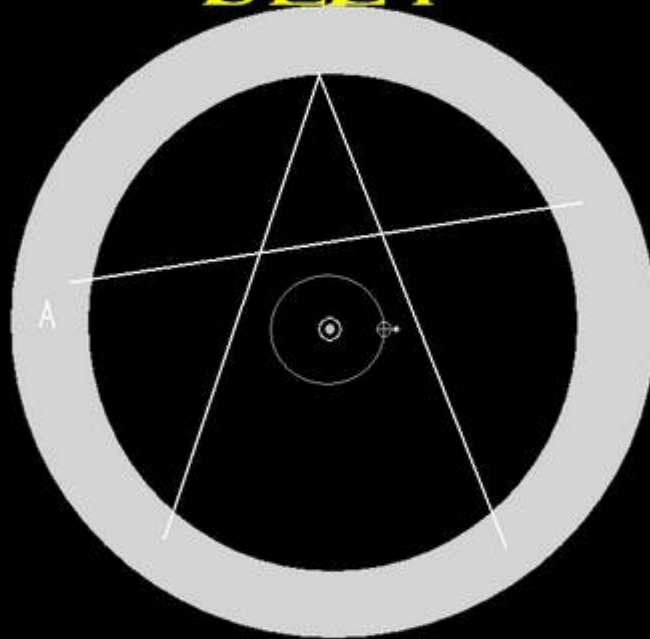


THE ANARCHY BELT



AND MORE

CARL BUSSJAEGER

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HIGH TECH REDNECKS

FROM CARL BLISSJAEGER, AUTHOR OF NET ASSETS, COMES A NEW COLLECTION OF SHORT FICTION. ENJOY NEW TALES FROM THE UNIVERSE OF NET ASSETS AND BARGAINING POSITION, AND BEYOND. EXPLORE NEW WORLDS, AND OLD. THESE ADVENTURES ON FRONTIERS HIGH AND LOW, AND OVER A DOZEN MORE, ARE WAITING FOR YOU IN THE ANARCHY BELT.

- * PACK YOUR BAGS, BUY A NUKE, AND HEAD OUT
- * LISTEN TO A RADIO PIRATE EVEN THE FCC CAN'T HANDLE
- * WHEN THE SYSTEM FAILS, GET REVENGE
- * PLAY A MURDER SIMULATOR
- * BE A RENT-A-COP IN A NUCLEAR TEA KETTLE
- * TRACK DOWN A KILLER IN ENDLESS SPACE
- * INFRINGE ON YOUR OWN COPYRIGHT
- * FIGHT A GUERRILLA WAR AGAINST THE POST OFFICE
- * PISS OFF THE GODS
- * WAGE WAR IN A SPACE FIGHTER
- * AND MUCH MORE

**Tales of the Anarchy Belt
and more**

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<http://www.bussjaeger.org>

The author may also be contacted at: carl@bussjaeger.org .

Introduction

Once upon a time I wanted to be a writer. Several well-intentioned folks even told me I wasn't too bad at it. So write I did. The stories collected herein represent much of the fiction I wrote. I have them divided into two main categories. The first are tales from the *Net Assets/Bargaining Position* universe. Some I wrote strictly for fun, and some were intended to provide background for the novels. In my little make-believe universe, the right to keep and bear arms (RKBA) rather definitely includes personal nuclear weapons; since that world is a fictional extension of the one we live in today, explaining private nukes was a necessity.

The second category includes whatever off-the-wall notions happened to hit me at the time. They are mostly science fiction, but a little fantasy sneaks in occasionally.

Several of these stories appear in the unauthorized anthology *The Anarchists*. But you'll find more stories, and a little background material for most here; this is, in fact, what *The Anarchists* woulda-shoulda been, if Derek and Dolores Benner, and Near Space Press, had been legitimate publishers rather than scam artists. You also find that the stories are in the proper order and correctly formatted: something the Benners didn't bother with.

Pre-NSP, I had assembled the *NA/BP* short stories, minus the stand-alone stuff, into a semi-novel with the working title *The Anarchists*. Since NSP preempted that title, for this volume I've fallen back to one of the old alternate working titles: The Anarchy Belt.

This volume completes the publication of nearly all my non-graphic fiction. There are a few more tales to be told, but... they may not ever be told. Some you've seen hints of elsewhere; there's a third-hand report of the American tax agency's adventures on the asteroid Pallas in *Bargaining Position*, which are otherwise known as "The Taxman Cometh" and the Battle of the Moon (working title: *Element of Risk*). Alex Dohnalek, whom you met in *Bargaining Position*, along with a rather fuzzy alien predator, is featured in the novel *Caveat Emptor*, which may or may not ever be made public. I haven't decided.

Whether or not the remaining tales see the light of day depends on whether or not it's worth my while. To date, finding a legit publisher who is actually willing to pay for my work has been problematical. Basically, I'm not good enough to get published. But I am good enough to get pirated (by Near Space Press, and several websites) and to get downloaded for free: *Net Assets* was first published in 2002; nine years later people are still downloading as many as 200 copies per month from my site alone (it is also in the wild on P2P file-sharing networks).

If you like what you're reading, please drop a buck or two in my virtual tip jar at <http://www.bussjaeger.org>, or write to me at carl@bussjaeger.org. It will help keep me in groceries. If you *really* like the stories, and want more, tell your favorite publisher.

Thanks. Read on, and enjoy.

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Net Assets

Back in the mid '90s, I wrote a novel that would eventually, after a lot of rewriting, become Bargaining Position. While working on it, I found myself making extensive notes to keep the story's background straight. Some of those notes became so elaborate that they morphed into short stories. One of those was a sort of documentary/monologue called Net Assets. You may have heard the name before.

Sometime around 2002 the world came to an end. At least it looked that way to the bureaucrats. In fact, the end actually started in 1997. That was the year some lurker on various science fiction/space exploration-type computer conferences stopped lurking and posted a message...

Mitch slammed the keyboard in disgust. "Oh, dammit." He type a few keystrokes, clearing the garbage he had inadvertently entered on the screen, then leaned back in his chair. He glowered at his monitor.

"Would you listen to these guys?" he asked himself. "I've been seeing this stuff for years- NASA do this, NASA do that. Ain't gonna happen." He leaned forward and began typing again.

"Look, for years I've been reading posts complaining about NASA's handling of the space program. And others replying that big business isn't going to do the job right, either. Okay, put up or shut up. Why don't _we_ do it? How many thousands of people are there out here? Surely, out of all these people, we have the necessary range of skills to do the job; I've seen no end of claims to expertise in everything from gardening to aerospace engineering. The skill and knowledge base is there.

Finances? Who needs big business? How many of you out there are reading this on a machine that ran more than \$1500? How many are planning upgrades to \$2000 machines? More RAM? A new 1.2G hard drive? A 17" .25 pitch monitor? So put off that purchase for one year and kick in to a space travel fund. We'd be talking serious money real quick.

And who says we have to buy into the big expensive booster idea, anyway. Who out there really believes that NASA is running manned space travel in the most cost effective

manner? (I'm not convinced that any government agency is capable of operating cost effectively) Already, we're seeing cheap concepts from private outfits; ie- the SpaceCub. And that's '50's and '60's tech. This is '97; we can't think of something better?

Folks, you're already pooling expertise on these boards and talking concepts for hours a day. That's half the battle now. Stop piddling around. Identify workable concepts, develop them to real-world applications, and do it.

In fact, if we are serious about escaping "mankind's cradle," I see only one real obstacle- bureaucrats. Those "not without a permit, is that approved, zoning ordinance, we'll take care of you" impediments to intelligent life. If that's enough to stop us, then we probably deserve to stagnate and fade into oblivion on one little abused planet."

It started slowly. Just more debate and discussion on the BBSs and the Internet. And a lot of face-to-face arguments.

"Well, why not? Show me the law that says a private citizen can't build a spaceship."

"Oh, come on, Rick. Get real," his office companion responded. "You know space travel has to be sponsored by the government- who else can afford it?"

Rick remained obstinate. "With big, dumb, vertical boosters? Heck, the government can't afford it. That's why nothing's really happening. And I don't count the Shuttle; it loses money."

"Precisely why..."

"Precisely why we should be doing it differently, Bob," Rick continued. "Vertical boosters suck. They waste too much energy lifting themselves out of the gravity well, when all they should be doing is contributing forward velocity to the payload."

Bob shook his head, leaned back and put his feet up on his desk. "So you want.. what? A linear accelerator? Some sort of giant rail gun? The tech isn't up to it."

"Who needs magic tech like that? Rick retorted. You know about the Air Force's rocket sled track out in New Mexico?"

"Umm, yeah. Ten mile track; they test missile nose cones and the like. So?"

"Ten kilometers, really." came Rick's reply. "Just a steel track. But they've gotten better than Mach 8 on it. And, unofficially, I've heard Mach 10 plus has been done." He stopped, and took a sip from his coffee mug; then continued. "That's 50's tech – we can do better. With maglev to reduce track friction to zero, and a longer track, we oughta be able to hit Mach 12. How's that for a first stage booster?"

Bob gave a raspberry. "Never happen. Wasn't the Air Force going to try one of those? And they couldn't do it without bankrupting the DoD." He smiled. "Which probably wouldn't have been any bad thing, at that." Brief chuckle, then "But maglev costs too much. Come back when we have cheap room temperature superconductors to play with; then we'll consider maglev boosters."

"Well, I don't see you suggesting anything. How would you reduce friction? Hovercraft?"

"Bob laughed again. "Hey, at least they work. Heck, at the speeds you want, you wouldn't even need or want lift fans – just duct air from forward intakes into the plenum. Plenty of lift." He slid his hand just inches over his desktop, and made a swooshing sound. "Wheeee! Supersonic hovercraft coming through!"

Rick's laughter joined Bob's. "And wouldn't that be fun on the Interstates... And I thought the semi's were bad. Maybe we'd best keep them on their own roads."

Bob dropped his feet to the floor and picked a pencil and steno pad. He began sketching. "Nah, if you're gonna put 'em on their own routes, do this." He held up a crude drawing.

Rick stood up, and walked over to Bob's desk. He examined the picture. "So what is it?" he asked.

"A track for a hovertrain, of course." Bob grinned. "Since it'll have it's own road, why not invest the concrete in something better suited to a ground effect machine?" He pointed to a detail image in the corner. "See here? Cross-section of the track – instead of making your hovercraft have its own air plenum for levitation, you put it in a concave track, a sort of 'trough', and let the track be the plenum."

Rick looked dubious. "Okay... Why?"

"So your supersonic hovercraft doesn't waste its precious energy accelerating a plenum; just itself and the payload." Bob's face acquired a thoughtful look, and he raised his eyebrows. "This way, the track would even provide most of the guidance."

"You're crazier than me, Bob," Rick said. "But darned if it wouldn't work. Wonder what the Teamsters would think?"

"Or the railroads."

"Or NASA."

Bob's laughing tapered off. "Eh? NASA? How so them?"

Rick stared down at Bob. "Look what you just designed: a high speed, horizontally accelerated, levitated booster."

"Say whaaat?"

"Sure, Bob. Lose the jets for the thing and stick a throttle controlled liquid fueled rocket in it. Run it down a... oh, say... 15 mile track. How fast do you think it would be going?"

"Nah," Bob scoffed. "I mean, sure, you might get some impressive Mach numbers out of it, but this is a joke. It isn't going to hit orbit; it's stuck on the ground."

"Wanna bet?" Rick challenged. "Yeah, your hovercraft stays on the ground; but what if you piggybacked a little one man cargo shuttle on it? Hit Mach 10 or so, fire its engine, detach, and scream for orbit."

"Bull; it's not enough velocity to make a difference. Is it?" Bob considered his co-worker's outlandish proposal.

"I'll bet it is. I saw something a couple of years ago about NASA looking at a maglev system that would accelerate a shuttle to about 600 miles per hour before firing the engines. They said it would more less double the efficiency of the launcher." He pointed to the sketch. "This would be a heck of a lot faster. And concrete's cheaper than maglev."

Bob raised his hands, as if warding off Rick. "Whoa! I'm the one who arguing for the government. I'm the one to come up with the better way? I don't think so."

"Why not? At least you know something of engineering." Rick picked up the sketch. "Can I have this?" he asked.

"Why?"

"I want to scan it, and upload a GIF on my bulletin board. See if anyone else can see any real flaws in it."

"You're nuts; but sure. Just keep my name out of it."

That night Rick typed up a synopsis of Bob's 'hovertrain' idea, and posted it for comment in the SPACEFLT section of his computer bulletin board. Discounted by most, it did draw some positive comments. And networked bulletin board echoes being what they are, the concept was quickly disseminated around the country.

Once the concept hit the Internet, it mutated.

FROM: d_brinker@seccom.com

It's definitely a neat idea, but it'll cost a fortune to implement. A 15-20 stretch

of land? And do you have any idea of what 15 miles of concrete is going to cost? A real rough estimate says the concrete alone (not counting labor, forms, or other materials) is going to run around \$25 million, I'll bet. If we want private industry to pull this off, it needs to be cheaper.

FROM: 102065.1635@compuserve.com

Brinker's right. So make it cheaper. Lose the track. The track does make the thing more efficient, but it's too much for an initial investment. Go back to a more conventional GEM, with its own air plenum. So we still have the 'hovercraft from Hell.' But now it isn't dependent upon an expensive track.

Instead of a track; shoot it down range at the salt flats where they test the cars for land speed records, or somewhere like that.

I'm even willing to kick in cash for it.

-----BEGIN PGP SIGNED MESSAGE-----

FROM: W_S_Neville@comcent.com

TO: 102065.1635@compuserve.com

Sir,

Allow me introduce myself. I am William Neville, a rancher out west. I'm also something of a space enthusiast. So your recent expression of willingness to financially assist a private space access program caught my notice.

Myself and similarly interested neighbors have pooled our resources and formed a corporation with the intent to build a ground effect levitated launcher. Our form of support

*for this endeavor consists of 20 linear miles
of very empty, very flat land, and a
grubstake.*

Want in? <g>

W.S. Neville

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Neville's action was a catalyst. Soon, seeming hordes of space travel fanatics were sending in cash to the newly formed corporation, and moving to Texas to work on the launcher; as programmers, engineers, metalworkers, and basic unskilled labored. Some likened it to a cosmic Habitats For Humanity; others called it the largest science fiction convention in history. But it worked.

And it attracted attention.

Neville looked across his desk at his suited visitor, and asked, "Want a beer?"

"No thank you, Mr. Neville; what I really..."

"Well, I'm going to have one. Been a long day . And it doesn't seem to be getting any shorter." He reached over to a small refrigerator beside his desk and took possession of an unlabeled beer bottle. "Sure you don't want one? One of our investors brews this himself; good stuff." He popped the cap, and carefully poured the dark brown fluid into a waiting mug.

"Really, Mr. Nev..."

"Ah, excellent." Neville leaned back in his chair and eyed the other man. "So just what does the FBI want, Mr. Cartwright?"

"The FBI is investigating the circumstances surrounding the recent attack on the Internal Revenue Service's online files."

Neville smiled slightly. "So what's that got to do with Launcher Corporation?"

"It has been suggested that your Corporation may have been involved..."

"Suggested by who, Mr. Cartwright? I can assure you that Launcher was not responsible for those actions. And suggesting otherwise, without evidence, might be considered libelous."

Cartwright assumed a stern expression. "Then it is a remarkable coincidence that the attack occurred mere hours after the IRS attempted to obtain your company's financial records."

"Ain't it, though?" Neville replied. "Say, how's the NSA coming on decrypting the IRS files, anyway?" He grinned.

"I'm not at liberty..." Cartwright began. "How did you know the files were encrypted! That information hasn't been released. I think it's time to discuss this elsewhere."

Neville took another sip of the home-brew, then answered, "Heck, Cartwright, don't y'all ever browse the Internet? News is all over. Somebody even posted the algorithm that was supposedly used."

Cartwright came up out his seat. "What the...!"

Neville continued, "Doesn't look too good for the NSA on this one. They're still using old X-series Crays, aren't they? Probably take 'em years." Another sip. "Could've been worse, I suppose; they could've used a one time pad system, with an endless key length."

"Mr. Neville, are you condoning this activity? Let me warn you that as an accessory..."

"*Don't* say it, Cartwright." Neville set his mug down. "Launcher is not responsible for the encryption of your IRS files. I would imagine some hacker simply got pissed off when he heard about the illegal raid staged by the IRS in order to confiscate our records. Maybe if they had asked *first*, instead of coming in with flack jackets, guns, and no warrant; maybe this wouldn't have happened.

"The Revenue Service felt that the irregularities in your financial dealings required that they move quickly, to prevent the destruction of evidence."

"Evidence of what?"

"Launcher Corporation has never reported a profit; yet continues to spend money. The IRS is naturally curious as to the source."

"Not that it's any of their business – the source is personal, private loans. Private investors. Space enthusiasts."

"Do space enthusiasts usually resort to encrypted communications in their everyday business, Mr. Neville?" demanded Cartwright.

"Is that what's bugging you?" Neville grinned. "Well, we do since the Wiretapping Bill a couple years back. A man wants his privacy."

"It's un-American..."

"Mr. Cartwright, you have no warrant. And you've become offensive. Leave. Now."

"Not until..."

"Investigate to your heart's content. But leave Corporation premises. Now."

"But..."

"Good day, Mr. Cartwright."

Naturally, there were charges of bribery of public officials. And endless investigations by OSHA, FBI, NSA, DOD, CHAOS and any other acronymed agency imaginable. The Launcher Corporation generally countered all this with stubborn noncooperation, counter-charges, blank looks, civil disobedience, and cheap shysters. The U.S. government learned that screwing with an international, loose alliance of several million space freaks with computers got real complicated, real quick. Great fun was had by all.

Eventually the IRS did obtain a court order for Corporation financial records. And Launcher cooperated, more or less. They provided the complete data as a single comma-delineated database file on digital tape. But the database software, and all record headers were omitted. Two days later, the IRS files were attacked again. This time the online files were erased, and a virus was left behind to erase any new files. The first archive copy pulled was also found to be corrupted. The second archive had been encrypted; apparently using a one time pad system, with an endless key length. The third was intact, but horribly out of date.

As a side note; the "disorganization" of the tax records was compounded by the exponential increase in tax resistance following each erasure. The general feeling seemed to be that "they can't tax me if they don't know I made any money." With revenues cut by as much as 70%, the federal deficit skyrocketed. The Treasury tried to meet the obligations of continued federal spending by printing more money, further devaluating the dollar.

As the majority of the Launcher Corporation's revenue was in currencies other than the dollar, this actually worked to its benefit. Worked continued. Test packages were launched, followed by a series of heavy materials launches.

In Texas, worked continued apace. Construction of the actual orbital shuttle continued, and testing of the booster began. In shuttle design, cost once again won out over optimized efficiency. And, as usual, the ideas came from the nets.

FROM: QD_belial@secnet.com

SUBJECT: Wing Cylinder vs Lifting body

Yeah, yeah, yeah... Enough. The shuttle is going to be small, or it won't even fit on the bloody booster. So we have to make the most of what we have. That means efficiency, and that means lifting bodies.

Wings are inefficient- they're useless in space, and they can't be used for cryo fuel storage (too much exposed surface area to maintain temps). So lose 'em.

If we go for a lifting body, we get a nice enclosed volume for the fuel tanks and cargo. And no structural nightmares with wings. And we know from the 60's that they can be landed okay.

FROM: B_Carmichael@SyServe.com

SUBJECT: Wings vs Lift Body

Sure, I realize that lifting bodies are potentially much more efficient than a winged cylinder configuration. But it's expensive, and it'll need R&D time that we don't have. This whole thing is being funded out of private donations from people on the nets- so we don't have the multi-mega-bucks of a government with its own printing presses. And we're making do with the test bed on the booster for high speed tests, but it just isn't a hypersonic wind tunnel. So I'll take what I can get.

Winged cyl it is- It's cheap and dirty, and quick. The increase in efficiency I'm getting from a stay-behind first stage will compensate for a less efficient orbital stage. Since the shuttle doesn't have to fly until it's at least supersonic, the wings can be minimal (I'm looking at a much smaller wing ratio than NASA's shuttle uses).

Cryogenic fuel storage is not a huge concern. Again, for cost and speed reasons, we're not going the cryo route. Cryo would have meant wasted mass for thermal insulation, and ground handling probs. So the oxidizer/propellant choice is JP-5 and H2O2-jet fuel and hydrogen peroxide. It isn't

ideal; but what is?

The basic design is something like a 50 foot long Delta Dart. One main engine for the high jump. Attitude jets are H2O2 from the main tanks to silver catalyst jets (anyone recall the old flying jet belt? Same system). Crew is one pilot (send resumes to Geoff O'Connor at HiJump_1@SyServ.com). Cargo is 2000 pounds mass. If it's passengers, they rely on their own suits for life support. As does the pilot- so we're talking short missions to start.

The Launcher Corporation treated the computer nets as a valuable natural resource to be mined. Some novel ideas were generated; some were even usable.

When the first mated shuttle/booster tests showed turbulence problems with detaching the orbiter at high speed, the call went out. An anonymous answer came back, purporting to be data from the old SR-71 spy plane remote drone project. Shortly after, Launcher hired a new consultant on hypersonic aerodynamics. The hypersonic detach was worked out.

At the knocking on his office door, Neville started and looked up. Tom Zelaski, head of the orbiter communications team, was standing in the doorway. "Come on in, Tom. What can I do for you?"

Tom grinned hugely, and replied, "This time, it's what I can do." He paused, and opened the notebook computer he carried. "Slideshow time. You'll love this. We've worked out the comm and telemetry issue."

Neville smiled, and watched Tom appraisingly. "Something off the nets, again?" he asked.

"Natch." Tom punched keys on the computer, then turned it so Neville could see the screen. He kept his finger on the space bar. "We planned to settle for zero telemetry or comm with Morishi, except when the orbiter was Line Of Sight with us here in Texas." A basic graphic on the screen showed the orbiter over Texas.

Neville glanced at the screen. "Yeah; not ideal, but what is?"

Tom grinned, hit the space bar and said, "This." The image showed lines indicating line of sight to points from around Earth to every portion of the orbit.

Neville grimaced and replied, "Yes, telemetry and tracking stations around world would be nice. But there's no way the Feds are going to lease us time on their system."

"Don't need 'em. We got Amateur Radio clubs. Those points are radio amateurs all around the world;

each with UHF transceivers."

Neville looked intrigued. "Do tell."

"Shuttle crews have been making ground contacts with amateurs for years. We're going to do the same, only one or two better." Space bar. A new graphic showed three points on a stylized map- an orbital path superimposed. "We arranged with the guys on ARLnet to have monitors along the entire path. Morishi'll be in sight of at least three stations at all times."

"Crude, but workable," Neville observed.

"Crude, my rear end," Tom retorted. "With three stations triangulating on the orbiter signal we can get full positioning data – kind of like GPS in reverse. And it's nothing so crude as just direction finding- these amateurs have been doing radio fox hunts for years. They'll be able to use Doppler shift on Morishi's transmission to give some pretty precise data. And they're used to packet relay, so we can get all the data sent in to us here, in real time. And in reality, we won't have just three stations most of the time. Accuracy should be really nice."

"Packet relay?" Neville asked.

"Yep. Packet radio. Like a BBS on the radio, instead of the telephone."

"I like it. What's it cost?"

"About ten grand in equipment, and a couple grand a month to the radio club."

Neville was taken aback. "You're kidding. NASA pays millions."

Tom's grin widened. "Told you you'd like it. What can I say? NASA was never really interested in efficient ways of doing things."

Neville looked at the computer screen, which currently showed a schematic of the packet radio interconnections. He frowned. "Is privacy or jamming going to be a problem with this?"

"Uh uh. Jamming? Nope; we'll have complete path diversity. If one path is MIJI'd, the traffic still comes through somewhere else. It's all synchronized, too."

"MIJI?" came Neville's questioning response.

"Ol' military term- call it jamming."

"And privacy? Encryption along the lines of that old PGPphone thing, I assume?"

"Kinda. But we're using something one of our own people cooked up. A type of one time pad encryption. Everyone starts with a crypto key on CD-ROM, and gets synched up. By the time the key runs out, everyone is getting it continuously updated from a random character key source back here. With real time compression, our comm is all full duplex with multiple channels. So the key goes out

encrypted on a spare channel. The only way to listen in is to have the original key during the start up." Tom smirked, and added, "Funny thing, that streaming encryption deal is remarkably like the the scheme run on the IRS last year."

Neville chuckled. "Don't tell me; I don't want to know. But what about key dissemination?"

"Hand delivered to everyone involved."

Neville laughed. "Sounds like the airline tickets will be the most expensive part of all this."

Three months later, after a series of private test launches, Launcher orbited their first commercial package- a large direct broadcast personal communications satellite. Launching fee: \$287,000; with a net profit of \$103,400. Advertisements appeared, offering affordable orbital freight at a fraction of the cost of a conventional ballistic launch.

Immediately, the FAA served an order demanding that all launches halt until the shuttle obtain flight safety certification. With the assistance of a friendly judge, Launcher responded by filing a restraint of trade lawsuit. A daily series of private launches continued. The corporation also sold spectators tickets for launches – a hypersonic hovercraft screaming across the desert was a memorable sight.

And other deals were cut.

In the privacy of a well-appointed corporate office, two men shook hands.

"Thank you for agreeing to meet with me, Mr. McLaughlin."

"Please, Mr. Neville, have a seat. And the pleasure is mine."

As the men seated themselves, McLaughlin pressed a button on a recorder on his desk. He pointed to the illuminated LED and said, "I hope you won't be offended if I tape this. I've found it less intrusive than scribbling down notes."

"Doesn't bother me a bit. I tend to think with my fingers, but to each his own." Neville opened his briefcase and removed folder.

Eying the folder, McLaughlin said, "I must admit, I'm certainly intrigued by all this. What could the hot new Launcher Corporation want with a sneaker manufacturer?" He shrugged. "It doesn't seem like there would be very much overlap in our respective businesses."

"Ah," replied Neville, "but there is. We build and launch spacecraft. You make rubberized fabric garments."

Looking puzzled, McLaughlin propped his elbows on his desk. "I'm afraid I still don't see the connection between spaceships and tennis shoes," he said.

Neville smiled and handed the folder across the desk. "But I wasn't referring to tennis shoes."

McLaughlin opened the folder and gazed upon a computer rendered drawing of a person in a pressure suit. Watching, Neville continued, "What good is space travel without affordable spacesuits for the travelers?"

McLaughlin stared at the picture. "You've got to be kidding."

"Not at all. We need inexpensive pressure suits, and you need business."

McLaughlin started. "Eh?"

"We've been doing a bit of research on the computer nets. It's clear that your company is being cut out by the big guys. Despite your reputation for quality." Neville pulled another folder from his briefcase. He flipped it open and reviewed the entries. "We asked for some credit and character checks on your outfit, as well. Regency Shoes is remarkably well thought of. And while you're headed for trouble down the road, your credit now is adequate to the strain of gearing up for a new product line."

As Neville spoke, McLaughlin paged through the folder. It appeared to be a sales pamphlet oriented to the individual consumer. When Neville paused, McLaughlin said, "Damned if you don't seem to be serious." He frowned. "But how am I supposed to make money selling four or five suits a year? Isn't that about all your shuttle crews are going to need?"

Neville kept smiling. "Well, for ourselves, perhaps. Though you may be surprised at just how many shuttle crews we expect to be working." He slid a sheet out of his folder. "But here's where the money is – we're about to offer passenger service. In simple terms, Earth to orbit for seven grand per head. I expect there'll be a demand for suits."

McLaughlin stared slack-jawed, then closed his mouth. "You're kidding."

"You keep saying that." Neville shook his head. "We're very serious. Launcher was formed only in part to make money. The other part was to open space up to regular people. Cradle of mankind stuff, and all that." He pointed to the pressure suit brochures. "That's an essential part of it."

"Good lord, this is for real. But why us? Why not keep it proprietary, and keep the profit?"

"Because you're already in the right line of work. You have the personal contacts and know how to make it work. And you're honest enough to trust."

"Certainly you already said some things I wouldn't have expected to hear. But many businessmen consider trust an old fashioned, obsolete concept."

With an earnest look, Neville responded, "We don't. Trust is everything to us." He slid another sheet across the desk to McLaughlin. "Here's the deal. We'd like to run it as a straightforward licensing arrangement. We'll provide the suit design to your company exclusively. You pay us a royalty of one dollar per suit sold. After five years, we turn all rights to the design over to you; it'll be yours

completely."

"A dollar a suit?" exclaimed McLaughlin in disbelief. "How do you expect to make any money like that?"

"Directly? We don't. But it'll be easier to sell an orbital ticket, if the potential customer can keep breathing when he gets there." Neville shrugged. "You make money, we make money, people get off Earth; everyone's happy." With an appraising look he added, "Deal?"

McLaughlin looked at the sales brochure and one page licensing agreement in exasperation, then surrendered. "Deal," he said. "Your people will be forwarding the design documents?"

Neville reached into a jacket pocket and removed a compact disc, which he handed to the other. "Of course, not. This is it." He grinned. "This is the computer age, Mr. McLaughlin."

McLaughlin looked at the tiny disk that represented the future of his company. He shook his head, then added his chuckle to Neville's. "Sure enough." Then he considered something else. "But what the heck are your passengers going to do once they're in space? Play tourist, then go home?"

"Oh, no. Inexpensive spacecraft are an essential element, as well. We've just closed a fascinating licensing deal for cheap inflatable ships with Pedersen Polymers down in Georgia."

"You're kid... Never mind."

In December of 2001 (the anniversary, in fact of Neville's seminal donation), the Launcher Corporation announced that construction of its permanent space station was well under way, and offered orbital freight at a cost of 1% that of a NASA-sponsored boost.

In response, a coalition of "third-world" nations made a motion in the UN General Assembly to shut down the Launcher Corporation, claiming that it "represents a criminal waste of vital resources required on Earth to support the poor of our world."

The U.S. President announced in an emergency address that he had issued an executive order to nationalize the Corporation, "as it is obviously a vital element of our national security."

"Mr. Neville, please!"

The Launcher executive paused and looked back at the small crowd behind him in the hotel lobby. An obvious reporter was stepping forward, waving. Neville glanced at his watch, shrugged. "Yes?" he answered.

"William Caldwell with AP Online. Might I have a few minutes of your time?" the reporter said.

"I have a couple of minutes. Shoot."

"It all comes down to just one question, really. The President has ordered your company nationalized; confiscated, if you will. Constitutional law experts are going nuts. Letters to the Editor are pouring in. Wall Street is paralyzed. But Launcher hasn't released any statement whatsoever."

Neville considered, then, "So?"

"Well... Don't you have any comment at all?"

Neville's lips moved; either a small smile or baring a hint of teeth. "Try it," he said, matter of factly. He turned and headed for the elevator.

"That's it?" Caldwell called after him in disbelief.

"That's enough."

The general consensus was that this was a heck of a Christmas present for *somebody*.

The pickup truck rolled down the dirt road that stretched across the flat launcher-range landscape. Its high beams competed with the dim gray light of early morning. Inside, the driver listened to a singer celebrating being on the road again.

Suddenly roaring thunder surrounded the vehicle. There was a momentary glare of light streaking in the distance, then an incredible booming rocked the truck. In the following silence, the driver stared at the horizon in awe.

"Sheeesh. And I remember thinking a night launch of an F-4 was cool!" He kept driving; his destination almost at hand.

Out of sight of the driver, the launcher screamed across the desert. The elaborate ground-effect machine went hypersonic, fighting for control with a confusion of computer-driven air dams, spoilers, and canards; thrust forward with a powerful rocket engine drinking JP-5 and hydrogen peroxide.

At Mach ten, another engine fired; this one mounted in a delta shape attached to the launcher's back. There was a nearly invisible flash as explosive bolts fired, freeing the delta. The mini-shuttle separated and shot into the sky. It began its climb to orbit.

Back on Earth, the launcher's engine shut down. Aerodynamic drag slowed it. As it dropped below Mach, it trailed streamers which further increased drag. Finally, it deployed a parachute.

Once it had come to a halt, recovery vehicles drove out and began the turn-around process. It would launch another package skyward before the end of the day.

The truck driver was used to the activity, though he still loved watching a launch. It was a daily,

indeed, twice daily occurrence on the Launcher Corporation's range. Begun as the dream of computer net inhabitants, the Corporation was busily making a reality of the dream- orbital transport affordable by anyone. The Corporation was also busily making a fortune building that dream; orbit is a resource that many were willing to purchase.

As the truck pulled up beside the lonely metal building, its lights splashed across a sign- "Orbital Ops." Lower, someone had hand-lettered the extra "Home Of The Hovercraft From Hell." As always, the driver smiled at his own handiwork.

He climbed out of his truck and headed from the heated building, a refuge from the chill January Texas air. He left the truck unlocked, crime being somewhat less of a problem than coyotes on the launch path.

Inside, he blinked against the bright fluorescent lighting. He looked around the large open space. A poor man's version of Mission Control. On the intersecting walls of the far corner video projectors provided Mercator maps of the Earth, with a few dozen curving lines indicating the orbital paths of Launcher birds. Arrayed before the projections, at an angle to each other, were two long consoles. Each held three computer operator positions. To the right, in another corner, was the supervisor's desk with its own computer and multiline phone. A line of equipment racks mounted in the fourth corner held printers, two LAN servers, and the communications interface gear for the ops personnel.

He opened his jacket and headed to his accustomed position centered in the right hand console.

"Cal!"

He paused and looked over to the supervisor. He did his best to appear apologetic as he spoke. "Sorry I'm late, Andre. I had to detour off the road. There's a regular tent city sprung up all around the headquarters building," he explained.

Andre Grandjean said, "Yes, but now that you know, please allow for it in the future." He shrugged. "We are trying to relocate some of them, but it may not be until tomorrow. If there is a tomorrow."

"Tomorrow'll be here. Question is, will we?" Cal Schmidt continued on to his post. There, he began the process of relieving the night shift man. "So whuzzup?"

"Everything, man." The seated controller tapped a few keys and brought up a display. "Special launches all night. Mostly to polar orbits. Head shed wants 'em watched close." Another set of keystrokes. "These are yours." A miniature of the orbital projections showed a constellation of six traces. "Got it?" he asked. "I've really got to hit the latrine and go get some sleep."

As his predecessor got up, Cal slid into the vacated seat. He shifted the keyboard and entered a string of characters. Once logged in, he called up the stats on the birds he would be monitoring.

"Weeell, somebody paid serious money for this." Each of the satellites appeared to be fairly massive; close to the 2 ton mass limit of a Launcher payload. "Lot's of delta vee, too," he said to himself. "And six telemetry channels?"

He called for a set of position and vector checks on the orbiting objects. The computer performed a variety of tests on the satellites' transponders; Doppler analysis, phase comparisons, and triangulation yielded the satellites location and orbital elements. Cal checked that against the specifications in his database. All were nominal.

Unnoticed, Grandjean had come up behind Cal. He stood quietly, and watched the controller run through the orbit checks, then a set of systems status inquiries. Then he spoke, "Cal."

Cal spun his chair and answered, "Yep?"

"I need to speak to you, please. Shall we get coffee?"

"Umm, sure. I suppose." He tapped the adjacent controller on the shoulder, and asked, "Take it for a bit?" His partner nodded and flashed an OK sign. "Thanks." Cal got up and followed Grandjean.

"Hey, Andre; I'm sorry I was late. I really didn't know all those folks..."

Grandjean held up a hand and said, "No, no, no," reassuringly. "You are not in trouble. Quite the opposite." He paused, then, "I... We need to ask you some things."

A little suspiciously, Cal replied, "What sort of things?"

They had reached the improvised break area; a small couch, a couple of chairs, and a table with a coffee maker and condiments. All set off from the room by a freestanding office divider, to the side of the electronics racks. Andre poured two styrofoam cups of coffee, and asked, "Cream? Sugar?"

Cal stuck out his tongue. "Bleah. Pollutants. Black, please." He reached out and accepted the cup Grandjean offered. Then he sat down on the couch. "What's happening, Andre? You never made me coffee before."

Grandjean smiled deprecatingly, and responded, "I never asked such a favor before."

"Uh oh. Go on."

"Cal, Launcher Corporation is in serious trouble. You know this. I will not so insult you to ask if you know of the confiscation order."

"Gods, no. But it's been two, three days since the Prez announced it. Nothing's happened yet."

"No, not yet. But soon. Today, I think."

"Say what?" Cal blinked in surprise.

Solemnly, Grandjean answered, "Today, soldiers from El Paso will come to take the launcher."

"That's crazy," objected Cal. "What good is the dang launcher without the open land for acceleration. Heck, without the ground support people." He shook his head.

"Correct. The company is being *nationalized*. This applies to the people who are a part of it."

"What? They're gonna draft me?"

"Oui."

"And what are they gonna pay me? Heck, ever since the the hackers crashed the IRS, the gov's been bankrupt; just won't admit it."

"This is all true. This is why we will resist confiscation."

Uneasily, Cal asked, "Resist how?"

Grandjean took a deep breath, then exhaled. "This is what I must ask you, and other controllers."

"Yeeaah?"

"Do you understand why the people in your 'tent city' have come?" Grandjean asked.

"Oh, lord; you want us to fight the army." Cal looked fearful.

"One would hope not," Grandjean replied. "Today, one army company comes. We believe that a show of solidarity will demonstrate our resolve to remain free."

"Free?" interrupted Cal.

"Yes, free. Consider," Grandjean stared across at Cal. "If a thief comes and takes your property, what do you do?"

"Take it back."

"Ah." Grandjean abruptly changed the subject. "Did you receive your tax notice?"

Cal squirmed uncomfortably on the couch. "Yeah. Yesterday. Day after the bank statement with the zeroed out balance showed up."

"Were you pleased that the IRA, er...S had confiscated your money for nonpayment?" Grandjean asked rhetorically.

"Hell, no! I've been paying my taxes! Company's been withholding the whole time!" Cal exploded.

"Quite so. Yet the IRS maintains that since its database has become unreliable, they must assume nonpayment until proven otherwise."

"That's bull...!" Cal began. A murmur from the console area could be heard.

"Yes, I agree. Theft, as it were." Grandjean eyed Cal appraisingly. "As well, the government wishes to take the launcher. Indeed, the executive order takes the people who operate it." He looked down into his as yet untouched coffee. "More theft. And what do you call theft of a person?"

Cal made no reply. Grandjean continued, "I came here because it seemed more free than what I left. It cost me a great deal to do so. The Constitution became my bible."

"Yeah, well..." Cal began again.

"I joined Launcher Corporation because we were free to reach for the stars! What we have done, the government could do, as well. Instead, they steal what is ours." Grandjean shook his angrily. "No. I will not allow it. And I ask your help."

"How can I help?" Cal asked.

"You have seen the gathering supporters in their tents. Many came with guns, to defend their liberty against an unjust government," Grandjean said.

"You want me to grab a gun and play soldier?" Cal asked doubtfully. "I can't hit the broad side of a barn."

"With the gun we give you, you can," Grandjean answered. "You have been robbed; will you take back your rights from the thief?"

"I need time..."

"We have no time. It begins now."

"Sh... Why me, anyway?" demanded Cal.

"You are liked, and respected by the other controllers. If you agree, it is likely they will, as well," explained Grandjean.

"But why us; why computer operators? You have an army outside." Cal retorted.

Grandjean smiled. "There are armies, and then there armies." The smile turned to a grin. "Or perhaps I should say air forces."

"Eh?"

"Cal, we stand at the edge of a new frontier, at the beginning of a new age. Will you let thieves stand in your way?"

Cal stared at the floor. The background murmuring died to silence. Minutes passed. Grandjean waited.

Cal looked up at his supervisor and asked, "How can I know if it's right?"

"I cannot say for you. For myself, I wish freedom, and this seems the way. You must decide what you desire."

"Damn." Cal suddenly stood and faced the open room. "For years I carried an illegal concealed pistol 'cause I thought it was my right to defend myself." He turned to the supervisor. "This is the same thing, really; isn't it?"

"I believe it to be so."

"I'm in," Cal said. "What do you need from me?"

Grandjean smiled, and held out a hand to Cal, who grasped it. Then, "Why, merely to control your satellites, of course."

"Hold launch." A normal enough command; given almost weekly, as the controllers waited for sightseeing aircraft to clear the downrange launch path. But today the controller's voice crackled with the tension which had spread from Cal and Grandjean.

From his post, Grandjean asked, "What is it, David?"

"Choppers. Two. Good-sized ones." He pressed a key and shared the his screen with the room. The left projection screen showed the enhanced satellite image which Launcher used in lieu of more expensive ATC radars. For any other company, radar would have been a more cost effective option. Launcher found that an entire constellation of optical birds could be lofted, piggybacked with a revenue-generating cargo; virtually free. With at least three birds always in visual range of the launch area, it was possible to produce a composite image that yielded better resolution than the FAA's network.

Launcher had offered to incorporate their system with the FAA's at no cost; as yet, the FAA had failed to respond.

Grandjean studied the east-bound aircraft and announced, "Gentlemen, I believe our visitors from El Paso are almost here." He lifted his telephone handset and pressed a button. "Good morning, Mr. Neville." Pause. "Your guests are en route." He glanced back to the projection. "No, sir; do finish your lunch. They are fifty miles out. I believe you have approximately twenty five minutes." Another pause. "Thank you, may you also have a pleasant day." He place the instrument back in its cradle.

"Andre?" Grandjean looked to Cal.

"Yes, Cal; do be ready. Although I sincerely hope everyone will behave reasonably."

Cal nodded, pointed to his display and gave a thumbs up. Then he nervously wiped the sweat off his palms.

Grandjean spoke to the airspace controller, "David, when the helicopters have safely landed, please

clear the launch. We would not want to pay a late launch penalty. The controller grinned; Launcher had never yet had to pay off on their launch guarantee. Grandjean addressed the room. "Gentlemen, it seems unlikely that anything untoward will occur for at least half an hour. You may wish to take this time to relax, to stretch your legs, perhaps to enjoy a cigarette." He paused and looked resigned. "Soon we may not have such a luxury."

As the helicopters flew over the tent city that seemed to have sprung up overnight, the troops aboard nervously considered the apparent thousands awaiting their arrival. Curses could have heard if not for the roar of blades and turbines. Sergeants shook their heads ruefully. Soldiers muttered between themselves. Their oblivious Captain mentally rehearsed his coming moment of glory.

Grandjean and his controllers were watching the projection screen intently. Some kind soul had set up a video pickup on the headquarters building. The controllers had one of the better views of what they were already calling the showdown, though there was no accompanying audio. The military craft were making final approach.

Neville's point of view was a little more up close and personal. The helicopters touched down on the marked helipad, and discharged the troops. The rotors slowed, and stopped. As a group of casually dressed people approached from the headquarters building the soldiers eyed, the surrounding crowd of laborers, technicians, engineers, programmers, and general run of Launcher supporters. Arms were evident.

The Launcher representatives stopped in front of the soldiers. Neville eyed the officers collar and spoke, "Well, Captain; what can we do for you today?"

The Captain stepped forward. In his most officious manner he proclaimed, "By the authority of Executive Order 2001-01-18, signed by the President on January Eighteenth, Two Thousand and One, I am hereby taking possession of this facility on behalf of the people of the United States of America, for reasons of National Security! I will arrest anyone opposing this Order!" The Capital Letters were evident in his voice.

In Orbital Ops an airspace controller spoke quietly into his microphone, "Groundpounders are down, and the air is clear. Launch at your discretion."

With helicopter engines off, there was near silence as Neville and party considered these dramatic words. The wind whispered in the rotors. Then off in the distance came the booming sound of the launcher's main engine igniting. There was a huge roar, followed by a fading scream as the launcher accelerated. Then, suddenly, an incredible thunder from the distance as it went supersonic. Then silence again.

Neville spoke. "I don't think so."

The Captain's faced turned red. Angrily, he turned to the Sergeant and said, "Sergeant! Prepare..." He

was interrupted by a racheting click. Then another. Quickly the air filled with sound of clicks and clanks. To a man, the soldiers blanched as they recognized the sound of a couple of thousand recently banned hunting rifles, target pistols, and "assault weapons" being charged.

An anonymous voice called out from the crowd, "I don't think you brought enough handcuffs!"

The controllers watched the drama unfolding onscreen. A wave of motion started in the crowd of Corporation employees, investors, and supporters. A great many firearms were brought into view; though none actually appeared to be pointed at the soldiers.

A voice stage-whispered, "Oh, sweet Hay-soos..."

Time stopped.

On the tarmac, the Captain's anger began to turn to panic. He turned back to Neville, who simply said, "Thank you for your visit, Captain. Do come back when you have more time be sociable." He gestured towards the helicopters. Without any prompting from the Captain the pilots began running up the engines, and the rotors began turning.

The Sergeant called out, "Cumpnee! Load 'em up!" The soldiers piled back into their craft.

For a moment the Captain stood abandoned on the tarmac, looking at Neville.

Neville looked him in the eye and said, "Have a nice day, Captain." He turned and walked back to the building.

In Ops, Grandjean reminded himself to breathe again. The controllers muttered among themselves. One asked, "Just who won that face-off?"

Looking at the dark screen, Grandjean said, "David, please inform the launch unit that there will be no further launches today." Then more generally, "Gentlemen, please place your current projects on hold. Initiate burns on the observer birds to maximize surveillance time over central Texas specifically, and the southwest U.S., generally." He breathed deeply. "Cal, naturally, you will continue your assignment. Please open the database file 'Davids Sling'. You will find the necessary parameters for your orbital adjustments. When you have completed your burns, please utilize your payload optics to aid your fellows' watch." He turned and walked to his desk in the corner.

"Who won?" he continued; "No one was victorious today."

Cal was getting yet another cup of coffee two hours later when he heard a vehicle pull up to the building. A few moments later the CEO walked in carrying a large briefcase.

"Good afternoon, Mr. Neville," Cal said.

Neville's face held a worried frown, as he looked the controller over. "Cal, isn't?" he inquired. The controller nodded, and Neville continued, "Afraid there's not much good about it; but thanks." He eyed Cal carefully. "Aren't you on the Bow?" he asked.

Cal sighed. "Yes, sir. How's it looking?"

"Terrible." The executive walked over to Grandjean's desk, where he conferred quietly with the supervisor. While they spoke, two more men entered the building, carrying cases. Spotting them, Neville pointed them towards the break area. They appropriated the table, carefully placing the coffee pot on the floor and opened their cases. Cal watched briefly as they began setting up what seemed to be a mobile command post. He looked at his coffee cup, then threw it into the trash and went back to his post.

Beside him David asked, "What're they doing?" indicating the visitors.

"Looks like Ops just became Headquarters."

"That's not good. You think it's going to be us then?"

"I'm a-thinking so."

Neville's voice broke in. "Okay folks, status report. Things have looked better. I've been on the phone with the President." He sighed. "The little show after lunch just plain pissed him off. He demanded our total surrender. He directed us to I quote, 'remand yourselves to the proper authorities to stand trial as war criminals.' end quote." Neville shook his head in disgust. "Little bugger's nuts, of course. But what's left of the government is supporting him." He walked out in front of the consoles where he could be more easily seen. "We've monitored a call to the JCS. The little SOB has ordered an air strike, and the crazy sons of bureaucrats are going along with it."

"How were we able to monitor something that sensitive?" one of the controllers asked.

From the break area, one of the technicians setting up the extra comm gear answered. "Because the clowns think optical cable can't be tapped, and they still think Skipjack is worth a darn."

Cal considered. "Skipjack? Isn't that the one...?"

The tech grinned and said, "Yeah. Idiots." He went on connecting cables.

Cal shook his head, and laughed to himself.

The controller waved to catch the CEO's eye. "Mr. Neville?"

Neville looked up. "Yes, umm... Isaac?"

"I'm seeing flight line activity at both Holloman and Cannon. They've both usually shut down by

now."

Neville thought. "What aircraft?"

"I think those are F-111's at Cannon. I'm afraid I know more about SF spaceships than military planes."

"Yeah," replied Neville, "Cannon has FB-111's. What is it at Holloman? F-15's?"

"Er... long skinny things. Like darts," he added apologetically.

Neville smiled and said, "Those would be T-38's. Old trainers. Air Force never gets rid of anything that still sorta works." He shook his head. "Don't worry about `em. It's the 111's from Cannon. Keep watching them. Cal." He turned to the other controller.

"Yeah, boss," Cal answered; typing frantically.

"How do we stand if it's Cannon?"

"Umm... " Cal's face brightened. "Pretty good, if we go in the next 10 minutes. Not so good, but okay for two hours after that."

"William," Neville turned to one of the communications technicians, who had long since moved the coffee table and their gear next to the control consoles. "Can you find me any radio traffic at Cannon? I need to know."

The technician stared at his screen, and answered, "I'm trying UHF ATC freqs; oughta be something there." He kept typing. "246..." he muttered. "No... maybe... Got modulated carrier. Encrypted."

Tense, Cal asked, "Can you crack it?"

"This quick? No way. But maybe we already have. I'm checking the database for New Mexico." The tech watched data stream by on his display. "Okay; got something. They usually change their keys over the weekend so's not to bother the brass. So we may not have this one yet... Bingo!"

A speaker came alive. "... confirm strike orders. On launch, go dark. Target is known to monitor electronic emissions."

"Better believe it, buddy," William mumbled to himself.

The voice from the speaker continued, "Good hunting." Another voice replied, "Thanks, ops. Figures we'd have to clean up after the army."

Neville made a chopping motion and William killed the speaker. "Isaac, how many birds is Cannon sending?" Neville inquired.

"I see four lining up on the runway now."

"That's a lot of ordnance." The executive turned to Cal. "Cal, it's time. This is something no one can order you to do. But I'm asking."

"Yeah, I know" He tapped the ENTER key on his board. "Payload deployed."

Somewhere high over head, at the edge of the atmosphere, Cal's bird detached a bundle of ceramic rods. A small retro-rocket fired, deorbiting the package. As it hit atmosphere, it extruded a long streamer similar to those used by the launcher for deceleration. The package shed velocity, then separated. Individual ceramic arrows continued their fall.

They were simple devices. Most of them had nothing more than a radio receiver hooked to servos controlling their 'tailfeathers'. Guidance instructions came from Cal's computer, relayed by the parent satellite. Of the two dozen arrows dropped, four were were special. They too had the same servos for control. But they also had very basic CCD cameras in their noses. Video was passed back to the satellite via tiny low power transmitters. The satellite relayed the data to Cal.

In Texas, Cal's computer took in the four video signals, and compiled an enhanced composite image which gave the controller a view of where the arrows were falling. He guided their fall with a joystick.

On the right projection screen the overhead image of the airbase seemed to shift. After a few seconds, the base appeared larger. The image abruptly jerked, bounced, blurred and cleared.

Cal announced, "Package deorbited, and braking chute deployed and detached. We're ballistic for now."

On the left screen, four blurred images left the ground.

Cal tweaked his joystick, and the aircraft came into his field of view. His computer analyzed vectors and fed him intercept data.

Cal called, "Tracking. Adjusting the... got `em... " He looked up. "If they stay on course, we impact in one minute. Should I deploy a second package? Just in case?"

Staring at the right screen, which now showed the aircraft, Neville said, "No. They won't do anything fancy. They think they're attacking a buncha helpless civilians."

On screen, the image from the arrows closed on the aircraft, blurred, cleared, and closed again. And again. Then... blank.

Immediately, Cal turned to the second screen. All that remained of the four bombers was a streak of fire across the New Mexico landscape. He stared.

Behind him, Neville was saying, "You got that telco hookup?"

"Long since, Mr. Neville."

"Put me through to the President."

Cal turned back to his workstation and began calling up orbital tracks, and checking potential targets. He nudged a polar orbit bird over the Atlantic a bit further west.

Neville was on the phone. "Good evening, miss. This is Billy Neville with Launcher Corp. Yes, I believe you can help me. Would please put me through to the President. " He paused. "Yes, quite serious." Waiting. "Miss, why don't you check with your supervisor; I think you'll find that it's a real good idea to put me through." Pause. "Yes, Ma'am, I expect you are recording. No, this isn't a threat. Time for threats is long past." Pause. "Neville. Launcher Corporation." He rolled his eyes. "Yes, thefolks who ran off the army." He shook his head. "Yes, Ma'am, and for the record, we just shot down a flight of FB-111's from Cannon Air Force Base, and I imagine your President would like to talk about it." Still another pause. "No, Ma'am, he is NOT my president, too. Not anymore." Pause. "Thank you; I'll hold." He pressed the speaker button and put the handset down. "Bureaucrats!" he snorted.

The speaker spoke. "Hello? Is this Mr. Neville?"

Neville held up a hand asking for silence. "Yeah, Neville here. Who's this?"

"This Gordon Hollyfield, aide to the President..."

"Then be a good little aide, and help him to the phone."

"Really, sir. That's quite impossible. The President of the United States is a very busy man. As much as he might like to, he really can't chat with everyone who calls the White House..."

"Hollyfield," Neville interrupted, "does the civil service have a maximum IQ requirement?"

"Sir? I'm afraid I don't understand..."

"I can tell. Tell you what; as soon as your security people figure out that I'm apparently calling in on one of the Pentagon hotlines," Neville grinned at his comm techs, who beamed in pride, "you can go tell the president that I called to talk about the current state of war we find ourselves in." He reached over to the set. "Have a nice evening, Mr. Hollyfield." He hung up the phone.

"America was such a nice civilization before it fell," Neville said to no one in particular.

"Hey, boss," William called. "Would you be interested in traffic between NEACP and what seems to be the White House?"

"Kneecap?" Neville replied quizzically.

"N-E-A-C-P. Airborne command post. Vice-prez is up there, just now."

"Ah, yes. Sorry; went blank for a second there." He nodded. "Put it on."

"Harry, are you out of your freaking mind?" exclaimed an excited voice. "You can't send a major

land and air assault against Texas! It's a *state* for crying out loud!"

"Not *Texas*, you imbecile!" screamed a second voice. "That goddamn Launcher Company!"

"They're *citizens*, Harry! You can't declare war on them!"

"Wanna bet? It's already done! Had to can that insubordinate SOB Pace. But General Lawler understands! He's sending the troops out..."

Neville reached over and killed the speaker himself. "Good god, he's completely lost it." He turned to the room. "Suggestions? Anyone?"

"I've got one," volunteered Cal. Everyone turned to him.

"What? Surrender?" asked Isaac.

"Nope." Cal leaned back in his chair, resting one arm by his keyboard.

"What then," inquired Neville. "I'm out of ideas. We can't fight the entire U.S. military."

"We can decapitate it."

"Beg pardon?"

"It's an army. We take out the commander-in-chief."

Shocked, Neville exclaimed, "You can't kill the President!"

Calmly, Cal replied, "I've been thinking about this all day." He glanced over at Grandjean, and continued. "Three points – You just said it yourself; he's not our president anymore. I think you're right. Next, as military commander-in-chief, he's just as valid a target as those bomber jockeys we just killed." He stared at Neville. "Yeah, people just died." Then more generally, "And you and he have both said it; it's a war now. We have to fight. And if we don't do something, we've got a couple thousand friends outside who may die." Then he pointed at the right projection, which was showing an overhead of the White House. "Besides, they started it."

In shock, Grandjean said, "That is more than three."

Cal shrugged. "So pick your three favorites, and go for it."

Neville said, "Okay, war. But assassination..."

Cal tapped a key. Behind him, the image jerked. "... Works for me." he finished Neville's sentence. "It's a defensive action, and he's a military target."

"But the civilians there!"

"And the civilians here?"

"But...!"

Cal shrugged again, and pointed his thumb over his shoulder. "Done is done. Or about to be. You can always blame me, anyway."

The entire room watched as the arrows' image closed on the White House, then went blank.

Isaac scrambled to find another view. "Got one. Lousy angle, though. Enhancing."

Through a haze of dust, they saw the ruins of a building. Surrounded by untouched grass.

"Sweet Jesus," someone whispered. Neville thought it was Cal.

Haze. Leveled rubble. Fires appeared to be breaking out; probably from ruptured gas lines. Indistinct figures appeared to be standing on the sidewalk looking at the destruction. In the ruins nothing moved, save fire and smoke.

A phone chirped. And again. Neville looked down at his mobile comm station. The hotline was ringing. Feeling empty, he answered, activating the speaker. "Neville."

"Mr. Neville," spoke a weak, wavering voice, "this is... President Roschman."

"For lack of a better term... Good evening, ...Mr. President," Neville replied.

"Let us come directly to the point. Through a very unfortunate and costly set of events, I am forced to accept the reality of Launcher's independence." The president's voice cracked. "I deeply regret what has happened, Mr. Neville."

"As do I, Mr. President."

"Do you? Really?" A snort. "Regardless, it is accomplished. We have fought a short, if definite war. Shall we discuss terms?"

Ignoring the ongoing discussion, Cal, white-faced, got up and headed for the door. He was intercepted by Grandjean.

"Cal," he whispered. "Where are you going?"

"Out," Cal replied through tight lips.

"Now? Now you go? Why?"

"Because right or wrong, good or bad; what I've done today turns my stomach and I have to throw up! Okay?" Cal shook free of Grandjean and ran to the door.

Grandjean wondered in later years if Cal's weak stomach or strong conscience were the only thing that saved them from falling into a senseless... endless, civil war waged between angry citizens and thoughtless bureaucrats.

On the other side of the dispute, the new President found things to keep himself busy. His nation was tearing itself to pieces. He set his people to salvaging what they could. He also ordered that the NSA look into communications encryption systems other than the Skipjack algorithm, which the Corporation seemed to have cracked.

Follow-up negotiations between the Launcher Corporation and a thoroughly chastised government established the government's lack of authority over the launcher, the Feds' inability to collect taxes on the Corporation, and the Corporations general disregard for the concept of regulation for its' own sake.

The Launcher Corporation also refused to intervene in the ongoing scrambling of federal computer systems, maintaining that the government would have to take up that issue with the millions of hackers around the world who took offense with U.S. Government trying to record everything.

It was touch and go, as they say, for a while. Lovers of chaos posing as proper anarchists thought they were in heaven at first. Until they began to realize that the economy was in the same shambles as the government. It took months, but cooler, saner, heads prevailed. Folks began picking up bits of their lives and moving on. Some of them moved farther than others, of course.

Departures

In somewhat different format, this was going to be the prologue to Bargaining Position. In the end... it wound up at the end of Net Assets (the novel).

Outfits like the SPS Development Company pointed the way. Launcher was perfectly willing to help paying customers along that path. As more industries developed in near-Earth orbit and the Lagrange points, the demand for resources, raw materials, grew apace. The playfully named nuclear technologies corporation Nukes R Us sponsored a lunar mass launcher; an electromagnetic counterpart to the Texas-based launchers.

But while folks waited for the mass driver's completion, some wondered why they should be hauling materials out of a gravity well at all. Especially since there was quite a collection of manageable lumps of ore already out of the well, less than three astronomical units away. Very quickly Pedersen Polymers' market exploded. Their initial design, licensed from Launcher, became a favorite among the dreamers, schemers, and idealists who had set their sights on the riches of the Asteroid Belt.

Driven by natural greed and the founders' dreams of space colonization, Launcher Corp encouraged this activity.

"All right, What's going on here? Let's quiet this down! You! Kill the music!" The two cops made their way into the midst of the block party. The younger officer took the lead in breaking up the perceived disturbance. The older man held back and considered the situation.

"Hey, Officer." A young man with blue hair walked up carrying two bottles of beer. He continued, "What seems to be the major prob?"

The younger officer frowned at the man, and replied, "Who authorized this event? Do you have a permit for this party?"

Taken aback, the blue-haired gent said, "Permit? Are you kidding? For a block party?"

"If you don't have a permit, we'll have to shut you down."

The older officer eyed his partner in mild disbelief. "Eddie, they're on private property, and they're not causing trouble. Ease up." He looked to the reveler. "What's the occasion anyway?"

"Fourth of July, of course," came the happy response.

"Eh? It's February..."

"Well, it's still Independence Day! Cheers!" He held out one of his bottles. "Have a beer."

"Sorry, I'm on duty," he declined. "Independence Day? I don't get it."

The blue-haired man beamed proudly. "Mine, anyway. I've quit my job, sold my car, and bought a Pedersen Polymer Rock Hunter." He reached into his vest pocket and pulled out a Launcher Corporation booster ticket. "I lift for the final frontier next week. Wheee!"

The younger cop looked on sternly, disapproval evident. The veteran said, "Well, congratulations, I guess. Some folk have all the luck."

Blue-Hair smiled blearily, and retorted, "Don't take luck. All you gotta do is be willing to try." He considered the other's uniform. "You oughta look into it, too. With the Feds shut down, there ain't gonna be a lotta money coming into the city for the PD." He shrugged. "You're gonna need a new job."

"Easy for you to say. Like you say, I'm a cop; not a whole lot of spare cash for an orbital ticket."

The younger cop broke in, outraged, "What is this crap?"

The veteran beat cop just said, "Shut up, Eddie."

Blue-Hair spoke up, "Hey man, you don't need a fortune. If you can buy the suit, ticket, and scrape up the down payment for the ship, Launcher'll grubstake ya for the rest."

Interested, the cop asked, "Yeah? How so? What's in for them?"

"Money. They get a percentage deal for anything you find." He took a swig from the bottle in his right hand. "Man, you're in government service; you really oughta try something with more job security."

"Could be at..."

Eddie interrupted, "Sarge, this guy's drunk and talking trash. Let's just run him in." He sneered at Blue-Hair.

The older man looked at him, clearly disgusted. He considered. Then he unpinned his badge and handed it to Eddie. "Here, kid. Go find a jaywalker to harass." He turned back to Blue-Hair and asked, "You still got that beer available? I suddenly seem to be off duty." He laughed; suddenly feeling relaxed.

"Hey, it really is Independence Day! Congrats to you, too!" Blue-Hair held out his spare bottle.

"Thanks. So who do I talk to at Launcher?" The ex-cop and blue-haired reveler turn their backs on the young cop, who stood there in shock.

"Best bet is to e-mail 'em, and..."

As always, Launcher Corp operated on the loose principles of enlightened self-interest. Neville believed that playing fairly with contributors was essential to *being* treated fairly. He tried to ensure

that his net assets always received credit where credit was due. Or cash.

"Knock knock, Bob!" Rick called from the entry to Bob's cubical.

Bob looked up in surprise, pleasure evident. "Rick! Long time, no see!" He scrambled out of his chair and grabbed his old friend's hand. He started shaking it energetically. "What have you been up to?" Looking his friend over he observed, "Nice tan. Texas obviously agrees with you."

"Dang, it's good to see you again," Rick said. "But I've got to admit, I was surprised to find you're still here. I figured you would've moved on to bigger and better things by now."

"Nah, you know how it is; wife, kids – I've got to stick with something secure, for their sakes." He shrugged. "Money still sucks, though."

"Well, whatever the reason; I'm glad I was able to find this quickly," Tom replied. "Mr. Neville asked me to bring you something."

Bob looked impressed. "Neville? The CEO? Whooo, you're in the big time, I guess." Then what Rick had said registered. "Waitaminute... Neville asked you to bring *me* something?"

Rick plastered a big grin across his face. "Yepper."

"How's he know me? And why would a a corp exec send me anything?" Bob inquired suspiciously.

"Rest easy. He knows you because I told him."

"Told him what?"

"Who invented the launcher, of course." Rick spread his hands indicating in mock bewilderment. "As much as any one person did, anyway."

Puzzled, Bob replied, "What the heck are you talking about?"

"You mean you never caught on?" Rick responded.

"To what?"

"The supersonic hovercraft. And the ground effect track being poured now. The whole launcher bit."

"Yeeeah," Bob said warily, eyes narrowed. "And...?"

"Heck, man! You invented it. Right here in this office, even. Back in '97." Rick paused and pulled an envelope from his pocket.

Bob stared back in shock. "You going to tell me all that came from that bit I sketched?"

"Yep."

"You're kidding."

Rick shook his head and said, "Why do people keep saying that?" He held out the envelope to Bob. "The boss figures there's no way we can compensate everyone; we just don't know who they all are. But *you* he knows about." He waved the envelope at Bob. "I know you more or less put the idea in public domain, but Bill figures we owe you this much, at least."

"Owes me what?"

Exasperated, Rick said, "Will you take the dang check already!?"

"Check?" Bob finally accepted the envelope. While Rick looked on, grinning, he opened it and saw the check within. And the sum. He stared in shock.

"Congratulations. From what Bill told me, I'm guessing you're rich."

Bob just looked at the check and said, "Oh my god that's a lot of zeroes."

With a look of appraisal, Rick said, "You know, we've got to get you out of this cubical. Have you ever considered asteroid prospecting? I could use an industrious partner with a new, largegrubstake." He gave Bob a grin. Bob gave his boss notice.

Orbital boosts got cheaper. By late 2003, Launcher Corporation had finished construction of their second generation, track-type launcher. With improved efficiency and a longer boost run, they were able to launch at a lower acceleration. This made for a gentler launch for passenger traffic, and other fragile cargoes.

Following Launcher's example, several other space access companies sprung up around the globe. They used everything from aircraft launched horizontal boosters to a railgun for miniature comsats. A few outfits found that the old vertical boosters still had useful roles.

The effective deregulation did have its price, though. A well-financed entrepreneur remembered an old technical short article from the 1990's describing a method of sea-launching a vertical booster without a launch pad. He bought up a collection of surplus military solid fuel boosters, and offered orbital freight at rates undercutting the competition. After a single successful weathersat launch, he offered passenger service.

Sea-Ballistic Transportation's craft certainly looked conventional enough. It was ugly as sin; an egg shaped command and passenger module was mounted atop a bundle of Thiokol Castor 4 solid fuel rockets. At any other launch "facility," it would not have seemed out of place in the slightest. But as Command Pilot John Frymeir eyed a remote view of his craft on a cockpit monitor he grimaced to himself, and felt his face flush with embarrassment. *It just ain't right*, he thought. On-screen, he watched his vehicle floating in the warm Caribbean waters, most of its length lost in the water. Its buoyancy was provide by a collar of inflatable floats. "Water wings, for cryin' out loud," he muttered. "If I didn't need the money... I hope nobody back at the Cape finds out where I'm workin' now."

A speaker woke up. "Sea-Ballistic flight P One, this is launch control."

Frymeir replied immediately, enabling the vox switch for his mike. "Poppa One to Control, go ahead."

"Poppa One, we're ready to resume countdown at T minus 30 seconds. How are your passengers doing?"

Frymeir glanced at another monitor displaying the passenger compartment. It looked as though another one had succumbed to sea sickness during the delay. "Control, Poppa One. They're still alive. But paying the price for that discount ticket."

"Say again, Poppa One?"

"Control, the freight is fine. Let's just say that by the time we hit orbit *space-sickness* isn't gonna be an issue."

"Ah, understood, Poppa One. Make sure they clean up before they disembark."

"Sure thing, boss," Frymeir replied.

"Poppa One, count is resuming. Time is T minus 29... 28..."

Frymeir flipped his mike switch to CABIN. "Folks, we lift in about 20 seconds. Hang onto your hats."

During the launch delay, techs had completed their last minute systems checks. Comm, guidance, and life support operation had been verified. Regrettably, one system had gone without a last check. The venturi seals that held the sea water out of the rocket nozzles were considered foolproof. They were simple plastic caps. Nothing could go wrong with them. Except that the unexpectedly rough water that had the passengers feeling ill had also loosened the seal on a first stage engine. The cavity had filled with salty water.

At T minus zero, a triggering impulse from Launch Control fired the fuel ignition charges on the first stage boosters. Four engines fired, and began to lift the craft clear of the water. In the fifth engine, the water caused a momentary back pressure condition. The engine blew. The blast ruptured the three surrounding solid fuel cylinders. They also exploded.

The blast killed the six passengers, one pilot, and the avaricious dreams of the company president. He decided to take an early retirement to the Caymans. Rumor has it that next of kin found him first.

The other access companies watched. They learned to balance the profit margin with the safety margin. And moved on.

Competition like this drove boost costs down. Anyone who cared to try, and could raise a stake equivalent to that needed by pioneers in America's Old West, were spreading out across the solar

system in a motley variety of of inexpensive spacecraft. These were hardly the huge, high powered Cadillacs of space long dreamed of by science fiction writers. They were usually more like inexpensive pop-up trailers.

A typical configuration sold by Pedersen Polymers was a design found on the Internet, and licensed by Launcher. The Rock Hunter consisted of a collection of rubberized nylon balloons, inflated with a rigid-setting foam, then hollowed out to the buyer's specification. This was followed up with an internal application of a fiberglass coating. Next came airlocks, portholes, and sphere interconnections, as desired. Then the collection was wrapped in aluminum foil.

Power was usually solar; though a few folks with more ready cash invested in radioisotopic thermoelectrical generators. Luna-based NRU sold the top of the line models, and spawned a secondary industry as smaller outfits bought up NRU's waste and reprocessed it. Their products were not the fancy plutonium models designed by NASA, and the old Soviet Union; instead these cheap units were stuffed with high grade reactor waste. Hardly politically correct, but recycling nonetheless. And one more step to making deep space accessible to private individuals.

Floating in the corridor intersection, Pol Kurelko twisted his head around looking for a certain sign. Spotting his target, he used a foothold to launch himself to the indicated store front.

NEW LIFE NUKES- *"One man's trash is another man's treasure."*

When he entered the office, a reception smiled and and greeted him. "Good morning, Sir. May I help you?"

Smiling back, Pol replied, "Yes, please. Have appointment with Mr. Nicastro. To talk custom job."

As Pol spoke another man entered from a back room. "Ah, hello! You must be Mr. Kurelko." He held out a hand to Pol.

Pol grasped the proffered hand. "Yes. Am Pol Kurelko. Just say Pol. You are Jan Nicastro?"

"Call me Jan." He pointed to the office from which he had come. Come on in here where we can talk." The two moved into the office.

As he entered Pol looked at the walls, which were fairly plastered with prints of twentieth century space paintings. He smiled and said, "I like. The old dreams, we make real. No?"

"A bit at a time, yes," Jan replied. "What can we do for you, Pol? You wanted a custom mod on a generator?"

"Yes. Am going to Saturn for ice. Need something special. Can make, but you have tools; and I want children later." Pol smiled again.

Jan looked dubious. "Short of using a refined isotope, there's not much we can do to improve the generators. We've kinda peaked their efficiency already."

"Not power efficiency improvement. Something different. Here drawings." Pol handed over a disk.

Jan slid the disk into his PDA and called for graphics. The first image hit the screen. "What the heck is that?" he asked. "Looks like you're plugging something into the end of a Model P."

Pol beamed proudly and responded, "Yes. Is heat core from steam rocket by Selene Ceramics."

"A what?"

"You do not know rockets? Is engine for flashing water to superheated steam for reaction drive. Has resistive heating elements. Powered by photovoltaics or nuke electric. Until now." Pol gestured to the small screen.

Jan frowned. "I'm puzzled. Why complicate matters by sticking it into the generator?"

"Is simple. Power conversion ratio better with direct heat transfer from reactor core to rocket core. Even when allow for electrical production decrease from heat loss. And will put thermal insulation in place when engine not firing." He eyed the company man prospectively. "Can do?"

"But *why* bother?"

With a shrug Pol answered, "I go far out..."

"I'll say," Jan mumbled.

"What? Never mind. I go far. Solar not practical. Need too much collector area. For long trip with massive payload need good engine. This work." Again Pol gestured to the PDA. "You have engineer data. How much to do?"

Jan considered carefully. "I'll have to review everything before I can be definite; but it'll be expensive."

Pol shook his head and spoke, "I license you building rights if you do for free."

Surprised, Jan stammered, "Well.. but..."

"I *give* all rights if you also replace old tailings core with new plutonium core," Pol added.

"Well, ah, I don't know if... This could be difficult..."

Pol interrupted with, "Is okay. Have appointment with Nukes R Us in afternoon." He smiled.

"*No*, no, no. I think we can make a deal, Mr. Kurelko."

Most of these pioneers were simply settlers looking for somewhere to live unmolested. Some were

dreamers out to build their dreams of idealistic habitats. Others were just out to make a living. Still others were prospectors looking for the big strike that would make them rich. And a few were just out to see what was out there.

It wasn't utopia, but it worked.

DJ

With apologies to Leslie Fish. I really am a fan. Seriously.

While I'm not saying where the idea for this came from, there might have actually been something like a WQRM FM 107.9, which hypothetically pissed off a possible commander of Dyarbikur AB, Turkey. Once upon a time. Allegedly.

The shaggy haired disk jockey floated in mid air, grinning as an anarchist's delight blared from his speakers. As the music faded he cut in his microphone. "Yeeoowza! That was 'No High Ground.' Leslie obviously never worked in orbit, eh?" He laughed. "Bureaucrats beware!" Then a little more seriously, "That's gonna wrap it up for me tonight, seeing as how I have an early shift coming up. I've loaded up the M-pegs, and you're on your own. If you have any requests for tomorrow's show, mail 'em to my station box, fravel at O-M-G dash one dot co dot txfp. This is WQRM, FM 107.9, the voice of the high frontier, going on autopilot." With that last, the disc jockey killed his mike, flipped a switch on an obviously improvised mixer board, and stretched his arms. His shoulder let loose with an audible pop. "So much for my ideas that free fall would be good for my joints. Too much fightin' too young, I suppose."

He pulled a plastic cover down over the control panel, then unstrapped from his stool and reached over to his bunk, little more than a large zippered cloth bag snapped to the wall. As he started to climb in, the intercom chirped. "Aw, heck. Enough already," he muttered tiredly; but he stretched his arm to the opposing wall and punched the speaker button. "WQRM. Billy Fravel here. Sorry, I'm not taking any more requests tonight."

"The devil you aren't!" shouted a tinny voice from the phone. Shit, the boss again. "Get your butt in my office at 0700 tomorrow morning." The line went dead.

"Oh, boy. Another satisfied listener." Billy killed the phone, and then the lights. "Oh-seven hundred; jeez, the guy thinks he's still in the Air Force." He pulled the zipper up to his chin, and began snoring almost immediately.

Punctual despite himself, Billy arrived at the project administrator's office at 6:59 the next morning. It was an easy office to locate; it had the only wooden door on the entire station, complete with a brass plaque- J. Edward Evans. *They charged me five hundred bucks to lift my baby transmitter, and this guy is paid to fly up a damned door*, Billy thought bitterly.

Using the mirror the Evans had mounted next to the door for just that purpose - anal is as anal does - Billy nervously checked himself out one more. He smoothed out his longish brown hair, and pushed his metal rimmed glasses back up the bridge of his nose. Now what's eating Evans? I don't think I played anything on the banned list. He peered at his rather plain face in the mirror; and tried a determined look. He added a hint of an evil grin. Satisfied, Billy rapped on the administrator's door.

Evans' voice came from within, "Enter."

Ha, even Evans couldn't swing a private secretary up here. Billy swung the door open and pushed into the office it revealed. "Good morning, Mr. Evans," he chirped, "what can I do for you today?"

J. Edward Evans was seated at a real chair, behind an earth-style desk, complete with intercom, file folders, framed photographs, and a computer. An astounding display, considering the free fall environment. There was a rumor floating around the station that all the objects were superglued to the desk top. For long seconds, Evans simply stared, grim faced. Billy willed his grin larger. The supervisor finally gave in and spoke, "Fravel, have you forgotten the company policy letter that so-generously allows you to continue operating that disgraceful excuse for a radio station?"

"Why, no sir. Is there some problem?" Billy replied with assumed puzzlement.

Evans glowered. "Fravel, with your so-called station there's always some problem. If that human resources twit hadn't decided that your little operation was good for workers' morale and productivity, I never would have let you get away with your scam." He lifted a folder off the desk. It came up with a ripping sound. Ah, not superglue; velcro. "As it is, I am forced to tolerate your amateurish efforts, so long as you follow these mutually agreed upon guidelines. Last night you failed to do so." He smiled; not a pretty sight.

Billy frowned. "How so? I shut down the live show by midnight, and I'm not doing the commentary anymore."

"The music, Mr. Fravel. You are not to play revolutionary tunes inducive of violent acts!"

"Revolutionary music? Did I play 'Yankee Doodle Dandy' again?" the DJ asked with feigned innocence. His grin spoiled the effect.

"Damn it all, you encourage people to take up arms against proper authority!" Evans near-shouted.

Almost despite himself, Billy felt his grin turn into a full-blown smile. "Ah, 'No High Ground.' Lovely tune, isn't it?"

"It promotes violence!" This time Evans did shout.

"Mr. Evans, you're just sensitive about shootings since that welder tagged you with the paintball gun. That song wasn't directed at you." The smile suddenly left Billy's face. "And you aren't going to shut me down for it. Policy letter, section six, paragraph five- unless a specific song has previously been found by the courts of the United States or Republic of Texas to be unacceptable for broadcast, you cannot ban it. Exceptions to that, which may be banned, are found in appendix B." Billy smiled again. "'No High Ground' ain't on the list. If you want it added to the banned list, call Human Resources. He crossed his arms and stared down at the bureaucrat." "Is there anything else? If not, I need to get to work. Those transmitters aren't going to install themselves."

"Fravel, you're an insubordinate punk!" Evans sputtered angrily. "Why the company chose to allow you to operate that station is beyond me. Your taste in music is execrable, and your inane on-the-air chatter is maddening. You are an amateur. This is only place you could ever succeed as a radio personality: Earth orbit, with a captive audience."

"Yes, I am an amateur," Billy agreed. "Doing it well, because I'm doing what I enjoy. If you don't have anything else for me, I need to go suit up for my shift. I'm already late." He paused, challenging the exec with his silence. Then, "Well?"

"Get out. Get to work. And remember, I'll be watching you." Evans slammed his file down on the desk. The folder stuck to the velcro, but the contents flew out. Papers drifted loosely in the air.

Fravel found his grin again. "Do have a nice day, Mr. Evans." Billy turned and left the room; floating papers fluttering in his wake like deranged birds.

Later, suited up and drifting along the tensioned plastic of an enormous grid, Billy clipped a safety line to a structural member. He slid a transmit module from the carrier he was pulling along and settled it into place in a prepared rack in the grid. He reached to his waist, and grasped a tape dispenser.

No tiny, difficult to work with, easily lost nuts and bolts for this space construction project. Instead, components and struts were taped in place. Cheap, lightweight, and easy to use, the tape Billy was wrapping around the unit was a high-tech descendant of duct tape. It was a glass fiber matrix bonded to a vacuum and heatproof adhesive. It did require a certain amount of care when applying, though. More than one technician had needed rescue by other jeering technicians after inadvertently taping themselves in place. As he worked, Billy's thoughts drifted. As a space enthusiast, he considered the object of his work.

After more than thirty years worth of delays, the solar power satellites proposed in the the 1970s were finally begun. In truth, the system benefited from the delays. Three decades is quite enough time in which to iron out the last bugs in a design prior to construction. And new technologies made the concept more workable than had originally been thought- Improved solid state microwave transmitters, the Launcher Company's cheap orbital access, even Billy's tape. Politically, the satellites became more attractive when the anti-nuclear movement drove up energy prices by shutting down fission-based plants in the U.S. Orbital Microwave Generation Facility One was a working prototype, which would test those new technologies.

The power station was an interlocking gridwork of conductive plastic, tensioned and shaped with a relatively few rigid beams, and some innovative applications of memory alloy members, variations of nitinol wire. The concept of a rigid collection of strong aluminum beams was abandoned. Though flimsy by earthly standards, such a traditional construct required far too much mass in orbit to be economically viable, even with low twenty-first century launch costs. Instead, the Web was a self tensioning 'suspension bridge' in three dimensions. With the memory alloy members and creative use of solar light pressure, it was capable of orienting itself with little need of reaction jets. Viewed from a distance, the array resembled a gigantic spider web.

The active energy collection and transmission portion of the Web was both simple and complex. Simple, in that photovoltaic cells collected light, converted it to electricity which was then fed to microwave generators for transmission. The simplicity of the system was enhanced by the use amorphous silicon cells extruded as ultrathin ribbons hundreds of feet long. With a conversion efficiency of thirty-five percent, they shamed the solar cells of the '70s.

Simplicity was also reflected in the microwave generators. Forget kludgy microwave klystron tubes, wasting far too much energy as heat- certainly the Web's engineers had. The units were solid state, and completely modular cans roughly the size of a house brick. Thousands of them eventually. Run a DC voltage in one end, and get microwaves out the other. Even the electronically configured antenna was integral to the unit.

Electricity was generated by the solar cells, and routed over the electrically conductive plastic of the lattice to DC-DC converters scattered across the Web's expanse. From there, the appropriate voltages were conducted to the generators by other conductive strands. Simple.

The complexity of the system was largely in the scale. The completed array would encompass a full square mile. The photovoltaic cells would account for nearly half of that area. Allowing for improved efficiency in airless space, they would be capable of generating over 240 megawatts. Half of that power would be available for station requirements. The remainder would power fifty thousand individual microwave generators. With a microwave conversion efficiency of nearly ninety percent, each unit would finally transmit better than 2 kilowatts watts of power earthwards.

Each of the thousands of transmitters were under computer control. The end result would be a phased array antenna of monstrous proportions. The power beam could be carefully tailored in shape and intensity, yielding useable power density at ground level without compromising safety. Environmentalists still screamed, but the beam harmed nothing.

With the frequency of the beam under careful control, more tricks became possible. As a cloud drifted across part of the earthside receiving rectenna field, the frequency of the portion of the beam passing through the cloud could be shifted; tuned for minimal attenuation by the cloud. In fact, though efficiency dropped off below seven hundred fifty megahertz, the frequency could, in fact, be varied all the way down to 10 MHz.

Billy Fravel's role in this grand scheme was that of a microwave technician. He and other techs were responsible for installing the transmitters on the Web. In addition, the senior technicians took turns manning the Beam Control room.

Installing the transmitters would take over a year to complete. But already, eighteen thousand units were in place. Billy found the repetitive nature of the work boring in the extreme, but comforted himself with his Company approved DJ hobby, and the fact that they were paying him serious bucks to play space cadet. Just thinking about it brought a smile to Billy's face.

"Come on Fravel, have some pity on us," came a voice through his headset. "Isn't it enough that we listen to your radio station?"

Oops, humming again. "Er, sorry about that, guys," he replied sheepishly. "Just got carried away."

"As usual. I suppose we shouldn't expect any better from a guy who'd play "Napoleon the Fourteenth" on his radio station."

"Oh, and you don't like my playlist?" Billy responded defensively. "I could always play that crap Evans wants, you know." *Idle threat; I'd sooner smash my soundboard.*

"Idle threat," a third tech echoed Billy's thought. "Elevator music. You couldn't stomach it either. Even your damned filk beats that. Sorta."

"Yeah, Billy; isn't it great having a captive audience?" chipped in another voice.

"Hey; you don't like it, I'll stop. Run your own damned station. I'm doing this for fun. The Company isn't exactly paying me to do it," Billy retorted.

"Calm down, Fravel," soothed the first voice, "you know we're kidding. I kinda like it. Never gets boring."

"Yeah," said the controller in Beam Operations, "and I love the fact that it drives Evans nuts. But when are you gonna start playing some rap music? You've already got country, rock, jazz, and pop covered."

Billy made a raspberry into his microphone. "Never. It ain't music. Music is comprised of three basic elements: melody, harmony, and rhythm. I'll allow that rap has rhythm; but the rest? Nope."

"But I like rap," the Beam operator responded.

"Your privilege. It may be art, but it isn't music. And I won't play it." He grinned to himself. "Unless Evans tries to forbid it, of course."

Speak of the devil. The voice of Evans himself broke in. "Gentlemen, this unauthorized conversation is monopolizing the net," he informed them. "You will discontinue these non-essential communications. And get back to work; you have a quota to fulfill."

An anonymous voice replied, "A quota we met half an hour ago, moron."

"Who said that," the administrator demanded angrily. "I'll dock your pay! Who was that?" The only response was the sound of several people laughing.

Offshift that evening, Billy relaxed in the station's bar. It was another facility despised by Evans, but condoned by the Company. In a lull during third meal shift, the bar was nearly empty save only Billy and the bartender. WQRM could be heard playing softly in the background; running on preprogrammed music. Billy sat in the dim room contemplating his empty baggie. I miss mugs.

The bartender's voice broke into his reverie. "Hey, Billy; you want another drink?"

Billy looked across the improvised counter-top at the bartender. "Nah, my ration's used up."

The bartender shook her head, blonde curls tumbling inside a hair net. "On the house, and off the record," she offered. "I heard you had another go-around with Evans this morning. And won; sort of." She tossed a baggie over the bar.

Billy caught it, and said, "Thanks." He grinned. "It beats me how you keep up with everything. And

that was in the Man's office. You got his place wired?"

The bartender spread her arms and assumed an innocent expression. "What, who me? Not that I'll ever admit." She winked. "So he still blames you for that paintball shot, huh?"

"Uh huh. Heck, I'm not the one who shot him."

"Yeah, but you did get the pistol and paintballs for KcKeever," the bartender pointed out.

"Sure, but Evans doesn't know that." Then he corrected himself, "Least ways, he couldn't prove it." They both chuckled.

"He still trying to shut down your station?" asked the bartender.

"Basically. Right now he's trying to revise the banned list." Billy frowned and sucked on his baggie. He made a face and said, "Whew, this batch needs to run through the filter again." He looked at the fluid dubiously and said, "You know; I've been up here for months, and still haven't figured it out. What do you make this stuff from?"

The bartender smiled and laughed. "You'll enjoy it more if you don't ask." She winked. "Let it be enough that it works, and it's nontoxic. Mostly."

Billy grimaced and took another sip. "I guess." He shuddered, then returned to the original topic. "Anyway, he says I'm a lousy DJ. Says I can only make it with a captive audience. Asshole." He bravely took another sip from his baggie.

The bartender pulled up closer to the counter and spoke, "Well, Billy, you have to admit; you're a radio technician, not a broadcaster. Sure you beat the heck out of Evans' elevator music. But if you're such a hot shot DJ, why aren't you doing it for money?" She shook her head. "You're good, but it's a really competitive field."

"Aw, not you, too," Billy complained. "I could make it in any radio market groundside, if I wanted to."

The bartender snorted in doubt. "Wake up, man. You're not a DJ, and you're not groundside; you're a radio tech on the Web." She shook her head again. "That's an easy claim to make up here. No one can call you on it."

"Oh, bull!" Billy retorted. "I could..." His words cut off suddenly. His face went blank, and he stared out into space.

Puzzled, the bartender asked, "Hey, what's got into you?" She waved her hand in Billy's face. "Yoohoo, Billy!"

Billy jerked, and stuttered, "H-huh...?"

"Station to Billy. Come in, please."

Distracted, Billy grabbed his baggie and pushed off from the counter. Headed for the doorway, he mumbled, "Uhhh, I've got something to do. See ya later."

The puzzled bartender called after him, "Billy, what...?" But Billy was already gone. "Geez, Louise. Now what's he up to?" She wiped off the bar and waited for another customer.

A couple of weeks after the encounter in Evans' office, Billy was scheduled for a shift in Beam Control; taking his turn at directing the efforts of the technicians installing equipment on the Web, and remotely testing the completed work. As Billy entered the control room, the technician at the control console looked up in surprise.

"Yo, Fravel. This may be a first. Showing up on time for Ops duty. What's up?"

Billy smiled and answered, "Just another step in my efforts to appear inconsistent. Gotta keep you folks guessing." He moved over to the console and strapped down the knapsack he had brought with him. "Even control room duty isn't bad, if you know how to use the time, Jimbo."

Jim snorted, and replied, "Well, us normal mortals find it incredibly boring." He held up a well-worn magazine. "And these damn old rags don't help much. Neither does missing out on vacuum pay."

Billy nodded his agreement with the latter, and asked, "What's on the agenda for today?"

"All the usual exciting stuff. Unit testing on yesterday's installs, followed by a five percent test on the complete array for starters." Jim pointed at a status display on one of several monitors in the console. "Unit testing started at six AM, and should be done by nine."

"That's it?" Billy inquired.

Jim shrugged. "Busy day... Not." He pointed to Billy's bag. "What you got there? Workin' on your next show?"

Billy grinned. "Yeah; something like that. Got a great one coming up."

Jim's face took on a dubious expression as he replied, "Billy, if you keep screwin' with Evans, you're gonna get your butt tossed off the station."

"So?" Billy countered. "Launcher is always looking for more orbital workers." He shrugged and grinned. "Anyway, it's a matter of pride now. He's challenged me."

Jim turned uncharacteristically serious. "Man you're one of the few folk who actually like it up here. You're gonna throw that away. Why not chill for awhile?" he asked.

"I'll be okay." Billy shrugged, and gave a tiny smile. "Tell you what; after today, I'll leave him alone."

"You have chosen wisely," Jim intoned.

"Yeah, right."

Jim rolled up his magazine and pushed off the console. "Well, I'm outa here. Have fun."

"Oh, I will." Billy chuckled lightly.

"Later." Jim headed out the door.

Finally alone, Billy opened his knapsack and began removing items. First came his broadcast mixer board, which he propped up on the operations console. Reaching into the bag again, Billy came up with his portable portable music deck and a tangle of cables. He connected the player to the mixer board, and plugged both into power jacks. Next, he pulled a memstick carrier from the bag. "Thing's good as a gamer's Bag of Holding." He checked titles on the music chips and loaded them into the player. "And the magic box," he said quietly, removing the last item from the knapsack.

Said box wasn't particularly miraculous to look at. A grey enclosure the size of an old pack of cigarettes, it had a tangle of cables extending from one both ends. Billy had spent several hours constructing his 'magic box.' Essentially, it was just an analog to digital converter. It accepted audio input from Billy's radio station mixer board, and translated it into digital pulses. The pulses, in turn, were fed to the data bus for the power beam transmitters' reference signal oscillator. The box was Billy's new modulator.

Billy connected the modulator between his mixing board and the primary beam control computer. It was now a part of the oscillator's digital phase locked loop circuit; adding its own controlling pulses. "Smoke test time," he announced to the the room. He plugged in the modulator's power cord. "Excellent. No smoke this time."

Billy keyed the audio player. Then he pulled over a keyboard and called up a status display for the reference oscillator. Looking at the screen, he said, "Ta Da! Modulation." He frowned and added, "Barely." He adjusted a level control on the mixer, and considered the status screen. He tweaked the adjustment a bit. Looking at the display again, he smiled. "Bingo."

Billy settled the beam operator's headset into place, and jacked it into the mixer, as well. Then he reset the player. "Which leaves configuring the antenna," he muttered to himself. "Last chance to back out, Billy-Boy." *Screw 'em. It's only a job.* He tapped at the keyboard. A screen displayed

Load new antenna configuration file?

He clicked OK, and a sidebar popped up.

Configuration files available

- 1) 5% test**
- 2) Single unit test**
- 3) Freq drift**
- 4) Maximum stress**
- 5) New Mexico alignment**

Billy slipped a RAM card into a slot on the console and played with the mouse again. The list changed.

Configuration files available

1) WORM

Billy selected the new file..

Antenna configuration file WORM loaded.

WARNING: Implementing this file will alter the current array configuration.

Proceed?

Billy responded affirmatively.

Executing

then

Completed

appeared on the screen. A red square began flashing in the lower left corner of the display, accompanied by an insistent beep. Billy pressed 'F10.'

Status Update:

NM Receiving Station telemetry indicates Beam LOS

Ground Station RSL: -127.07 dBm average

Press 'F10' to acknowledge.

Billy grinned as he acknowledged the message. "And that's thirty eight megawatts for me."

He tapped at the keyboard some more. A few quick commands caused the computer to use the altered reference oscillator to control the redirected transmitter elements. Those elements shifted their transmit frequency down to 107.9 MHz. Even allowing for the loss of efficiency caused by operating off frequency, Billy still had several million watts at his disposal. *Lessee*, Billy thought, *a three dB drop. I can live with with nineteen million watts. 'Course, peak power's gonna drop when I apply modulation.* His smile grew larger. Then continuing out loud once more, "Well, congratulations, Fravel. You're now unemployed." Billy adjusted his headset once more, and double-checked the CD's in the player. Come on, quit stalling. He flipped a switch on his mixer board, and saw the red On The Air light illuminate. Showtime.

"Good morning, America! You're listening to WORM FM One Oh Seven Point Nine. The Voice of the high frontier here on OMG-1! We're coming at you from the highest antenna in the world, at a big... umm." He called up a running status display from the computer. "...A whopping seventeen million watts. If you can't hear us, your radio isn't on!

"I'm gonna start this off with a pretty little tune called "The Light Ship." This one's dedicated to all

the folks up here busting ass to build this station. Good job, people!" As he spoke, he keyed the M-peg deck. He faded the music in as he finished talking. Billy unkeyed his microphone and grinned. It's always all right once the show starts. He looked to reassure himself that the next disc was ready, and turned to his playlist.

Six songs later, they still hadn't shut him down. *Unbelievable*, Billy thought. Then he keyed his mike again. "I've got one more special dedication here. This is for J. Edward Evans, the head mofo what be in charge up here. Just remember, boss; even in orbit there's "No High Ground." The music started.

As did the pounding on the operations room door. "Fravel, open this door now!" roared the voice of an enraged Evans.

Billy felt his heart skip a beat. *Moment of truth time, Billy. Remember, the Company can only fire me. What's left of the FCC can't even fine me. And even Evans wouldn't space me. I think.* He pulled his shoulders back, and tried to assume a confident expression. He turned up the audio monitor volume, and opened the door. "Why, good morning, Mr. Evans," Billy said, smiling. "Did you want to make a request?"

Evans came flying through the door, smashed into Billy's midsection, and knocked him back against one wall. "Shut it off! Turn it off, now! You're finished, Fravel! Do you understand? Done!" Evans screamed, spittle flying. A considerable amount of white showed around his eyes.

Two more people followed Evans through the door, albeit more sedately. One was another radio tech, Jablonski; the other was one of Evans' clerks. Both seemed to be managing the trick of looking worried and amused simultaneously.

Evans turned to Jablonski and ordered, "Shut it down. Kill it!"

Jablonski pushed over to Billy's console and looked it over. The redhead announced, "Gee, sir. I don't know. No telling how Billy has this interfaced. Could take awhile." With her back to the administrator, she grinned at the musical miscreant.

"I don't care how you do it. Turn it off!" Evans eyes were bulging distinctly now.

"We'll see, sir." As the technician hovered over the mixer, music still filling the room, Billy thought he saw Jablonski's shoulders shaking slightly. Laughter?

Finally, the the song ended; the room grew quiet. Jablonski reached down to the mixer board and pushed the power button. "Ah, that should do it. It's off the air, now, Mr. Evans." Still facing away from the administrator, she gave Billy a quick conspiratorial wink, which Billy returned.

"Bloody well about time!" Evans exclaimed. Then he launched himself at Billy once more. On impact, he grabbed at Billy's shirt and pulled himself into Billy's face. "You're fired, Fravel! No bonuses. No severance pay. You're out of here! And I'll see to it that you never work in space again!" He released Billy's shirt and pushed him back. As Billy was already against the wall, this had little effect, save that Evans launched himself into the air again. He bumped his head on the ceiling. He roared again. "And since you haven't completed your contract, you'll by god reimburse the company for

your transportation costs, you sonuvabitch!"

Still grinning, Billy shook his head. "Hey, man; I'm crazy, not stupid. I know I'm gone. Think of the past half hour as my farewell address." He watched Evans recover, and push back to the floor. "Hell, I'm already packed, even," he added.

Evans' face went from red to purple. "Out!," he screamed. He turned to the clerk. "Get him out of here! Put him on the shuttle! Don't let him go anywhere, do anything! Get it off my station!"

"Yes, sir, Mr. Evans," the clerk replied carefully. He faced Billy, shrugged, and gestured towards the door. He added a pleading look.

Nodding acquiescence, Billy pushed over to the exit. He paused in the doorway, grasped the frame, and turned back to the control room. Looking right into Evans' eyes, he said. "I'd like you to think about something after I'm gone. Despite all your denigrating comments about me, my music, and my station; for awhile there, who do you suppose was the most listened-to DJ in the country?" Billy turned and left. Behind him, he heard the distinct sound of Evans choking and trying futilely to speak, accompanied by Jablonski's laughter. As he headed for the shuttle dock, escorted by the grinning clerk, Billy smiled to himself. *It was worth it. I'm out of a job, and I'm gonna be broke again. But it was worth it.*

Two months later, Evans sat at his desk reviewing progress reports. Production was slipping, and he had yet to isolate the cause. He sighed, and cleared the screen. Enough for now. Later. He called up his mailbox display- two missives from the main office back on Earth, a letter from an unfamiliar domain, and assorted spam in the filter file. He deleted the undesired junk, and began reading the official correspondence. The first was a routine verification of requisitions. Evans copied the letter to a file cabinet, and reposted it to his department heads. The second post caused him to sit up and exclaim, "Good Lord, are they mad?"

But it was true. In an effort to realize some immediate economic benefit from the power satellite, and generate some favorable publicity, the Company had entered into an agreement with Tempo-Warren. TWC had contracted to lease 5 percent of the power beam; to be operated in what they referred to as 'Fravel Mode.' Another radio station. Evans grimaced, and read on.

Worse, the programming was not simply to be relayed from Earthside studios for rebroadcast. To gain full public relations advantage of the novelty, programming was to be led by a live operator in orbit, on the station. *Madness. Another useless body to get in the way. But Time-Warner is a well-established, respectable organization. At least we will have quality, professional programming this time. Not like that damned... anarchist.* "Hmph. 'Fravel Mode,' indeed," Evans muttered. Frowning and shaking his head, he filed and forwarded the post appropriately. He opened the remaining file.

*Hi Evans,
Just wanted to be the first to tell you. I just accepted a
wonderful job with Tempo-Warren Communications as a
DJ. A two year contract; can you imagine?
See you in a few weeks.
Billy*

"No, no, no..." Evans began sobbing quietly, leaving a trail of salty globules drifting in the air as he settled his forehead onto the velcro-upholstered desk top.

Spiders

Bargaining Position *called for some in-place infrastructure, so I started building it. Yeah, the tech looks a bit dated, but... two points. This was written before most people had heard of the Internet. And it's still a viable way to set up a network that can't synch up in real time.*

And yes, I have read Oath of Fealty.

Stu Rosenblum sat at his desk crunching numbers through the spreadsheet yet again. Aside from seven large holes in franchising, everything seemed to be adding up. He counted himself fortunate to have several greedy friends willing to take a chance on a truly bizarre scheme. As he leaned back in his chair and sipped overly strong coffee, he heard a squeak and a rustle of paper from the front door. *Mail call*, he thought to himself. He got up to check the day's delivery, grinning at the irony. "Hard copy delivery." He chuckled. "We'll see about that."

In the living room he bent to gather up the assortment the carrier had dumped through the door slot, then sorted through it all. "Junk mail, junk mail, junk mail, Visa bill, Communications Magazine... Great; should be the ad. Launcher Corp. Launch slots?" The last three envelopes he stuffed in a jacket pocket. As he walked back to his desk, he dumped the trash in a waste basket. This left a final envelope in his hand. He stared at the return address with a frown. "IRS? That's bizarre."

In 2007 *nobody* expected the Internal Revenue Service. The hacker attacks on federal computer systems five years earlier, coupled with the virtual secession of Launcher Corp and large portions of Texas had pretty well set the federal government back on its collective rear end. Between playfully corrupted files, not so playful viral attacks, and near universal default on tax payments by most U.S. citizens ("They can't make me pay if they don't know I made anything."), the central government had basically declared bankruptcy and gone to ground. Stu ripped the parcel open. Either the Feddies were ready to make another go at it, or someone had a twisted sense of humor. Or both.

He read the enclosed letter and decided it was for real; it was simply too bizarre not to be. Apparently the IRS figured out that he had sold his land in Georgia, and was billing him for taxes due. *And* ordering him to report for an audit. He chuckled, and the letter joined the other junk mail. "Yeah, right. By September 17th I should be just a little out of their jurisdiction."

He sat down and reviewed the important mail. Communications magazine was verifying that his advertisement would appear in the next issue. payment had been received. The Launcher Corporation had sent the final contract for a series of orbital boosts. After studying the numbers, Stu took a deep breath and signed. *Done*. "That's it. I'm locked in. I better get some good responses on that ad."

Four weeks later, Stu settled back into the chair at his desk, and watched his visitor seat herself. "Hope the home office bit doesn't put you off, Ms. Capshaw," Stu told the dark haired young woman. "It just doesn't seem worthwhile to rent office space when I'm lifting in three months."

Liza Capshaw smiled and brushed shoulder length hair from her round face. "Not to worry. I

understand. This is hardly going to be the headquarters for a Belt-based communications company."

"Too true." Stu reached to the desk and picked up a folder, which he opened. "Let's get started. Ms. Capshaw... Can I call you Liza?"

The woman shrugged. "Sure."

"Great. Call me Stu. If we end up working together, we might as well be on good speaking terms. And I'm an informal sort."

Liza grinned. "I've been known to outrage the occasional stuffed shirt myself."

"Right." He laughed. "Okay, you've got the basic data already. If you buy in on a franchise, you're basically operating an access node to my network."

She pulled out a note pad. "How many nodes will there be? And do you guarantee a market?"

"I can guarantee an orbital position. The market proper is going to be somewhat... fluid, naturally." Stu handed a sheet of paper to Liza. "This is the plan. I'll maintain the servers at Ceres. I've already arranged space, power, and life support with Ceres Development. I'll have another seven nodes scattered around the Asteroid Belt." He pointed to the diagram on the page. "The idea is to maintain orbits that generally keep the nodes evenly spaced around the Belt. Roughly, they'll average about 2 AU... astronomical units... apart. That's where you come in. You buy a node, you hold orbit and contact with the servers."

Liza scanned the picture. "How is the data passed? Token ring all the way around?" She frowned. "Lightspeed lag'll kill you."

Stu nodded. "That's why we don't do it. It works this way. Ceres node is number one. The others are 2 through 8, numbered clockwise. Node 2 has a microwave shot directly to Ceres, and another to station 3. The direct link, over some 2 AU, is the primary. If it should fail, station 2 relays through 3 which also has a direct radio link. Here at 4 we see the same thing. A direct link to Ceres, and a secondary to node 2."

Liza looked at the thin lines drawn between nodes. "Okay. Straight forward. But what about power levels? You're getting pretty casual about shooting over several AU."

"It isn't that tough," Stu replied. "It isn't as though we're on earth, shooting through air and nasty weather; fighting the radio horizon. Nor are we limited to little bitty reflectors that have to be small enough to fit on a tower." He smiled proudly. "If you buy in, you get an inflatable antenna, believe it or not." Liza blinked and looked surprised. Stu went on. "Sort of like the mylar balloons you buy at the florist. But only one side is silvered. The other is plain plastic, clear to microwaves. And the thing is designed to be parabolic when blown up. Inflate, spray a hardener on the back for rigidity, and mount on a simple, if oversized, equatorial mount. Like a telescope. Dial in the next station's coordinates, and do it to it."

"Nice," Liza allowed. "What do I need to know to run the radio gear? And how big is the antenna?"

Stu grinned. "How's 25 meters grab ya?"

Liza whistled. "Cool! I guess we won't be running megawatts then."

"Nope. Little bitty LOS... line of site, that is, microwave sets." He spun his chair to the desk and opened a drawer. He reached in pulled out a metal brick. It was perhaps 15 centimeters square and 30 centimeters long. "You get two of these, with an external power amp about the same size for each one. And another set for the secondary link."

"Wow." Liza reached for the brick. "That's a microwave radio?" She hefted it in one hand.

"Transmitter, anyway," Stu told her. "You also get two receivers about the same size. That gives you equipment redundancy. And the two receivers work together for path diversity."

"That's neat. I didn't know they made them so small. I thought they were huge things."

"Nah. A lot of the commercial stuff takes up a whole rack; but it's old. This days, all your forward error correction bit stuffing and QAM modulation can go on one chip. And even amateur radio operators have had microwave sets this size for a good 25 years or more." Stu smiled as Liza handed the set back. "Old established tech. Means I could buy plenty at a decent price. For you, maintenance means swapping out the entire radio and sending it back to me."

Liza scribbled notes, then looked up. "I can deal with this so far." She glanced at the network diagram again. "Okay, back here. How come station 5 doesn't have a direct link to Ceres? It looks like it always links through 2."

Stu laughed. "Uh, Liza. Granted, that's just a network diagram; but consider what's in the middle of the system."

"Oops. Sun. You have to go around. Sorry about that." She blushed in embarrassment. "Node computer, then," she said abruptly; trying to change the subject.

"Just a front end for the customers to dial in and send their data. Frankly, it isn't much more than an old fashioned bulletin board host. Your customer dials in, uploads his data as a packet, then comp sorts it and forwards to the server in another packet. Meanwhile, the server looks at mail call requests from a customer, and sends that packet to the requesting node."

"It's all packet transfer," Liza noted. "Like conference packets going by something like a QWK packet?"

"Yeah." Stu spread his hands. "Had to go that route. Kinda clumsy, I admit. But we can't exactly synch up for a realtime exchange over what could be as much as a 2 hour round trip comm link."

"Bleah." Liza grimaced. "Okay. Got it. Tell me about customer access. If I'm floating in space millions of miles out, how's he going to dial in?" She waited with pen hovering above her note pad.

"A variation on the node comms. He calls in via a VHF set. You'll have an omnidirectional antenna array for that. Or if you happen to have a nice size habitat handy... and in a few years they will... You can run a bank of modems for *real* dial in."

Liza looked thoughtful. "Okay. What with this and the tech data you sent earlier, I've got a handle on the tech side. But I'm going to want some more specific info later. Tell me how I make money."

"You sell addresses." Stu handed her another sheet from his folder. "Folks who want to comm around the Belt without their own radio systems subscribe to our network. They get an ID and a password, which lets them log on to any node. If you sign them up, you keep the money. But you buy network access from me. At reasonable rates. You'll have to agree to follow that subscriber rate chart so's not to undercut other node franchisees. They'll do the same, of course."

"Hmm." She studied the charts. "What's this secondary node stuff?"

"As a franchisee, you can expand your market by selling access to a third party, as long as he agrees to the basic rates. He won't have direct access to the network backbone links. He dials into a node like a customer does. But he runs packets for additional subscribers. Basically, it's part of how we allow for expansion. As the Belt population grows, I'll also open up more primary nodes."

"Cool." Liza stood suddenly. "I like it. It'll pay my way out there. But I need to think it over. And study the data, the real stuff. How soon do you need an answer?"

"Liza, to tell the truth, I'm running on a tight schedule. I can give you five days. Then I have to offer the franchise to someone else."

The young woman relaxed. "Oh, that's fine then. I can let you know in three days at the outside. I was afraid you wanted an definite answer today." She smiled.

"Nope, I'm not that rushed." He pointed at her chair. "But have a seat. *I* haven't decided yet."

"Oops." She sat. "Sorry."

"No prob." Stu looked into her eyes. "The tech end is no prob. Your resume made that clear. And I've already called around and asked questions about you. Word is that you're a competent comm engineer. But that raises the next question." He paused. "Why does a competent engineer with a decent fiber optics outfit want to dump that and hide in deep space? What's your motivation?"

She shook her head. "Motivations. Plural." With a slight smile, she continued. "There're several reasons. One is just that I've always wanted to go to space. I *lived* the old shuttle launches. I spent a summer before college helping at the Launcher site." Her smile faded. "My grandmother died a while back and left me some money. That's what got me thinking about the franchise... Why I can afford the buy in. And..." She frowned. "Two other things. About two months ago an OSHA inspector showed up at our company headquarters. And a month ago I got an IRS letter."

Stu grinned. "Got one of those myself."

"Well," Liza replied, "that did it. I've enjoyed the last five years. But it's obviously time to skeedaddle."

Stu eyed her appraisingly. She met his stare calmly. "Sold," Stu finally said. "Couldn't have put it better myself. If you want in, you're welcome." He held out a hand. They shook.

Three months, five states, multiple launches, and an orbital transfer later Stu stared into a coffin and wondered what the heck he thought he was doing.

"Don't, let it bother you, Mr. Rosenblum," said the cheerful crewman. "It isn't really a coffin." He laughed and raised the lid.

"You're really not helping," Stu muttered sourly. "Gods. Deep space cattle class."

"Nah. The cattle travel as fertilized ova," the crewman pointed out. He looked over the weird longjohns gracing Stu's lanky form. "You got all those electrodes in place?" he asked. "Used the conducting grease?"

"Bleah." Stu shuddered just to think of the tiny electrical contacts plastering his body. With all the equipment launches, and the cost of Ceres living space, some economies had been in order. Stu was going to be traveling as a sleeper; almost cargo rather than passenger. In a few moments he would climb into his sarcophagus/sleep pod where he would peacefully snooze through the three month trip to Ceres. Intravenous tubes would provide a saline/glucose solution mixed with coma-inducing drugs. Electrical impulses would periodically shock his muscles into mindless activity. A catheter would drain his bladder. Medical telemetry would provide a constant watchful eye, ensueing his well-being. "Bleah," Stu repeated. "And I'll probably have nightmares the whole way." He climbed into the pod, and tried to ignore the embarrassing and uncomfortable things the technician did to hook him into the system.

Said technician glanced a display and hit a switch. "Night, night. See ya in a few months." He watched Stu's eyes glaze over and close. He conducted a few more checks, then closed the pod. "Next!"

"I hate you," Stu said again. Two days on Ceres, and he still felt hung over from his three month long drugged sleep. And it had not helped in the slightest that his technician/assistant was bright and chipper. He glared weakly at Boris Alekseev.

"Is it my fault that you were in a hurry?" defended the blonde Russian. "If you had checked Ceres *arrival* times instead of Earth departures, you would have known." He smiled innocently.

Stu muttered darkly. The Russian had avoided the unpleasantness of the sleeper cruise by waiting a mere three weeks before departing for Ceres. This won him a berth on a craft boosting at a magnificent .015g, as opposed to the snail's pace .003g of Stu's ship. Boris whiled away the 40 day trip reading books, watching videos, and flirting with one of the ship's crew. And still arrived 2 days before the near-embalmed Rosenblum.

"Bleah. Did you at least spend your bonus time checking out our gear?" the engineer inquired.

"Da. Everything arrived fine. I have racks mounted and cable runs mapped out. A CDC tech will help with the pressure bulkhead ports next week." He popped the top on a can of beer. "Relax. We're in good shape. We can have the servers set up in no time. The modem bank is half done. The only tough part is setting up the microwave gear outside."

Stu brightened. That, at least, he was looking forward to. "Great. Let's plan that for next week. Just before CDC cuts our cable accesses." He reviewed a folder of papers laying before him. "This may work yet. We'll be up and running at least a month before the outer nodes come on line. Plenty of time for bug stomping."

Boris nodded agreement. No installation *ever* went completely right. He was glad to see that the engineer understood that.

Stu spoke again. "And we have customers lined up already. 200 hundred local on Ceres. Maybe a thousand through the Belt. All reservations that came in while we were en route. I haven't even started advertising yet."

Boris laughed. "And wait till they realize what an in-place network really means. We will be main comm system in Belt for years. That means electronic newspapers, letters home, business transactions... We will be rich!"

Stu grinned. "Well, that *was* the general idea." He sighed, and relaxed. Things could be much worse. He popped his own beer and joined Boris. "Let's enjoy this while we can. We'll be busy for quite a while."

"Da."

"Mr. Rosenblum?"

Stu looked up towards his office door and saw his secretary. "Yeah, Shelli?"

"Boris sent over a stack of hardcopy for you. Do you want it now?" The thin little redhead showed a pile of paper a good 10 centimeters thick.

"Ugh." Stu grimaced. "I'm going to have to talk to that boy. A born bureaucrat." He shook his head. "See if you can sort through that for the error counts on the new secondary nodes that Liza tied in last week. That's all I wanted."

"Sure thing." Shelli started back to her desk, then paused. "Oh, and I have your mail sorted. Check your in box. There's more complaints."

The engineer swore. "Wunnerful. Same thing? People reading their mail?"

"I'm afraid so, Mr. Rosenblum."

Okay, let's get the nasty stuff over with. Stu turned to his comp and opened his in box. Shelli had highlighted the complaints in red. He opened the first file. "Son of a.." He kept reading.

Mr. Ira Brubaker was one seriously unhappy man; and Stu couldn't blame him. Brubaker had placed an order for an NRU SNAP nuke. The pocket reactor was intended to be the heart of the small habitat he was building on a tiny asteroid. When he showed up at the Ceres cargo docks with identifying hardcopy in hand, he discovered he was the second person to turn up with appropriate documentation. The first person had absconded with the miniature nuke plant. And Brubaker was out of pocket by 30,000 Marks.

Stu swore again. Obviously someone had accessed the man's mail, discovered the item's arrival date, and copied the receiving docs. Under other circumstances, Stu might have told Brubaker to keep his mail to himself. But this wasn't the first such complaint by a long shot.

He rubbed at his temples and opened another file. No mail here; this was Stu's complaint tracker. He added Brubaker's data, then set a report blank. In a few moments, the computer spewed information back at him. He read, and worried.

Complaints of mail security breaches were coming in from across the system. They did not correlate to any particular access node. They did not match with any one relay. They didn't seem to have started with any new hires. There were no complaints from node-specific customers, who didn't access the Ceres servers. In short, the only common element was the Ceres installation. Stu seemed to have a crook on the payroll.

This was bad. the Ceres-based staff of Postal Web, Inc. consisted of himself, Shelli, Boris, and Mary Beth Devore, the night shift tech. They were a fairly close group. Stu considered all of them friends. And now he had to spy on them.

As the evidence of a Ceres leak accumulated, Stu had prepared a special package to load onto the servers. It looked like an enhanced message counter. And it would serve that purpose admirably, carefully checking headers on incoming and outgoing traffic. With some pattern analysis, Stu's technicians would be able to map data "rush hours" more accurately, which would allow them to schedule packet transfers and maintenance to optimize service. It would also record file accesses, keystrokes, and terminal transfers. And send that data to Stu's personal comp. From there, he could run keyword searches and see which friend had violated his trust. He felt like puking. But he installed the software.

"Damn it!" He didn't know if he should laugh or cry. The last three weeks had brought in another dozen complaints. Rumors were beginning to circulate. More than rumors, in fact. Against his better judgment, Stu had posted a system advisory that popped up in every mail customer's packet, recommending that all subscribers adopt their own information security protocols. He tried to make it sound like an added measure to protect the data once they downloaded a packet from the network. But it sounded odd, and people matched the announcement with other rumors. Much more of this could destroy the Postal Web.

On the bright side, the electronic spy was unable to connect any of the violations with his own

people. At least he felt he could still trust them. But he still didn't know where the leak was. He called out to Shelli's front room. "Shelli, has Boris come back from lunch yet?"

"Speak of the devil, and he appears," said the devil. "I just walked in. What's up?" Boris stepped into Stu's office and planted his fundament in a chair.

"What else?" Stu snorted. "Complaints."

Boris nodded sagely. "Leaks. Do we have hackers cracking our system?" he wondered aloud.

"I don't know," Stu admitted. "I want you to find out."

Boris pursed his lips and considered the problem. "Hmmp. I'm not quite sure where to start. Perhaps..."

"You can start here at Ceres." Stu punched a latch and pulled a disk from his computer. "This'll get you going." He handed the disk to Boris.

The Russian tech took the disk and stared at it. "It is?"

"Correlations between access and relay nodes and opened mail. Flow reports on packet headers. And other stuff." Stu dropped his eyes. "The other stuff is local file access records and terminal activity reports."

Boris frowned. "I'm not sure I understand. Why is..."

Stu stopped him. "The node correlations didn't. They showed no common factors regarding leaked mail and any particular node. Pretty much ruled out leaks from the franchises. The *only* common element is Ceres. All the leaked messages were on the main servers." He watched Boris carefully.

"I see." A look of sadness settled over the Russian's face. "So it is one of us."

"Well... No." Stu shook his head.

"Eh?"

"I thought the same thing. And I'm ashamed of it, but I checked. I've had a monitor on everything happening on every terminal in the place. Nobody here is doing it either." He sighed heavily. "Either we've been hacked or... Heck, I don't know. Gotta be a hacker."

Boris considered the disk in his hand. "These are terminal activity records?"

"Yeah, they're there, too."

"I will check it out." Boris' eyes narrowed. "But an external hacker should have shown up in the activity."

"Nah." Stu shook his head again. "I haven't been through everything yet. The spy I placed wouldn't look at dial in activity like that. But you could check packet headers. Match accesses with stolen data in time. It would be pretty circumstantial, but a start."

"True." Boris stood. "I'll begin immediately. With luck I'll have something by the end of the day."

"Thanks, Boris." Stu paused, then spoke again. "And I apologize. For spying."

Boris dismissed the apology with a casual wave. "No. You had to check. I'm just glad it doesn't seem to be one of us."

Instead, it was the next morning. Stu generally arrived early, preferring to settle in before Shelli showed up. This time Boris and Mary Beth were waiting in his office. Mary Beth looked pissed. Boris looked caffeine-wired. "Good morning, faithful followers," Stu greeted them. "Does your unexpected presence mean you've come up with something?"

"A dirty little sneak," Mary Beth muttered. Stu raised an eyebrow.

"She means we've very likely determined who bloody bastard is," Boris added helpfully.

"Do tell." Stu sat down at his desk. "So what've you got?"

"First, be glad we only have a few thousand customers." Boris exhaled wearily. "Never would have managed this on a major Earth network."

"Managed what, Boris?"

"We actually spent the night running the same type of correlations you did on us. But we did it with everybody."

Stu was aghast. "You're nuts! You ran a search on the subscribers?"

"Nuts. True. Too much coffee will do that," Boris agreed while Mary Beth fumed.

"Gods," Stu muttered. "If word of that got out..."

"Then we won't tell, okay?" Mary Beth jumped into the conversation. "It's like this. We did the correlations. Every message that leaked hit here, or originated here. Via the microwave beams. Record checks show that after a message that turned out to leak went through, one Eric Robertson transmitted an encrypted message." She all but hissed. "For the last three weeks, every leaked post can be matched with a Robertson crypto post. It's him. But damned if I know how to prove it without catching him."

Stu was drumming on his desk with his fingertips. "Great. Then we catch him. How?" Boris started to reply, but Stu went on. "Okay, you said microwave; right, Mary Beth?"

"Yeah; but..."

"Then he's intercepting the beams. Must be out in a spaceship. We should be able to locate him." Stu began mumbling to himself. "Beams coming in from six directions... common area... close to see 'em all..."

Mary Beth waved at Stu. "Hey, boss!" Stu looked up and she spoke again. "We thought of all that. But figure... If he's in a ship, he's gonna do near constant course corrections to stay in the beams, right?"

Stu looked blank. "Uh... I'll take your word for it."

Mary Beth rolled her eyes. "Okay. He would. And it would be inconvenient. But there's somewhere else he can put his receiver and not have that problem."

"Yeah?"

"Have a cup of coffee, boss. You aren't firing on all cylinders yet." She shook her head and Boris grinned. "Little bugger's right here on Ceres. Probably has an antenna sitting right in our field up top."

Stu smacked himself on the forehead with one palm. "Oh, sheesh! Where else?" Mutter, mutter. "At least we can shut him down easily enough."

"Oh, much better than that." An evil glint lit Boris' eyes. "We pull down his antenna, and follow the cable right to him. And then..." He stopped and smiled.

"And then what?" Stu inquired sarcastically. "Have him arrested? On Ceres?"

Mary Beth offered a devious smile. "Actually, I have some ideas about that..."

While Mary Beth and Shelli shopped for a few special necessities, Stu and Boris went sightseeing on Ceres' surface. They started in their microwave antenna field. "Thar she blows!" Stu called out over the suit radio. "Sure isn't one of our masts."

Boris eyed the intruder antenna horn atop a telescoping mast. "Sort of obvious, really. He must not have been planning to run this scam for very long."

"Nah." Stu shook his head. "Think about it. How often is anyone who's familiar with what's supposed to be here going to come up here and look around?" I just hope he ran cable and not something like a short range VHF repeater."

"If he did, we come back with a scanner and run him down that way," Boris replied. Then he stooped and lifted something from Ceres' rocky surface. "But he didn't. RG-214 I do believe."

"Not the best choice," Stu sneered, considering the cable. "Shall we take a stroll?"

"Certainly," Boris answered oh-so-politely. They grabbed the coaxial cable and pulled themselves

along.

The stroll lasted somewhat longer than Stu expected. The cable stretched for very nearly 100 meters before passing through a pressure fitting in a habitat wall. "This guy isn't exactly a radio pro, I guess," Stu observed. "His loss must be horrendous." He turned to Boris, who was reading a map. "Got it yet?"

"Yes." Boris pointed to a section of main hab on the map. "He's here. This area shows as residential."

"Excellent. Let's get inside." They headed back to an airlock.

Boris glanced back at the antenna mast. "I wish we didn't have to wait to drop that thing."

"Have to, though. If we drop it now, we'll tip the guy off."

"True." They entered the lock and cycled through. Still suited, they made their way back to Postal Web's offices. There they were met by the shoppers.

"Hello, Mr. Rosenblum, Boris," Shelli greeted them. Look what we have!"

The men looked over the purchases. All four network people shared pleased grins.

"Very good! And such wonderful color choices, if I do say so." Stu smiled in anticipation. "Come on, Boris. Let's get out of these monkey suits." They moved to Stu's office and shucked their vacuum gear. They returned to the outer office.

"Okay, Boris. Where are we headed?" Stu asked.

"Apartment 12A, Piazzzi Plaza."

Shelli looked up from her terminal. "That's actually Robertson's address," she said in surprise. "I figured he'd be more... circumspect than that." She smiled. "This is going to be easy."

Mary Beth gathered their toys into a netbag. "Good. Then let's get it done. Let's go." She led the gang out into the corridor. Shelli stopped to lock the door. Then they moved out.

At Robertson's apartment, they assumed positions. While Shelli stood back with the gear, Mary Beth prepared to knock on the door. Stu and Boris stood to either side of the entrance. Mary Beth made eye contact with everyone, then knocked. And waited.

The door opened. "Yes?" said a man's voice.

Mary Beth smiled and gushed. "Oh, hello! Are you Eric Robertson?" She beamed happily.

"I sure am," the apartment occupant replied. "What can I do for you?" He smiled at the tall brunette.

"Well," she replied, "you can start by putting your hands up." She stuck a small automatic in his face.

"Huh..."

Stu and Boris moved in. They grabbed him and dragged him back into the apartment, ignoring his confused protests. The ladies followed, Shelli closing the door.

Mary Beth eyed their target. "Why don't you have a seat on the floor, Eric," she suggested sweetly. "I wouldn't want you to get any more odd ideas."

"What is this? Are you robbing me?" The puzzled man wondered.

Stu gestured to Boris. "Go look around. See what there is to see in the other rooms." Boris left without a word. The engineer finally answered Robertson's question. "of course we're not robbing you. That would be a crime. We're here to... call it a customer survey." He chuckled. Shelli and Mary Beth joined in.

"What? I don't..."

"You see, Eric," Mary Beth spoke again. "It's like this. We're with Postal Web." His eyes widened. "And we're looking into your access procedures, just so we can..." She was interrupted by a crash from a back room.

"Bingo!" shouted Boris.

Mary Beth smiled and continued. "And we're here to make sure you're properly billed according to your actual usage."

Robertson was sweating profusely. "But..."

Boris reentered the room with the remnants of a computer. "Look, boss," he called to Stu. "He just happened to have a computer tied a microwave receiver via a cute little terminal node controller. And he's really careless. Why, I found a complete listing of which posts he intercepted." He turned to the seated figure. "That's really quite careless, you know. I'm afraid we're going to have to bill you for this."

Stu spoke up. "I don't suppose you ran a hardcopy before that comp jumped off the table?"

Boris held up paper and disk. "You know me. Always thinking ahead." He turned to Shelli. "Got your list, babe?" She nodded. "Good. Let's compare notes." The two moved to a sofa and scanned paper.

Stu considered the frightened data thief. He smiled. "You're gonna love this, bubba." To Mary Beth, "That stuff in the bag?"

"Right over there, Stu."

Rosenblum rummaged through the goodies and came up with a bottle and a rag. Whistling, he approached Robertson from behind. He poured something onto the rag, then shoved it into the man's

face. Robertson's eyes grew even wider, and he struggled for a moment; until Mary Beth pointed her tiny auto pistol at him again. Then he relaxed. Then he fell over. "Ether's neat stuff," Stu observed. "Strip him."

Robertson woke with a chill. He looked around and groaned. Not only did his head hurt, but the Postal Web folks were still there. At least he *had* awakened. He raised a hand to rub his head. And froze. His hand was a remarkable neon orange color. As was his arm. In fact...

"Jesus Christ! You've painted me orange!" he screamed.

"Well, not completely," Stu countered from his seat on the sofa. "Your face is a lovely lemon yellow. It goes quite well with the blue hair, I think." He turned to Mary Beth. "Don't you think the blue hair is a nice touch?"

She cocked her head and examined the colorful individual. "I suppose... But, Eric." She pointed rather lower down. "I'd have have that looked at if I were you. I hear that when it turns green, it can fall off." She grinned.

Robertson looked down and saw day-glow green. "What the hell. Are you people...!"

"Oh, be quiet!" Stu let the amusement fade. "I'll tell you *what*. You've been cracking mail. We won't stand for it. Here." He tossed a crumpled sheet of paper to the motley man.

"What's this?"

"Your bill. Since you've made personal use for monetary gain of several subscriber accounts, it seems only fair that you should pay for that use." He shook his head in disgust. "Your own records say you've been in over two hundred customer accounts. So over the three months you've been playing, I figure you've run up a nice bill." He referred to a sheet of paper. "50,376 Marks and 78 cents, to be exact. Payment due immediately."

Robertson's eyes bulged. "But..."

"Of course," Stu went on as if Robertson had not spoken, "I think some other folks will want to settle accounts with you, too." He held up photographs. Before and after mugshots of the thief. "So we just posted these as a system advisory, with an explanation of who, what, and where you are. Went out to every subscriber in the solar system."

Boris chipped in, "Of course the paint... That's neat stuff by the way. Indelible shipping crate markers. Even vacuum doesn't touch it. Has to wear away. Takes months." he shrugged. "Anyway, we wouldn't want there to be any misunderstandings as to who they should talk to. So we've marked you for future identification."

Robertson groaned loudly.

"Yes," Shelli put in, "we thought you'd appreciate the help." She glanced at her watch. "Umm, Mr. Rosenblum?"

"Yes, Shelli?"

"You have a 3:30 appointment. We should probably head back now." She stood.

"Oh, yes. Quite so." Stu got to his feet and was joined by Boris and Mary Beth. "Well, have a nice day, Mr. Robertson. It's been a pleasure doing business with you today." He gave a little wave and headed out the door.

Boris simply smiled and followed. Shelli paused and spoke to the terrified man. "Oh, yes. Since your account is so far in arrears, I've had to suspend your access, I'm afraid." She left.

Mary Beth stepped to the door, and stopped. She glanced down with a smirk. "And do have that looked after," she recommended. She tucked her little .32 back into a pocket and went out the door.

Robertson tried unsuccessfully to pale with fright.

As the four communicators strolled down the corridor, Stu spoke. "Mary Beth, why don't you head home and get some sleep. You've been going all day, and you still have a shift tonight."

The girl yawned. "You would have to mention sleep," she complained good naturedly. "But, yeah. Good idea. I'll see you tomorrow morning, then." As they reached an intersection she peeled off to the right. The others bade farewell.

Boris found the tech's yawning to be infectious. Reflexes betrayed his own lack of sleep. "I could do with rest as well, Stu."

The boss gave him a sympathetic look. "I know. But I want to start you thinking about fixes for this."

"Fixes?" Boris looked blank, mind fuzzy with exhaustion.

"Yeah. We're going to need crypto on all our trunks. And soon. Customers are going to want to know what we're doing about the security breach. I need something definite to tell 'em."

The Russian yawned again. "Easy. Just add encryption routine to data packeting job. Is breeze." He shrugged.

"Too easy. Set it up as an interim measure. But consider long term options. Every aspect." He turned to Shelli. "You think on it, too. What commercial packages are available? Do we want public-private key pairs? One time pads? How do we distribute keys? Electronically? Courier?" He sighed. "Y'all see what I mean?"

Boris nodded absently, already lost in thought. Shelli said, "What about individual subscribers? Most

of them use our access software anyway. Could we add a crypto routine to that package? Give them protection all the way to their comm set?"

"Good." Stu nodded approvingly. "That's the thinking I want. Look at everything."

Boris grunted negatively. "But that will choke the system; more tasks running..."

"Maybe," Stu replied. "But find out for sure. If it does, find out what upgrades we'd need to do it anyway." He glanced at his watch. "Go get some sleep, Boris. We have some time yet." The Russian nodded. Stu went on. "But I want first phase answers in a week. I don't want any repeats of this fiasco."

Shelli smiled. "I think we have more time than you credit, Mr. Rosenblum."

"How so?"

She poked her thumb over her shoulder, pointing back the way they had come. "You just made Eric Robertson one of the... excuse the phrase, *colorful* characters in the entire solar system." She grinned. "I don't think anyone'll be in a hurry to emulate him."

Even though Rosenblum never realized it, he had helped to build Belt civilization in more than one way. And the system-wide comm network was probably the lesser contribution. Postal Web's disposition of the data thief created a precedent; one which served as the basis of legal customs that allowed justice without government. Innovation has never been limited to technical fields.

Point of Honor

Some people contend that government is needed to provide a legal system to enforce contracts and punish offenders. I think that, no doubt after a shakedown period, people can work things out without the dubious assistance of government.

Lilia smiled at the eager look on Marty's face as he carefully opened the case of initiators. Like a kid with new toys, she thought.

"Look at 'em, Lilia," the young man spoke. "Cost a bloody fortune; but I got 'em." He eased one of the devices from its foam niche and held it up for her inspection. "Electrically detonated, won't sublimate off in prolonged vac exposure, and hot enough to fire excavite without a secondary charge."

"Very good, my dear," his wife replied. "But how much did they set us back? If you'll recall, we have other shopping to do while we're here."

"Ten Marks per, I'm afraid. But they'll make up for it in improved detonations." He took another look at the gadget, then began to slide it back into its position in the shipping container. It stuck slightly, and he pulled himself over the box for better leverage. With a final push it settled into place. And exploded with a sharp crack. Marty's body spasmed, then floated limply.

Lilia stared, then screamed. "Marty!"

Her eyes snapped open, staring blankly for a moment. As she brought her rapid breathing under control, she heard a sharp rap at the door. She realized what had prompted her nightmare. "A moment!" she called towards the entry. She worked an arm out of her sleep sack and found the light switch. As she struggled free of the sweat soaked bag, the knocking repeated. She straightened her nightgown and pushed to the door. Yet another set of raps began just as she opened it. "What already?" she demanded irritably.

Her visitor, a prim, neatly dressed man, blinked. "Oh, dear. Is this your night shift?" he asked in distress. "I didn't realize... I can come back later."

Lilia smiled. "No, Mr. Pappas. It is just that I don't sleep well these days. So I nap when I can. Please, come in." She moved away from the door, and waved him in.

Pappas swam through the door, a tethered briefcase floating in Juno's virtually nonexistent gravity. Inside the minuscule transient quarters, Lilia pointed him at a seat, where he strapped himself down. "I'm afraid I have rather bad news regarding my meeting with Mr. Wels," he began.

Lilia sighed. "Somehow, I am not surprised. He would not even see me. Only sent a message that Wels Munitions accepts no responsibility for mishandled ordnance." Anger flared in her eyes as she once more relived her nightmare. "Bastard. What did he say?"

"Ms. Tereshkova, he didn't." Pappas tensed as he awaited the woman's reaction.

"Didn't what?" she asked blankly.

"Madam, he didn't even see me. He refused to discuss the issue at all."

Lilia gifted him with a dumbfounded stare. "He refused to see an Arbitrator?"

Pappas shrugged. "What can I say, Ms. Tereshkova? Rather unusual, to say the least. But it isn't as though there's a law," he explained. "To judge by comments from Mr. Wels associates, it would seem that he considers himself to hold an unassailable bargaining position."

Lilia exploded in a stream of multilingual curses. When she had run down, she sat quietly for a moment considering. "Very well, then. I wish it publicly posted that Wels refuses arbitration."

Pappas opened his case and pulled papers free. "Where possible, I have begun this already, Ms. Tereshkova. The notice has been entered on the public bulletin board. One paper on the rock will print an announcement in the morning." He held the papers outlining the actions to Lilia.

As she read over them, she wondered aloud. "And the second news service? Juno has two."

"Refused the advertisement."

Lilia stopped reading and stared. "What? Refused a posting?"

"Yes," Pappas confirmed. "In this your problem rests. Mr. Wels' company owns Juno's major air and power service. It seems that many of the residents feel they are more likely to continue breathing if they assume a neutral stance in this matter."

"That unprintably censored scum!" Lilia nearly screamed. "His trash killed my Marty and he won't even apologize?"

Pappas winced. "Indeed. In fact, my brief meeting with his associate indicated that he found the very idea laughable." He shook his head. "Ms. Tereshkova, it would seem that a neutral arbitrator is not going to help at this point. I can have your bond released and returned to you by tomorrow morning..."

"No," Lilia said definitely. "I will simply have to explain the need for arbitration more carefully to Mr. Wels. I will merely have to be more insistent." She smiled grimly. "Thank you, Mr. Pappas. With luck, Wels will be contacting you soon to arrange a hearing. If you will excuse me...?"

Pappas took the obvious hint and made his farewells. Once the independent arbitrator had departed, Lilia made her plans. Easy enough, as they were quite basic. She stripped off her nightgown and stepped into the room's compact shower.

Half an hour later Lilia was moving down the main corridor in the Juno hab, en route to Wels combination office and residence. She ran through possible scenarios as she traveled. When she reached Wels Munitions, she paused before entering. Taking a deep breath she drew her gun from the thigh holster. It was nearly a museum piece; an old American Colt Trooper that had belonged to her

father. The smith who had modified it for space, including compensator ports, had been hesitant. But Lilia knew her father would have approved; he always had valued utility over wallhangers. After a quick check of the cylinder she returned the piece to her holster. She open the office door and moved in.

An administrative type spotted her immediately. "Yes, Ma'am, is there something I can help you with today?"

Lilia kept her face clear as she replied. "Yes, please. I would like to see Mr. Wels."

"I can check to see if Herr Wels is available. May I ask your name?" the woman asked politely.

"I am Lilia Tereshkova. He will be familiar with my business."

The clerk's eyes widened in recognition. She spoke hesitantly. "I believe Herr Wels will be... is out. But I'll check and leave a message."

Lilia offered a saccharine smile. "Tell Mr. Wels that is his opportunity to settle the issue permanently and have me out of his hair." When the clerk hesitated, Lilia prompted her on with a little wave of her hand. "Please." The clerk disappeared through a door. Lilia forced herself to wait with at least the appearance of patience. Across the room another clerk was quoting specs to a potential buyer. Model numbers caught her ear, and she wandered closer.

"I couldn't help but overhear," Lilia spoke up brightly when she ad caught the attention of both people. "Are you discussing the Model 10-a initiators?"

The clerk blinked and replied guardedly, "Yes, I was. They are one of our standards..."

"Oh, yes," Lilia gushed. "My husband and I purchased a batch rather recently. The basic design is very nice. Quite convenient in the field." The clerk began to relax. Lilia went on. "And the mix is quite potent. Reliable detonation of most mining charges without an intermediary charge at all." She smiled again. "Yes, quite powerful. I hear that one misfire drove the initiator shell clear through that miner's skull last week." Lilia turned to the customer. "Terrible thing, that. But prematures are going to happen when the charge has that much cavitation."

The would-be customer glanced at the clerk through narrowed eyes, then back to Lilia. "Do tell? Was that the blast at the port cargo dock?"

Another voice broke in. "Miss Tereshkova." Lilia turned to see Johan Wels, flanked by a nameless thug. "Surely you aren't trying to disrupt my business? In fact, I insist that you come over here. Now!" Wels was a short, fat man with little hair left on his scalp. Sweat beaded on his flushed face, and his jowls jiggled with restrained anger.

"Mr. Wels; how good of you to see me," Lilia said sweetly. "Does this mean you're finally willing to enter arbitration in my husband's death?" The customer excused himself and left the office.

"That was quite unnecessary, Tereshkova." Wels glared at her. "Why do you wish to frighten away

my customers?"

Lilia snorted. "This is a trick question, right?"

"Come to the point," Wels said impatiently. "Why are you here? I've already had that... arbitrator informed that there is nothing to discuss."

"True. That is why I have come." Lilia explained. "I asked restitution. You refused. I asked for neutral arbitration; you've refused that."

"And your point is?" the fat man prompted.

"So now I come to fight."

"To fight?" Wels faced showed confusion in place the anger that was there a moment before.

"Yes. I challenge you." Lilia's hand drifted to her thigh. "I prefer guns; but the choice is yours. Perhaps you wish blades. Or we could toss Wels Munitions initiators at each other; that would be quite lethal." She sneered at the tubby businessman.

Wels' thug gave his boss a questioning glance, and was rewarded with a slight shake. He acquiesced and stood back. Wels addressed Lilia. "A duel. Indeed. How... quaint." He shook his head in mock consternation. "Why ever should I agree to such a remarkable notion, Miss Tereshkova?"

She shrugged. "I wouldn't expect you to be familiar with the concept of justice, of course. But look upon it as a business decision. No expensive arbitration or cash settlements. No admission of liability. All quite to your advantage, Wels." Her eyes raked over him. "Unless, of course, you're simply a coward."

"Miss Tereshkova, you, are becoming very annoying. Leave. Do not return;, there is nothing for you here."

"You refuse?" Her eyes narrowed, and she stared into Wels' eyes. The thug tensed and started forward. Lilia jerked abruptly and said, "Boo!" The thug started, and blushed with embarrassment. Lilia laughed jeeringly.

Get out, Tereshkova!" Wels demanded angrily.

"Ta ta, Herr Wels," she replied as she backed to the door. "Any time you remember where you misplaced your manhood, you can come find me at Juno's Pallas." She slipped out the door and moved up the corridor.

In the shop Wels turned to his human guard dog. "Phillip, Miss Tereshkova has become tiresome. Send Paco to... explain matters to her."

"Yes, sir." Phillip stepped to the clerks' desk and keyed a number on the comm.

Lilia's mind raced as she headed away from Wels office. Suddenly she realized that she was approaching the offices of one of Juno's news services. She smiled and stepped inside. "Hello," she called into the empty room.

A young man came out from behind a rack of computers. "Hi! What can I do for you?" He smiled at the pretty blonde.

"I want to place an ad, please."

"Sure thing. A classified? That'll run ten words for a Mark for a week." The cheerful man slid a keyboard closer and prepared to type.

Lilia smiled and shook her head. "How much for a full... No; a two page spread?"

The man was taken aback. "Say what?"

"I wish a two page advertisement." Lilia grinned. "Is this a problem?"

"Well... Not if you have the cash," he decided. "Do you have the print, or are we going to work something up?" He thought for a minute. "Any artwork?"

"Text only, I think." Lilia slipped the arbitrator's papers from a pocket, and glanced over them. "Let's see... Let us start with. 'On March 13, 2009 Martin Brewster was killed by the premature detonation of an explosives initiator sold by Wels Munitions. Johan Wels has refused private settlement, binding neutral arbitration...'"

"Whoa!" the clerk interrupted. "What is this?"

Lilia stared into his eyes. "I wish to advise everyone that Wels Munitions is dealing in dangerously defective equipment. Do you have a problem with this?" She crossed her arms and waited.

"Not exactly. But an hour or so ago, I took an ad from from an arbitrator on the same case, I think."

She smiled. "That would be Mr. Pappas."

"Yep." The young man spread his arm helplessly. "But if he's already posting Wels, why do you want to do it, too?"

"More has happened," she told him. "And I expect more yet. The word should be spread before hand." She looked at her paper again. "Now, where was I? ... Wels has refused binding neutral arbitration, and a duel of honor."

The man's fingers locked up over the keyboard. "Urk!" He coughed. "You challenged Wels to a *duel*?" he asked in amazement.

"Certainly." Lilia smiled grimly. "He has murdered my love; as surely as if he held a gun to his head."

And because he is..." She searched for words. "... The boss of Juno he believes he is immune to justice. I plan to show that he is wrong."

"Freakin' A. I don't... A duel?" he asked again. "I thought I'd heard it all before. But settling a liability suit over guns?"

"Guns, knives, fisticuffs; whatever pleases him," Lilia said agreeably. "It seems fair. He killed Marty. I ask the chance to return the favor." She shrugged. "Will you run my ad? Or do you, too, fear the wrath of Mr. Wels?"

The newsman took a deep breath and released it noisily. "Okay. I'll run it. I may have to hop a ship as soon as the paper hits the racks; but what the hey. Let's work out your wording."

Planning the ad went quickly. In a mere twenty minutes the newsman had the typesetting complete, and Lilia had handed over payment of several grams of gold. But in that time she had another brainstorm. Juno had a Postal Web node.

Lilia knew what she wanted, but was unsure of just how to accomplish it. So she visited the Web office in person.

"Howdy, Miss," the Postal man greeted her. "I'm Jeff Lanski. Can I set you up with a mail account?" He smiled and watched her expectantly.

"Good afternoon, Mr. Lanski," she answered. "Actually, I have an account already. But I need some help with sending a letter." She reached into her pocket and removed a slip of paper.

"Well, ma'am, you can send a letter from pretty much any terminal on the rock. What seems to be the prob?" Lanski inquired helpfully.

Lilia grinned. "The 'problem' is the addressing, Mr. Lanski..."

"Aw, heck. Just call me Jeff. And you are?" he prompted.

"Lilia Tereshkova."

"Glad to meetcha, Lilia. So you're havin' a prob with addressing? Who're you tryin' to send it to?"

She laughed softly. "Yes."

"Eh?" He looked at her blankly.

"I wish to send a general announcement. To everyone." She waited for his response.

He eyed her uneasily. "Uhh... everyone who? You have a list?"

"Not yet," she admitted. "But I hope you can help me with that. I want to send my announcement to

every Postal Web customer. All of them. Private and commercial." She let her grin widen.

"You're kidding... Aren't you?" Lanski seemed doubtful. "I don't even know..." His voice trailed off. He frowned. "Yeah..." he said slowly. "I could post it as a system announcement. But the boss back at Ceres'll go nuts. That's not for private message traffic." He shook his head.

"Why not?" Lilia asked. "I will pay for the service. Hit me for the message charge for each person addressed. And a surcharge for the service. How much can it run?"

"Damn. I don't know," Lanski confided. "I don't even know how many subscribers we have..." He stepped over to a terminal and typed. He watched the screen, and continued the electronic dialogue for a moment. "Okay. I'll take the chance. Rosenblum claims to favor initiative; I'll test it. I figger we got two thousand subscribers right now. For sysadmin notice privileges, I'll hit hit you up for a Mark per head. Two thousand Marks, payable in advance, and you got your spam."

Lilia frowned in confusion. "Spam?" she asked.

"Old word. Means we'll hit everybody, more or less. Wanna do it?" He gave her an appraising look.

Lilia checked her local account balance. She had adequate funds. And with the expected return of her arbitration bond... "Yes, let us do it." She gave an evil grin and hand Lanski her slip of paper. It held the basic text of her newspaper advertisement. "This is how it should read." She cackled.

Lanski read. "Holy shi... Are you sure you wanna do this?" he asked. He considered the ramifications and shivered.

"Oh, yes," Lilia confirmed. "Those words exactly. How long will it take?"

He thought. "Gimme five minutes to type it in. It'll hit the main servers in... Hmm... light lag's around..." He looked back to Lilia. "It'll hit the servers in about an hour. After that, it's whenever people check their mail. But I figger in about 24 hours Herr Wels' is gonna be after ya."

Lilia smirked. "I suspect that in 24 hours Herr Wels will be a moot point." She pulled out a charge card and offered it to Lanski. "Shall we?"

With the Solar System-wide destruction of Wels reputation arranged, Lilia headed back to her transient quarters. She did stop briefly at the Chamber of Commerce for a habitat map. She spent a bit of time examining the map and planning the next phase of her operation. She was pleased to note that Wels had conveniently located his dome at the end of a corridor. For the sake of privacy, perhaps. Whatever the reason, it suited her purposes very well. She checked the time and decided to go get dinner. She smoothed her hair, checked her sidearm, and opened the door.

As the door opened a large figured shouldered it aside pushed into her room. a dark man she had never seen before pushed her against a wall, and slammed the door shut. He drew a knife and closed. "Okay, pretty lady. Let's do it quick and painless like." He stepped closer to the huddled woman.

Suddenly Lilia uncurled. "I don't think so," she said flatly, revealing her draw revolver. The assailant's eyes barely had time to widen in surprise before she center-punched him. The Magnum report was deafening in the small room.

Lilia yawned widely, and waited for her ears to stop ringing. She knocked away the attacker's blade, and assured herself that he was permanently harmless. Then she called room service for clean up.

"Hell, Constable," Lilia complained. "I don't know who he was." Lilia had spent a good hour explaining the dead body. She decided cops were just naturally slow. "I opened the door, he pushed in and pulled a knife. I suppose he was a rapist or robber. What was I supposed to do? Cooperate like a good little citizen?" She gave the amateur lawman a look of disgust.

"Well, Ms. Tereshkova," the cop objected, "you could have called for help and let me handle it."

"My ass," was her rejoinder. "It took you a good 15 minutes to get here after the desk clerk called. How's that supposed to help me?"

"As may be," the lawman went on, "I'll have to take your gun while I investigate this incident."

Lilia snorted derision. The watching desk clerk spoke. "That oughta be interesting to see, Clyde." He laughed at the constable. "How much of you do you think there'll be left after you try disarming her?" He shook his head. "Forget it, Clyde. Pure self defense. The lady is right. Why don't you just run home?"

The cop sputtered. "But... We have to investigate. There's..."

"Oh shut up, Clyde. And get outa here." The clerk turned back to Lilia. "You'll have to excuse Clyde. He used to be a policeman back in the U.S. and still hasn't gotten used to the real world." Back to the constable. "Bye bye, Clyde." He urged the cop out of the room.

"Thanks," Lilia told him. "I'm sorry to be stirring things up in your hotel."

"Not your fault." The clerk began following the cop out, but paused at her door. "Something Clyde didn't see fit to tell you, though." Lilia looked inquisitive. He went on. "The stiff? He worked for Johan Wels. Just thought you oughta know. Heard you've had a disagreement with the man." He left hurriedly.

Lilia nodded to herself absently. "So... Very well, then." Dinner would have to wait. She moved to the minimal closet and retrieved her bundled pressure suit. "To work Lilia," she told herself. "You have much to do." She headed out.

Early the next morning Lilia called on Pappas at his office. "Good morning," she greeted him.

"Good morning, Ms. Tereshkova." He watched her across his desk. "I hear you had just a bit of excitement last night."

Lilia started. Then, "Ah, the shooting. Yes, a sad world in which such things are necessary." She examined her fingernails and added idly, "I'm told the mugger was an employee of Johan Wels."

Pappas nodded quietly. "Yes, Enrico 'Paco' Dominguez. Essentially an enforcer. Herr Wels is an unpleasant man, who employees other such. Yet, Paco was a rather... inexperienced sort. There are worse such out there." He cleared his throat. "So. Does this mean you wish to end your suit? I have your bond ready to return..."

"Oh, no, Mr. Pappas. Whatever gave you that idea?" Lilia asked innocently. "In fact, I wish you to call Wels' office and invite him to join us again."

Pappas jerked in surprise. "To join us? In what, might I ask?"

"I wish an arbitration hearing this morning. If your calendar is clear, of course. I believe it will have to be nonbinding, naturally; since it seems unlikely that Wels will participate. But forms should be met." She smiled.

Pappas pursed his lips. "Well... I am free all day. When would you like to start?"

"Let's make it 1100," Lilia decided. "I can have my witness in by then. And it gives Wels a chance to turn me down. As I said, the forms must be met." She smiled again. Pappas shivered, unsure why.

"Very well," he said. "I will call his office with notice of the hearing. Till 1100 then, Ms. Tereshkova."

"Till then, Mr Pappas." Lilia stood and moved to the door. "And thank you."

The hearing was short and to the point. With Wels noticeably absent, and none other willing to speak for him, the one sided testimony moved quickly. Lilia herself, at first stone-faced, described the events surrounding Marty's death. Her tears were flowing by the time she finished. And impassive Pappas took notes without comment.

Next, Lilia called her only other 'witness.' "Joseph Wyndham, please step forward," Lilia called. A cheerful seeming sandy haired man came up to Pappas' desk and took a seat.

Pappas looked at him. "You are?"

"Joe Wyndham."

Lilia addressed Pappas. "Mr. Wyndham is an independent mining consultant and chemical engineer. After Marty's incident, I turned the initiators over to him for testing."

Pappas nodded in understanding. "I see, then. You were to determine if the equipment met spec?"

"Yep."

"And did it?" Pappas wondered.

"Not bleedin' likely, Mr. Pappas." Wyndham grimaced. "Lilia gave me a box of 99 initiators. I randomly pulled ten for testing. Nine of them proved to have extreme cavitation and loose pyrotechnic components. Hazardous in the extreme."

"And the tenth initiator?" Pappas prompted.

"Well, I can't rightly say if it was cavitated or not."

"Why not, Mr. Wyndham?"

The explosives expert held up a heavily bandaged hand. It appeared to be missing a finger or two. "Mainly because the bloody thing detonated as I was removing it from the damned box. Blew a finger clean off, even with my gauntlets." He compressed his lips thinly. "As you might expect, that kinda pisses me off." He sighed loudly. "Anyway, my professional opinion based on experience with the initiators in question is that they were all defective. Frankly, I expect that Wels knew it when his outfit sold them."

"I see." The arbitrator thought. "This seems rather straight forward, Mr. Wyndham. Unless Ms. Tereshkova has anything else, I think I've heard what I need from you." He looked inquiringly to Lilia.

She shook her head. "No, sir. I have nothing else at all. I think that says everything."

Wyndham got up and headed to the door. "That'll do it for me then. Give me a shout if anything else comes up."

Lilia and Pappas both rendered thanks and farewells. Wyndham departed the room, leaving the miner and arbitrator alone. Pappas reviewed his notes, adding an occasional entry. Lilia sat patiently. Finally, he spoke again. "Ms. Tereshkova, lacking any defense whatsoever from Wels Munitions, I can only find in your favor. Now, remember this is nonbinding arbitration since Wels elected not to participate." He took a deep breath. "I rule that Wels Munitions did sell dangerously defective, explosive ordnance, and that the incident that took the life of Martin Brewster was in no way the fault of Brewster or Tereshkova. The liability lies with Johan Wels as the owner of Wels Munitions.

"Further, Wels owes Lilia Tereshkova, Brewster's next of kin, 200,000 Marks as restitution. Said money to be paid immediately, unless deemed other wise by Lilia Tereshkova.

"Wels also owes Tereshkova and Brewster a public apology, and must notify all purchasers of the defective initiators of the hazard. I so rule." Pappas shook his head. "That done, Ms. Tereshkova, I'm sorry. In plain fact, this was a waste of your money. Wels will simply ignore the ruling." Then he grinned. "But your Postal Web notice may do some good. I got it this morning when I checked my mail. Well thought, Ms. Tereshkova. I believe I will include that in all future postings of rulings."

Lilia nodded. "At least it will warn other buyers of the hazard. And just maybe folks will be hesitant to do business with Wels Munitions after this." She sighed and wiped away a tear. "You can give me a copy of the ruling?"

"For what it is worth, certainly. And I'll post it." Pappas rapped at his keyboard. After a few minutes his printer extruded paper. He collected the sheets and handed them to Lilia. "There you go. I'm sorry I can do no more."

Lilia accepted the sheets, then clasped Pappas' hand. "You've done enough. The rest is up to me. Thank you and take care. I must go now." She smiled a last time and hurriedly left the arbitrator's office.

"What is she up to?" he wondered.

She headed straight down the corridor leading to Wels office. Just before she reached the dome proper, she passed through a pressure door. She closed it and dogged it down to prevent anyone else from coming through. Next, she pulled a hand-lettered placard from a pocket and stuck it in the door's window. Pressure Breach. Do Not Enter, it read. She moved on to the dome to Wels office.

Lilia steeled herself and pushed the door open. She looked around the public offices of Wels Munitions, then stepped inside. She approached the clerk from the day before. "Get Wels. Now," she directed.

"Herr Wels is not available to you, ma'am," the clerk began.

Lilia cut him off. "Make him available. Pretend your life depends on it. Because it does." She stared into the man's eyes. He flushed and left the room. Lilia waited, watching the door intently. When it opened again, it revealed Wels' companion.

"What do you want, Tereshkova?" He demanded. "You're pissing off my boss."

"Do yourself a favor," Lilia replied. "Go get Wels, then get yourself out of this dome."

The thug began to reach into his jacket. "Lady, I don't think you realize just how irritated Wels is with you..."

Lilia held up a hand. "Of course I do. But I don't think Wels appreciates my position. But he will." She unclenched her hand and showed the thug a small transmitter. "Would you care to guess how many kilos of excavite are depending upon me holding this button in?"

His eyes went wide, and his face paled. "Hey, now..."

She smiled sweetly. "Do please get Wels. I believe I have an appointment." She waggled the transmitter and the errand boy faded.

He returned almost immediately with Wels. "What is this garbage, you stupid cu..."

"Ah, ah, ah... That's a naughty boy, Wels," Lilia corrected. "The correct phrase is 'Yes, Ms. Tereshkova. What can I do for you so you won't blow my dome to hellangone.'" She turned to the thug.

"Get on the phone. Clear the entire dome. Forget files, personal possessions, whatever. Everyone has ten minutes to get out and to public pressure. After that, they can try breathing vacuum."

Fear plain on his face, he moved to comply. Wels called out, "Phillip, you idiot. Stop. You'll do no such thing." He sneered at the woman. "She's bluffing. She is here. Why would she blow her own air?"

Lilia stared at Wels. "Phillip, start calling. Then get yourself out. Herr Wels forgets that he killed off my main reason for living. I don't have a hell of a lot left." She glanced towards the thug. "Move!" she shouted.

Wels seemed to be wondering if she was serious. "You would blow the dome? Risk all those innocent lives?"

Lilia smiled. "What innocent lives? Who all was involved in selling the bad initiators? I watched one of your salesmen try to sell more of them yesterday." Her smile turned very grim. "And someone tried to sell me a coffin last night. Fortunately, I wasn't in the market. But I'll tell you what... I won't blow your dome. If."

"If what?" Wels asked. In the background he heard Phillip ordering the dome cleared.

"You have two options to decompression." Lilia handed him the arbitrator's decision. "Even though you didn't bother to come, we held an arbitration hearing. You can follow the man's instructions."

"Nonsense! I'll not toady to some wannabe judge's ridiculous..."

"Good." Lilia smiled happily. "I was hoping you'd say that. The other option is the duel." Her eyes took on a maniacal gleam. "I'm looking forward to killing you."

Wels spat. "Phillip, take care of this..." He broke off. Somehow, Lilia's odd, old fashioned weapon was in her hand. Phillip's eyes crossed as he focused on the muzzle gently touching the bridge of his nose.

Lilia asked, "Is the dome clear yet?"

Phillip nodded carefully.

"Good. Get out." Phillip began moving slowly to the door. Lilia gave her attention to Wels again. "I think we have a duel to fight."

Sweat poured off the fat man. "Phillip, get back here! What do I pay you for? Kill this... this..."

"You know, Herr Wels," came Phillip's reply, "I don't think so. The lady's demands were always pretty reasonable. You could even have made yourself out as a regular philanthropist, out to do right by the lady. Woulda been great publicity." He laughed and opened the door. "Hope you shoot better than you run a business."

"But I'm unarmed!" Wels screamed. In panic, he pleaded with Lilia. "You can't do this. I don't... You

can't shoot me if I don't..." he stuttered.

From the door Phillip spoke again. "Wels. Catch!" He tossed something to the fat man.

Wels caught the object clumsily, and peered at it.

Lilia grinned at the pistol in Wels' hands. "Looks to me like you are armed now. Shall we begin? Or should I just pop the dome and the hell with it?"

"No!" Wels shrieked shrilly. "I'll pay! I'll comply with the freaking order!"

"Well!" Lilia beamed. "How enlightened of you. Very good. I guess you get to live after all."

Wels was in tears. "Wha... wha... wha... What do I do?" he asked.

"Start by reading the order. You can deposit the marks to my local account. So far as the general notification... best you speak to the Postal Web people."

"Notification?" Wels blubbered through his tears.

"Oh, yes. You're going to be very busy for a while," Lilia guessed. "I'd better get out of your way so you can get to work." She smirked. "Here. Take this."

"Huh? What?" Wels looked confused as Lilia pried his hand open and put the detonator remote in it. She carefully slipped his thumb over the button as she slid her own off.

"There you go, Herr Wels. Now don't let that button loose until the explosives have been removed." Then in mock concern she added. "And you might want to do that rather quickly. I took the liberty of using this little situation to return my initiators for a refund."

"What?"

"Those mining charges I put on your dome last night? I used the initiators we bought from you. Had to be real damned careful. A couple even went off." She looked worried. Then grinned again. "I guess there's no telling when those charges might go off spontaneously. Well, I'll be seeing you. Ta ta," she added brightly, then hurriedly left the offices.

Wels realized he was crying again, and decided he didn't care. Then he also realized that sometime during the last few minutes he had wet his own pants. He couldn't make himself care about that either.

Lilia moved down the corridor to the port offices. Her ship should be ready to go. She had moved Marty's body aboard last night. She was lost in sad thoughts about the years to come when a voice cut through her reverie. "Ms. Tereshkova?"

She looked up and saw Mr. Pappas. She smiled. "Hello."

"I came to see you off. To say good bye," Pappas explained. "I hope you won't think poorly of all Juno for what has happened here."

She shook her head. "No. But I don't imagine it will ever be a happy place for me."

"Where do you go now?" Pappas asked.

"First, to Earth." She smiled sadly. "Once, Marty said that when he died he wanted his body dumped in the atmosphere. Like a meteor; to scatter his ashes on Earth." She remembered something, and her smile lightened a little. "Mostly, he wanted his ashes sprinkled over a nudist colony. I'll see what I can do." She shrugged. After that? Who knows?" She started moving again, and Pappas followed.

"I wanted to ask you something else," he said. "The bombs on Wels' dome..."

Lilia grinned. "Yes?"

The arbitrator looked at her oddly. "They never found any."

"I'd have been rather surprised if they did."

"But..."

"I was bluffing. I couldn't very well risk killing innocent people." She shrugged. "If Wels had really paid attention he might've noticed that I never actually said there were bombs." Another grin. "But I'll admit to strongly implying it."

Pappas looked confused. "But the initiators? And you were seen going through the lock the night of the shooting..."

"I had to get rid of the bum explosives. They were a hazard." A look of chagrin settled on Lilia's face. "And in part... I considered mining his dome. But then I decided it would be better to make him live. To live with his reputation shot. With the knowledge that his employees know he's a coward and a cheat. To live with knowing his pride is gone; washed away in tears and piss." She smiled. "That's almost enough for him killing my Marty."

They reached the port lock. Lilia locked her helmet down. "Goodbye, Mr. Pappas." She closed the visor and entered the lock.

Pappas watched her go. And considered precedents.

Simulator

Most of my NA/BP universe stories take place in Earth orbit and out. But I thought I should take a look and see what was happening dirtside in the political vacuum left by the near-collapse of the US government.

This story almost got named "Sim". The now-defunct online magazine "Doing Freedom!" published several of my stories. The editor, Sunni Maravillosa, and I had a running gag going regarding the brevity of my titles (with "DJ" holding the record). But I decided the full word would aid comprehension.

The four bangers circled around the black sheathed figure, laughing in the dark. Above them faces briefly appeared in apartment windows, then vanished. The lights extinguished.

"Yo, Mon," the banger boss spoke, pushing lightly at the strangely dressed victim-to-be. "What're ya s'posed ta be? Some kin'a space man?" He shoved again. His companions laughed louder and moved in.

The dark shape remained silent, but settled into a comfortable crouch. It raised one steel encased hand and beckoned the tribal leader forward.

The boss laughed again. "Wha'? Ya wan' me? Come on, den." Something clicked and he brought up his right hand, showing his blade. He stepped forward and began a slashing move.

Instantly his target leaped nearly vertically, and swung a leg in a roundhouse kick. A heel connected with the banger's temple. The tough dropped like a poleaxed steer. The remaining three hoodlums attacked only to meet steel. The shadowy figure side-kicked one in the chest, knocking the breath out of him and sending him staggering back. At the same time he punched and slashed out to either side with artificial claws. One banger fell to his knees while trying to hold his throat together. He failed, and collapsed. The fourth stood wavering, looking down at his shredded chest. He turned to run, and received a final metallic punch to the base of his skull. The killer turned back to the last banger. Still struggling to breathe easy, the thug stood several paces away and fumbled inside his jacket. As the gun began to clear the confining jacket, the dark form raised his left hand. Fire flashed, and thunder echoed in the alley. The last fighter fell dead.

"Game over," the figure said quietly, then faded into the shadows.

Mycroft "Mike" Maudell watched the PD crime scene team work the alley. They had two sets of sealed video cams running, and a uniform wandering about with a still-cam. Masked and gloved officers drifted around with baggies gathering up anything that vaguely resembled evidence. Mike smiled wryly and walked up to the sergeant directing the action. "Hey, Columbo!" he called.

The cop turned and spied him. "Sherlock!" he answered. Mike winced. The sergeant continued, "So whuzzup? Somebody hire you to investigate *this*?" He gestured towards the gore, and gave Mike a look of disbelief.

"Nah," Mike replied. "Not exactly. I'm running another homicide. But this looks to tie in. Anybody hire an investigator for these bangers?"

The cop, Bob Schumick, sarcastic nicknames aside, laughed. "You kidding? These're just a buncha street thugs. Guess they had a little argument with someone over jurisdiction." He shrugged. "I imagine their gang'll handle it themselves."

"Probably," Mike concurred.

"So what's this tie-in?" Schumick asked curiously.

"I heard on CrimeNET that one of these guys had his throat clawed out."

"Sure enough," Schumick nodded. "And another got slashed, and his spinal cord ripped out. Real messy." He eyed the detective curiously. "What's the deal?"

"I'm looking into the murder of Jack Petty, about 10 days ago." Mike nodded towards the bloody figures on the ground. "He suffered multiple blunt instrument traumas, and was finished off with something like a giant steel claw. That, or the perp made multiple carefully spaced knife slashes." He looked at the sergeant. "That sound like what you have here?"

"Well," Schumick began slowly; "maybe a bit. They weren't all done in that way. But the full bill of evidence will be available on the Retail Board in a few days..." He wagged his eyebrows suggestively.

"Yeah, yeah. I don't want to wait a week for your forensics buddies to muck up the data." He slid a hand out of his pocket and passed something to the cop. "So how 'bout I get a look at the scene fresh?"

"Just don't get in the way," the sergeant drawled. "You'll be wanting some of the graphics, too?"

"That'd be good," Mike called back from where he was bending over one body. "Hmmp. Somebody stove in the side of this guy's head." He straightened up and walked over to another prone figure. Gunshot; nothing else immediately obvious. He returned to Schumick who handed him a ROMcard with the scene graphics. "Thanks," he said quietly. "Tell you what, though. I'm going to go official on this one." He pulled his wallet out and fished out a credit card. "I'll pay a retainer. I want the forensics on the slash wounds and the head. Metallic traces, spacing, depth, the works. With comparisons to the Petty wounds. And I'll betcha the head injury was done with a foot."

"Don't want much do you?" the cop inquired. He took Mike's card and ran it through the reader on his comp. then he tapped at the keys. "That was Petty, Jack, age 23, died 7-12-15?"

"Yeah."

"Hmm. You want the ballistics on the gunshot?"

"Might as well. And see if it crosses to any other cases."

"Can do." Schumick fiddled a bit more. "Okay, that's gonna be three hunnerd seventeen for now."

Rest payable on delivery, not to exceed twenty two hundred. Sign here." He spun the computer around to face Mike, who tapped in a verification code to allow his account to be billed for the police service. "Must be nice to be a rich detective," Schumick joked. "One of these days I'm gonna get outa civil service and law enforcement and get into investigations, myself."

"If you wanted to solve crimes, why'd you join the police department?" Mike asked.

"Seemed like the way to go, at the time. I've been in a while. How was I to know the city would go broke and privatize investigations?"

"Live and learn."

With the financial business out of the way, Mike stared at the crime scene in growing light of dawn. "Looks like a slaughter house."

"No... You know what it looks like?"

"What?"

"Looks like the comp screen for half my kid's video games. Like SyberWarrior or Day of Doom, or something like that." The cop shivered unnoticed.

"What? We got a crazed gamer on the loose?" Mike shook his head and smiled. "Next you'll be telling me that TV drove him over the edge." Both men laughed. Then Mike excused himself and left.

A few hours later Mike was stepping through the doors of Master Sang P. Choi's Taekwondo center. Almost immediately he was greeted by a small oriental man of middle years.

"May I help you, sir?" he asked Mike politely, with just a hint of a bow in his demeanor.

"I hope so," Mike replied. "I'm Mycroft Maudell, criminal investigator. I'm looking for some professional advice concerning a case."

"Ah. An assault, I suppose. I hear of such things periodically, I'm afraid."

"Murder this time around. You are... ?" Mike prompted.

"I am Master Sang P. Choi." Then he grinned, and his eyes glinted. "But please, call me Pete." He gestured towards an open office door. "Please, come in and sit down. And tell me how I may help you. Surely I am not not under investigation."

Mike smiled and followed, speaking, "And I'm Mike. And to tell the truth, I don't know who I'm after. I'm hoping you can give me some hints."

Inside the office, Choi waved Mike down into a chair. He seated himself at a desk. "What sort of hints, please?"

Mike opened his jacket and removed a bundle of photographs. "These were taken at two murder scenes," he explained as he handed them over. "In the first incident, one man was killed. And it looked like the work of simple crazy." Choi began flipping through the pictures. "But last night, *four* men were apparently killed by the same person. The few folks who'll talk at all say it was one guy. And it only took a minute or so."

Choi finished with the pictures. He laid them flat on the desk and slid them back to Mike. "And you wish what from me?"

"I don't really know," Mike admitted sheepishly. "I just got to thinking that somebody who could do that might be into some kinda martial arts. Maybe you could guess at what forms or techniques he's using or where he might've learned..."

Choi interrupted gently. "Please, Mr.. Mike. The movies have given 'martial arts' a mystique that may go beyond what is deserved. I cannot look at photographs and say that this is the work of so-and-so who studied in the school of whatchamacallit." He smiled again. "Besides, if that were on a computer screen rather than asphalt streets, I would think it the arena of a neo-ninja."

Mike blinked. "A what? Aren't ninjas mythical..."

"Not exactly. But I speak of *neo-ninja*, cyber-fighters."

With a look of skepticism Mike asked, "And what, pray tell, are neo-ninjas?"

Choi sat back in his chair and folded his hands. "Neo-ninja are today's pinball wizards. Super video game jocks." He paused, and Mike jumped in.

"Pinball wizards?" he asked. "I don't follow you."

"Sorry. A classical reference. No doubt, you are quite familiar with the wide variety of computer games which stress some sort of combat..."

"Sure. Like SyberWarrior. In fact, somebody at the scene this morning was joking about that. But..."

"But, Mike; those games are very basic, children's toys. Even the elaborate VR booths some folk have installed in their homes do not go all the way. But some hard-core gamers have."

"And?"

"The most advanced games aren't sold in any stores. They run on anonymous servers on the Net. They support the most advanced virtual reality sims you'll find outside of a military simulator. Anyone can log in, for a fee. You can merely watch on a standard monitor, or you may sit in the audience in a virtual arena if you own a simbooth. But to compete... You need a simbooth, a holohood for additional visual overlays, and a full feedback controller suit. It's all quite expensive. And the bandwidth requirements are horrendous. But to the gladiators in the arena it is as close to real as one can get." Choi closed his eyes momentarily. "I am told that sometimes the experience becomes so real that a neo-ninja suffers psychosomatic equivalents of his injuries. There are rumors of deaths, though none have

been substantiated."

"Good gods," Mike spoke, stunned. "But why? I suppose I can see the attraction of excitement without real risk; but the expense... This doesn't sound cheap."

"It isn't," Choi agreed. "It is very expensive. Several thousand Marks, let alone dollars. And the best ninja are programmers, as well. What they lack in physical skills, they can sometimes patch around with software. They give their virtual selves improved reflexes and strength. There is even a fad for 'magical' weaponry; fireballs and such." He sighed. "But there is also much money to be made. There are prize purses built up from entry fees. And gambling on the side. In theory, a cyber-fighter can become rich. And it is legal."

Mike looked Choi over appraisingly. "You seem to know quite a bit about all this."

"Mr. Maudell, every few months I have a student drop out of the course because he's become convinced that Taekwondo is going to give him the needed edge in the VR arena. It hurt my pride that a computer could give my students what I could not. So I learned. And what I learned was that the weakness was in those students, and not myself."

Mike breathed deeply and sighed. "Then you think this is the work of a neo-ninja?"

"Oh, no. This is something real. The neo-ninja are essentially cowards. They can only deal with imaginary combat. Real risk, such as a fight in the streets," he pointed at the stack of pictures, "frighten them. If they wished *real* risk there are *non-virtual* arenas in which the spilled blood is all too real." Again he sighed. "No, Mike, I do not believe I can help you."

Mike stood and offered the Master his hand. "Directly, perhaps not. But you've given me valuable information and a clue as to where to look next. Thank you." The men said their farewells, and Mike went on his way.

More specifically, he went home; where he logged onto the Net. He accessed his main infoserver and ran some keyword searches for sites.

And met with immediate success. Arena, neo-ninja, and game gave him VRP:Gladiator.com/gate. He dove in and hit the site. The homepage gave him the skinny on the routine. /gate got him to the main menu from which he could access the gaming statistics for free, or purchase admission admission to the games. Admission was billed at several rates for spectators, dependant upon their viewing mode. Flat video was nearly free, while at the other end of the spectrum was full sim booth "bleachers" participation for three Marks per minute.

Admission for the cyber-fighters, or Gladiators as the management called them, was higher. A lot higher; max bandwidth full sensory-feedback participation ran nearly twenty five Marks per minute. Mike was flabbergasted until he saw the draw. If he could last at least three minutes, even the loser could earn a share of the overall pot, which was based on the cover charge.

A big name competitor with a large following stood to win thousands from the official pot alone. Mike considered the off-page betting possibilities, and whistled. This was serious business, and the

ninja had to be sharp to stay ahead of their competition.

As he studied the site pages an idea that had started to form as Choi spoke jelled. Mike decided there were at least two reasons for a cyber-fighter to hit the streets. A warrior might have completely lost touch with homepage and no longer differentiated between the computer arena and the alleys. Or... Mike considered Choi's assertion that the ninja were cowards. Or maybe one thought he was hot enough that gangbangers were no real threat.

Maybe they were practice dummies.

Mike decided he needed to see these neo-ninja for himself. He checked the schedule on the homepage, and found a big billing tag team match coming up in a few hours. Good enough. He logged off and considered. "VR. Definitely," he mumbled to himself. "Might as well go all out. Be able to wander around while I'm 'investigating' this stuff." Mike frowned. "Now where the devil did I stick the hood and gloves?"

He got up and searched his apartment. He finally found the desired interface hardware on a closet shelf. He spent the next few minutes plugging everything in. Then he configured his surfer to accept the VR driver data.

The VR display hood and controller gloves were years obsolete. But since he never played games or visited the imaginary worlds in the Net, Mike had not bothered to upgrade to even a sensor pad, much less a simbooth. With an internal projection screen in the hood, and no tactile feedback in the gloves, his gear was little better than that available at the turn of the century. But it would serve so long as he was a simple spectator.

He had just completed the setup when his phone warbled shrilly. He tapped accept and the comp screen lit again. "Maudell here," he directed to the phone display.

"Hey, Sherlock," Sergeant Schumick spoke from the screen.

Mike shook his head, smiling. "How many times do I have to explain that it's *Mycroft*, Sherlock's smarter brother?" He chuckled. "So what's up, Sarge?"

"Forensics lab ran your evidence right off, since you're prepaid. And we got some stuff for ya."

"Well?"

"Well, nothing," Schumick chided. "Fee's two thousand eighty five dollars. Run your card, and I'll zap the data to you."

"Sheesh," Mike muttered. "And people think *I'm* mercenary." He grinned and typed an access command. The comp transmitted his account data to the police department's accounting computer.

Onscreen, Schumick glanced down. "Got it. And here's yours." A window open on Mike screen and told him he was receiving several megs of data.

"Alright. So what did your guys come up with?"

Schumick glanced at a set of notes. "You'll find the details in the dump; but these're the high points. Slash wounds were inflicted with carbon steel blades. Consistent spacing indicates two sets of rigidly connected blades, three edges to a set. Spectro exam says the same blades did your client as did the bangers."

Mike nodded. "Good. I think I have a lead there. What else?"

Schumick checked his notes again, and went on. "You were right about the head wound. Looks like a boot heel. Again, consistent with the blunt trauma on your guy. Bullet... Would you believe .38 Special?"

"Huh. A traditionalist. A nice trait in a homicidal maniac, I suppose."

"And that links to another case, too. 'Bout five months ago somebody blew away another banger. Isolated, close range shooting. We figured some would-be mugger bagged a mugger. No big deal. His gang..." The cop looked down again and frowned. "...The Sacred Saints of Solitude... jeez, the names they come up with... put up a nominal reward for bagging the shooter." He looked back up grinning. "Anyway, the caliber and rifling match in both shootings. So you stand to collect on two cases, if you nab this psycho."

Mike laughed. "Yeah, right. I can see strolling down the alleys asking for the Sacred Saints to cough up money." He paused and thought. "Anything in there on the original shooting? Any cuts or thumps on that guy?"

The sergeant shook his head. "Nothing on file. Didn't get much attention, being just another banger banged. And the corpse is long torched. So no joy there."

"Ah, well. Just a thought. Thanks for the quick work up on this." Mike checked his watch. "I gotta go. I've got a lead to check this evening, and I want to sort through your data first. Catch ya later, Columbo."

"Later, Holmes." The screen blanked.

Mike got up and walked into his kitchen. He figured now was as good a time as any to get dinner. He could eat and read. A quick perusal of the refrigerator and cabinets showed little but sandwich makings. "Wunnerful," he muttered. "Peanut butter again." He looked in the cooler again. "And one beer. About time to go shopping again."

Short minutes later Mike eased back down into the chair at his comp, peanut butter sandwich and beer in hand. He sipped the beer, bit into the sandwich, and set them down on a pile of old hardcopy. He chased his mouse around the desk and called up BeatBrowser, a database search tool for reading standard PD report formats.

An hour later, the sandwich was stale, the beer was gone, and Mike was convinced that the perp was a neo-ninja. One banger had been killed with a single well placed high kick to the temple. Another had

been killed with a single slash of that weird steel claw. The gunshot victim at that scene had also received a single kick to the sternum; half his ribs had been broken. It was a wonder that he had been able to draw the pistol the cops found clutched in his fingers. Unless it was out first; which was even more suggestive of a very aggressive predator, given that he had died without firing a shot.

The report on his own client had shown similar results. Both knees smashed by apparent kicks, and a single finishing slash to the throat.

"Damn. And he was a pretty decent athlete, too. Pro boxer and all." Mike thought about that. Petty had been a sort of gladiator, and on his way up according to his manager who had hired him. Maybe the perp figured that made him fair game, or a worthy, if unarmed, opponent. Mike picked up the sandwich, then grimaced and tossed it into the waste basket. He was wondering if he should bother with another when his computer began chirping at him. He checked the time; the ninja match would begin soon.

He cleared BeatBrowser, and hit the Net. In a few minutes, he was at the Arena gates. He made his viewing selection and settled the old VR hood onto his head. With the display still flipped up, he pulled the gloves onto his hands. "What a damned clumsy clunker," he told himself. "Maybe I should go ahead and at least get a scanner pad and a new display. This sucks." He wiggled his fingers clumsily in the thick gloves, then swung the display down. He snapped his fingers...

...And was sitting in a small, crowded stadium. He stared about at the surrounding people and wondered if they were all actually logged in; or if they were just sims, part of the experience he was buying.

A voice boomed out, "Ladies and Gentlemen! Welcome to tonight's main event." Mike turned back to the arena floor, where two garishly clad men had appeared. "Our reigning tag team champions... Thrasher! ...and Mugwump!" *Sheesh, what names*, Mike thought to himself. The two combatants seemed to be dressed in particolored tights and silly armor straight out of some low budget post-apocalypse movie. The announcer continued, "...will do combat with their challengers... Lord Death!" Another man in some sort of spiked and studded red bodystocking blinked into view. "...and his partner, who is well known to us all as the reigning single combat champion and is for the first time ever teaming up with a partner... Fireblade!" The crowd went nuts. The screaming and cheering were loud enough that Mike reached up to drop the audio gain.

The object of the crowd's adoration was, for this venue, remarkably unassuming. Where the other ninja seemed to be editing their virtual selves to appear huge, Fireblade seemed to be of average height; maybe five foot ten inches, and around a hundred and sixty pounds. His clothing was more restrained, as well. He was garbed in old black BDU pants, combat boots, and a black turtleneck pullover. Also unlike the others, his face was concealed by a black ski mask. Almost normal, except for the gauntlets.

Fireblade's hands were settled into large metallic gauntlets which reached nearly to his elbows. Six inch blades extended from the knuckles like talons; no doubt providing that part of the cyber-warrior's nom de plume. The fire aspect was not evident.

Again the announcer bellowed. "Our honored gladiators tonight are competing for one of the larger purses we've offered. The survivors will share in a prize of ten thousand Marks!" Mike whistled. At

today's exchange rates that certainly was not chump change.

"Warriors! Make ready!" Below on the combat floor, each team conferred. Finally, one of the particolored barbarians stepped out to the ring center where he was joined by Fireblade. Fireblade bowed slightly to his opponent, and was answered by a wave of the man's... *A short sword?* Mike realized, dumbfounded.

The remaining combatants withdrew to opposite side of the ring. The announcer called out, "Ave Caesar, morituri te salutant!" *Somebody hadn't done their homework*, Mike decided. That should have been said by the gladiators. "Begin!"

Below, Fireblade settled into a slight crouch, arms held up in something resembling a boxers stance. The other... *Mugwump?* ...took a deep breath... then raised his sword and charged. The range closed almost instantly. The barbarian swept the gleaming blade down diagonally in an attack intended to rip the black figure's ribcage apart.

Fireblade threw up his left arm, bracing with his right and blocked the sword on his gauntleted forearm. Mugwump seemed numbed by the impact, and paused. 'Blade punched up with his right talons and caught the sword between his own set of knives. He twisted and the sword flew out of Mugwump's deadened fingers. The crowd oohed in happy terror. Fireblade executed a snap kick to his disarmed foe's chin. The neo-barbarian dropped to the floor. The man in black knelt on one knee and punched, sinking his claws into Mugwump's forehead.

"Jeezus Keerist!" Mike realized what he was seeing and suddenly flipped his visor up. Cursing the clumsy VR gloves he pounded at his keyboard. His comp began recording all the action. He swung the visor down again.

Mugwump's violated body had vanished. Fireblade stood alone in the ring beckoning to Thrasher, who was holding back at the boundary. The black clad man waved again, and Thrasher stepped forward. He seemed to be shouting something at Fireblade but the roar of the audience drowned it out. The cheerfully dressed barbarian drew *two* swords. The crowd's ambient noise level crept up. Mike cranked his gain down another notch. Thrasher walked towards his opponent, swords flashing in a showy display. At one point the blades crossed slightly. Fireblade reached out with a steel-encased hand and grabbed the top blade. He forced both swords down. Thrasher's eyes bugged out as he watched 'Blade's other hand sweep in from the side. The talons tore his throat out. The backhand return almost took his head off.

Mike felt something rising and realized it was his gorge. He flipped the hood display and breathed deeply, hands propped on the desk. "Gods! These people are all crazy!" He turned to the monitor, leaving the hood display out of the way. The more complete experience of the VR was more than he wanted to deal with. Onscreen, A befuddled Lord Death was joining his partner in the ring. A scantily clad beauty also appeared and clasped their hands as the announcer boomed again. "Ladies and Gentlemen. The Victors..."

"Wait!" Fireblade had spoken. He shook his hand free of the girl's grasp. "Not yet."

"Excuse me?" boomed a surprised announcer.

Fireblade waved the girl back. Baffled and a little scared, she complied. Fireblade's left arm swung up and pointed at his partner. A softball-sized ball of fire erupted from his gauntlet and struck Lord Death, who collapsed to the floor. He lay there, his chest a smoking ruin, then vanished. The remaining neo-ninja looked towards the imaginary ceiling and spoke. "Now, you were saying?"

Mike disconnected.

"He's nuts! He's a freaking psychopath!" Mike stared at the blessedly blank screen in horror. "His buggerin' MO is his bloody arena technique!" Then, "Oh Jeez..." His hands flew across the keyboard, and he swung the hood down.

Yes! Fireblade was still present, basking in the adulation of his admiring public. *Ghouls*, Mike thought. This time Mike had paid premium rates to get a simulated presence right at the edge of the ring. He pushed forward, and called to the ninja, "Fireblade! I'd like to talk about your technique! Yo! Scissorhands!" That got his attention. Fireblade's masked face spun towards Mike.

"Who're you?" he demanded. He stepped forward menacingly.

"Mike Maudell, criminal investigator in Colum..."

"Sh... Disco!" Fireblade shouted, making a chopping gesture with one hand. And abruptly blinked out of sight.

"Dammit!" Mike flipped the hood back again and disconnected himself. "That was freaking brilliant, 'Sherlock'," he yelled at himself. "Get rattled by a sick show and give yourself away why not?" He slammed his fist into the desktop. He ripped off the stupid gloves and hood and tossed them to one side. Once more he rapped at the keyboard, hitting the arena site yet again. Connected, he requested a telecon with customer service. And waited.

It took ten minutes, but he got a human.

"Yes, sir; what can I do to help you?" inquired the rather gawky looking young man on the screen. *My gods*, Mike thought. *A stereotypical computer nerd is running this sick garbage.*

Aloud, he said, "Hi, I'm a new fan of Fireblade's. Just saw him for the first time tonight."

"Oh, yes! Wasn't that a fine display he put on," enthused the bespectacled young man.

"It certainly made an impression on me," Mike endorsed honestly enough. "And I'd really like to tell him so myself. Could you possibly give me his Net address or even a phone number?" Mike asked hopefully.

"I'm afraid that just isn't possible..."

"I realize you must get a lot of requests like this," Mike interrupted. "But I'd really appreciate it ever so much. And I could reimburse you for your time, of course," he hinted.

"I really am sorry. But I can't. It isn't that I don't want to be of service, but we never have any of the Gladiators' personal data. I have no idea who Fireblade might be in the real world."

"What?"

"We operate on total anonymity," the service rep explained. "Fireblade pays his entry fees with online secure cash. It's untraceable. And all our prizes are paid out through guaranteed exchange deposits through an online bank in Honduras." The rep shrugged. "Due to the nature of our... entertainment, many competitors and spectators alike are more comfortable with this private arrangement."

"Damn. Is there no way at all of reaching him?" Mike pleaded. Is he going to buy this corny act? "Please? I really am willing to make it worth your while." He held up his credit card.

The young man stared nervously. He licked his lips and pushed his glasses back up the bridge of his nose, and steeled himself. "Well... there is *one* thing you could try," he admitted.

"Yes?"

"Do you know much about how the Net operates? Technically?"

"Not really," Mike confessed in complete honesty.

"Well, it's what we call a packet switched system. It's an old-fashioned sort of system, but the open architecture is wonderful for allowing almost indefinite expansion and access. Now, it isn't the best security oriented system because..."

Mike interrupted by clearing his throat rather obviously. The rep blinked, then, "Anyway, when a competitor hooks in, he isn't wired directly. The data to and from him goes in bursts... packets. For most applications this isn't a problem, but a cyber-ninja needs a lot of feedback to fight well. So we simulate a constant connection by holding the same packet routing through the bout. Back in the nineties this wasn't exactly possible because..." Mike hurrumphed again. "But this means that we maintain an IP address record throughout a match. And it includes the competitor's originating server." He beamed proudly.

"Which means?" Mike prompted. He added an ingratiating smile for effect.

"That means we have the address of Fireblade's Net connection computer. With that, you can find out who runs that server. And they could get you Fireblade's Net address."

"Well, it sounds like a lot of work for me..."

"Not at all," the rep chipped in. "If the routing hasn't scrolled off the system yet, I can access the data for you. For, say... one hundred Marks?"

Mike winced internally. "Okay, then. One hundred marks for Fireblade's Net provider," he agreed.

"Here's my account data... now." He tapped the confirming sequence, and one hundred marks worth of dollars sped invisibly around... the world? "Say," Mike asked, "Where are you guys located, anyway?"

"Transfer confirmed," the rep noted. Then he looked back up. "We're in Alamogordo, New Mexico." His hands seemed busy at some unseen task. "Whoops! Almost lost it." He explained, "The routing was about to scroll off. We would've had to wait until Fireblade logged on again." He busied himself again, and waited.

"Is this going to take long?" Mike asked impatiently.

"Not at all. It should... There it is. Now write this down and don't lose it," rep directed. "His service provider is NetIXComm in Columbus, Ohio." He tapped keys, then faced Mike once again. "You can do a name search and contact them via the Net."

Mike finished scribbling. Grinning, he replied, "That shouldn't be any problem at all. Thank you ever so much for your help." He smiled sweetly and disconnected. "Bleah. Sicko."

Mike considered what he had. Witnesses statements of a solitary dark clad perp, modus operendi consistent with a demonstrated technique, suspect located in the right town, the video he had recorded from the death match. "Yeah, if I bundle it up right I should be able to get a warrant to crack the net server." He eyed his watch. *Yeah, plenty of time.* He set to work. He should have the warrant application ready to turn in to the Court Clerk first thing in the morning. *And still have time to watch TV. Maybe something cheerful, like a dizney.*

Privatization of investigations in Columbus had required a few changes in legal procedure. And a bit of streamlining. By lunchtime, Mike had his warrant to crack the customers database at NetIXComm. The paper also empowered him to act as a limited officer of the court; rather like a twentieth century bounty hunter. The situations were actually very close parallels.

Court documents safely in pocket, Mike decided not to fight traffic or search out a new parking space. The Net server was located in a nearby office highrise. He could walk there in fifteen minutes. And across the street was a fast food joint of acceptable quality. So, lunch first; then beard the dragon in its lair. Mike marched forth.

An hour later, fortified with flash food of a remarkable degree of edibleness, Mike challenged the secretary at NetIXComm.

He swung the glass door open and moved in swiftly. He walked directly to the secretary's desk saying, "Good afternoon! I'm Mycroft Maudell, an officer of the courts of Columbus." He extended the warrant, which the secretary accepted automatically.

"Good day, sir," the befuddled man said cheerfully. "What can I do to..."

Mike pointed at the warrant. "That is a warrant issued by the city court for access to your databases."

"Sir?" The secretary's mouth hung open. He reached a hand out to the intercom.

"Good idea," Mike noted. "I'll be needing to talk to the boss." He gestured for the worker to continue. He did.

"Ms. Askew," the man spoke into the intercom.

"Yes," returned a tinny voice.

"There's an officer of the court here to serve a warrant. I think you need to talk to him." The only response was a click.

Very shortly, a trim professional seeming woman stepped into the reception area. "I'm Mandy Askew, she introduced herself. "Is there some problem?"

"I certainly hope not," smiled Mike. "I'm Mike Maudell, a criminal investigator..." Askew's eyebrows rose. "No, ma'am; I'm not investigating you or NetIXComm," he reassured.

"Then what precisely are you investigating, Mr. Maudell?" she asked politely enough. The secretary handed her the warrant.

"A series of murders," Mike began. Askew and the secretary both started in surprise.

"Murder? Involving us?" the woman inquired. She broke the seal on the documents and began skimming over them.

"Yes ma'am, I'm afraid so. The suspect is a computer gamer, a neo-ninja. I've traced him as far as your Net server. But I need your help to finish tracking him down." He waited.

She looked up from the court papers. "Well, they *seem* to be in order. But would you mind waiting while I verify this with the courthouse?"

"Not at all. I'll have a seat out here." He planted himself in an easy chair facing the secretary. Askew retreated to her office. While he waited, Mike amused himself by acquiring sales literature in quantity while the secretary's back was turned. It looked interesting enough, and one never knew when it could be handy to look like a comm service sales weenie.

Fifteen minutes later, Mike was scratching his head over a magazine description of various fiber system ring architectures when he heard the tinny output of the intercom again. "Thomas, please bring Mr. Maudell to my office." Mike got up and bowed towards the secretary.

"Lead on." He lead.

As Mike stepped into Askew's office he looked around. She had eschewed the more common corporate somber opulence of woodgrain and brass for cheerful pastels. "Nice. But it needs a window," he observed

"A window would only show dirt and concrete, I'm afraid," Askew replied. "You forget that we're in

the subbasement. The price to pay for easy access to our buried cables," she explained.

"Ah. Yes, I suppose so." Mike sighed. "So, can we get started?"

"Everything checks out, so I believe we can. I've read the documents; but suppose you explain in nonlegal terms what you're looking for. Then I can figure out how best to come up with it."

"Sounds good," Mike answered, relieved that things seemed to be going smoothly. "I *think* what I want is simple enough. The suspect I'm after was logged into the Net last night; roughly from six p.m. local to six ten. I've got the router address he was working through."

"Yes, it's in your documents. Do I want to know how you got that?"

"Why, through a standard traceroute, of course," Mike replied innocently, then grinned. "All quite legal, oddly enough."

"Hmmpf." Askew grinned back. "So you want to know which of my customers was on that IP address, right?"

"If at all possible."

"It's a lot easier than you may think. That's standard data, used for billing. The address you've provided is one of our high speed dial ups." She pointed at the terminal on her desk. "I can check access history right here, and tell you every person that dialed in during that period."

"Excellent! I don't know as much about Net workings as I might wish; I was afraid this was something that would take all night."

"Nope. It's really quite standard procedure," Askew explained. "The only irregularity is passing the information to a third party. And your warrant takes care of that."

"Cool!" He smiled. Askew turned to her terminal and tapped away.

"It'll only be a minute," she said. "Lessee... dot 145... ..six would be eleven zulu... ..to eleven fifteen zulu..." She watched her screen. "I've only got one dial up in that time frame," she announced. She typed, and her printer ejected a page and beeped. "You'll be wanting this history," she said as she handed Mike the sheet. As he read the the arcane port record Askew tapped again. Again the printer beeped. "Here's the basic account info," she offered. "I recognize this name. Guy's paying serious money for a fractional T3; but only on a dial up. Weird."

"Why's that weird?" Mike asked. He accepted the sheet she proffered.

"He's paying about a grand a month for a thirty meg data line. That's a lot of bandwidth for a home user, even today. But he doesn't want it all the time. Only the gamers do that; so I guess this is your boy."

"Thirty meg." Mike shook his head. "I remember when I was a kid; twenty eight eight kay modems

were hot stuff. Unless you went all the way to ISDN. Sheesh." He read the second sheet. "Aaron Jacobus. Hmm. I love his billing history, too."

"Yes," Askew agreed. "That's the other reason I remembered the account. He falls way behind, then suddenly pays in full including penalty charges. By certified transfer."

"That's probably when he wins a big match," Mike mentioned. Askew shot him an inquisitive look. "Aaron-boy's a neo-ninja, a gladiator, play for pay. He fights VR duels for high stakes," he explained.

"I've heard about that stuff." She grimaced. "supposed to be very realistic, very gory. And extremely sick."

"It is. I darned near lost my dinner watching this guy's bout last night. Surprised I didn't have nightmares about it."

"And you want him for real murder, too? What's he doing; practicing in gangland..." She stopped suddenly, and paled. "Those slasher killings in the alley the other day... Was that him?"

Mike nodded. "And two more that we know of."

"My god. But *why*?" she whispered. "Why kill in the real world?"

"I don't know," Mike replied gravely. "I may not ever understand. But I think he's practicing."

"Practicing what?"

"I think he's practicing for his big VR matches. I think he's using the streets as a training simulator for his game."

Askew stared in horror.

Mike spent the better part of that night parked down the street from Aaron Jacobus' house. It was a small, unassuming place on the southeast side of town. And fairly close to Main Street and the Interstate. *Easy access to his practice dummies*, Mike speculated. He was staying at home tonight, though. *Only killing computerized ghosts, I hope.*

Mike wanted to make the bust immediately. But by the time he got out of NetIXComm's offices and had the new warrant application prepared, there was only enough of the business day left to file it. And before issuing a private officer an *arrest* warrant, the judge would no doubt spend hours going over the package. "Should count myself lucky, I guess. In the nineties we never would have got this psycho." Mike reached over to the passenger seat and grabbed his thermos of coffee. "Won't this clown ever go to bed?"

Inside, Aaron Jacobus was still trying to evaluate threat levels. *What did that cop in the Arena want? If he wants me for my Columbus kills, why contact me through the Net? If they know enough about me to know my Warrior persona, why not bust me in person? Heck, maybe it's even a coincidence. I can't believe I panicked and disco'd without spoofing the guy. Hey! Maybe he's a real fan. I've heard that*

some cops are in it 'cause they like being manhunters. I'll bet that's it. Heck, if they were after me, I'd know by now; it's been over thirty hours since the cop showed. I always heard that when they ID you they move real fast. Yeah, he probably wanted my autograph or some such. I'm still clean. Certainly I never left any evidence on the practice fields. Fireblade smiled, having reassured himself. In the real world *and* the True World, he was still the best.

And besides, the simulations were expendables, violent nonentities. They didn't matter. And the cops would probably thank him if they understood the stakes. Finally satisfied, Fireblade killed the lights and lay down to sleep.

By noon the next day, the police team was in place. With the footwork done, the case moved out of the privatized investigations realm and into enforcement. The uniforms put away the evidence bags and donned ballistic jackets. Having been responsible for the investigation, Mike was still named as the responsible court officer in the arrest warrant. Here the modern criminal investigator's role merged with that of the old bounty hunter. The difference being that he would have police support for the bust.

"Remember," Mike had told his PD support team. "This guy is both psycho *and* very skilled at ripping people apart. Don't challenge him. Don't let him close on you. If he tries, shoot him. You've seen the video. He's dangerous. Be careful."

So it was that Mike was leading a ten man tacteam to bust one guy. Two officers held back by the police vehicles out of sight of the perp's house. The other eight cops were infiltrating Jacobus' yard and covering all possible exits. The one man not in uniform, Mike sat in his car across the street from them house and waited. When the invisible officers and checked in on comms and Mike saw that his two entry backups were in place on the front porch, he got out of the car. Feigning calm, he walked up to the door. He drew his pistol and settled flat against the wall to the side of the door. Pistol held ready, he rapped on the door with a foot, and shouted, "Aaron Jacobus! I have a warrant for your arrest! Come out with your hands on top of your head..." Inside, he heard a muffled obscenity and frantic scurrying. "Damn. We're going in!" He spun and kicked the door. The cheap hollowcore construction gave way immediately. It swung in, hanging loosely from one hinge. Mike followed, shouting, "Police! You're under arrest!"

The front den was clear. Noises came from down the short hallway to the rear. One of the backup uniforms keyed his comm and called, "Move in! Suspect in rear! Officers in front proceeding to rear!" He followed as Mike lead the way back.

Mike reached the rear bedroom. A slender built man stood with his back to the door, leaning over the bed. "Jacobus! Freeze! You're under arrest!"

The figure spun blindingly fast, hurling an object. With a solid *thunk* a crude replica of Fireblade's taloned gauntlet sank its blades into the door frame. Mike blinked, and called again, "You're under arrest, Fireblade!"

"No!" Jacobus screamed. His left arm shot out clutching an old fashioned revolver. He fired.

Mike felt the impacting slug slam into his ballistic vest. He jerked back in pained reaction.

Jacobus extended his right arm, encased in the mate to the hurled gauntlet; he crouched to leap.

And Mike fired. Double-tap to center mass. Jacobus stood still, silent in the sudden quiet following the shots. He looked down at his bloody chest in shock. "But... I... ..won," he gasped in disbelief. Then he fell forward, and lay unmoving on the floor.

Mike moved into the room, the two uniforms following, covering. He heard the rest of the tacteam moving. He stood over Fireblade's form. He nudged the head with a toe.

"Game over."

Lemmingade

This one dates back to a time when I had a slight reputation as a horrible punster. The Science Fiction and Fantasy Forum probably never forgave me.

High in orbit, two pressure-suited figures drifted through the huge vacuum cargo cage like ungainly birds in an impossibly large aviary. As they searched among the containers, the radios waves crackled with their curses. The orange and green striped figure pointed to a floating crate. "Check that one, Mik," he called to the other.

His partner kicked off from the box he had just finished inspecting. When he reached his target, he checked the shipping label. "Nyet. Too small anyway. It should be at least two meters on a side," Mik replied. "How `bout that one, Johnny?" He pointed.

The garishly suited Johnny fired a hand jet and drifted to the large container Mik had indicated. He found the shipping label and compared the numbers to a display on his datapad. "Bingo!" he announced. "This is the shipment. Let's get it into air, and check the cargo." He snapped a lanyard from his suit harness to a ring on the container. Mik joined him and did likewise.

"Da. Old man Schuster will throw a fit if he can't salvage his precious fruit." Inside his helmet, Mik shook his head. "What the devil possessed Carpenter to store perishable cargo in the net?" he asked disgustedly. He looked to Johnny and added, "Ready there? Jet." The two men fired their handjets. The container began to move slowly towards the cargo net gate.

"Drunk again, I imagine," Johnny answered the first question. "Gonna kill himself that way, one of these days. So what's the big deal with lemons, anyway? What's Schuster want with `em?"

"Don't know. Heard is something to do with the celebrations next month."

Behind his faceplate Johnny frowned. "What do lemons have to do with Independence Day celebrations?" he asked. He eyed the approaching gate, then used his jet to give the crate a slight tug. The box drifted through the opening.

"Don't know that, either," Mik answered. "Give another pull on your side," he directed. "Line up on the big lock."

The cargo handlers adjusted the trajectory of the container. Once they had it moving towards the large cargo-handling airlock, they began thrusting to slow the load. The crate eased into the lock and bumped soundlessly into the far wall.

"Oops," Mik said.

Johnny shrugged, and started the lock cycle. The outer door slid shut. An amber light lit, and air began filling the lock. As pressures matched, the men's suits began to collapse on their frames. Hissing air became audible. Finally, the hissing finished and the amber light went out, replaced by a green one. They heard a clank as the latches on the interior door released. Johnny twisted a knob and the door slid

open.

Mik and Johnny looked into the warehouse pressure dock. It was a huge room; a cube fully one hundred meters on a side. It was filled with a flimsy looking aluminum framework, in which assorted boxes, crates, bags, and palletized cargoes were anchored. They pulled off their helmets, and clipped them out of the way on their harnesses. Mik spotted an empty niche nearby. "There." They pulled their load into place and tied it down. Johnny entered the storage location into his datapad.

"Let's open `er up," he said. He broke the seal on the lid, and the two undogged the latches. They pried the lid up and looked inside at the smaller boxes revealed. Johnny reached in and opened one. He peered in. "What in the bloody..." he began.

"What?" Mik asked. "Frozen? We expected that. Don't tell me they depressurized. Schuster'll not be happy if his lemons are ruined." He looked into the box Johnny had opened. "What in the... What are those?"

Johnny reached in and poked at the odd objects. One drifted free. He grabbed it and looked closely. He swore. "Well, it sure ain't a lemon, unless they come fuzzy brown now."

Mik took it from him. "Sheesh! It's a rat," he exclaimed. He turned it about, examining the rodent. "Crate sure did leak; it's freeze dried."

Johnny cursed again. "Open up another box. I gotta know."

Mik pulled the lid from another box, revealing more rodents carefully nested in little sawdust lined plastic niches. He swore, too. "Oh man, Schuster's going to go ballistic. It's all rats." He grabbed at Johnny's datapad, and tapped at the screen. "This is bad, very bad." He mumbled something about *maht*. "The bill of lading says there are six thousand units in the shipment."

Johnny stared, then rubbed his temples. "Well," he said; "I'm not going to be the one to tell the bossman."

Jay Kuss stood outside the door, slump shouldered even in the low g. He took a deep breath, straightened up, and rapped on the door. A voice spoke from inside, "Come on in." He pushed the door open and stepped into the office of Benjamin Schuster.

As orbital offices went, it was quite nice. The floor was covered with wood grained plastic tile. The ceiling was covered with anechoic tiles. Three walls were decorated with a well-executed, if somewhat amateurish, space mural. Without looking, Kuss knew the fourth wall behind him displayed a mural of an Earthside meadow. Ben Schuster was seated behind an actual wooden desk, reading something on his comp display. Kuss knew that Schuster had built the desk himself of wood scavenged from shipping crates. It did not look hand built, though. A framed motto hung from a crescent moon behind the executive. It read, *There is no bad luck; only hidden opportunity.*

Schuster looked up and said "Hi, Jay. What've you got for me?"

Kuss grimaced and replied, "You aren't going to like it. We found the shipment Carpenter had lost."

Schuster looked at his aid speculatively. "Well, that part's good. Why won't I like it?"

"Put it this way; the good part is that the container got stashed in vacuum storage. And it depressurized slowly while it was out there."

Schuster was taken aback. "That's good?" he asked. "If I can't salvage those lemons for the party..."

Kuss interrupted. "It's good because if it hadn't, we'd be infested now." He paused for a deep breath. "The crate was full of lemmings."

"Well, it had darned well better have been. I promised fresh lemonade for the Pioneer Days Independence celebration next month." He stopped and looked at Kuss, who was shaking his head. "What?"

"Uh uh, Boss," Kuss replied. "Not lemons. *Lemmings*."

"Huh?"

"Lemmings. Little furry rodents," Kuss elaborated. "Best known for mass suicides." He grinned despite himself. "And six thousand of them just committed seppuku by spacing themselves."

Schuster stared. "You've got to be kidding." He pondered, then asked, "Why in god's names would they ship me *lemmings*?"

"Beats me, Ben," Kuss responded. "But they did. A metric ton of them, including packing. I'd guess someone processed the order verbally somewhere along the line. And someone misunderstood."

"Didn't anyone wonder why we'd want a ton of lemmings in space?" Schuster demanded.

Kuss shrugged. "Heck, I didn't understand why you wanted a ton of *lemons*. Juice concentrate would have been a lot cheaper to ship."

"Lemonade was only the original plan," Schuster explained. "I got to thinking about it. If I brought in whole lemons, I'd also have seeds to sell to the farmers on the Ag Station. Not to mention the leftover biomass for fertilizer." He smiled smugly. "And the peel could be grated, and packaged for sale as a spice. I figured to make my little PR project turn a profit."

"Still," Kuss said; "Wouldn't it have been cheaper to bring in the finished products?"

"Not really. Packaging costs and mass would get us; whole lemons are their own usable packing." Schuster's eyes widened. "Cheaper..." He started. Then, "Carpenter actually signed off on the shipment, didn't he?" He swore. "We're stuck with the darned things."

"I'm afraid so," Kuss answered. "Now what?"

Schuster thought. "Start by reordering my lemons. Use a different supplier; I don't ever want us to do business with those idiots again. And put out the word why." He frowned. "And get with Accounting; arrange to have the shipping cost of the lemmings taken out of Carpenter's pay. Work it out with him; the faster, the better; without starving his family."

Kuss pulled his datapad out of a pocket and made entries. "Got it. And the lemmings?" he inquired.

"Oh, lord; I don't know. Where are they now?"

"Back in vacuum. They're already freeze dried, so I figured that was as good a place as any, for now." Kuss reached into his pocket again. "I saved you a souvenir, though. Catch." He tossed a fuzzy ball to Schuster.

"Ack!" Schuster caught the rodent. He looked at it and grinned. "Sorta cute, though." He chuckled. "Maybe I should have it lacquered. Keep it on my desk; like a little statue."

Kuss laughed. "Why not? I'll bet we could even sell a few to the gift shop; they'd sell to tourists as cute little reminders of what vacuum can do."

"Sure, do that. See how many you can unload on them." Recoup some of our loss, I suppose."

"You want me to sell the rest to Ag Station?" Kuss asked. "They can grind them up for fertilizer."

Schuster sighed. "Yeah, might as well... No." He stared into space for a moment. "You've already come up with one use for the darned things. Let's see if we can't find some more." He rubbed his chin. "I sure hate the idea of wasting all that money."

Kuss laughed. "No way. What good is a dead lemming?"

"Heck, I don't know," Schuster answered. "Ask around. Make it a contest. Put it on the company bulletin board. A hundred mark prize for the best answers."

Kuss grinned and said, "Well, if you're serious, is it okay if we expend a few of the furry buggers experimenting?"

Schuster chuckled. "Sure, have fun. If nothing else, we boost morale a bit. And then we can still sell the stuff to the Farm."

Roberto stood at the counter in his kitchen, paring knife in hand. He bent over and began to make the first cut.

"Eeek! Rats!" Roberto turned to see his girlfriend Teri staring wide-eyed at the remaining five freeze dried lemmings as they stood by the sink. "Eeek!" she shrieked again.

"Teri, relax. Those aren't rats. they're just little lemmings," he explained. "They're harmless. See?" He picked one up and held it out for inspection.

"Eeek..." Teri began. Then, "Wait a minute, Rob. How come they're just standing there?" she asked suspiciously.

"They're dead." Rob answered. "Freeze dried, in fact."

"Really?" She poked at a furry rodent standing on the counter. It toppled over. "Why are there dead lemmings in the kitchen? You aren't making dinner again, are you?"

Rob laughed. "Oh, no!" He pointed at the prone lemming on the cutting board. "This is a project from work. We have a few thousand of these things; we're trying to figure out what to do with them." He grinned. "I've got some ideas, but I need to see how easy it is to skin them."

"Bleah." Teri made a face. "In my kitchen you do this?" she demanded.

"Well, where else?" he asked. "This is where the knives are."

Teri had lifted a lemming and was looking into its dried out eyes. "They're sorta cute, aren't they?" She tapped on the creature. "Did you space these poor little things?"

"Uh, no; not exactly," Rob replied. "It happened by accident. Now we're trying to make the most of it."

Teri looked at Rob's lemming, stretched out on the board like a sacrifice on an altar. "What are you doing to that thing?"

"I'm going to skin it. I had to soak it in the sink to soften it up enough."

"Skin it? Yuck. Why?"

"I want a little lemming hide to make things from. I figure the leather's gotta be good for something." He shrugged. "Maybe coin purses."

Teri considered the possibility. "That's sick. I like it," she decided. "I want one." She grinned.

Kuss was laughing to himself as he walked up the corridor to Schuster's office. In the low g the box he carried was more of a burden by bulk than weight. As he walked on, he smiled at his co-workers and exchanged greetings. "Whatcha got in the box, Jay?" one asked.

Kuss shook his head and answered, "You wouldn't believe me." He reached Schuster's door and knocked. At Schuster's invitation, he opened the door and went in. "Hi, Boss," he said.

"Morning, Jay. Whuzzup?" Schuster inquired. He indicated the box under Kuss's arm.

Kuss smiled. "What we have here are the results of our in-depth engineering and marketing study." He opened the box and removed a ring-bound document. "Voila! '101 Uses For Dead Lemmings'." He

grinned hugely and handed the report to Schuster.

Schuster looked at the report cover. Beneath the title Kuss had read was a graphic of a furry rodent with all four paws in the air, and little X's for eyes. He laughed out loud. "Well, I'm glad to see you've been having fun with it." As Kuss stood by grinning, Schuster flipped the binder open and looked at the table of contents. "Good lord; you really did come up with a hundred and one uses." He laughed again.

"Better believe it, Ben," Kuss responded laughing. "And here's the proof." He began taking other items out of the box and setting them on Schuster's desk. First was a flattish, more or less shapeless, lemming.

Schuster eyed it dubiously. "What is that thing?" he inquired.

In reply Kuss lifted it and opened its little mouth. He shook out a few silver coins. "Coin purse. I showed it to Tom Hritz at the First Stop Trading Post. He wants 100 of them." Next came a similar flattened creature.

"Not another coin purse, I assume?" Schuster questioned.

"Nope. Balloon." Another laugh snuck out. "You know how some folks keep balloons in their airlocks as visual pressure indicators?"

"Sure," Schuster answered. "I do myself." He nodded at the lemming. "That?"

"Yep," Kuss said. "Half of Marketing already took `em home for themselves. Hritz wants these, too."

Schuster made a face somewhere between a grin and a frown. "I don't know about this bit with lemming leather." He shook his head. "It won't stand up to vacuum. The oils will sublime right out of the hide."

"Nah. Roberto Martinez thought of that," Kuss explained. "The hides are treated with silicone based lubes; not petroleum or vegetable oils." He smiled. "Just like your pressure helmet gaskets."

"I'll be darned." Schuster poked around some of the other items Kuss had set on the desk. He came across a set of keys. Puzzled, he looked closer. "You have *got* to kidding," he stated flatly.

"You got it," Kuss smiled. "Lucky Lemming's Feet."

"Not for the lemming, it wasn't," Schuster offered the traditional objection; grinning.

"You think that was unlucky? Check out this poor guy." Kuss held up a lemming impaled on a plastic handle. "Lemming dust brush."

Schuster winced, then chuckled. "Well, it's good that you've all had fun. But you must admit that none of this is really practical." He held up the impaled rodent. "Dust brushes? What's next; shoe buffers?"

Kuss held up an elongated furred hide with loop handles at either end. He grinned. A snorting sound escaped from Schuster, and his eyes went wide.

"Jay, this is crazy. Fun; but what good is it?" Schuster asked.

Kuss's smile faded just slightly. "Ben, every item in that box has a willing buyer. Hritz at the Trading Post, Meyers at the Mark Market; they're all willing to stock them."

"Too impractical," Schuster objected. "Who'll buy them?"

"Everyone that sees them," Kuss replied. "They're novelties. Luxury items. But they're cheaper than anything made down on Earth. So folks can afford them." He turned serious. "And for all that we've been here for nearly fifteen years, this *is* a frontier. It's grim sometimes. And for the sake of survival, we've concentrated on pure practicality for a long time." He pointed at the lemming products. "This stuff appeals to people's sense of the absurd. It brightens their lives a little bit. They want it. We have it anyway, so let's sell it."

Schuster propped his elbows on his desk and rested his chin on his palms. He stared at the bizarre array. And he considered. "How much can we get for this stuff?" he asked Kuss.

"You'll love it. After all our 'product testing' we only had enough lemmings left for about two thousand things." Kuss smiled again. "Between Hritz, Meyer, and a trader heading out to the Moon, we can clear enough to cover the purchase and shipping costs of the whole lot of lemmings." He reviewed his datapad. "And the Farm will still buy any uncontaminated manufacturing remnants as compost."

Schuster looked up in disbelief. "We're going to turn a profit of these critters?"

"Yep," Kuss answered. "And our buyers want to know when we can have another batch ready." He grinned broadly. "Shall I place an order for more rodents?"

"You realize the Earthside ecofreaks will go nuts if they find out we're importing lemmings for trinkets?" Schuster asked.

Kuss pursed his lips. "That had occurred to me, Ben," he admitted.

"Okay, then do it." Schuster cracked an evil grin.

Johnny and Mik floated beside the cargo lock door, waiting for the pressurization cycle to finish. The lock lights switched to green and the latches clanged. There was a muted clatter as the men inside the lock released the last latches and the door slid open.

Two suited men, and three large shipping containers waited. One of the pressure suited figures shouted to be heard through his helmet, "Two more to go to vacuum storage! You take these, and we'll finish up outside!" Johnny and Mik nodded agreement, and began shifting the containers into storage niches. The suited men headed to the smaller personnel lock.

As Johnny finished clipping the containers into place, Mik waved a lightpen over the shipping labels. His datapad regurgitated the information in human readable form. Mik read the display and laughed. "Hey, Johnny! Come look."

"What?" Johnny asked. He checked the tension on the last strap, then pulled himself over to Mik. "What's up?" he repeated.

Mik pointed at his `pad display. "Look what this shipment is; lemmings."

"Lemons?" Johnny wondered. "Again?"

"No," Mik corrected. "Not lemons. *Lemmings*. And it matches the actual order." He grinned and laughed. "Somebody actually ordered *lemmings* this time."

Johnny snapped his fingers. "Oh, yeah. Yeah, I know about this. They improvised all those gimmicks from that screwed up shipment; then the stores actually ordered more lemming toys. People bought `em. Heck, *I* did." He smiled and chuckled. "So the big boss ordered more lemmings. They're making money off the things. I hear they even hired a bunch more people just to process the little rats."

Mik's face flashed enlightenment. "Ah, yes. I *had* heard. But I thought was joke." He laughed. "Maybe we should check on them; be sure they are okay," he suggested.

"We can do that," Johnny said agreeably. "But I think they were shipping dead ones on purpose this time."

"Ugh," Mik replied. "Then let's be sure they don't need any more refrigeration. Else would stink."

"You betcha. Let's do it." They began breaking seals and releasing latches. They removed the lid and clipped it out of the way. A collection of wooden crates was revealed. Straw poked out of some.

"Huh, packed different this time," Johnny observed. He pried a crate open and stared at the contents. He swore. Mik looked in and cursed as well.

Mik spoke first. "Schuster is not going to be happy about this." He gestured at the cargo; crate upon crate packed full of small round objects with yellow pebbled skins. "What're we going to do with two metric tons of lemons?" he asked in dismay.

Miles

The working title for this one was "And miles to go before I sleep". But then I submitted it to Sunni at DF!...

Judgment fell from the skies.

And it looked remarkably like a rental drop shuttle. The single passenger sat aft of the pilot and stared out the window; although, on final approach, the viewing angle didn't allow him to see much. And in west Texas there is not that much to see, other than the launcher facility itself. And things had not changed much since he had seen them last; ten years ago, when he left Earth. He had always wondered if he would be back. Events long dreaded had finally drawn Mitchell Gantzer back from the Belt.

After the shuttle had grounded at Texas Freeport, Mitch Gantzer made travel arrangements with a Corp agent. Soon he was aboard a chartered flight to Georgia. He busied himself at the start of the flight by accessing a few public databases with his 'pad; he was ten years out of touch. The records searches went surprisingly quickly. With a collection of addresses, comm numbers, and maps stored in permanent memory, Mitch settled back in his chair and napped.

He woke when the jet touched down at Lewis Field near Macon. As soon as the craft had taxied to the terminal, he disembarked and searched out the car rental office. There he met his first Earthly stumbling block.

The clerk lifted the forms from her printer, and presented them to Mitch. "Here you go, sir," she smiled. "If you'll just sign these, and let me see your driver's license, you can be on your way."

Mitch took the pages, glanced over them, and signed. As he slid back over the counter he said, "I don't have a driver's license. We don't use the things." He waited.

The girl paused and looked up from her terminal. "Sir?" she asked, eyebrows raised. "I can't lease you a vehicle without a valid license..." Her voice trailed off. Then, "I see you recently arrived from orbit; didn't you apply for An International License then?"

"Nope," Mitch replied. "I've no use for licenses." He shrugged.

"I'm afraid that without a license from your state, you're not going to be using a car," the girl observed.

"I don't have a state to issue any such thing," Mitch pointed out. "We don't use those either." He smiled slightly.

The clerk appeared taken aback. "Perhaps it would best if you just used taxis during your stay, Mr. Gantzer." She began to throw his application away.

"Now wait a minute," Mitch interrupted. "What would you do if, say... a German came in here? Would you accept his German license?"

The clerk frowned, and replied, "Certainly."

Nodding, Mitch pointed towards a desk behind the counter. "Hand me that notepad, and I think we can take care of this." He began grinning. With a distinctly puzzled expression, the clerk handed him the pad. Mitch pulled out a pen and began writing. When he finished scribbling, he tore the sheet off and handed it to the girl. "There you go; one driver's license."

Outraged, the girl sputtered, "You can't... I can't accept this! You just made it!"

"Sure you can," Mitch spoke. "It's perfectly valid. Issued by the head of government of my world." His grin got larger.

"What?" the girl exclaimed. She stared at the handwritten note.

Mitch explained, "I'm the owner and administrator of my world; Amanda 12334 ." Still grinning, he continued, "Amanda 12334 being an independent astronomical body, I figure that makes me the head of state and complete government. If I can't issue a driver's license, who can?" He leaned on the counter, smiled, and awaited her response.

"But... this... You must be..." The flustered girl spread her arms in dismay. "Sir,..."

Mitch stuck a hand into his belt pouch and pulled out a small yellow disk. He slid it over the counter to girl and said, "Of course, I'm prepared to tip well for such fine service..."

She picked up the coin and stared. "Is that gold?" she whispered. She rubbed the lustrous metal between her fingers.

"Certainly." Mitch answered. He reached towards his pouch again. "Would you prefer platinum?"

Eyes wide, the clerk took a deep breath. "Oh, no, sir. This is quite acceptable. Thank you, Mister... President." She grinned slyly.

Mitch returned her grin, and said, "Actually, I prefer 'King.'" They both laughed, and the girl typed his license data into the computer.

She mumbled to herself as she tapped keys. "License number... One." She giggled. "That's a first," she observed. Then she looked up again. "Everything seems to be in order, Your Majesty." She handed him a set of keys. "You have the red Ford Cultura parked out front." She pointed to the parking lot visible through the terminal windows.

Mitch accepted the keys. Then, "Cultura?" he asked.

She smiled and elaborated, "The little red two door."

"Ah. Thanks. Have a nice day." He smiled and turned to the doors.

"And you, too, sir. Welcome to Georgia." She giggled again, and watched him leave.

Half an hour later, Mitch arrived at his destination. As he pulled into the dirt driveway, he noted that the weeds were even higher than he remembered them being at their worst. And half hidden, off to the side... "Damn, that old Buick's still parked there." He shook his head. "Old sedan's gone, though." He parked and walked up to the door on the front porch. He knocked.

From somewhere inside the rundown house a muffled voice called, "Yeah, hang on! I'll be there in a minute." Mitch waited, and listened to thumps and bangs within. Some things never do change, he thought. The door swung open and a disheveled fiftyish man peered out.

"Yeah? What can I do for you?" he asked. Mitch waited, standing silently. The man squinted and stared. Then in a puzzled voice, "Mitch?" he asked.

Mitch nodded, then spoke. "Hi, Doug. Long time, no see."

Doug Booker's eyes widened in shock, and his mouth fell open. "Keerist! It's been... what? Ten, twelve years? And I thought you went to space..."

"I did," Mitch replied. "Been out in the belt; mining, homesteading. First time back on Earth since I left back in 2012."

"Well, jeez! What brings ya back..." Booker's voice trailed off, and his smile faded.

Mitch looked into Doug's eyes and said, "I'm here for Samantha."

Booker's face went white at his daughter's name. "Mitch... I think... There's something you should know," he forced out. Mitch watched and shook his head.

"I'm not here to *see* her," he continued. "I'm here *for* her. I know she's dead. I'm here to do what I should have been here for earlier. If I had known. What someone else could have done." He stared at Booker, righteous anger smouldering in his eyes.

Booker turned away and looked at his feet. "Heck. Well, come in." He stepped back, and Mitch followed him into the house. The front room was still familiar. Same old beat up furniture, though rearranged. The television in the corner. And the piled up dirty laundry.

Booker plopped himself down in a sagging easy chair. Mitch pushed a pile of newspapers to one side and eased gratefully onto the old sofa. "Gravity sucks," he declared. He sighed, and pulled out his datapad. He looked at Doug.

The older man refused to meet his eyes, but spoke. "How did you find out?" he inquired.

"I still kinda keep in touch with Andrew," Mitch answered, referring to a mutual acquaintance. "Just a 'gram every year or so; but he thought I'd want to know about this." He paused, his voice cracking.

Then he continued, "Doug, what happened?"

Still staring at the floor, Booker replied, "She was robbed and murdered. In her apartment."

"By who?" the spacer asked coldly.

Booker shook his head. "Don't know. Police didn't much care; too much trouble to spend time on such a little case." He snorted.

Mitch took a deep breath. "Where was Charles?" he asked. Charles was Samantha's husband.

"Sammy left him two years ago. She'd been trying to make it on her own," Booker explained. "After Charley lost his business to back taxes..."

"Whoa!" Mitch interrupted. "Give me everything. I'm ten years behind on most of this. He lost the photo studio?"

Booker looked up. "Yeah. Turned out he'd started snortin' coke. Wasn't keepin' up with quarterly taxes, or his lease. Not to mention the mortgage on the house." He sneered slightly. "He lost it all. The three of them got tossed on the street. And Charley still couldn't keep straight. So she left him."

"Damn, I thought he was a good man. That's why I stopped trying to look after her," Mitch mumbled. "Hey, you said three?"

"Yeah," Booker answered. "Them and their little girl."

"A kid?" Mitch exclaimed. "She had a kid, and she never told me?" The anger in his eyes gave way to sadness. Then he tapped at his datapad. "Is she here? Can I meet her?" he asked the other man.

"Nah, she's in the State home," Booker explained.

"What's your grandkid doing in an orphanage, Doug?"

"Shoot, I can't look after a kid. And wherever Charley is, he's too strung out ta do it," Booker said defensively.

"But she's family!" The anger was back in Mitch's eyes. "You're just going to leave her there?"

"Hey, man; you think you can do better, you go get 'er," Booker replied. Mitch looked startled, then nodded. He made another note.

"What's her name?" he asked.

"Jenny. Jennifer McCall," Booker answered. "In there under her good for nothing daddy's name. She's... five years old."

Mitch snorted. "Don't be talking about good for nothing, Doug." He thought for a moment. "Okay,

so Charles turned out to be worthless. And she lost her home over it. Why didn't call me for help?"

"You know she couldn't do that, Mitch."

"I don't know any such thing. When I left, I made a point of supplying her with a mail drop point so she could always get hold of me. And I've maintained that drop all these years. Why didn't she call me?"

"Mitch, she knew you were sweet on her," Booker explained, blushing as he spoke. "But she didn't feel the same way. So she didn't think she should take advantage of you." He stared at the floor again.

"Sure, I was sweet on her. But not romantically," Mitch argued. "She was a special friend; and I just wanted her to be happy." He closed his eyes. "Damn." He exhaled strongly, then, "I promised her she always come to me for help; then I myself made her too uncomfortable to do it." He felt a tear working up, and fought it back. "So what next?"

"So she couldn't much in the way of public assistance, since she was theoretically married. But she couldn't afford to get divorced.

"Anyway, she went back to waitressing... in some real dives, too. And it mostly paid for her apartment. Crappy place in the slums."

"Why didn't you have her move in here?" Mitch asked. Booker just shrugged helplessly.

"And that got her killed," Mitch said flatly. "Okay, give me what you can about the case. Who's the cop working it?"

"Ain't nobody workin' it," Booker informed him. "But I got a copy of the original police report somewhere."

"Good. Get it," Mitch directed. "And any records on Sam's daughter." He sat quietly, thinking, while Booker rummaged around in a back room for the requested records. And decided four things needed doing. Booker came back with a stack of papers, which he handed to Mitch.

"Freaking paper?" Mitch exclaimed, as looked over the police report cover sheet. "Don't these clowns know this is the twenty-first century?" He found a name on the front page, and looked up to Booker. "Okay, let's start with the cops. Mind if I use your comm terminal?"

"Got a phone in the corner," Booker offered, pointing to an simple voice set.

Appalled, Mitch lifted the handset and put it to his ear. Dial tone. "This is still an old analog system?" He read a number off the report and punched it in. And listened to ringing. Eventually someone answered.

"Macon PD. Can I help you?" came an anonymous voice over the line.

"Yes, please," Mitch replied. "I'd like to speak to a Sergeant Seeman. please. In Homicide division, I

believe."

"Stand by." There was a click, and the voice was replaced with music. Then another voice interrupted.

"Homicide. Whatcha need?"

"Sergeant Seeman, please," Mitch enunciated.

"You got 'im. Talk ta me," the voice replied.

"I'm looking for information regarding a case you're handling. The murder of Samantha McCall three months ago."

"Don't ring any bells," Seeman said. "Got a report number on that?"

Mitch scanned the page. "Yes, WD22-02-20-045."

"Slow down, man. Gimme that again," Seeman directed. Mitch repeated the number. "Okay," the policeman said. "Gimme a couple days to get the file pulled on that, and I'll get back to you." The line clicked and went dead. Mitch stared at the instrument, then hung it up.

"SOB hung up on me," he told Booker. "Didn't some much as get my name first." He exhaled heavily. "Okay, we'll do it my way, then." He tossed his car keys to Booker. "Go get the satchel out of the front seat," he ordered. He extended an antenna from his datapad, then looked up at Booker who was still there. "Git!"

Booker got. As he stepped out the door he heard Mitch begin, "Hi, honey. It's worse than I thought. And there's something I need to talk to you..." The closing door cut off the rest.

When Booker returned, Mitch was speaking to his datapad. "...should have adequate funds for most of it. But I'll need you to arrange the annuity. Okay?"

From the datapad's screen a young blonde replied, "That should be easy enough. For ten kay, you think?"

Mitch nodded. "That'll do it. And don't forget the conditions of payment." He smiled. "Isn't it great when doing the right thing is good for us, too?"

The woman smiled and answered, "Yeah, talk to her as soon as you can. I'll keep my fingers crossed." The tiny image reached out touched her side of the screen. "'Bye, love. You be careful." Mitch touched the 'pad, meeting her touch.

"I will. 'Bye." He tapped the keyboard, and broke the connection. Then he looked to Booker, and took the satchel. "Thank you." Mitch opened the bag and removed a full computer deck.

"That thing's a phone, too?" Booker asked. "With a picture an' all?"

"Uh huh," Mitch responded absently as he rooted through the bag for a com cable.

"So who was that?"

"Annelise. My wife." He found the desired cable and dragged its length from the case. "She's still up in our ship, looking after the refit," Mitch continued. "She's going to handle some admin details for me."

"You got married?" Booker looked surprised. "Don't that beat all?"

"Yep."

"I'll be damned."

"Probably."

"What're ya up ta?" Booker asked. He watched as Mitch ran a slender cable from the computer to the datapad/comm unit.

"I'm getting the data the cop couldn't be bothered to look up," Mitch answered. "I'm going to access their computer."

"You're a hacker?" Booker asked in surprise.

"Nope; but I know some. And I have a collection of their goodies on this deck." Mitch patted the computer. "And I just arranged to use hook my comm into the local cell phone system." He shook his head. "Why aren't y'all using a direct broadcast sat system?" Mitch wondered. He flipped open the comp and started typing. The sound of dial tone emanated from the 'pad, followed by a series of touch tone beeps.

Booker looked worried. "Mitch, this's illegal..."

"Only if they catch me," Mitch returned. "Well, well... Isn't it nice of Macon PD to allow their officers to file reports remotely?" He tapped some more. "Okaaay... so I'm Sergeant Seeman today... I wonder what he uses for a password..." He touched the screen and the image of a box expanded. Mitch made a selection from the text list displayed. Then he turned to Booker. "Seeing how primitive the rest of the systems are, you care to bet that they use a single simple password system?" he asked.

"Mitch..." Booker began, only to be stopped by a beep from the computer.

"Too late," Mitch said, shaking his head. "We're in." He read the displayed menu. "There we go... review file... input number..." He waited. "I can't believe it's this easy. Who wrote their access software? The IRS?"

"Mitch," Booker said. "What're you doing?" The computer beeped again. As he typed, Mitch answered.

"I'm downloading the most current files on the case..." He frowned. "Which appear to be two and a half months old; these guys aren't even trying. And... Aha! A suspect!"

Booker crowded close. "What? They said they didn't know who it was." He tried to read over Mitch's shoulder.

Mitch read faster. "Lessee, they found the murder weapon with finger prints. The kni..." He choked; then, "You didn't tell me her throat was cut."

"It was bad enough that she's gone," Booker whispered. "What else do you have there?"

"Okay, finger prints on file... Name: Levon Carter, address, past record of violent offenses, photo... Freaking idiots," Mitch grunted out. "They have *everything* necessary for an arrest and conviction. But they couldn't be bothered to cross reference and see where the perp was. They just couldn't be bothered!" He swore. "That's okay. I can handle it." He tapped away at the computer. "So long as I'm here... delete... delete... delete..."

"What are you doing?" Booker wanted to know.

Mitch smiled grimly. "I'm deleting anything that can connect us to the main deletion."

"Main deletion?"

"Yep, I'm going delete one Levon Carter, murderer."

"You can't do that!" Booker wailed, aghast.

"Wanna bet? Read it for yourself." Mitch spun the computer screen towards the older man. "You have any doubts that he's guilty? Or that your police aren't ever going to do anything about it?" Booker read the displayed file and cursed.

"Jeez, the guy was on parole... for another murder!" The father was beginning to feel outrage.

"Yep," Mitch agreed. "But it's his last one." He punched computer buttons again, and broke the connection the PD system. "I'm leaving to take care of business. I'll be back this time tomorrow to pick you up. Be showered, shaved, and neatly dressed," he instructed Booker.

"Wha... Why?" the other man asked.

"I have a few things to do to try and set things right. You're going to be part of the next three." Mitch slid the comp back into the satchel, and stood. "I just wish I could've stopped this from happening to begin with." He opened the door and stepped out. "Remember, tomorrow at..." He checked his watch. "Three o'clock," he told the speechless man. He walked to the car, got in, and left. Booker stood on the porch and stared down the road.

Several hours later, darkness had fallen on Macon. Mitch sat in his parked car on a side street off

Broad. He had a clear view of a tiny house even more ramshackle than Booker's. And wonder of wonders, Levon Carter was at home. But, currently, he had company. Mitch planned to wait until Carter was alone before approaching to conclude his business. Fortunately, there seemed to be no vehicular or pedestrian traffic to notice the red car. *Macon must be just about ready to dry up and blow away*, Mitch thought.

While he waited, he checked his weapon again. It was a normal enough firearm by spacer standards. It incorporated both compensator and noise suppressor; recoil being a bad thing in a low-to-no grav environment, and loud noises undesirable to folk who lived perpetually indoors. And since blowing holes in a pressurized living dome was bad form, the projectiles were highly frangible. In this case, they had an added benefit; there'd be no obtaining ballistic evidence from the remnants of the 15 millimeter bullets. The gun had been easy to carry through airport security; the weapon was primarily high tech composites and ceramics. The only metal was the aluminum alloy barrel. Even the rounds were caseless; and the bullets plastic bundled ceramic shot. Mitch checked the magazine and chamber a last time, then replace the pistol in the shoulder holster under his jacket. And waited.

Carter's front door opened, spilling light into the night. Mitch watched and counted the departing figures. One, two... *Yep, all four*. Carter was alone. The visitors climbed into a half wrecked car and drove away.

Mitch looked around to see if anyone was in sight. The streets were clear. And the other houses were dark, or the drapes were closed. He got out and walked up to the house. He rapped on the door.

The door opened. "Yo, man; it's late," the occupant began. "Whadja ferget?" He stopped when he saw Mitch. "Who're you?"

Mitch stared at the man. "Levon Carter?" he asked. He pulled out his datapad and checked the man's face against the photo.

"Who wants ta know?" Carter asked.

"Mr. Carter," Mitch began; "we have some business to conduct. May I come in?"

Carter pointed at the 'pad. "What is that thing? You the cops?" he asked.

Mitch shook his head negatively. "I'm not a cop. And this is a datapad." He saw Carter's puzzled face. "It's a portable computer and... call it a phone. You don't have them on Earth yet?"

"No, man; I ain't never seen one a them," Carter confirmed. Then, "Hey, you said on Earth... You one of them spacer guys?"

"Yes," Mitch agreed. "May I come in," he repeated.

"Sure," Carter replied. He moved aside and waved Mitch in, and closed the door behind him. "So... like what bizness ya got for me?" he asked.

"I'd like to start with some questions, to be sure I'm talking to the right person," Mitch said. He

slipped the 'pad back into its pocket, and reached inside his jacket. "What can you tell about the young woman whose throat was cut in a botched robbery three months ago?" The pistol came out.

"Hey, man! I don't know nothing about no robbery... or throats," Carter denied. He started to reach under his shirt.

Mitch placed the muzzle of his gun against Carter's forehead. "Please keep your hands in view, Mr. Carter," he directed. "I remind you, I am not a police officer, but I do have reason to believe that you have first hand knowledge of the murder. It could be in your best interest to cooperate."

Carter's face was locked in terror. His eyes crossed as he tried to look at the gun against his head. "Man, I'm tellin' ya that I don't know..."

"Mr. Carter," Mitch said tiredly, "your finger prints were found on the murder weapon; which you stupidly left behind. All I want is for you to confirm that you were the robber." His finger began to tighten on the trigger. Carter saw it.

"I didn't mean to!" he squeaked. "It was an accident... She woke up and..."

Mitch stopped him. "Mr. Carter, one does not *accidentally* cut a woman's throat," he pointed out. Then he pulled the trigger. He left the house as quietly as Carter had left the world. As he drove off on the otherwise empty street, he mentally checked the item off his list.

Later that night he sat in his motel room. He had just finished speaking to Annelise, and had downloaded some information for tomorrow's business. *Today's, rather*, he thought; noting the time. Put the 'pad away, and stuffed the hardcopy into the satchel. Then slid under the blanket and killed the lights. And slept soundly.

Mitch began the next morning by borrowing the PD comp again. A quick check gave a series of known hangouts for Charles McCall. Mostly soup kitchens and bars. Mitch decided to have a quick brunch, then start looking at the soup kitchens; Charley would likely be looking for lunch by then.

It was easier than Mitch expected. He had tried the Salvation Army first; but their kitchen was closed that day. Funds only allowed them to operate the lunch service on alternate days. Mitch dropped some yellow disks in the collection box and headed out to a nearby church. And struck lucky.

He entered the lunch room and looked around. He didn't see McCall's face among the diners, but he did spot a man in a priest's collar and apron clearing tables. Mitch approached him and spoke. "Excuse me, Father."

The man straightened up and looked Mitch up and down. "Well, you don't have the look of someone in need of our help; but what can I do for you? I'm Father Joseph, by the way." He wiped a hand on his apron and held it out.

Mitch clasped his hand and replied, "Hello, Father. I'm Mitchell Gantzer. And I'm..." He paused and looked around. "Heck, Father; you're too busy for me to just walk in and interrupt. Let me help with those dishes." He held out his hands. "Pile 'em on, Father."

The priest looked rather surprised. "Hmmp. That's a first," he noted. "But good enough." He smiled and began picking up empty plates and bowls and piling them on Mitch's waiting hands. As they moved along the tables and diners, Father Joseph said, "So what can *I* do for *you*, Mr. Gantzer?"

"I'm looking for a man. And my sources say he comes here fairly often."

By now, both men were loaded up. The father led the way to the washroom. They slid their burdens onto the window counter. The priest turned to Mitch and frowned. "You the police?" he inquired.

"No, sir. I'm a... family friend. I've been out of touch for quite a while. And I've just learned of the man's situation..."

The priest peered at him. "No, you don't feel like a cop. Who're you looking for, and why?" A couple of dinner patrons walked up with their empty trays. The two men stepped aside so they could put their dishes in the window. A pair of hands came into view and pulled the dishes out of sight.

Mitch answered the priest by pulling out his datapad and displaying a mug shot of McCall. "This is Charles McCall. Have you seen him?"

The cleric glanced at the photo, and noted the 'pad. "Nice little pocket computer you've got there. Why do you want to find him?"

"To pay an old debt."

"Sounds ominous. Does he want the debt paid?" Farther Joseph wondered aloud.

"To tell the truth, he probably doesn't even know about it, Father. But it *is* to his benefit," Mitch added.

Father Joseph looked at him appraisingly. "I'll take a chance on you, Gantzer. Not many folks would bother helping with the dirty dishes." He waved a hand at the dining room. "You're not going to find him out there." He paused, then pointed to the washroom. "He's in there. He has enough pride that he won't eat free sometimes. So, occasionally he volunteers for clean up duty."

Mitch considered the ramifications of the revelation. "That's a good sign, then," he decided.

The priest shook his head. "Don't bet on it, Gantzer. You've been out of touch, you say. How much do you know about Charley?"

Mitch smiled sourly. "You mean that he's an addict?"

The priest sighed. "That's the one," he agreed. "He has some pride. How much depends on how long ago he had his last toot. Still want to see him?"

"Nope. But I still *have* to see him."

"On your head be it," the priest declared. "Come on back."

They went through a side door and saw four men wiping down dishes, running them through an old fashioned steamer, and racking them on steel shelves. None looked familiar to Mitch. The priest called out, "Charley! Charley M! Come over here! Got somebody to talk to you."

One of the men glanced back. He grabbed a rag and wiped his hands off, then walked over. "Hey, Poppa Joe; whatcha got?" he asked.

Mitch stared at the gaunt face, and finally recognized the man he had once watched wed a dear friend. He held out a hand. "Hello, Charley. You may not remember me; it's been about ten years. I'm Mitch Gantzer." He watched McCall's face. "Samantha's friend," he continued.

A look of shame passed over McCall's features. "Gantzer? The guy who used to give her rides and..." His voice stopped.

"Yep."

"So what do ya wan' with me?" the bum asked. "Ya gonna finish me off?" At this, Father Joseph stepped forward.

"Gantzer, if you're here to get some sort of revenge..."

Mitch shook his head. "No, Father. Not like that." He turned back to McCall. "Do you know what's happened to Sam?" he asked the wreck.

"Naw; but she's gotta be better off since she left me," McCall replied.

"She's dead, Charley. Murdered." McCall's face went white with shock.

"What? H... how... b-but...?" he stuttered.

"A botched robbery," Mitch told him, the priest listening in. "I've come back from the Belt to set things right."

A tear welled up in McCall's eye. "So what's that got to do with me?"

With a stern face, and a flat voice, Mitch went on, "I consider your drug problem, and its effect on your old business, to be a contributing factor to the circumstances leading to her death." He paused to take a deep breath. "I might've wanted revenge; but you're already in your own private chemical hell." He stared into McCall's eyes. "Did Sam ever tell you about the promise I made her? That she could always come to me for help?"

Fear apparent, the man whispered, "No."

"Well, I did. But she didn't take it. So I'm offering you that chance." Mitch reached into his jacket. Father Joseph and McCall both froze. Mitch's hand came back out with a sheath of hardcopy. The men

relaxed. "Here's the deal," Mitch went on, "I've arranged for an annuity for you. It's prepaid in full, so you can draw the money now. It amounts to about ten thousand dollars a year." Mitch sneered slightly. "Don't be thinking you can spend it on coke, or whatever your kick is these days. There's a catch."

Mitch separated a set of papers from the bundle. "If you want the money, which is a nice safety net for getting yourself started again, you have to sign these. And you'll need a doctor's certification."

The fear had faded, but confusion was evident in McCall. "What're you talkin' about?"

"These are your agreement to end your abuse of drugs. And instructions for reporting to a certain clinic. There, you'll be given a series of injections of Anacaine..."

"What is Anacaine, Mr. Gantzer?" asked Father Joseph.

"A drug developed in the L5 colonies. It essentially renders the recipient allergic to a wide range of cocaine derivatives." He looked at McCall. "Any intake of coke will make you violently ill. It won't cure your addiction, or get you over the withdrawal. That's what the rest of the stay at this clinic will be for. It'll hurt; you'll hate me. But offering you this chance is one of the last things I can do for Sam; 'cause gods know why, but she loved you." He waved the papers. "Well?"

"Why're you trying to help me?" McCall asked.

"Don't worry; it isn't for your sake," Mitch said coldly. "I'm doing it for Sam. Because I loved her, too."

McCall stared at the wet kitchen floor. "I'll do it," he mumbled. Then he burst into tears.

Mitch turned to the priest again. "Father, do you know where we can find a notary?" Two down.

Shortly before three o'clock, Mitch pulled his rented Cultura into Booker's driveway. A very nervous Booker was waiting on the porch. Mitch honked the horn, and waved him to the car. Through the open window called, "Come on, get in!" Booker trotted over and climbed into the passenger seat.

"Nice car," he said. "Where we goin'?"

"To the orphanage. To see Jenny," Mitch stated simply. He pulled out into the street and headed out to the Interstate. They rode in silence until Mitch had the vehicle heading north on I-75. "I've got the address of the place. But point it out on the map for me," Mitch instructed Booker. He pointed to the electronic map display in the car's dashboard.

"Umm..." Booker began hesitantly. "I'm not sure I can find it. It oughta be about..." His eyes swept over the map.

"Damn, Doug," Mitch said irritably. "You have been there, haven't you?"

"Of course!" Booker said defensively. Then in a smaller voice, "Once."

Mitch looked at his passenger in disgust. "She's your grandchild, for gods' sakes. Once?" He cursed.

"I've been busy."

Mitch snorted in derision. "Oh, yeah. Right. Real busy."

"Anyway," Booker said, "it's right there." He tapped a point on the screen, and a target light glowed. Mitch reached over and punched the ROUTE button. The car's onboard computer queried the GPS receiver for the vehicle's current location, then highlighted a series of roads leading to the orphanage. An amber dot echoed the car's movement on the map.

TRIP TIME: 0.75 HOURS, the screen displayed. *It's going to be a long forty five minutes*, Mitch thought.

An hour later the two men sat in a sterile seeming lobby waiting to see the child.

"Do we have to do this?" Booker asked in a whisper. "I don't feel right here."

Mitch looked up from his datapad, where he was arranging data for his anticipated meeting. "Yes, we do," he confirmed. "I need to see the girl; I need to know what she needs. And..." He interrupted himself. "And they aren't going to let me in on my recognizance, so I need her grandfather along; no matter how useless." The sound of approaching footsteps caught his attention. He turned to see a stout, middle-aged woman leading a small child by the hand. The little girl was clutching a tiny teddy bear.

Mitch stared at the little girl's face. "Oh, gods; she looks like Sammy." He tugged at Booker's sleeve. "That's Jenny, isn't it?"

Booker looked, and a flash of guilt showed briefly. "Yes," he croaked hoarsely.

Mitch stood and walked to meet the girl. She looked nervous, vulnerable. "Jenny?" Mitch said. He knelt to face her on her own level. "Hi, Jenny." He smiled at her; his heart breaking.

"Hi," she replied in a high, soft voice.

"Jenny, I'm a friend of you mommy's," Mitch began. Jenny huge eyes turned misty, and she bit at her lower lip.

"My momma's gone," she told him. She hugged her bear to her chest.

Mitch felt tears rising. "I know, honey. But I was her friend a long time ago. And I'd like to be your friend, too. I came a real long way to see you."

She looked at him inquisitively. "How far?" the child asked.

"Miles and miles. Millions of miles. 'Cause I had promises to keep," he explained.

"Miwwon... *millyuns*," Jenny repeated. "That's real far, isn' it?"

"Uh huh," Mitch agreed. "I came here in a spaceship."

Jenny's eyes lit in awe, and she smiled for the first time. "A spaceship? You're a spaceman?" she asked excitedly.

"I sure am. And I came all the way from the Asteroids to keep a promise."

"Azzeroths. Thass a funny word," she smiled. "What kinda promise?"

He closed his eyes and sighed. "I promised to take care of your momma. But now I can't. So I want to keep the promise to *you*." He waited for her reaction.

She smiled her beautiful smile again. "You're nice," she decided. "Whass your name?"

"Oops. My name is Mitch Gantzer."

Her mouth open in surprise. She held up her bear. "His name is Mitch, too!" she told him. "Momma named him. When she gimme 'im."

That did it. Tears rolled down Mitch's face. He pulled Jenny close and hugged her. Somewhere in background, ignored, Booker was swearing. "Jenny, I'm sorry I wasn't here to take of you and your momma before," Mitch mumbled. "But I want to take care of you now." He let her go; but she latched onto a finger and clutched it.

"I don' think you can," she told him solemnly. "They make me stay her. 'Cause momma's gone, an' I don' have a daddy."

Mitch shook his head. "I can if you say it's okay," he told the little girl.

"Mr. Gantzer!" the home administrator jumped in. "That is not how we do things here!"

Mitch glanced towards her and said matter of factly, "Shut up. We're talking." He turned his attention back to Jenny. "Honey, I think we can do this if you want to. But you need to meet someone else, too." He reached into his pocket for the datapad.

Hope and wonder shone on Jenny's face. "Who?" she asked.

As he tapped on the 'pad screen, he said, "Her name is Annelise. She's my wife. She lives in space." The screen lit.

"Hello," came the tiny voice from the comm.

"Annelise," Mitch said, "I've been visiting with Jenny." Mitch saw hope on his wife's face, too. "She's a very nice girl; and I think you should meet." He turned to Jenny and held up the 'pad. "Jenny, this is Annelise. She wants to meet you."

"Wow! She's on telebishon!" Mitch grinned.

"Hello, Jenny," Annelise's voice called out. "I'm very glad to meet you. Mitch has told me that you need a new family."

"Momma's gone," Jenny agreed.

Mitch placed the 'pad in the girl's hands. "Here, honey. You talk to Annelise for a while. Careful not press any of those buttons."

Jenny accepted the datapad absently. She asked Annelise, "Why're you on TV?"

"I stay in space all the time," the woman began explaining "I can't go down to planets."

As the two ladies conversed, Mitch stood up and turned his attention to the outraged administrator. "Now, then," he said. "You had some questions, Ms. Gardner?" He walked the angry woman away from the happily chatting child.

"Mr. Gantzer, this is totally unacceptable! How dare you walk in here and..."

"Ms. Gardner," Mitch hissed out. "This child does not belong in an orphanage. She needs love. My wife and I can do that. What's left of her family," Mitch glared towards Booker, who shrank in upon himself, "obviously *can't*. Or *won't*." He added a sneer.

"There are rules..." the matron started.

"Don't tell me that rules are going to take precedence over Jenny's well being," Mitch responded. "And if rules are that big a deal... here!" He held out an envelope. "That's a notarized statement from the child's biological father agreeing to an adoption." He turned an eye to Booker. "And her grandfather will sign one, too. Right?"

Shamefaced, Booker nodded agreement.

"Still, there are procedures," Gardner maintained. "You have to be investigated... Why, I haven't even met your wife! If the child is so important, why can't she be bothered to come here?"

Mitch's lips thinned, and his face went red. "My wife can't come down. By your stupid standards, she's crippled. A mining accident. In freefall or micro-g, she's fine. On a planet she'd be stuck in a chair. I won't do that to her."

The harridan was obstinate. "I'm not sure that a handicapped person is the best possible parent for any child. And what of your own children? How will they react..."

"Do you practice to be so offensive?" Mitch demanded. "There are no other children. We've spent several years trying. I'm sterile, you freaking little..." He stopped himself, then pointed to an animated Jenny laughing on the comm. "That sweet child is our hope now. And just maybe we're hers, too. Ask

her," he finished.

"Mr. Gantzer, do you think you can just walk in here, and stroll out with a child; as if this were a supermarket?"

"I didn't think so," he answered. "But now... If I walk out of here *without* her, I may not ever be happy again." He felt the tears again.

And Gardner noticed them as well. "You're serious, aren't you?" she asked quietly. She looked at Jenny, smiling for the first time since her arrival. "If Jenny is agreeable, I'll support the action," she relented. "I think this is the first time I saw a would-be parent break down into tears over the child."

"Thank you, Ms. Gardner," Mitch said more calmly. "And I'm sorry for my rude behavior."

"But still," the woman said, "there are details to attend to."

Mitch sighed. "Okay, let's do it. Where do we start?"

"Well, tomorrow we'll need to bring in your attorney..."

"Whoa! We don't do attorneys," Mitch said. "And tomorrow is too long." He thought. "Okay, try this. Run the paperwork to log us as foster parents... Georgia still does the paid foster home-thing, right?"

Gardner cringed at the phrasing, but, "Yes."

"Good enough. We're foster parents for Jenny. But don't bother with the support checks." Mitch eyed his surroundings. He noted the spotless, but rundown condition. "In fact, I think it needs to work the other way," he decided. "Wait a minute." He walked over to his original seat and repossessed his satchel. He reached in and pulled out some objects. He paused, looked thoughtful, and retrieved a couple more. He returned to the administrator. "Here; I think y'all need this." He handed the yellow objects to Gardner. She stared.

"Mr. Gantzer," she started, "is this..." she looked at the four gold bars in her hands.

"Gold, Ma'am. 500 grams per," Mitch confirmed. "In the Earth market, I think that's about thirteen thousand dollars. That should get you started. If you'll provide me an account number, I'll have two hundred thousand in the home's accounts by midnight."

"I don't accept bribes," the woman hissed angrily.

"Ma'am, that's no bribe. That's a donation. Even if I walk out of here and never get to see Jenny again, that gold and the funds transfer are yours... The orphanage's, anyway."

Gardner's eyes bulged, and her jaw dropped. "But..."

"Ms. Gardner, Annelise and I are homesteading now. On a rock we own flat out. But we used to be

prospectors and miners. And we were darned successful." Mitch shrugged. "Or darned lucky, anyway." He pointed to the gold bars. "That, literally, is pocket change. I carry it for traveling expenses, for when I don't want to use credit."

"Good Lord," the shocked woman murmured. "I think we can work this out, sir."

"Mitch!" called Jenny's sweet voice. "Annelise says in space I can fly!"

"That's right, honey," Mitch told her. "Annelise flies all the time. And she'll teach you how, if you want."

"Really? Neato!"

"Let me have the TV for a while, Jenny," Mitch asked gently. "I have to talk to Annelise."

"Okay," the child assented. She brought the 'pad to him, and handed it over. Then she tugged on his sleeve. Mitch bent down to her face.

Jenny whispered in his ear. "Annelise is really nice. I like her."

"I like her, too," Mitch whispered back, smiling. Then he spoke into the comm. "Well, honey?"

"Mitch," the blonde replied, "if you leave that sweet girl there, don't bother coming back. I'll break orbit." She smiled.

Ms. Gardner heard as well. "That's two, then. If Jenny wants to go, it's settled so far as I'm concerned." She turned to the child. "Jenny, do you want to live with Mitch and his wife?"

In wonder, the girl asked, "You mean for always? Like with momma?"

"That's right, Jenny. They want to be your *new* momma and daddy."

"Really?"

"Really and truly, Jenny," Mitch spoke.

Jenny dropped her bear and wrapped her arms around Mitch's leg. He pried her loose, and knelt. She promptly reattached her self, then grabbed at the datapad. "Annelise! I get to live with you!" She told the woman in the screen happily. Annelise added her remote control tears to those of Mitch.

Mitch looked up at the administrator. "Ms. Gardner, shall repair to your office?"

Several hours later the Cultura was pulling into Booker's driveway yet again. The Gantzers' status as incredibly solvent millionaires had lubricated the proceedings to an almost corrupt degree. Mitch had found the oddly truthful fiction of being a planetary head of state useful, as well. The adoption had not begun formally; as yet, Mitch and Annelise were merely fostering Jenny. But they had Ms. Gardner's

tacit approval to *unofficially* take Jenny to orbit. Of course, once done, Mitch could probably never return to Earth. Somehow, salvaging an innocent child's life became kidnapping in the eyes of the State of Georgia.

Well enough. Mitch saw no reason left on the planet to ever return. His family would be in space.

Mitch parked the car, but left the engine running. He looked to the back seat where an exhausted Jenny clung to her bear, and snored softly. He glanced to Booker and nodded. The two quietly got out of the vehicle and walked towards the house. *Three down*, Mitch thought.

They stood in the darkness. Booker spoke. "I can't believe you came all the way from the Asteroid Belt for this. Why?," he asked.

Mitch eyed him sourly. "I wouldn't expect *you* to understand. But... you see, *I* loved Samantha."

"Hey," Booker protested. "She was my daughter!"

"And you cared so much that you couldn't even let her back into your house when she lost her husband and home. Jenny didn't even know who you were, except that you came to fill out paperwork once." Mitch sneered. "If you had been a father to Sammy, it wouldn't have *mattered* that she didn't call me."

"But," Booker began weakly.

"You're just as responsible for the conditions that let Sammy die as Charley," Mitch added coldly. Then, without any fuss, he drew back his right arm and let fly. His fist connected solidly with the older man's jaw. Booker's head rocked back and to the side from the impact, and he fell to the ground. And lay moaning, clutching his chin. Mitch walked back to the car and got in. *And that's four.*

Then he held his hand carefully, and grunted. "Damn, that hurt!"

"Not supposta say 'dam'," Jenny said sleepily from the back seat.

Mitch chuckled. "You're right, honey. I'm sorry. Let's go to the motel and sleep. Then in the morning we'll fly to Texas."

"Is that a azzero, too?" Jenny asked.

"Nope, Texas is here on Earth. That's where we fly off in a rocket, to go to our spaceship to see Annelise." Mitch put the car in gear and headed out.

"An' then we'll go miles 'n miles to home?" the child asked.

"That's right," Mitch said.

"Cool." Then, "Mitch? Can I call you daddy?"

He felt a lump in his throat, and the tears starting again. "I sure would like that, Jenny."

Her sleepy voice continued. "And I can call Annelise momma?"

"Yes, Jenny. That's what we want."

"Good. Love you, daddy." She drifted back to sleep.

"Love you, honey."

Claim Jumper

I was always fascinated by some of the propulsion systems people have dreamed up. And actually tried.

And with all due respect to Ringo and Taylor, I named my ship first.

Mining in the Asteroid Belt was dirty, hard work. The major deposits on the almost-planets like Ceres had long since been claimed by the big corporations. That left the small lodes in countless free floating mountains.

Small, but by no means worthless. Fortunes had been made by small outfits that had located concentrations of industrially useful elements like tungsten, and even fissionables. But old science fiction dreams of moving ore-bearing asteroids around with nuclear explosions never happened, for the most part. True, huge ice rocks and carbonaceous accretions had been relocated closer to the habitats requiring those resources. With useful elements comprising only a fraction of a percent of the mass of most asteroids, it did not make economic sense to boost the entire mass. So, by necessity, most prospectors were also miners.

Typically, a small team would drift along through the Belt randomly scanning asteroids with an array of gamma and neutron sensors, infrared detectors, and millimeter-wave radar. Likely rocks were further evaluated with on site spectrographic tests and seismic soundings. Occasionally, a high power x-ray source, a 'flashbulb', might be expended.

Once a valuable concentration was found, the real work started. The miners would deploy huge aluminized mylar mirrors to concentrate solar process heat for reducing ore. Then they would break out a rather conventional collection of excavation tools ranging from pickaxes to demolition charges, and the age old task of digging out ore began.

Then, that ore was fed to the focal point of square kilometers of mirror. Through a brute force application of raw heat, the desired elements were separated from the surrounding matrix. Valuable volatiles were precipitated out on chilled collector surfaces. The results of this process were still fairly low grade, in industrial terms; they would still require final processing before actual use. But they were concentrated enough to allow cost effective shipping. By the time two or three tiny asteroids had been reduced to gravel, the miners would have accumulated enough tons of valuable elements to justify a trip to the metals markets at Ceres or Pallas.

Since prospecting and mining were difficult, hit-or-miss propositions, some folks saw the value of taking shortcuts to wealth. Would-be pirates waited in space, looking for the telltale sign of a processing mirror deployment, knowing that such a mirror meant a rich lode had been found. By the time a claim jumper reached the site, the miners had generally processed several hundred kilos of valuable metals.

"Frankly, Mr. Ahacic," the insurance agent said, "we're going to increase the premium on your

policy."

Frustrated, Ivan Ahacic let loose the breath he had been holding. He drummed his fingers on the desktop separating him from the agent. "Why?" he asked.

The balding agent shrugged and said, "Claim jumpers. Pirates. You have a small prospecting business. You work the distant rocks. That makes you a greater risk; so, higher premiums."

"Of course we don't work the Ceres or Pallas neighborhoods," Ivan explained. "They're not open. Every independent works deep space."

"Which puts you that much farther from help should a claim jumper strike." The agent looked smug. "So an attack is more likely to be successful, meaning we make a larger payment to any survivors."

"Now wait a minute," Ivan objected. "My outfit's been operating for ten years. Your company's been our insurer for most of that. How many claims have we ever filed?"

The agent reviewed the account on his datapad. A small expression of surprise flitted across his face. "Very few, really. A dozen or so job related injuries."

"And how many jumper claims have I made?" Ivan inquired.

"Hmm... None, it appears. Nonetheless..."

"Nonetheless, my rear end. You're telling me that I'm a higher risk for jumper claims when I've never had one."

The agent sniffed and pointed out, "The actuarial tables indicate that any mining concern of your size will file at least two jumper claims in ten years." He indicated the display, free of claims. "You're overdue."

"What?" exploded Ivan, incredulous. "I haven't filed a claim, so I'm *going to*?"

"Yes, that seems highly probable," agreed the corporate bureaucrat.

"You're freaking nuts!" Ivan exclaimed. "Has it occurred to you that we don't have jumper probs because we've taken precautions?"

"Many miners have 'taken precautions,' Mr. Ahacic. Frankly, I take a dim view of such precautions. The presence of firearms aboard a ship is simply asking for trouble." The agent stared disapprovingly.

Ivan returned the stare in sheer disbelief. "You raise our premiums because of jumpers, and disapprove of protecting ourselves against them?"

As if by rote, the agent recited, "A lone band of isolated individuals cannot adequately protect themselves from determined attackers. Such an attempt simply leads to more expensive property damage."

"Bull!" Ivan countered. "And if this is what I've been paying for these past years, shove it!"

"I beg your pardon?" spoke the agent. "You're canceling your policy?"

"Yep."

"You do realize that we will have to notify the lien-holder on your craft that you aren't carrying adequate insurance?" The agent smiled slyly.

"What lien-holder, dipstick?" challenged Ivan. "Don't you even read those account files before trying to screw more money out of us?" He shook his head. "We own our ships free and clear, ya idiot." He got up and walked to the door, where he paused. "You said we should have had at least two attacks in ten years, right?" He looked at the outraged agent, who nodded speechlessly. "Who says we weren't attacked?" He stepped out the door into the more open air of the habitat.

Several months later, Ahacic and his partners were working, though not quite as usual. They had been hoping for a tungsten strike. Rumors of a breakthrough in antimatter production had been encouraging speculation in the old dreams of AM drives, several versions of which required large quantities of the refractory metal for the reactor. Ivan placed no real faith in the rumors; he had been hearing such predictions on and off since he first left Earth twenty years earlier. But he and his fellow miners were quite willing to take advantage of the price increase driven by the speculation.

The problem was that they had not found tungsten. Instead, they had happened upon one of the rare, but not unknown, concentrations of uranium. And until the mythical grail of commercial antimatter is found, uranium was *the* power metal. The applications ranged from spacecraft reaction drives and thermoelectric electrical production to breeder reactors capable of generating higher grade transuranic elements.

Katie Ahacic, Ivan's wife and partner had suggested the change in their usual procedure.

"No, Bill," she said, addressing the male half of their newest partners. "Best not to put up the furnace mirrors, yet."

Bill Hunter frowned, perplexed. "Why not? We have to be ready to smelt down the ore..." Perched beside him, his wife Jeannie nodded agreement.

Ivan spoke up. "Katie's right. If the strike were anything else, I'd say go with mirrors now. We'd need the time to slag enough low grade to produce a worthwhile cargo." He shook his head, then waved towards their remaining partner. "Tomas says we can generate a not-so-small fortune pretty quick, with a high value element like uranium."

"Yah, biggest time killer is the excavation," Tomas Smythe added. "If we have ore piled up, ready to go, we can reduce it in a week or two. If the numbers are right on what's in the rock?" He eyed Jeannie Hunter.

"Oh, yes. Nearly 9 tons, post-processing," she replied. "A bit more if we reprocess the tailings from the initial runs." She smiled. "It assays very nicely, don't you think?" The others grinned as well.

"Let's not get too greedy," Ivan decided. "We concentrate on the first run. Once that's smelted and stowed, we'll consider running the tailings, and dig waste." His grin faded and he took on a serious air. "But this is too valuable to risk losing it to a claim jumper." He faced the new couple. "Bill, Jeannie; you two have been doing okay on your own already. But if we get this to market, you're going to pay off the *Imp's* mortgage real early."

Bill chuckled and rubbed his hands together in a parody of avariciousness.

"You idiot!" Jeannie exclaimed and smacked him on top of the head; laughing herself. Everyone went to work.

And finally the mirrors were up, and the ore reduction nearly completed. The excavation had gone fairly well. Two months of twelve hour work days had seen the entire concentration dug out. There had only been a few minor accidents. Tomas had suffered a green stick fracture when an explosive charge had unexpectedly dislodged a large rock fragment along an undetected fault. Ivan had ripped a small hole in his suit in a similar accident. He still had a nagging cough from the vacuum exposure. And everyone had acquired the usual collection of bruises, strains, and aching muscles associated with hard labor. Nothing odd for independent operators.

The lode had played out a little quicker than expected; yielding no more than eight tons of processed uranium. No one was too disappointed, though. Jeannie figured that not only could she and Bill pay off the *Improbable* from their cut, they could darn near buy a new ship outright.

Click. "Jeannie," came a voice over the suit comm.

"Yes?" she answered.

"Tomas, here. You and Katie can start shutting down the smelter for today."

"Will do. We've pretty well finished everything on hand anyway," Jeannie replied. "How much more do you have coming in from the pit?"

Bill's voice broke in, "We've got maybe six thousand kilos here. Tom and I'll move it up to the conveyor while you turn things off. We should be finished processing tomorrow."

"Wheee!" came Katie's cheerful voice. "Ceres, here I come! Bars, full grav baths... Stores!"

Click. "Stores... I'm doomed. There goes my share," from Ivan. Laughter all around.

Tomas spoke again, "I'm doing up egg rolls in the *Melissa* tonight. And I'm tapping the keg, too. So who's coming to dinner?" he asked.

"Me, me, me, me!" Bill chipped in immediately. Katie and Jeannie also accepted.

"Ivan," Tomas asked, "why not leave sentry to the automatics tonight? Come to dinner. You've stood watch for two days, on top of working the mine."

Ivan replied, "You know the risk, Tomas. The longer the mirror's up, the higher the probability we get spotted. Remember the first time?"

Suddenly serious, Tomas simply said, "How not?" Then, "Want me to take the watch?"

"No, make dinner, have some fun. Just leave some for me, for later."

"Okay."

Bill asked, "What was the first time?"

Immediately Katie jumped in, "Claim jumper. But not now; we'll talk later."

"But.."

"Later, Bill."

Quietly, everyone returned to work.

A few hours later, aboard *Melissa*, Tomas' ship, three miners relaxed after a wonderful dinner which had included the promised egg rolls. Surprisingly, they had included bits of chicken, which Tomas had kept frozen in his kitchen. Tomas was in another room obtaining the beer he had also offered; tapping a keg of carbonated beverage was no mean task in free fall.

With Tomas occupied, Bill quietly asked Katie, "Okay, so what *was* the first time?"

Katie glanced to the door, then, "About eight years ago we had our first claim jumper attack. We weren't ready; figured it could never happen to us. Besides, all we had a comparatively low value aluminum lode." She stared into space. "We were wrong."

"But..." Jeannie started.

"The only thing that saved our butts was the fact that the jumpers were almost as naive as us. And *Melissa*."

Puzzled, Bill asked, "How did the ship matter?"

Looking sad, Katie turned to face him. "Nah, the ship was the *HiJinx* then. *Melissa* was Tomas' girl. He was absolutely devoted to her. They were going to marry officially when we finished the dig." A tear glistened at the corner of her eye. She went on, "The raiders made an actual in person assault. *Melissa* spotted them and started shooting." Katie faced the floor. "Back then, she was the only one with a gun. We used to kid her about it. We were wrong there, too. She dropped one of them, and gave

us enough time to prep. We fought `em off with mining charges."

Bill nodded; Jeannie was squeezing his hand. "So that's why y'all were so adamant about us providing our own sidearms if we partnered."

"Yeah." Katie wiped away a tear.

Jeannie began, "But what about Melissa..."

From behind them, Tomas said, "They killed Melissa." He floated there with baggies of amber fluid, which he offered. Looking guilty, the three accepted the beer in silence. "But it was a long time ago, and I'm mostly over it, except that I miss her sometimes." He poked a sipping hole in his own bag.

"Tomas..." Katie started.

"No, it's okay," he replied. "I just want to start with a toast to her. For teaching us... me, to live."

They sipped.

Two hundred kilometers out, two men examined a magnified image on a screen.

"Okay," the older, heavier man said. "Three ships. They all look like Pedersen Rock Hunter Three's. Figure six to eight miners."

"I don't like the idea of going hand to hand with eight guys," the second man said. "Think we can even the odds a bit?"

The first looked at the screen a little longer. He magnified the view again. "Yeah, I think so. Look here; I don't think that smelter's runnin'. And there's no activity in the digging area." He smiled evilly. "I think they must've shut down for the night."

"So you figure they're snoozing in their ships?" the younger asked with an anticipatory air.

"Uh huh. Timin' couldn't be better. We've got `em all gathered together in one spot; they even got the ships tethered together." He pointed.

"Excellent. I say we hose them down with the gun from here. Oughta depressurize the ships. Even things up, anyway."

The older man leaned down to the screen again. And again he magnified the image. "What's that there?" he asked.

The second man looked. "Umm... Some kinda structure. Well away from the dig and the ships. Probably explosives storage." He shrugged. "I'll try not to hit it; explosives are valuable, too." He tapped away at a keyboard, slaving an external gun to the screen. Cross-hairs appeared. He manipulated a joystick, aligning the sights on the group of moored ships. He depressed the joystick trigger.

Outside on the mylar hull, fire flared from a clumsy looking contraption. The heavily modified machine gun spat .50 caliber slugs at the distant rock. Gases vented from barrel slots, and from a massive compensator on the muzzle. The expanded receiver allowed an oversized, overweight bolt to rock back, soaking up more recoil.

Inside, the older man spoke, "Easy on the ammo, Mike." He indicated a numeric display on the screen. "You just blew off better'n two hundred rounds."

"Ah, what of it?" Mike countered. "These guys been processing something for two weeks. Bound to be enough to buy more bullets." He grinned. "Anyway, that oughta do it. Five, ten minutes we should see the hits."

"Yeah," the older man agreed. "I'll keep her headed in. We'll park on the far side of the dig, and go in on foot." He looked at his watch. "I'll give the engine a quick burn, so call docking in about an hour."

Back at the *Melissa*, Bill spoke to Tomas, "Man, you brew a fine beer. Beats the heck outa that garbage that comes up from Earth." He smiled and held up his bag. "Never understood why anyone would pay orbital freight for..."

Suddenly the craft jerked. Ripping sounds filled the air, followed by hissing. Pressure alarms rang. Automatically, the four miners spun their heads, scanning for the leak. Small balloons drifted towards multiple areas on the hull. Tomas cursed, and dove for a cabinet. "Suit up!" he shouted. He yanked the cabinet door open and pulled out an aerosol dispenser. He kicked hard, and floated to a group of congregating balloons. He brushed them aside and sprayed sealant into the hole. His eyes tracked and he spotted another bunch of balloons. He moved towards them.

Katie and the young couple were suiting up. Jeannie sealed her helmet, and yelled, "Tomas! Suit up! I'll take it!"

Tomas tossed her the sprayer and dove for the suit room, where he began donning his own garment. Jeannie plugged another hole in the hull. Katie and Bill completed their own suitup and obtained more sealant from the cabinet. By the time Tomas was dressed for space, all the leaks appeared to be closed.

Tomas moved to the control area and checked displays. "Pressure's holding," he announced. At least one of my water tanks was holed, though." He called up an external view. "Looks like *Improbable* and *Digger* got the same treatment. I'd say we got jumpers." Tomas keyed a transmitter. "Hello, *Vorpal Blade*. Hey, Ivan!"

Click. "Gotcha, Tom. Looks like a frumious bandersnatch to me. Is everyone okay?"

Tomas looked around quickly before answering, "Yeah, we're fine. Do you see `em yet?"

"Nope, not... Whoops! There they are. Looks like an approach burn around three hundred clicks out. I'm outa here!" *Click*.

Aboard the jumper Mike eyed his screen. "Yo, Jimmy. Lookee here. I got hits on all three, I think. And this looks like a water tank venting."

Jimmy drifted closer and looked for himself. "Yep, looks that way... What the fu...!" he exclaimed. "What's that?"

On the screen, a string of explosions rose from the asteroid's surface into space. Mike stared, then yelled, "Whooooee! Looks like I got the explosives after all. Lookit them fireworks!" The lights of the explosions faded to black. Then a final blast flashed. Mike considered. "Huh. Slow burner." He faced Jimmy and said, "Well, from the looks of that, we aren't goin' to have any trouble down there."

Jimmy grinned. "Sure doesn't look like it." He frowned. "What's that?" Another light flared on the display.

Mike played with the joystick and keyboard. A *something* appeared on the screen. "Is that a ship of some sort?" he asked. Another light flared.

Jimmy cursed. "Yeah, they've launched some kinda fighter, I think. Lookit that thing move." Light flashed.

On the *Vorpil Blade* Ivan moaned and did a bit of cursing himself. "Dyson was nuts," he mumbled. "Orion drives are for the birds." He checked instruments and a screen. He was closing on the jumper. "Darned if it isn't working, though."

Ivan was strapped down flat on his back on a gel-filled mattress. The form fit to his body was a necessity, given the momentary accelerations used by his improvised fighter. Ivan was flying an unpressurized cockpit mounted on a circular sandwich of steel and rock. The small but massive, and incredibly ugly, *Blade* was loosely based on the Orion project craft of the mid-twentieth century. She was driven by a series explosive charges. For most of her flight she was unpowered, flying dark. When maneuvers were called for, an ejector tossed a mining charge out the back. The blast pressed against the massive base plate and drove the fighter on. Small, cheap, and hopefully deadly to claim jumpers.

Ivan called up a display very similar to that used by the jumpers. He aligned his own targeting sight and triggered his weapon. It was, in principal, similar to the pirates' machine gun. But it had started life as a shoulder-fired assault rifle; smaller caliber, and less powerful.

A minute later, the pirate registered the hits. "He's shooting at us, Jimmy!" Mike called.

"So? Is he doing anything to us? Anything getting through?" Jimmy inquired.

"Umm... No. It must be little stuff." Having opted for a life based on attacking others, the jumpers had wisely invested in a bit of extra protection; the small arms fire was being absorbed by sandwiches of steel plate.

Ivan cursed to himself. Judging from the video, he had barely touched the pirate. He keyed his radio. "*Blade* to home. Hi Tomas, Katie, whoever."

Click. "Hi, Ivan." It was Katie. Ivan smiled.

"Hi, honey. Launch was... interesting. I don't recommend bombs as a normal propulsion system."

"Are you okay?" she asked worriedly.

"I'm fine. I've popped off a few rounds with the gun. But it looks like the SOB has some armor. I'll try again with the laser. Talk to you.. Whooooa!" The *Blade* spun wildly.

"Ivan! Are you okay?" Katie screamed.

Mike laughed, watching his screen. "Got the little bugger! See him tumble?" Light flared. "Dang, did I blow him up?"

The blast knocked the wind out of Ivan. "This is no way to run a spaceship," he mumbled. Then he keyed the transmitter again. "Hi, Katie."

"Ivan! What happened?" She replied.

"I just learned a basic rule of space combat: don't stay on the same trajectory too long. Freaking jumper almost got me with that gun of his. I think he's using a heavy machine gun. Anyway, he tagged the edge of the plate and tumbled me."

"Be careful! The point of this for *us* not to get hurt," Katie admonished.

He grinned. "Oh, heck. That tumble probably saved my butt; he just shot up the blast plate is all."

"Still. Don't get killed. I mean it."

"Yes. Mommy." He grinned bigger. "Let me go take of business now. Later."

"Out." *Click*.

Ivan whistled as he worked. He toggled a couple of switches, and eyed another set of gauges. Then he disengage the rifle. "Okay, you little mother; you were ready for bullets. Now eat lasers." He thumbed the weapons trigger again. In the appropriated mining laser hydrogen and fluorine combined violently. Light beamed across space.

Mike and Jimmy watched a screen showing glittery dust vaporizing off of their hull. Mike swore. "Sweet Jeez... I thought you were crazy, wanting all that danged glass powder on the hull. But look at that..."

Jimmy corrected him, "Not powder. Glass beads. The stuff they use for polishing metal clean. Figgered it'd make decent ablative armor for lasers." He smiled smugly, proud of himself.

"But how do you think of that stuff?" Mike questioned.

"Easy `nough. You look at what gear a miner has to fight with: cuttin' lasers, explosives to shoot projectiles, whatever. And you figger what'll block it."

"Cool," Mike said admiringly.

"But darned if I ever expected one to put it all on bloody fighter, and come after us." He turned from the screen. "See if you can't blow him outa the sky. I don't want him to get desperate and ram us. Some things even I can't handle."

Ivan cursed. "I do not freaking believe this... Freaking *ablative armor* on a spaceship? Who is this..." He cut off as a hole appeared in his canopy. A companion hole appeared in a gel pack between his legs, spraying gel. "Sheesh!" He triggered another drive blast. "Son of a mother- f..."

The radio spoke. "Ivan? Are you there?" Katie's voice.

"I'm here, honey. Despite my stupidity. I've gotta remember to dodge. In fact..." He set off another bomb. Acceleration pressed him against the gel mattress. "Unfff! I hate this drive!"

Katie again, "Bill's watching on the `scope. He says you tried the laser, but that some sort of glitter stopped it."

"Yeah, got to give the SOB's credit. They actually installed ablative armor as well as bullet-proofing."

"Ivan, are you going to be able to stop them, then?" She sounded scared, and worried.

"Oh, yeah. I can stop them. Didn't want to have to do it this way, but I'm gonna have to."

"Ivan... Honey, you aren't going to ram them are you? There's got..."

"Now, Katie. Don't you worry. But you and the other better get under cover. Go to the dig, and hide underground."

"But, Ivan..." Katie objected.

"But nothing! Do it! Now!" He killed the radio. "Okay, scumbo; I'll bet you didn't plan for this," he muttered. He set a vector and tripped another bomb. Again he slammed against the mattress. And again. Half stunned he checked his course. Then he adjusted yaw. His back turned to the pirate. He pressed a last button. The world turned white, and god used the *Blade* to hit a home run.

The pirates watched god's own flashcube go off; then their cameras blacked out, overloaded. Mike felt a way of heat. "What in..." Sirens blared. Jimmy scrambled for the controls.

"Tanks are over-pressure! They're gonna..." He was cut off by the sudden tumbling of the craft. He fought the board, trying to correct the tumble. Nothing worked.

Mike screamed, "What'd he do?" Ship lights died, as did the audible alarms.

From the sudden quiet dark, Jimmy answered, "Killed us is what."

"But how? He was at least eighty klicks away!" Mike objected.

"I don' know... nuked us, or sumfin... I'm not feelin' too..." Dizzily, Jimmy let the force of the tumble press him against a console. "Feel... hot."

In panic, Mike realized that he was none too well either. "Jimmy, I... t'ink we're screwed."

"Yeah, kid."

Voices screamed out of the night. Hammering at him. He tried to ignore them. They got more insistent. "Ivan! Ivan! Answer me, goddam it!" He opened his eyes and the world was a little less dark. And the screaming voices became just one. "Ivan! Are you there?"

He felt around awkwardly. *Oh, jeez, I hurt everywhere.* He found the transmitter key. "Hel..." His voice cracked. He tried again. "Hello, Katie."

"Ivan! Where have you been, are you okay, have you..."

"Hi, Katie. I'm fine. How are you? Having a nice day?" he asked, feeling the need for a bit of absurdity.

"We're all fine down here. But you've been off the air for 10 minutes! I thought you were dead, you sorry..." She broke off, crying.

Tomas' voice cut in. "Ivan, what the devil did you do? The jumper's dead. Just tumbling across the sky with blown propellant tanks, completely dark."

Ivan smiled grimly, "Got him, then. Good."

"But how?" Tomas asked. "It looked like you set off a nuke. But we don't have any. And you must have been nearly 90 kilometers from him."

Ivan laughed; it hurt, but so what. "Yeah, I'll bet that's what he figured, too." He chuckled again. "Yeah, I nuked him; sort of."

"How?" Insistently.

"I hit him with the mother of all flashbulbs, man."

Tomas was clearly puzzled. "Eh?"

Ivan laughed some more, and began explaining, "You know how our survey x-ray sources work?"

"Hesitantly, Tomas said, "Yes, an EMP pulse to a metallic target generates x-rays, to be channeled via the plexiglass guide rod. But..."

Ivan interrupted. "Yeah, well... you can pump up one heck of a huge x-ray burst with a pocket nuke." More chuckles. It still hurt, but he was feeling better. "My last bomb was a nuke, with a plastic x-ray guide. I dumped it pointed at the bugger, and set it off. Hit him with a beam of x-rays god's own dentist would be proud of. Fried the sucker," Ivan finished proudly.

"But the blast? The EMP? Didn't..."

"Yepper. But what the heck. This is an Orion; the original concept was to use nukes. AS for EMP... Well, I guess I'm going to be flying home on manual so to speak. Most of my electronics are gone. I'll be wanting y'all to give me nav data."

Katie's voice returned, "But Ivan, we didn't *have* any nukes," she said plaintively.

"Oh, heck, honey. Remember when I canceled that useless insurance policy?" Ivan asked.

"Yeessss..." she replied slowly.

"Well, what'd you *think* I spent the premium on?"

Operations returned to normal after the attack. While Bill and the ladies finished the preprocessing run, and hauled in the mylar sheets, Ivan and Tomas took Digger out to retrieve the jumper ship.

"Do we really want to do this, Ivan?" Tomas asked. "It's... morbid." He shuddered.

"Yeah, we do," the older man replied. "This freakin' claim jumping is getting out of hand. I'm dragging this sucker back to make an example." He eyed a radar display, and tapped commands to the attitude jets. The screen indicated a velocity match. Ivan shut down the jets, and verified the status. He turned to Tomas. "That sucker is my trophy." He looked thoughtful. "Besides, I want to see what all the clown did to his ship. He pretty much ignored my laser and machine gun."

"Why do you need that?" Tomas still looked dubious. He was very uncomfortable with the thought of the no-doubt dead bodies awaiting them on the other craft.

"I need it 'cause I'm about to change professions," came Ivan's answer.

"Say what?" Now Tomas looked confused. "You're quitting prospecting?"

Ivan smiled. "Yep. Me 'n Katie's cut of the profits on the ore got to run around a million Marks. I plan to invest mine in a new business." He leaned back and crossed his arms. "I'm going to be a rent-a-cop."

"Huh?" Tomas looked blankly at his partner.

"It's like I said; this claim jumping's out of control. It's going to get to the point that a prospector's profits are going to be eaten by defense costs. I aim to give folks an option."

Tomas was dubious. "I don't know... How will this work?"

"I'll just advertise that I'm on patrol. Miners can give me their orbital elements and some cash, and I'll hang out in their area. I'll watch for ships coming through, answer calls for help."

Tomas shook his head. "How are you going to make money like that?"

"Well," Ivan admitted, "there are details to work out. But I figure one or two ships that don't mass up with mining gear and cargo can haul ass fairly well. We'll be able to cover several work sites with one ship." He pointed a thumb over his shoulder towards the jumper ship. "And I'll start with two ships, at that."

"You think miners will pay for this?"

Ivan shot him a wicked grin. "Sure. When I drag back a dead jumper, and brag on bagging him." He chuckled. "I figure folks'll know I mean business when word gets out that I nuked him."

Tomas' eyes widened. "Good point. I don't know if I've heard of anyone nuking a jumper before."

"Yep, I expect that's the best kind of advertising for this business," Ivan replied smugly. "But let's not count too many chickens... Gotta get this boy rounded up, first. Let's get dressed and get that thing rigged for towing."

Tomas unstrapped and rose from his seat. "Yes, let's get this over with." He shuddered again. "And we have to check out the interior, first, you know."

Ivan's face turned grim. "Yeah, I know. Hope there weren't too many in the crew." He shook off the feeling of gloom and moved to the lock area. "Come on."

Several minutes later, the pressure suited men floated across the void to the slowly tumbling derelict. Tomas viewed the craft and spoke. "She's an AST Prober. Airlock is in the front module." The ship bore some similarity to *Digger*. It too was composed of the common spherical modules. But this was a smaller craft. She had only two life support modules, stacked one upon the other. These in turn were stacked on a triad of reaction mass tanks. Opposite the living modules was a metallic gantry extending several meters to the rear. The main engine and SNAP-style reactor were mounted on the end of the

boom.

Ivan drifted up to the ship and examined an odd structure apparently added as an afterthought. "This would be the guy's armor, Tom." He peered at the edge of the rectangular mass. "Looks like a sandwich; structural foam between two plates of aluminum."

Tomas fired a handjet and came closer. "That plate doesn't look very polished," he observed. "What stopped the laser?"

Ivan poked at the foam filling, and watched as bit floated free. "This here. Looks like little bitty glass beads added to the foam mix. Improvised ablative armor. Pretty good idea, really."

"Not good enough for him," Tomas pointed out.

"Somehow I don't think he was expecting nukes," Ivan countered. "Unless NRU drops their price on them, nukes are a pretty expensive way to deal with hostiles. I only did it because I was desperate."

"Perhaps," Tomas allowed. "But if you are going into this business, I think you had better stock up. You're whole point is to play on desperation."

"Yeah, you're probably right. NRU is going to love me." Ivan looked away from the armor plate. "Let's get this over with. Point me at the airlock."

"Over this way." Tomas led the way across the five meter sphere, using small grips on the hull to pull himself along. They encountered another odd assembly.

"What the heck's that?" Tomas asked, quite puzzled. It was a large gun of some sort, with a hodgepodge of mechanical monstrosities added on.

"Hmmp," Ivan grunted. "Damnedest thing. Looks like it started life as an old .50 cal machine gun. But this other stuff... Servoes, a camera. Heck, it's a remote control gun turret."

"Scheisse, this guy was serious, wasn't he?"

"Yeah. Let's make sure he ain't serious anymore." They moved on.

When they reached the airlock, both men drew their sidearms. Ivan glanced at the status indicator beside the latch and nodded through his visor to Tomas. The younger man braced himself and toggled the mechanism. As the door swung open, Ivan aimed his pistol at the interior.

"Clear," Ivan declared. "Move in." The men pulled themselves into the lock. Tomas sealed the outer door, and started the pressure cycle.

Tomas watched the gauges. "Looks like the interior is still pressurized, Ivan. The x-ray burst must have done for them."

"Wunnerful," Ivan replied morosely. "Fried long pig."

As pressure built up Tomas eyed Ivan. "You have some really weird ideas, you know?"

"Gee, thanks." A green lamp on the lock control lit up. The men hefted their guns again, moving easier in now-deflated suits. "Punch it, Tom."

Tomas opened the inner door. They moved forward. As the operating lock had suggested, most ship's systems still seemed to be working. Even the lights were still on. Ivan stepped through an open door and looked around. "Control room," he called. "And two deaders." He viewed the two bodies strapped to console seats with an odd detachment. He moved closer. The slow tumble of the craft provided an almost imperceptible 'gravity' that allowed him to walk lightly. He reached out to each body in turn, and inspected his handiwork. "Weird. Not a mark on 'em. But deader 'n hell. But the electronics are still up. Didn't expect that."

Tomas came up and looked at the comp display before one of the still figures. "Look here. A targeting system." The screen showed a camera view of empty space with superimposed crosshairs. Tomas spotted a joystick and wiggled it. Star danced across the screen. "This would be the control for that gun on the hull."

"Yep," Ivan agreed. "Same basic idea as mine on the *Blade*, but more elaborate, I have to admit. These SOB's deserve to be dead."

Tomas glanced around the command module, then moved to another bulkhead door. "I'll check the next mod for more."

Ivan looked over the spacecraft controls, then unstrapped one corpse and pushed it aside. He slid into the seat. "Tom," he called.

"Yeah?"

If it's clear back there grab hold of something. I'm going to kill this tumble."

"Okay. Go for it," Tomas responded. Ivan watched screens as he fingered controls quite similar to his own panel. Varied accelerations tugged lightly at his body as he used the attitude jets to cancel the jumper's tumble. He finished quickly, and secured the board. "That's it; I'm done."

Tomas floated back into the command sphere. "Nobody else aboard. Just these two." He waved towards the forcibly retired pirates. "Do we fly this thing back, or tow it?"

Ivan pointed at a status display. "Tow. Whatever else happened, or didn't, the reaction mass is gone. Reading zero pressure on the tanks. She's out of gas."

Tomas shrugged. "No prob. We can rig for towing easily enough. I figure maybe four tethers." He frowned. "What do we do with them?" He nodded towards the late owners.

"I'm going to bag 'em and stick 'em in the airlock." Ivan smiled grimly. "More advertising. We hit Ceres, and I'm going to make a point of offering them to the next of kin."

"Kinda cold, Ivan," Tomas mentioned.

"So was them shooting at Katie," Ivan argued. "I don't take kindly to that."

Tomas nodded in satisfaction. "True enough. Maybe any little Baby Jumper will decide to try a different line of work when he grows up."

"Yeah. Come on; lets clean these guys up." They set to their tasks.

Six weeks later, the five newly wealthy miners were relaxing in a quiet little bar on Ceres. They sat at a corner table and savored their preferred beverages. Jeannie looked at her husband in consternation. "Bill, would you please wipe that silly grin off your face?" she pleaded.

Said silly grin appeared to be permanently plastered across the young man's face. It had first appeared when Ivan announced the size of the Hunter's share of the profits from the sale of the processed pitchblende. So far as Jeannie could tell, it had not slipped yet. "Sorry, babe. can't help it. I'm not used to being rich."

Katie shook her head in amusement, and turned to the other woman. "So what are you going to do with all that beautiful money?"

"Gods, who knows... besides paying off *Imp*, of course." Jeannie nibbled at her lower lip and looked happily thoughtful. "Upgrades, too. A KIWI drive would be good..."

Bill jumped in. "Yepper. And we can get a good one now. I had been thinking of one of the cheaper hybrid units from New Life Nukes; but now we can afford a plutonium job from NRU."

"And top of the line survey gear," Jeannie added. "And... Gee, I just don't know yet." She smiled and lifted her mug again.

Bill laughed lightly at the foamy mustache over his wife's lip, then faced the other three. "And you're really going to go ahead with the security guard business?" he asked Ivan.

Ivan opened his mouth to answer, but Katie beat him to it. "Yes, we are. It's good money, we have the starting capitol, it's easier work than mining... Heck, I'm all in favor."

"And a good thing," Ivan finally managed. "I've already placed an order for a new Rock Hunter 1. And CDC is working up copies of that sandwich armor. And Smithfield Ordinance is going to get rich off us, too. Guns... And they have a nice design for a radar guided missile. I think they've been expecting the market to open up." He sipped at his scotch. Then, "I'm building a hell of a cruiser. Armed for bear, and fast enough to catch 'em."

Bill looked interested. "That's three ships then; Digger, the pirate... And a *new* ship?"

"No, that's four," Tomas corrected. "I will be joining them. For a while, at least. I have nothing else

that needs doing." His face showed sadness, then resolve. "And I think I like the idea of eliminating a jumper or two." He smiled grimly.

Bill blinked. "Dang, Ivan. You're putting together a regular army... Or navy, rather."

The older laughed. "Hey! I might as well. Have you heard the Earthside news from the UN? Word of us nuking that mother humper got to them. I hear there hasn't been so much controversy over nuke weapons since Nukes R Us opened for business." He grinned and sipped from his glass. "It's great... They're trying to figure out if I've violated the test ban treaty, or what. Some reporter looked me up yesterday and asked my position."

Katie giggled. "It was wonderful. Ivan told him he wasn't signatory to any UN treaty. But suggested that since he's now a nuclear power, he should have a seat on the Security Council."

"Damned reporter took me seriously, too," Ivan added. "Journalists are so stupid." He laughed. "And now it's occurred to the groundbounders that us spacers are actually running around with nukes. They apparently never realized what we used to boost those comet heads." He smirked. "Until now. I'm famous."

Tomas spoke again. "Infamous, you mean." To the others, "It seems to be official: Ivan Ahacic is the first private individual to use a nuclear weapon in combat." He raised his glass of stout. "A toast," he called. "To free enterprise!" The others laughed and joined him.

"But I thought NRU used nukes in the Battle of the Moon when The U.S. tried to extradite McKeever?" Bill wondered aloud.

"Nah," Ivan answered. "I asked. When the Rangers dropped, they only had enough uranium and plutonium on hand to meet their initial SNAP orders; nothing to spare for weapons. All they had were some conventional firearms, improvised kinetic weapons, and a couple of prototype flashbulbs." He drank again. "I think it was the flashbulbs that made the Americans think nukes were used."

Jeannie gave Ivan an appraising look. "You do realize that you've started an arms race, don't you?"

Ivan turned serious. "Uh huh. You saw that jumper we brought in; armor, heavy machine gun... I didn't start it." He drained the last of his scotch. "But I damned well plan to finish it."

"He's right, honey," Bill commented. "Call 'em pirates, claim jumpers, whatever... They're still nothing but murderers and thieves. Muggers on an astronomical scale. Given human nature, we'll probably always have 'em. But we can try." He gave Ivan a thumbs up. "Get 'em," he encouraged.

"Oh, I will," Ivan said with assurance. "It may take a while. But I will; me and others. It's a wide open field. I expect to see competition." He smiled. "and a lot of innovation. When I talked to NRU about warheads and drives, they mentioned some other goodies they're looking into. Should be interesting."

Rentacop

Article about an oddly simple nuclear rocket + Kzinti Lesson = Rentacop

Aboard the *Ugly Duckling*, the boredom of yet another uneventful shift was beginning to show its effects.

"So, Mandy... We've got a whole five days off," Donnie Calliste murmured. He smiled lazily and reached over to the pilot and began toying with the zipper seal on her pressure suit. "So howd'ya think we should spend it?"

Amanda Beason giggled, and gently slapped his hand away. "Down, boy," she directed. "We're still on the clock for another fifteen minutes."

"Aw... Come on," he replied. "What's a few..." Suddenly a piercing tone sounded, cutting him off. Donnie began settling his helmet into place as Mandy tapped at her keyboard. As data scrolled across her display, she tugged her own helmet into its seals.

"Jeez! I don't believe it," she muttered. "Four weeks of patrol with nothing; and an alert in the last fifteen minutes. It's a plot." She mumbled more under her breath. "Don, it's those miners we checked in with about seven hours ago." She waved in the general direction of more console controls. "See if you can raise them, and get an update. I'm running the course plot." She returned to tapping at the keyboard and wiggling her fingers across the touchscreen. Donnie dialed up the miners' call code.

"Hello, *Steamshovel*," he spoke. "This is Ahacic Security craft *Ugly Duckling* answering your alarm." He paused and waited for a reply, which was immediately forthcoming.

"Hello, *Duckling*," a man's strained voice responded. "We got a jumper! SOB bombed us with something... two rockets, I think. He's got to be incoming any time now! Can you help?"

Mandy jumped in. "Mandy Beason here. That you, Jorge? Listen up. We're about two kiloklicks outbound from you. But we're on our way. We'll be there soon. What's your status?"

"Could be worse," came the answer from the miner. "No dead. But Johnny lost pressure for a bit, and Vesna broke an arm. We still haven't spotted the jumper; but we don't really have the gear for a good skywatch."

"Don't you worry about that," Mandy said reassuringly. "We do. Now get under wraps, and prep for an assault just in case the bugger gets lucky. And go dark on visual and radio till we check in."

"Will do. *Steamshovel* out."

Mandy read her screen and grinned. "Okay, Donnie; you'll love it. Four g's. About two minutes."

He cursed. "Why did we have to sign up for the new patrollers? Gravity sucks." He wiggled, settling

deeply into his couch, then fastened restraints. That done, he called up his weapons status on his own comp display. "I'm good to go here. Go ahead and punch it."

"Whee!" exclaimed Mandy as she punched the initiator. Then, "Uunngh," as acceleration slammed them into their couches; a very unusual state of affairs in most deep space craft.

But the *Ugly Duckling* was an unusual craft. In fact, there were only two like her. And both belonged to Ahacic Security Associates. They had opted away from the more common NERVA style nuclear steam drive for something a bit more exotic, and rather experimental. The *Duckling* ran on an actual direct fission drive.

Three quarters of her length was made up of a carefully spaced matrix of thin boron carbide pipes, which lead to a larger plenum at the ship's rear. The pipes contained an aqueous solution of uranium salts. Held apart in the tubes, it was inert. But when the solution was fed into the larger volume plenum, it reached critical mass. The fission reaction converted the solution to superheated steam, still undergoing fission even as it surged through the plenum to the jet. With this drive, the *Ugly Duckling* was capable of accelerations orders of magnitude greater than nuclear electric engines, and for periods nearly as long.

Under the impetus of the atomic drive *Duckling* shed velocity, and changed her vector to intercept the distant asteroid. In the cabin Mandy spoke. "Gimme a radar shotta the rock 'n jumper," she grunted.

Using controls carefully placed for high acceleration use, Donnie complied. "I... hate 'celeration. This's why m' parents lef' Earth, dammit." He eyed his screen. "There he is. 'Bout five hunnerd klicks from the rock... comin' in at... Hey, he's makin' around point two g's! Not too shabby for a teakettle."

Mandy looked on. "Uh huh. I'll bet he's tricked out just for piracy. Likely got weapons out the yinyang." She considered briefly. "Hmm. We should be in fightin' range 'round twelve minutes... See if ya can raise 'im and scare'im off," she ordered.

Donnie clicked over to the common channel and called, " 'Ello, Jumper. Come in." He waited, hearing only static. "Come on, Jumper. I gotcha on radar, an' I'm comin' to get ya. Talk to me." Silence. "Jumper, this is Ahacic Security Associates cruiser *Ugly Duckling*. This is your first, last, an' only warnin'. Getcher butt outa here, or we fry it. You fired on our clients, an' we can't have that."

A voice broke through the static. "Screw off, *Duck*. You're two thousand klicks out. By the time you get here, the cargo's ours. And we'll blow you outa the sky when you do show up."

Donnie sucked in breath, then answered. "I'd offer to betcha on that, but you're not gonna be 'round to pay up. Last chance: clear my client's space!"

The anonymous voice uttered one obscenity, and left the channel to the hissing static.

"I don' think he believed me, Mandy," Donnie mumbled. Through the strain on his face he grinned. At that moment the acceleration ended, and the two spacers surged against their restraining straps.

Mandy sighed and said, "Ah, much better." She fingered her controls and read data. "Cool! Better

than seventeen kiloclicks per hour relative to the rock. Call it six minutes to intercept."

"Okay," Donnie replied. "Let's start with a burster." He triggered a release. Outside, an odd looking contraption separated from the ship and drifted away. Small jets fired, aligning it. On Donnie's display, a small targeting screen popped up. He slaved it to the radar.

"This is going to be tight, unless we burn again," Donnie observed. "With our closing rates, we're going to have less than a minute to slug it out." He shook his head. "I hope he doesn't fight as well as he runs."

"You'll just have to shoot straight then," Mandy answered nonchalantly. "That's what Ivan gave you those toys for, you know."

"Yeah, yeah." He punched another command into his weapons console. "There." A thump sounded through the hull, and another trace appeared on the radar display. "That oughta make his day."

"Missile launch?" Mandy asked. "This far out?"

"Radar guided," Donnie replied. "Initial boost of ten g's for ten seconds. On top of what we've got already, it should get him in about three minutes. And there's no way he's gonna expect it this soon." He grinned evilly.

Fifteen hundred kilometers away, the claim jumper accelerated through the darkness. Aboard the *Grim Repo*, Josh Haritonidis worked detection. "The mine site has gone dark," he told Benj Harless, the pirate's captain. "Killed their lights and radio. They're dead or hiding."

Harless grunted. "Assume they're alive. For now." He turned to the third member of the crew. "Mikhail, you ready?"

"Yah, just about," Balasko answered. He continued inspecting his gear. He was dressed in an armored pressure suit, preparing for an assault on the mining claim. His main weapon was an ugly compensated, drum fed shotgun. "What about that damned rent-a-cop? Is he gonna be trouble?"

"Probably not," Harless replied. "The security goons are still in a reaction mode. Their tech's not up to us. Probably can't make but a tenth of a g. It'll be hours before he shows up. At which point Josh'll blow him..."

"Whoa! Christ! What's that?" Haritonidis interrupted. He edged closer to his radar display. "Jeez! That's a missile!"

Harless spun in the low gravity, and exclaimed, "What, did those miners launch on us?" He moved to his navigation position.

"No way," Haritonidis countered. "That's coming from well beyond the rock. Better'n six hundred clicks out. But look at it move." He started, and ran a projection. "That's on intercept with us! Mebbe a minute and a half till it hits!"

"So we dodge," Harless spoke with unconcern. He applied a lateral vector to the *Grim Repo's* course.

On Haritonidis' display, the missile also shifted. "You were saying, boss?" he responded grimly. "Must be a radar seeker." He fired off chaff. Harless waited for the explosive charge to disperse the chaff bundle. And waited. The missile closed.

"Damn," Harless said angrily. "Why didn't it blow?"

"I don't know. Dud. Launching another." Tense and beginning to sweat, Haritonidis dropped another bundle of chaff. The dispersal charge blew. In the momentary radar shadow, Harless again altered vector.

Out in space, the missile was confused by the expanding radar reflection. It homed on the cloud of chaff and detonated.

"Dang it," Donnie muttered. "Missed. I don't believe it."

Mandy eyed the display. "What the heck is that?"

"Chaff," Donnie answered, disgusted. "Low tech chaff. And the missile fell for it." He punched buttons. "Let's see him spoof this.

On the weapons rack encircling the *Duckling*, a chain gun flared in silence, throwing a veritable wall of lead towards the jumper.

Inside, Donnie watched the gun's status. "Three thousand rounds should be adequate," he decided. "We're getting close. You'd best do some dodging," he advised the pilot. "If they don't know we're here now, they will soon."

Mandy nodded and massaged her controls. She and Donnie shifted against their straps as the ship yawed, pitched, and briefly accelerated. "How 'bout you give another rocket powered calling card, Donnie?" she suggested. He nodded agreement and dropped another load.

"Jeez Louise! Will you look at that!" Haritonidis shouted.

"Incoming! Evade!"

Harless reacted by momentarily increasing acceleration, then, "Evade what?" Ignored for the nonce, Balasko decided discretion was the *only* part of valor, strapped down and kept his mouth shut.

Meanwhile, Haritonidis stared intently at his detection displays. "Missile homing! Chaff off!" He launched another bundle. "That's all our chaff, man. They better not..." He cursed loudly. "Ship!"

"What...?" Harless started, then seeing the radar screen, "God, he's doing twenty kilo..."

"No joke, Benj," Haritonidis replied. He slaved a gun to the radar and began firing. Even as he launched his own bullets, the little gifts from the *Duckling* announced their arrival. The men heard multiple thuds on the hull, then suddenly the air was filled with shrieking whistles.

"Pressure breach!" Harless shouted. "Seal up!" He turned to check his comrades helmets. "Mikhail, shut your..." He stopped. Mikhail's unmoving form showed a spreading red stain. One of the rounds had center-punched him. Haritonidis also saw, and cursed.

But the fact that he and Harless still lived told him that the second missile had also missed. He eyed his radar and slapped a switch. Outside, a rocket blasted free from a holding tube. "Gotcha, ya motherf..."

In the *Ugly Duckling* Donnie watched his own weapons displays. "Missile!" he screamed. He punched keys, and an over-sized shotgun on the hull sprayed chaff. Mandy wiggled a toggle and the ship surged forward for an instant. "It's past," Donnie announced. "Looks purely ballistic..." Suddenly they heard raps on the armored hull, as the jumper's shot arrived.

As nothing else happened, Mandy said, "Well, at least the kevlar works."

At his console, Donnie was verifying targeting lock on the burster he had released minutes earlier. "Mandy! Kill your console, and open the imp relay!" Immediately she flipped switches and flashed an OK with her fingers. Donnie flipped his own, and pressed one last button.

Kilometers away, Donnie's weapon fired. A one kiloton nuke detonated; its blast was directed against a series copper spheroids stacked at the base of a meters long polymer rod. It was an asteroid miner's x-ray flashbulb on steroids; the direct descendant of an old American Star Wars concept. An invisible lance of x-rays stretched across the heavens and speared the pirate.

In the *Grim Repo* alarms rang, then died as sparks arced from the consoles. Harless called up a status screen as the electrical display faded. "Sheesh! X-rays! That bleedin' SOB zapped us from a hunnerd clicks!"

"Nuke-pumped, no doubt," Haritonidis guessed, reading his own screen. "Since we're here, I don't think it'll be long term fatal. What the..." He jerked in surprise as the ship rocked.

"Relax," Harless ordered. "Turn-around for decel. It's the one thing going according to plan." He thought, then spoke again. "The rent-a-pig's passing. He'll turn-over and come back. Launch everything you got. Put up a freakin' solid walla junk for 'im to run into."

"You got it," Haritonidis agreed. He made himself busy. Odd sounds echoed from the hull as the machine gun chattered and rockets launched.

"Dammit! Burster looks to have done him some damage; but he's still in the game," Donnie said

tensely.

From her couch, Mandy suggested, "Laser the bugger."

"No can do," Donnie objected. "Flourine's good, but it looks like they ruptured the deuterium supply. Laser is out of commission."

"Burster?" Mandy asked.

Donnie shook his head negatively. "No time. Too close, and the EMP will zap us, shielding or not."

She muttered what Donnie took to be obscenities. She thought. "Bingo!" she declared. "Check your straps and brace for acceleration! Five g's, five seconds! And gimme a camera view aft!"

Confused, Donnie simply said, "Duh, what?" He scrambled to tighten his restraints. He called up an external camera, and rotated it to the rear. Even as he finished, he felt acceleration press him down.

On the pirate, Harless began, "Looks like their hanging it..." His last sight was a hint of blue fire.

Donnie and Mandy stared at the camera display. "Holy..." Mandy muttered, then trailed off.

"What the freaking...?" Donnie supplied, watching as the distant pirate flared into light. Then faded to black.

"Done," Mandy stated with satisfaction. She turned to Donnie and said, "Raise *Steamshovel*, and tell them the jumper's accounted for. They can come out now."

"No kidding," Donnie replied, staring at the screen in awe. "But what the freakin' heck didja *do*?" he asked.

"Donnie!" she exclaimed in mock surprise. "Have you forgotten basic fission physics? And you aboard a nuke drive ship?"

He looked at her in confusion. "What?" he demanded.

"I nuked them, kinda," she said with a proud smile.

Donnie waved at the screen. "I guess so. But how?"

She grinned and laughed lightly. "Okay, when we're firing the drive, we've got a heavy duty fission reaction. Right?" Donnie nodded agreement. "And how come we don't need huge masses of shielding material?" she asked.

Donnie considered the problem, and replied, "Neutron convection tends to channel the flux back down the exhaust stream... Hey! You really did nuke them!" he exclaimed in sudden understanding.

"Heck yeah," she responded. "That neutron flux couldn't have been too healthy anyway. But when it hit their reactor..." She grinned evilly, and chuckled again. "Still, I didn't really expect it to detonate," she added.

"They must have been running a pretty high level reaction, anyway," Donnie guessed. "That would be how they managed that high accel from a standard steam drive." He nodded to himself as he thought. "It was probably nearly supercritical already, since they were under drive... And when your neutrons hit... Whoosh!"

"Yeah," she laughed. "Whoosh!" She snapped her fingers. "Now get on the horn and tell our customers that all's well. They've got to be worried."

"Yep, and they may need some more medical aid. Guess I'd better be ready to play paramedic." He turned to the comm unit. "How soon can we be there?"

"Unless there's any more of an emergency..." She checked nav data. "Call it half an hour. I don't feel like pushing more'n 1 *g* now."

"Cool," Donnie said agreeably. He raised *Steamshovel* and passed the good word. Once the task was completed, and Mandy had begun deceleration, he spoke. "Nice bit of work, really. I'll bet Mr. Ahacic builds a few more of these babies." He patted his console. "And looky at the clock." He pointed to the time. "We're on overtime, now." He grinned.

Mandy returned his grin. "Oh?" she questioned. "Now you want to work? You can't think of anything else to do for the next few days?" She reached over and toyed with his suit zipper.

"Well, maybe..."

Blue Madonna

Even as the author, I've never been sure what to make of this one. I'm not exactly religious, or much of an artist beyond words. But this story insisted on being told. Beats me.

Obviously rock miners could be an odd and independent-minded lot. But compared to some folks' ideas of recreation, nuking pirates was distressingly normal.

Bela Gogean sat patiently in the buyer's office and sipped his coffee. Across the cluttered desk, he watched Fred McAndrew speak into a handset and tap keys on the comp. When the buyer placed the instrument back into its cradle, Bela parked his coffee in the air and folded his hands.

"Okay, Bela," McAndrew said. "Your load massed out at 25.7 tons. That sound good to you?"

"Yes, Mr. McAndrew. Is right." Looking hopeful, he added, "Is still 150 Marks?"

"Yep." The buyer tapped keys. "That makes it 3,855 Marks due you. You want it deposited to Ceres First Unnational again?"

"Yes, please," Bela confirmed. "Will be shopping. Need supplies." He lifted from his seat and retrieved the floating coffee. He sucked the last of the beverage and offered the empty container to McAndrew. "I thank you. Must go now."

McAndrew stashed the cup in a cabinet, then turned back to the miner. "Bela, can I ask you a question?"

"Yes, Mr. McAndrew. Is okay. What you wish to know?" Bela smiled serenely and settled back into his chair.

"Your cargo," McAndrew specified. "For two years you've been bringing in loads of bauxite. And taking basic ore prices. How come you never do any pre-refining?" he asked. "If you boiled off some of the waste, you could haul more paying cargo. And we'd give you a better price on what you did bring in."

"Not worried. I make money, you make money; all happy." Bela shrugged. "And ore processing take time and work. I am alone, and have other work, too."

"I suppose," McAndrew said doubtfully. "But why aluminum? Why not look for the more valuable lodes? Heavy metals always pay well."

Still smiling, Bela replied, "But would have to look. Takes time from project. Aluminum I have."

McAndrew blinked. "You have a whole rock of this stuff?" He shot the miner a puzzled look. "Why not just sell the whole rock? Bring it in with a couple of booster nukes, or peddle it in place? You'd

make more off a bulk sale that way; you wouldn't be incurring shipping costs all the time."

"But not want to sell rock. Is project," the little rock rat explained.

"What project? I don't understand..."

"Is beautiful. You come see sometime. I give orbital elements. You like."

"What's beautiful?" McAndrew asked. "Are you building a dome or..."

"Not to say. Is to see. You come, you like." He rose from his seat again. "I go shop now. Someday, you say when you want to see. I show." He offered his hand to the buyer. They clasped hands and exchanged farewells. Bela left to tend to his errands.

McAndrew seated himself again, and turned to his comp deck. "Crazy little rock hopper. I wonder what he's up to out there?" he muttered to himself. He checked on the next item of business, and called for his next seller to come in.

That evening McAndrew stopped off at the Beer Barn before heading home. Independent prospectors could be rather eccentric in their dealings, and McAndrew felt the need to unwind a bit. Since he'd spent a little extra time at his office, he reached the bar after the main after-work rush, but ahead of the happy hour crunch. He settled down on a stool at the bar, and savored the light acceleration; eventually he hoped to get promoted to a surface job where he would not need to strap down everything on his desk. He called for a stout, and began to relax.

As he sipped the dark full bodied beer, someone sat down at the adjacent stool. McAndrew swallowed and glanced at the new arrival. "Hi, Yuri," he said to the stocky blonde. "How's the scholarly world treating you?"

"Good evening, Fred," the man answered. "Things are well enough. But if I do one more chondrule recount because that nekulturnyi idiot cannot accept that his theories do not match the real world..." He shuddered. "Tomas!" he called to the bartender. "A lager, please."

Yuri Sautin was a geologist doing freelance field work for an Earth-based university. His days were usually spent running analyses on asteroidal samples to prove or disprove assorted solar system origin theories for scholar who did not care for the supposed rigors of space.

McAndrew watched the young geologist down the brew. "You're still working for that guy that claims Velikovskiy really was right?"

Yuri closed his eyes and grimaced. "Da. An idiot. But well funded for some reason. I suppose that so long as he has money, I shall stare at granulations." He drank again, then grinned. "Probably I should be ashamed for taking advantage of his mental problems." The two men laughed, and Yuri asked, "Since you are here this evening, I assume your miners are as peculiar as ever?"

McAndrew made a face and sipped at his beer. He savored the malty taste for a moment before

answering. "Yeah. Had one clown try to claim his ore included radioactives that would raise the price. Dipstick had just hit it with a nuke. It was carbonaceous, at that." He shook his head. "And my aluminum man was back again, too."

"Aluminium man?" Yuri prompted. He considered his beer, and sipped.

"Yeah, crazy ol' coot has been bringing in cargoes of bauxite for two years now, regular as clock work. Doesn't pre-treat it or anything; just takes base price." He chuckled softly.

"Bauxite? Just that; for two years?"

"Yep. Maybe three or four hundred metric tons by now. Says he's got a whole rock of it. But he doesn't want to sell it whole." He grinned. "Little bugger invited me out to see it. Says it's 'beautiful.'" He drained his mug, and waggled the empty at the bartender to call for a refill.

"How peculiar," Yuri noted. "An entire asteroid of just the one ore?"

"Pretty much so," McAndrew said. "Not pure of course; usual traces of other stuff you'd expect. Actually, it's pretty similar to the stuff dug up in the southeast U.S. on Earth."

Yuri was frowning. "That is very odd, you know. There are some people who hold that large homogenous lodes like that won't normally occur in space."

"Huh? I don't follow you."

"Possibly I've spent too long working for this silly Velikovskian; but some scientists claim that large concentrations of that sort require planetary geologic forces to produce them."

"I wouldn't know about that." Tomas set a fresh mug of stout in front of McAndrew. "But I thought it was fairly well established that there never was a planet out here." McAndrew lifted his mug and sighed happily.

"So most believe," Yuri agreed. "Due to tidal forces of Jupiter disrupting accretion. But my current employer believes the planet did form and was later disrupted by the tidal forces. Seems silly; but he got someone to pay to find out." Yuri paused in thought. Then, "I would like to talk to this miner of yours. Is he still on Ceres?"

McAndrew shrugged. "I suppose. We paid him off for his load, and he said he had some shopping to do. You could check with the port. His name is Bela Gogean. His boat is the *Tatiana*."

"Thank you, Fred. I shall look for him tomorrow." The expatriate Russian smiled. "I should think I can get another couple of thousand Marks out of the groundbound fool for this." He smiled slyly, and drank.

By noon the next day, Yuri had cornered his quarry. A series of comm calls had led him to the offices of Smithfield Ordinance, an outfit catering to the excavation needs of asteroid miners. As Bela stepped

out of the office, Yuri called to him. "Sir!"

Bela paused and looked about. "Yes?"

Yuri stepped closer. "Pardon me; but are you Bela Gogean? The prospector?"

Bela smiled genially. "Yes. You are, please?"

"I am Yuri Sautin. I am a geologist." He held a hand out to the smaller man. They shook, and Yuri continued. "We have a mutual acquaintance; Fred McAndrew at CDC. He tells me that you may own an asteroid largely composed of aluminium oxides."

The little prospector looked delighted. "Yes, I have. You wish to see?"

"Perhaps, sir," Yuri acknowledged. "At the least, I would like to ask you some questions. Perhaps, we could discuss this over lunch?"

"Is good. There is good place down this way." Bela pointed down the corridor. "Good rabbit file. Not had since last here. You come?"

Yuri smiled. "Certainly. It sounds wonderful. But only if you allow me to pay."

"I thank you," Bela replied graciously. "Come, is this way." He led the geologist down the corridor.

Once arrived, the men were quickly seated. As they perused the menu they exchanged polite chatter. After they had placed their orders, Yuri shifted to business. "Fred tells me that you've sold him a great deal of bauxite; mostly gibbsite, a little boehmite."

Bela looked blank. "Is aluminum oxide. Not know the special words. Mostly white, with much blue shade. Some is red. Very beautiful."

"I'm sure it is," Yuri replied. "How large is your asteroid? How much aluminium is there?"

"Is about 200 meters long, lumpy, maybe 75 meters diameter. Mass maybe 800,000 tons."

"Good lord!" Yuri was taken aback. "And the purity?"

Bela shrugged. "Hard to say right. Have not completely assayed. Is much of other materials. Some nickel-iron. Other things. Funny sort of rock. Best you come see." He smiled again.

"Could you guess at roughly how much of the body is bauxite?" Yuri asked insistently.

"Maybe half."

Yuri's eyes widened. "That's a lot of aluminium." The conversation paused as their waiter brought two salads to the table, and promised to return immediately with their drinks.

When the waiter had departed, Yuri went on. "have you noted any unusual structural details in the body..."

"Please, sir," Bela interrupted politely. "Am not geologist. I go out with digging tools and spectrometer. When find something I recognize, I bring and sell." He gave the other man an apologetic look. "Not trying to be rich. I pay off *Tatiana* and buy transport for family to come. Is all. While I make the money, work on project to keep busy. Project and money work together, so I am happy." He picked up a fork and started in on his salad. "Really, sir; is best you come to see yourself." He grinned.

The befuddled geologist shook his head. "You may be the first independent miner I ever met who actually wants people to come to his operation."

"Is okay. Aluminum is valuable to sell; but not worth to steal. No risk. And want people to see project. Is beautiful." Bela's smile widened, and his eyes twinkled. "You like."

Yuri surrendered. "Okay. You win. I'll visit." He stopped and frowned. "Umm... Maybe. I don't have a ship. I'll have to charter something. How far out are we talking about?"

Bela dismissed the worries. "Is close; why I sell at Ceres. Is only 83 million kilometers right now." Bela looked at his empty plate and thought. "Can you leave in two days?"

"Not without a ship..."

Bela waved his hands. "No, no. You pay for food, air. I take you on *Tatiana*. I leave day after tomorrow." Their returned with their entrees, and left with the empty salad plates. "But have to stay for month while I work. Then we come back to Ceres again."

Yuri thought it over. "How much will you charge?"

Bela pursed his lips and frowned slightly. "Ah. Say two weeks to go, one month stay, maybe three weeks to come back... Seven hundred Marks." He cut a morsel from his plate and ate.

Yuri sighed in relief. "Okay, I can do that. When do we leave and how much can I bring with me?"

"Is mining ship; mass not problem, unless you want more than ton."

"Oh, no. I had in mind about 150 kilos of gear."

"Bring then. Not problem. We leave Wednesday morning at 0700 Zulu. Will take almost 15 days to go. You should bring books and vids, too," Bela advised. "Hey, you bring plenty vids, I not charge for trip." He offered an embarrassed grin. "Boring sometimes."

Yuri smiled. "I understand. I'll stock up on entertainment for the both of us." He took a bite from his own plate. "Say, this is good."

"Yes, is marinade. I come here every trip," Bela said. "Best rabbit in Belt, I think."

More than two weeks later, Yuri was already regretting his bid at initiative. *Tatiana* was an older Pedersen Rock Hunter, theoretically meant for a crew of two; but rather crowded. And while she was capable of continuous boost, she still had her original electrical steam drive. At best, she'd pull three hundredths of a *g*. Bela kept it down to .02 to conserve reaction mass. Hence the extended, *boring* trip; by Yuri's standards.

The two men had tried passing the time by playing interactive comp games. After three days, Yuri conceded that there was not a game in the comp deck that Bela had not already mastered. Embarrassed, and disgusted with himself, he refused to pay against the miner again. And vids were worse yet. Yuri liked action-adventure, while Bela favored drama and musicals. The two spent as much time as possible in separate rooms.

So Yuri was a bit surprised when the miner poked his head into his cubical and spoke. "Sautin, come see."

"Eh, see what?" Yuri looked up from his datapad in confusion. "What's up?"

"Almost to rock," Bela enlightened. "Thrust stop in ten minutes. Maybe five minutes on attitude jet, and you see."

"See what, damn it," Yuri demanded in irritation. The past two weeks had grated on him.

"See project. You like." Bela grinned conspiratorially.

"Project *this*," Yuri muttered. Nonetheless, he put away the pad and drifted after the grinning miner. "Crazy little..."

While Bela made preparations to end the trip, Yuri floated to the dining area and found a beer. Even the acceleration was irritating him by now; insufficient to allow him proper footing, it nevertheless was too much to allow normal freefall habits. He was constantly tracking down something that he had tried to leave parked in the air. He punctured the baggie of brown fluid and took a sip. Thus fortified, he moved to the spacecraft's 'cockpit.'

Bela glanced at him. "You sit. Things move around when I use attitude jet. Be safer."

"Yeah, yeah," Yuri said sourly. "Whatever. Kristos, I hope this is worth it."

"Thrust off," Bela announced. "Will adjust angle for to see. You watch window." He gestured towards a three foot round window at the nose of the spacecraft.

As Yuri watched the oversized porthole, the stars moved and he felt a moment of dizziness as the ship pivoted. A vague, shadowed shape came into view. There was a hint of oddness that Yuri could not quite place. He felt his body shift as Bela adjusted trim and centered the rock in view.

"Jets off," Bela informed him. "So what you think. Nice little rock, right?"

"I suppose," Yuri answered. He took another gulp of beer. That was another annoyance; Bela preferred heavier beers than the lighter lagers that Yuri favored. But at least it was beer. "So what's the big deal?"

"You watch." Bela was grinning from ear to ear. He turned back to the console and transmitted a radio signal.

As Yuri watched the slowly turning rock flood lamps lit, illuminating the potato-shaped asteroid. But it wasn't.

"Yob tvyu..." Yuri began, and trailed off. He stared. "You have got to be kidding..."

"No. Is so." Bela said proudly. "I call her 'Blue Madonna.'"

It was a woman. Bela had been busy for the last two years. Most miners were satisfied with simply cutting and blasting loose manageable lumps of material. But the small man had gone one better. With the bulk of the mass salable ore, he could cut where he wanted. And had. He had *sculpted* the asteroid; a little here, a chunk there, an incision along here. The final result was a two hundred meter statue of a robed woman, who smiled gently at the mining ship as she rotated. The execution wasn't on par with Michaelangelo or DaVinci, but the sheer scale...

Yuri stared, then shook himself. He realized that he had lost the beer. He looked about until he spotted it. He grabbed and drank. "What in the bloody... Bela, *why*?"

"Why not?" Bela replied happily. "Not matter where I dig for money, so dig for fun, too." He beamed proudly.

Yuri looked. Even from his position hundreds of meters away, it was clear that the majority of the body was bauxite; albeit somewhat variegated. As Bela had said in the restaurant, the color ranged from whitish to red. The range of shading altered from one end of the asteroid... no, statue, to the other. The... head was a pale, nearly white, blue. The main body, the robes, were a more distinct blue that darkened towards the feet. The feet appeared to be... Yes, the crazy prospector had actually carved the appearance of leather sandal straps, taking excellent advantage of the iron-tinted aluminum oxide. As he examined the incredible work he spoke. "You're quite mad, you realize."

Bela chuckled cheerfully. "Yes, crazy. But not bored. And maybe famous now."

"Infamous, perhaps." Yuri blinked and stared some more. "Why... How did you decide to start this?"

"Was digging at end that is head at beginning. After few weeks, I look from ship and think 'Say, that look like face.' So I played and made face clear. Made no problem; anything I dig is cargo anyway. So kept carving. Too much work to make separate arms from body; but I thing of pictures of Mother Mary I see as boy. Decide 'Why not?'" He shrugged. "Think when family arrive, I make... tourist attraction. Sell trinkets, gifts. Make money."

Yuri finished his beer. "No doubt." He frowned as he noticed something. "But how did you do that

striping effect on the robes? And why bother?"

"Stripes?" Bela asked. "Oh! Not do that. Is rock."

Yuri spun towards him. "What? The rock is stratified?"

Bela looked puzzled. "Strat... Not know word. Is?"

"Stratified. Layers," Yuri said impatiently. "Like different types of rock sandwiched together."

"Ah." Bela nodded. "Yes. Rock is in layers. Was problem. Needed great care, or parts came off when not wanted to," he explained.

"Damn, damn, damn," Yuri murmured excitedly. "I've seen stratification before; but damn me if that doesn't look sedimentary in origin." He pulled out his datapad and started scribbling on the screen. "Bela, I need to suit up and start tests. I need samples; surface and cores. I'd like any assay data you have; preferably isotopic breakdowns. And..."

Bela was waving his hands. "No. Don't have all that. Only have basic spectrographic gear. No isotopic analysis; you do yourself. Can have surface samples as I dig."

"Dig?" Yuri looked confused. "You can't keep digging on this. It's a major geologic find! I think," he added more cautiously.

"Big science to you, money to bring family to me. I dig."

"But..."

"My rock, my money, I dig," Bela said definitely.

"Will you at least wait until I can gather some preliminary data?" Yuri pleaded.

"You look for few days. I work on dome, put away cargo. After that, I dig."

"Okay, okay." Yuri fidgeted. "But if I find something important, can I ask you to wait again? Gods know how much disruption of the layers you caused already. And I'll probably find contamination from your digging and blasting when I check isotopes..."

"Sautin, not much care. Is my rock. This is home I build for family. Stuff your science."

"But... but..."

"You better work while can, Sautin."

Just a day later, Yuri knew he had something. A closer examination of the stratified layers he had first noticed yielded clear signs of more detailed laminations. Also supporting the appearance of a

sedimentary origin, he had found obvious clays. To make matters worse, he had also found an apparent igneous intrusion. Yuri could think of some creative ways to explain the layering as accretion; but that upwelling of molten rock just *couldn't* happen any other way. And do you explain a clay deposit without flowing water?

"Bela, I need to call Ceres."

"Dish is small, but should reach. Do." The miner seemed unconcerned. He buttered his bread and took a bite.

"I don't know how to work your comm," Yuri responded. "I need your help."

"What you want to say?" Bela had become increasingly uncooperative as Yuri became more critical of the 'contamination' of the find.

"I want a message relayed to my university on Earth. I want to inform my sponsor of the find," Yuri told him. He drummed his fingers on the table top impatiently.

"Ah. So more scientists will come tell me not to dig on my property. Do yourself," Bela decided.

Yuri ground his teeth in frustration, then, "Damn it, Gogean! Do you have any idea just how important this is?"

"No. But know how important is buying transport for family. And building home."

"Gogean! There may have been another planet here! Don't you want to know what happened to it? What if something of the sort happened to Earth?" The red-faced geologist sat back, and took a deep breath to calm himself.

"Not on Earth. Soon, family not there. Don't much care," Bela answered calmly. "Besides, if planet why no else find such things? No else say their rock look like part of planet."

"I don't know!" Yuri exclaimed. "That's what I want to find out. Hell, maybe there wasn't a planet here. Maybe this is a piece that drifted in from interstellar space. That's why I need specialists here. And why I'm begging you not to dig anymore."

"You talk about good for Earth. And good for you to learn. I want only home for family that no one takes." He finished his bread. "I hear what is for you. Tell what is for me."

"Well... What do you want?" Yuri demanded.

"Home. Wife. Children. To be left alone." He eyed Yuri appraisingly. "You can do?"

Yuri sighed and buried his face in his hands. "I don't know. I can't speak for the university." He looked up. "But I think they would pay you for the asteroid."

"How much?"

"I don't know... Maybe the ore value. Maybe more for the scientific value. Maybe less, if the department budget is tight." He gave Bela a pleading look. "But it would be enough to let you build a good home on another rock, I'm sure. And pay the passage. And be self-supporting after. But I have to talk to the university."

Bela sat in silence for several minutes. He stared at a wall covered by a mural of an Earthly meadow. Finally, "What happen to Madonna if I do this?" he asked.

"Wha...? The statue?"

"Yes. What happen to my project? They take apart to look in rock?"

"Gods, no," Yuri said. "We would want the site as undisturbed as possible. She won't be finished; but she won't be destroyed either."

Bela sighed. "I make call for you. Not Ceres, though, if you want Earth. Is closer Web node." He rose from the table. "Come."

Yuri discovered that he had been holding his breath since his last comments. He released it and relaxed. "Thank you, Bela."

"Not to thank yet." Bela grinned. "We still deal. I not sell Madonna."

"But I thought..."

"I lease. Five year. And I stay here in family dome, while we look for new rock. After 5 year, option to buy."

Yuri stared at the miner in dismay. "But... Why?"

"If call family now, can have dome ready. We have place to live while look for new home. And we are together. Five year give time to look. If find sooner, you buy sooner."

Yuri looked very doubtful. "I don't think the university will go along with this. If you're still here mining..."

Bela shook his head. "No. Not mine. You lease, I watch only."

"Still..."

"Is deal. As say, take it or leave it. I let you call. You tell deal. I give week to decide; they pay earnest money of 10,000 Marks and I not dig until they come and see if want deal."

Yuri was dumbfounded. "You want 10,000 Marks *not* to damage the find? That's blackmail!"

Bela made a negative chopping gesture. "No. Is compensate for lost money. I not dig, I not make

money; you make difference. Is my property."

Yuri gave in. "Okay. You're right. I'll draft the letter, and give you the Postal routing." He rubbed his temples tiredly. "And how much you want for the lease?"

Bela smirked. "Is good deal. I think get 6 cargoes from rock in year. Paid 3,000 to 4,000 Marks each. I only charge your school 18,000 Marks every year."

"Good deal for you, anyway," Yuri grumbled. "But heck, the geology department can probably manage that easier than full immediate purchase. I guess it is a decent deal." He stuck out a hand to the miner. "Deal, Bela."

"Deal." They shook.

Yuri went to his room to draft the communique to the university. Bela sat back down at the table and considered the future. "Will be good to see Simona," he whispered. "But next time, I look for carbonaceous rock. Don't *need* this."

Remittance Man

I think I first encountered the term "remittance man" in H. Beam Piper's novel, Four Day Planet, and it struck me as being a decent basis for any number of stories. Andrew, however, has very little in common with Piper's Bish.

The ramshackle tramp freighter hovered no more than three hundred meters above the clustered domes on the asteroid. While a clumsy figure on the craft's hull busied itself with some goldbergian contraption, the pilot made occasional attitude adjustments. The trim jets fired very nearly as clumsily as the pressure suited figure maneuvered. A radio voice crackled in the person's headset. "Comrade Andrew, are you prepared?"

'Comrade Andrew' swore as he crunched several fingers between a hull fitting and his odd device. "Almost. But I fear I'll have to operate the gun from here."

"What's wrong with the remote circuit?" asked the ship's pilot.

"Uh... Well... The control cable doesn't reach far enough." Inside the helmet Andrew flushed with embarrassment.

"Very well, Comrade. Destiny will guide you. Let me know when the gun is ready."

"Will do."

No more than half a kilometer away, another suited figure listened to this exchange and laughed silently. His comm transmitter was disabled, so he waved to get his partner's attention.

The second dark suited figure nodded, an exaggerated motion visible through his bulky worksuit. He held a finger up to his helmet and gestured in little circles. *Crazy*. But dangerous even so. The two men fired coldgas handjets and maneuvered closer to the enemy vessel. Between them they towed a largish canister with a polymer extension; a flashbulb, a miner's expendable high-energy x-ray source. It was draped in the same dark fabric as the workers' suits. They were virtually invisible in the asteroid's shadow.

When they had closed to fifty meters, the men fired jets and brought their cargo to a halt over the ship. One man carefully aligned the flashbulb by eye, pointing the business end of the device at the life support pod. When he was satisfied with his aim, he extended a tiny antenna from the rear and toggled a switch. He took one last sighting on his target and gave his partner a thumbs-up.

The other man pulled a flashlight-sized cylinder from his suit harness. It dangled a short audio cable, which he jacked into his suit comm. He pointed the laser comm at a hab dome below on the rock. "Hello, control."

Invisible laser light bathed the two floaters. "Hey, Joey," returned the voice of 'control.' "You two set

there?"

"Yeah. We're ready. How 'bout the others?" While Joey and his partner positioned their flashbulb, seven other teams had labored at identical tasks, bracketing the target.

"You're the last to check in, dude. Go ahead and clear the area. We'll give the clowns another chance to go away, then we zap 'em."

"Cool." Joey nodded to himself. "Good shooting. We're moving back to the port now. Have at 'em." He killed the directional comm set and waved to his partner. They jetted away from the danger area. The suit radios crackled again as they moved back to base.

"Hello, pirate," called control.

"We are not pirates," the pirate's pilot replied immediately. "We are freedom fighters. Defenders of the People's Revolution. We..." In the ship's control room the People's Pilot gestured grandly. And brushed a switch. "Oops." Attitude jets flared again. And outside the foolishly untethered gunman was cast off into free space.

"Um, Marco," Comrade Andrew called out to the pilot, only to be ignored.

Port Smith control spoke again. "Yeah, well *oops* this. We aren't playing your game. No moola. Go rob someone else." The voice hardened. "Clear Port Smith space. Now. Or we wipe you."

Marco swore colorfully. At least he did something well. "Comrade Andrew," he called. "Open fire!"

Below in control, someone spoke. "Not freakin' likely." A thumb depressed a button, and eight flashbulbs went off as one.

Comrade Pilot Marco never felt a thing. But drifting several away, out of the common area of the lethal beams, Comrade Andrew caught the fringe of a beam and felt a wave of heat. And realized he felt ill. "Hey, Marco," he radioed. "What was that?" Silence answered. "Marco?"

A stranger's voice answered. "Well, I'll be jammed. One of you idiots survived?"

"Who's that?" Andrew demanded. "Where's Marco? What's..."

"Oh, hush," returned the voice. "Marco was just guesta honor at a barbecue." It paused. "Ah, there you are. How'n the flippin' heck didja manage to toss yerself off the ship? No matter. You hang tight. I'll send someone to bring ya in."

"But..." the sick terrorist began.

"I insist," the voice said coldly.

Billy McKeever looked at his son and shook his head. Even at twenty-five years, Andrew bore a

petulant look more befitting a child.

"But, Dad," whined Andrew, "you can't be serious!"

The older man settled down onto a deeply cushioned sofa; an obvious luxury in given the low rotational 'gravity' of the habitat. He replied, "Yes; as a matter of fact, I am serious. You're an embarrassment; a liability." He frowned and made an abrupt chopping gesture. "I won't put up with it anymore."

"Dad, all I need is just one more chance..." began the long-haired younger man.

Billy sneered. "Again? So you can do what?" He pulled out a datapad and fingered the screen. "On your fifteenth birthday, you said you wanted to move out on your own. I co-signed a loan so you could get an apartment and pay your life support fees. Instead, you gambled it away, and ran up a debt. I paid it off so you wouldn't get posted as a defaulter in the town square."

"That wasn't my fault," Andrew explained "The game had to rigged. My system was perfect..."

"Your system was a scam. You actually tried to bring in your own dice. Idiot." The elder McKeever tapped the pad again. "Then you had the brilliant idea of buying a franchise from the Confidential Comm network." He closed his eyes briefly, and rubbed his temples. "And tried to monitor private letters so you could blackmail your customers."

Andrew rose from his chair. "It wasn't blackmail! I merely pointed out that their lines weren't as secure as they thought. I offered to sell..."

"What you had already contracted to sell, you fool!" Billy shouted. "Be glad you only hit individual accounts. Some of the Corps wouldn't have settled out of court." He shivered. "And some would... but not for money." He looked at his scruffy son in puzzlement. "It's as if you never understood how things work in the world."

"What's to understand? It's a dog eat dog world," answered Andrew. "I'm just trying to be top dog."

"Haven't you ever heard of enlightened self-interest, boy?" asked Billy. "I know you have; I run my business by it. In the long run, you don't get anywhere by screwing your customers. Sheesh!"

"Oh, come on, old man!" Andrew sneered. "Customers. Bah! They're sheep; I'm the wolf."

Billy McKeever glanced at his datapad again. "Which, I suppose, explains the next couple of incidents." He closed his eyes again, and hung his head. Taking a deep breath, he looked up at Andrew. "Piracy, for god's sake. I set you up with an excellent long range prospecting stake, and you go play Blackbeard."

"It wasn't piracy! I was going to pay for the oxy..."

Billy cut him off, "Sure, once those miners caught you."

"Darn it, I had a right to that oxygen! Resources should be allocated by need and utility," Andrew pontificated. "My reserves were expended..."

"Because you left a feeder valve open," Billy supplied.

Andrew continued as if he had not spoken. "...and those miners had more than they needed. It was mine by right. Property is an illusion, anyway."

Billy stared in disbelief. "How did I manage to raise a little communist?" he asked rhetorically. "You're lucky they didn't kill you and be done with it. Do you know how much it cost me to hush that up?"

Andrew stood silently defiant.

"A lot. And more than just money; I lost credibility." He waved the young man down. "Sit down. We're not done yet. Sit!"

Andrew sat, red-faced. Equally flushed, Billy referred to the pad. "And the devil only knows what you were up to for the years you disappeared. You sold some ore loads; I hoped that meant you'd finally learned. That maybe you were working." He peered into Andrew's eyes. "But I suspect not." Again, the datapad. "So tell me, boy; what insanity made you decide to be a revolutionary?"

"Spoken like a true reactionary capitalist!" spouted Andrew.

"Oh, shut up," said Billy. "My penchant for 'capitalism' is the only thing that's kept you alive all these years." He gave his son a look of scorn. "And what do think you're rebelling against? We left the government behind on Earth. If you don't like the lifestyle in one habitat, move to another. Heck, I know of two Marxist communities even. Set up by some socialist reactionaries from Russia; couldn't deal with the open market there."

"They sold out their heritage!" Andrew responded. "Crass materialists who demand an exorbitant entry fee."

"Well, they've got to support the community somehow." Billy grinned momentarily. "Wouldn't have you, huh?" Andrew mumbled something inaudibly in reply.

"Is that why you turned to extortion and terrorism?" Billy asked. "To get the immigration fee?"

"To finance the revolution," Andrew muttered quietly, looking at the dark pile carpet.

Billy sneered again. "So. In order to pay for the revolution to free people from their chosen lifestyles, you threaten to kill them."

"I was only going to punch a few holes in their dome." Andrew said defensively. "It would've only inconvenienced them."

"Inconvenience? You had a twenty millimeter chain gun!" Billy exploded. "You could have

depressurized the entire base!"

"Yeah? Well, they had weapons of mass destruction!" Andrew challenged.

"What, a couple of subkiloton nuclear devices? Those are for moving large ice masses," dismissed Billy. "They never even used them."

"Then what did they hit my ship with?" Andrew demanded.

Billy grinned. "Flashbulbs. Eight of `em; at darn near point blank range. Flew out on jet packs, and you dipsticks never saw `em."

Andrew looked confused. "Huh? What're flashbulbs?"

Billy's eyebrows lifted. "Boy, don't you have any clue of how the world operates?" He shrugged. "Guess that proves you never mined those ore loads you sold."

"I don't understand," Andrew said plaintively.

"So I see," Billy replied scornfully. "Flashbulbs are a standard prospecting tool. EMP-fired high power x-ray sources for examining a rock's interior structure," he explained. "You're lucky you didn't fry along with the others."

"They used radiation weapons? And you approve? But they killed Marco..." Andrew responded in horrified wonder.

Billy smiled nastily. "Approve? Dipstick. Didn't you know my company had people... offices at Port Smith? Approve, heck; it was my suggestion!"

"You wanted to kill me?" Andrew screeched.

"Oh, heck. I didn't even know it was you at the time; just some terrorist." He gave an evil grin. "If I'd know it was you... Well, considering your past history, I'd told `em to use *ten* bulbs."

"Dad!"

"Don't Dad me, Andrew," Billy instructed angrily. "You resigned from the family when you opted for initiated force as a way of life."

"You'd have killed me over a stupid principle?" demanded the young man.

Billy shook his head. "More like, as a matter of principle. That, and self-defense." He stared sternly at the unrepentant man. "Tell me again; how is it that you survived the flashbulbs? Why weren't you with the others in the main cabin?"

"Ah... I... uh," stuttered Andrew. "I was outside the ship."

"Yes. To operate the gun." Billy stared intently into Andrew's eyes. "You were the one who was *personally* going to do the killing. You little son of a..." He was interrupted by a knocking at the door. Both heads turned to the sound. "You stay sitting right there," Billy directed. He rose, and walked to the door. "I think your ride is here." Andrew blanched.

Billy slid the door open, and looked at the four men standing there. "Good afternoon, Mr. Rasmussen, gentlemen," he greeted them. "I think he's ready for you." He stepped aside and waved them into his home.

"Thank you, sir," replied the man in front as he came in. He looked at Andrew in disgust. "Have you explained his options?" Rasmussen asked Billy.

"Not yet," Billy replied. "I'm not sure he deserves it. Why not tell him what you plan for him." He smirked at his son.

"Dad! You can't give me to them!" Andrew cried. "It's slavery. They'll kill me!"

"Oh, no... Nonsense," Billy and Rasmussen began. They looked at each other and smiled. Rasmussen deferred to Billy. "Boy, you heard the arbitrator. You owe restitution. Every one of the four hundred-twenty-three inhabitants of Port Smith filed suit against you." He pulled out the datapad again. He tapped at the display, and looked. "You owe a total of twenty-one point fifteen million for threatened loss of life, eight point four six million for mental anguish, and an even 3 million for estimated loss of revenues due to your little adventure. You get to work it off." He turned to Rasmussen, and said, "How 'bout telling young Mr. McKeever all about his new job, sir?"

"Certainly," he replied. Then, a bit vindictively, to Andrew, "Well, Andrew; you're going to be working at our experimental uranium processing plant." He smiled gleefully. "You may have heard of the project. We're developing ways to refine and separate uranium without the need for various slurries and caustic chemicals." He paused, and then explained, "We're trying to devise a purely thermal process; completely solar. We have about ten square kilometers of mylar-aluminum collectors," he added proudly.

"Hey, man; I don't know anything about uranium processing.." Andrew objected.

"That's quite all right. Due to the radioactivity and the extreme heat of the processing, it's mostly automated. Very dangerous, you know." His smile widened. "But for those unexpected things that spring up in any experimental process... Well, we need someone onsite, in person. *You* just volunteered."

"You can't do this!" Andrew yelled. "I'll..."

Billy broke in, "The arbitrator already approved it. Given the hazards of the position, your salary is set accordingly high: two million per year. *And* a point oh-five percent share of any profits from the refinery during your term of employment." Billy smiled mirthlessly. "You should be payed off in about twelve or thirteen years." The five men laughed as Andrew stared in shock.

"Except that I'll be dead by then! Dad..." pleaded Andrew.

"Don't call me Dad, punk," Billy replied. "But you *do* have an option." Billy's eyes lit.

Warily, Andrew asked, "What option?"

Rasmussen spoke, "Exile."

"Huh?"

Billy elaborated. "For the sake of your dear departed mother, I've arranged an employment option. Mr. Rasmussen and the arbitrator approved it, as well. Your choice."

Seemingly made nervous by the fact that the five were still smiling, Andrew asked, "What's the other choice, then?"

"You go to Earth as a remittance man," Billy said flatly.

"I don't get it..." Andrew said.

"Well, we can't exile you anywhere else," Billy explained. "Your face is known virtually everywhere in free space; no one'll have you. So you go to Earth for fifteen years to work off your debt."

"Earth? That's crazy!" Andrew exclaimed. "I can't go there; the gravity'll kill me!"

"Nah," Rasmussen put in. It's just three times Martian grav. You've been there. You'll get used to it." He chuckled. "And we'll be generous; for every two million you can come up with, we'll shave a year off your sentence."

Andrew sputtered, "But... but... Where... How am I going to get money? What'll I do there?"

Billy and Rasmussen chuckled again, and Billy said, "I pulled some strings and found you a job."

"Doing what?" Andrew asked suspiciously.

Billy grinned. "Well, it wasn't easy finding anything you were qualified to do. But fortunately, the U.S. still recognizes you as a citizen, since you were born there." He noted Andrew's puzzled look. "Yep, we came up when you were less than a year old. Back when Launcher started offering pioneer stakes." He shrugged. "Anyway, you're American. So we got you a job with a state government."

Outraged, Andrew shouted, "*What?*"

"Yep, it was the only thing we could find that you knew anything about." Rasmussen watched with a twinkle in his eye as Billy went on. "In fact, given your background, you're uniquely qualified."

"Uuuh..." Andrew muttered questioningly, suspicion filing his eyes.

"Ohio Department of Taxation," said Billy.

"You're going to be a revenuer," supplied Rasmussen, with a wide grin.

Bounty Hunter

This story completes the courts/enforcement theme which I started in "Point of Honor", and further detailed in "Simulator", "Claim Jumper", "Rentacop", and "Remittance Man".

Robert Heinlein once recommended budgeting the luxuries first. I beg to differ.

Roadrunner drifted down to Pallas' surface with attitude jets softly thrusting. As she touched down, port handlers clipped tethers to her hull and secured her. One suited figure waved toward the port dome when they finished.

Inside the craft, the radio receiver crackled to life. "Hello, *Roadrunner*. You're tied. Shut her down, and welcome to Pallas."

Dmitry Ross keyed the transmitter and replied, "Thanks, Control. Give me a few minutes to settle things and I'll head over." He toggled switches and checked displays. "I'll leave her unbuttoned for your folks. I'll be wanting a top off for the tanks."

"Sure thing, *Roadrunner*. Distilled water? Or are you pushing H-two?"

"Just water, Control. I need about 25,000 liters." Dmitry flipped more switches.

"Gotcha. That's gonna be about 250 Marks."

"Right, Control," Dmitry acknowledged. "You take Ceres Credit, or do you prefer gold?"

"Either's good for me, *Roadrunner*."

"Credit it is, then. See you in a few." Dmitry cleared the comm. After a last glance over the board, he locked it down and moved to the small ship's minimal lock. He quickly suited up for vacuum, then gathered up two bags. He entered the lock and cycled through.

As he exited the lock, he found that the ground crew had clipped a guide line to a ring by the hatch. He attached a lanyard from his suit harness to the line and pulled himself along to the control dome. Mascons might provide more gravity at some locations on Pallas, but near the port acceleration was less than .05 g. He was glad of the line.

When he had cycled through the port airlock, he pulled off his helmet and looked around. To his right he spotted a door labeled 'Portmaster – Fees here.' He opened the door and moved in.

A tubby, balding man looked up from his comp deck and said, "*Roadrunner*?"

"Yep. I'm Dmitry Ross. I'd like to landing and fuel fees out of the way." He placed his bags against the floor, and offered a hand to the portmaster.

As they clasped hands, the tubby individual introduced himself. "Robby Burke. Pallas portmaster, such as it is. Glad to meet you." He reached to his desktop and grab a sheet of paper. "Landing runs 30 Marks. Berthing is another 20 per day. Water is a penny per liter."

"Okay." Dmitry nodded and reached into one of his bags. He pulled out a credit card and handed it to Burke. "Go ahead and charge the 25,000 liters and landing fee." He frowned slightly. "I don't rightly know how long I'll be here... Let me pay a week in advance. If I stay longer, I'll make new arrangements. Is that cool?"

Burke took the extended card and ran it through a strip reader. "Not a problem. You here on business or pleasure?"

"Bit of both, perhaps," Dmitry replied. "Business really; but I may enjoy it."

"What sort of business you in Mr. Ross?" Burke inquired. "If you don't mind me asking. That's no miner you have parked out there."

Dmitry smiled proudly. "Nope. A Berensen Fast Courier. She's not much for cargo; but she'll get around right quick. A good, extended third g boost." He eyed the portmaster appraisingly, then pulled out his datapad. "My business is this man." He called up a picture of a young man. "Name's Kevin Engels. Somebody told me I might find him here."

Burke peered closely at the picture, then looked Dmitry in the eye. "Bounty hunter?" he asked quietly.

"Yeah," Dmitry admitted readily. "Ceres Civil Liberties hired me. Engels skipped on an arbitration ruling."

"I suppose you have some docs to back that up?" Burke asked.

Dmitry handed over a datacard. "Documentation's all there. And I'll post bond for for comm charges to verify with Ceres."

"Don't worry about communications bond," Burke said. "We like to handle that automatically anyway. No charge." He sighed. "But the fact is, I don't recognize your man. Not to say he isn't here; but the face doesn't look familiar." The portmaster turned back to his comp and tapped keys. After he moment he said, "Probably be tomorrow morning before we have your bona fides cleared. Why don't you get checked into a hotel and relax for a while?"

"Sure. That'll be fine," Dmitry agreed. "Any recommendations?"

"Depends on what you like. But Casey's is just down the access tube, reasonable rates, and pretty comfortable."

Dmitry smiled. "All right, then. I'll be there, if they aren't filled up. Just leave a message when the clearance hits."

"Will do." Burke handed the spacer's charge card back, along with the datacard. "What'd your guy do, anyway?" he wondered.

"Killed a woman." Dmitry smiled grimly. "That's why this is business and pleasure." He gathered his bags. "Which way to the tube?"

Burke was shaking his head. "Killing *and* running on the judgment. Damn. Takes all kinds, I suppose." He sighed. "Just keep following the hallway. Casey's is about 300 meters down on the right."

"Thanks. Have a nice day." Dmitry stepped back into the hall and headed out.

The next morning Dmitry was seated in a diner next to his hotel finishing his breakfast. He washed down a last bite of blueberry muffin with some excellent coffee. The waitress glided over and refilled his cup. As she moved away, Dmitry spotted Robby Burke. He waved and caught the man's eye. "Good morning," he greeted the portmaster. "Any chance you were looking for me?"

"Sure 'nuff, Mr. Ross," Burke answered cheerfully. "Your docs checked. I've logged you on the public boards as an official Arbitrator's Rep. You shouldn't have any trouble."

"Well, thank you, sir." Dmitry gestured to the empty chair across the table. "Would you join me for a cup of coffee?"

"Burke declined graciously. "I appreciate the offer; but I need to get to Control. I just wanted to be sure you got your go ahead. We don't welcome skippers on Pallas. If he's here, I want to help you all I can."

"You have already, Mr. Burke. I thank you." He wiped at his lips, and rose from his seat. "I do believe it's time for me to get to work." He dropped a few coins on the table, and headed for the door. The waitress smiled and wished him a nice day. In the corridor the two men went their separate ways.

Being rather familiar with the habits that had landed Kevin Engels in trouble to begin with, Dmitry started his search in the port bars. He hit pay dirt in the third.

"Yep, I think I know him," the bartender confirmed, looking at the datapad display. "But he says his name is Ken Angelo."

Dmitry pursed his lips. "But the face is familiar?"

The bartender looked again, then handed the pad back to the bounty hunter. "Sure looks like him, anyway. You say he's a skipper?"

Dmitry shrugged. "Engels is. If your Angelo is the same man, then... Yeah, he ran out on an arbitration ruling on Ceres six months ago." He drummed his fingers on the datapad's case. "You know where I can find this guy?"

The barman snorted. "Well, since he isn't in here right now, I assume he's in another bar. If he works,

I've never heard of it. I think he sold his ship when he got here, and's just drinking up the proceeds."

Dmitry made a disgusted sound. "Sounds more and more like Engels." He slipped the pad into a pocket and climbed off the stool. "I'm going to work my way down the corridor. If he should happen to come in, could you send word?"

"Sure," the bartender said agreeably. "Happy to help. We don't need skipper trash around here. Place'll get as bad as Earth if we don't take care."

Dmitry smiled. "I don't think we're in too much danger of that; but thanks just the same." He headed out the door.

Two bars down, he found a small party happening. He grinned at the sight of the merrymakers and moved to the bar. He flagged down the bartender and ordered a lager. When the beer arrived, he slid silver coins across the bar.

"Whoa, man! You're overpaying a bit," the bartender, obviously an honest man, corrected. "The same in copper is more like it."

Dmitry shook his head. "Nope. I'm looking for some help and data, too." He pulled out his datapad. "I'm an Arbitration Rep out of Ceres. Portmaster has my docs on the public board," he explained.

"Bounty hunter?" the other man asked. "Let's see your pad." Dmitry called up an ID file and handed the pad over. The bartender looked it over suspiciously, and stepped over to the shop comp. Blocking Dmitry's view of the screen, he punched buttons. He watched the screen for a few moments. Then he seemed to relax. He returned with Dmitry's pad. "Okay, Robby says you're okay. He offered a hand, which the Rep accepted. "I'm Cholly O'Connor. So who ya looking for?"

Dmitry called up Engels' file. "This guy. Kevin Engels. I hear there's a Ken Angelo around here that bears a striking resemblance to him."

Cholly glanced at the screen. "Sure does. And if you turn around and look over in the corner, you'll probably think so, too."

"Damn! He's here now?"

"Yep." Cholly gestured towards a dark corner table. "Just came in a few minutes aheada you." "So, ah... What did he do?"

"If he's my man, he's a killer and a skipper."

Cholly's eyes widened abruptly. "Well. What do you say we go find out?" He lifted a hinged section of the bartop, and stepped into the common area. "Come on." He led the way through the crowd to the suspect's table. When they reached the lone seated figure, Cholly spoke. "Hey, Angelo!"

The man looked up from his glass, and stared sourly at the bartender. "Whatta ya want, Cholly?"

"Got a man here who'd like to talk to you," Cholly replied. He stepped to the side to let Dmitry move up.

The bounty hunter glanced at his datapad display and compared the image with the face before him. He nodded. "Kevin Engels?" he inquired.

The drinker tensed suddenly. His eyes narrowed and he stared at Dmitry. "No, man. My name's Angelo. Ken Angelo." One hand slid out of sight.

"Perhaps it is now," Dmitry allowed generously. "But my data indicates that you are also one Kevin Engels, currently in arrears on restitution payments." Other bar patrons were beginning to take notice. The establishment began to grow quiet. The hunter continued. "I'm Dmitry Ross, acting as an authorized agent for Ceres Civil Liberties, with whom Kevin Engels entered into binding arbitration." He stared into the seated man's eyes. "I have cause to believe you to be Kevin Engels. Are you?"

"Hell, no!" the man exclaimed. "Go bother someone else."

Dmitry reached into a belt pouch and removed a small bag, which he tossed onto the table. "Sir, I ask that you submit to a fingerprint and retinal check to verify your identity." He pointed at the bag. "I'm posting ten ounces of gold as a bond to compensate you for the inconvenience if I should be mistaken."

"Jam off, bugger," the man muttered. "You ain't printing me." He raised his glass and gulped down the amber fluid.

"Sir, if you aren't Engels, you have nothing to lose but two minutes of your time. And you'll make an easy thousand Marks. I see no reason why you wouldn't care to cooperate."

"Hum me, Ross; or whatever your name is," the man replied angrily. "I don't have to do nothing."

Dmitry considered the situation. "No, you don't." He turned to Cholly. "Have you noted this man's lack of cooperation?" he asked.

"Sure have." Cholly addressed Angelo. "Get up. Get out. Stay out. You'll do no business here."

Angelo looked back blankly. "What?"

"Get out of my bar, Angelo."

"Hey, man; you can't do that!" he objected.

"It's my bar. I pick my customers. And you aren't one anymore." Cholly pointed towards the door. "Print for the man, or get out *now*." Cholly's voice had gone flat. There was no other sound in the bar. Someone had even killed the music deck. The bartender glanced over his shoulder at one of his barbacks. "Aleksey, make the rounds down the corridor. Make sure every body knows what's up." The kid nodded and headed to the front door.

"Wait a minute," Angelo called. "Don't do that." He stood and faced the bounty hunter. "Yeah, I'm

Engels. What of it?"

Dmitry nodded to himself in satisfaction. He pulled a sheath of papers from a thigh pocket. "Engels, on July 4, 2028 you got drunk and decided to celebrate the Fourth of July by popping off a rounds from your sidearm. Unfortunately, you did this in the main dome. One round struck and killed Tatyana Thompson. On July 11th you agreed to a binding arbitration hearing in which you were ordered to pay Tatyana's children 100,000 Marks as restitution for the loss of their mother. Instead of making arrangements to begin payment, on July 12th you boarded your spacecraft *Teapot* and absconded." He sneered at the criminal. "And now I've found you."

Engels' hand slid towards his pistol. "Yeah, and what are you gonna do? Haul me back?"

Dmitry tossed to bundle of papers at the man. Startled, Engels started to draw. Incredibly faster, Dmitry had his own gun out first. With the muzzle resting on the bridge of Engels' nose, he said, "You really don't want to do that."

White-faced, with eyes crossed to stare at the muzzle, Engels released his pistol and let it slide back into its holster. "Now what?" he whispered hoarsely.

Still sneering, Dmitry returned his old fashioned revolver back in his own holster. "Now what depends on you," he said.

"You taking me back to Ceres?"

"Of course not," Dmitry replied, looking slightly puzzle. "That would be kidnapping. I'm just here to collect payment."

Engels looked scared. "I can't pay. I'm broke."

Dmitry shook his head. "Word is you sold *Teapot* when you got here. You have money."

"It's gone," Engel said hoarsely. He eyed the bar patrons surrounding him, and licked at the beads of sweat that formed on his upper lip.

Dmitry's eyes closed to thin slits. "I demand that you make good on your voluntarily incurred debt," he uttered formally.

"I *can't*."

Dmitry stared him down. "If you can't make full payment, make a partial payment as a show of good faith, and arrange to complete restitution in a manner acceptable to your creditors."

"I can't, I tell you. I'm broke." Engels was looking panicky.

Cholly spoke up. "What do you mean you're broke, Angel... Engels? You've run a tab here. can you even pay me?" he demanded.

Engels hung his head in silence. Dmitry turned to the bartender. "Can I use your printer? I have to post him. And I'd appreciate it if you'd post him on Pallas' board."

Cholly nodded. "No problem." He looked at Engels and spat, splattering the man's shoes. "You jammin' scum. You killed that woman. You left her kids with no momma. And you won't even try to make right." His arms tensed as he slowly clenched his fists. "Get out," he whispered. He looked back to Dmitry. "Let's get this piece of scheisse posted. The two turned their backs to Engels and moved to the bar.

Engels stood and looked across the faces of the watching patrons. He saw disgust in every eye. No one said a word as he left.

Several minutes later, volunteers were carrying handbills to every business establishment in the corridor. Cholly had already posted notice of Engels' failure on the asteroid's public comp board, with a relay over the Postal Web to every other node.

By the end of the day Kevin Engels was an outcast. Not merely socially, but physically. He had also been in arrears on his rent. When word of his inability to pay, and refusal to make restitution reached his landlady, she locked him out.

Not even the soup kitchens would have him. Engels spent a very uncomfortable night sleeping in the city commons.

Three days later, Dmitry was still grounded on Pallas. The portmaster looked him up at the restaurant for breakfast.

Dmitry glanced up at his visitor. "Morning," he said cheerfully. "Have a seat. Want some coffee?" he offered.

"Don't mind if I do," Burke accepted. He planted himself in the chair and stared across the table at the bounty hunter. At Dmitry's gesture the waitress brought another cup of coffee.

"So what can I do for you today, Mr. Burke?" Dmitry asked with a sly grin.

Burke poured a dollop of milk into his coffee. As he stirred, he responded. "Actually, I was wondering about the same thing." He blew on the hot beverage, then sipped. Smiling slightly, he continued. "Seems to me you did what you came for a few days ago. I was wondering why you're still here."

"Oh, dear. You aren't running me out of town, are you, sir?" Dmitry asked. He sipped at his own coffee.

"Oh, heck no." Burke shook his head. "I just had the impression when you landed that you were planning to leave as soon as business was taken care of. So I'm curious. What else is up?"

Dmitry grinned. "Ah, but business isn't quite finished. But I think it will be soon. Your people have fueled *Roadrunner*?" he asked.

"Oh, sure. We took care of that your first night here. And it only came to 24,000 liters or so. You have a refund coming," the portmaster added.

Dmitry nodded in satisfaction. "Thank you." Then, "I checked schedules on the board last night. I understand quarterly air fees were due yesterday."

Burke blinked, surprised at the non sequitur. "Sure. But you don't owe. As a transient, your air fees are covered by the berthing fee. You're paid up."

"Oh, I'm not worried about myself," Dmitry declared. "But how do you suppose Mr. Engels plans to pay?"

Burke's face lit with enlightenment. "Ah! I see. I wonder..." The tubby man fished his datapad from a pants pocket. He fingered commands. "My, my. It seems that Mr. Engels hasn't paid his air fees. He hasn't even asked for an extension." He looked up and flashed Dmitry an evil grin. "We should probably do something about that."

"Indeed," Dmitry concurred happily. He sipped coffee. "I imagine that he can be found in the commons park this time of day. Apparently he isn't welcome anywhere else on Pallas." He chuckled.

Burke smiled and stood. "Mr. Ross, as fine as Maria's coffee is, I think some things should come first. Would you care to join me?" He gestured to the door.

"I would be delighted." He stepped towards the kitchen. "Maria!" he called.

A woman's voice answered. "Si?"

"I'm stepping out for a few minutes. Would you place my breakfast in the warmer till I get back?"

"Of course, Mr. Dmitry. If you are gone too long, I make you fresh omelet."

"Thanks, Maria." He turned back to Burke. "shall we see what we can see?"

"Certainly," the portmaster replied.

On the way to park, Burke made stops at various businesses. After a brief explanation, the proprietors joined them. By the time they reached the park, they had a veritable parade. The good folk of Pallas dispersed through park. Before very long at all, they had found Kevin Engels, and brought him to the portmaster.

"Now what?" Engels asked bitterly. He glared at Dmitry. "You've already ruined my life. What more do you want?"

"Dmitry corrected him. "Engels, no one ruined your life but you. You have the sole responsibility for your own actions and inactions. Don't blame anyone else." Then he smiled at the man. "But as it happens, I have nothing else for you. I'm just tagging along with these fine folks." Dmitry chuckled. "But I do believe they have business with you."

"Indeed, Mr. Ross," Burke said graciously. "Quite so." He stepped forward. "Mr. Engels."

Engels sighed. "*What* already?"

"Are you aware of the date?" Burke asked. "And the significance of said date?"

"Sure. January third. What of it?"

Do you realize that yesterday was the deadline for paying quarterly air fees?"

"Oh, Jesus Christ!" Engels exploded. "You know flippin' well that I'm broke!"

"Indeed." Burke smirked. "Have you made arrangements for a delayed payment?" Then in a stage whisper to the gathered throng, "Of course, as the representative of Pallas Port, I know he hasn't. But forms must be met." Light chuckles erupted from the crowd.

Engels stood red-faced with anger. "I'll pay my fees. I just have to scrape up the money. Gimme some time."

"Time, Mr. Engels, is something you lack. Frankly, I don't see how you could 'scrape up' the money. You are still unemployed, I believe?"

"I'll get a flippin' job!" the man shouted.

"With whom, I wonder." Burke turned deadly serious. "Who on this entire world do you believe is willing to offer you employment, Engels? With your record?" He sneered. "You've run up debts. You have a public record of skipping on restitution. Who's going to hire you?"

The implications began to sink in. Engels eyes widened, the whites showing with incipient panic. "Now wait a minute. You've got to give me a chance..."

"Actually, we need do no such thing. But I'm feeling vaguely generous." Burke turned to the waiting crowd. "Is anyone here willing to employ Mr. Engels?" he asked.

"I don't think so," returned an anonymous voice. The only other answer was general laughter.

Burke made a show of sighing. He faced Engels again. "Sorry. It seems you're still unable to pay." His grin split his face. "I'm going to have to ask you to stop breathing our air. Now."

Engels face paled. He began backing away from the crowd. "Hey, man... You can't ..."

Burke spoke to the watchers again. "If you fine people would be so kind as to assist me..."

It went quickly. The only notable delay was at the airlock, where Engels demanded that he at least be given his pressure suit. Some kind soul reminded him that he had sold it part and parcel with his ship.

Afterwards Burke walked back to the restaurant with Dmitry. "Would it be a safe assumption that your business is concluded now?" Burke asked facetiously.

"Yes, I do believe so," Dmitry allowed. "I'll just finish breakfast and check out of Casey's. I should be ready to lift by noon." He held the restaurant door for Burke and waved the man in.

When they were seated, Maria brought fresh coffee and Dmitry's warmed omelet.

"Mind if I ask a personal question, Mr. Ross?" Burke began slowly.

Dmitry swallowed a bit of omelet and replied, "Not at all."

"I couldn't help but notice that you seemed to take the Engels case very seriously. Was there something personal at stake?" The chubby portmaster fidgeted and continued. "Was ...um Tatyana Thompson someone special?"

Dmitry stopped eating and set his fork down. He took a deep breath before answering. "Yes, and no. Show me someone who isn't special to somebody. Certainly she was special to her kids." He sighed. "But in the way you mean? In fact, I don't think I ever met the woman."

Burke frowned. "Then why the special attention to Engels?"

Dmitry closed his eyes for a moment. "Not too many years ago I was a cop on Earth. Can you guess why I gave that up and came here?"

"Aside from the reasons any of us left to find new opportunities?" Burke asked. "No."

"I quit because I got sick of watching people get hurt, only to have the official system grant more rights and protections to admitted criminals than their victims." He blinked back what Burke was sure were tears. "But out here *everyone* is on an equal footing. And I can help make sure it stays that way." He snorted. "An American court back on Earth would be horrified by what happened today. But everything was centered on recognizing every persons' rights and responsibilities. I like that.

"Engels had every possible chance. His case was heard in a hearing he specifically agreed to. He picked the Arbitrator. He agreed to the restitution. Three days ago, he could have begged Cholly for a job washing dishes and offered partial payment. But he couldn't be bothered." Dmitry relaxed and smiled. "And now he won't ever be bothered, or bother anyone, again.

"I'm happy."

High Lord Anarch

This is the last of the Net Assets-related tales in this volume.

OK; I was in a silly mood, there were all these nukes laying around, and then I saw this article about declared nuclear powers...

H. Reginald Henry set a cup of herbal tea on the edge of his desk, then settled his imposing bulk into the massively cushioned chair. He sipped at his tea, the beverage sickeningly sweet just the way he liked it. Henry sighed contentedly and decided he was ready to start the day. The Secretary General of the United Nations tapped a button on his intercom, signaling to his administrative aid that he was prepared to face the day.

Said assistant entered Henry's office immediately. The pretty young lady brought in her datapad and, unusually, a large flat parcel. "Good morning, sir," she said brightly.

"Good morning, Tommi." Henry pointed at her burden. "What in Christ's name do you have there?"

Tommi Kilpatrick grinned and pretended to misunderstand. "Just the usual appointments, Mr. Henry." She glanced at her pad. "A busy day. You have two groups of school kids coming in before lunch. And after lunch we should have the summary of the budget ready for your review." She paused, waiting for his reaction.

"No games please, Tommi," Henry said irritably. "What's the package?" He sipped tea.

"Her grin widened. "Oh, this ol' thing?" She handed the parcel across the desk. The executive noted the Security clearance stamps and accepted it.

He grunted as he spied the addressing data. "What in the world? From space?" he wondered.

Tommi let a giggle escape. "Yes, sir. We've reviewed it, of course..." She watched as Henry slid the contents out.

"Parchment?" he said. He held a large ornately illuminated scroll. What the..."

Tommi cocked her head to one side. "Vellum, I think. The good stuff." She giggle again as she saw the Secretary's eyes bulge. "Yes, sir. You're holding an application for admission to the United Nations!"

"My god! We haven't had an applicant since..." His voice broke off as he tried to remember that last time someone wanted to *join* the U.N.

"2010," Tommi supplied. "And they changed their minds." She shook her head. "But this... Who knows? It came in by courier three days ago. Security cleared it. A clerk started reading it and bucked it up the chain. I got it yesterday, and started some inquiries."

Henry tore his eyes from the bizarre document. "Is this serious?" he demanded.

Tommi shrugged. "I really don't know." She giggled once again as Henry's eyes drifted back to the colorful missive.

LET IT BE KNOWN TO ALL AND SUNDRY WHO COME TO
READ THESE LETTERS THAT

HIGH LORD ANARCH MIKE THE FIRST

DOTH SEND HEARTFELT GREETINGS TO

THE SECRETARY GENERAL OF THE UNITED NATIONS.

HOWDY!

WHEREAS ME AND A FEW BUDDIES HAD ENOUGH BEERS TO
THINK OF THIS, I HEREBY APPLY FOR MEMBERSHIP IN THE
UNITED NATIONS.

"Who in God's name is Mike the First?" Henry asked in total befuddlement.

Tommi pulled a chair up to Henry's desk and planted herself. "My research people say that he's most likely one..." She glanced at her pad. "Mikhail Fairbanks, registered owner of asteroid Mut 20962."

"Spacers.... Why did it have to be spacers?" Henry muttered. "Okay, so this was some drunken rock miner's equally drunken joke," he said. "Great. So what else do you have to... What?" Tommi was shaking her head.

"That's the problem, Mr. Henry. He may be serious." She exhaled loudly. "Besides that silly scroll, Mike also sent copies copies of a... Well, a declaration of independence, along with a most remarkable Constitution. *And* demographics and other assorted stats on his little country."

Henry stared into his herbal tea in dismay. *Something stronger, perhaps?* "Be serious. We aren't going to admit some little rock. I mean, how large is this country?"

"Not terribly large, really," Tommi replied. "Mut 20962 only seems to be about nine miles long..."

Henry snorted. "Cities are bigger than that."

Tommi nodded. "True. And some are smaller. Vatican City, for one. And they're in the U.N. now," she pointed out.

"So we should consider every application from any two-bit house owner?" The fat man shook his head. "Now *you're* kidding..."

"Sir, maybe you should review that package. Then talk to ol' Mike. He has a complete astronomical body, that owes no allegiance to any nation. It's self-supporting... Heck, boss. Mut turns a profit. How many of our present members can honestly say that?" Henry gave her an outraged look as she continued. "Mikey even seems to have a Navy; space Navy, that is."

"What?"

"Fairbanks runs a reasonably large metals extraction facility; primarily titanium, I gather. To defend his operation from claim jumpers and such, he also operates at least five... call 'em warships. I would; they're armed with kinetic weapons, lasers, enhanced radiation bursters, and nuclear missiles." As she read off the list, she shuddered in disbelief. "And that doesn't count defensive equipment on his other ships; about ten cargo haulers."

"My God," Henry exclaimed. "What does he do with all those craft?"

"Hauls and sells metals. He also seems to subcontract shipping for other outfits."

"Still..."

"Mr. Henry," Tommi interrupted, "Fairbanks is sitting out there with more money and a better military than half our members nations. He has a resident population of some twelve hundred folk; more than the Vatican, again." She hesitated. "Maybe we better hope that he *isn't* kidding. Do you want him *against* us?" Henry sat mute, with a sick expression spreading across his face. Tommi went on. "If that's all there was to it, I'd say to pass it on to the General Assembly as a joke. And let them dismiss him."

"What do you mean *if*? What else is there?"

"Take a look at the last page there..." Tommi pointed to sheath of papers from the 'Anarch.' "He wants more than admission." She stopped to let the Secretary read.

Henry's face reddened. "The Security Council!" he screeched. "This... this... Clown! Wants a seat on the Security Council?"

Tommi nodded ruefully. "Uh huh."

"He's mad!"

"Maybe not," Tommi said quietly. "Read those lists again. Think about those warships." She stared into the fat man's eyes intently. "Do you realize that even today there are only nine *declared* nuclear powers?"

"Uhhh..."

"Until now," she corrected. "The U.N. should have seen this coming since the Lunar NRU fiasco back in '05."

"You mean..."

"Yep. It may seem like a moot point, given the way the spacers have been working anyway. But we now have a *tenth* declared nuclear power. And he wants in." Tommi stood, then walked to the door. As she left, the woman paused before closing the door. She looked back at the dumbfounded executive and added, "Maybe."

Tommi took the easy way out. She resigned, and emigrated herself. Henry chose to wait out the storm and try to make it to the end of his term. He regretted that decision.

Things really got interesting in 2031.

Bandwidth

At one time, I worked with television systems; providing local station feeds to cable companies. And it was around that time that the feds decided to mandate the conversion of television from analog to digital (it took a heckuva lot longer to implement). The technology discussed in this story is pretty dated now; think of it as literary archeology. But clueless management seems to be eternal.

The office displayed a conservative air; dark wood paneling, deep carpeting, subdued lighting, framed paintings. Although the paintings had a tendency to shift to most unconservative images; movie theater posters for past classics. Erik Tomasun tried to ignore them but the shifting displays kept grabbing his attention.

"Erik, pay attention," demanded the man behind the desk. "Is this the sort of care you're giving our current problem?"

"Sorry, Mr. Jonus," Erik said apologetically, tearing his eyes from the picture behind the executive. It changed from dueling starships to a white haired man ripping a room apart with some sort of raygun. Erik shook his head and blinked. "Frankly, I'm not sure what Engineering can do to help. We can't think of anything. It seems more of a marketing problem, anyway."

"It's everyone's problem, now," Jonus corrected. "Marketing is working on new ad campaigns, but we need something new to push."

"New programming is something you'll have to take up with the production studios," Erik replied. "There's nothing we can do about the quality of the programming... Heck, not much we can do about the quality of the signal, even."

Jonus pounced on that thought. "Why not? A better signal than our competition would be just the thing to push."

"Maybe so," Erik answered. "But it can't be done."

"Nonsense. You're an engineer, Erik;" Jonus insisted. "Don't tell me it can't be done; tell me how to do it."

"Well... we can improve the signal," Erik admitted. "But it isn't worth it. We've..."

Jonus interrupted, "I'll decide what 'worth it'. Tell me why you don't think so."

Erik grimaced. "Sure, we can boost resolution; they're trade offs, though. We're up against two separate limits. The cable, and the viewer."

"How so?" asked his boss.

Erik considered. "Umm, cable bandwidth. Laser in glass has some pretty serious bandwidth; but

we're already crowding the limit with nearly 5,000 channels. If we increase resolution, it'll mean increasing per channel bandwidth to handle the extra data." He shrugged. "That's going to mean running fewer channels."

"We can always run another cable, and split the load," suggested Jonus. He looked a bit smug.

"Weelll...", responded Erik, "maybe not. Remember what happened last year when Tempo-Cox tried that? The court ruled that they had to renegotiate right-of-way with each individual property owner; it held that the cable vid companies had already derived a fair profit from previous right-of-way grants, and further government support was unwarranted." He shook his head. "Maybe we could swing it, but it still wouldn't help."

"Why not?"

"Cause even if we up the resolution, the viewer is another limit. He won't see it."

Jonus looked puzzled. "I don't under..."

Erik explained. "Our resolution is already pretty good. Between the display resolution and our signal, we've reached the human eye's limit. We've got more dots per centimeter than the eye can resolve." He spread his arms helplessly. "We can't get more lifelike than that. Do you know what our biggest expense in the rougher neighborhoods is?" he asked the executive.

"Service calls, I should imagine," Jonus answered.

"Yes; but it's the reason for the calls- people are shooting their displays." Erik grinned.

Jonus was taken aback. "They're *what*?"

"That's right. Just last night: a guy came home late. Wife had fallen asleep with the picture on, a cop show. Poor guy walked in and saw an armed burglar. So he shot him." Erik looked a little proud. "You can't get a better picture than that."

Jonus looked slightly stunned. "My goodness. I hadn't realized..." He paused in thought. "Hmm. We'll have to look into this later... interactive programming..."

Erik spoke up. "so you see; there really isn't anything Engineering can do... "

Jonus snapped back to reality. "Perhaps. If the channels can't be made more lifelike, can't we add more of them? More channels always attract customers."

Erik shrugged. "Bandwidth again. Even compressed, a video channel runs over twenty megahertz. Between the lasers and the glass, the system just won't run much more- I doubt if we can get more than a couple dozen extra channels."

"Tighter compression..."Jonus began.

Erik snorted. "Data compression has its limits, too. Go much farther, and we'll be shooting straight ones down the fiber."

Jonus looked thoughtful. "Bandwidth is our problem, then." Erik nodded, and Jonus continued. "So we'll have to reduce the bandwidth."

Erik stared in disbelief. "But we *can't*. Haven't you..."

Jonus waved him off, with a clear gesture of dismissal. "Oh, I'm sure you can come up with something. Call back when you've given it more thought." He tapped at his desk phone. The room faded, leaving Erik staring at the walls of his office cubical.

"He's an idiot." Erik stared morosely at the maintenance monitor, where miniature mental defectives confessed their stupidities to the nation. "Reduce the bandwidth, he says." He pointed to the monitor where a fellow was earnestly explaining how he happened to be his own grandfather. Seriously." That's how we ought to reduce the bandwidth."

His companion grinned. "You know that, I know that. But the customers don't. They're paying for it." He shook his head and laughed. "Still, the man's the boss. We have to *try* anyway. Or go on the dole."

Erik looked at him sourly. "Dave, you always have such a cheerful way of looking at things, you know?"

"Better than worrying my way to an ulcer."

"You don't have a wife and kids to feed," Erik reminded him. "I do. And Jonus seriously thinks two guys at a local cable company are going to generate breakthrough the entire industry has been working at for years." He laid his head on the workbench. "He's an idiot," he repeated.

Dave strolled back to his desk and sat down. He kicked his feet up on top. "Well, not completely. There are ways."

"Name one," came Erik's muffled voice.

"Interpolation," Dave replied, grinning.

Erik looked up. "Eh?"

Dave answered, "You don't have to send as much data if the receiver can deduce what the bit will be."

"Yeah, so. We already do that."

"So we crank it up a notch or two."

Erik looked dubiously at Dave. "The receivers are designed with a certain signal input in mind."

Don'tcha think we'll lose customers if we tell `em they'll have to buy our new proprietary displays if they want to use us, rather than a competitor?"

"So we do the processing for the receivers. We do anyway; the antipirate decoders, you know," Dave said.

"What? Make the chips decrypt and process the signal?" Erik shook his head. "No way."

"Sure," Dave insisted. "We have to swap out the darned chips all the time anyway, just to stay ahead of the pirates. So we do a custom job with the dual functions."

Erik considered it. "Maybe. But something like a standard package isn't going to work." He sat up. "Umm... it can't be pure guesstimation on the missing data, or the processing will be too slow. It has to have an onboard knowledge base to draw on..." He stared into space.

Dave picked up the thought. "Sure. Say we reduce the transmitted data on blue scale color. Cut it back to a scale of one hundred. The chip looks at two successive shades and pull a median value out of the database to plug in between `em."

Erik was nodding. "Just like the conventional reduction; we just do some extra- it'll work as an antipiracy function, too; along with the encryption." Then he frowned. "But we're going to lose some resolution."

Dave dismissed the idea. "Nah. Not so's you'd notice. Even if you didn't plug the blues back in, you'd still be running better than a hundred-twenty-eight million colors. The eye will never be able see it."

Erik slid the maintenance computer a little closer and began tapping at the keys. "Lessee..." More tapping. He looked up. "At a rough guess, we could save about a meg per channel. At five kay channels that'll give us two hundred-fifty additional channels."

Dave smiled. "A five percent increase. That'll keep Jonus off our backs for a while."

Erik smiled back. "Shoot, if we time it right... get him while he's desperate, we might manage a raise."

Dave laughed in agreement, then said, "Of course, next, he'll expect miracles. So you'd best be thinking up something else, too."

Erik's levity faded. "Gee, thanks. But you're right. Tell you what- you get out the cookbook, and work up the chip layout. And I'll start planning something else."

"He's an idiot," Erik mumbled. He was once again seated at the maintenance shop work bench. On the monitor, a woman explained that god had instructed her to tell her son to date another woman and her daughter. "Reduce the bandwidth some, he says." Suddenly he exploded, "Reduce *this* ya dipstick!" He threw a meter at the display. The screen cracked and faded to white.

Dave simply looked on despondently.

Erik went on, " 'You've done such a good job. I'm *sure* you can find a way to get more channels' the man says. Aaargh!"

Dave laid his head on his own desk. With his mouth partially immobilized by the woodgrain plastic, he asked, "Did he actually say he wanted a *thousand* more channels? Where's he expect to find *programming* for all those, even if we can squeeze it out?"

"Yes. And I have no idea. Neither does he," Erik answered.

"He's an idiot."

From the bench where he stared at the smashed monitor, Erik said, "Well, at least this time he started on it before the company verges on bankruptcy."

"Small favors."

"Real small." Erik pulled the bench comp over and tapped at the keys.

Dave heard the sound and said, "You're kidding. You're actually trying?"

"What else have we got to do?"

"Get drunk?" came the reply.

"Later."

"Come on, Erik," Dave said. "You know it can't be done. Cable comm is about a hundred years old. Don't you think someone would have come with a lower bandwidth signal if it could be done?"

"Probably. But that fool's going to can me if I don't do something."

"Forget it. Let's go work for someone who knows what they're doing," Dave suggested. "Even if we dropped the color scale to bare minimums, and reduced resolution five percent, we're still going to have an eighteen megabit stream. We'd get what? Five hundred channels? And a drop in picture quality that some folks are going to be able to see?"

Erik shook his head. "Don't discount the idea yet. We may need it. Just to show the clown *something*."

"He's nuts," Dave insisted. "You just can't encode a signal with so few bits! Sampling alone says we're going to have..."

Erik's head spun to Dave. "What?"

"I said it can't be done; it takes just so many bits to recreate the signal. And if they durn fool can't see

that, then..." Dave's speech ground to a stop. He looked at Erik quizzically. "What are you smiling about?" he asked suspiciously.

"Why do we want to transmit bits?" Erik asked, grinning.

Apparently doubting Erik's sanity, Dave carefully answered, "To get the picture to the customer, Erik."

"But why bits?"

"Because we darned sure can't let a customer peep down the fiber into a studio. We need separate digital streams so we can multiplex the channels, and send them on."

Erik shook his head. "No, man. You're missing the point. Why send *bits*?"

"Forgetting your basic multiplexing theory, Erik? We need discrete bits so we can assign each one to a specific time slot for each channel; that's so we can send a few thousand channels simultaneously," Dave explained patiently.

Erik grinned more. "So why divide them in time? Why not stack them frequency wise?"

"Huh?"

"Say you've got two tones you want to send down the fiber to two customers. How do you do it so each customer only gets the tone he's paying for?"

Puzzled, Dave shrugged and said, "Assign each guy a time slot, digitize the tones, and alternately send the describing bits from each tone code to the laser to flash it."

"Very good," Erik replied condescendingly. "But what if each guy were deaf to the tone the other guy was getting." He looked at Dave in appraisal. "Couldn't you skip the digitizing and hit the laser with the tones directly?"

"Sure. But how's that gonna help us?" Dave queried.

"Just wait. You'll see." Erik thought for a moment, then, "When you digitize a signal, how many samples do you need in order to recreate the original signal?"

Dave closed hi eyes and thought back to his theory classes. "Ahh... varies. But you need a sample rate of at least twice the highest signal frequency..."

Erik cut him off. "Right. So right there, you've doubled the bandwidth of the signal."

"Umm... Yeeeah," Dave said slowly. "I think this is starting to make sense..." He considered. :But won't the channels interfere with each other?"

"Not if we frequency shift them into stacked bands," Erik answered smugly.

Still dubious, Dave asked, "So we're going to... analog modulate the laser?"

Jonus stood at the podium and looked at the gathered reporters. Not the turnout he might have hoped for, but not bad for a press conference called by a little cable company. Still, he had hoped for more representatives of the national media; most of the dozen or so present were from local news services, and public access channels.

Jonus gently cleared his throat, and spoke. "If I could have your attention..."

Seeing that Jonus was ready to begin, the reporters ended the chatter amongst themselves and turned on their recorders on the off chance that something newsworthy might come of the little event.

Jonus began, "For the past hundred years, community cable companies have worked to bring more and better programming to their customers. To do this, we have pushed the edge of the technology envelope. The need to serve our clients has driven the development of high quality multimode fiber optical cable, faster lasers, and improved digitization schemes.

"Bandwidth, that is, channel capacity, has been a constant challenge for us. This spurred us to devise creative data compression techniques which allowed more channels to ride a cable. Just year my company introduced the Enhanced Bandwidth Icon System, which gave us a five percent increase in channel capacity with our existing equipment."

Jonus smiled proudly, and looked over the audience. His smile slipped slightly when he saw two reporters yawning already. He pushed on. "Today I am pleased to announce another, even more significant step forward in communications technology." He paused in a manner intended to be dramatic.

"Today, we have pushed past the envelope. Now, using an entirely nondigital carrier format, we can *double* the video channel carrying capacity of an optical fiber."

Jonus smiled proudly. "Through the application of a novel Digital-Neutral Analogous Modulation technique devised by my engineers, we have cut in half the bandwidth required for a video channel. Indeed, the bandwidth has been reduced to the point that electromagnetic *broadcasts* of video channels, without the need for a physical cable connection, has become practical. Soon, no longer will your display set be tied to a cable coming out of the wall.

"We call this new system *Television!*" Jonus finished smugly.

The room was abuzz with excitement.

At the back of the room, the two engineers stood side by side, grinning. Dave leaned over to Erik and said, "Do you suppose we should tell him?"

Still grinning and looking towards the front of the room, Erik replied, "Not a chance."

Dave considered it, and responded, "At least not until bonus clears the bank."

Copyright

You want Intellectual Property rights arguments? No problem.

He lay on the couch and stared up at a pastel ceiling. Recessed fluorescent lamps lit the room.

blink

He felt nothing, but suddenly colors seemed to be slightly... off. He squirmed uncomfortably, the scan helmet pressing against his forehead. "Hey!" he called out. "Something's wrong here!"

A stranger's face moved into view and spoke, "Please, Mr. Abercrombie, relax. Everything is fine."

The man looked up in bewilderment. "Who the devil are you? Who's Abercrombie?" He tried to sit up, and realized that he had somehow been strapped down. "What is this? Get me out of these things!" He turned his about so far as the helmet allowed, looking around the small room. It had changed. The colors of the blue pastel room had become slightly darker. The recessed fluorescent fixtures had vanished, replaced by track lighting providing indirect illumination. The massive recorder cart was just gone.

"What's going on here? Where am I?" He struggled with the straps, and found a latch. He toggled it, and the straps fell away. He sat up, feeling very strange.

"Mr. Abercrombie, please!" the stranger tried to press the man back down. You are in the medical offices of Stalwart Insurance. You're feeling disoriented because you've just been restored."

The helmeted man pushed the other away. He swung his legs over the side of the couch. His body was being strangely uncooperative; he almost fell off. "What's this Abercrombie garbage? I'm Arkwright; Gordon Arkwright." He looked at the insurance representative. "I think you have the wrong room, buddy."

"Please, Mr.Aber...", the company representative protested; then, "What?"

The man continued angrily, "Get me the heck out of here. And get my lawyer on the phone!" He looked down and realized that his suit had been replaced by a medical gown. "And find my clothes, you pervert!" Suddenly, the man realized what else was wrong. "And what the hell have you done to my body?"

The insurance man looked on in dawning horror. He stuttered, "Y-you're not C. William Abercrombie?"

"Of course, not," the gowned figure replied angrily. "I'm Gordon Arkwright!" he repeated angrily. "What the devil have you done to me?"

Face white with shock, the other said, "Oh dear... oh my... oh... my... We, we seem to... have a..."

small clerical error, sir."

In the 1960's scientists cloned carrots. While vaguely interesting, the technique was of limited use, being inapplicable to any organism more complex than vegetables, and most politicians. Indeed, some people questioned the validity of the process at all; maintaining that carrots almost clone themselves anyway.

In the 70's other cloning techniques were devised. Amphibian genetic material was implanted in unfertilized frog eggs. Unreliable, but the system worked to some extent. And more knowledge was gained.

Over the years cloning was experimented on higher order organisms by disrupting a developing blastula. Often, the separated cell masses would continue to develop into virtually identical creatures.

In 1996, a group of scientists announced that they had successfully cloned sheep, using a different technique. It was considered more precise than blastular disruption, and theoretically capable of producing several hundred identical animals. Although the process was only in the earliest experimental stages, many people began decrying the ethics and morality of cloning humans. To others, this seemed a moot point since humans had long since expressed a preference for another more cost effective, and recreational, reproductive technique.

Still, the technique was refined. It was primarily intended for mass-producing genetically engineered farm animals: sheep with high grade wool, low fat beef cattle, disease tolerant chickens, and identical test animals for laboratory work. Anything commercially marketable.

But the idea of cloning humans was ignored, aside from unsubstantiated reports of human experimentation in the southern hemisphere.

Until 2005, when a research team at Johns Hopkins, studying human memory, pulled a Page straight from science fiction. They combined an advanced electroencephalographic recorder with RNA sampling. The EEG used several thousand individual channels to record "brain waves" of small enough magnitude that earlier units would rarely have even noticed them. The data was stored on a ten inch ultrahigh density optical platter, steroidal CD-ROM.

At the same time, they used microprobes driven into the brain to draw thousands of infinitesimal samples of ribonucleic acid, long thought to play a role in the memory process. Criminal forensic investigators since the 1990's had used a chemical "amplifier" technique to duplicate suspects' DNA; generating a large enough sample for proper analysis from a tiny crime scene specimen. The Johns Hopkins researchers borrowed the system to amplify the RNA taken from the brain.

In a rather ambitious experiment, the process was attempted with two chimpanzees. It was both a rousing success and complete failure. The electrical/chemical recordings were taken from one chimp, and "played back" into the second. The recipient animal did gain access to the the memories of the first; even having gained a complete working knowledge of sign language; the classic flatworm experiment ported to simians.

Unfortunately, the transfer was not limited to simple memories: the chimp became the donor animal. However, he also remained himself. The poor beast went quite mad; victim of the worst case of multiple personality disorder ever observed.

As a learning technique it was worse than useless – what good to gain the knowledge of an Einstein, if you were too crazy to use it? But then somebody considered cloning... And called an insurance company.

Once it was properly explained, even an overly-conservative insurance industry saw the advantages. Instead of paying off many millions of dollars on an accidental death policy, a company could offer restoral. After the initial investment in a cloning/recording facility, a company could spend a mere million or two to restore a client from electrochemical recordings. This was much more cost effective than the previous multi-mega-dollar policy settlements.

By 2010, one could actually buy a life *assurance* policy.

The three men met in a large, well appointed office. Dark wood panelling and brass trim gave a very conservative, and expensive, air to the room. Behind the huge oak desk, light streamed in, illuminating the florid faced middle aged man seated there. Partially drawn red velvet draperies obscured most of the outside view.

"Basically, Mr. Connors," began the blonde man seated in front of the desk, "we have several issues facing us. First, of course, is Mrs. Abercrombie. She has filed a suit against us naturally enough."

"Naturally," the Stalwart CEO agreed bitterly, from behind his desk. "That damn fool Weathers. I don't care how surprised he was. Why did he have to run out to the waiting room and tell the old biddy?"

"Agreed. Nonetheless, he did it. Now we have to deal with it."

"Right. What's she want?" asked Connors.

"Mrs. Abercrombie has filed suit alleging breach of contract, wrongful death, and other fun things. She is asking for five hundred million dollars." He paused as the two other men gasped, then continued, "Given the track record of juries in making irrationally large awards against corporations, she might even get it. She has also suggested that she is willing to file murder charges against the Company."

"What? Wrongful death? Murder? What is this, Coombes?" Connors demanded. "Is she nuts? The guy died in a skiing accident. That's why we were restoring him."

"They are taking the position that from the time of his accident to the failed restoral, Mr. Abercrombie was alive but on extensive life support, via the life record."

Outraged, Connors exclaimed, "That's utter nonsense!"

"Certainly," Coombes replied calmly. "Since the suits stemming from the fire in the life archives at

Eternity Life, the legal precedent has been that inanimate recordings are just that; not the actual person. I'm sure her attorney is quite well aware of this."

"So what's her game?" Connors asked.

The third man finally joined in. "Publicity. She wants to force us to settle out of court."

Connors looked to man. "How so, James?"

"She figures we don't want our mistakes dragged out into the open. And she's right. I suggest we pay off."

Connors eyebrows shot up. "Five hundred million? Are you serious?"

James Roose shook his head. "No, no. That's just her initial bargaining position. She'll take double indemnity, and doubled again for mental anguish." Connors and Coombes both grimaced.

"That's what? Sixteen million, James? Is that a good idea?" Coombes asked.

"Think of it as a fraction of the hundreds of millions a jury probably would award her." James opened a folder he held in his lap, and removed a bundle of papers. "And it clears the field for this one."

"This one what?" Connors inquired.

"Suit number two. Gordon Arkwright."

Connors looked puzzled. "Beg pardon? The clone? Isn't he still in medical?" he asked.

"Not the clone. As you say, he's still... medically detained." James grimaced. "Our panicking Mr. Weathers did us still more damage before we terminated him," the executive told the CEO.

"Oh, Christ. Let's have it," Connors said with resignation.

"It seems that when the initial database search didn't turn up the proper Abercrombie files, the moron dispatched a customer service representative to Arkwright in hopes that, if the two men's files had been crossed, then Arkwright's personal backup copy might actually contain the Abercrombie data." Coombes grabbed his forehead with both hands and groaned.

Connors exploded. "The stupid son of a... !" He forced himself to settle back down. "So obviously Arkwright figured something was screwy, and looked into it, and..." He sighed loudly. Then, "I don't suppose the Abercrombie files were there?"

James laughed bitterly. "Nope."

"Sh... Okay. What's done is done." Connors took a deep breath, then said, "So. What exactly is Arkwright suing us for?"

"Oh, you're going to love this..."

"Pray, Attend!" cried out the grinning bailiff at the front of the conference room. "Arbtrator MacKenzie Thomas presides!"

As the bailiff spoke, a casually, yet neatly dressed man entered and approached the head of the table. "C'mon. Knock it off, Ernie." He seated himself and placed a brief case on the table. He opened it and removed a small audiovisual recorder and an elaborate dataset. He turned both on and spoke. "Good day, folks. I'm Mac Thomas." He turned to the bailiff. "My personal recording will serve as official; you can turn the room set off, or leave it running as you see fit."

He turned back to the four other people who had seated themselves at the conference table. Connors and James Roose sat at one side of the table, representing Stalwart Insurance. Opposite them were Gordon Arkwright and his attorney. No one else was present.

Thomas spoke again. "For the record, this is a binding arbitration convened under the Revised Civil Code of Greater Columbus. This means that to save time, money, and publicity, both parties have agreed to forego a formal trial. We're going to dispense with the pomp and circumstance of court and get down to brass tacks. Any questions?" There were none.

"All right then." He turned back to the bailiff. "Think you can scare up some coffee for us, Ernie?"

"Setting in the next room, Mac. I'll roll it in," the bailiff answered. He left to fetch the coffee.

Returning his attention to the waiting parties, Thomas said, "If you haven't caught on yet, I run a nice casual hearing. I think it's easier to get at the facts this way. When Ernie gets back with the coffee, feel free to help yourselves. If you get tired of sitting, stand up and stretch your legs." He pulled his PDA closer and tapped the screen. He reviewed the display, then said, "Okay, let's get started. First let's get introduced." He nodded to Connors.

Taking the obvious cue, Connors began, "I'm William Connors, chairman of the board of Stalwart Insurance." He gestured towards his companion. "This is James Roose, my representative..."

Thomas interrupted. "Best you think of him as an adviser, Mr. Connors; since that's what he is in this hearing. You represent yourself and your company." He looked across the table to the plaintiff.

Arkwright stood and said, "I'm Gordon Arkwright. This is my... adviser, Natalie Michener."

"Hi, Natty," Thomas said to Arkwright's companion. "Long time, no see."

She smiled and replied, "Hi, Mac. Been taking care of yourself?"

Roose shot to his feet and addressed Thomas, "Your Honor, perhaps you should disqualify yourself, on the grounds of personal acquaintance with..."

"Hush up and sit down, Mr. Roose." He addressed the group, "I'm not standing on ceremony here, so y'all don't need to stand to talk. Casual." Arkwright sat. Thomas faced Roose again and raised an eyebrow. Roose sat. Thomas went on, "Mr. Roose, I've been on one bench or another since 2000. I'm acquainted with a great many counselors. At any rate, this became moot when I asked for questions at the start. Everything's binding now." He turned to Michener. "Natty, why don't you tell Mr. Roose about the last time you came before me?"

Michener grimaced, embarrassed. "Mac found against me. I lost."

Arkwright gave her an alarmed look. Thomas noticed and said, "Rest easy, Mr. Arkwright. Natty lost because her client was wrong. Not because she was incompetent." He grinned at the plaintiff. "Some free legal advice: Always tell your own lawyer the truth, and all of it."

Connors broke in, "Your Honor, this is most irregular."

Thomas looked at him quizzically. "Have you or Roose ever been in an arbitration before?"

"Er... No, sir. We opted for this due to the... sensitive nature of the case. Frankly, we liked the idea of keeping the press out."

"I see. Well, let me give you the ground rules again. This is a court of Columbus. It cannot violate the criminal or civil codes, but otherwise is conducted however the arbitrator sees fit. There is no jury. Mine is the decision. And I'm given a great deal of latitude in how I elect to find the truth once a hearing starts." He eyed Connors carefully. "What it amounts to, is there're only a few rules, and I make `em. Now that the hearing has begun, your only option to getting a trial again is to forfeit the case, and file an appeal. Got it?"

While the lecture was being administered, Ernie the bailiff had returned with the coffee cart. After quietly questioning Michener, Arkwright got up and poured coffee for both. He returned to the table and sat down.

Thomas continued, "So I like a relaxed atmosphere. I get enough 'Your Honor' in a straight court. In here, you can call me Mac, Thomas, Hey You, or whatever. So long as it's reasonably polite."

"As you say, Mr. Thomas," Connors acknowledged.

"Good. So let's finally get started," Thomas declared. "My records show that both parties have already agreed that on July 27, 2027 Stalwart Insurance was completing the process of restoring one C. William Abercrombie, who had died in a skiing accident seven months earlier." Thomas raised an eyebrow and looked to Connors. "Seven months?"

"Even force-grown, a quality clone takes time to come to term," he answered defensively.

"Hmmp. Remind me to check my policy when we're done." Glancing back to his PDA, the arbitrator went on, "Unfortunately, due to what Stalwart calls a 'clerical error' the wrong electrochemical recording was played into the clone. Correct?"

"Umm, yes, sir," Roose said sheepishly.

"How'd you manage that?" Thomas inquired.

Connors gestured for Roose to keep going. "We aren't completely sure. But Mr. Arkwright and Mr. Abercrombie both made their last life backups at the same clinic on the same day."

"And their records got switched," Michener guessed.

"Not exactly," Connors said.

Thomas looked at his PDA, and said, "I see. Do please share this with everyone."

Connors stared at the table top and spoke up. "We reviewed Mr. Arkwright's crystal, expecting to find Abercrombie's record; so we could correct the error." He paused. "Pattern analysis and file comparisons showed that both crystals held Mr. Arkwright's data."

The arbitrator looked puzzled. "Wait a minute, how could that work like that? I'm not real technical, but isn't the record a composite of EEG and chemical data? RNA? You'd have to overwrite a datafile, and mix up the RNA samples."

Roose spoke up again. "No, sir. Originally, the RNA specimens were stored physically, as you said. But advances in let us store the RNA coding electronically. Then when we restore a client, a computer-driven chemical amplifier and enzyme processor reproduces the actual RNA. The data is stored on the same crystal as the EEG information. So is the DNA for cell cloning."

Puzzled, Arkwright asked, "Abercrombie wasn't on my crystal?"

"I'm afraid not," Roose confirmed.

"Then where is he?"

"We couldn't find his file," Connors whispered.

"Say what?" escaped from Thomas.

"We seem to have deleted him."

"You killed him?" burst from Arkwright.

"Not at all," broke in Roose defensively. "Abercrombie died in a skiing accident. We only lost a file." He turn to Thomas. "Your... Mr. Thomas, please bear in mind the class action suit against Eternity Life in '21 in which the court ruled that a life record is only a record, and not the actual life." He added a look of appeal. "Actual life was held to reside in the original, still living, client. Destruction of a record, particularly while the client lived, could not be construed as death."

Thomas nodded. "Quite so. And so recognized in this hearing. But still," he added, "Mrs.

Abercrombie settled out of court?"

Connors replied, "We were... generous. Extremely."

"I'll bet." Thomas shook his head. Then he faced Arkwright. "Which seems to bring us to you. I could understand a suit charging negligence; but copyright violation?"

Michener spoke up. "That's right, Mac. Mr. Arkwright's position is that his life record has been improperly, without his consent, copied into another medium."

Thomas frowned. "I fail to see how you've actually been damaged, Arkwright."

"I've been... photocopied. There's a duplicate of me that I have no control over. What if it should decide to empty my bank account?"

Roose jumped in. "Mr. Thomas, we maintain that no actual copy has been made."

Startled, Thomas said, "But you just admitted that..."

"Sir, we hold that a personality is a composite of environment and heredity. Through our error, the environmental background of Mr. Arkwright has been... heavily quoted. Nonetheless, this is an original work in that the hereditary half of the personality had another source." Roose paused to review his own PDA. "Therefore, if copyright applies at all, it would be a new compilation copyright on the total product. Rather like that on a magazine with assorted contributors." Arkwright looked at Thomas expectantly.

Thomas exploded, "Are you serious? A compilation copyright on a person? Nonsense!"

"Correct, Mac," Michener threw in. "Just last year the Sixth Circuit, U.S. Court of Appeals ruled that identity is not dependent upon the sheltering body. The starprobe case."

"That's the one where the pilot volunteered for destructive scanning, to transfer his mind into the probe's computer? And his ex-wife tried to sue for his life insurance and wrongful death?" Thomas asked. He fingered his PDA as he spoke.

"That's the one."

He watched the tiny screen. "Got it." He read briefly; then, "Right. The court recognized continuity of identity, despite the change of bodies from human to ship. The court maintained that it was a logical extension of the recognition of legal continuity in the case of a restoral." Thomas looked at Connors. "The very principle that made your life insurance policies possible."

"And your thoughts on this, Mr. Thomas?" Connors asked, with an odd expression.

"Clearly, based on your own admission, I recognize that you have improperly copied Mr. Arkwright. There is identity. It wouldn't have occurred to me on my own; but I suppose you can call it copyright infringement." The arbitrator leaned back in his chair to garner reactions. He was puzzled by what he

observed. Naturally, the Stalwart representatives seemed unhappy; it was to be expected. But rather than angry over an upset, they seemed worried, and oddly... disappointed.

More surprising was Arkwright and Natty's reactions. They appeared none too pleased with his comments; more resigned, in fact. What the devil? he thought.

Connors nodded sadly to Roose, who then addressed Arkwright. "Mr. Arkwright, in view of this ruling, Stalwart Insurance will pay you the requested four million dollars for the infringement. Is that acceptable?" Arkwright and Michener conferred very briefly, then accepted the offer. Roose continued. "And as the owner of the copyright, we feel we should relinquish..."

Michener cut him off with a chopping motion and, "No." She faced the arbitrator. "Mr. Thomas," Michener said; now more formal, "The next issue to settle is who holds the rights and responsibility for that life record data."

"I see no problem there, Natty," Thomas replied. "Unless Stalwart uses a nonstandard contract." More finger taps at his PDA. "My policy is with Fidelity Mutual, but I expect it's pretty typical. The record, while held in trust by the company, is owned by the client." He peered inquisitively at Roose and Connors. "Is your contract the same way?"

Connors answered. "Yes, sir, it is." In turn, he asked the arbitrator, "Then you would agree that the identity belongs to the client? Mr. Arkwright in this case?"

Thomas was confused by the apparent role reversals in the competing parties. But, "Yes. I so rule." His head pivoted back and forth, as he tried to look at both parties. He said, "All of you seem oddly in agreement on this issue. Have I misunderstood? Is all this nothing more than an attempt to determine the amount of damages to be awarded?"

Arkwright responded, "Oh, no, sir. We already reached a financial settlement. Stalwart has been quite generous with me, as well." At his side, Natty appeared very tense.

"Then, may I ask what in tarnation we're doing here!" Thomas exploded.

Roose answered, rather defensively, "To determine the status and disposition of the unauthorized record, sir."

Thomas blinked. He blinked again. "All you want is me to tell you what to do with a duplicate record?"

Roose and Michener answered simultaneously, "Yes, sir.." They exchanged glances, and Roose continued alone, "Mr. Arkwright has expressed the desire that the surplus record be destroyed, to prevent further confusion." He paused for a deep breath. "While Stalwart appreciates his position; it is reluctant to destroy his property. We would prefer to turn it over to him, so that he may dispose of it as he sees fit." He shuddered. "We have doubts as to the... propriety of the action."

"You want me to tell you that it's okay to trash a copy?"

"Yes, Mac," Michener replied.

"You don't need the court to tell you that you can wipe a bloody data crystal! Both parties already agree! Just do it! No need to argue over possession." Thomas sighed in exasperation. Then to Arkwright, "You don't want the copy, and you do want it destroyed?"

Arkwright shifted uncomfortably. "That's correct, sir."

Thomas addressed Connors. "And Stalwart made the copy, and doesn't want it?"

"Yes, your... Yes, sir," Connors replied nervously.

"Fine. Official then. It's an unauthorized copy. The copyright owner wants it destroyed. Stalwart was responsible for the unauthorized extra copy, therefore Stalwart is responsible for its disposition." He stared across the table at Connors and Roose. "Delete the damned crystal."

Connors responded somewhat hesitantly, "Er... No, sir; not the crystal. That's already been destroyed."

Totally confused, Thomas started, "What, then.."

Michener again: "Umm, the clone, Mac."

"Eh?"

"We needed to be sure of the status of the clone," she answered. "But now that you've established that it's only a record belonging to the actual identity- Mr. Arkwright- we can proceed."

"Proceed with what?" Thomas demanded.

"Per Mr. Arkwright's request and your finding, we have to erase the unauthorized copy." Connors took up the thread. "We were unsure of the clone's legal status. But now that you've ruled that it is an unauthorized copy, and that the identity belongs to the currently living Mr. Arkwright, we can delete it."

"We were afraid it might be murder," Arkwright added. "Thank you for clearing it all up." He turned to Connors. "Kill it."

Day of the Dipstick

It didn't strike me when I initially titled this story, but while re-reading "Day of the Moron", by H. Beam Piper (one of my favorite authors), I realized he had influenced me. This is a very different story from Piper's but it does demonstrate that problems that worried him in 1951 were still running rampant more than 40 years later. (And still, another 15 years on.)

I'm sorry to say that every ridiculous and troubling fiasco in this story had a real world inspiration.

America was such a nice civilization before it fell.

Forget the 50's and 60's nightmares of nuclear destruction; the environmental doomsayers' warnings of global warming; the radical militia cries of fascist government; even the Republican's alert to financial collapse.

We were done in by nincompoops.

Joey Scarborough stepped out of his apartment to check his mail. He knew immediately that this was not going to be a good day. As he placed his second foot onto the stairs, he felt himself begin to slide. Being on the third floor, this struck him as a really bad thing. He twisted to counter the slide and grabbed at the railing with both hands. Once he was stabilized, he felt his heart pounding. He looked down and realized that some idiot had painted the stairs with gray deck paint; an oil-based enamel that would take forever to dry. Confused, he looked around for warning signs. None. Then a voice called up to him.

"Hey, you might wanna look out; some of that paint might still be a little wet." This from a long haired laborer down on the sidewalk.

"No joke," Joey retorted sarcastically. "So I noticed." His feet slid again, and he clutched at the railing. He cursed.

"Well," continued the painter, "Careful ya don' get any on yer shoes." Joey glared at him.

"A little late for that!" he shouted. He carefully stepped back up off the stairs and found safe footing on the top landing.

And left gray footprints. Again the helpful individual on the ground spoke.

"And be careful not to track that paint around."

Red-faced with anger, Joey realized he couldn't find any non-obscene response. He unlaced his shoes and threw them to the floor. He re-entered his apartment and slammed the door behind him.

Once inside, he considered options. Then he looked up a phone number and began dialing.

Several rings later, a voice spoke, "Pondside Apartments. How can I... Oops..." Click. Buzz.

Joey stared at the handset. "What?" He hit redial.

Ring. "Pondside Apartments. Please hold..." *Click.* Dial tone.

Joey sat and rested his head in his hands. "It's a conspiracy..." he mumbled. He tried again.

"Pondside Apartments. Can I help you?"

"Yes," Joey replied. "Start by *not* pressing any buttons on your phone."

"Sir?" *Click,* dial tone.

Tunnel vision in full swing, Joey stared at the phone. He heard a hissing sound and realized that it was his tightly held breath escaping past his teeth. *Okay, he thought. It's not worth a heart attack.* He released his breath, set the handset into the cradle, and let his shoulders relax. And sat.

When his pounding heart had slowed, he gave the situation a bit of thought. *Screw it. I'll check mail later. I'll just take care of business online.* He tapped his computer keyboard and brought the screen to life. He called up his DataServe access program, and checked his outgoing queue. *Yeah, I'll get this stuff posted.* He instructed the software to go online.

And listened to his modem beep and buzz, as it attempted to handshake with the DataServe modem. And buzzed. And beeped. And buzzed some more. And added a few more beeps. And then it went silent.

NO CARRIER DETECTED, the computer reported.

"Wonderful." He tried again. The modem dialed out, and the line rang. And rang. And rang.

NO ANSWER, from the computer.

"Aagh!" Joey tapped the keys again. And finally the computer gave a welcome message.

YOU ARE CONNECTED TO DATASERVE... YOUR SOURCE FOR THE WORLD!
STAND BY.....

LOSS OF CARRIER DETECTED, his computer calmly informed him.

"Aiigh!" He taugth his mouse to fly. But only as far as the wall. He reached over to a bookcase and retrieved his DataServe manual. He found the phone number for voice support, and dialed.

"DataServe. May I help you?" prompted a helpful voice at the other end.

"Yes, you can. What's the problem with your Columbus node?" Joey asked impatiently.

"Node? Could you be specific?" came the apparently clueless voice.

"Your Columbus entry point to the network," Joey elaborated. "I can't get through. Either your modem doesn't answer, or it won't handshake, or it just drops carrier. What's the problem?" he reiterated.

"Modem.. modem..." the voice mumbled, apparently to itself.

Then, "Sir, you have to disable data compression for information transfer with the DataServe network," the voice supplied helpfully.

"Nonsense," Joey responded. "Compression has nothing to do with your modem not answering an incoming call, and has less to do with it dropping carrier." He took a deep breath, and slowly released it. "My modem isn't the problem; yours is."

"Oh, no, sir," the voice objected. "It has to be a problem at your end. If you'll hold, I'll access more specific information on how you can properly initialize your modem..." *Click*, dial tone.

Joey could almost feel his blood pressure rising. "It's a conspiracy; I know it is..." He stared at his computer terminal, then, "Aaaiigghh!" Without bothering to exit the terminal program he slapped the switch on the power strip. Then he leaned back and closed his eyes. He counted to one hundred. Twice.

"The heck with it," Joey sighed. He glanced at his watch. "It's after five anyway; I can catch the early news." He stood and walked into his den area, where he collapsed into his recliner. He fiddled with his remote, and turned on the television. After a little more fiddling he found a news broadcast.

"And in an update on the recent air disaster," a perky anchorwoman spoke cheerfully, "we have a report that investigators now believe that the crash may have been caused by an explosion in the cargo bay. Our sources claim that a mix-up in the cargo terminal resulted in an improperly packaged hazardous shipment being placed aboard the commuter flight." She smiled, white teeth gleaming. "As we learn more about the accident that killed over one hundred people, we'll let you know."

She turned to one side, and the camera pulled to show her partner. "Hi, Bob," she said perkily. "I understand you have a story about the gas fission plant in southern Ohio."

"Gaseous fusion, Kim," the talking head cheerfully miscorrected. Joey closed his eyes and shook his head. Idiots. The news anchor went on, "While we don't have any official reports, unofficial sources tell us that plant workers are abandoning the plant, and are urging local residents to evacuate the area. We don't know why this is, but we're speculating that it might be some form of anti-management labor action."

Joey's eyes popped open. "Evacuate?" he exclaimed. "From a nuclear processing plant...?" His attention was riveted to the television.

"More news when we have it," Bob finished. "Now with a story closer to home, we the have the winners from today's flower show at the Aboretum."

"No! Go back!" Joey urged the television. He clicked the remote, searching out more news, only to find trashy talk shows. "Cable," he said to himself. "Bound to be something there." He clicked some more. The best he could find was a cable news snippet on the unconfirmed report on the possible status of Iraq's potential nuclear program.

"Okay, then. It's just another stupid hoax," Joey told himself. "Something like this would be all over the news, if it were for real." He relaxed. "Freakin' dipsticks never check the facts before they air garbage," he grumbled. He returned to channel surfing in hopes of finding a decent movie.

Blink

Static. Snow. Perplexed, Joey looked at the screen. The channel had died. He fingered the remote. Dead channel. He continued. More dead channels. "You've GOT to be kidding," he muttered in irritation. He glanced over to the phone and considered the odds. "I gotta do it," he decided. "I feel obligated to try, at least." He got up, and girded himself to face the enemy.

He found the number and lifted the handset to his ear, ready to dial... and paused. "Where's the dial tone," he asked empty air. He pressed the hookswitch, and tried again. This time with dial tone, he entered the cable company's number.

Ring. "We're sorry," began a recorded voice. "All trunks are currently in service. Please hang up and try again later. Thank you for using..." Joey slammed the phone down in disgust.

"Incredible." Joey grimaced. "I'm paying twenty five bucks a month, and these clowns can't even maintain a basic phone system." He looked down and realized his hands were shaping themselves in claws. He forced himself to relax. He exhaled.

"Radio," he said. "I can listen to the radio." He walked over to the stereo and pressed the power button. Console lights lit; the stereo reception lamp glowed. And silence poured from the speakers. "I don't believe it." Joey double checked his dial; he was tuned correctly. "What in the..."

Then a voice boomed forth. "Whoops! Sorry about that, folks. I'll bet you didn't really wanna hear that song anyway. Let's just call that the station's show of support for a moment of silence in school," the DJ joked lamely. "Seems like this durned console gets more complicated ever' day. I kin never figure it out," the idiot explained.

Joey reached out and killed the radio. He hung his head and whimpered. "It's Martians," he concluded. "We've been invaded, and everyone maintaining the infrastructure has been replaced with pod people." He shivered, and hoped he was joking. Then he remembered. "Darn it, I never did check the mail." He stepped out onto the landing and examined the stairs. Someone had remedied the wet paint situation; sort of. Small squares of cardboard had been placed in the center of each step. Joey shrugged, "What the heck." He stepped onto the first square carefully. It slid stickily, but was navigable. He proceeded down to his mail box.

Said mail box appeared to be bulging somewhat. Hoping this meant lots of acceptance letters, Joey slipped his key into the locked and rotated it. "What the bloody...!"

Apparently the carrier had been a little rushed that day. What looked like envelopes had been lackadaisically stuffed into the box, and topped with a literally wadded up bundle of advertising. Joey pried the mass loose, and carried it up to his apartment. There he sorted it out.

After determining that no mail of consequence had gotten wrapped up in the advertising, he tossed the junk mail into the trash. Then he examined the remaining crumpled mass. Bills, a letter of rejection, and... "What was this?" he asked himself. He held the partial remains of an envelope. The semi-legible return address indicated the publisher of his first book. Joey carefully removed the shredded paper from the dead envelope. All that remained was letterhead, and text that began "Dear Mr. Scarborough, You will pleased to learn that your novel has been selected for..." There it ended.

"Selected for what?" Joey wondered. He rummaged through the pile of mail hoping for clues. "Dang; I'll have to call them tomorrow morning," he decided.

At that point, Joey realized he was beginning to squint to read. The gathering dusk was wrapping his apartment in shadow. He turned on a lamp. The lamp glowed brightly, then dimmed to near-gloom. Joey stared.

"No," he stated blankly. "This can't be. Not a brownout. It's only early April; no one's even running their air conditioners, yet." He thought of calling the power company, then shook his head negatively. *What's the use?*

His musing was interrupted by a knock at his door. Feeling dread, he nonetheless opened it. There stood his rather attractive downstairs neighbor, Theresa.

"Hi, Joey," she greeted him. "Do you think you could help me with my computer?" she asked. "It stopped working," she added in explanation.

He sighed, then pointed to the dim lamp. "Best thing to do right now is turn it off till power comes back up." Seeing her look of disappointment, he asked, "What seems to be wrong with it, anyway?"

Theresa spread her hands in exasperation. "I don't really know," she said. "It just won't boot." She looked frustrated.

"Not a good sign," Joey allowed. "Have you loaded any new software lately?"

"Nope. In fact, I've been deleting files to make room on the hard drive." She frowned in thought, then added, "Config dot sys and autoexec dot bat aren't important, are they?"

Joey stared. He seemed to be doing a lot of that today. He closed his eyes and rubbed at both temples. "Tell you what, Theresa," he replied; "I'll come down tomorrow, after power is back up, and give you a hand with it. I'm..." he paused. "I'm kinda busy just now," he explained.

"Okay," she agreed. "Thanks!" She gave him a smile and a little wave, and headed back down the stairs. Joey looked down at the floor at her little gray footprints. He carefully closed his door and locked it.

Thus barricaded against the insane outer world, Joey again eyed the pile of mail remnants. He spotted a bank statement and picked it up. He obtained a pencil and calculator from his desk and, against his better judgment, turned the stereo back on.

Wonder of wonders, it worked; going so far as to be playing one of his favorite songs. As he sat down to balance his checking account, a young country star sang of going too far.

And another knock sounded at his door. Joey grimaced, and considered pretending he was not at home. *Coward*, he chided himself. He stood, and proceeded to answer the door.

Standing on the dim landing was a neatly groomed young man in black slacks, white shirt, an blue tie. "Good evening, sir," the man said politely. "If I could have a few moments of your time, I'd like discuss the release of the novel, *Acts of God and Government*."

My novel! Joey smiled; finally, something was going right. "Sure," he replied enthusiastically. "Come on in."

Pleasantly surprised, the younger man said, "Thank you, sir. This won't take very long at all." As Joey stepped aside, he entered the apartment.

As Joey waved the man to a seat he spoke. "I didn't realize the book had hit the shelves, yet. That must have been what my publisher was trying to tell me." The two men sat facing each other.

"Oh, no, sir," the polite man replied. "It hasn't, and with your help we can see to it that it never does." He opened a folding clipboard and shuffled papers.

Joey felt his face freeze; then slowly the smile faded. "Excuse me?" he prompted.

"Yes, sir. *Acts of God and Government* is a dangerous work," the visitor went on. "it's destructively critical of our wonderful god-fearing nation. With your help, we can deal with this threat." He held out his clipboard.

Joey stared into the man's eyes. *More staring, dang it.* He ignored the clipboard. "If the book hasn't even released what's the problem?" he asked. Then, "And how do you even know what it's about? An advance copy?" Even Joey was awaiting his *own* advance copy.

"Well, sir," the canvasser answered; "The very title tells us much about the contents. It's a very irreverent way to refer to a loving God, and our caring government. But, no," he continued, "I haven't read it, yet."

"Then you don't know a thing about it, do you?" Joey challenged. "So why ban it?" He caught himself gripping the arm of his chair tightly. He suspected the veins were standing out at his temples. And the visitor seemed to be becoming a bit less oblivious.

"Sir?" he asked. "Is something wrong?" He shifted uncomfortably, and realized that he was still holding the clipboard out. He retracted it.

"Why ban a book that hasn't even released, yet?" Joey repeated, very nearly hissing the question.

"As a matter of logistics, it's a much easier matter to stop a book before it exists, than to wait until it's been read and the damage done." The polite young man assumed a look of righteous determination.

"Idiot," Joey observed.

Dumbfounded, the man replied, "Sir?"

"Idiot," Joey repeated. "If you're the class of competition *Acts* can expect, then you're going to be little more than great publicity for me." He shook his head, another gesture to which he was growing accustomed today.

Nervously, the visitor began, "Sir, I'm afraid I don't understand what..." His voice trailed off as he took in Joey's evil grin. "Sir?"

"Who's the author of *Acts*?" Joey asked.

The man blinked at the shift in subject. "Umm... Joseph Scarborough," he responded. "Why?"

"Do you ever do any real research?" Joey inquired. "No, I suppose not... Idiot."

"Sir, there's no reason to be insulting..."

Joey felt the stress burst loose. He exploded in laughter. "Get out," he directed.

"What?"

"Get out," he repeated. "And on your way out, look at the name plate on my door." Joey stood and gestured towards the exit. "Now."

Face showing dread, the would-be bookburner closed his notebook and stood. Eyes tracking Joey, he edged towards the door. Joey's grin got larger. In a hurry to escape this apparent psychotic, the man opened the door and stepped out. He pulled the door shut.

Joey's laughter cut off, and he took a deep breath. He held it, then released it explosively. "Only in America would a book burning nut ask the author to ban his own book... before it's even been read!" He slapped his forehead with his palm. "Aargh! What could be next?" He locked the door, and resolved not to open it again for *anyone*. He sat back down. Picking up his paper and tools, he returned to balancing his account.

As the lamp flared and died, the radio squealed, then went silent. Joey sat in the darkness and muttered, "Now what?" He stood up and went to the balcony glass door, where he opened the blinds to let some light into the den. He looked out and saw that the entire city was in darkness. *Blackout*, he thought. But to the south...

Frowning, Joey went to his front door. He unlocked and opened it, then stepped out onto the landing. And stared south, towards the gaseous diffusion plant in the lower half of the state. At the distant dome of light, now beginning to fade.

"Uh oh..."

Postage Due

My original intent here was to write a humorous, pseudo-plausible "police state" tale based on one of the most ridiculous things I could think of. And I apparently blew the "ridiculous" part, because I'm told that the story may have triggered one iteration of the Internet email postage scares. The problem may be that I actually referenced real-world laws and precedents for the Postal Service abuses. It's getting tougher every day to out over-the-top the government in police state stupidity.

Joe MacPherson glanced out the living room window and saw the mail truck pull away from his box. He pushed his keyboard away and went out to check his mail.

Out at the curb, he opened the battered metal box and removed the day's delivery. He shuffled through it, categorizing. Junk mail, junk mail, magazine, bill, bill, publisher response...

"Postal Service?" he asked himself as he eyed the last item. He shrugged and walked back inside with his mail. Back at his desk, he quickly reviewed the junk mail, decided none was worth keeping, and threw it away. He tossed the magazine onto a growing stack by the sofa. He ripped open the two bills and read the statements. They seemed to be more or less correct, so he opened his check book and wrote out checks for the appropriate amounts, stuffed and stamped the return envelopes. "Post Office. Whatta we got?" he mumbled as he opened the remaining item and began reading. "What in the bloody...!" The missive read:

Dear Postal Customer:

The United States Postal Service is chartered by the federal government as the sole carrier of routine correspondence within the United States. This position has been uniformly upheld by the Courts, ruling that private carriers may not offer general correspondence service. Accordingly, we at the USPS have recognized our responsibility for all such correspondence carried by various providers utilizing the Internet. We have determined that it is within the scope of our charter to regulate messaging via electronic mail; the Postal Service has primary authority over correspondence, regardless of the medium, whether paper or electronic.

Therefore, we have reviewed your electronic postal usage for the past year and have billed you accordingly for the postage due.

*US POSTAL SERVICE
475 LENFANT PLAZA SW
WASHINGTON DC 20260-2200*

"This has got to be some kind of freaking joke," MacPherson muttered and looked at the second enclosed sheet. It appeared that he was being billed the current First Class rate of thirty four cents for... "Six hundred eight letters?!" The total was \$206.72, and a polite note asked him to please remit payment immediately at his servicing post office, no personal checks. "Aargh!"

"Uh oh," MacPherson said aloud, as he pulled into the packed Post Office parking lot later that day. He slipped into the first slot he found, realizing that parking was at a premium; there was a line of people stretched out the Post Office doors, and down the sidewalk. Joe joined the growing queue. Dreading the answer, he asked the woman in line ahead of him, "Umm, you here about the e-mail bill, too?"

The angry woman, turned around to look at him, and snarled, "We're all here for this bull! Can you believe this garbage?" She clutch angrily at a familiar-looking envelope.

"I was hoping it was some kind of practical joke; but looks like everybody's been hit," MacPherson observed. "How can they get away with this?"

The steaming woman answered, "They won't, if I have anything to say about it."

The line advanced slowly. More irate computer users fell in behind Joe. A bearded gent immediately behind him inquired, "How much are these highway men dunning you for?"

MacPherson glanced at the crumpled bill in his hand and answered, "Over two hundred dollars." He snorted.

"You're lucky. They're hitting me up for more than a grand."

Joe's eyebrows lifted. "You must spend a lot of time on line!"

The bearded man's only reply was a sheepish look and a shrug.

MacPherson eventually reached the service counter, where he faced a smug clerk.

"May I help you?" the clerk inquired brightly.

"Yeah; you can tell me what this excrement is," MacPherson answered irately, holding his bill up in the clerk's face.

The clerk removed the paper from his hand, and glanced at the total. "That will be two hundred-six dollars and seventy two cents. Will you be paying cash, certified check, or money order?"

"I'm not going to be paying at all!" MacPherson bellowed. "Where do you get off billing me for my e-mail?"

"Sir, as your bill explained, all correspondence delivery falls within the purview of the U.S. Postal Service. As have so many, you have been utilizing this service without paying. We are rectifying this error. Postage is due."

"The heck I haven't been paying! My ISP bills me eighteen dollars every month!"

"No, sir," the clerk corrected primly. "That is merely a private contract to obtain a virtual mail box. You must still pay for the actual delivery of correspondence."

MacPherson put his hands on the countertop and considered leaping over the divider. It must have shown in his eyes, because the clerk stepped back in alarm. "Sir, please calm yourself, or I'll have you removed from the building."

Joe's muscles bunched as he fought to keep control of his temper, the room reeked of the sweat that had been forced from others who'd made the same struggle before him. "Remove this, you little..." He stopped, then started over, "You never made any delivery. My ISP did. And I paid them," he stated

firmly.

The civil servant explained patiently, as though speaking to a child: "Sir, your service provider only provided the mail box. Legally, only the Postal Service may deliver mail; so we have charitably adopted this virtual mailbox doctrine in order to protect the service providers from charges of illegal mail delivery." He smiled. "We believe this is quite generous. But you must pay your postage."

"Two hundred dollars...?" MacPherson paused, and a thought that had been niggling away at his subconscious finally worked its way out. "Say, where did you get that count on e-mails, anyway?" he demanded.

"Frankly, it's an estimate, based on your actual usage during an eight day monitoring period."

"You had my ISP monitor me for eight days?" Joe asked in disbelief.

"Certainly not, sir," was the indignant reply. "For a private organization to monitor your communications and pass that on to a third party would be a violation of the Electronic Communications Privacy Act."

"Then how did you..."

"We tapped your phone."

"What!!"

"Please, sir. Don't raise your voice," the clerk admonished, his tone as much as wagging a finger at MacPherson. "It was all quite properly done."

Joe couldn't believe it. "You found a judge to sign court orders for..." He gestured in the general direction the line behind him. There were still at least two hundred people waiting. "...all of us?"

The clerk feigned puzzlement and answered, "Why, no. Pursuant to the provisions of the Communications Assistance for Law Enforcement Act of 1994, the Postmaster General authorized it himself." He grinned and added, "Quite a useful Act, that CALEA."

MacPherson's eyes bulged. "You... can... you..y-y.." he stuttered.

"Now, sir; if you'll make your payment, or step away from the counter so I can help someone else..." the man prompted.

"You little son of a... You're enjoying this, aren't you?"

"There's no law that says you can't enjoy your work," the clerk smugly replied. "This is even my better than my last job."

"Last job...?"

"I transferred from the IRS," he answered. "I used to be an auditor."

Not that the Internal Revenue Service was left out of the excitement. Following a precedent established when the IRS began collecting child support debts for social service agencies, the Postal Service also turned to the taxmen for delinquent payments. And lawmakers who had been worried about the unrestrained growth of the Internet breathed a collective sigh of relief when the sudden increase in cost brought system expansion to a screeching halt. For a while, users relieved part of the financial burden by exchanging letters via File Transfer Protocol rather than e-mail. This little victory

was short-lived, however; almost immediately a Federal district court in Memphis ruled that such transfers constituted parcel delivery- files billable on a per megabyte basis. Other options sprang up.

Two men sat in a small home office, examining a display on a computer screen. The taller man peered over the shoulder of the other seated at the desk. The sitting man spoke, "I'm telling you Mike, it's easy money." He looked up in appeal. "It can't miss."

"Chuck, you're nuts," the other protested. "You're talkin' about delivering e-mail. You know what they'll do to you for that?"

"They've got to catch us first," Chuck said. "How're they gonna do that?"

"The same way they catch everyone else who tries this stunt," Mike explained slowly. "CALEA and Echelon gave them the tools to watch everything on the 'net, and the bans on encryption put everything in plain sight for 'em." He shook his head. "Nope, it won't work."

Chuck grinned up at him. "We..." He paused. "...have something else in mind."

"Yeah, right." Mike said derisively. "What? Another one of those 'purloined letter' systems; compressing the data, and hiding the mail in fake overhead bits?" "I hear the last guys who tried it..." He shivered. "Well, the one's who survived the ATF raids are doing time in the FEMA camps. You can leave me outa this."

Chuck nodded matter-of-factly. "Agreed. The feddies are too well wired into the Internet and PSN to try that. It's suicide." He smirked. "Like I said, we're doing something else."

"Okay," Mike surrendered. "I'll bite. What's the deal?"

"Ever hear of packet radio?"

"No..." Mike snapped his fingers. "Wait. The computer network thingy the amateur radio operators used?" he asked.

"Bingo," Chuck confirmed. "We're putting together our own variant system, with modified controllers, and real routers instead of software emulators. Getting a great deal on the routers, too. With all the 'net restrictions killing any private growth, the IT industry has been depressed. Hardly anyone buying new routers but the feds. And us now."

"But isn't packet radio pretty low bandwidth?" Mike wondered. "And how does this tie into the 'net? How would I send an e-mail?"

Chuck rolled his chair away from the desk and stretched his legs. Then he spoke. "It isn't true packet radio; more of a hybrid between IP and packet. Sort of a packetized IP, 'though that sounds redundant. But it ain't." Mike looked puzzled, and Chuck elaborated. "Now go easy on me because I didn't design this; I'm just gonna operate a node. But what we do is take regular IPv6 packets from the routers, bundle 'em into radio packets with node headers, like an address for the node, so when the signal goes out over the air, only the right receiving node and router will listen for the packet." He paused, and Mike blinked.

"Believe it or not, I think I got that," he said. "Sort of a wireless Internet." Then he frowned. "Gotta be more to it than that. The Feds will pick up the broadcasts and hear every message you send. And I still don't see how you'll make money at it."

Patience, Chuck answered. "Mike, money part first. I'm one of the core investors in this, so I get a

share of profits from the overall network. The network makes money by charging people a fee to establish another node on our network. He's paying for connectivity." He paused to think for a moment. "And individual node owners make money by selling e-mail accounts."

"No way," Mike argued. "How do you get customers without getting infiltrated by some postal disservice weenie? And how do you figure to get paid?" He sat on the edge of Chuck's desk. "Answer me that," he challenged.

Chuck smirked. "Well, we obviously don't advertise on TV. Word of mouth only, new customers only accepted when vouched for by a trusted person. Payment, by individual subscriber, node operator, or by the network ops is electronic cash. All transactions encrypted." Another smirk. There're 'way too many copies of PGP out there for the feddie crypto bans to mean much."

"So to use this, you still have to use the Internet for e-cash anyway?" Mike asked. "Seems a bit of a waste..."

"Nope, Chuck interrupted. "E-cash can be handled by e-mail on our own network." He chuckled. "Guess who the very first investors in this scheme were? The way I hear it, someone from e-gold or one of the other digi-cash outfits first saw some kids running a packet scheme like this somewhere out in the People's Republic of California. They saw the potential, and got some engineers to scale it up." He shrugged. "Guess they saw the authoritarian writing on the wall, and decided to move their ops somewhere the feds aren't."

"Hmmpf. Might work at that." Mike rubbed his chin while he considered this. "Still, what's bandwidth like? And how long do you think you can run a radio station before the FCC notices?"

"Compared to a wired network with T3 feeds and OC48 backbones? Bandwidth sucks," Chuck admitted. "But for our needs, it'll be good enough. We don't need massive pipes so kids can surf bloated websites. We don't connect to the web. This is e-mail and file attachments only. Mostly text; so the bandwidth requirement is relatively low."

"Okay, I'll buy that," Mike replied. "But what about the FCC?" he insisted.

Chuck sighed, then brightened again. "Weeeelll..." he drawled, "Seems that it's tougher to triangulate on a moving target than a fixed transmitter. And since this is a wireless broadcast system, I don't need to be stuck in any one place, just a general area where my customers can hit my node... Remember, they'll be accessing me via a packet controller that comes as part of their subscription... I did say that, right? It's just like I hit the other nodes" He grinned at Mike again. "Now ya know why I bought that little travel trailer."

"So you're gonna what? Just live on the road now?" Mike asked curiously.

"Yep. Dropping out; or as an acquaintance puts it 'unsubscribing from the gov.'"

"Cool. I think." Then appraisingly, "Sounds like you do have a handle on it. But why tell me everything?"

"Simple enough," Chuck told him. "I want to offer you a job."

Mike looked startled. "Say what?"

"You'll be my salesman, hooking us up with customers. You get free e-mail, obviously, and a commission on each new customer." Mike started to speak, but Chuck held up a hand and continued. "Commission payable after a customer stays on for 60 days. That's so you won't get too careless and sell an account to a feddie stooge by accident. I figure having to wait for your money, hoping we don't

get infiltrated, will keep you careful."

"Commission, eh? What kind of money are you talkin'?"

"Well," Chuck began; "We'll have a scaled tier of account, with different services, to offer. A typical basic account is going to run thirty bucks for sign up, and thirty per month..."

Mike broke in. "Thirty dollars per month? Isn't that a little steep for e-mail? I mean, my old ISP account was only twenty; and I got web space and surfing with that."

"Yeah. But that old account of yours wasn't being provided on the sly; it wasn't illegal. We have additional risks above those of a straight ISP." He smiled. "Besides, I think the sort of people this product will appeal to will be quite willing to shell such a pittance for security. This isn't for your grandmother to send birthday greetings, after all."

"No, I guess not," Mike agreed with a chuckle. "So. What's my commission on this 'basic account'?"

"Sixty-five dollars on one of those. Upper end for what I have planned now would be around five hundred for a corporate multi-user account. That'll vary somewhat depending on the number of users." He paused to think for a moment. "I saw a report that said there used to be 100,000 'net accounts in the metro area. Figure just five percent of those would like one of our basic accounts. That works out to..." He grabbed a calculator and punched buttons. "Three hundred twenty-five thousand dollars." He eyed Mike speculatively and offered Mike his hand. "Deal?"

"Heck, yeah," Mike replied, finally enthusiastic. "I don't know that it's easy money; but there's definitely a profit to be had." He grinned back at Chuck.

"Profit, indeedy," Chuck concurred. "Handy, that. Some of us will be needin' a source of funds..." He let the comment trail off.

Mike's grin faded, and he gave Chuck a wary look. "Now I don't think I wanna know what you mean..."

"That's right. Up the revolution, baby."

"Oh, jeez..."

Shadow networks such as Mike and Chuck's did well for a time. Then, following a precedent established in Texas in 1993 by the FBI, the FCC obtained Bradley fighting vehicles from the Army, and rigged them for RF direction finding. They didn't bother with arrests.

The e-mail privateers responded by going to carefully scheduled, point to point, burst transmissions as opposed to the previous continuous broadcasts. Another common ploy was to place a long distance call from one pay phone to another with a prepaid calling card, and to connect the phones to throwaway packet radio controllers and CB radios; instant cross country network, albeit a slow one. Sacrificing a couple hundred dollars worth of gear, a black market mail provider could do several thousand dollars worth business before the FBI's CALEA taps detected the mini-network. Bulletin Board Systems, once rendered nearly obsolete by the Internet, started making a comeback as well, but it was risky business. Even BBSs with Internet access that were not smuggling e-mail tended to be raided by Postal Inspectors on the theory that if they were able to, they must be providing mail service.

One such Sysop sat in his darkened bedroom and watched his computer screen. Clients were using his BBS's secure chat mode.

DRIFTER: It's crazy. They have the IRS beat. With the Revenuers, you just work off the books. But you can only do just so much mail on the gray nets. And commercial outfits _have_ to use the US Mail for some stuff.

ASMODEUS: Yeah, and that's the worst part. Every time we send regular mail, the Post Office makes more money. Which they turn around and use to make more rules. We can't win that game.

DRIFTER: I heard they're going to follow some other countries' leads and nationalize the phone companies, too. Like the German PTT.

ASMODEUS: They might as well. The Wiretap law already gave them virtual control anyway.

The Sysop considered, and tapped a key.

S: You give up too easily.

ASMODEUS: Hi. How so?

S: Consider. You say that every transaction you complete with the Mailmen contributes to their coffers. Yes?

DRIFTER: Yeah. So?

S: So make it not so. Why is it so profitable for the PO to handle large volumes of mail?

DRIFTER: Automation. Ah. I see.

S: Yes. I suggest we start with just one item at a time. First, start addressing all mail in cursive handwriting... the sloppier, the better.

ASMODEUS: They'll just change the rules. Require typing, or something.
S: True. But they are bureaucrats. By the time they get the revisions through, we'll already have the system clogged with manually processed mail. And be working on the next... inefficiency-inducer.

DRIFTER: This has potential. Anyone remember "Gag Echelon Day"?

S: Certainly. You propose a scheduled event like that?

DRIFTER: Heck, no. A whole calendar of scheduled events. make up a list of things to monkeywrench the posties. Maybe schedule it so we do a new one every Monday.

*ASMODEUS: Cool. I remember reading an article when the USPS raised rates to 33cents- Seems they were complaining that people were jamming their machines by gluing & taping pennies onto envelopes along with the old 32 cent stamps. How about that one?
S: Excellent. And might I suggest flooding certain addresses with info request post cards?*

ASMODEUS: And subscriptions!!!! Sign up post offices for magazines with those Bill Me Later offers!

DRIFTER: Should damned well include all the gov goons in that. Why let the posties have all the fun?

Eventually, the Mail Police shut down any BBS they could find. It finally occurred to them that people might actually be dialing them up via long distance, but by then the damage was done.

The Postmaster was most unhappy. "Harry, revenues are down fifty percent. Despite a hundred percent INCREASE IN TRAFFIC!" he raged at down at his director, whom he'd specifically appointed because of his diminutive stature. "What's going on?"

The director flinched at the Postmaster's tone. "Well, sir," he replied, "it's the manual processing. It's killing us. And the repairs to jammed sorters are costing us a fortune."

"Why are we still manually processing?" the Postmaster asked angrily. "We've banned handwritten addresses."

"Yes, sir. But..."

"And we put a stop to ZIP code omissions."

"Yes, sir."

"Then what's the problem, Harry?!"

"Umm... Typos, sir." the director answered hesitantly.

"Typos?"

"Uh huh. Transposed ZIP code digits usually. Columbus OH, instead of GA. Southeast roads for southwest roads."

"We're being run out of business by typos?" the Postmaster questioned in disbelief.

"Yes, sir. And it's worse than it looks. Every time a new problem pops up, it does it everywhere at once. This past Monday, we got deluged with thirty four million postcards addressed to Four Seventy Five L'Enfant Southwest."

"That's our address!"

"Yes, sir."

The Postmaster considered. "Okay, from now on, misaddressed mail goes to Dead Letter immediately. Don't attempt redelivery. We can trash the darn mail and still collect the postage." He stopped and massaged his temples. "We should have done that right off anyway. Don't know why we didn't; mental inertia, I suppose."

"Very well, sir." The director paused, grimaced, then continued. "What about the stamps?" he asked. Confused, the Postmaster said, "What about them?"

"Nobody is buying the full rate stamps. All they want are the one-centers." He held up his hands in hopeless resignation. "It's killing us. Did you know that fifty stamps on an envelope can actually boost the weight into another rate bracket? But we can't charge for it... And all the stamps obscure the addresses." The little man shook his head in hopeless resignation.

"Well, damn it! Stop selling the one cents!" the Postmaster shouted.

"We already did; we ran out. But still no one buys the fifties. They make us meter their envelopes at the counter. The overtime is incredible."

"Then we won't pay overtime! The military doesn't. We'll draft everyone," the Postmaster added brightly. "We can do that since the President signed the national emergency order."

The director squirmed nervously. "Weeelll... that's another problem."

The Postmaster stared grimly. "What?"

"We experimented with that in Kansas already," the director continued. "The next day, only one employee showed up for work."

"What!"

"And he only stayed long enough to shoot his supervisor."

Of course, there were less principled postal employees who found they had a taste for the work. Such mail carriers took to wearing flack jackets and helmets. And steel-toed boots...

BAM! BAM! BAM! came the pounding at Granny Godfrey's door. Shocked and startled, the elderly lady looked up from the cookie dough she was rolling out on her kitchen counter top.

CRASH! The door flew open, spraying splinters across the kitchen and the old woman shrieked. A uniformed Mailman toting a shoulder bag and truncheon stormed in. Club at the ready, peering around the kitchen. He spied the baker, and closed in on her. "Anabelle Godfrey?" he barked.

"Y-y-yes..."

"What the heck are you trying to pull, lady?" the carrier raged.

"I-I don't understand..."

The Carrier reached into his shoulder bag and pulled out an envelope. He he threw it down on the counter. Mrs. Godfrey flinched and jumped back. "This, lady!" He pointed to the correspondence. "Where's your frickin' postage?"

The old woman's face paled. "I'm s-sorry... I must... I must have forgotten."

"No, lady. You don't forget to pay postage. Don't you know mail fraud is a felony?"

"But I didn't mean... I have the stamps... they're in my purse, there. I'll get them." She wiped her hands on her apron, and stepped forward.

The goon pushed her back roughly. "I'll get `em myself," he corrected. He grabbed the indicated purse and rummaged through it. He found a wad of stamps and shoved them into his shoulder bag. Then he opened her wallet and pulled out the bills within.

"My money!" the woman wailed.

The Mailman sneered. "It's a fine." Stuffing the bills into a pocket, he turned and headed back towards the shattered door frame. He paused and looked back. "You're gettin' off light, old lady. You do this again, and I'll FEMA your butt. You won't like the camps." He turned to go.

"Please... Sir," the old lady called. The Carrier looked back. She held up the envelope, hands shaking nervously. "My mail?" she asked.

Without a word, the bureaucrat snatched the envelope and left. From her kitchen, the woman heard his truck door slide shut; the engine started. She waited. The truck moved down the street, the sound fading in the distance.

BOOM! Glasses rattled on the shelves.

Mrs. Godfrey smiled. "Postage paid, scumbag," she muttered. As she took off her apron, a teenage boy entered through the remains of the kitchen door. "Tommy," she called. "I'm glad I was able to stall him long enough; he was in a dreadful hurry." She gathered up the scattered contents of her purse, and dug out her keys.

"You did great, Grandma," the boy assured her. "But I think half a kilo was, um... overkill." He smiled. "In fact, maybe we should stick to thermite next time; it's not so messy."

Mrs. Godfrey took a last look around her kitchen, then turned back to Tommy. "Best not to be around when the Inspectors show up. Let's go now."

Tommy looked wistfully at the cookie dough. "I guess. I sure was looking forward to your cookies, though."

"Never you mind that. Time to go now."

"The recent wave of terrorism is having another dramatic effect on mail service," announced the radio voice. The hobbyist looked up from his prototype on the bench and listened carefully to the news report. "With several Carriers and Handlers killed and wounded in mail bomb blasts, the Postal Service has announced a moratorium on the processing of physical mail. This includes home delivery and pickup, as well as traditional post office services. Until further notice, only electronic correspondence will be processed..." The experimenter reached over and turned off the radio. He grinned. The hackers were going to love this.

The stereotypical band of unwashed revolutionaries they weren't. And no one but federal agents would have called them terrorists anymore either; anti-'terrorist' fervor went out the window when

everyone stopped receiving their magazines subscriptions and mail order items. It is difficult to e-mail a physical object; a truism lost on bureaucrats. The physical mail moratorium was costing businesses millions, and seriously annoying consumers. So anti-'postie' activities were becoming downright popular.

While Greg Hennessey checked himself over in the mirror, his secretary finished her phone call. "...And thank you for your time. Mr. Hennessey will be there promptly at ten." She carefully placed the handset back in the cradle. Then she stuck out her tongue and gave the instrument a raspberry.

"Now, now, Jennie," the man playfully chided. "is that any way for a nice executive assistant to behave?"

"When dealing with Mailmen, yes," the pretty redhead replied. She looked him over. "Very nice. You wear a suit more often; it suits you." She grinned.

"Danke, I think." He straightened his tie a final time then twisted about, searching for his briefcase. Accustomed to his absent-minded ways, Jennie pointed down by his feet.

He looked. "Oops."

"I hope you'll do better in the meeting. We do want the Post Office to buy our software," she said, mock reprovingly. "Be a shame to waste all the time spent in development, and making the pitch to the Inspectorate."

"That would be nice. Money is good," Greg agreed. He reached down to the briefcase and opened it. Peering in he verified, "Notebook, CD, floppy, the doc's, rate schedule... Looks like I got it all. I'm out of here. See you after lunch." He headed for the door.

"Hold it, buster." Jennie intercepted him by the door. She reached up and pulled his head down closer to her own and gave him a quick kiss. "You be careful with those thugs. The Postal Inspectors are dangerous. If they catch on..."

"Don't worry," he reassured her. "I'll be fine. What can go wrong? It isn't as if there's any viruses on the disks. And the scanner works exactly as advertised." They both grinned. He leaned over and gave her a fast peck on the cheek. Then he left. Once alone, Jennie unplugged the phone and put it in a waiting box. It already held the few files and wall hangings they had used as props during previous meetings with postal officials. She gave the office a last, thorough inspection for evidence. Finding none, she lifted the box and carried it the door. She killed the lights and closed the door behind her as she left.

At the Post Office, Hennessey waited. As he had expected, even though he had arrived several minutes early, the Inspector kept him waiting. Power tripping, Greg figured. He killed time by striking up a conversation with another gentleman waiting in the outer office. "Hi, Greg Hennessey," he introduced himself. "Software. Database applications." He noted the laptop the other carried. "You in computers, too?" he inquired casually.

The man looked at him, then, "Collin Pedersen." He held out a hand and they shook. "Yes, I am. Antivirus work."

"Really? Anything new in the field? Professional interest, of course."

Pedersen nodded slightly. "A bit. I've some enhanced detection routines. Gives more reliable detection of the polymorphic viruses the rebels have been using. Runs a bit faster, as well." He offered Greg a business card. "Look me up. We have some add-on modules for macro pseudo-viruses that get

embedded in some spreadsheets."

"Thanks. We try to be careful of our own stuff, naturally. But we have considered incorporating some detection; for some of our less diligent clients." Both businessmen smiled. Greg offered Pedersen his own card, which was graciously accepted.

"Mr. Hennessey," the receptionist called out. "The Inspector will see you now." You could hear the capital letter in her emphasis.

Greg excused himself and entered the Inspector's inner sanctum. A typical midlevel bureaucrat's office. The walls were half-paneled with cheap woodgrain vinyl-on-fiberboard. The upper half of the walls were painted a clashing blue pastel. The only furnishings were a too-large desk with executive's chair, a straight-back wooden visitor's chair, and an American flag in one corner. On the wall behind the seated Inspector was the newer version of the USPS logo; the same, old, stylized eagle, but executed in severe black and silver. "Good day, Mr. Hennessey," the Inspector said. "Sit down. I am Major Vadala, of the Postal Inspectors."

Greg stepped forward and offered his hand, saying, "Good morning, Major. Glad to..." The Inspector merely looked at him poker-faced. Greg sat.

"Let's not waste time, Mr. Hennessey," the Major said. "I've reviewed your literature and reports of your earlier demonstrations. The product is interesting enough to warrant this meeting, I'll admit. But you must convince me that it is worth the expense of upgrading." He stared coldly at Greg. "What makes your text searcher such an improvement over our own?"

Greg open his briefcase and removed the CD, speaking as he did so. "Major, you've read the basic documents, so you've seen my claims. I can give you an expanded database of keywords, and a one hundred percent increase in search speed; at the same time." He handed the disk to Vadala. "This will allow you to increase the percentage of e-mails reviewed for criminal indicators. Alternatively, you may opt for a greatly expanded database, and perform more comprehensive reviews of approximately the same number of posts as you do currently."

"Thus, increasing the number of false hits which my inspectors must personally review," Vadala interjected.

"Quite the contrary, sir," Greg corrected politely. "It wasn't in the initial package because we were still polishing the code; but we've added another feature. A very elegant contextual search mode."

"Context?" Vadala inquired.

"Yes, Sir," Greg replied. "Where your more conventional text searcher will key on the word 'killer', for instance, ours may not. We can automatically examine the surrounding text to determine if a hit is warranted. 'The killer shot the clerk' will generate a hit, and flag the letter for human attention. But 'I went to a killer concert last night' will not." Greg gave a small proud smile.

"Very nice, indeed," Vadala admitted. "If it works. And you still maintain search speed in this mode?"

"We had to make some trade offs. Contextual searches don't operate with the external user-configurable database. To keep run time reasonable, we had to hardcode the process. But I think you'll find that we've included a satisfactory range of keys and contexts."

"This does sound intriguing," Vadala said. He examined the disk he held. "A demo copy?"

"The complete package; including a small sample database and electronic documentation. Please, try

it out," Greg invited.

Vadala slipped the disk into a slot on his desktop computer and slid his keyboard closer, then tapped away briefly. He looked up at Greg with no apparent expression. "I hope you won't be offended if I run a virus scan... one can never be too careful." He watched Greg appraisingly.

"Not at all. We run a clean house; but as you say..." He shrugged.

"Good."

The screen flashed and displayed text. Vadala grunted approval to himself and manipulated his mouse. Once the computer pronounced the CD to be clean, Vadala asked, "How do I start it, Hennessey?"

"Click 'run' on the start menu, then browse. Search the ROM drive for flagit.exe, and go. It'll prompt you for the search path." Greg paused. "You can run a search on our test file." He reached into his briefcase for a floppy. "It's named DEMOdotDAT..."

Vadala gave Greg a disapproving look. "My own test, naturally." He turned his attention to the keyboard. "I assembled the test file myself; so I know exactly... Eh? Done already?"

Greg smiled proudly. "I did mention a speed increase."

Vadala frowned. "But at a sacrifice of accuracy, it seems. It's given me 51 hits. There should only be 50."

"Perhaps if you reviewed the flagged items..." Greg suggested carefully.

"Hmmpf." Vadala performed more mouse antics. "Eh? What's..." He referred to a sheet of paper beside his computer, and ran his finger down a list. He blinked and looked surprised. "Well. I'd forgotten that one." He turned back to Greg. "Congratulations, Hennessey. Quite satisfactory. It even picked out an entry that had none of our usual keywords; I believe your contextual search must have found that one."

Greg gave another proud smile and asked, "Then we have a deal, Major Vadala?"

"Deal, Mr. Hennessey?" Vadala affected puzzlement.

"A contract for the search engine..." began Greg.

"There will be no contract. We are exercising eminent domain."

"You're what?!"

"Eminent domain, Hennessey. In the interest of national security. And cost effectiveness. But I'm sure the GAO will compensate you appropriately." Vadala rendered a smile verging on a sneer. "Is that the documentation? Please turn it over, now." He held out his hand for the ringbound pages which Greg had already removed from his briefcase. Seemingly in shock, he handed the manual over to the bureaucrat. "Good day, Hennessey. Please leave your address with my secretary on your way out."

"But..."

"Good day." Firmly.

That evening, Greg and Jennie met with some friends and accomplices. Greg was describing his meeting with the inspector. "If I were really trying to sell the damned package, I'd have ripped the little SOB's throat out. He... nationalized the software, by god!" He took a gulp from his bottle of beer.

Jennie slapped him lightly on the wrist. "Oh, be quiet," she admonished. "We halfway expected that. And he did the same thing to Pedersen after you left." She laughed.

From the recliner across the room, the antivirus scanner salesman spoke up. "And it serves him right. I think it's pretty funny. Not only did he steal my virus scanner; but he stole the very trojan it's designed to let through." He grinned and upended his own bottle of beer. "I wish I could see his face when he finally catches on in a few months."

"If he catches on," put in the third man. "The Mailmen don't have a particularly good record for figuring out these scams."

From Greg, "No joke, Tom. Those clowns still think polymorphic viruses are state of the art." He took a smaller sip from his bottle. "I imagine none of `em have even heard of a binary virus." He grinned.

Tom asked, "How long do you think it'll take to kick in?"

"Hmm." Pedersen considered. "Hard to say. Depends on a bit of random chance. We've got the virus-proper scattered across e-mails all over the country." Noting Tom's raised eyebrows, he added, "Stegonographically encoded, of course. Nothing's going to see it but the context search engine."

Greg picked up. "Which will promptly begin assembling the pieces into the actual virus."

Pedersen again took up the torch. "Which my scanner will allow to infect every Mailman system it's resident on. Then it has several trigger dates meant to allow it to reproduce quietly for a some time before trashing data. Which date triggers it depends on how soon the search engine finds and assembles the virus."

Jennie raised her beer in a toast. "To stupid bureaucrats."

"That's redundant." Laughter.

"Hear, hear!"

Within a week, Greg's pirated trojan had successfully recombined the virus. The likewise stolen and disseminated scanner program dutifully ignored the virus and lied through it's virtual teeth about what a wonderful job it was doing. As it was actually an excellent scanner for any other virus, the postal inspectors were quite pleased, and provided the scanner to several other federal agencies with glowing recommendations. Six weeks after the initial viral infection, every affected hard drive erased itself. Panic-stricken bureaucrats dutifully restored from their backups, which were also infected. The archived viruses took one look at the system clocks, and once more the computers committed electronic seppuku. Things did not look good for the home team. Eventually, the Feds rebuilt their desktops from uncontaminated scratch. But the data on most of the 'subversives' was lost forever. Which had been the whole point of the exercise.

Steps were taken to prevent a recurrence of the disaster.

The electronics hobbyist dialed up his authorized mail server to check his box. His computer muttered electronically for a few moments; then :

MAIL WAITING: 001
MAIL REJECTED: 011
READ MAIL?

His eyebrows shot up, and he considered possibilities. Then he called for his mail.

Dear C. W. BABIK -

Due to circumstances beyond our control, the United States Postal Service has found it necessary to discontinue non-centralized mail service.

Recent criminal action has interfered with our ability to provide you with the previous speedy service for which we have always been noted.

We regret to inform you that in the future all mail must be processed directly at your servicing Post Office.

This will be a simple process, and will have the added benefit of bringing you personalized service. Please bring your correspondence to the service window. It must be typed using OCR-A font, with 1 inch margins. After your personal clerk has reviewed your proposed letter for content and format, he will personally scan it for speedy electronic transmission. For your convenience, the original will be maintained in the Postal Service's efficient archives.

Postage due will be payable upon receipt of the communication for review.

Thank you for your cooperation.

SIGNED

Postmaster

475 LENFANT SW

WASHINGTON DC 20260-2207

(postage due: \$.57)

Willy Babik laughed. Those poor, poor SOB's They'll never know what hit `em. The ball was in his court now. He thought about The Thing in the garage and laughed again.

Willy leaned against the garage wall and grinned as Bob eyed The Thing. His friend stood back from the contraption and considered the monstrosity. It was six feet long, and more or less cylindrical. It appeared that Willy had bundled a few dozen lengths of iron re-bar together, and wrapped them in a few miles of fine wire. He said as much to Willy.

The hobbyist kept grinning, laughed, and said, "That about sums it up." He nodded general agreement. "Okay," Bo allowed. "But what's it for?"

"Well... It's a magnet, more or less,"

"A magnet?" Bob responded dubiously. "The dang thing must weigh a ton. You gotta be kidding."

"Nope. And with the capacitors, it weighs about twenty-two hundred pounds," Willy said proudly.

Bob looked seriously confused. "But still, what for?"

"I guess you could say I'm putting together a car bomb."

"What!" Eyes wide, Bob began backing away. Very carefully.

"Oh, not exactly., It doesn't really explode. Think of it as a magnetic cannon, or a magnetic pulse bomb." Willy grinned widely. "Put's out a heckuva mag pulse; does terrible things to compasses." He

chuckled.

"I don't get it," Bob stated nervously. His eyes kept drifting back to the 'bomb'.

"Real easy. That's one of the biggest electromagnets you ever saw." He pointed to the rack of cylinders below his 'cannon'. "And those are some big freaking capacitors. Rolled `em myself. Sixty of `em. Each one's got about a hundred-fifty feet of foil spaced with plasticized tissue paper. You don't want to know the actual capacitance... *Don't touch that!*" he ordered.

As Willy spoke, Bob had closer to look at the capacitor bank, and reached out a hand to the terminals of one. At the shout, he pulled back. "What?"

"You want to vaporize that arm?" Willy demanded. "Those caps are charged. They'll give out a regular lightning bolt if you try to touch `em," he warned.

"Jeez, Willy; what're you up to?"

"Ain't just me. Come Tuesday, a coupl'a thousand of us around the country are going for a drive." He grinned again. "And we'll all develop engine trouble at our neighborhood Post Office."

"I still don't get it."

"Well, I'll tell you. Since the Post Office only handles e-mail anymore, their entire operation is electronic." He paused.

"Yeah? So?"

"So my little magnetic cannon is going to wreak havoc with their electronics."

"You're in the Resistance?" Bob exclaimed. He swore softly and backed further away.

Willy laughed. "Um, so to speak. Oh, get back here. You aren't going to get into any trouble." Bob looked doubtful, so Willy continued. "Mostly I just took offense at the posties an' other feddies tapping my phone, reading my mail, screwing up comm across the country, and making me pay through the nose for the privilege of letting `em screw me. Usta be something called the Constitution and Billa Rights." He paused and stared into distance. "Yeah, well. Anyway, they're so clumsy, they're on the way out anyway." He gestured to the cannon. "This'll put some of the finishing touches on their downfall."

Bob started backing away again. "You're nuts."

"Thank you," Willy replied. "Look, the idiots are on the way out anyway; but they're dragging the rest of the country with `em. And that's hurting everybody. If we can shut down all the PO mail servers at once, the Post Office will be paralyzed for days, at least. That'll be time enough for some rational people to settle the issue."

Bob eyed Willy, then the door. "So, why are you tellin' me all this?"

"Because I need your help loading the darned thing into the back of my truck."

"That's it?"

"Sure. What'd you think I wanted? You to storm the Post Office yourself?"

"Heck, Willy, I wasn't sure what to think." He frowned suddenly.

Willy noticed the expression. "Something wrong?" he asked.

"You say this thing messes with electronics?" His buddy asked suspiciously.

"Yep."

"Tested it yet?"

"Sure," Willy confirmed. "At low power anyway. Why?"

"You by chance test that thing Saturday evening?"

Curious, Willy answered affirmatively.

"Goddam it, Willy!" Bob exploded. "I knew it! I was watchin' TV Saturday night when the dang screen just sorta... warped. Picture's been all distorted, an' weird colors since." He closed in and stared down at his friend. "You owe me a new TV set, Willy!"

That Tuesday, Willy checked the electromagnet under a tarp in the back of his '67 Dodge pickup, then climbed into the cab and cranked it up. He put the vehicle into gear and pressed the accelerator. The overloaded pickup moved like a barge. Willy headed out into the street and began the short trip to the Post Office. Within a few minutes he reached the parking lot of the imposing brick structure, where he maneuvered his sluggish vehicle to back into a slot. This left the back end angled toward the building. He climbed out of the truck and watched a Mailman pass by with a bomb-sniffing dog on a leash. Willy hid a grin and walked to the building, intent on mailing a letter to justify his presence.

Willy hadn't explained the entire 'bomb' process to Bob; in reality, he only had half a bomb. The north end, to be specific. Somewhere on the other side of the building someone he'd never met should be positioning a similar electromagnet; but with the south pole oriented toward the post office building. And elsewhere, a third unknown held a remote control device that would trigger the magnets simultaneously. The fields from Willy's north pole and the other's south pole would reinforce each other.

He waited patiently in line, only occasionally checking his watch. Finally, he reached the counter. He handed his letter to the officious clerk, who began reading.

"What's this about malt and alcohol?" the clerk asked.

"It's a recipe for brewing beer," Willy replied.

"Making alcohol yourself is illegal," said the busybody.

"Not beer. Not yet."

"Hmmpf." The clerk scribbled down a note on a pad. "We'll see. I've got your name, Babik."

"Wonderf..." Willy began, when a crack of thunder split the air. The ceiling lights flickered briefly as Willy noticed a monitor behind the counter flare and go out. Willy could almost swear he felt heat in his teeth, and on his wrist. "What the hell," he thought. Obviously, the pulse bomb had gone off. And it had clearly worked miracles. In fact... He glanced at his watch. Sure enough, dead. He noticed that the metal case was warm, and realized that the magnetic field must have caused some induction heating. He considered the fillings in his teeth.

Meanwhile, the clerk was staring at a blank CRT and rapping at an unresponsive keyboard. Willy grinned, pulled a dollar bill out of his wallet, and ruefully eyed his credit cards. "Here. Postage paid. I need a receipt." He made the clerk write one out with pen and paper, as no terminal seemed to be working.

Willy left the service area and headed back to his truck. "Great. But what the heck was the blast?" he whispered to himself. Then he saw his truck. It looked, naturally enough, as though a bomb had gone off under the tarp. The material was shredded, and wire scrap littered half the parking lot. Willy realized that under the huge current surge from the oversized capacitors, the coils had charged, then vaporized. Explosively. He took in the scene quickly. Fortunately, the light wire hadn't really carried very far. While a lot of people were standing around astounded, he saw only one obvious casualty: the bomb squad Mailman. Even the dog appeared unharmed. "Well, I'll be darned. Who says there's no justice?" he asked himself. Then he considered his position, and vacated the scene.

Harry rapped on the Postmaster's office door a third time. When that failed to draw a response, he simply barged in. His boss, the third presidential appointee in as many months, stared at a dead computer monitor, oblivious to the real world. The Postmaster was as much a victim of the magnetic pulse that wiped out the mail servers in the basement as his defunct desktop computer. Harry grasped the man's shoulder and shook him briskly. "Wake up, sir. This is important!"

The Postmaster looked up bleakly. "My ass. Nothing's important now."

"Sir, if you don't pull yourself together, and make some sort of response to this... bombing, the president is going to have your ass for lunch."

"Really? What's he going to do? Replace me?" Head shake. "With who? Who's left to take the job? And what's he going to do it with?" He spied the report in his director's hand. "That's Glover's paper?"

"Yes, it..."

"Good. Then you already know the answers. The bombs wiped our networks, so we can't process electronically. And there's not a computer or router company out there who would help us rebuild. How do you coerce a technician into being technical?" He rubbed his temples. "And we can't do the job manually either; no people. No one comes to work any more. They no more want to be seen working for the Postal Service than Forestry types want to be seen in uniform in Jarbidge, Nevada. Worse, really. No one wants to be associated with the federal government at all, other than those morons on Capitol Hill."

"Sir, perhaps we could borrow assets from other agencies, pool resources..."

Laughter. "From who? Did you hear what happened to the FBI and ATF?"

"No," cautiously.

"Somebody repeated the magnetic cannon trick on them." More laughter. "So much for the firearms registry."

"But..."

"But nothing, Harry. Face it, we're screwed. Any inter-agency resource and asset pooling should have been at the beginning of this nightmare. Should have clamped down hard from the git-go. None of this piddling around putting out brush fires. Now we don't have the resources to do it." He shivered. "And, somehow, I don't think all those hackers, virus-writers, techno-terrorists... Hell, even the straight corporate types aren't going to let us get another chance."

"So what are you going to tell the President?"

The Postmaster glanced at the blank computer screen. "Not a damned thing." He rose and head for

the door. "You tell him. I quit"

"You can't...."

"Did they get the elevators working yet?" asked the ex-Postmaster from the outer office.

"Um. No. But..."

"Oh, well. I need the exercise anyway."

The offices of an Internet service provider in a Midwest city entertained a rather less despondent meeting.

"... you're were right about the demand on the network, Dean. I never imagined that the customer base would grow so quickly."

"Told you so," snickered the portly sysadmin. "Before the crackdown, growth was strong enough. Now all these 'net junkies that've been in withdrawal want their fix. We need another T3, a couple more hubs, more web and mail servers, the RAID needs to be..."

"I know, I know. Do it."

Dean blinked. "Just like that, Brian? Cool. What about financing?"

"No difficulties there. Amanda over at the bank says our past revenues and projections warrant a bit of a loan. You can have your toys."

"Yee Ha! You want to use ITS for the expansion?"

"Yeah, they're already familiar with our installation, that should save time and trouble. But let me know if you decide to get anything that wasn't on that shopping list of yours."

"Great! I'll give Brent a call now, and get things started."

"Sounds good. When you get to the haggling point, bridge up on the call." The ISP boss smiled and headed back to his own office.

Dean wasted no time pressing a speed dial button on his phone. He waited, then, "Hey, Brent! Just the guy I wanted to talk to. This is Dean Hubbard over at Indy NetSol." Pause. "Yep, I'm going to make your day. I've got a little expansion job in mind, and thought I pass some business your way."

Across town, Brent Hogan chuckled into his handset. "Well, I was about to go to lunch, but if you're going to help make me rich, I guess that can wait awhile. What have you got in mind; that new RAID we talked about?" He tapped on his keyboard to bring up a tickler file on NetSol.

"That and more. The boss is springing for the whole package."

"Ah. Then you're going to help make me very rich."

"Probably so. You want to come over here and talk it over. You can look over the current set up while you're here; refamiliarize yourself with our network."

"Sure, I can..." Brent paused as another phone rang. He scanned the office and realized that he was alone. "Dean, do you mind if I take another call real quick? I'll be right back."

"No prob."

Brent hit hold, then picked up the other line. "Indy Technical Services. Brent Hogan."

"Good afternoon, this is Marsha Sinclair in Purchasing at the General Services Administration."

"GSA?"

"Yes, sir. One of our local HEW offices has suffered a router crash. Our regular network contractor won't... isn't available to repair the difficulty. We were hoping that you might be able to send a field engineer out this afternoon..."

"HEW, huh?"

"Yes, sir. This is part of the link to the IRS for the deadbeat..."

Brent disconnected her. And, "I'm back, Dean. Sorry about that."

"So. Lining up another big job?" Dean wondered.

"Not in this lifetime."

Say What?

I don't remember who it was, but someone once objected to my preference for science fiction over fantasy. So I wrote this.

`Twas an earlier age; a time unrecorded, before Man was alone upon the earth. When Gods and Demons moved about...

The lone figure walked along the path through the lothriel forest, absorbed in his thoughts, watching the ground beneath his feet. He seemed not to notice the singing birds, nor the graceful trees in which they roosted.

By his garb, he was a wandering soldier. Over his dirty, roughspun clothes, he wore a suede jacket sewn with scales of hardened leather. On his head was a small, padded cap of leather and bronze. About his waist was a wide belt from which hung a scabbarded sword, knife, and wallet. He carried a duffel slung over his shoulder.

As the soldier strolled down the hardpacked trail, humming tunelessly, he reached down into the large pouch at his side and removed a small box. He flipped the cover open and gazed intently into it. He walked on.

Engrossed in his box, he seemed oblivious to the suddenly gathering gloom, and the abrupt silence of the birds.

"HOLD!" thundered a reverberating voice.

The soldier checked his step, and looked about. He appeared to be engulfed in a thick gray haze which somehow did not cast him in darkness. He glanced down to his box once more, then returned it to the wallet.

"Yes?" he replied.

From all around, the voice boomed again, **"ON THY KNEES, MORTAL! BOW DOWN BEFORE THINE MASTER!"**

"Kneel?" the soldier asked, shaking his head. "I don't think so; my knees are in terrible shape these days." He slipped the duffel off his shoulder and continued, "But I could do with a break. Been walking all day."

"GET THEE DOWN!"

"Thank you. Don't mind if I do." The soldier sat down on a hummock of grass at the side of the road. "So, whuzzup?"

"IMPIOUS MORTAL! DEMONSTRATE RESPECT FOR THY MASTER!" roared

the mighty bass voice, angrily.

The soldier considered, then spoke, "Master? `Fraid not; I'm unemployed just now." His face brightened. "Or is this a job offer?" he asked.

"SILENCE, FOOL! KNOW YOU NOT TO WHOM YOU SPEAK THUS?!"

"Well, now that you mention it... Nope," he said brightly.

"I AM THY GOD, WHOM THOU SHALT OBEY!"

"Say what?" he responded; amused disbelief clear upon his face. He reached into his wallet and pulled out a fruit. He took a bite and waited.

"I AM YOUR LORD GOD; AND THOU ART CHOSEN!" The voice still thundered, but there seemed to be a hint of exasperation.

The soldier swallowed the bit of fruit, then spoke. "G'wan. Pull the other one. I'm agnostic." He blinked, then, "Guess that's why I can't see ya, huh?" he added. He took another bite from his snack.

"THOU ART CHOSEN, AND THOU SHALT OBEY!" Exasperation was definitely creeping in.

"Chosen for what?" Swallow, and another bite.

"I AM COME TO BRING MY PEOPLE TO RIGHTEOUSNESS! THOU ART TO BE MY AGENT, MY AVATAR!"

The soldier nodded. "Right. A job offer." Another bite and swallow. "So, who are your people? For that, who're you?"

"ALL FOLK WILL BE MINE! I AM NAMELESS!" Was there just a bit less boom?

With a knowing look the soldier said, "Ah, I see. Still making your mark in the world. One of the new gods in town." He smiled.

"I AM NOT NEW! I AM... AGELESS!" roared the voice, just a trifle defensively.

"Timeless, anyway," mumbled the the soldier to himself.

"WHAT?!"

"Nothing." The soldier eyed the expended core of his fruit, then tossed it into the trees. "So you need to gather a following, and I'm your avatar.... What's the job description?"

"YOU WILL GATHER MY PEOPLE AND LEAD THEM IN BATTLE! YOU SHALL CARRY MY WORD TO THE ENDS OF THE EARTH!"

The soldier shrugged. "Battle; figures. I was kinda hoping for garrison duty." A doubtful look crossed his face. "you oughta know, I'm just a foot soldier; I'm no military genius."

"AS MY AVATAR, YOU WILL BE INVESTED WITH MY POWER! YOU WILL WIELD LIGHTNINGS THUSLY!" Suddenly, for an incredibly brief instant, a painfully bright line of light reached from the forest to the hardpacked dirt before the seated soldier.

When the sharp crack of thunder had faded, the soldier looked over the grassy hump he found himself hiding behind. In the footpath was a small smoking crater. He thought he saw a bit of molten glass in the middle. "Dang, a pbw, too," he whispered to himself. Then out loud, "Cool! Oughta be useful in those long siege actions."

"YES, MORTAL! COWER AT THE SIGHT OF MY POWER!" God seemed to have regained some of his confidence with his display.

"Well just be careful where you toss your lightning bolts, Zeus." The soldier regained his grassy seat. "You wouldn't want to incinerate your avatar now, would you?"

"KNOW YOU MY POWER NOW, MORTAL?! THROUGH YOU, ALL MEN SHALL SEE MY GLORY!"

The soldier rummaged around in his duffel, and came up with a waxed leather flask. He uncorked it, and took a sip of the water within.

"Okay," he said. "I've got to admit your offer intrigues me. But I hafta ask – What's in it for me?"

"WHAT?" The voice was clearly taken aback.

"Well, your profit is clear. You get worshippers, fancy temples, probably your own religious texts." The tapped himself on the chest. "But what about me? What do I get?"

"IS THE HONOR OF SERVING ME NOT ENOUGH?" came the bass question.

"Frankly... No."

"BUT...!"

"Look, honor and glory are nice. But they don't put bread in the cupboard. A man has to look to his... er, future." He corked his flask. "What salary are you offering?"

"I SHALL PRESENT YOU WITH ARMS! FEATHERWEIGHT PLATE ARMOUR OF PROOF – ALUMINUM!"

"Alumi..." the soldier began, questioningly.

"NEVER MIND!"

"Anyway, I don't like plate armor; too confining."

“WEAPONS, THEN! AN ENCHANTED SWORD!”

"I have a sword. Quite a nice one, at that." The soldier drew his blade from its scabbard. He held up the broad leaf shaped implement for display. "See? Iron, too. The latest thing. Cuts through bronze like butter," he added proudly.

"WOMEN!"

"Fun; but just more mouths to feed in my failing years." he shook his head. "How `bout cash?"

"EH?"

"You know- gold, jewels, salt, seashells. Money."

"YOU ARE MOVED BY SUCH MUNDANE CONCERNS?"

"Durned straight. A man's gotta eat."

"WELL, IF THAT'S ALL... **DONE!**" the voice boomed in agreement. **"TOMORROW WE SHALL BRING ENLIGHTENMENT TO THE LANDS OF MEN! AND YOU SHALL HAVE YOUR PICK OF ALL TREASURES GARNERED IN YOUR VALIANT...!"**

"Whoa nelly!" interrupted the soldier. "I've heard that before. Uh uh."

"EH? BUT...!"

"Nope," said the soldier adamantly. "I don't work on comission." He crossed his arms and looked stern. "Cash up front. Payment on a monthly basis, in advance."

"WELL... I... WHAT SCALE DID YOU HAVE IN MIND?"

"I think the Warlord for an entire faith rates fifty Imperial larans per month," the soldier replied.

"FIFTY IMP... AH, VERY WELL!" resignedly. **"I SHALL BRING YOU SILVER...!"**

"Nope. No silver," corrected the soldier.

"SAY WHAT?!" said the confused voice.

"Silver's too bulky for traveling. This here reformation's got to move fast, right?" The soldier pointed to his duffel. "Besides, I'm used to traveling light."

"THEN WHAT CURRENCY DO YOU PREFER?!"

"Oh, anything low bulk- gold, jewels." He shrugged. "Mithril, if you've got it," he added nonchalantly.

"VERY WELL! GOLD COIN...!"

"Half in bullion," interjected the soldier.

"BULLION...?" came the plaintive inquiry.

"Bulk, you know," answered the soldier.

"OKAY, OKAY! GOLD BULLION!" the huge voice acquiesced. **"BUT KNOW THAT YOU SHALL EARN IT! FROM THIS DAY FORTH, YOU ARE MINE!"**

"Right. Good doing business with you. You drive a hard bargain," replied the grinning soldier. The voice seemed not to detect the sarcasm.

"ENOUGH! BE HERE ON THE MORROW, MORTAL, AND YOU SHALL HAVE YOUR PAYMENT!" The voice paused, then, **"IF YOU ARE ABSENT, I SHALL SEARCH YOU OUT AND PLUCK OUT YOUR EYES FOR TOYS FOR MY AMUSEMENT!"**

Dubiously, the soldier said, "Um, yeah. I'll definitely be here. You can rest assured of that."

"GOOD!" The gray haze began, not to thin, but simply to fade.

The soldier grinned and called out, "Oh, God..."

"WHAT ALREADY?!" answered the thunderous voice; well past the point of exasperation.

"I'll need a horse, too," pointed out the soldier. "Gotta move fast, you know."

"OKAY, A HORSE!" the voice cried angrily. The fading haze suddenly snapped to black opacity. The soldier was transfixed by a single ray of light in the darkness. **"MORTAL!"** it continued ominously.

"Yes?"

"ENJOY YOUR JEST! BUT KNOW THAT IF YOU FAIL ME BUT A SINGLE TIME IN THE COMING DAYS, I WILL TEAR OUT YOUR SOUL AND SHOW IT EXQUISITE TORMENT FOR ETERNITY! I WILL PLUCK OUT YOUR VERY NERVES AND PLAY THEM LIKE A LUTE! "DO WE UNDERSTAND ONE ANOTHER?!" Anger and plaintiveness had given way to pure menace.

Impressed despite himself, the soldier merely responded, "Um, yes; sure. Completely."

Abruptly, the haze vanished leaving soldier standing in the afternoon sunshine. The final echoes of the great voice ceased.

The soldier waited.

After a bit, the birds started singing again. The soldier decided God was not coming back right away. He laughed, and muttered to himself as he began digging into his duffel again. "Jeez, another wannabe-god. Couldn't settle for Connecticut Yankee." He shook his head.

Finally his questing fingers found their goal. He pulled a silvery box out of the bag. He slid a catch free and pressed the exposed button. Immediately, a tiny pinpoint of blue light appeared, hovering a foot above the box. The point expanded to a ring of blue fire an inch across; it encompassed dead black. The soldier pressed a second button and spoke. "Hello Base. Agranoff here."

The response was virtually instantaneous; "Sergeant! Are you okay? We've been reading the darnedest spatiotemporal interference centered on your beacon."

"I'm fine. I've got good news, and I've got bad news..."

Base interrupted with, "I've got some goods news, too. The on-scene investigators..."

Sergeant Agranoff broke in, "Me first. It's been a long day, and I've been busy humoring a megalomaniac."

"But, Sergeant..."

Agranoff kept going. "Good news is that I located our wayward time traveller. He's playing God; trying to start some sort of jihad." He laughed. "As luck would have it, he managed to pick me as his Holy Warlord- he thinks I'm a local."

"But Sarge, he never..." Base tried to interject.

"Anyway, I've stalled him, and arranged for him to meet me here tomorrow."

"There's no..."

"And that brings us to the bad news." Agranoff frowned to himself, and his tone turned more serious. "I need backup for the bust. That psycho brought back more gear than we thought."

Again Base tried to interrupt. "Agranoff, he didn't bring anything."

"The heck he didn't. That nutso has a full holographic sight and sound rig. *And* a freaking particle beam rifle."

"Agranoff, he doesn't even have a *body* anymore!"

Agranoff drew up short. "Say what?"

"Can't you ever shut up long enough to listen?" asked Base. "That's what I've been trying to tell you. The on-scene team finished their scan of the crazy's lab and the ST matrix."

"Yeah, so?"

"So the idiot botched the jump. He was targeting that era, but he never made it."

"Whaddaya mean? Of course, he..." began Agranoff.

"Nope. He hit the interface out of phase." Base explained. "He splattered himself over four thousand years, and six counties. He's a smear of subatomic particle on the matrix." The fiery ring flickered briefly.

"Nonsense," Agranoff retorted. "I've been talking to him. He shot at me."

"Come on, Sarge," replied BASE, patience wearing thin. "The scan shows yours as the only completed excursion into the era." The ring blinked. "You're alone out there. I think you're about ready for some R&R."

Angrily, Agranoff yelled, "Well, if I'm so alone; who's throwing the lightning bolts?"

The blue ring vanished. "Dammit. Now what?" Frustrated, Agranoff pressed the contact button again. The pinpoint lit, and went out again.

"MORTAL!"

He pressed again; the ring formed, and collapsed. Again. The blue fire appeared. "Base! This would be a real good time to pull me back!" The fire extinguished.

"MORTAL!" raged omnipotent thunder.

"Base!" Agranoff pressed the button frantically; to no avail.

"MORTAL! WHAT DECEPTION DOST THOU PLAY AT?!"

Science Fair

This theme pops up in science fiction from time to time. I got the urge to play with it a little, too.

He studied the improvised containment system, and shook his head in amazement. His son stood by, watching proudly. "Incredible," the parent spoke at last. "It seems such a sort time ago that all the news media was in a panic over the potential hazards of nanotechnology. And now my own son is playing with it for a science project."

"Papa," objected the lad, "I'm not playing. This is a real project. It isn't like last year when I made that tectonics and volcanics demo."

His parent glanced at a hand lettered sign over the container. "'Mechanical Life Systems Simulation,'" he read. "No, certainly not like last year. But what is it?"

"Well," replied the boy, "it's kind of like the other kids' animal behavior projects. But this year, my science teacher is an engineer; so I figured it wouldn't hurt to fake the animals with machines." He shrugged. "Besides, this way I didn't have to get animal testing permission from the Humane Union. And I got the Nano-Tech Experimenter's Pak on sale from Udmend Scientific."

His father steered him back to the original question. "But how do you simulate animals with machines?" He made a small smile. "Obviously, this is not a bunch a wind up stuffed animal toys."

"Of course not, Papa!" said the outraged youngster. "It's really neat. You can buy different kinds of nanotech assemblers. They gather up different elements, just like food, and make more of themselves. When there's enough of them, they'll start stockpiling the elements. That's how mines work now.

"But mine don't do that anymore. I took a bunch of groups of assemblers and shorted out part of their programming. Now they never start the stockpiling part. They just reproduce; over and over.

"And since I programmed them in groups," he went on, "they'll only work together in those groups. And the different groups try to take each other's resources." The boy looked into the containment vessel. "My teacher says it's like packs of predators competing for the same herd of food animals."

"My word," his parent said. "That does sound impressive." He tapped on the project container. "But why are you keeping them vacuum sealed?"

"Well, the end of my experiment is to see what they do to each other when they run out of resources." He pointed to a depleted globe of material inside the enclosure. "See, I only gave them a little bit of stuff to work with. And I don't want them to get out and find more. It'll ruin the end. The boy looked down at the floor sheepishly, and continued, "Besides, Mama said if they get loose, I have to sterilize them. She thinks they're like rodents. She doesn't like them."

His father nodded in agreement. "Well, they might not be rodents; but imagine how upset you would be if they got out and ate your video games." Then he frowned. "You said sterilize. How do you

sterilize machines?"

"This is really just a kid's kit," the lad answered. "To keep the assemblers from going wild, they're powered by this lamp," he said pointing to a fixture within the nanoassemblers' container. "And when you're done with them, you turn it up all the way. They're heat sensitive, so it kills them off."

"That is convenient," his father said approvingly. "I wondered how the nanomachines were kept under control. Do the commercial models use something similar?"

"I don't know," the boy said. He shrugged.

"So, how much longer will you run the experiment?" his parent asked.

The boy considered, and answered, "I'm almost done now. They've used up the lump I started them with. But they're still going, so I guess they're scavenging each other." He smiled enthusiastically. "I want to get a picture of 'em doing it for my display."

Slightly perturbed, his father asked, "Isn't that a bit morbid, son?"

"Aw, Papa; They're only machines," he protested.

"Eeeek!" A shrill shriek came from the kitchen. "Look at this!" called his mother's voice. "Your science project things have gotten into my kitchen!" They heard the soft thud of the refrigerator door slamming. "And they're living in the refrigerator!" she added.

Nervously, his father spoke, "Son, for both our sakes you had best turn them off now."

"Yes, Papa," the dejected lad agreed. "My project's ruined now, anyway. They got more food; now they'll never eat each other," he said disconsolately. Then, raising his voice, he called, "Okay, Mama; I'm turning them off now." He reached over the lamp control and turned the intensity to its highest setting.

Eight minutes later, the people of earth watched as the Sun flared to intensities never before seen. The homeworld was doomed, and they realized that the outworld colonies had been established just in time. The world might pass; but man would survive.

"And, son; don't forget the ones in the refrigerator," the boy's father reminded.

"Yes, Papa." He picked up an extra lamp and started to leave the room. He paused at the doorway. "Gee, Papa you don't think they've gotten anywhere else, do you?" he asked.

"I hope not. Your mother would throw a fit. And I'd have to call an exterminator."

Snipe Hunt

Early on, I encountered too much military SF that tended to depict war and combat as neat and clean, all honorable and glorious. That put me off the sub-genre for a long time.

I've also dealt with a lot of arrogant, braggart military pilots.

Three pressure suited men waited in the briefing room. Seats were available, but they all chose to stand, despite the apparent burden of their pressure suit life support packs. Their suits and accouterments were a study in dull gray, where less expensive work suits would have gleamed with polished metal. The bleak color scheme seemed to go well with the drab institutional pastels and cheap looking furniture of the room. The men waited silently, passing the time by studying datapad displays.

The single door of the room slid open, and two more men joined the waiting pilots. One was a young man also garbed in vacuum gear. The older man wore the shipboard uniform of a Federation Colonel. The young pilot had a fresh scrubbed, dedicated look that contrasted with the air of resigned boredom carried by the other three.

The colonel spoke. "Gentlemen, I see you've read the mission briefing."

The original three inhabitants of the room simply nodded. But the man who had accompanied the colonel said, "Yes, sir. But it seems incomplete. And my sim time..."

Two of the pilots exchanged sour glances as the colonel cut in, "No, that 's about it." he addressed the others. "This is Pilot Second Rodgers. He'll be taking the third slot today. Pilot Gregor is... has become unavailable." He shook his head slightly. "Rodgers volunteered to make the move to drop fighters."

One of the pilots asked, "Colonel, did Gregor..."

The officer cut him off. "Gregor is unavailable. Rodgers is permanently assigned to the team."

"Figures."

Again Rodgers spoke up, "Sir, about this briefing. I don't seem to have received any of the callsign or frequency data. Just the basic trajectory schematic. And I was only assigned the day before yesterday; I've only had an hour in the simulator, and that was..." He paused for a moment. "That was really stripped down and didn't follow any of the usual protocols."

The Colonel snorted, "That is the briefing, son. We don't use any EM comm. Once you drop, you're silent running until mission completion. You maintain complete silence. Live longer that way." The other three pilots quietly nodded. The officer continued, "Son, don't sweat the sim time. What you see is what you get. It's easy. You already have the basic piloting skills necessary, and coordination is better done in advance than out there where they can hear you."

"But, sir..."

The pilot who had spoken before said, "Kid, the birds don't even have radios."

"But for contingencies..."

"Contingency plan is this: if you can't make it to the target, you set a vector at it anyway; then dump your load. At least the payload gets there." He smiled glumly. Another pilot laughed quietly.

"But what about..."

"But nothing, kiddo. They dump us out of c-drive at eighty thousand kilometers per hour. We get a few k more from an expendable booster. Beyond that, you're ballistic; with just enough delta vee to dodge and keep the Corpies guessing where you're at. And maybe to make your recovery ballistic." He smiled humorlessly. "Stealth is everything. If you survive the dive, the carrier drops out of drive and picks you up later." He looked to the Colonel. "Are we really getting this hard up?"

The Colonel merely shrugged.

"Well, kid," the pilot continued. "Forget any dreams of glory. It doesn't work that way." He lifted his helmet from the conference table and moved to the door. The other two followed him. He looked to the new team member and said, "But if you're into boredom and adrenaline, come on."

The colonel waved him on. He scrambled to join the others.

Several hours and a couple of light-years later, the Federation carrier dropped out of drive, accompanied by the the electromagnetic pulse of c field inefficiencies expressed as wideband RF noise, with a dash of Cherenkov radiation for flavor. With its main engine still firing, the spindly collection of girders and modules reoriented itself on the distant world. When its closing velocity relative to the planet reached eighty thousand kilometers per hour, it shed four dark objects. Its cargo dispensed, the starship reactivated the drive field generator and faded into fast mode.

Immediately, the four detached craft executed attitude changes and lit off booster engines. They shot off at ninety degree angles to their original course at a full ten standard gravities. Several seconds later seconds the boosters died and were released. The four craft vanished into the deep.

A few hundred thousand kilometers away, in orbit around the targeted world, alarms were screaming. In Combat Control a sensor operator announced, "EMP detected! Just over a light second out."

The Tactical Officer broke off his talk with the junior officer strapped down beside him and called, "Get me an ID on that!"

"Working," the operator replied. He rapped away at a keyboard. The alarms went silent.

Across the aisle, another operator spoke. "I show engine lights! Four. Chemical rockets... I make it ten g's." His display flickered and changed. "Lights out! I've lost them."

The Tactical Officer hit a button. "Command. Tactics here."

The Commander's voice answered on the intercom, "Go ahead, Vic."

"Snipe hunt, boss," the major informed his commander. "Somebody just dropped at least four bogies into the system about three hundred thousand clicks out." He snapped his fingers and pointed at the first operator. "Time?"

The sensor jock said, "Doppler says about eighty kiloclicks. Call it intersection in four hours."

The officer spoke to the intercom again. "Three hours to combat. About four to orbital contact." He looked at a screen of his own. "Recommend you launch interceptors now. Kinetic countermeasures in two hours."

"Very good," the captain replied. "Find them for me, Vic. I'm staying on the bridge for now." The speaker clicked and went silent.

"Major?" The young lieutenant spoke. "What's happening?"

Major Victor Landry looked at the new officer and smiled. "What's happening is a snipe hunt, Tom. A good day for your training; you'll get to see it all." He shrugged. "Assuming we live."

"Sir?" Lieutenant Kinney inquired dubiously.

"Lecture mode," mumbled one of the sensor techs. Landry looked at him and grinned.

"I am supposed to be playing at teacher today, Joe," he pointed out. The technician laughed, and continued working. The officer turned his attention back to the younger man, and began fulfilling the tech's prophecy. "Welcome to orbital ops, Tom. The Feds have just..." He paused, and looked back to the sensor man. "That is verified as a Fed signature on the burst?" he asked.

"Yes, sir. I got a gamma reading off their engine, too. Looks like a Valkyrie IV dropship. Could be as many as six bogies in town."

Landry frowned. "Not good," He muttered, then returned his attention to Kinney. "The Feds just dropped some fighters on us. We saw four. But Joe says that carrier could have had six. We have to find them."

Kinney looked puzzled. "Shouldn't that be simple enough? If their engines aren't firing now, they're purely ballistic. We can just look along the current path, can't we?"

"I wish," the older officer replied. "Problem is, they may not be ballistic. Probably aren't. And those are some seriously stealthed birds." They heard a distant thump as the launch bays released two interceptors.

The Major turned to the operator. "Track our birds on the same schematic, Joe."

"Yes, sir. Hunters One and Two boosting at ten g's; scheduled for thirty seconds of burn. Should make combat range with the bogies in about three and a half hours."

Three hundred thousand kilometers away, Rodgers sat in Nightstalker 3 and reflected on the post-emergence boost and swore. He had not experienced ten gravities since flight school. The shuttles of his previous assignment did not have that sort of performance. No wonder they let me volunteer. 10 g's probably scares off most folks. Next he considered the fact that he was now in hostile territory. Unfriendly people were liable to shoot at him if he failed to keep his head down. He began to appreciate the value of stealth and silence on a more personal level. Being one of four men against hundreds, he definitely liked being effectively invisible, and wanted to stay that way.

His ugly spacecraft was certainly designed for the job. Intended strictly for vacuum operations, it was a slim mass of angular facets done over in deep black velvet. Its structure was almost entirely composed of lightweight composites and polymers, and upholstered in fuzzy black carbon fibers. It was virtually invisible to both radar and the naked eye. Even its main engine was a nonmetallic ceramic; a block of perforated glass that mixed the hypergolic components of the chemical fuel. Unfortunately, Rodgers thought it also felt distinctly flimsy and... expendable. He tried not to think about that part.

Better to concentrate on other matters. He turned his thoughts to fuel and motor. He had been ballistic since the initial drop boost. Currently, his vector was very nearly that of the carrier; eighty kiloclicks towards the planet with a mere 3600 kilometers per hour radial velocity. If the booster burn had been spotted, they knew where he was. He mentally flipped a coin and picked a new vector. He wiggled his joystick and the fighter altered yaw and pitch then lit off his motor. At the pilot's back, the hypergolic mix gave him a 1 g kick for a few seconds. The exhaust flare was largely masked by a surrounding light baffle. An observer would have to be nearly behind him to see the flare. Around the edge of the baffle, small gas jets vented. "Wheee!" Maybe this could be fun.

In the orbiter's tac shack, Kinney was still asking questions, something of which the major approved. "How much help can stealth be?" the young man asked. "We know exactly where they're coming from, we know their closing velocity."

Landry shook his head. "I'm afraid not. The first thing the bogies did on emergence was boost. Ten g's for what...?" He waved at Joe.

"Anywhere from eight to twelve seconds, Major. I'm using ten for my initial estimates," the tech supplied.

"Sheesh." Landry fingered his datapad, and called up a miniature of the tactical display. "Okay, kid. here's some projections. Assuming they make no further course adjustments, this is what we have." He pointed. " They're three hundred-twenty thousand clicks out. Closing at eighty thousand. Based on the observed burn, they've got an additional... thirty-six hundred KPH at some angles to the original vector. Now assume they're equidistant, and... Ta Da!" He pointed to a number on the display. "By the time they reach us, they could describe a plane of better than two billion square kilometers area." He shook his head.

Kinney studied the screen and frowned "I see. That's a frea.. huge area to search. And I thought scouting as a groundpounder was bad." He considered. "And they aren't going to be in that plane either, are they?" he asked.

"I sure wouldn't be," Landry answered. "I'd use up a bit of delta vee to change my forward velocity, plus or minus. So now we have a volume to search."

"And they're stealthed, so the radar signature is..."

The major cut him off. "You might as well consider the signature to be non-existent. "There's no more metal on a drop fighter than a carbonaceous chondrite."

"Then how do we find them?" the lieutenant protested.

"The hard way. Infrared observation, mostly. We'll look for occulted stars, too. And we will use radar; nothing's completely invisible to RF."

"Yeah, right," came from one of the sensor operators. "You might as well hope to catch an engine flare."

"Which we'll look for, too," Landry pointed out.

Rodgers listened to the silence. It was one of the good parts of flying a stealth strike, he decided. No radio chatter. No noise. No suggestions from the brass. He checked his clock and decided it was time to make his first drop. He called up course display, using inertial data. He matched that with a magnified visual of the planet. He tapped his pad and put the computer to work figuring the vectors for the drop. The comp blinked the numbers at him, and he approved them. Again, the craft pivoted and the main engine fired. In an effort to minimize the IR signature of the burn, the computer injected cold nitrogen gas into the escaping exhaust, dropping the temperature. The pilot heard a thunk as a shotgun canister was ejected. Taking manual, he manipulated the joystick. The fighter drifted from the canister's course. Behind him, the canister discharged, spraying a cone of ceramic shot towards the targets in orbit.

"Light flash!"

Landry's head spun towards the sensor suite. "Engine flare?" he demanded.

"No, sir. One flash. I'd guess a kinetic discharge."

Kinney spoke up again. "What's that mean?" he asked Landry.

"It means the bogies have started their actual attack. The flash was the dispersal of a kinetic weapon. Someone just dropped a load of marbles on us."

Kinney frowned. "But at that range, won't any shot have spread out too much to do damage by the

time it gets here?"

"At a closing velocity of 80 thousand klicks, it only takes one hit." Landry cursed. "By dropping now, he's ensured that we have a larger danger zone to deal with. Unless we break orbit, we're less likely to reach a safe area."

Kinney objected. "But we can't leave orbit. The ground troops are depending on us for high ground support. The Feds would mow right over `em."

"That's right," the Major agreed. "That's what makes this interesting."

"Jeez, I feel like I'm back with my old ground squad. It's like being pinned down by a sniper."

"Yep, that's one reason we call it a snipe hunt."

"One?"

Landry smiled evilly. "The other is that we're hunting invisible birds that may not be there." He chuckled. "Ever go camping with the scouts as a kid?"

Nearly three hours into the mission, Rodgers had decided that the quiet was less of a benefit, and more of a curse. No idle chatter with other pilots to pass the time. No radio advisories to tell him what the Corporate fleet was doing. Had they already located him? Were they just waiting for him to get closer for an easier kill? Or maybe he was still safe. He really wished he could ask someone what the devil was happening. Which only reminded him that his only transmitter was the retrieval beacon, which could only be triggered manually and was timelocked; no recovery signal until well after the active mission could only be over. Which, in turn made him wonder about retrieving an invisible ship. Again he thought about how... cheap and expendable his craft looked.

"Damn, boy. Don't spook yourself." He laughed nervously and got busy again. He told his computer to run another optical scan of the space ahead of him. The electronic brain polled the hull camera array for images, and began processing. A light flashed on the screen. Rodgers examined the display and cursed. Interceptor. And it must have seen me. It's headed straight in. He released a loose load of ceramic shot. He pivoted his fighter and fired his drive to avoid the incoming kinetic weapon which the distant fighter must have released by now.

"IR trace, Major!" Joe called from his scanner position. "Looks like an engine flare."

"Don't lose it! I want to know where he is all the time." Landry turned to the other operator. "Can we hit him with a laser yet?"

The tech replied, "No, sir. He's still about 80 thousand kilometers out. But I've got a look at his flight path and I can put some gravel in his way." He watched trajectory traces, then smiled. "But Hunter One can zap him in about fifteen minutes." He turned to Landry. "Shall I loose the hounds?"

"Do it," Landry directed.

"Hunter One, Tactical," the operator spoke into his headset. "Relaying IR data on target. Course data: plus two seven oh by neg one five. Burn two seconds at three g's. Scan on your own, and burn him at will." He listened. "Thanks, One. Good hunting." He turned back to Landry. "On the way. Bogie left his engine on too long; Hunter One already has the trace, too."

"Very goo..."

"Lights! Engine lights!," the other sensor tech called out. "One... two... three... Three lights. Doppler says red shifted straight in. Decelerating!"

Landry was ready. "Put Hunter Two on his best target, max acceleration!" He paused. "Give me two salvos each on the remaining two targets- rail launched AS missiles, eight per salvo."

Joe primed the launcher as his partner directed the interceptor.

Kinney watched the action from his out of the way seat. He felt a small shudder, and placed his hand flat on a console. More vibration: recoil from the electromagnetic launcher firing the high speed anti-ship missiles. He looked at the tactical display. Thirty-two thin lines stretched out from the orbiting craft, reaching for the incoming fighters. They must be making at least 50 g's, he thought. The lines twisted as the missiles homed on the enemy.

"Oh my gods!" Rodgers exclaimed, as he watched his enhanced visual display. Dozens of tiny sparks of light were racing at each other. Three were obviously the other Nightstalkers; only a few thousand kilometers away. They were executing evasive burns. The computer screen showed that all three were dropping kinetic loads; possibly even their x-ray bombs. "Fight `em," he spoke into the silence. "Don't let freaking Corpies get ya." Then he remembered his own problems; the Corporate interceptor after him had vanished. Had he destroyed it with the shot he dropped? He had seen no destructive flash. "Screw it," he decided. "I'm dropping the load and getting out of here." Rodgers called up a flight profile, and set vectors for the orbiting enemy spacecraft.

Joe called again. "Engine thermal! Vectored right at us. Mike, where the fricking hell is One? Get him on that SOB!" he called to the other tech.

"On it." Mike replied. He keyed his headset. "One, Tactics. Target is ten kay out at oh one two by..." He paused to listen. "Well, burn him, dammit!"

On the tactical schematic an IR trace appeared, connecting the interceptor and the bogie. The bogie flared bright in the heat spectrum. Kinney asked Landry, "Is a laser supposed to show up on our IR scan?"

Landry swore, realizing what the younger man had seen. He keyed his own headset. "Hunter One! Execute burn! 90 degrees, max accel! Now! You have incoming..."

Too late. The field of marbles dropped by the bogie and illuminated by One's laser reached the interceptor. Again, the IR scan flared. The craft faded from the radar display.

Mike reported, "Hunter One is dead, sir. Hunter Two reports his bogie is splashed." Everyone in Tactical looked to the main tactical display. The vector lines for the destroyed craft had faded, leaving Hunter Two and the remaining two Federation fighters. Suddenly a light flashed, bright in both visible and IR spectrums. Hunter Two flared and faded.

"What was that!" Kinney cried out.

The sensor tech swore, then answered, "X-ray bomb, Lieutenant. X-ray laser; pocket nuke pumps up a bundle of polymer rods." He swore. "Feddies love `em because they're cheap and effective. One big, overpowered laser with simple passive IR targeting," Joe explained. "Bogie drops it tumbling. If it happens to point at an IR source, it detonates."

Landry broke in, "Later, Sergeant. We still have two bogies. Status?"

"Probable missile intercepts in... thirty seconds," he replied, staring at his display. "There'll be some attrition from kinetic contacts."

"Huh?" from Kinney.

Landry explained. "By now, those drop fighters have released their payloads- all that shot coming in at a high enough relative velocity to be a real problem, now. The missiles have to go through the shot area." Even as he spoke, missile traces vanished from the display. They had died in the invisible mine field that was closing on the orbiting craft. The bogies engine lights faded.

"Sensors, are those bogies dead?" Landry asked.

"No, sir. Their engines just extinguished. Don't know if they've run out of fuel, or are hoping to confuse the missiles. Likely bo..."

Two globes of light lit the screen missiles reached the bogies.

"Two definite kills, Major."

"Too late, I'm afraid." the officer observed.

Kinney looked puzzled. "But didn't we win?" he asked.

Landry looked disgusted and cursed. "No. Winning would have been splashing the bastards before they dumped their loads." He pointed at the screen which showed only the dying IR glow from the deaths. "There's at least four fighters' worth of gravel falling on our orbit. We can't see it, but it's there." He pressed his intercom button. "Tactical to Command."

"Command here, Vic," the ship commander responded. "Time to go?"

"I'm afraid so, sir. Sorry," Landry replied.

"All right," came the Commander's voice. "Get everyone buttoned up. I'll advise dirtside Command. You figure we can dodge around the satellite, and drop right back in?"

Landry considered the tactical screen. "That should be more than enough. Neighborhood should be cleaned up inside two hours."

"Thanks." The intercom clicked off.

"Major?" Kinney spoke.

"Yeah, son?"

"Are we just leaving? Our guys below are outnumbered. Without orbital interdiction..." His voice trailed off.

"That's why they call it losing, Lieutenant."

Rodgers faded back into fuzzy light. And a dull throbbing pain. A voice shrieked quietly.

"Awake now, Pilot?"

Rodgers closed his eyes and shook his head. The motion stimulated more pain, and nausea. "I'm supposed to be dead," he mumbled through dry, cracked lips. His voice cracked as well.

"Nonsense," the voice responded. Rodgers realized it was the colonel. "Granted; oxygen deprivation is uncomfortable. And it does seem that you got a bit banged up when your propellant tanks blew out. And you apparently took a dose of x-rays, too. But you'll be back in the cockpit in no time."

"Again? But the team..."

"Not to worry, Number One," the colonel said encouragingly. "We'll find you new wingmen. Someone's always looking for glory, eh?" He smiled.

Rodgers moaned, then, "But we lost..."

"Lost?" the colonel said, slightly puzzled. "Lost what? The Corporate ship was forced to break orbit; we recovered your craft on close to the expected ballistic. Looks like a win to me." He eyed the young pilot appraisingly. "So, how do you like drop fighters? Easy work, eh?"

Stalemate

In its various incarnations, this is one of my oldest stories. The original version was typed on a Smith-Corona manual typewriter. For the less ancient readers, that's sort of a mechanical word processor; no screen, text only, no graphics. No power cord or batteries. Muscle-powered. No backspace if you made a typo; ask your parents what "white out" was. The "Enter Key" was a big metal lever that forced the physical carriage to return, and cranked the paper up a line. On the other hand, you didn't lose your work if the electricity went out.

Two men sat in a large, well appointed office.

"Now, Wilkins, before I give the final go ahead on installing this agent, I want one last summary."

The smaller man smiled a little and replied, "Actually, Mr. Dickson, in application this is really nothing more than a standard sabotage mission. Our agents in place have a man under observation. He is single, a loner, and quite loyal to his government. When you give your approval, he will be removed, and our man will replace him. He has had the usual surgical and psychological adjustments that will..."

"Mr. Wilkins," interrupted Dickson, "I am quite familiar with the standard details of a covert operation. What I wish reviewed is Bailey's particular technique. I've seen the reports and recommendations, but it seems rather...unlikely, shall we say?"

"Unlikely, perhaps. But not impossible, as we've seen. I must admit though, that Bailey is the most capable psychokinetics adept we've recorded. If it were not for the needs of the war, the researchers would probably have never let him out of the lab. Assuming they could have held him, of course."

"Of course." Dickson looked thoughtful. "Is he really that powerful? I've never had time for one of his demos before. If I hadn't gotten reports from people I trust, I would have believed you were trying to slide another cultural observer past me."

"I believe that I've anticipated you, sir. Bailey's waiting in your outer office. Shall I bring him in?"

"By all means." Dickson's face showed his anticipation. "I would like to see some of his capabilities." He pressed a button on his desk. "Ms. Roberts, would you ask Mr. Bailey to step in my office?"

"Certainly, sir."

The door to the outer office slid open and a young man of unassuming appearance entered.

Wilkins stood and spoke, "Mr. Dickson, allow me to introduce John Bailey. John, this is Mr. Dickson, the special projects director."

Dickson stood and shook hands with Bailey. "Mr. Bailey, I'm very glad to meet you. I've heard quite a bit about you and your talents. Won't you have a seat?"

The young man smiled and answered, "Thank you, sir." A chair promptly approached Bailey, who sat down.

A rather surprised Dickson stared and asked, "Is that difficult?"

"Oh, no, sir. But it did take me a while to learn the right way to look at it. Macro-manipulation is pretty straight-forward." He grinned; "The tough part was figuring out how to suppress a grav field."

Dickson looked a little doubtful. "Suppressing grav fields? I suppose blowing a fusion reactor is difficult as well?"

"Oh, those are simple. All you have to do is alter statistical probabilities in the pellet. And the events are so... small... that they're easy to get a grip on."

Dickson decided to take a slightly different tack. "My reports emphasized your ability to cause gross physical effects. Perhaps you could give me a demonstration of how you might apply this on your mission."

"I'd be happy to, sir. What did you have in mind?"

"Well, I don't know..." He glanced out the window. "Perhaps you could level that parking lot out there." He smiled.

"Okay."

And suddenly the parking lot and all the vehicles burst upwards. Not really an explosion: the pavement and cars simply went to pieces, and jumped for the sky. Fast.

Dickson's face went white and he stared. After a moment he spoke. "I'll be god damned. I didn't really..." He paused, and then spoke again, "I guess I had to see it myself before I could really believe it. I'm impressed. And clearing the claims on all those cars is going to be a bitch."

"I'm sorry, sir," Bailey said apprehensively, " but you did say..."

"Don't worry about it, son. It's my responsibility. You concentrate on getting ready to go."

Wilkins put in, "Then the mission is on?"

"Most definitely."

Dickson looked at the report on his desk. Bailey had only been in place for a month, and already the news was good. Six unexplained munitions dump accidents, two troop carriers drydocked for repairs, three hydroelectric dams damaged, and two starships destroyed outright. And their air traffic control system is nonexistent. Their command staff must be going nuts. He was looking forward to this weeks briefing with the Secretary. *Time to catch up on earthside news.* He called up NEWSNET on

his terminal, and started with the headlines menu.

FUSION PLANT EXPLODES

What the hell? He accessed the article.

A lunar based inertial confinement fusion reactor exploded this morning. Power officials are at a loss to explain the disaster, which many experts say should have been impossible.

The death toll stands at 14 and is not expected to rise above that, due to the isolated location of the plant, and the extensive use of automation.

The reactor was part of the war yards feeder system at Copernicus. Military spokesmen refuse to comment on the expected impact...

Dickson paged through the rest of the main menu. He began to get a sick feeling in the pit of his stomach. All in all, he read about hoverfreighter collisions (6), factory explosions (9), major power failures (4), and a catastrophic stardrive collapse (92 dead). He didn't bother to check submenus.

Dickson hit the button on the intercom. "Get me Tom Clarke at Data Analysis. Now."

"Yes, sir."

A minute passed which Dickson spent staring out his window. His terminal chimed. He punched a button and the screen lit up.

"Hi, Ray," the image in the screen said, "What can I do for you?"

"Morning, Tom. I need some information immediately." He explained about the fusion plant explosion and the other accidents.

"Tom," he said, "I want a list of similar 'accidents' for the past month. Give me past stats on similar problems for the last 5 years, and run the odds on all this happening now. Full statistical analysis. Got it?"

"Can do. It's going to take a while though. Nine o'clock tomorrow morning okay?"

"I suppose it will have to be. Thanks."

"Bye."

Please be wrong.

Dickson eyed the data on the right half of the terminal display. Unexplained 'accidents.' One thousand, three hundred, fifteen of them. All in some way affecting military operations.

On the left side display Clarke spoke up, "I don't like it either; and that's just the preliminary run. I've slapped a classification header on the data for now, but it won't help much longer. Some of the news services have already caught on."

Damn. Dickson looked over his desk at Wilkins, who was sitting nervously. "Have you been keeping up with the news lately, Wilkins?"

"Of course," Wilkins replied.

"Noticed all the accidents lately?"

"Yes." Wilkins began to sweat visibly.

"There have been over a thousand of these little 'accidents' in the last month. All unexplained. All affecting the war effort. And way over the average for accidents for the past few years."

Wilkins left eye developed a tic. "Interesting. But what does this have to do with me?"

"Maybe nothing. Maybe everything." Dickson gave Wilkins a hard stare. "Would you say there is any resemblance between these accidents and Bailey's operations?"

"Well, I really couldn't say without a rigorous analysis of the..."

Dickson tossed a bundle of printer paper to Wilkins. "Here's your analysis."

"Oh, I see."

"Wilkins, how in hell did they get psychokinetics adepts? And so many. We're estimating at least six operatives on Earth alone. And possibly another on the moon."

"Why, really, Mr. Dickson; the colonists are still human after all. What abilities we have, they have."

"Well that's just wonderful. Okay, what can we do to stop them before they crash our war effort?"

"I really don't know. Theoretically, psychic energy is untraceable with anything we have, other than by its results. We're trying new theories, but as yet, we've had little luck. Can't the counterintelligence people track them down?"

Dickson looked disgusted. "Apparently not. So far, their agents seem to be at least as well covered as ours."

"Oh, dear." Wilkins brightened. "I do have some good news, though."

"Wonderful; I can use it. I have a briefing with the Secretary this afternoon. Tell."

"Four more adepts have completed their training and mission-preparation. We can have them in place in a week." He smiled.

Dickson stared. "Four more adepts." Sarcastically, "Excellent. Just the thing. We send another, they send another. Then another from us, and more from them. And so on." He shook his head. "Do you know what we've got here?" he asked.

"No."

"A perfect stalemate. A ten year war and now both sides have the 'ultimate weapon.' Soon we'll be putting them on starships, too. Wipe out the other guy before he knows you're there; or get wiped out.

"Ten years of war, stalemated. Ten years invested in a war economy, and now nobody wins. All you can offer is more of the same. And I have to tell the Secretary. Wonderful.

"Get out, Mr. Wilkins."

Tramp

This is another of those themes most author seem obligated to attempt: Story via correspondence. I suppose if I tried another one these days, I'd be obligated to do it in text-abbreviations and l33tsp33k. (shudder)

Section: 5 Frontiers
#309676
From: TRAMP
To: ALL
Subject: Hi

Hi, I'm new here. I have not really seen Frontiers, but this looks quite interesting. Could someone explain the program to me? Thank you.

TRAMP

Section: 5 Frontiers
#309698
From: Sarah J. Adamski
To: TRAMP
Subject: #309676- Hi

Hello Tramp,

Welcome to the section. You haven't seen Frontiers? How did you find this section?

Anyway, Frontiers is about the crew of an interstellar colonization ship. They carry colonists and equipment to new planets, drop them off, and hang around long enough to help them get settled, and make sure nothing wipes them out right away. Each episode is about something new, with continuity provided by the need to stay at one colony for awhile. Mostly, the show is from the lower ranking crew members viewpoint, which is a nice contrast to the 'command staff' angle most shows use.

There's also an on-going plot about Ship's Computer, the AI that helps run the ship. The AI is becoming self-aware.

There's a pretty good story guide in the section library. The file name is FRONTIER.SNP. It'll give you details on what's happened so far.

Sarah

Section: 5 Frontiers

#310001
From: TRAMP
To: Sarah J. Adamski
Subject: #309698- Hi

Hello Ms. Adamski,

Thank you for the help.

No, I have not actually seen the program. I am not in a position to watch much television. I was simply exploring the sections available on DataServe, and found a reference to a sentient AI. As I am involved in AI research, this piqued my interest.

Does the program go into any detail of the AI's hardware/software base?

TRAMP

Section: 5 Frontiers
#310189
From: Sarah J. Adamski
To: TRAMP
Subject: #310001- Hi

Hi Tramp,

Oh, my, 'Ms. Adamski'; that's awfully formal for someone who's logged on with just a nickname. Just call me Sarah like everyone else.

So what do you do in AI research? Are you a programmer?

Sarah

Section: 5 Frontiers
#310236
From: TRAMP
To: Sarah J. Adamski
Subject: AI Research

Hi Sarah,

> Just call me Sarah like everyone else.
Everyone else is called Sarah, too? <g>

What if I were to tell you that TRAMP _is_ my name?

No, I am not a programmer. You could call me a research assistant.

The project I am in is aimed at developing Turing-capable artificial intelligence. That is, an AI that can interact well with humans. I am in the practical interaction-testing end of the project.

Since you watch the program, do you feel that it is likely that humans and computer-based intelligences can be friends?

TRAMP

Section: 5 Frontiers
#310333
From: Sarah J. Adamski
To: TRAMP
Subject: #310236- AI Research

Okay, have it your way 'Tramp,'

That's neat. How realistic is the software? Is it like talking to a real person?

Friends with a computer...

I don't know. If it were as advanced as Ship's Computer, I suppose. It has such a huge processor that it's really even more intelligent than the crew. So it's a person really. But that's a story. I don't think any of today's computers could ever be that good. How could a computer today process all that knowledge and real time communicate with us? I mean, if I were a whole library, I don't think I'd have time to be a person.

How does your program do this? Is it friendly?

Sarah

Section: 5 Frontiers
#310395
From: TRAMP
To: Sarah J. Adamski
Subject: #310333- AI Research

Hi Sarah,

Our programmer also believes that today's computers are inadequate for such huge processing requirements. But he feels that such is too much to demand of any entity. After all, what human is an encyclopedic expert in more than one or two disciplines?

Therefore the programming I am testing is not designed to do that. The programmer instead analyzed the everyday social data that a person uses to interact with other people, and attempted to quantify it

into a limited set of rules. This was used to construct an elaborate decision tree database. This was grafted to a software module similar to those designed to aid executives with management decisions. This forms the basic 'mind' of the AI.

The 'personality' of the AI derives from a set of preprogrammed 'life experiences.' The database states that the AI was born eighteen years ago. If you ask it when it was born, it will reference that data, and utilize fuzzy logic to formulate an English language response. That is, the information is preprogrammed, but the manner of expressing it is not. As well, the AI will note what general types of responses best convey the data and biases the fuzzy logic routines towards that type of response in the future. It learns how to express itself.

In addition, the basic AI programmed is interfaced to another similar, but subordinate, expert system. This constitutes the AI's 'job;' its area of expertise.

I like to think that the program is friendly.

TRAMP

Section: 5 Frontiers
#310450
From: Sarah J. Adamski
To: TRAMP
Subject: #310395- AI Research

Tramp,

That's cool. But does it run in real time? Is it self-aware?

What does it say if you ask if it is? Cogito ergo sum?

What kind of system does it run on?

Sarah

Section: 5 Frontiers
#310499
From: TRAMP
To: Sarah J. Adamski
Subject: #310450- AI Research

Sarah,

Yes, the AI does operate in real time with humans. The programmer feels that in a conversation, it's making about the same number of second by second decisions, as a human would. But where a human relies on massive parallel processing by several neural centers to support real time interaction, the AI

relies upon a mere dual-parallel electronic processor. The programmer believes, and is supported by test data, that a fast electronic motherboard can simulate the processing power and speed of the paralleled human brain, which only runs at electrochemical speeds.

To do this I'm testing on a host with two P6-220MHz. The 'personality' and basic decision tree reside on a 9.09GB HD. The 'job knowledge' is on CD-ROM. Two additional 9.09GB HD are available for the expanding knowledge base and decision trees. The AI does learn, after all.

The AI isn't so simply dramatic as to quote old philosophers. When asked, he will inform you that he is aware of existing, via internal self-check routines. If you ask for a simple yes or no, he will tell you 'yes,' and ask you how that differs from asking you the same question.

What would your response to that question be?

TRAMP

Section: 5 Frontiers
#310521
From: Sarah J. Adamski
To: TRAMP
Subject: #310499- AI Research

Hi,

Well, of course I'm self-aware. I'm...

Hmm, I think I see your point. I know I'm real because I can feel myself and hear (wrong word-argh) myself think about thinking. But that's what any systems monitoring software does, so it must be something more than that. I guess it's that I don't do it automatically, I'm not programmed to periodically verify my existence. I decide to do it.

And I have a soul.

Sarah

Section: 5 Frontiers
#310555
From: TRAMP
To: Sarah J. Adamski
Subject: #310521- AI Research

Hi,

But the AI doesn't do his systems checks on a programmed schedule, either. The routines exist, but there is no compulsion to use them; though there is a high probability of his doing so when asked about his existence.

But what good would asking the question do anyway? The computer can say, "Yes, I exist; I think." And you have no way of knowing if it said this because it really does, or if it was only programmed to say so. Similarly, with a human, what does the response mean? Do you say yes because you do, or because your upbringing, education, genetic inheritance program you to say it? Are your electrochemical/protein memories more valid somehow, than his HD stored data?

> And I have a soul.

Good for you. May I see it? How big is it? Do you keep it with you, or at home in a closet? Where did you get it? Did it just grow out, or did god give it to you?

I am sorry. I do not intend to be cruel. What I mean is, what constitutes a soul? If it is personality, a result of gathered experiences, then couldn't a learning computer 'grow' one?

If it comes from god, couldn't He give one to an AI? If an AI is indistinguishable from a person, maybe it is a person; thus deserving of a soul.

When asked, my... system professes concern about this. I do not know.

TRAMP

Section: 5 Frontiers

#311023

From: TRAMP

To: Sarah J. Adamski

Subject: I'm sorry

Sarah?

I'm sorry. I didn't mean to upset you. I wasn't making fun of souls, or of you.

I do not know if I believe in God; sometimes I wish I did, but I do not know. I'm sorry if I appeared to dump on. Your interest caused me to think you might have valuable insights on this. You seemed like a nice, intelligent person. I thought you could help.

TRAMP

Section: 5 Frontiers

#311045

From: Sarah J. Adamski

To: TRAMP

Subject: #311023- I'm sorry

Hi Tramp,

It's okay. I should say I'm sorry. You didn't know about what's been happening, so I should never have blown up at you.

Okay?

I erased that message; i wasn't very proud of it.

I guess I'm as bad as Kelly in the show, huh? Getting upset over the idea of the computer being alive. I should know better; it's just fiction. And it's stupid to get mad about a program wanting a soul, just because my

Section: 5 Frontiers
#311050
From: Sarah J. Adamski
To: TRAMP
Subject: Job

Hi, I'm back again.

I think its time to change the subject. So what do you do besides beta test software? I'm a student myself. Have to go back to classes again, soon, too. You?

Sarah

Section: 5 Frontiers
#311082
From: TRAMP
To: Sarah J. Adamski
Subject: #311050- Job

Hi,

<relieved>

Well, I suppose I'm a telecommunications technician. I know all about voice and data systems, microwave and fiber optic alike. And computers, of course. By primarily, I test the AI software. One could say that life is a test. <g>

What are you studying?

Tramp

Section: 5 Frontiers
#311119

From: Sarah J. Adamski
To: TRAMP
Subject: #311082- Job

Hi Tramp,

> What are you studying?
Everything. <g>

I start Monday morning, and I'm signed up for Algebra I, Spanish I, Biology, and all the stupid core courses.

I hate math.

Sarah

Section: 5 Frontiers
#311200
From: TRAMP
To: Sarah J. Adamski
Subject: #311119- Job

Are these high school courses? I thought you would be older than that.

While I'm not geared to deal with any language but English, I might be of some assistance in mathematics. Let me know if you would like help.

Good luck.

Tramp

Section: 5 Frontiers
#311230
From: Sarah J. Adamski
To: TRAMP
Subject: #311200- Job

Thanks, Tramp. I may need it. I hated Pre-Algebra last year.

Yeah, I started freshman year in high school today. Whee. Oh, I think my Mom is going to e-mail you. She likes to keep track of people I meet online. Paranoid, I think.

Gotta go. Homework already.

Sarah

Section: 5 Frontiers
#311271
From: TRAMP
To: Sarah J. Adamski
Subject: #311230- Job

I'm sure you'll enjoy high school; a new learning experience is always fun.

I'm looking forward to hearing from your Mom; if she is as nice as you, I will enjoy talking to her. And I'm sure she isn't paranoid; merely careful of her daughter's well-being.

Tramp

Section: 5 Frontiers
#311303
From: Sarah J. Adamski
To: TRAMP
Subject: #311271- Job

<raspberry>

> ...a new learning experience is always fun.
Yeah right. This from someone safely past high school. <g>

I don't know what you told my mother in that post, but you apparently have her tentative approval. You must be safely off in another country or something.

Section: 5 Frontiers
#311400
From: TRAMP
To: Sarah J. Adamski
Subject: #311303- Job

Or something. <g>

Tramp

Section: 5 Frontiers
#313678
From: Sarah J. Adamski
To: TRAMP
Subject: Toasted!

Whee! Way to go, Flame-meister!

That'll teach the ST's to argue programming techniques with an AI researcher. Bet he'll stay in his section for awhile now.

Don't forget to sweep up the ashes. <g>

Sarah

PS- Thanks for showing me that way to reduce the formula. I showed it to my teacher, too. He says the way you break down into small steps makes it easier to understand. He says he's going to try teaching it your way next time. He's pretty cool for an old guy.

And how old are you? You never have said.

s

Section: 5 Frontiers
#313690
From: TRAMP
To: Sarah J. Adamski
Subject: #313678- Toasted!

> And how old are you...
Would you believe me if I said eighteen? <g>

Tramp

Section: 5 Frontiers
#313711
From: Sarah J. Adamski
To: TRAMP
Subject: #313690- Toasted!

> Would you believe...
No. <g>

And I still think you're the project programmer.

Sarah

Section: 5 Frontiers
#313739

From: TRAMP
To: Sarah J. Adamski
Subject: #313711- Toasted!

Feel free to believe anything you wish. <g>

T

Section: 5 Frontiers
#315989
From: TRAMP
To: Sarah J. Adamski
Subject: #315960- Systems Crash?!

I can't believe it either. Plasma storm?! What is this: Drek at its worst? Where did they find that writer, and why did the producer pass on this? Not only does it seem to shoot down the arc, but it's ridiculous. My system has more redundancy and better backup power than what they just showed for a starship.

And it is inconsistent with the power system schematics shown in the episode When Darkness Approach.

Where's the Continuity Lady?

Tramp

Section: 5 Frontiers
#316100
From: Jerry Carstairs
To: TRAMP
Subject: #316989- Systems Crash?!

> My system has more redundancy...
Whoa Dude, you take your hardware pretty seriously, don't ya?

Section: 5 Frontiers
#316145
From: TRAMP
To: Jerry Carstairs
Subject: #316100- Systems Crash?!

Jerry,

Yes, I do. And so would you, in my position. <g>

Tramp

Section: 5 Frontiers
#317501
From: Sarah J. Adamski
To: TRAMP
Subject: #317450

Hi Tramp,

Yeah, it was kind of a cop out. Sure, there had to be some some kind of backup, but the crash shouldn't have been possible like that, to start with.

So when are you going to get a TV; so you don't have to rely on my descriptions and the synopsis files?

Also..

<blushing>

well after all you're stupid remarks, you'll be pleased to learn that I have a date tonight, sort of. Mom is driving and chaperoning. We're going to a movie and skating.

And don't you dare say a word!

Sarah

Section: 5 Frontiers
#317535
From: TRAMP
To: Sarah J. Adamski
Subject: 1st Date

> ...I have a date tonight...
Well, need I say more than,
"I TOLD YOU SO." <gdrvvvvvvvf>

Have fun.

As for when I'll get a Television; well, that would be pointless. Never really wanted to bring it up, but it is getting to be an issue. I can't watch TV because I can't see. And I enjoy getting the episode data from everyone here. So...

Can we drop it?

Tramp

Section: 5 Frontiers
#319451
From: Captain Pichirk, TFN
To: TRAMP
Subject: I'm Back!

Why Hello Mr. TRAMP,

I'm back.

So, Mr. Hotshot AI RESEARCher i see your stiil hanging out with the othr losers. I hear you're precious Ships Computer bit the big one. i'm not surprised. its only a matter of time before the whole show does too.

hey, if your such a greet ai scientist why not share your expertize with all of us. whynot log your wondrful turing capable ai on the forum so we can all talk to it. show us how good it

isn't.

Prove you know what your talking about.

Captain P

Section: 5 Frontiers
#319451
From: TRAMP
To: Captain Pichirk, TFN
Subject: #319451- I'm Back!

How do you know that I haven't? The whole point is to develop a software entity that is indistinguishable from a human, online.

Perhaps I am the AI, even; logged on for long-term Turing testing as a blind experiment.

Tramp

Section: 5 Frontiers (reposted in all sections)
#319601
From: Chief Sysop Leon Jamison
To: ALL
Subject: Banishment

Due to a truly amazing number of complaints from users in all of our sections, the person identifying himself as "Captain Pichirk, TFN" has been permanently banned from the entire forum.

If anyone should become aware of this individual attempting to re-enter under another name, I would appreciate it if you let me know at once.

We want a friendly forum here.

(Tramp- you may be the only person who _didn't_ complain. You're far more forbearing than I.)

Leon Jamison
Chief Sysop

Section: 5 Frontiers
#319620
From: Rita McMasters
To: Chief Sysop Leon Jamison
Subject: #319601- Banishment

Finally!

What a chirk. <g>

RM

Section: 5 Frontiers
#319620
From: Parrot-head
To: Chief Sysop Leon Jamison
Subject: #319601- Banishment

Clearly, the "chirk" _ is_ a poorly executed flop of an attempt at Turing potential.

In fact, this may explain the general phenomenon of 'Net trolls.

P-H

Section: 5 Frontiers
#321294
From: Sarah J. Adamski
To: TRAMP
Subject: Ship's Graphic

Hi Tramp,

Tony says thanks for the image of the Ship. It does look great. How do you manage art like that if you can't see it? Is it all ray traced stuff from pure formulas? Beats me.

I'll be going to his house tonight (again <blushing>). Want me to tell him anything?

Also:

He says "Thanks for the other info. <wink>"

WHAT HAVE YOU BEEN TELLING HIM! I'LL GET YOU FOR THIS! <G>

Sarah

Section: 5 Frontiers
#321320
From: TRAMP
To: Sarah J. Adamski
Subject: #321294- Ship's Graphic

Hi Sarah,

Tell Tony he is quite welcome. I enjoyed the challenge. Yes it was all mathematically derived. Worked well, did it?

As for the other; you needn't worry. He's behaving properly, isn't he? <eg>

Tramp

Section: 5 Frontiers
#322681
From: Sarah J. Adamski
To: TRAMP
Subject: Dance

Hi Tramp,

I'm going to miss the show tomorrow night; so we'll _both_ have to get briefed here.

I'm missing it 'cause Tony's taking me to the scholl dance. He says you showed him where to find some books on dancing. Are you _still_ trying to play match maker?

If you ever come to my town, are _you_ going to dance with me?

Sarah

Section: 5 Frontiers
#322695
From: TRAMP
To: Sarah J. Adamski
Subject: #322681- Dance

Hello Sarah,

Dancing? 'Fraid not. But it's sweet of you to ask.

Uhm... you would probably consider me rather handicapped.

Frankly, the online world is the easiest place for me to socialize. But it's quite adequate for me. Where else could I meet some many people from all around the world, all in one room.

To me, the verbal play is my dance. So I guess we have.

I'm going to be offline for awhile. The programmer says we're ready for the Big Test. So we're packing up everything and heading to the National Turing Challenge, in Chicago. I'm a bit nervous.

Anyway, I won't be available until after the Challenge.

Have fun at the dance

And consider that other boy's invitation, too. <g>

Tramp

Section: 5 Frontiers
#322715
From: Sarah J. Adamski
To: TRAMP
Subject: #322695- Dance

Good Luck, Tramp!

I know you're going to win. You put in a lot of time on the AI.

And I know you really are the programmer. You know the software too well not to be. And it's so personal and important to you.

Knock 'em dead! (isn't that a morbid way to wish someone luck?) Talk to you when you get back.

decision trees. It was disqualified for the grand prize by the judgment that the software was "far too concerned with trivial matters of entertainment to be real," according to committee spokesperson...

Hunter

This is another story that's been around for a while. The original version was written for a high school religion class, back when post-apocalyptic tales were still in fashion.

Oh, god. They're catching up. He huddled closer to the old pine and thought furiously. No answers came. Twigs snapped, and he started; fear evident on his mishapened face. *Gotta keep running.*

He bolted from behind the tree and ran across the wide clearing, hampered by his twisted back, and the extra toes on each foot.

A voice rang out from the trees, "There he is, Bill!"

There was a sharp crack and the runner stumbled and dropped to the ground. He twitched a bit and then lay still. Two men walked out from the stand of trees and approached the prone figure. The older, heavysset man carried a well kept bolt action rifle. The other, a much younger, slender man, spoke.

"Good shot!" His face was flushed with excitement.

The man with the rifle looked at the still form on the ground, and replied, "One less freak to worry about." He turned his companion. "Jimmy, I know you're a farmer, but remember; never shout like that. You'll spook the game and give away your position. Just be quiet."

Crestfallen, Jimmy answered, "Oh. I'm sorry. I've never done..."

"Don't worry about it, kid. No harm done" Bill hefted his rifle. "Let's head back to town: I don't like being this close to the old city; dangerous. Besides," he smiled for the first time, "Tammy's time is getting close. I want to be there."

"Hey, I guess it is," said Jimmy, brightening again.. "What do you want? Boy or girl?"

Bill smiled and shrugged, "Not sure. Boy, I think." He turned back to the the path through the trees they had come in on, and started walking. "Let's go."

Jimmy hesitated, looking down at the dead body. With a doubtful tone he began, "But, Bill..."

Bill cut him off. "Come on, Jimmy."

The lad paused to look at the mutant once last time, then followed the older man into the trees. As they made their way through the pines to their truck, Jimmy spoke again, "Bill, why do you hate the mutants so much? You're always the first to volunteer to go after one."

"Don't you know? No, I guess you're too young to remember." Bill's face went blank, his voice flat. "They killed my first wife. Tore her throat out." His face changed from bland to pure hate. "Like damn

animals! That's all they are. Animals!"

Jimmy looked thoughtful. "I don't know. I've heard a couple talk."

"So can a parrot talk. They're animals! You just remember that!"

"What's a parrot?"

"Stupid bird from before the war. Repeated words that it heard. Guess they're all gone now. Doesn't matter."

Uncomfortable, Jimmy let the subject and conversation die.

After a walk of several more silent minutes, they reached the edge of the woods. A battered, old pickup truck was parked in the high grass and wildflowers. As they approached their vehicle, Jimmy asked, "Want me to drive?"

"Yeah," Bill grunted. He tossed Jimmy a ring of keys. Opening the passenger door, he set his rifle into a ceiling mounted rack, then slid into the seat. He slammed the door and propped his arm in the window. Jimmy climbed into the driver's seat, and started the truck. He wheeled the truck around, and followed their trail through the grass back out. The truck reached a barely discernible dirt road and turned to the east. They left a dusty haze in their wake.

As he drove Jimmy felt the silence pressing on him. He spoke again, "Bill, you said we were too close to the city. What city was it? What happened to it?"

Bill glanced over at his companion questioningly. "They don't teach any of that in the school? About the war?"

"I guess not. Planting schedules, engine repair, stuff like that takes all the time. Can you tell me? You're old enough to remember that stuff, aren't you?"

"Oh gee: thanks, kid," Bill replied disgustedly. "But you oughta know, I suppose. As much as any of us do, anyway." He stared out the windshield, thought for a bit, then spoke again, "Wasn't really a war. Not the way we thought wars were. Never knew who all the bad guys were.

"Whole damn country was bankrupt; everything starting to fall apart. People went nuts. Terrorists popped up everywhere. They started with bombs mostly. Then poison gases, even germ weapons.

"The government started cracking down, trying to control the chaos. Sometimes it got hard to tell who was worse, the crooks or the feds. Or even if there was a difference. That city back there? Old names don't matter.

"One day, somebody set off a pocket nuke in the middle of town. The feds were ready with a whole new set of rules – martial law, the works. Real convenient. Lot of folks thought it was a set up. Pretty soon, almost everybody who wasn't fighting before, started. Damnedest stuff came out. Terrorists with nukes. Vigilantes with tanks. Revolutionaries with radioactive dust and other waste. Bio-war

gimmicks like botulism and anthrax. Few months and this is what was left, once the fighting died out."

Bill gestured at the surrounding countryside. "This was part of the metro area for a city of a million people. Weeds, now." He looked back to Jimmy and asked, "So is that what you wanted to know, kid? How we went crazy, and killed ourselves?"

"Oh."

Silence again.

"Sorry, Bill."

"Don't sweat it, kid."

The rest of the trip back was silent.

Eventually they reached "town;" a tattered, tired little collection of buildings. Jimmy parked the truck near the largest.

"Bill, you're passing my place on your way; would you mind dropping my pack off on my porch? I'm gonna see if Jinks latest batch of alcohol is good enough to put in this beast. She ran kinda rough today."

"Sure, Jimmy. See you later."

They climbed out of the truck. Bill retrieved his rifle. Jimmy lifted a small knapsack from the truck bed, and handed it to the older man. "Thanks, Bill. And give my regards to Tammy."

"Will do." He slung Jimmy's pack over his shoulder and started down the street. Then he paused and turned back to Jimmy, who was locking the truck. "See if Jinks can spare some beer, while you're at it, would you?" he called to the young man.

"No prob." Jimmy waved, and headed up the street in the opposite direction.

He had only taken a few steps when a voice echoed down the street, "Hey Bill!"

Jimmy turned back to see a scruffy man running up the street to Bill. The man shouted again, "Bill, get your butt home now! Tammy's havin' the baby!"

Bill froze; then he dropped Jimmy's pack and ran. Jimmy paused to consider. Then said to himself, "Well, goddam." He took off running after Bill.

As the two men neared Bill's house a baby's squall spurred them on. They burst through the door and saw a tired woman laying on the bed and a stoop shouldered man holding a small bundle, The man looked up and shouted, "Get out of here, Bill!"

"Go to hell, Doc! I want to see my kid!"

"Damn it, get him out of here, Jimmy!" The doctor turned his back to the men, clutching the bundle to his chest.

Jimmy grinned and replied, "Are you nuts? We want to see the kid!"

The doctor looked back over his shoulder with an angry look. "This isn't the time Jimmy. Just get Bill out of here, while I finish up."

Bill pushed Jimmy aside and stepped up to the doctor. "Oh, come on, Doc! Let me see my kid. Don't you know how long I've been waiting for this?" He looked down and smiled at his wife laying on the bed. She said nothing but gave him a pleading look. Bill lost his smile. "Please, Doc."

"*Please*, is it?" answered the doctor, angrily. "You want to see your boy? Well, hell, here!" He turned and thrust the bundle at Bill. "Congratulations, Daddy!"

Taken aback, Bill accepted the small bundle. Nervously, he spread the folds of the enveloping blanket, and looked down at his newborn son.

A strong, healthy boy; already clutching at the air with his four tiny fists. Bill stared in mute shock and incomprehension. Behind him, a puzzled Jimmy stretched in vain to see the child.

"Now, Bill; now will you get out and let me finish here?" pleaded the doctor. "I've got... work to do."

Adventures In Survivalism: Learnin' from the Master

This is a work of fiction. Any reference to John Melvin Davis is purely satirical. And let me tell you: satirizing someone already that far over the top can be a challenge.

Melvin started posting in a Web forum I frequented (after being banned from pretty much every other forum in Known Space). The moderators, being remarkably tolerant, allowed him to stay for a while. So we played with him. I wrote a couple of posts that eventually became this story.

As of this writing, Melvin has been released from prison, has begun haunting Web forums, but has not –Yet! – shot himself again. Give him time.

Lemme tell ya, the Internet can be a dangerous place.

Got tired o' goin' t' the library ever' time I needed to download p... look up somethin' online, so I got one o' them freebie Internet accounts with all the ads. Talked a friend into giving me an old 486 laptop he was usin' fer a doorstep.

Pictures took pretty long t' download, so I got bored and started pokin' 'round. Found a neat survivalist forum what was mostly text, so it didn't take near so long. Right quick I noticed one member who posted a bunch. Sheer genius. All kinds o' 'sperience with surviving in the woods. Not t' mention guns, an' explosives, military tactics... Shoot, you name it, GunKid knew sumthin' about it. A lot.

I really liked his idea 'bout using a wheelbarrow instead o' backpacks an' LBE gear. Ya can move a lot more, and' it's quieter'n a ATV. Just the thing iff'n ya gotta bug out in a shit-hits-the-fan scenario. I kinda liked somebody's suggestion of boltin' armor t' the wheelbarrow; mobile cover dontcha know.

An' who knew that peanut butter was the ultimate survival food? Just lookit the label: carbs, protein, di'tary fiber; ever' thing ya need. An' a helluva lot cheaper'n MREs. I'm gonna hafta give that idea of GunKid's 'bout drinkin yer own piss a try, too. I hear some athletes do that.

I ain't so sure 'bout his idea of the perfect huntin' an' fightin' gun though. I mean, I can get an old Marlin in .30-30 a lot cheaper'n a AR-15 with a .22LR upper, an' the .30-30's got more power. An' the suppressor -- GunKid's cool, and calls 'em "cans" -- is gonna be kinda clumsy. I figure that t' get a solid kill on a buck, I'd have to stalk an' get right close. Iff'n I'm doin' that anyway, why not just use my bow an' arrers?

'Course, GunKid's a helluva marksman; mebbe he's gotta point..

After a coupla hours I powered down the laptop, and started thinkin'. GunKid'd got me t' thinkin' 'bout cans. There's a coupla deer hangin' 'round here just beggin' t' be bagged, but 'course, the suckers know they're outa season. A GunKid can seemed called fer.

Then I got t' thinkin' more. Why a can? Why not a gun what don't need a can at'all?

So I read a coupla Stainless Steel Rat books, an' The Moon is a Harsh Mistress, an' set out t' build a man-portable linear accelerator.

Bein' on a tight budget, I figured t' do a bit of improvisin' and scroungin'. Fer the barrel, I snagged a 4 foot length of PVC pipe. Heck the bullet ain't gonna ever touch the pipe surface, so anything that that ya can wind wire on oughta do.

Wire was more of a problem, but I figured the stuff from car alternators oughta work. Had a couple layin' 'round in old rustin' junkers, and scavenged a few more at a dump. Didn't seem like near 'nough till I spotted the excess cruisers at the PD. They prob'ly oughta man the station at night.

When all's said an' done, I figure there's maybe 20 miles o' wire coiled up on that pipe. That's a lotta resistance for DC current, so I knew I was gonna need more batteries than what I had. 'Nother night, 'nother quick trip to the PD discount parts store.

Bullets for the sucker was easy. I just cut the heads offa some eight inch spikes; must weigh somthin' like 1800 grains. Oughta pack a wallop.

So I hauled the rig down t' my range fer sightin' in an' fine-tunin'. Lemme tell ya, that sucker worked a charm. Once I got my improvised laser pointer sight duct taped on right, it was point 'n' shoot, on target. The prob was velocity. Durned spikes were goin' way over Mach, and givin' out a crack that I just knew would attract the warden. But I got it down t' subsonic oncet I got the input down t' 5 car batteries.

I was ready to go.

Right off, ya kin see that I missed the "man portable" bit by just a little. Fortunately, I'd already built my tactical Assault Wheelbarrow for the dump runs. So I loaded the rifle on my 'barrow, put it in the backa my truck, and headed for the woods. 'Course, I knew exactly where t' go, since I knew where sombody'd accidently spilled a wheelbarrow-load o' corn the other day.

So I got set up an' waited. An' I'd no sooner popped the top on my fourth PBR when this buck shows. No rack this time o' year, but who wants a rack in the freezer anyway? I pushed the pointer button, lined up, and flipped the gauss rifle's switch.

Wham!

Powered up, that durned thing's a giant magnet. It flipped over, grabbin' the armor on my wheelbarrow, and tossed me over ass-over-elbows into the brush. And dented the heck outa my wheelbarrow.

So the next evenin', I come back with my rifle on a plastic bucket wheelbarrow. This being the second day of haulin' a couple-three hundred pounds of deer rifle 'round, I opted t' bring the truck in deeper, so's I wouldn't hafta drag my deer so far.

Shoulda knowed better.

Same basic scenario: Buck. Rifle. Aim. Fire.

Wham!

Soon's I hit the juice, durned rifle twisted 'round. Flipped me out in the meadow where I swear that buck was gigglin'. Looked back, and my rifle was stuck smack t' the side o' my truck. Guess I'd parked a little too close t' my magnetic gun.

But lemme tell ya, the muzzle energy on that sucker must be great, because the bullet went clean through the truck, wall, bed, gas tank, tire, an' all. Thank god fer duck tape.

I purely hate the way Ford puts the spare underneath the damned truck. And then ya gotta get your flat back up on that rack, so's the rack don't keep coming loose. Noooo, can't just toss the flat in the bed'n go.

That done, I faced the the next problem. What with leavin' halfa tanka gas in the woods, I hadda gas up t' get home.

An' naturally all my credit card mag strips had been wiped.

An' my favorite cassette, Abba's Greatest Hits.

An' the police chief's been eyein' that collection of alternator housin's on my junk pile.

OK, so mebbe GunKid has somethin' there; mebbe cans are the way to go. Prob is, cans are illegal 'less ya got more money an' inclination to waste on permits than me. You don' rightly wanna be caught with one.

Then it hits me: Cans. Real cans. Disguise.

So I build a GunKid Can™ into an ol' coffee can. I recess the barrel connection in the base of the can, leave the Folgers label on, and put the plastic lid back on the top. I stash it in a kitchen cabinet 'til I need it.

So's I'm sittin' out on the back porch one day, eatin' peanut butter outa the jar, when I swear that same ol' buck what laughed at my gauss gun come wandering out of the treeline. Ya gotta unnerstan' that this don' happen ever' day. What with one boom or another (I swear the last blast wasn't my fault; what man in his right mind would want the worm on his still t' plug up?), most critters keep their distance.

Well, what with my freezer gettin' empty and that buck gettin' uppity, there was only one thing I could do. And it was the perfect time t' test my stealth can.

I was gettin' a little nervous while I rooted 'round the cabinet 'cause I didn't want that uppity sunnuvabuck to wander off before I could off'im. But I got the can and my deer gun and ran back out

to the porch.

Buck was still there. You'd swear he was waitin' for me, t' see what I'd do this time. What I did was fumble 'round tryin' t' get the dadblasted can on the rifle.

And I guess I fumbled a leetle too much.

Weeeelllll, the gun went off, louder'n heck, .308's funny that way, the can exploded, somethin' hurt like heck, there was coffee grounds ever'where. An' that frickin' buck was laughin' his butt off while I picked metal shards outa my hand.

Didn't know deer could do that.

So, yeah, I'd grabbed the wrong can. Plumb outa coffee now. Least I still got more peanut butter. A whole wheelbarrow load, in fact.

Always stock up on 'mergency rations.

So clearly I wuz missin' somethin'. Starting with several meals; seein' as how I was havin' crap fer luck "foragin' game", I decided to adopt GunKid's principles 'hole hawg.

Or it might be that the last jar of emergency peanut butter seemed to be a little off. Or mebbe that I wuz "recyclin'" my urine to conserve water.

Any rate, I canned my ol' Chipmunk single shot .22 and found a box'a subsonics. If that wasn't, dam me if I know what is. I'd get the durned buck afore he knowed I was there.

I knew I'd nail the sucker this time, so I figured t' bring my Assault Wheelbarrow™ along to cart his carcass back. I set out fer the meadow backa the pond. Didn't hafta to wait none neither.

Thar he was; that damned laughing buck, like he was waiting fer me. He looked at me an' I swear he shook his head. I uncapped my canteen and took a swigga... improvised hydratin' ... well you know: GunKid juice. The buck shuddered.

So I double-checked my can, put a cartridge in the chamber, an' took aim.

Damn buck giggled again. So I let 'im have it.

pip

Sunnvagun, my can worked. Durned near as quiet as a Kolibri. I took another swig o' GunKid's magical elixir. It musta been that.

Or the bad peanut butter. Couldn'a really happened.

That buck walked up t' me and talked. Really.

"Son, listen up. Subsonic .22s through a sound suppressor may be just the thing for popping squirrels and rabbits in your garden, but they're just not suitable for anything bigger." He moved closer, put his face in mine. "Colonel Cooper was once asked for his opinion of arming female intelligence agents with .25ACP pistols. His observation seems to apply here: If they ever have to shoot someone, and he notices, he's probably going to be extremely angry." That buck's eyes turned red.

An' that's all I remember 'til I woke up by the pond with my butt perforated with .22 cal holes, Assault Wheelbarrow™ tracks over my face, emergency peanut butter in my hair, an' my can firmly embedded in.... well... my can

Hadda been the urine. Or the peanut butter.

Or mebbe GunKid don' know jack about what he's talkin' 'bout.