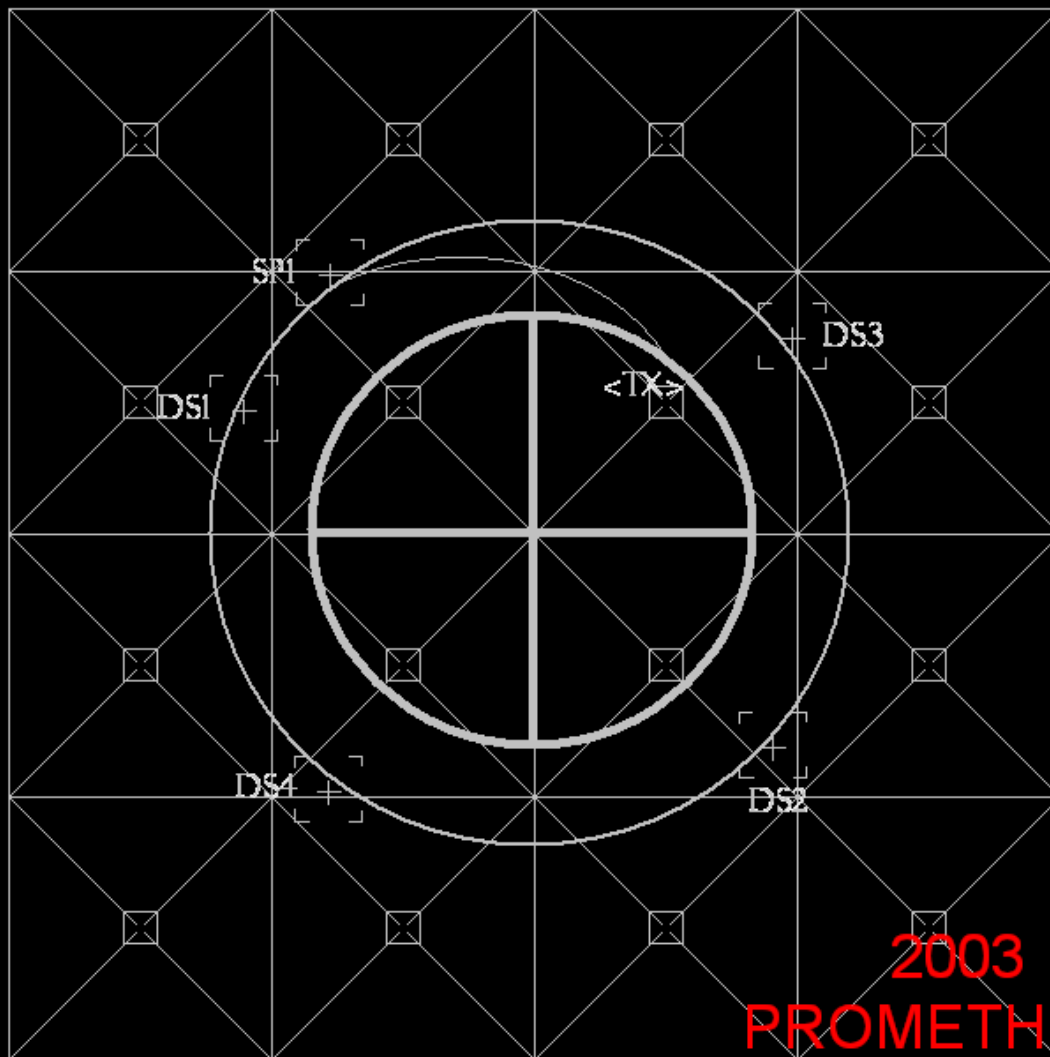


NET ASSETS



2003
PROMETHEUS
NOMINEE

CARL BUSSJAEGER

Net Assets

The Authorized E-Book

Copyright © 2011 by Carl Bussjaeger.

All rights reserved. This work may not be reproduced in whole or in part in any form without the express permission of the author.

This is a work of fiction, more's the pity. Characters and events depicted are imaginary.

Parts of this novel have been previously published in somewhat different forms as "Call to Arms", by [Nuketown](#), and as "Net Assets" (short story).

Concerning Unauthorized Editions

This is the authorized Kindle/ebook edition of *Net Assets*. You might have noticed that Amazon sells an edition (at a considerably higher price) published by Derek Benner, a.k.a. “Near Space Press”. The NSP edition is unauthorized. Benner did not pay for the use of my manuscript; not in advance, and no royalties. It, quite frankly, is stolen work.

Benner/NSP also markets the bootleg *Net Assets* through Smashwords (and other works of mine through these and additional venues). Both Amazon and Smashwords refused to comply with DMCA takedown letters from myself, the author and actual copyright holder.

Why Benner chose to steal my work and then price it ridiculously high (for an ebook) is beyond my comprehension. Maybe he was greedy. Maybe he was crazy. Perhaps another reason applied. I prefer that my readers be able to afford to buy my books, so I price them accordingly.

**For Lobo, Sunni, Neil, and the others who encouraged
me to go for it; and for everyone who helped me do so.**

Thanks.

**Thus Hipparchus left the sky as
a legacy to all men - if anyone
should be found to claim this
inheritance.**

- Pliny the Elder

Once upon a time, there was an agency of the American government called the National Aeronautics and Space Administration. NASA was tasked with the exploration and development of space. Being a government agency, it was very bad at the job. But also, being a government agency, NASA made damned sure that no one else would do a better job.

And then the bureaucrats' world came to an end.

Chapter 1

Year One, February 6th

We gotta get out of this place.
- Animals

Hank Hanners stared intently at his monitor, oblivious to the cluttered bookcases, space models, and victimized computer parts decorating his study. Comfort ranked higher in his priorities than some interior decorator's sense of style and efficiency. He leaned forward to peer closer at the text displayed, as if he couldn't quite believe his eyes. He could imagine his poor old computer decrying, "Don't shoot me; I'm just the messenger!" His shabbily comfortable office chair creaked under his weight, but he'd long since learned to subconsciously tune out the sound, along with the soft whoosh from the air-conditioning vent and the accompanying flutter of papers on his desk. The idiots in his website discussion forum were far more important than his immediate surroundings.

From: Connors03

To: Freedom7

Subject: RE: Rehabbing NASA

Admitted. NASA does have some serious problems. "Better, Cheaper, Faster" was "Half-assed, Cheap, Rushed." But the root cause lies in Management; NASA is burdened with a bunch of bureaucratic bunglers who wouldn't know good science if it bit them on the ass.

So... We need the equivalent of a Justice Department "independent counsel" and grand jury to review and purge management. Maybe require science or engineering degrees. Pay the big bucks to hire competent senior management types away from private industry.

And by god cough up the cash to replace those STS dinosaurs with real lift vehicles.

-AC

From: KevinK

To: Connors03

Subject: Re: RE: Rehabbing NASA

At least you're right about replacing the shuttles. But that's about all. The last thing NASA needs is to dump its core of experience and replace it with science-degreed ivory tower types. Do you really expect say, a theoretical physicist to understand real world budget constraints? And they'd expect to blow the whole budget on theoretical research, when what we really need is a permanent and large manned presence in space. That's for science and practical applications. If NASA had maintained its manned emphasis from the 60's, we could have a moon base now, even. Just think how much the astronomers would love the sort of lunar farside radio telescope that a moon base would allow. NASA needs to shelve the research crap for now, and concentrate on manned space access.

/s/

Kevin

From: SpaceCadet

To: KevinK

Subject: Re: RE: Rehabbing NASA

>>NASA needs to shelve the research crap for now, and concentrate on manned space access.<<

Sheesh. Please tell me you're kidding. Research is exactly what NASA should be working on; government should stick with nonprofit science work and leave the money-making "practical" stuff to private industry.

From: CMDR Shepard

To: SpaceCadet

Subject: Re: RE: Rehabbing NASA

Yeah. Right. Like private industry can actually afford to put people into space. Yo, Bozo! Take a look at launch costs: It cost a frigging fortune to orbit even a few kilos of inanimate junk, much less a person with LS. How do you propose to fund this sort of thing without government support?

From: SpaceCadet

To: CMDR Shepard

Subject: Re: RE: Rehabbing NASA

Dear CMDR Shepard-wannabe,

At least I'm not experiencing an identity crisis. Nor is my mind closed to non-government possibilities...

Hank felt like screaming. He resisted that urge, along with the desire to punch out his monitor. "Just a messenger," he muttered. But the beefy man did indulge the impulse to cradle his forehead in his hands as he leaned forward in his chair. It groaned once more.

He leaned back in his padded chair, propped his feet up on the euro-tech computer desk, and closed his eyes against the fluorescent glare of the ceiling lights. The heater had shut down, and he could hear the faint buzz of a dying light ballast. His mind automatically filed that with the other noises of his house, in a sort of mental ignore list. And he thought. After a while, his feet hit the carpeted floor and he grabbed his keyboard.

From: ForumAdmin (Hank)

To: ALL

Subject: Fresh Start

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.

On the NASA side, we have the Challenger O-rings, myopic Hubble ST, assorted lost Mars probes (my gods, why was a conversion to/from metric even an issue anymore??), a 75 megabuck satellite shaken to death, innumerable missed launch windows, a scaled back ISS that's STILL only partially operational- 12+ years overdue and \$20B-odd overbudget. You get the drift.

And then there's "private" industry (which ain't so private, me buckos- even Boeing teamed with Russia for that sea launch fiasco): the aforementioned sea launch, Iridium (show of hands- who bought phones?), Ariane (again not-so-private) and its lost shots, and the general lack of any manned action at all.

To my mind, both sectors are oh-for-ten where it should count.

Face it; NASA can't be rehabilitated. That suggests that NASA is "broken." It isn't; it does exactly what it's supposed to do admirably well- It's a government PR/propaganda (same difference) operation. A bureaucratic one, naturally enough. It was never meant to get man into space, only to beat the Soviets to a series of media coups; manned access was an interesting side effect. The STS is more of the same. If it had truly been an improvement in space access, Congress wouldn't have needed to kill any competition with it (and thus guarantee payloads for the shuttles) by ordering the military to effectively gut its own launch program.

Nor can we rely upon "private industry". In space access, there is no such thing at this time. No? Another show of hands: How many of you in the US have really looked into current corporate structures? In effect, a US (and most, if not all, other countries where gov grants special corporate existence to companies) corporation is an extension of government- in exchange for special tax favors, favorable legislation, and shielding against more real accountability for its officers pays government "danegeld." In effect, a corporation still receives gov subsidies. Just like a certain national space agency which shall remain nameless, but whose initials are NASA.

And that isn't even counting in little things like _NASA_ having to approve any "private" launch system (the greatest advantage of sea launch may have been that it took the launch out to sea beyond NASA's bureaucratic grasp), government construction incentives/subsidies in exchange for making the system available for government use (note that the gov supports American aircraft construction because the planes can be used to transport troops.)

"So what's the point?," I hear you mumbling. Easy. It's well past time we tried something different.

Why don't _we_ do it?

Stop waiting for a gov space agency to put the people's desires ahead of the politicians' (Who hold the checkbook after all. Which draws on _your_ accounts.). Forget about a pseudo-private savior coming to your rescue.

Moi, I'm a sorta-libertarian. I expect to take responsibility for my own life. Seems to me like that should extend to getting into space, if that's really what I want.

"Oh, no, Mr. Hank! That's much too hard for us (truly) private individuals to do," I hear some of you whining. "We wouldn't even know where to start!"

Frogsnot.

This is just one little web forum on one little (okay, maybe I'm not so little)...

Hank cast a rueful glance down at his prominent belly and continued typing.

...guy's private web site. There's less than two hundred people logging in, and just a darned few of those post regularly. Even so, I've seen no end of claims to expertise in everything from gardening to aerospace engineering. Unless you're BS'g each other (oh, dear; should I be PC and say,

"exaggerating"), the skill and knowledge base is there. Now multiply that by the other various and sundry space-related BBSs, web forums, e-mail lists, and (gods save us) USENET groups. That's only the online tip of the iceberg (comet nucleus?). Let's not forget astronomy clubs, model rocketry groups, SF fan, et cetera (The L-5 Society? I stopped hearing from them years ago, but...) Hitting up all this year's WorldCon attendees for one measly buck would amount to how much?

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 100G RAID? A flatscreen monitor? A CD/DVD writer? A new photo-quality printer? All around the world, this would be how many millions of people?

Try putting off those purchases for just a year (and get an even fancier new generation gadget) and kick in to a space travel fund. Just for starters, that would be how many dozens, or hundreds, or thousands of dollars per those millions of people? Quick, one of you self-proclaimed accountants open an offshore bank account, boot that financial program, and get the money rolling in.

Hey! Aren't the feddies after Gates again? Maybe he'd kick in a few billion from his foundation for the chance to relocate waaaaay outa their jurisdiction.

What? Who said "nonprofit?" Bull. If space can't be accessed profitably, we should be doing something else anyway. So we don't just solicit "donations." Every dollar (or ruble, yen, lira, Mark... oops, scratch some of those, showing my age again; I guess; we could accept EC whatsits) buys bonds.

We'd be talking serious money real quick.

And then there's the tech: 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've seen cheap concepts from private outfits; ie- the SpaceCub. And that's '50's and '60's tech. This is the twenty first century; we can't think of something better? Didn't Rutan get involved with Roton? Now there's a neat concept.

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 into real-world applications, and do it. Or go back to your Star Trek novels and pointless daydreams.

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."

Yeah, sure. Repost this if you want. Heck, I want you to post it. Anywhere you bloody well please. And just maybe someone'll get off his or her butt and do something. Even if it's only to prove me wrong. But don't just talk; prove I'm wrong.

Feeling relief at the vented frustration, Hank hit the post button. "Well, no doubt it'll just give most of 'em something more to argue about incessantly."

"Hank, are you still fooling around on the computer?" Hanners' wife, Kristi, was standing in the study doorway, gripping the frame. Hank thought she looked a little fuzzy around the edges; she'd been drinking again, no doubt. For all that she was a couple of years younger than Hank's late 30s, she looked ten years his senior. Booze; her current hobby. Hell, it was cheaper than the long distance calls to her mother that she used to indulge in.

"Yeah, but I'm about done," he answered tiredly. "Just more of the same whining as always." He gifted the screen with an expression of disgust.

Kristi walked into the room and peered over his shoulder at the screen. Her highly flammable breath wafted over him. Who says vodka has no odor? "I wish you put as much effort into work as you do that bulletin board," she nagged.

And here it comes again. She could never quite come to grips with the fact that seniority and butt-kissing count for more in the modern corporate world than did honest hard work. He spun his chair around with an extended squeal to face her. "I do put in the effort at work, Kristi. I make it in every day, something my boss doesn't manage. I avoid the unapproved water cooler rumors. I donate the company-approved amounts to the company-approved charities. And every now and then, when they'll let me, and the signs and portents in the sky are favorable, I indulge in the occasional bit of actual engineering." He tipped his chair back and spun to face her. She looked... frumpy. Faded housecoat, graying hair, maybe forty pounds overweight, and downright shrewish. What had ever happened to the cutie he'd married nearly sixteen years ago? Then he snuck a guilty peek at his own generous gut. Neither of them were who they had been. "What else do you want? I still get step and COLA raises."

"I heard that idiot Morgan Jackson got a promotion," she pointed out accusingly.

"Jackson kisses ass, and he works in a department that isn't under a promotion freeze."

Kristi crossed her arms over her protuberant belly and declared, "And if you'd kiss some ass, maybe we could put Erin in a better school." She referred to their teenaged daughter, just fifteen, pretty, with her father snugly wrapped around her little finger.

Hank shrugged noncommittally. "Like, which one? And why? Her grades are good, she likes where she's at. Why switch anyway?"

"She likes it because it's easy." She frowned suddenly. "And where is Erin now, anyway?" She peered about the room with eyes slightly out of focus, as if expecting the girl to be hiding in a corner.

Hank replied patiently. "She's at the library studying for a physics test. You're supposed to pick her up at..." he shifted his gaze to his wristwatch "...Now." He considered his wife's borderline inebriation. "Never mind; I'll go get her." He heaved his bulk erect, joints popping.

Kristi stepped back, snorting. "Hmmp. Oughta make her walk home. You spoil that girl rotten."

Hank grinned. That much was true. "What hey? She's my only daughter. If I can't spoil her, then who?"

Kristi waved dismissal and she walked carefully to the door. "Oh, whatever." She paused and

turned. "Oh yeah. So long as you're gonna be out anyway, stop and pick up another bottle of vodka. And some tonic."

Hank's face fell. "Another... ?" Hell, it wasn't worth the argument that any comment would start. The time for subtle hints was usually before she started drinking. "Okay. Stoli?"

"Anything'll do." came Kristi's response from beyond the doorway. Damn; just seven-thirty, and she's already too far gone to drive. He thought about Al-Anon again. Then shelved the thought for the nonce, and went searching for his car keys. Erin would already be waiting, probably impatiently.

A few days later Hank's NASA debate had reached his cubical at work, where he and Bob Anderson spent their days pretending to be mid-level aeronautical engineers. The cube's walls stood about five feet high, pretended to be fabricated of drably pastel sound absorbing material, and afforded imaginary privacy. "Well, why not?" Hank demanded of his cohort in corporate criminal engineering. "Show me the law that says a private citizen can't build a spaceship." He fumbled blindly behind himself for his coffee cup, a chipped ceramic souvenir from a competing aircraft builder; he brought it to the office for primary purpose of torquing off the departmental brown-noses. He stared into Anderson's eyes, brown behind classically nerdish 'Clark Kent' glasses, waiting for the expected response, the one he'd been seeing on his computer forum. He'd never asked, but suspect the eyewear was a subtle joke on the nerdish engineer stereotype. Hard to say for sure, since Anderson was less in-your-face about annoying the bosses than was Hank.

"Oh, come on, Hank; get real," his office companion obliged him. Score one for predictability. "You know space travel has to be sponsored by the government. Who else can afford it?" he lifted his own mug, which dodged the corporate correctness issue by being embossed with inane cartoons. Hank had tried to convince him to at least get a Dilbert mug, guaranteed to annoy management. Unfortunately, Anderson still had dreams of corporate success. He even wore a company tie with a blue shirt. But those glasses... There was still hope.

Hank loosened his knotted Tweety Bird tie. It clashed with his business blue dress shirt; but then, it would conflict with anything. "With big, dumb, vertical boosters?" he inquired obstinately. "Heck, the government can't afford it either. 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," Hank insisted. He drained the dregs in his mug and rose to head in the direction of the pot, eager for a refill. He kept talking as he poured. "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 simulated desk. "So you want... What? A linear accelerator? Some sort of giant rail gun? The tech isn't up to it. And potential passengers wouldn't be up to the acceleration. From your babbling over the past few months, I figure you want a system that'll put people up, and with g's low enough that they can disembark instead of being decanted."

"Who needs magic tech like that?" Hank retorted, ignoring the jibe. "You know about the Air Force's rocket sled track out in New Mexico?" He leaned back and bumped his head on fabric covered

particle board. The cube was scaled too small for double occupancy; a fact which had escaped the management sorts who made cost-cutting decisions from private offices.

"Umm... Yeah." Anderson waved his empty hand vaguely. "Ten mile track; they test missile nose cones, ejection seats, and the like. So?"

"Ten kilometers, really," Hank corrected. "And it's nothing but a steel track. But they've gotten better than Mach 8 on it." He plopped his mass back into his chair, displaced air riffling the pages of a Far Side calendar. "And, unofficially, I've heard Mach 10 plus was done even back in the '80s." He stopped, and took a sip from his coffee mug; then continued. "That's fifty year old tech. We can do better than that surely. 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?" He leaned back.

Bob's raspberry made his position clear, but he elaborated anyway. "Never happen. Wasn't the Air Force going to try one of those? And they couldn't do it without bankrupting the DoD." A devilish grin spread across his face. "Which probably wouldn't have been any bad thing, at that." A brief chuckle, then, "But maglev costs too much. Come back and talk when we have cheap room temperature superconductors to play with; then we'll consider maglev boosters." Then he grinned. "And my god... You want Mach 12? At ground level?" He made a mock shudder. "Talk about noise pollution. And everyone for miles'll think the mother of all earthquakes just hit."

Hank sneered right back at him, downed a slug of bitter office coffee to brace himself, and retorted, "Well, I don't see you suggesting anything. So we start a little slower. And how would you reduce friction? Hovercraft?"

Bob laughed at the sudden mental image of a hovercraft trailing a machwave wake. "Hey, at least hovercraft actually work. Heck, at the speeds you want, you wouldn't even need or want lift fans- just redirect 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!"

A voice made itself heard from another cubicle. "Oh, shit. The Mad Scientists are at it again; re-inventing the aerospace industry for the third time this week." Hank wadded up a corporate memo and pitched it over the upholstered divider. "Missed again!" The voice taunted. The crumpled ball sailed back over the partition.

Hank ignored further comments from invisible kibitzers and smiled at Anderson's outrageous idea. "And wouldn't that be fun on the Interstates; I thought the semi's were bad. Maybe we'd best keep them on their own roads."

Bob dropped his feet to the floor, struck with another thought. He grabbed a pencil and steno pad and began sketching. "Nah, if you're gonna put 'em on their own routes anyway, do this." He held up a crude picture. Some people should really stick to computer aided drafting.

Hank stood up, and stepped into Anderson's personal space. He examined the picture of a rectangle with a semicircular bite taken out of the top. A second complete circle rested in the semi-circle like an egg in an egg cup "So what is it?" he wondered, thoroughly baffled.

"A track for a hovertrain, of course." his counterpart smirked. "Since it'll have it s own road, why not invest the concrete in something better suited to a hovercraft?" He pointed to a detailed image

in the corner. "See here? 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."

Hank was dubious. "Okay... Why?" He handed the simplistic sketch back to the failed artist.

"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," Hank said. "But..." He considered the odd concept. "I wonder if it it wouldn't work at that. Wonder what the Teamsters would think?"

"Or the railroads." Anderson laughed again.

"Or NASA." Hank, deep in cogitation, wasn't laughing.

His co-worker's chuckles tapered off abruptly. "Eh? NASA? How so them?" Confusion was evident on his face. The conversation had drifted too far from its origins for him to make the immediate connection.

Hank stared down at Bob. "Look what you just designed: a high speed, horizontally accelerated, levitated launch catapult."

"Say what?" Anderson re-examined his silly picture, trying to see whatever Hank had spotted in his version of reality.

"Sure, Bob," Hank explained. "Lose the jets for the thing and stick a throttled 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?" Hank challenged. "Yeah, your hovercraft stays on the ground; but it's just a carrier, a ground-bound first stage. What if you piggybacked a little one-man cargo shuttle on it? Hit Mach 10 or so, fire its engine, detach, and head to low earth orbit." He crossed his arms and gave Anderson a look that dared him to pick out flaws in the idea.

"Bull; it's not enough velocity to make a difference. Is it?" Bob considered his co-worker's outlandish proposal. Without computer modeling, he wasn't about to argue pro or con any other aspect of the ridiculous concept; better to not give it any more credence.

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

Anderson grimaced at the cubicle divider behind Hank, briefly lost in thought. "Six hundred would be enough to... ?"

Hank caught the man's drift. "Sure. Remember- The first seconds or minutes of a launch is when a rocket expends most of its propellant mass, because it has to accelerate the rocket _and_ the as-yet-unexpended reaction mass. It wastes energy boosting its own weight, without contributing otherwise to the velocity of the rocket." He shrugged as if it should have been self-explanatory. "If you've got something external to the rocket that provides that initial push to the _rocket_, not just the propellant, you start with a huge... head start. Hell of an advantage."

Bob raised his hands, as if warding off Hank. "Whoa! Okay; the basic concept of horizontal boost is sound in theory. Heck, that's what the old X-15 rocket plane did. But I'm the guy to come up with the better orbital mousetrap? I don't think so."

"Why not? At least you know something of engineering. Or that resume' you keep updating every week claims you do." Hank grinned, then picked up the sketch again. "Can I have this?" he asked.

"Why?"

"I want to scan it, and upload a GIF to my web forum. See if anyone else can spot any fundamental flaws in the basic concept."

"You're nuts; but sure." Then he shook his head. "Uh... If you're gonna post that thing in public, let me come up with something kind of prettier on my computer for you. I'll mail it to your home account. And keep my name outa this."

"Coward. But thanks." Hank shot a look at the wall clock over Anderson's computer. "When can you get it done? Aren't you supposed to be working on the passenger seat redesign?"

Anderson scowled, then brought up a CAD file on his machine. An engineering drawing of a cattle class airliner torture device appeared on-screen. The bespectacled engineer typed a command and the front-back proportions of the seat shrank half an inch. He saved the change. "What redesign?" With a glance at his portly partner, he added, "But you probably won't want to fly anything but first-class anymore."

"I don't fly anyway," Hank countered. "Not since 9-11," he referred to the terrorist strike years earlier that saw four commercial aircraft downed, killing thousands. "Not until the Transportation Gestapo will let me travel with defensive capability." Then he grinned and shrugged. Besides, don't you know those things are built by low bidder?"

"Good point." Anderson ignored the first part of Hank's diatribe. He'd heard it all before; Hanners was as about as pro-gun as you could get without advocating... No, the other man _had_ said private individuals should be able to own nukes. He cringed mentally.

That night Hank typed up a synopsis of Anderson's 'hoverlauncher' idea, and posted it for comment in the SPACEFLIGHT section of his forum. Most folks dismissed it as intentional humor, but it did draw some positive comments. And 'Net reposting and forwarding being how they are, the concept was quickly disseminated around the country, probably the world. It was generally discounted, ridiculed, occasionally praised. And mutated.

FROM:d_brinker@seccom.com

It's definitely a neat idea, but it'll cost a fortune to implement. A 15-20 mile stretch of land? And do you have any idea of what concrete is going to cost? A real rough estimate says concrete alone will run around \$25 million. Then there's labor, forms, reinforcing rod. You want to do this privately, you'd better find a way to do it cheaper.

FROM: jgroome2@compuserve.com

Brinker's right. So make it cheaper. Lose the track; sure, it makes the system more efficient, but it makes the initial investment required too high. Go for a more conventional GEM with its own plenum. We'd still have one kick ass hovercraft. But now it isn't dependent on an expensive track. Instead we'd shoot it downrange at the salt flats where they run cars for land speed records, or somewhere else flat enough.

Chapter 2

Year One, April 16th

Up against the wall, redneck mother.
- Jerry Jeff Walker

Bill Neville scratched at his balding scalp as he peered at the computer screen. "I do believe I'll be goddamned," he muttered to himself. The grizzled old Texan sat in a very comfortable leather upholstered chair at a positively enormous - not to say "Texas-sized" - oak desk, working with an equally impressive desktop computer. The desk feet sank into a few inches of expensively plush carpet. All this was within a large, wood paneled den he shared with his wife, who happened to be watching an old SF classic on their widescreen HDTV.

Amy Neville looked over at the sound of his voice. "What for this time, dear?" She muted the exploding star furies. Their steroidal ranch house held plenty enough rooms for the retired couple to indulge their electronic vices in private, but after forty-some years together, they were used to one another.

Neville chuckled and tilted his tumbler of scotch and water, ignoring Amy's frown of disapproval as he sipped. So what if he'd just finished breakfast? Ain't as if I'm goin' to work. "I'm readin' over some list traffic. Some clown's got the bright idea of launchin' space shuttles from the back of a hovercraft."

Amy blinked. "Beg pardon?" That didn't sound right; she must have misunderstood. She scratched her head in a parody of puzzlement.

"Sure 'nough." He rotated his monitor in her direction so she could see the artist's concept drawing he had downloaded. Something big and black, like a legless, elongated beetle was roaring across a desert, while a miniature space shuttle trailed fire into the sky. "Idea's to use a big hovercraft as a kinda launch catapult for a shuttle. The hovercraft's to dodge friction; not a bad idea on first glance." Amy was nearly a big a fan of space technology as her husband, which allowed him to abbreviate the description somewhat. Anyone who had read "The Moon Is A Harsh Mistress" knew launch catapults. He sipped watered down scotch. "Damnedest thing is, it sounds as though it could actually work; least in theory."

"What? Your model rockets aren't enough? Now you want to go to orbit?" Neville was a member of a local high power model rocketry club, which he often thought of as his own personal NASA.

"Always have, honey. You know that." She ought to anyway, he'd tried investing enough in startup access companies over the years. Or maybe not enough, since none of them had paid off.

"Well, try not to get taken in by some high tech startup looking for venture capital." Again, she meant. Neville usually had a damned pragmatic eye for profit, the basis his considerable retirement fortune, but his dreams tended to get bigger than his wallet when it came to space.

Neville pursed his lips and frowned slightly. "That's part of the hell of it, Amy. There ain't any

company. Some guys are just floatin' a concept around the 'Net; idea's to invent a launch system so cheap and effective that it doesn't need government or major corporate support."

"Now I'm confused all over again, Billy." Amy clicked the TV off completely and rose to prop herself against the arm of the sofa closest to her husband. Her fundament sank nearly as far into the leather-clad padding as into the seat cushions. Several cows had died to provide her with a cushy place to rest her butt. "Explain, please." This was different; someone who wasn't asking for a few million up front.

Neville rotated his chair, shrugged, and taped a switch. He went limp as a faint hum announced shiatsu. What's the point of retiring rich if you don't enjoy it? "Not real sure where it started, but some guy's been complainin' 'bout NASA; how they can't ever get manned space travel right. Hell," he parenthesized, "lookit Hubble, the Mars probes, they just plain got lucky with DS1... They can't even get _unmanned_ travel right. But anyway, he's suggestin' that we abandon the whole conventional idea of space access by megacorp and government. Kinda like Crazy Horse Mountain..."

His wife interrupted. "Is that the one up north somewhere that they're carving into a gigantic statue?"

"Yep. Up in the Black Hills. They been at it for more'n half a century. They might not ever get the thing finished, but even as is, it beats hell outa that piddlin' Mount Rushmore." He'd meant to take his wife out there someday, but someday never seemed to make it onto his desk scheduler. Now that he was retired, he should make sure that it did. He snorted, then added, "But the point is that they've done it all on donations; they don't take government funds for it. This Hanners guy is talkin' somethin' similar for buildin' an orbiter and booster. He figures to sell bonds, maybe pre-sell tickets for rides to orbit, at conventions and such."

"Ah. So someone is trying to get money out of you."

"Nope. So far, there's just a buncha folks talking ideas. I think a few pros and semi-pros might even be doin' a little computer modeling. But no one's formed a company to actually do it." Neville paused and got thoughtful. "You know, Hanners pointed out that people have claimed all sorts of space-related technical expertise on the Web; but one area I haven't seen anyone stake a claim to is money handling and management. I guess maybe they need a volunteer for that before this ever gets off paper." He rose, and carried his tumbler of scotch over to a large picture window. He looked out onto his own personal piece of heaven, a semi-working ranch in west Texas. "Real estate would help too, I imagine."

His wife stood up and planted her hands on her hips. "William Neville! Just what are you thinking about? Getting tired of retirement already?"

Neville glanced back to the colorful shuttle launch computer imagery, then turned his gaze back to the prairie. "Mebbe so, honey. Mebbe so." With his back to the room, Neville didn't see the smile spreading across his wife's face. She didn't think retirement boredom had been good for her mate.

Just past dusk that evening, Neville sat out on the front porch of his ranch house with a couple of friends and neighbors, enjoying a cricket serenade, with occasional accompaniment from the coyotes that no one ever managed to eliminate. Neville figured it was a tossup as to which species would finally inherit the earth- the wild canines or cockroaches. Or maybe prairie dogs.

Neville's guests also happened to be members of his high power rocketry club. Cathy Peters was a thin, pretty strawberry blonde who looked as though she ought to be wired and intense; yet Neville could never recall seeing her anything but calm and collected, except maybe at some celebration. Such as the occasion of setting an altitude record, or watching her little girl win another skating medal. She finished reading the last of a stack of print outs which Neville had provided and passed it in turn to John Vasquez, as she had done with a couple dozen more pages. "Okay, Bill. Give," she directed. "You aren't really thinking of backing this hovercraft contraption, are you?" She smiled mischievously. "But I must admit, the idea of getting to orbit with a supersonic hovercraft does appeal to my sense of the absurd."

"Have another beer, Cathy, and it'll really begin to tickle ya." Neville popped the cap off of a Coors and handed it over. "Cause even better; I'm invitin' ya'll to back the contraption, too." He grinned as he opened a another beer for himself. "You want somethin' to drink, John?" Vasquez, stocky, middle-aged, and not particularly Hispanic in appearance, surname notwithstanding, declined absently with a shake of his head and continued reading.

"Shit," Cathy said flatly. "You're serious, aren't you?" She eyed her neighbor's bottle critically.

"Yep."

"What's Amy think of this? I notice she isn't out here."

"Naw, she had to go inta town for some meetin'. She figures I'm crazy. But she also figures that anythin' that keeps me from drivin' her crazy can't be all bad." The older man shrugged sheepishly. "My retirement hasn't exactly been easy on her."

"No shit?" Vasquez interjected, finally pulling his attention away from Neville's documents. "Mr. Type-A-Gotta-be-busy, just piddling around the house for the last few months? I can imagine." In fact, when Neville had announced his retirement the previous September, several acquaintances had started making odds on how soon he'd come out of retirement. Or when Amy killed him out of sheer exasperation. Vasquez wished he'd taken at least one of those bets now.

"Thanks for that vote of confidence, John." Neville flipped him off with a grin. "But I gotta admit that retirement has been borin' the livin' hell outa me."

Cathy again. "So from plain ol' boredom, you want to out-do NASA in the space business?" She was definitely dubious about the idea. "And you want to drag us down with you?"

"Sounds as good a reason as any," the older man answered laconically. "And the chance to make another buck or two ain't half bad either." Neville stepped to the edge of the porch and looked up into the sky. The really big sky. "But, no. Not just boredom." I also want to do it because I think people need to get out there, and no one else is going to let us. And because I want to be out there." He turned to meet his guests' scrutiny again. "And yeah, I do think we can make money doing it."

"Well, you finally got my attention," Vasquez joked. The man probably needed money no more than did Neville. Or Peters. But blatant avarice was one of his running gags. It might be a gag.

"Yeah, go ahead. I've got to hear this," Cathy added. There might be someone in high power

rocketry who wasn't seriously fascinated by space access, but Cathy Peters wasn't one of them.

"The fact is, crazy as it sounds right off, it's startin' to look like this hovercraft concept is actually workable. It was mentioned in those papers I gave ya'll, but I can getcha copies of the reports themselves. Seems some folks ran some computer models on the thing, and it tests out positive. More than that..." He paused to order his thought for the pitch.

"Well, this seems ta've started some months back on this guy Hanners' private website. It caught some college professor's interest, and he assigned it to a buncha his engineerin' students as a class project. They not only did computer work-ups, but they even made some scale models of several designs and did wind tunnel tests. It worked."

Cathy whistled. "Cool. But how did you learn about this?"

"Easy 'nough. Spent most of today doing 'Net searches on the subject. Found a buncha papers posted on the Web for review." He sucked down beer. "'Course, mosta the technical details in the reports were over my head; I just read summaries and abstracts."

"I'll be damned," was Vasquez's response. "But I still don't quite see what you've got in mind. None of us are exactly poor; but unless you're a heck of a lot richer than I thought, we can't fund our own private space program." Cathy nodded agreement.

"'Course not," Neville conceded. "But we do own a helluva lot of land; I think enough for a launch strip. And we've got enough cash to hire some tech-types to make a start at R&D, some office people... We can't fund the thing alone, but we can get the ball rolling."

Cathy was interested now. Eyes narrowed, she began, "So we.... What? Start a corporation and sell stock?"

"No. Or not yet, anyway. I want to start by setting up a private partnership; just us to start. We put up land and earnest money to prove we're serious. Once we're a going concern, we sell bonds..."

"Why not stock?" Cathy wondered.

Neville blushed slightly, not easy to see in the growing dusk. "'Cuz after forty-some years of corporate BS, and the government entanglements that go with incorporation, I just don't want to. For one thing, incorporation buffers the owners, the stockholders from responsibility. Dilutes it. Maybe it's ol' fashioned, but I don't think we're going to get to the stars by duckin' responsibility. And it makes a good filter; the personal financial risk will scare off the folks who aren't serious, or who only like t'play money games." He glared at his hoped for partners. "Remember all those start-up dotcoms and hi-techs that made millions on paper in the stock market? And remember what happened when it finally occurred to investors that they weren't ever seeing any real product?"

"Thirty-five hundred points in one day," Vasquez supplied. "Not quite a crash, but a pretty good fenderbender. You'd think the market bobbles in '01 would've clued them in, but noooo." He harrumphed; the only person Neville knew who actually did that.

"Yeah, and a lot of companies died before they ever did what their founders wanted to do. I don't want that to happen to us."

"Good point," Vasquez agreed.

"So," Cathy spoke up again. "Are you making this a formal proposal now?"

"Heck no. I'm just feelin' ya'll out on the basic idea. Think about it, do your own research. Then if ya think it's got potential, we can grab some lawyers and put together a real business plan an' all the rest."

Vasquez laughed. "Shee-it! You still got a lawyer that'll get within a hundred yards of you?"

"Just one now. Mosta them wanna use scopes." They all laughed.

FROM: wdneville@the_launcher.co.us
TO: Hank@hannersspace.hob
SUBJECT: Business Proposal

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

Hash: SHA1

Dear Mr. Hanners,

Please allow me to introduce myself. I am William Neville, a retired west Texas rancher. I'm also something of a space enthusiast. So your persistence over the past several months in encouraging people to take an active part in developing a new space program caught my notice. My associates and I are particularly interested in the ground effect launcher concept which you originated.

We have pooled certain resources and formed a company to build your launcher. Our starting support for this venture includes 20 linear miles of mostly flat, very empty land, and a grubstake meant to be used to hire engineers and technicians, and a supporting administrative staff.

Want in?

You may reach me via email at any time, or hopefully by telephone at 915-658-4787. Feel free to call collect. I would very much like to discuss employment options.

Sincerely,

William D. Neville

-----BEGIN PGP SIGNATURE-----

Version: PGP 7.0.1

wUBOSxkcPgNReBzywSyEQL1OwCgq6odzGVu7V5vHT5Rib6qjp7rWRUAoPPMEJA8vfy
842ntvbA4qX0CwOj=7W7p

-----END PGP SIGNATURE-----

"What the bloody... ?" Some days Hank figured it just didn't pay to check his email. Then again, maybe someone was serious.

Kristi Hanners glanced up from her magazine at Hank's exclamation. Did he have to vocalize over everything he read on his Internet? She stood to leave the study and find somewhere quiet to read. But remnants of curiosity made her pause. What now? "Yes, dear?"

"Sorry, honey. Just got the screwiest letter. A joke probably; but how would you like to move to Texas?" Right. She'd barely moved off the sofa in the last week.

"Texas?" She made a face of near-disgust. "Don't be ridiculous." The very idea was plainly out of the question. She head for the door with her magazine, footsteps barely muffled by the industrial grade carpet.

"Whatever." Curious now, Hank turned his attention back to the computer and did a little checking. He dissected the sender's email address and ran a whois on launcher.co.us:

Launcher Company
3828 Indian Trail
San Angelo, TX
915-658-4787

"Hmm." He typed www.launcher.co.us into his browser and was rewarded with a great rendition of a shuttle piggybacked on a futuristic ground effect vehicle screaming across a prairie, with the caption, Real, Affordable Space Access. "Sonuvabitch. Are these guys for real?" Sleep came hard that night.

Chapter 3

Year One, May 20th

By the firelight I see your tattoo.
Mi vido loco. So you're crazy too.
- Pam Tillis

Hank shifted uncomfortably in his chair, which was silly; comfort should not have been an issue. The chair was senior-VP grade, cushioned to hell-and-gone and covered with supple leather; it even had a built-in shiatsu massager. But such luxury is hardly a usual thing for cannonfodder-level engineers. And the interview was somewhat out of the ordinary. And interviewer himself was... different. He examined the conference room to which he'd been escorted by a pleasant-faced, sixtyish woman while he awaited the return of his host. It was a study in contrasts. The company office itself was located in a new strip mall; the sort favored by startups on a budget- affordable, but nice enough to make you look "for real."

The conference room was more of the same until you looked at the furnishings. Hank's chair, and that of his absent interviewer, looked expensive; the kind of thing you'd expect to find in the top offices at a well-established, and very profitable, concern. And they lacked the sheen of newness presented by the room itself; as if they'd been brought in from somewhere else. But the conference table could've come directly from any of a hundred corporate furnishing outfits; bland and anonymous. Contrasts again: What the room lacked in leased potted plants - something Hank always found outrageously ridiculous - it made up in artwork. There were very nice space-themed paintings hung everywhere. Not prints. Hank thought he recognized a McCall or two. What the hell?

And then there were the bottles of beer sitting on the table, sans coasters.

Neville swaggered through the doorway. "Sorry 'bout that," he offered apologetically as he eased himself back down into his own seat of affluence. He'd brought the chairs in from his own den, knowing that he would be spending far too much time in the office to subject his rear to the indignities of leased furniture. "You can never really buy a beer, just rent it." He gestured towards Hank's untouched bottle of Lone Star. "Drink up, son. Ain't the best stuff in he world, but it cuts a thirst." He settled deeper into his seat and propped his feet up on the table.

Hank stared. The man was actually wearing cowboy boots; old worn footgear, not urban cowboy costume crap. Well, they certainly went along with the faded Levis, work shirt and turquoise-encrusted string tie. No doubt there was a Stetson sitting around somewhere too. Hank started to tug at his own conventional tie... Well, as conventional as the Tasmanian Devil ever got ...then forced himself to stop fidgeting.

"Well, we've chatted a bit," Neville began again. "What say we get to business?" He reached over and manipulated a mouse attached to a notebook computer. "Gotcher resumé here; looks pretty good for a young guy." Young was relative; Hank was 37; but Neville may have been at least twice that; hard to say for sure, once the face got that leathery.

"Thank you, sir. I have made a point of continuing my education, and obtaining additional industry certifications..." Despite Neville's show of informality, Hank determined to play it straight.

The older man was having none of that. He cut, "So I noticed. Doesn't always mean much, but I happen to know that your company doesn't do tuition assistance worth a damn these days, so you were motivated enough to do it at your own expense. I like that." Neville feigned slight confusion. "But it beats the heck outa me why you've stuck with an outfit with such crappy benefits."

The engineer shrugged. "I have a wife, daughter, and a mortgage. I didn't want to jeopardize them by taking a chance on a job change."

"Sounds reasonable. Maybe." Neville brought his head forward and peered into Hank's eyes. "But what makes this time different? Why are you willin' to consider a change now?" He lowered his eyebrows. "It ain't the money or bennies, 'cause we haven't talked money yet. Got probs with your current employer?"

Hank was damned if he'd let this rodeo clown put him on the defensive. He stared defiantly into the man's blue eyes. "No, sir, I don't. If you'll recall, Launcher contacted me, not the other way around. You're the one asking me to come to you. I have a job." He grabbed his bottle and gulped carefully. "Why should I risk my family for you?"

"Good point," Neville conceded with a smile. He nodded to himself and tapped a few keystrokes into his notebook. "But the first question remains."

Hank took a deep breath and decided that if this was going to be a strange interview, he might as well go all out. "No, that's the wrong question. The right question is the one I asked. Why you want me to take the chance with my family." He sneered at the beer bottle, and set it down firmly, then pushed it away. He waited for Neville's reaction.

Neville cackled. "I like you, boy. Kinda figured I would, and I do." He got up and stepped around the table which he then leaned against. Intentional or not, it forced Hank to crane his neck to see the guy's face. "Let's not bullshit each other. We've seen your resumé. We've checked your references. We even talked to people at your company thatcha might not want us t' talk to. So I already know that technically you can do the work we got in mind." He picked up Hank's neglected beer and handed it to him. "Drink the damn thing before it goes warm and flat. It ain't a test; we really are casual here."

"No shit," Hank noted, then blushed. He drank, sipping moderately this time. It really was an acceptable brew.

Neville tried for control of the conversation once more. "Son, if you hadn't already answered the question of why you'd move for yourself, I doubt you'd be here today."

Hank nodded agreeably. "I have done a bit of checking on the company, of course. And it would ridiculous to try to pretend that the GEM launcher concept doesn't appeal to me."

"I sorta thought so," Neville chuckled cynically. "Seein' as you were the one to dream it up. Which is why we want you, naturally."

Hank blinked in surprise. "Huh? I didn't come up with the original idea. That was Bob Anderson, in a BS session one day. I did polish it up a little. But so did other folks."

Neville frowned. "Maybe we should get this Anderson fella too." He reached to his computer and made another note. Then to Hank again, "BS session, eh? Everybody bouncing ideas off each other? How'd it happen that you posted the idea on your site instead of this other guy?"

"Well, I'm the one with the site after all. And Bob didn't really think the idea was all that practical..."

"So you were the one willing to take a chance 'a lookin' like an idiot by floating the idea?"

"Well... Yeah. More or less."

"Space travel is a strong interest of yours?" Neville shifted the discussion vector abruptly.

Hank blinked and replied, "Of course; which I guess you know, if you already know about my website."

"If you're into space travel, why didn't you get a job with NASA?" The executive crossed his arms and watched the younger man's face expectantly. Obviously a test of a sort.

For Hank, an easy one. He sneered, and said, "Because I'm into space, not office politics, government contracts, covering my ass, and making excuses for still using the single least efficient launch system possible."

The semi-executive smiled. "That, Mr. Hanners, is why we want you. You're a competent aeronautical engineer, but there are better ones. We already hired a couple." He held up a hand at Hank's mildly offended expression. "Shit, son, don't getcher panties in a wad; there's always someone better eventually. But these guys... Technically, they're good. They even got imagination, and they want to see somethin' like this fly. But I think they need a real dreamer, a hardcore space enthusiast, and one who won't fall into the trap of doin' things NASA's way. As a boss. But he does have to be a competent engineer, so he can understand what he's asking 'em to do and what they're actually doing."

Hank was taken aback; his confusion was definitely not faked. "Excuse me, but run that by me again. You're wanting me to do what?" Surely he hadn't heard that right.

"I wantcha t' run our R&D section. Somebody's gotta design the damned thing." Lessee how he takes t' that.

"But..." Hank himself wasn't too sure how he ought to respond. From junior engineer on the totem pole to R&D chief?

Neville held up his hand again. "But me no buts, Hanners. Not just yet. Just keep that in mind. For now, I wanna take you out t' our facilities outside'a town. Not much but some shacks and sagebrush yet, but it's where we plan to build a launcher."

"But..."

"I wantcha t' get the nickel tour, see what we're doin'. I figure we can talk you inta joinin' us once you see we're serious."

By the time Hank's flight reached the Lambert Field jetway in Saint Louis that evening, he was fairly sure. For that matter, he'd obviously been sorely tempted from the start, to risk the perils of airport security. But he took two more days to thoroughly consider the deal. And how to talk his wife and daughter into it.

"No. Don't be ridiculous." Kristi dismissed the notion with a haughty sneer. "I am not moving to... to.. some bumpkin town in the Texas desert." She shuddered. She gestured dismissively with her vodka and tonic, slopping some of the fluid over the rim and onto paperwork which Hank had spread across the kitchen table to support his position- San Angelo tourist and business brochures, lists of schools, and a cost of living analysis. The wasted liquor was largely the limit of Kristi's attention to the documents. "Dust, horses, drafty cabins..."

More than a little frustrated, and definitely confused by the apparent non sequitor, Hank blinked. "What the hell are you talking about?"

She set her glass down on a Launcher Company benefits package. "I am not moving to some backwards town out in the boonies. I like Saint Louis. And where would Erin go to school?" the frumpy woman demanded.

Hank stared helplessly at the school pamphlets and folders sitting on the glass tabletop before his wife, then at her flushed face. "Backwar... Kristi, we're talking San Angelo in the twenty-first century, not some cattle town in the nineteenth." Gods, if she'd just turn off the soap operas on occasion and check out the real world...

"Right," she countered. "And how many TV stations does it even have?" By way of example, she pointed to her portable television - the four-inch LCD unit ensured she maintained her fix while away from the main unit in the living room - where the ex-mayor of a Midwestern city was once again reveling the nation with tackiness, assisted by the usual collection of tawdry morons.

Hank glanced at the tiny figures posturing on-screen. Inbreeding will tell, he figured. "Gods, Kristi; like you couldn't do without that crap?" He sighed with frustrated disbelief. "But I promise, San Angelo has TV, it has cable service. And stores, libraries, theaters... It's a city, honey. It even has schools for Erin." He tapped colorful papers. "Good schools." He propped his elbows on the kitchen table and rubbed his temples, a headache in full bloom. "Kristi, about the only things San Angelo doesn't have that Saint Louis does is too damned many people, the noise" - as if to make his point, the roar of traffic westbound on I-70 seemed to reach a crescendo - "and one of the most corrupt city governments in the country; I think Chicago sends its aldermen here for advanced training." Hank wondered cynically if that might even be true.

"But I like it here!" Kristi slurred. She sniffed dismissively.

Hank stared at his dumpy wife, still in a housecoat well into the evening. "Hell, how would you know? You never even leave the house anymore!" Except to go to the liquor store. Hank had started 'forgetting' to pick up her ration of booze lately. Thank the gods Erin wasn't old enough to buy, or Kristi would have her daughter making vodka runs.

"I do too!"

He took a deep breath, then let it out slowly. A screaming match would be worse than useless.

He propped his forearms on the table. "Look, honey, let me give you a few basic facts. First, " he stuck out a thumb, "I can stay here at the plant, sit in a cubicle with another guy, and figure out how to cram more people into aircraft designed 20-plus years ago by someone else who sat in a little cubical. If I'm lucky, and boredom doesn't kill me, I might get my own office in another twenty or thirty years. And I'd still be working with someone else's decades old designs." His index finger went out. "Or I can quit and go to work for Launcher, where they want to make me chief of R&D at a hell of a lot more money right off. We'll be the ones designing a brand new spacecraft, probably several craft. I'll be getting paid to create something I've dreamed of most of my life." Middle finger. "Now, if I take the new job, you can stay here and I'll send you an allowance. Or you can get a job of your own." Which possibility he classed right up there with a sudden reversal of continental drift; Kristi's last go at gainful employment was burgerflipper back in high school. "Or you and Erin can come out to Texas with me and we can be a family and have a much larger disposable income." He saw that struck a nerve with her.

"Is the pay really that much better?" she asked avariciously, visions of widescreen, surround-sound HDTV dancing in her head.

"Yes, it is." And if I set up an allotment to Erin's college fund right out of the check, Kristi won't know exactly how much more. For all that he was a gadget-happy engineer, he'd rather see Erin in a good college than a living room stuffed full of the techno-frippery that appealed to his wife. Especially since their daughter seemed to have inherited his distaste for most televised twaddle.

"And you really want to do this?" Now that the money had convinced her, Kristi was prepared to look as though she was graciously acceding to his wants.

Something deep inside clicked, and he realized he had already decided, and he wasn't going to let her off so easily. "No. I am going to do this. With or without you. If you choose to stay, I'll ask Erin to come along at least. But I'm going." He got up, nothing left to say. He pried open the refrigerator door and searched for a soda. He found something that Kristi hadn't yet mixed with alcohol and popped the top. And headed for his study.

Kristi sat stunned, mouth working like a gasping fish. But she'd been about to agree. Right?

As Hank sailed through the kitchen doorway, his face a study in controlled fury, he caught sight of Erin. She'd obviously been listening in, but... Hell, she needed to know about the job offer anyway. This didn't count as snooping. He began to calm down.

"Hi, Daddy." she began tentatively.

Definitely daddy's girl. Hank's heart began melting already. "Hi, hon. I guess you heard all that?" He tipped his head back toward the kitchen, then led the girl towards his study.

"Yeah." She stopped short of entering the room, and leaned against the wooden door frame. "After you went down to the interview, I did some checks at the library and on the 'Net. I think it sounds pretty neat." Hank knew his daughter also shared some of his own space fanaticism. Maybe it was just to keep him buttered up, but it worked. "I think San Angelo sounds okay, too. I guess... If this is what you want to do..." Her voice faded as she looked into the kitchen where her mother was doling herself out another vodka sans tonic. Hank followed her gaze as the young lady spoke again. "Do you think I'll make new friends there okay?"

Hank considered the question as Kristi watched trash TV on her microscreen. Few of Erin's current batch of friends cared to come by the house anymore, to have an inebriated Mrs. Hanners inflicted upon them. He shifted his gaze back to his daughter. Tall - she must be up to five-nine now - slender, fine chestnut hair hanging down straight. With those eyes and cheekbones... Even allowing for a papa's bias, quite pretty. Also quite intelligent and personable, if a touch too shy. Somehow... "I don't think that's going to be a problem for you," he finished aloud. He added a smile and brushed her forehead with a kiss.

She blushed and wiped at her brow. "Daddy," she pretended embarrassment, then looked up and returned his smile. "I'll go to Texas if you want."

"Thanks, honey." He sighed happily and dropped himself into his chair at the desk.

But Erin frowned and added, "What about Mom?" She flipped a guilty look back down the short hallway behind her.

Hank's cheer faded abruptly. "I think she'll come," he said with cynical certainty.

The teenager caught his tone. With a worried look on her face, she asked quietly, "Are you still in love?"

Poppa's guts curdled. This was hardly something a parent really wanted to discuss with his child. But Erin wasn't really just a child anymore, and he wasn't going to fob her off with comfortable inanities. He sucked air, and answered, "Yeah, I guess we are." He paused, and his eyes seemed to turn inward. "But we aren't the same people we once were. We both changed, and we don't always have the same things in common." He stared into Erin's green eyes. "So sometimes we just have to work harder at it."

Erin bit her lip, and tried to smile. "I guess maybe we all do, huh?"

Chapter 4

Year One, June 28th

Old man, take a look at my life. I'm a lot like you were.
- Neil Young

The Internet being what is - bored surfers, USENET, listservers, search engines, IRC, web forums, opinionated homepages, et al - it didn't take long for the online world to notice that someone had accepted Hanners' challenge. People worldwide debated the legitimacy and resources of the Launcher Company. Hank became a temporary celebrity, gaining the clichéd fifteen minutes of fame, when they realized that he had called his own bluff, quit his job, and gone to work for the space outfit.

That decision seemed to be a catalyst for other people; as if Hanner's commitment to the cause proved that Launcher was serious. Investors began to appear. And the idea that there were people out there who were willing to invest money in something so seemingly ludicrous as a ground-effect spaceship spurred a lot of more interest in other quarters. Discover magazine ran a series of articles on access techniques, beginning with the Launcher concept and outlining other alternative launch systems that had been suggested over the decades. Ground Effect linear accelerators looked downright sensible compared to orbital helicopters.

Scientific American was rather less complimentary, with a lengthy article strangely devoid of any supporting math which asserted that the launcher was an unworkable fraud. Neville wasn't thrilled by that one, but the magazine had lost so many readers after its turn of the century attacks on the American 2nd Amendment that it probably didn't matter much. SA hadn't much liked cold fusion either, but General Electric was releasing an interesting trickle of results from their joint research program with Japan under Pons and Fleishmann. Go figure. Well, someone had to be the voice of mediocrity.

On the other hand, since the twentieth century, Wall Street has been in love with hi-techs; even after the "fenderbender" of the stock market's 'Dotcom Death.' Which itself was a monument of the ability of investors to refuse to learn from the past, specifically the earlier, turn-of-the-century, market adjustment caused by an Internet techno-flop. The favorable article in the Journal reflected this techno-infatuation. The more conservative money people were impressed by Launcher's insistence on building a solid financial base (not to mention some actual infrastructure) by selling ordinary bonds and through personal investments by the founding partners before making an initial stock offering. Some people, Neville among them, remembered techno-startups that appeared around breakfast, IPO'd just after lunch, and evaporated by supper, damned near taking the rest of the market with them. Just when Launcher would IPO was the immediate item of speculation.

Neville punched the speaker button on his phone and leaned back in his chair. Yet another such speculator to handle. "Go ahead." He gazed down at his suit, missing the more comfortable jeans of his defunct retirement. Perpetual casual day had been fun while it lasted, but it was time to get serious with all the outsiders that were coming around these days. Big Money always looked askance at a lack of formal pantomime, not to mention pants. C'est la vie. Well, when we're up and runnin'...

A tinny (when would the consumer electronics industry realize that decent quality speakers really wouldn't noticeably add to their expense?) voice replied to Neville's prompt. "I do thank you for

taking the time to give me this interview, Mr. Neville."

Ah, reporters. At least this one's polite. So far. "Not at all, Mr. Naismith. 'Course, I do have an ulterior motive, my own agenda." He laughed a little.

"Everyone I interview has their own agenda, sir," Naismith chuckled right back at him. "The trick is make sure that it's my agenda that controls the interview."

Neville smirked at the phone, unseen. Uh huh, right. "Do tell. Neat trick if you can manage it," he challenged playfully. "Well, in that case, why dontcha get us started. I'm bettin' I can guess your first question."

Naismith was happy to oblige. Not too surprising, since that was the point of the whole exercise in public relations. "I suppose all the market speculation does make the question fairly obvious." Then, as if reading from a cue card, "Mr. Neville, how soon will Launcher Company make an initial public offering?"

"Well, thank you for gettin' right t' my agenda," Neville laughed. Gotcha. Unseen by the journalist, he made a mark on an invisible chalkboard. "Me an' my people been gettin' calls about that damned near since our website first went active. Drivin' us nuts. So I wanted to settle it once and for all."

"Yes?" The voice didn't quiver with expectation, but it should have. This was the first official announcement from Launcher on the subject.

"We won't."

The line was silent while Naismith apparently waited for Neville to elaborate. The Texan out-stubborned him though, and the reporter prompted, "You mean there's no specific time frame for the offering?"

"Nope. I mean we aren't going IPO at all." If Neville smoked, he'd have been kicking back, blowing smoke rings. He did sip beer; one of the last bottles in the office, since Amy had reminded him that beer bottles in the waste baskets were another thing that made conservative investors nervous.

Naismith laughed. "That's certainly likely to drive trading when you do announce. The sheer suspense. How about if we agree not to release the information too far in advance if you'll just give us the exclusive?"

"Hell, Naismith, I thought you said you did your homework on me." This time Neville scowled at the contraption at the center of his desk, visualizing barbecued reporter. "With any of the other companies I ran in the past, did I ever knowin'ly give out incorrect data?"

"Errr..." Then silence.

Damned right. "Son, I said we aren't makin' a public offering because we aren't, not to play stupid market games. Launcher is stayin' a closed company, a partnership." He leaned into the phone, and fought an urge to drum his finger on the hard wood table top; it would only distort his words. "We'll sell all the bonds we can eventually redeem, that people wanna buy. We might even occasionally

let a new partner opt in." He frowned, then picked up the handset again, not wanting to be misunderstood. "But we will not... and you better quote me on this... we will not form a traditional corporation, thus turnin' ourselves into a quasi-governmental agency subject to its bumbling bureaucratic interference, nor will we open the company up to inept control by sellin' votin' stock to sheeple who probably think a launch is a boat."

"Umm. Well. I see..." Naismith stammered. This was not expected.

"Besides which," the exec interrupted, "I personally disapprove of how the stock market is used, make that misused, today. The market was supposed to be a way to float loans to new outfits and companies wantin' t' expand. I can do that with bonds. But nowadays people expect to make instant money; they think that lotsa folks investin' inna company somehow increases its real worth, so its stock is magically worth more, so they can then sell it off an' turn a quick profit.

"That only works at all when the the company is actually makin' some product, be it physical or mebbe a service; that is, the apparent increase in the net worth has t' be backed up by something besides stockholders' wishful thinkin'. When it isn't, whatcha really got is inflation, stock that ain't backed up by product. And when it happens to enough outfits at once, you got inflation and even Dotcom Deaths come Monday morning." He paused for breath and to gather his thoughts.

"On really good days, you get stockbrokers tryin' t' learn t' fly. Not necessarily a bad thing, in my book." The basic message sent, and the reporter in possession of a colorful quote (which the paper was quite pleased to run bold-face in a sidebar), the real interview was over. The two exchanged inanities for a several more minutes, then each broke off to get some real work done.

Of course, daytraders and stockbrokers, not being emotionally capable of grasping the point, faithfully waited for the IPO that never was. In the meantime, more savvy investors snapped up bonds.

A hell of a lot of 'mini-bonds' got bought at WorldCon that year.

Some folks found other ways to 'buy' their bonds. As Hank Hanners had once pointed out, there are a lot of skills represented amongst Internet users. Launcher meant to take advantage of the fact. Compared to NASA, which had the seemingly bottomless pockets of complacent taxpayers to pilfer, Launcher was on a tight budget. Neville and his compadres were quite willing to deal with skilled technicians and not-so-skilled but absolutely necessary rough laborers willing to take their pay, at least in part, in trade. A great deal of people thought it was... a great deal. A basic wage, with accrued bond interest; and in the case of many construction workers, room and board in the form of dormitories and chow halls, brought in most of the people Launcher needed.

Some didn't even bother with traditional housing. A tent and RV 'city' of rather fluid proportions sprung up on company grounds; mostly consisting of day laborers and the folks truly serious about conserving funds. It also attracted more than a few tourists - space fanatics, science fiction fen, the merely curious. One late-night wag referred to the operation as the world's largest science fiction convention.

The young man ran a last bit of water into the cement mixer and set it to turning to rinse out. Then he returned to smoothing the pad he had just poured. He sprayed water over the plastic mass to leave a fluid film, and ran his oversized trowel across the cement. The morning was already plenty warm, and this part of Wyoming wasn't noted for shade trees; he'd chucked his shirt early on. His short,

but vigorous life of labor showed in the play of muscles on his back. The Wyoming sun showed in the half tan/half burn of his fair complexion. Sweat glistened in the sunlight.

Some yards away, an older man watched the work. He shared the younger man's six feet of altitude and sunburn-prone coloring. His lean torso was a good twenty years behind him though. He sighed, squared his shoulders, and walked over, scuffing up dirt where constant traffic kept grass from growing. "Hey, Cal."

The worker started at the interruption, and looked quickly at his father. "Yeah, Dad?" He continued working. It wouldn't do to let the concrete set unsmoothed. A rough surface would only make that much tougher to clean up after the chickens to be tenanted here.

"Got a few minutes to talk?"

"I guess so; if I can finish this foundation." Cal Schmidt gestured to the base for the farm's planned chicken coop.

"You can keep workin' if you want. Just want to talk." Schmidt-elder smiled. Damned if that boy hadn't developed one hell of a work ethic. He considered his own tendency towards laziness, and figured the boy got it from his mother.

"Okay." Cal continued his broad, smooth strokes. "What's up?"

"I was kinda hopin' you'd tell me." Cal's father shrugged. "You've been pretty distracted ever since you got the acceptance letter from MIT the other day. Like somethin's botherin' you. Thought it might help to talk it over." An apprehensive expression flitted over Cal's face, but he said nothing. His father continued, "If you're worried about the tuition..."

Cal straightened, and propped his tool against the frame of the mixer. He ambled over to a large plastic drop cloth near the fresh foundation. He picked it up and shook it open. "Hey, Dad; how 'bout helping me pull this over the concrete so the water won't evaporate before the stuff sets?"

His father nodded and took one end. As they maneuvered the sheet into place, he steered the discussion back into place as well. "If you're worried about affordin' MIT..."

"No. It's not that..." That would be too easy. Cal stalled a little longer by weighting down the edges of the plastic with broken bricks and rocks brought over for the purpose.

"I think we can handle it okay," the elder Schmidt persisted. "That partial scholarship ain't half bad, and we have a little more cash stashed than you might think." He set a few stones into place while he spoke. Work's gotta get done.

Cal looked troubled, and gave the polymer film a half-hearted tug or two before answering. Finally, "Dad..." He sighed. "I was thinking of.... maybe putting college off a little longer." Okay, that gets the balling rolling. Of course, it might be my balls rolling in a minute.

Mr. Schmidt raised his eyebrows. "Well, you've gotta do what you think is right. But that scholarship won't wait forever, you know."

"I know, Dad. But... " Cal turned to face his father, guilt evident on his face. "I'm not sure more school is what I want right now. I want to do things." He hesitated again, and his father waited with more patience than Cal figured he had a right to expect. "I've been looking into the Launcher Company," he added, meaning to clarify his position. He watched his leather shod feet as he kicked dirt.

Mr. Schmidt made a small smile. "Launcher? The space folks down in Texas?"

"Yeah." Cal's face became more animated. "They'll piss off the government, but they're going to build the first really affordable space access system. It'll make NASA look like the putzes they really are." He added a happy grin. "I've been thinking about going down there to work." Whoops. Maybe just a little too abrupt there, Cal-boy.

Mr. Schmidt rewarded the revelation with a hard stare. "If work is what you want, dontcha think we have enough here on the farm?" Cal looked crestfallen, and his father grinned. "Just kidding. Ain't like we weren't expectin' to do without you when you went to college anyway." He eyed his son carefully. "Can't say I'm surprised, what with all the launcher and space bookmarks you've left on the computer in the den."

Cal frowned. "Dad..."

"Take it easy, boy. Wasn't spyin' on you." He smiled sheepishly. "I've been readin' the stuff myself. Gotta admit; 15, 20 years ago, I'd be down there myself. If anybody had the balls to try it then. Glad to see that you've got the requisite cojones." The elder Schmidt hooked his thumbs in belt loops and let his approval show.

Looking mildly confused, Cal said, "You're okay with this? I mean, I know you were really counting on me going to MIT." What the hell?

Schmidt shuffled his own feet in the Wyoming dirt. "Hell, son. I guess we shoulda had this talk a good many years ago. I ain't made myself clear enough." He stared Cal right in the eyes. "In itself, I don't give a shit if you graduate MIT magna cum laude or dress up in a yellow dress and hand out flowers at airports. If it's what you gotta do." With a dubious look he added, " 'Though the later option might disappoint me just a tad bit. 'Course, even MIT ain't what it used to be," he parenthesized. His foot did a little more micro-landscaping before he said, "Let's move into the shade on the porch." He nodded toward the family's farmhouse.

Cal's father was considered something of an eccentric by his neighbors, and the house was a major reason. It was not a stereotypical Old West domicile. A couple of decades earlier, Schmidt had bought some land and a geodesic domehome kit. To the basic kit, he'd later added a wide porch completely encircling the dome home. Cal - and the neighbors - thought it looked more like a flying saucer than a house. Schmidt was unconventional, and had tried to pass that on to his son. The call on college indicated he might've succeeded.

The pair wandered over to the 'back' porch, near the kitchen door, and settled onto a couple of well worn wicker chairs. The sun was just high enough for the overhang to grant some cool shade, although a suncatcher fabricated from old AOL CDROMs glittered brightly near the edge of the overhang. Cal broke the brief silence. "You're making this 'way too easy, Dad. What's the catch?"

"Ain't no catch, boy. Not on my end anyway. But that don't mean it'll be easy." He smiled to himself. "Think you can stand a lecture? A beer might help." He turned, wicker chair creaking, and called into the house, "Shelby! You got time to get me an' Cal a couple of beers? I'm tryin' to loosen him up."

Laughter followed by a woman's voice came from inside. "Damned well about time, old man!" After a short wait, which Cal spent wondering and which the senior Schmidt spent smirking, Mrs. Schmidt came out with three pale ales. Two brews went to her male charges, while she kept the third for herself. She settled into the porch swing where she had a good view of the men. "Don't mind me; I'm just watching. This is bound to beat anything on that damned TV." She winked playfully at her husband. She pulled a bandanna from the rear pocket of her jeans and used it as an improvised table cloth, draped over a book or something she'd brought out with the brews and set on the swing seat beside her. She was about as typical a farmwife as her husband was a farmer; the suncatcher was her handiwork. She took a swig of beer, set the bottle down on her miniature table, and raised her eyebrows at her husband. "Well?"

"Why do I get the feeling that I've been set up?" Cal wondered aloud.

"Probably got something to do with the fact that you've been set up," his mother replied cheerfully. She had never been one to ignore a rhetorical question.

Mr. Schmidt chuckled. "You ready to put up with a little pontificating now, Cal?"

"Pontificating?" The younger man fortified himself with a sizable gulp of beer. With the apprehensive look of a less than enthusiastic martyr, he said, "Shoot."

Still grinning, Schmidt replied, "I'll try not take ya literally." Another sip of beer, and he went on in a somewhat more serious tone. "You know, most of our neighbors take me for a regular hick, if a little nuts. Small family farm an' ranch, peddling veggies an' sheep an' wool, favorite hobby's popping prairie dogs at a few hundred yards. Likely you think the same a lot of the time. But they're only half right. I'm a hick by choice. Don't suppose I ever got around to tellin' you what I'm doin' out here; now I'm makin' sure you know."

Schmidt looked out past his boy at the surrounding land. Green and brown, and topped with a huge, clear, blue sky; beautiful. Hard as the living got on occasion, he had never regretted coming here. He meant to make Cal understand why. "It may have occurred to you that I didn't exactly grow up on this dinky farm. In fact, I came from back east. Used to be a telecommunications technician. And the only reason I never finished my engineering degree was fear of being classed as one of the semi-educated, degreed morons around me passin' themselves off as engineers." Cal grinned at this, remembering some of his father's less polite references to engineers over the years. "Besides which, once I got established in the field, I was making more than some of those so-called engineers anyway." The elder Schmidt grinned again.

Cal recalled tales of telecomm 'engineers' who didn't know the difference between a T1 and a T3, who routinely killed Internet backbones, and wondered if that was really much of a brag on his dad's part. Probably was, at that.

"Problem with telecomm," the elder spoke on, "is that most of the jobs are where most of the people are. Cities." He shuddered. "I hate cities; full of busybodies packed 'way too close. But it pays

pretty good. Anyway..." He paused to recall something. "I read a friend's manuscript once; don't know if she ever got it published. But the title was I Just Want to be Left Alone. That's me. I just wanted to mind my own business, and have everyone else mind theirs; I wanted everyone to leave me be as long as I didn't bother anyone else. And being the semi-anarchistic sort, that went double for the government.

"Round about that time, it occurred to me that I had a good bit of change socked away; enough to buy just enough land for privacy and to be more or less self-sufficient. Which was about as close to old style homesteading as I could get." With that, he eyed his son appraisingly. "So I surprised the hell out of most folks that knew me. Chucked my job as a switch supervisor, loaded up the truck, and headed west." More beer, and, "Wasn't the first time I'd done something like that, though. Lotta people thought I was nuts to quit the Air Farce when I was more'n halfway to retirement. 'Course, I figured I was halfway to going nuts, and retirement in the loony bin didn't much appeal to me.

"Anyway, I ended up here. Dinky, pissant ranch and a few investments that pay our bills, neighbors that don't meddle and are willin' to help each other out when it's called for. And the government ignores me as long as I pay 'em their damned rent every year. And I even lucked into a gorgeous lady willin' to put up with my particular brand of insanity."

Shelby Schmidt chirped up, "Aw, you're just saying that because you want to get some tonight!" She raised her bottle in a toast to lust.

Cal blushed and his father leered. "Damned right, babe." Then back to Cal, "Anyway, you catching my drift, or am I rambling too much again?"

Doubtful, Cal began, "Well...?"

"Shit. Short form: Screw 'conventional wisdom', what the damned herd thinks. Hell, screw what I think. Don't ever sweat what other people think you should do, how you should live. You do what you gotta do. It worked for me. Oughta work for you."

"Still, that MIT scholarship is nothing to blow off lightly..." Cal knew damned well what he wanted, but his dad's speech aside, he was far from sure that it was the right thing.

"Lightly, heavily, whatever. If it isn't what you want, blow it, fuck it, whatever!"

Profane, but to the point. That's my Dad. Hope past dawning and well into daybreak, Cal asked, "So you really won't get mad if I don't go to MIT?" If Dad was so sure...

"Son, if what I think matters..." His eyes glinted, and he viewed the boy appraisingly. Then he took another sip to cut the dust. Made for an excuse anyway. "If the Launcher Company comes close to doing what they say they mean, they're opening up a new frontier for pioneers, not just NASA prima donna space cadets. Somewhere for people to go live the way they want to, not like some gov snoop thinks they oughta. Wyoming was as close as I could get. You may have a chance to do a hell of a lot better."

"So..."

"So," Cal's mother jumped in, "we thought you might want this." She magicked her 'book' out

from under her improvised table cloth and passed it over to her son.

"What the...?" Cal examined the object. Not a book. A reasonably recent model palmtop computer.

"Not very latest." His mother made excuses. "But then, it has left the store already. 128 Meg of RAM, 30 gig solid state hard drive. Best of all, it's got a wireless modem and a pre-paid account. With full Texas coverage on the network." She smiled at Cal's befuddled expression. "We're old, but not senile. It wasn't so difficult to guess at what's been on your mind, what with your browser bookmarks, the flyers you've gotten in the mail, and the library books."

Mr. Schmidt was not to be outdone in going away presents. He chimed in again. "And I expect you should be taking my old Glock, too; the 21. Never liked that little .25 you've been tuckin' into your pocket all these years; cheap, and a lousy defensive round. 'Bout time you got a little quality." He smiled. "Kinda hope it isn't so practical as wireless mail, but you never know."

Cal was astounded. "Dad? Your .45? You've had that since... Hell, you've always had it. I mean, well... I don't know what to say..." He blinked back tears.

"Heck, don't sweat it. Gives me an excuse to start wearing the Grizzly now." Cal's father had a weakness for .45 calibers, ACP and Win Mag alike. The neighbors who thought the Glock was interesting were going to freak when they saw the massive LAR Grizzly autopistol hanging on the man's belt. He grinned. "Just get going, and get to that new frontier before you get too old like me."

"Too old, my ass," Shelby interjected. "You're still in your fifties. Once Cal gets that booster built, I may haul your butt into space. I hear freefall may make you good for a few more decades." She leered at her hubby. "And just think of the privacy." Then facing Cal again, "I'm reasonably sure you can do nearly anything you put your mind to, but where do you plan to start in Texas? Seems like your math and programming skills should be useful."

"I doubt it," Cal responded modestly. "Without any sort of degree or extensive experience to show off, I expect to settle for manual labor. Anything for room, board, and Launcher shares."

"Anything?" Mr. Schmidt wondered.

Cal laughed. "Sure. Hey, they're building a port for aircraft and spacecraft." He nodded toward the cement pad curing in the sun. "I imagine they'll need a bit of concrete poured."

"I expect so. When do you want to get your truck loaded up?"

Happily for Hank Hanners, if not the remainder of his family, loading up was somewhat less personal. They left the major operation to professional movers, with considerable oversight from Kristi Hanners and Erin. Said supervision was more rational than the moving crew had a right to expect, although they failed to appreciate the fact, since Erin had taken a hint from her father and had her mother's wet bar packed first. The ordeal would be a sober - indeed, sobering - one for all concerned.

Safely distant in San Angelo, Hank thanked what gods might be that the school year was over, freeing up his daughter to help Kristi. Better yet, they'd both had time to join him here for the house hunting phase of the move. Even Kristi had been pleased with the place they'd decided on. It was larger

and in a quieter neighborhood than they'd enjoyed in Missouri. Although Hank was damned if he was going to mention to his easily annoyed spouse that quiet was likely to be in short stock if Launcher managed to get a supersonic booster operating in the area. The place had enough modern amenities to satisfy even her that rustic cabins were not in their immediate future.

Of course, it helped that his new boss, as a fine financially upstanding citizen of the community, seemed to know everybody. He'd had his choice of real estate agents already prepped with Hanners-specific portfolios. Even the least desirable houses on the lists were pretty nice. Nothing had been said, but Hank suspected the company was paying an extra commission to guarantee such service.

Real estate agents weren't Neville's only contacts, as his current visitor demonstrated. With closing completed, he'd gone out front to uproot the obsolete 'for sale' sign just as a Sheriff's patrol car pulled up. A large, brown-shirted deputy, whose coppery complexion, axe-blade nose, and black hair marked him as Amerind - Hank reined in his usual peculiar version of humor; the guy probably wouldn't appreciate being called Tonto - levered himself out of the the four wheel drive vehicle that passed for a cruiser in these parts, greeted the proud new homeowner, and introduced himself as Dwayne... Hank eyed the man's name tag again. Simmons.

"No, sir," Simmons had explained. "I don't come check out every new resident." He smiled amiably. "I imagine most folks would prefer not to deal with me at all; downside to wearin' a badge." He shrugged eloquently, and Hank tactfully didn't agree. Although it was true enough; his own experiences as a law-abiding citizen encountering Saint Louis police had ensured that. "But you're workin' for William Neville, and he's an ol' friend of the Sheriff's. When the boss says to make the new folk feel welcome... We try."

"I do appreciate that, Deputy..." Politeness couldn't hurt. And this isn't Saint Louis after all; this department probably has hiring standards. Saint Louis advertised for new officers on late night TV, along with the psychic networks and get-rich-quick real estate schemers.

The big man cut in again. "Oh, just call me Dwayne, Mr. Hanners."

"Okay, Dwayne. And I'm Hank." A definite change for the better compared to Saint Louis, where the police often neglected to wear name tags, and covered badge numbers with electrician's tape. "Anyway, thanks for the welcome. I'll pass it along to my wife and daughter when they get down here."

"Closin' up the old house are they?" the deputy guessed.

"Yep, since I had to start work here already, I got the easy part of moving," Hank joked as he glanced down at the sign in his left hand.

"Good plan," Simmons approved, with a twinkle in his eye. "I'll have to remember that one." He shot a quick look at the slowly descending sun and sighed. "Well, I'd better head out of here. Still have a few things to do before shift change."

"Sure," Hank allowed. As the big man strode back to his car, he added. "Thanks for dropping by. Let me know if there's anything I can do for you." A polite fiction; but it couldn't hurt to stay on good terms with the local fuzz.

The cop paused as he open the car door, and sized up Hank all over again, and decided to call

his bluff. "Well, there might be, sir. From what I hear about Launcher, that's goin' to be a pretty fair sized operation ya'll have out there. I expect ya'll be needing some experienced security men. Maybe you could put in a good word for me when the hirin' starts."

Hiring security guards was considerably outside Hank's R&D bailiwick, and he readily admitted it. "But I'll keep that in mind. I guess you could put me down as a reference on the application."

"I may do that, sir. Thanks. You have a nice day." He gave Hank a little bow of the head and crammed himself back into his vehicle. Hank sympathized with him silently, knowing the woes of an above-average sized man in the modern efficiency-sized world. Of course, where Hank's bulk ran to flab, the deputy looked to be pure bone and muscle. The peace officer hissed slightly as his butt kissed the solar heated vinyl seat, then started the car and put it in gear. He waved as he pulled away.

Hank watched the guy drive off - into the sunset, just like a Western cliché, damn it - and shrugged. Brand new here, and the locals are asking _me_ for references? Launcher must be a bigger deal for the local economy than I realized.

Chapter 5

Year One, July 20th

You are finite. Zathras is finite. This... is wrong tool.
- Zathras

Some days you're the windshield, some days you're the bug. Which is more or less how the computer-modeled launcher looked on the workstation screen. Hank shook his head in disgust and said, "Okay." He leaned closer to the computer screen. And closer to his employee. He tried to ignore the man's ashy breath. Smokers. "Run that again," he directed the thin man sitting beside him.

Abdul Gonzales - and the younger engineer wasn't answering any questions about how he'd gotten saddled with that combination of names - tapped buttons on his touchscreen. The computer simulation of a ground-effect launcher run started again. This time Hank ignored the animated display and watched the numerical data whizzing by in a second window. "See. Right there." Abdul pointed to a set of numbers and froze the run. "As soon as we start crowding Mach, the pressure wave buildup disrupts the ground effect cushion under the plenum."

Less than two months into his tenure as top engineer for Launcher, and Hank already had a serious problem. Joy. He supposed he should be glad it had popped up so soon; in most startups, an engineering staff wouldn't be in place yet, much running and debugging sims. Neville and his partners had sure done an outstanding job of picking out go-getters. Hank worried about keeping up with them.

So, back to the problem at hand. The engineers were holed up in Gonzales' office - another change from Hank's previous employer; everyone but the lowliest technical workers seemed to have their own private space - where they were reviewing the latest design failure. Hank had noticed that despite the private quarters, a lot of brainstorming and productive work managed to occur in common areas. But for this... disappointment he was glad for the chance to view the destruction in near-solitude. "Damn." Abdul was right. Every time they tried to get the 'hypersonic hovercraft' to go supersonic, the computer model shredded itself into random bits and bytes. A beautiful idea, but it just didn't work.

The lower echelon troubleshooter unpaused the sim and they watched the virtual booster start dragging its tail section on the ground at several hundred miles per hour. Total destruction was fast, even in slow-mo. The columns of numbers in the secondary window turned to gibberish as the poor overstressed comp processor attempted to model the independent trajectories of the simulated rubble and shrapnel, remnants of what had been a hi-tech super vehicle. "Hokay, boss," Abdul sighed as he leaned back dejectedly. "Now what?" He stared idly at a blank wall - offices might be a dime a dozen, but windows were still in short supply - and thought that he really needed something to dress the place up. Something to take his mind off fubars like this.

Hank was not a happy camper either. He'd felt a strong proprietary interest in the hovercraft concept, and really wanted it to work. "Damn, damn, damn..." he muttered softly as he mentally reviewed data. He sat down on a short filing cabinet near the door. "What about those sims they ran at Berkley? And the wind tunnel tests on the models? What did they do differently from us?" They must have done something right; since they managed to avoid crashing long enough to have convinced Neville to back the concept.

"Speed, mainly," Hank's subordinate answered. "They never seriously considered a supersonic model, and designed for 650 MPH. You told us to shoot for at least Mach 1.5. We're into an entirely different regime and seeing wavefront effects that Berkley never did."

"Umm." Hank closed his eyes to think. While he did, Abdul settled back in his own chair and watched his boss in sympathy. And wished he dared fire up a cigarette; but he wasn't going to push his luck with a new boss, even one that seemed as decent as Hanners. He'd rather liked the idea of a supersonic hovercraft as well. Hank spoke again. "Okay, try this. Shrink the damned plenum and stick a jet turbine in the sucker's nose to run plenum pressure up so high the cushion looks structural to the Mach wave..."

"Been there, done that." Abdul countered negatively. "If you run plenum pressure up high enough to beat the wave pressure, you get excessive lift and the damn craft lifts off the ground. When the nose went up first, the bitch does somersaults over the desert. When the tail lifts, it doesn't flip but starts oscillating. Up 'til pressure drops, then down again. Shakes herself to pieces on the Mach wave. Not pretty. Very messy." The results had put him in mind of the lifting body crash that started every episode of a classic SF series that still syndicated on cable occasionally.

"Can we add more aerodynamic control surfaces to keep that under control?" Hank knew that he was grasping at straws, but...

"Maybe. We tried some stuff, but it only worked up to around 1.06. And it did nasty things to the drag coefficient. Energy curve sucked. And that was without even figuring in estimated drag effects from an attached shuttle." Yet another brilliant idea foundering in the toilet.

"Shit."

"Uh huh. So now what?" Abdul repeated.

Hank sighed. "Well, for starters, I think I'll send you to tell Mr. Neville with the bad news. Given the traditional rewards for messengers..."

Abdul laughed bitterly. "In your dreams, buddy; you tell him. That's why you get the big bucks, Mr. Management."

"Oh, joy." Hank stood up turned to the door. He paused and raised one arm into the air. "Ave Caesar Imperatur! Morituri te salutant!" The two laughed, and Hank thought of something else. "Okay, I'll handle the bad news part. You get this data to Web Services."

Abdul was caught up short by the apparent shift in conversational direction. "IT? Why so, Oh Great and Powerful Oz?" Abdul was nothing, if not a smartass.

Which let him mesh well with Hank. "Pay no attention to the man behind the curtain," he orated. "Neville's got the idea that this started on the 'Net, and oughta stay there. Wants us to.... open-source everything we do, put it on the Internet for continuous peer review, as it were. Idea's that with millions of people all over the world looking over our shoulders and making suggestions, we're bound to pick up sporadic good ideas. And it's bound to be cheaper than putting several hundred more engineers and techs on the payroll," he finished cynically. If he'd been prone to empire-building anyway, he should have gone into public service. Launcher sure didn't work that way. He eased his

girth back down onto the files and felt about blindly for his ever-present coffee mug. He had a tendency to leave it laying around when he left rooms. These days he carried a plastic travel mug from a telecommunications outfit noted for bureaucratic bulk and several straight years of leading the industry in customer complaints. The one time Neville had seen it, he'd simply grinned an evil grin and said nothing. Hank guessed that the subtle warning had gotten across. His fingers encountered something and he clutched at... Ashes. Hank winced as he realized that he'd found Abdul's ashtray.

The younger man saw it too. "Umm..." he offered sheepishly, if unhelpfully. Then he ripped a tissue from a box by the computer and passed it to his boss.

The chief wiped his fingers clean and glared at the miscreant. "Seems I recall some rule about no smoking except in designated areas..."

Abdul made a feeble effort to defend himself. "Rules? Isn't that a downright statist attitude from someone who says he's a libertarian?"

"Anarchocapitalist, to be specific," the engineer corrected. "And bear in mind that I'm your libertarian _boss_. If you don't like our rules, you can always haul ash... tray to some less politically correct outfit." He smiled to take the sting out of the scolding. "If you can find one less PC than us."

"Good point." Abdul scooted his chair over to retrieve the ashtray, which he stashed in a desk drawer. No doubt it would come right back out as soon as the Boss departed. Good enough.

The Boss found his coffee, and thus placated, went on with the original discussion. "Anyway, Neville wants us to open-source everything we do, so let's tell the world about this snag. Maybe someone'll have a better idea." He sighed again. "I think I'm just a little too close to the problem; there's bound to be something I'm just not seeing."

Abdul face brightened. "Cool. The webster just hired the hottest new babe for page development. I think I'll volunteer to work with her to get the data up." Sly grin.

"Just keep thinking with the right part of your anatomy. Fun's fun, but it's _engineering_ we're paying you for."

"Spoilsport." And in playful retaliation, "Don't you have somewhere to be? Like telling the Big Boss about this little problem?" If I can't have fun, no one does.

"Bleah," Hank sighed bleakly. "Tell you what- You take over as boss engineer, and _I'll_ go play with the new IT intern."

"No way. Now go take it like a man. I'm going to." He waggled his eyebrows suggestively.

"Easy for you to say." Oh well, time to face reality, and the chance for a slow and painful death at Neville's hands. Then again... It was close enough to noon that Hank chose to employ lunch as a delaying tactic. He didn't look forward to sharing the current woes with his boss. He stopped at his own office long enough to check messages and grab a hat. Neville's western influence was beginning to affect the R&D boss; besides, in the hot Texas sun, the shade from a wicker cowboy hat was downright practical. From the office he headed to the parking lot, intending to refuel his stomach at a small bar and grill which Launcher employees were discovering.

Fate wasn't smiling on him. He encountered Bill Neville at the front doors, also heading out. "Mornin', Hank," the Texan greeted him. "Goin' t' lunch?" Dismayed, but hiding it well, Hank confirmed the guess. "Great. Got plans, or would you care to join me?" Neville asked.

"I could do that. I was headed to The Grill, but..."

"Sounds good. I hear they keep the beer plenty cold. Let's take my car."

Hank shrugged in resignation. Some days you just can't win. "Lead on." Neville held the door for the engineer as they left the building. Outside, a short expanse of dead grass gave way to a middling large parking lot surrounded by cyclone fence. The company had relocated their main offices to the facilities outside of town, and were maintaining the strip mall location as a mail drop until all their changes of address notifiers made the rounds. Hank began baking in the summer heat; Texas in July closely resembles the interior of an enormous solar oven. He could feel his shoes sinking into the fresh asphalt of the parking lot. The stench of hot tar was killing what appetite the merciless heat hadn't already done in. A cold beer started to sound very, very good. So did losing a few of his insulating pounds of fat.

Neville appeared immune to the heat; or maybe his lean hide just didn't have anything left to sweat off. As the pair walked over to Neville's vehicle, a well-kept '01 Ford Expedition, he cast a sidewise glance at Hanners and inquired about the launcher simulation progress.

Hank grimaced. "You would ask." So much for appetite.

"Eh?" The grizzled exec cocked an eye at the engineer.

"I was going to brief you after lunch, but..."

Neville frowned. "I take it you've got bad news." He punched a keyfob button as they approached his car. The car beeped and popped the locks. The men climbed in. The engineer paused to wipe dust from his seat. Okay, well-maintained, but dusty. Doesn't the man ever use his air conditioning? "Yeah, kinda," he finally answered. He sat and winced. Not as bad as vinyl, but the cloth seats still conducted far too much heat into Hank's posterior.

"Somethin' don't work as planned, I assume." Neville stuck a key in the ignition and twisted. The engine caught with a muffled rumble. He had pity on the other man and turned on the A/C. "Roll up your window when it starts blowin' cool." So why lock it up if he didn't bother closing the windows?

Even after weeks of associating with the executive, Hank found Neville's 'hick' accent and speech mode peculiar in a successful corporate exec-type. Maybe that was the idea; keep the opposition off balance. He turned his thoughts back to the question at hand. "Yeah. Problems." Then he sighed as cold air slapped him in the face. Little used maybe, but that A/C must be turbocharged. Hank thumbed a button and his window rose with a quiet hum. He let sweat evaporate while Neville wrangled the SUV through the front gate and onto the road. Hank watched lines converge in the distance while the low rumbling whine of truck tires on asphalt relaxed him. Once composed and cool, he explained the stability issues encountered in the computer model while Neville drove. "But on the bright side, the aerospike team is making great progress on the shuttle motor. Of course, that could put us in the position of having a perfect orbiter that can't orbit."

Quite unexpectedly, Neville laughed. "Heck, son, if that mini-shuttle works half as well as advertised, we could make money sellin' 'em t' other private access programs and forget the launcher!" He snuck a peek at the engineer's expression.

"I don't want to forget the launcher! As you may recall, I'm in this for something more than just designing cute space toys." Then he did a mental double take. "_What_ other access programs?"

"You ain't keepin' up with all the literature, Hank." Eyes back on the road, Neville pointed to a folded newspaper laying on the console between them. "Looks like we gave some folks ideas. Bit players yet, but one group is reviving the ol' Boeing-Russki Sea Launch ballistic system. Somebody else is tryin' t' do something like our hovercraft system, but with a seaplane."

"I'll be damned." Once the older man had mentioned it, Hank did recall something about a seaplane launcher, but from long before Launcher was even a gleam in anyone's eye, around 2000 maybe. He felt a mental tickle at the back of his brain, as if an idea was wildly waving its arms for attention. It wasn't quite there yet, so he shelved it for the time being. "Is the competition going to be a problem for us?"

Neville jockeyed his vehicle around a slow moving stake-bed truck overloaded with used tires. From there the road was clear, and he floored the accelerator. When the Sheriff is a drinking buddy, speeding tickets aren't a major concern. "Naw. Might even work to our advantage. More folks gettin' into the business, the more other folks may take the idea of private access seriously. Not," he added, "that we've had too much trouble with that yet." Neville turned the topic back to their own booster stumbling block. "So, you got any ideas on where to go with this now?"

Hank eyed the white dividers painted down the middle of the road; they blurred into a solid line. He snugged his seatbelt before replying. Neville grinned. "I wish. I'm sure I'm missing something, but I'm too close to it right now. The basic horizontal launch concept is still valid. But maybe we'll end up having operate the booster strictly subsonic. The overall launch efficiency drops, but it's still better than vertical..." Something still niggled at his subconscious.

"Glad t' hear it, since we've already got road crews building the launch and landin' strips. Be downright embarrassin' to drop the horizontal idea now." He grinned, and moved on. "Well, I pulled your idea off the 'Net in the first place. Maybe you can get some more ideas thataway."

"I'm ahead of you, Bill. I already put Abdul on it. Seemed worthwhile." He shrugged. "We've been getting modeling assistance that way. Most of our tech hires have been via the Web, too."

"Clerical and blue collar, too," Neville mentioned. "And advertisin', bond sales... Which we had t' pretty much stop for now; too much demand for 'em, believe it or not. And didn't you start a discussion forum cum suggestion box on the company site?"

"Yep; about like my old website. Too much good info to pass up on out there. You wouldn't believe the data we're getting on pressure suit design, life support systems... I even got the weirdest proposal for an inflatable spaceship."

Neville blinked in surprise. "An inflatable what? You're kiddin'."

"Nope. It might even work, if we can match it up with some of the other ideas coming in." He decided to brace his boss with a new proposal. "Bill, this is all stuff we need to look at. Assuming we get the launcher straightened out, we need suits and ships and all the rest. It won't do our customers much good to buy tickets to orbit and just float in the cargo hold waiting for reentry."

"Well, it'd be fine for the straight tourist trade..."

"NASA can play tour guide with schoolteachers and senators. I want colonists."

"Me too, son. But your point now is?" He saw the sun-baked sign of their destination coming up and began slowing the big car. Road noise decreased in proportion to his speed, signaling the end of the trip.

"Once I get the launcher on track, I want to start a new section to sort out these ancillary concepts and develop them."

"Hire a few more people, huh?"

Hank nodded as Neville slowed his vehicle to pull into a small gravel parking lot. Rocks crunched under rolling rubber. "Yes. We need to do this, Bill."

Neville guided his Expedition in between two old pickups and shut down the engine. With the A/C shut down, the sun through the glass began raising the temperature to oven levels almost instantly. Neville pushed his door open with a creak, and his passenger followed suit. Hot air blasted them, the contrast with the air conditioned temperatures almost painful. "I know. You're right. We've gotten too much from the 'Net to stop now; ideas, people, money." Before he stepped out, he finished with, "More than our buildings, or even the money we've already already gotten in investments, I figure the Internet to be our biggest asset." The two dreamers slammed their doors shut and hurried across sun-baked pea gravel to the anticipated coolness of the diner's interior. "Let's get something to eat," Neville said, his shoes kicking up dust and small rocks as he picked up the pace.

That evening, Hank strutted into his living room toting a brown sack and whistling the tune to the Air Force song. Damn the techno-bugs at work, this was still a day for celebration.

At least Erin thought that's what her father was whistling; he was the next best thing to tone deaf, although he denied it. Maybe that's what the bag was for; to carry the tune. "Hi, Daddy. What's up?" She stuck a reply mail card in between pages of the magazine she was reading and set it aside.

"You're late," was her mother's only comment. She didn't even look away from the television. The older Hanners female shakily set a tumbler down on a coaster and fiddled with the TV remote, surfing away. Hang ten, Ma.

"Yes, I'm late," Hank confessed. "I had to stop for party favors." he dropped his sack on the sofa and extracted a bundle of skyrockets. "Whee!"

"Mucho awesome, Daddy!" The girl bounded over to the bag, leaving a trail of discarded teen scene magazines in her wake. "What's up?" she demanded.

Kristi caught sight of the pyrotechnics from the corner of her eye and scowled. "Hank Hanners,

are those things even legal?" she scolded, not bothering to get up.

"Who cares?" He scoffed. "We're county, not city. And the store was quite willing to sell them. Glad to get rid of the Fourth of July leftovers, I should guess." He swapped mischievous grins with Erin. "We'll start blowing them off come dark."

"Aces!" the teenager exclaimed. "But what's up? Something at work?" She rummaged through the goodies, an assortment guaranteed to delight any pyromaniac, without waiting for her father's reply.

Trust someone here to bust my bubble. "Urk. Nope. Not at work." But you can't keep a good pyro down; he brightened again almost instantly. "Tsk, tsk, tsk. Don't you know what day this is?" He looked at Erin, then Kristi. Who had already tuned out the two fireworks fanatics. He was disappointed at the lack of response.

Then it suddenly hit the younger lady, an act echoed by her palm against her forehead. "Eep! July 20th! Of course!"

"Damned right," Hank stated assertively. "In this household, we will celebrate the moon landing. Even if it was NASA that did it."

"Yes!" At least Erin was excited. Kristi kept clicking buttons.

"You have mail!" Abdul had been in a retro mood the day he replaced his usual mail notification chime with the old voice notifier. He'd come to realize that it was an unfortunate choice since being stuck with the job of screening feedback on the launcher stability problem. The mail content was annoyingly uniform, with most comments falling into one of three areas. The first, and most common, was to simply run the booster at subsonic velocities; not very helpful. In a close second were the ones who were sure that one more air dam or canard would stabilize the wallowing pig; these people seemed to have difficulty with the idea of energy bleed-off. In a distant third place were the folks who had never, ever given up on the track idea; they saw the current problems as vindication of their position. They were the most annoying because Abdul was beginning to think they were right, damn them.

Those were the majority opinions, but he was also getting crackpot stuff ranging from gyroscopic antigravity to warnings that space travel violated god's - Abdul wondered which one - will, and on to claims that orbit was impossible because you can't freefall around a flat earth. He saved that one in his humor file to forward to some friends. He opened the new message. "And the next contestant is... !"

Big. Well, the message was short enough, but the attachment...

From: Mitchell McDermott
To: TechForum@the_launcher.co.us
Subject: GEM Stability at High Velocities
Hi,

First, the usual disclaimer: I'm not really an engineer of course, just a student. But it seems to me that a ducted plenum type of static hovercraft is hardly the best form of ground-effect to use for transonic applications. A hovercraft is fine for slow stuff because you don't get noticeable pressure front interactions. But at higher speeds the moving air screws up the cushion.

But old WWII bombers used to use their velocity at near ground (or sea) level to provide the cushion. I thought that would work, and fudged up some models. I may have missed something, but it looks like that style of GE works if you use variable geometry wings and some additional exotic control surfaces. Maybe you can try some physical models in your wind tunnel.

Anyway, I included a sim I ran.

Mitch

i ATCH: SS GEM.SIM.MOD
SCANNED / No hazard noted

Abdul felt a little idea screaming for attention. If he had compared notes with his R&D chief, they would have noted similarities with the tingle Hank had felt just days before. He examined the attachment, which his security system had autoscanned for viruses and other attacks. It was a couple of hundred megabytes in size, a bit large for a mail attachment from a stranger even these days. And it appeared to be in a file format supported by Launcher's off-the-shelf modeling software. Being the paranoid sort, Abdul ran a manual attack scan and file check while he wondered what he had. At least it wasn't another religious rant.

"Shit." The file was clean. And it was a sim file. But the headers said it had been generated by a newer revision of the software than Launcher was using. "Lucky guy." He made a note on the desktop to mention the update to Hanners, after which he read the rest of the header. "The software's registered to a high school?" He double clicked the file.

The graphic was primitive; obviously built up quickly by a comparative amateur in a hurry, just a wireframe. The airflow quanta were low-res, which denied the model really accurate info on flow and pressures. But the data that was there... Abdul ran through the entire sim three times while he thought.

"A genius?" Hank replied to Neville's rhetorical question. "Damned if I know. Define 'genius.' " He leaned forward and set his beer down on Neville's mahogany desk. It wasn't exactly lonely there, accompanied as it was by Neville's own, and another for Abdul. Three days of fighting the computer alongside Abdul and other R&D folks had left him thirsty. Now that he was explaining the results of those days to Neville, he'd been doing something about the spiritual dehydration. "What the kid did was remember something I should have remembered about World War Two bombers using ground effect to extend their fuel, and combined it with our own aerodynamic models of airfoils, canards, dams, et cetera." He laughed ruefully. "Well, I've heard it said that genius lays in the ability to manipulate and associate data from different sources. The kid did that."

For a moment Neville was at a loss for words, then, "So a high school senior suddenly solved all our problems?"

"No, sir," Abdul began. "I won't minimize what McDermott did, but don't read too much into it either. His concept is correct, but there were definite probs with his model -- lack of resolution caused him to miss some stability problems, some of his math had errors." He smiled hugely. "But he got us started in the right direction. We refined his sim, added some data the boy apparently didn't know about, and did a lot more intensive testing. I think it can work. We owe the kid big time."

Neville nodded. "Sounds like it. What's he want?"

The junior tech shrugged expressively. "He didn't ask for a damn thing in his message."

"Well, find out," the boss directed. "I wanna play fair here. If nothin' else, it saves us gettin' sued later." He considered the boy's position. "See if he can use a college scholarship, and offer him a couple K in bond shares."

Hank grinned. "Why don't you and your business folks do that?" he countered. "My guys are going to be too busy working up physical models for real testing to do your negotiating."

"Yeah. Right, good point," Neville admitted. "Are you really ready to do wind tunnel testin' already though?"

"Sure. Computer modeling is a heck of a lot better than it was just a couple years ago. Amazing what you can do with a few paralleled 4GHz CPU's. And once folks on the 'net started downloading our distributed processing screensaver... Basically, we've got one serious virtual supercomputer running twenty-four hours a day." He gave Neville a smug look. "And my people aren't bad either." Abdul smiled proudly, blew on his fingernails, and polished them on his shirt front. "I've already got the CAD/CAM carving an eighth-scale airframe out of a chunk of styrofoam. We ought to have it properly finished and fitted with control surface servos in a week."

Neville whistled. "Product development just ain't what it was when I was a kid."

"No kidding," Hank replied. "Unless something backfires in our faces, I'll bet we can start drawing up working prints in a couple of weeks."

"Great. Sounds like I better start hunting up some folks who can build us an airframe. Metalworkers, avionics, electricians..."

Hank swapped amused looks with Abdul. Optimism, thy name is Neville. But hell, it had gotten them all this far. He raised his brew in silent toast, and the other followed suit.

Chapter 6

Year One, August 19th

Any device is a tool of liberty to the extent it's available to all, and a tool of oppression to the extent it's regulated.

- Don Riggs

Hank strode into the R&D outer office, lighter on his feet than three months ago; both emotionally and physically. Texas has been very, very good to me. He stopped to wish Leesa, the engineering staff's common secretary, a good morning. He'd been told that as chief of engineering he rated his own private secretary, and that the position had been budgeted by Human Resources. He hated that term, but seemed to be alone in his sentiment. I am a man, not a resource! - he'd taken to wearing a small badge numbered '6' any time he dealt with the HR dweebs. He just couldn't wrap his head around the unfamiliar idea of having his own private secretary. Heck, he was still getting used to not being trapped in a corporate cube. "Hi, Leesa! How you doing today?"

"Just peachy, Mr. Hanners!" Leesa piped up perkily. She did everything perkily. Hank meant to check her job description to see if someone had actually written that in. He'd have to kill someone if it was there; probably himself. But perky or not, she was darned efficient, even if she was the only person in the entire company who routinely used honorifics and surnames. "I thought I should remind you that you have an appointment first thing this morning." She made a hinting gesture to one side with her eyes, but it didn't register with him.

Hank took his PDA from its belt holster and keyed up the calendar. "Right. That's the guy who wants to talk life support systems?" He scratched at the touch pad and frowned. "Here, Leesa." He handed her the gadget. "I don't think I'm caught up with everything. See if you can get me synchronized with the office calendar."

"Sure thing, Mr. Hanners." She accepted the electronic aid and placed it in front of an IR port on her desktop. As she moused commands, "I just wanted to be sure you hadn't forgotten your morning appointment." Another glance to the side. No reaction, and Leesa decided that Mr. Hanners really needed a second cup of coffee before he left the house in the morning.

"Okay, Leesa. Just give me a heads up when he gets here so I can review his file before I see him."

"Sir, he is here." This time she pointed. Leesa decided to make sure the coffee maker in Mr. Hanners' office was stocked. With hi-test.

Hank turned to see the object of Leesa's designator digit. An older man, of Bill Neville's approximate generation, maybe older, sat in a chair in the corner. He raised his bushy eyebrows, smiled, and waved. "Oops. Good morning," Hank addressed the visitor. "Am I late or are you early?" He tried to check his watch surreptitiously. Maybe it was slow.

"I am early, I assure you," the visitor replied. "I found myself a bit overeager this morning and arrived sooner than I intended; perhaps I overestimated traffic jams in San Angelo. I meant to wait in my car, but the security guard was quite insistent that I would be more comfortable waiting in here with

coffee." He gestured to the foam cup on the table at his side.

"Well, since you're here, why don't we get started? Got to admit, the data you sent me was pretty damned interesting."

"I would be most pleased, Mr. Hanners. It is refreshing to finally speak to someone who is interested after all these years, someone in a position to use my research." He rose from his seat, and approached Hank with one hand outstretched. The other was wrapped around the grip of a rather large briefcase; more like a salesman's sample case, really. But shabby, hard used.

Hank met him halfway and shook hands. "Call me Hank," he asked. "I'm only mister to Leesa, and we're trying to break her of the habit." The secretary looked up at the mention of her name and smiled. Perkily, of course, damn it.. "And you would be Doctor Waldo Rubenstein, I guess."

"Since your company appears to be delightfully informal, please call me Wally," the man requested. "I'm doctor only to the hellions and their evil spawn at the clinic, and only my mother ever called me Waldo more than once." He smiled genially.

"Wally and Hank it is then. Let's go into my office and see exactly what you have."

"Certainly."

Hank began backstepping towards one of the several office doors facing onto the engineering reception area. "Right over here, Wally."

"Excuse me, Mr. Hanners," Leesa perked. "You forgot your PDA." She held up his now-updated data cache. "And here's some mail that came in yesterday afternoon." She passed over a short stack of trade journals and colorful envelopes. The latter was probably all junk, but Leesa left that call to the boss.

"Oops. Danke, Leesa." He retrieved the unit and clumsily reholstered it, while trying to keep the postal droppings secured under his arm. Finally, he led Wally Rubenstein to his office where he offloaded his burden onto his desk. While the guest got settled into a chair and Hank booted his desktop, Leesa came into start the engineer's coffee maker. She gave Hank a wise look and tossed a couple of extra scoops of grounds into the basket. When the pot was trickling, Leesa departed and Hank started into the real conversation with Rubenstein. "So, I understand that you want to peddle some life support systems to us."

"Correct. They are related but separate." Rubenstein dug into his oversized case and fished out some papers and a CD. He passed them to Hank with an explanation. "This first is a personal life support system intended to mate with the partial pressure suits of which your web site speaks."

"Well, we've got something lined up for that already, but I'm always interested in new ideas." He looked at the cased disk. "This has specs?"

"Yes. It's PDF, I'm afraid. I find the format annoying, but so many people seem to be using it still that is useful for the sake of compatibility."

"I'm not too thrilled with the bloated format myself, but I can read it." He popped the disk into a

drive slot and watched the machine suck it in. He heard the drive spin up as the virus autoscanner kicked in. "Tell me what you've got."

Rubenstein took a deep breath and launched his pitch. "As your company appears to be emphasizing simplicity of design, and brute force effectiveness above over-priced elegance, I believe you will like this. It is, essentially, an open cycle rebreather system of the sort commonly used by divers."

PLSS wasn't Hank's area of expertise, but he'd picked up the basics during the course of the p-p suit design effort. "Open cycle? Wouldn't it be more efficient to completely recycle the air mix?"

"That would depend on your definition of efficiency, Hank." Rubenstein leaned forward. "As oxygen is added to the mix, air volume gradually increases and must be bled off somehow. My design simply vents the excess prior to the lithium dioxide CO2 scrubber and desiccator, assuring that what gets wasted contains the highest partial pressure of the useless gas. A closed cycle system either requires much more desiccant and CO2 absorber, and a much larger counter-lung to allow expansion of the total volume. Alternatively, instead of venting, one might install a compressor and storage tank.

"I am not necessarily totally opposed to the closed option, and indeed, have included such a design in the documents you now have." He stopped and dug into the voluminous briefcase, and came up with a handful of stapled pages. "Here's is a hardcopy of that design, as well as the first." He handed the graphics to Hank, who examined them as Wally went on. "The closed cycle is, however, more expensive and much larger than my preferred open cycle system, although not quite on the order of a... " A scowl flashed across his features. "...NASA-style PLSS backpack. The compressor system is not only somewhat larger and more expensive, but also consumes far more power than the open cycle, which is essentially lung powered."

Hank nodded affirmation. "Sounds right to me. Until someone comes up with man-portable nuke plants, power is always going to be an issue with suits."

Wally smiled happily, pleased to find a rational man. "Indeed. My primary design uses a flap-valved helmet connection with input and output lines sharing a common port. The output is valved back to the the enclosure, where the exhaled air is first run through a canister of silica desiccant to extract excess moisture. The material is arranged to maximize surface area. From there, the now dry air is conducted to a similar canister of lithium hydroxide CO2 scrubber, with surface area similarly optimized. Between the canisters is the counter-lung." He pointed to details on the sheets spread across Hank's Formica desktop.

"The counter-lung is of my own design, double-walled so that the lung proper is maintained within a compressible atmosphere. Otherwise, vacuum would prevent the correct operation of collapse and expansion counter to the wearer's breathing, maintaining a relatively constant air volume." Rubenstein held up a cutaway picture of his system. "And at the scrubber outlet, I have an O2 sensor which monitors the amount of oxygen available with the mix. That controls a valve on a small oxy cylinder which carefully bleeds oxygen into the mix as it is used up. Quite a simple system, really. And constructed from off the shelf components. Even the oxygen sensor, which I purchased from an auto parts store. It is intended as part of a vehicle emissions control package." He smiled at that.

Hank laughed as well. "I think I'm going to like you. Why re-invent the wheel, as they say." He blinked. "Who the heck is 'they' anyway?"

Rubenstein chose to ignore the non sequitor. "Why, thank you, Hank," he replied modestly. "I do hope that means we shall be able to work together on these projects. I will be quite happy to leave these documents with you for review; and you may contact me if you have any additional questions."

"Seems straightforward enough." Hank abandoned the printed presentation material and began a critical review of the more detailed CD data. He clicked through an assortment of images and tables on screen, nodding. He ejected the CD and handed it back to the inventor. "I'm not going to mislead you. Launcher already bought the rights to a closed cycle rebreather very similar, though not identical, to your secondary design."

Rubenstein fought unsuccessfully to hide his disappointment. "I... see." He began gathering his material back into his briefcase.

"Or maybe you don't, Wally." Hank folded his hands and propped his chin atop his fingers as he stared at Rubenstein. "Unlike NASA, Launcher is on a budget. Much as we'd like to, we can't fund the development."

"My rebreather is fully developed and tested. I only wish to market the unit." Frustration and exasperation contested for dominance in Rubenstein's voice.

"I do understand, Wally. And even without getting into the guts, I suspect your rebreather is all you say. Unfortunately, Launcher isn't in the business of general PLSS manufacture." Rubenstein opened his mouth to voice another objection. "But," Hank pressed on then halted.

"Yes?" One must always hold out hope.

"Look, Launcher doesn't build anything but the actual launch hardware. But so we'll have a market for tickets, we do encourage other outfits to construct things like suits, orbit to orbit space craft, et cetera. In the case of rebreathers, we already bought one design and took bids from companies that wanted to license the design. That's already been awarded, so we can't help you there." Rubenstein was crestfallen. "But." Hank grinned. "Competition was pretty fierce. I imagine that if I gave you a list of the outfits that were bidding, one of them would jump at the chance to market their own competitive version." Hank leaned back and smiled broadly. "Launcher would welcome that, too, since the competition would tend to drive down prices for us and for our prospective customers." Hank leaned back in his chair, not so fancy as one of Neville's, but it would do. From the inventor's perspective his head was framed by the open sky visible through the window behind him.

Rubenstein blinked. "You would help me market this to your competitors?" Hank's rationale made sense, but it ran counter to the way of doing things that he usually encountered. He examined the proposition for hidden catches.

"Sure. Not that we're into competition; our license fee is pretty nominal; just enough to assure bondholders that they'll see a return on their investment. We're just trying to encourage the market to make space travel affordable, something NASA was never into. If helping you get one more design on the market does that, so much the better... for us. Call it enlightened self-interest. We're as greedy as the next bunch, but opening the market up means there's more opportunity for us to satiate that greed." Hank offered a sardonic smile, and lifted an eyebrow. "That work for you?"

Rubenstein was pleasantly surprised. Why, yes. I do believe so."

"Great!" Tell you what, I'll get the list from our contracting office and forward it... " Hank began clicking through docs on-screen. "I've got your email address in here... Damn, haven't saved it to my book; have to dig out your messages." He looked up again and said, "Give me your address one more time, please."

"Wally at rubenstein underscore clinic dot co dot us," he recited the address phonetically, sort of. But he still looked mildly puzzled. "But will these companies also be interested in my other system?"

Now it was Hank's turn to be confused. "Other system? I thought you only had the two, the rebreathers."

"Oh, no. I counted that as one. I also have the atmospheric recycler."

"The what?"

"Recycler." Wally elaborated. "A rebreather is only good for comparatively short term, temporary applications like a personal suit. After some hours of use, the desiccant and scrubber cartridges must be exchanged and the used items regenerated. That may be acceptable for NASA..." He exhibited irritation again. "But it is totally useless for anyone planning a permanent presence in space. The CO₂ must go somewhere, and we can hardly be perpetually shipping oxygen cylinders into orbit." He pulled another disk from the not-so-confines of his huge briefcase. "What I propose is a spirulina-based photosynthetic CO₂-O₂ regeneration system."

Hank blinked. Twice. "Run that by me again."

Rubenstein passed the CD back to the engineer again. "Something a bit less conventional than rebreathers, which of course, have been known for decades. Yet this has been known for far longer... In a manner of speaking." He waited to let the engineer read CD docs.

Hank jammed the disk into his drive. When he began looking the diagrams, they made considerably less immediate sense than had the rebreather graphics. "Maybe you'd better start fresh here, Wally. I don't think..."

"It is actually quite simple, really," Wally assured him. "Stripped to its basics, I have constructed a device that utilizes the photosynthetic action of blue-green algae to reduce exhaled carbon dioxide to oxygen. Quite natural in principle, though somewhat enhanced in my system."

"What? You're talking aquariums in space? Sounds messy." He looked at a schematic on screen. Was that plumbing running into an oven?

"Nothing so crude," Rubenstein corrected proudly. "First, of course is a simple culture of a blue green algae, specifically the same sort sold by health food stores as spirulina. It's commonly used as a very nutritious, high protein food supplement, and occasionally as a compact emergency foodstuff."

"Right. I do know the stuff; my wife bought some after some dipstick told her we lived in an earthquake-prone area... Saint Louis," he added in explanation, "but never did anything with it. You use

this to recycle air?"

"Yes. I culture the algae in a vessel constructed of a semi-permeable membrane; one with which I suspect you are also familiar. It is a regular component of outdoor clothing, allowing air to circulate, while repelling water." He smiled.

"I think I see where this is going. The Goretex - registered t-m -, " he quipped, "contains the fluid culture while allowing the air to circulate, CO2 in, oxy out."

"Precisely. In fact, the culture is circulated through a collection of tubes, rather than sitting in a single tank, the intent being to once again maximize the surface area for air exchange.

"The culture becomes almost a thick slurry as the spirulina grows very quickly, so I use an ordinary trash pump to move the stuff through the tubes, though slowly. Also while moving through the tubes, the slurry is illuminated with the same sort of plant growth lamps which gardeners utilize to start spring plants early." He sighed sadly. "Periodically, I have to assure irrational police officers equipped with infra-red scanners that I am not cultivating the illicit weed. I receive regular inquiries from the DEA." He braced himself and pushed on to the climax. "As the spirulina reproduces, excess is collected in a separate tank from which one may skim off the algae for other uses."

"I'll be damned." Hank was very intrigued. "So you've not only got a way of producing air indefinitely, but it's an emergency food source as well?"

"Quite so," Rubenstein confirmed. "My wife and I have even attempted to work up recipes for the stuff." His face screwed up. "It may never become a gourmet delicacy, but it is edible. Added to spicy dishes such as chilli, it is palatable, quite acceptable. A mix of ordinary flour and dried spirulina yields an acceptable bread." He made a small smile. "I should think that spirulina as a regular item on one's menu would be a small enough price to pay for the chance to move farther into space." He looked wistful. "I sometimes think such a system could make asteroid colonization achievable."

"Asteroids, eh?" Hank smiled a little, too.

Rubenstein's face animated again. "Oh, yes! Spectrographic analyses, and even NASA's sampling probes, show that the asteroids hold virtually everything needed for life. Water will be extractable from carbonaceous chondrite asteroids, or if that proves too costly, there are nearly dead cometary nuclei and some asteroids should prove to be ice balls, probably cast loose from Saturn's rings. All the elements of life are there! As are the valuable metals that make it worthwhile. Why go into the gravity well of a planet just to obtain what is already floating readily accessible in space?" As were so many who had come to support Launcher, or to ask for Launcher's support, Rubenstein was a closet space enthusiast. Hank marveled endlessly that NASA and the other national space programs had refused to tap this resource. The waste was criminal.

"Wally," Hank said, returning to the business at hand "this sounds interesting as all hell. But what about nutrients for the stuff? Surely it doesn't grow from nothing in distilled water."

"Certainly not. I am a scientist, not a perpetual motion crackpot. There is a source of growth nutrients for the spirulina." He smiled craftily. "But you might not like it..."

"I'll like anything that can keep me breathing in deep space." He shrugged and decided to

explain. "I'm not just working for Launcher for the money. I want Out myself," he confessed . He looked into Rubenstein's eyes and saw a kindred spirit looking right back. They exchanged knowing smiles.

Rubenstein nodded. "Then if you are not too squeamish, I shall tell you." He winked. "I use human excrement."

"Ick." But it was inevitable.

"Definitely. But there is some treatment. In my home, I recover the waste..."

"In your home?"

Rubenstein made a show of mock offense. "But of course. You do not think that I would come... pitch some system I had not tested extensively? From where did you think I obtained the spirulina for the culinary experiments?"

"Sheesh, talk about dedication," Hank muttered. "So you get the... stuff from your toilet?"

"Yes. My home is equipped with a composting toilet, another commonly available technology that is readily adaptable to space living," he added parenthetically. "I recover the waste from the toilet, macerate it mechanically, and sterilize the mass by running it through a modified microwave oven. Once biologically dead, the fertilizer can be mixed directly into the spirulina holding tank and through the growth tubes. Or it may be dried and stored for future use. In all, it is a closed system save for the electrical input."

"What's that look like?" Hank asked thoughtfully. Power would be a major concern in all aspects of space life.

"For the unit in my home, which should be comparable to that needed for a spacecraft or outpost with a staff of up to ten, the daily power requirements are approximately two kilowatt hours for the microwave, one kilowatt hour for the slurry pumps, twelve kilowatt hours for the illumination, and maybe five kilowatt hours every other day for waste desiccation. And perhaps one half kilowatt hour for parasitic and ancillary applications such as monitoring of CO₂ and oxygen levels. Ah, and four kilowatt hours for blowers for air circulation."

Hank ran a mental total. "Some twenty-five kilowatt hours a day... A bit of a power pig."

"Yes, but is it too much for the chance to breathe - and eat - in space?"

"I'd think not. Hell, just the air conditioner share of my electric bill..." Hank grinned. "Not too mention the phone bill; I've got a teenage daughter." Who still has 'way too many friends out-of-state. "Anyway, viewed in those terms, I'd think twenty-five KW would be reasonable. Without atmospheric light losses, photovoltaic cells generate a heck of a lot more power in space. Just add more, 'til the supply can handle the load of an air plant."

"Such was my thought as well." Rubenstein agreed. "Or one might even pipe in raw sunlight and skip the artificial illumination." He rested his case and requested summary judgment. "So, what does the Launcher Company think of this idea?" His fingers rapped a staccato pattern on his knee as he

nervously awaited a verdict.

Hank was nodding and staring into space. "Offhand..." His voice trailed off. After a few more moments he said, "Okay, I like the sound of it. But I'm aeronautics, not life support; wrong specialty. What we can do is pay you a... not retainer... earnest money, I guess the term is." After bringing up the subject of mining the Internet for more ideas, Hank, Neville, and some lawyers had worked up a basic procedure to handle the gems gleaned from the 'Net trash; it was a boilerplate agreement, and Hank had been granted the authority to commit the company to this extent. "That gives us first dibs on your idea, but doesn't permanently commit either of us. We'll want to post your doc on the company's website for peer and public review. If it passes that, we'll get serious."

Rubenstein indicated satisfaction with a quiet nod.

"No promises, but the idea is that if it works, we buy the gadget from you. I don't get into those negotiations, but I don't think anyone has left unhappy with his settlement yet. From there, it's ours, and we'll license it out to some manufacturing outfit like we did those rebreather PLSS's." He saw Rubenstein's expression change at that mention. "Nope, I haven't forgotten. I'll get those contacts for you. Remember, this is something that benefits us too, if you can make some money selling your design."

"Quite acceptable, in principle. What level of... earnest money do you have in mind?"

"Hang on a sec, and let me check something." Hank played games with his mouse and keyboard. He decided to get a touchscreen monitor like Abdul's even if he had to buy it on his own and bring it to work. He paged through directories and pulled a couple of files. A quick look at a table gave him an answer. "I can have a check for five grand cut in an hour if you'll give us dibs on your recycler for six weeks. How's that grab you?"

"It grabs me just fine," Rubenstein answered very happily. "I spent years attempting to interest NASA in this system, and now you offer me money after just one morning's meeting. Mr. Hanners... Hank, I am astounded. And very pleased." He rose to offer Hank his hand.

Hank accepted the proffered extremity in a firm, warm grasp. "Excellent!" He began the computer input gymnastics again. "If you'll give me a few minutes to fill in some blanks here, I'll get the basic agreement churned out by Legal and we can get going." He busied himself clicking electronic boxes and typing technicalese. Occasionally he asked Rubenstein for additional information and elaborations. He completed the ritual by sending a priority email to the legal department, which he followed up with a voice call so the matter would get immediate attention. Hank was still tickled by the idea that he was so high up the company ladder that he could exert such influence.

He hung up the phone and turned back to his guest. "Well, Wally, unless they're pulling my leg, I should have a check and contract here in maybe half an hour." He explained the boilerplate nature of the process which allowed the speedy service. "You mind if I ask a personal question?"

"If it is too personal, I will just ignore it," Rubenstein replied with a smile. "I am willing to put up with much from someone about to make an old dream come true. Ask away."

"Well, what's a doctor... That's doctor of medicine, right? ...what's a doctor doing designing space life support hardware in his spare time?"

Rubenstein's face clouded over, and Hank wondered if he had overdone it despite the doctor's assurance. "Hank, many years ago, a very idealistic young man fresh from internship decided to specialize in space medicine. He believed the government's tales of life in space, colonization. That young doctor went to work for NASA. He was sure that his work would make life in space possible for thousands of people who shared his dream." He snorted bitterly.

Hank shook his head sadly. Gods knew he felt disappointed and betrayed by NASA, and he had never worked for the agency.

"It was a crock," Wally said flatly. "I spent my days watching men puke in various simulators. Over and over again. And that was the bright spot, since we actually worked on anti-nausea drugs which would, and do, help people. But I watched NASA largely ignore effective partial pressure suits for real EVA work. I watched them reject proper recycling systems and stress the use of large stores and scrubbers which automatically limited man's time in space to short duration missions. I thought it was a matter of cost, so I conceived of these cheaper alternatives. And then I saw them rejected out of hand. Perhaps my design didn't require expensive construction in the right congressman's district.

"Eventually I was 'promoted' to a level in which I, a doctor of medicine, no longer did medicine. I monitored spacesuit telemetry. I hate telemetry. Beyond a certain point, such monitoring and ground-based command and control simply assume that the men in orbit doing the work are nothing more than expensive puppets. Stupid, expensive puppets.

"And perhaps they are, some of them. Or perhaps they are so desperate for the chance to be in space, even for a little while, that they will put up with nearly anything." Rubenstein grinned conspiratorially. "I always admired the crew who demonstrated their possession of true genitalia by going on strike against the sub-moronic demands of ground control."

"Truth to tell, so did I," Hank shared. "Although I'm crude enough to phrase it differently." The men smiled, having established a bond. A dislike of NASA and its methods was endemic among those doing business with Launcher. "You mentioned a clinic, so I assume you aren't with NASA these days."

Rubenstein harrumphed. "Hardly. I stuck it out for some years, but was finally so disillusioned by the reality of NASA's commitment to keeping man out of space that I quit.

"I quit NASA. I quit space medicine. I nearly quit medicine altogether, but not quite. I went into sports medicine, which is the next best thing. I now have a very lucrative practice giving little league thugs annual physicals, treating shin splints and bruises, and prescribing exercise and diets for fat kids who expect to be turned into sports giants in a month after years of stuffing their faces while watching television and playing video games. I don't know which is worse; the hellspawn themselves, or the mentally defective parents who pamper such hooligans." He sneered.

"But through it all, I found that I was still fascinated by alternative methods of life support. It was a hobby, an avocation, then something bordering on obsession, although I've known model railroaders who are far worse than I." He smiled in recollection. "But it was useless tinkering until I encountered the Launcher Company on the Internet one fine evening."

Bill Neville and Hank reveled in having put together the kind of competent staffs which they could trust to handle the endless string of micro-decisions generated by a burgeoning space program. It

freed them to concentrate on the big picture and big problems. It also gave them an amount of time for sharing insights that would be inordinate in most companies. This morning, Hank was filling the exec in on the mutually profitable Rubenstein interview. "Bill, every time I think I understood NASA, I get something like this. The guy was... is a professional. He was even one of their own, an insider. And still they blew him off."

"And this surprises you?" Neville was enjoying a drink while listening to Hank's informal departmental report; coffee for once. He figured Amy would be proud.

"It shows that not everyone is just a bureaucratic paper shuffler over there. People care about space. You'd think that after a few decades the doers would have over-ridden the nay-sayers by now."

"Only if access were really what NASA wanted." He frowned at his coffee, then went to Hank's coffee station for more sugar. Seemed like Hank was drinking the stuff stronger than he used to. While he stirred, he spoke. "I've harped on it enough; so have you yerself. NASA was established to show up the Russkis. Once that goal was met, the pols in DC tasked them with something else - keepin' ordinary folk outa space." He stared over Hank's shoulder at an old McCall print framed over the engineer's desk. It showed a space-suited figure standing on a crater rim, looking down at an outpost partially buried in lunar regolith. "You know the old sayin' about frontiers givin' folks a chance t' 'vote with their feet', to go somewhere they don't hafta deal with stupid rules an' policies an' such shit?"

"Yeah."

"Maybe I'm gettin' paranoid in my old age, but sometimes I think that NASA is makin' a business of makin' life in space look a lot harder'n it needs t' be. To keep folks like us from votin' with our feet."

Hank stared through a wall wistfully, momentarily lost in thought. "Is it paranoia? Look at us; we're finding so many ways of doing it that we can't even use them all. I just sent Wally Rubenstein off to compete with us because his idea was too good not to develop. And it's a thirty-something year old idea that NASA refused to look at.

"We are doing space, and it's turning out to be easier and cheaper than even I thought it would be. And so many people are willing to support the access effort that we stopped selling bonds on the open market because we risked taking in more revenue than we felt comfortable with, until we can show actual operations revenue.

"And the government's reaction to easy access is to try regulating private access out of business." Hank smiled sadly. "Which is worse? To be so successful twenty or thirty years later than it should have been, or so successful that the feds see us as a threat?" His gaze turned down to the Formica surface of his desk. "I don't like what it says about Americans, either way."

"Not Americans, Hank," Neville corrected. "American government."

Hank lifted his head and smiled at the amendment. "Hey, Mr. Ultra-Conservative-Republican; you turning anarchist on us?"

"Damfino, Hank." He made a face at his coffee. "What the hell you doin' t' this stuff lately, man?"

The engineer laughed. "Leesa took it upon herself to up my blood caffeine content. Says I'm a bit less-than-alert in the morning."

"So who wants t' be a Lert?" Neville smiled impishly. "Mebbe we oughta set up your Leesa and Tom Zelaski. Give 'em somethin' t' do with their spare time."

"How about we direct their energy somewhere more productive and less reproductive? The one damn thing we aren't seeing much of on the 'Net forums is power sources." Hank relayed his concerns about electrical requirements for Rubenstein's air recycler. "The guy was talking up asteroid-based operations, but I have doubts about solar for that. Not that it wouldn't work. But the PVC arrays would be big bitches. Gotta be something better out there."

Neville face went blank. "Don't put too much energy inta that, Hank," the older man punned. "I don't think it's gonna be a problem for long."

"You have a line on something, boss?" Hank looked like he wanted to be irritated with being left out of an engineering loop, but thought better of taking the company prez to task.

Neville, no fool, saw the reaction. "Take it easy, Hank. This wasn't one'a the projects we're sponsorin', so it wasn't an issue for your department." He peered at the department chief over his mug of industrial solvent, and thought for a moment. "Okay, shouldn't have left you outa the loop anyway, you bein' a junior partner in this here madhouse. Partly didn't wanna bother you 'cause you're workin' your ass off doin' a great job, and partly because the client wants _lots_'a confidentiality."

"Well, if you wanted me curious, you got it."

Neville cackled. "And I oughta leave you hangin' now." He relented. "But here's the deal; don't spread it around. If you think we got feddie trouble, you wouldn't _believe_ what the 'crats would do to these guys." A dramatic pause. "Nukes."

Blink. "Say what?" Hank was pretty sure he'd heard correctly, but...

"Yep, nukes. I don't think you need t' worry 'bout usin' solar in the asteroids."

"You're kidding."

"Nope." Neville explained. "Got this outfit called NRU. They haven't said so, but the head honcho sounds like he has a sense of humor; I think that stands for 'Nukes R Us.'" The men laughed together. "Apparently they cut a deal for reactor grade uranium, plutonium, and other fissionables with one of the old Sov republics in need'a some hard currency. They mean t' assemble thermoelectric isotopic reactors, based on the old soviet space reactor design, but simplified even more. Lotsa kilowatts, essentially no movin' parts. Perfect for space operations by folks who ain't nuclear physicists." He watched Hank expectantly.

Hank whistled in amazement, then exclaimed, "Wow! That ought to get some hackles up in Washington; plutonium being sold to a private outfit."

"That's part of why you need t' keep it under yer hat," the bossman cautioned. "I kinda expect

that this deal violates one or two international treaties."

"So how do we come into this? Are we buying reactors?" Hank's internal processor started clicking through uses to which he could put a small nuke. Hell, he'd like one in his backyard; shielded right, it wouldn't be anymore hazardous than that wannabe-fuel-air-explosive propane tank that fed the house.

"Wouldn't be at all surprised, down the road. But the first thing is that we boost the things into orbit, so NRU can sell 'em to folks wantin' t' build spaceships, stations, an' colonies. Already put 'em in touch with Pedersen Polymers; they wanna fit their ships with the generators." Pedersen had bought the license for inflatable spacecraft and station modules: Inflate a kevlar sphere with rigid-setting insulating foam, carve out the middle for living space, apply an inner airtight coating for a heavily insulated, double-hulled bubble, and fit it with an airlock. Install life support gear - Rubenstein's recycler would probably do nicely - and you have a space station. Add more bubbles as your living area requirements increase. Stick a motor on one end, and you've got a spaceship. It's strictly orbit to orbit, no planetary landings; but if you're colonizing space, who cares? Equipped with one of these NRU reactors, the contraption would make a dandy deep-space vessel.

"I will be damned." Hank thought about the future. "How much do you think they'll be asking for one of these things?"

"Don't rightly know. You'll have to take it up with them. After they announce publicly," Neville cautioned. Then he grinned once more, a fairly common occurrence for the busy executive. "But they suggested a cut rate version for tight budgets."

"Yeah?" Now this really interested Hank.

"Guy said they're eventually gonna try a deal for the radioactive waste the feds are still pilin' up at Hanford up north. Seems the stuff is so hot, it'll boil water. And NRU figures that's hot enough that their new-generation thermocouples can suck some electricity outa the stuff."

"That I've got to see; Uncle Sugar," an old bit of slang for the U.S. government that Hank had picked up somewhere, "selling off radioactive waste to be shot off into orbit." Dubious didn't come close to describing the engineer's reaction to the idea. As for government bureaucrats' reaction... Hank chuckled.

"Maybe not our government," Neville allowed. "But I could see other countries doin' it. Sure would solve their waste disposal problems once and for all."

"You think?" Hank challenged. He knew more nuke power history than Neville. "Did you ever hear of an isotopic transmutation reactor Lawrence Livermore Labs wanted to play with... maybe fifteen years ago? It was supposed to test out a system of neutron bombardment to turn radiowaste into something safe."

"Doesn't ring any bells."

"I'm not surprised. It got canned quick. See, the punch line was that not only would it eliminate nuclear waste, but the reaction produced enough heat to turn a fair steam turbine." He elaborated for the blank-faced president. "It fissioned nuclear waste to produce electricity. Economically."

Neville's jaw dropped. "So why do we still have a storage problem? Sounds like the alchemists' Philosopher's Stone."

"Idea was shelved. Politically Incorrect. The anti-nuke gang hated the thing; it would have made nuclear power safe, nonpolluting, and economical in all phases of operation. They figured that if these things got built and eliminated the problems accompanying the use of nuclear power, they could never convince people to give up those nasty ol' nukes." He looked disgusted. "I always thought that showed up the anti's for the people-hating, latter-day-Luddites they really are. If safety was the real issue, they'd have jumped at this chance. We'd not only have clean, safe power; but we'd have a way to get rid of the waste we already have problems with." Hank was angry all over again just remembering it.

"Those sick bastards would rather see people freeze in the dark, babies starve for lack of food that needs power to produce and ship, and watch radioactive waste leach into groundwater than give up their psychotically irrational fear of nuclear power." He glared across the desk at his boss. "If NRU wants to put a nuke in every kitchen, I'm all for it."

"Well, if you liked that, wait'll you hear about GE and their cold fusion research ideas."

That derailed Hank's tirade. He looked disgusted. "Gack. Not cold fusion again." He set his coffee mug - Star Trek this time; and where did he find that parody mug, Neville wondered - down on a half read stack of mail.

"They've got a real effect there," Neville reminded the engineer. "That's about as well established as anything ever gets."

"Yeah, sure," Hank drawled. "But no one's been able to do anything practical with it so far. Alloy, crystal size, alignment... Everything has to be just right, or it doesn't work at all. The boys in Utah had a bit of dumb luck that they saw anything. It's no surprise that verification of their results was so inconsistent; so were the materials everyone else used." He shook his head. "Nah. Anything that persnickety in production will never be commercially viable," he opined.

"Wanna bet?" Then Neville shifted the subject by pointing to a red, white and blue envelope pinned down by Hank's mug. "I see you got one'a those things, too."

Hank's gaze followed his boss's finger. "Oh, yeah. 'A New Texas Constitution for the Twenty-first Century.' I love it," he chortled. "These guys really do want to petition the state legislature to pull out of the United States?"

"Don't laugh too loud, boy," Neville cautioned. "A damned silly idea, I'll admit; but a fairly popular one with us 'ornery Texans'." He smiled wistfully. "Some days, I'm tempted to signed the blamed petition myself."

"Go for it," Hank urged. "I did. Heck, take a poll of the company; I'll bet a majority of us NASA-baiting, feddie-distrusting scalawags would support it in principle." He pushed his mug off the envelope of discussion, leaving a brown semi-circular stain on the line drawing of the Alamo which adorned the wrapper. "Of course, signing a petition's as far as most would be willing to go."

"Guess ya gotta start somewhere, and work your way, and nerve, up from there," Neville

observed. He sipped at his hypertrophied coffee and shuddered.

Chapter 7

Year One, September 20th

If beer is not the answer, you asked the wrong question.

- unknown

The two women sat in a corner booth at The Grill and evaluated possibilities in the crowd. Carrie Pollard, a thin gothic sort, had short-clipped hair of a blackness unlikely to be natural, and wore two-tone makeup - white with black trim. Despite the effect, she remained undeniably cute. Her companion was less retro and more conventional in appearance. Micky Melendez was short, and had the kind of dark hair that Carrie might've considered killing to possess. In contrast to the painfully slender goth girl, Micky seemed almost stocky in a sexily voluptuous way, with very well developed athletic muscles overlaid with curves that garnered more than enough attention to soothe her ego. Carrie might be cute, but Micky was generally considered gorgeous. She rarely bothered with makeup, but one look into her huge dark eyes, and most men didn't notice the supposed lack.

Carrie eyed a man at the bar much as a cat might when deciding which squirrel to pounce upon. "Now, Paco over there is cute. I think maybe I'll make his night." Restless, she shifted slightly to unstick her miniskirt-exposed thighs from the booth's plastic coated seat cushion. The bar owner had calculated that ease of cleanup counted for slightly more profit than total customer comfort. But what regular habitué of dram shops wasn't well used to that?

Micky, her legs protected from the evil designs of furniture vinyl by tight slacks, smiled. "I doubt it. Watch where he's headed." The man in question tossed some bills down on the scarred and graffiti-adorned bar, gathered up an armful of longnecks, and headed to a table near the opposite corner of the poorly lit room. Said table was packed with an assortment of fellow construction workers and some women whose outfits suggested they might be headshed clerical staff out slumming with the proles. The man managed to get the bottles onto the table without overturning a one, and slid into a straight back chair beside a bleach blonde. One arm automatically wrapped around the secretary while the other grabbed a beer. "Looks like somebody's going to find out about Paco's nickname."

"Mmmph." Carrie grunted. "I kind of wanted to check out that 'Pile Driver' rep myself." She peered at the latina beauty beside her from the corner of her eyes. "So... Haven't you been out with him? What's the story?"

Micky may have blushed slightly, Carrie wasn't sure in the dark room. "Sorry; you'll have to find that out for yourself."

"What? No kiss and tell?" She slipped a hand down to Micky's leg in a manner that may have been meant to be conspiratorial. "I can keep a secret."

Micky shook her head. "No secret to keep. We've dated; had some fun, too."

"And?" came the prompt.

"And that was it. I like guys, like to date. But that doesn't mean I have to sleep with each one."

Carrie eyed her friend with some consideration. "So, saving yourself for someone special?" She licked her lips.

Micky laughed. "A little late for that. But I'm kind of picky." She chose her next words carefully, with a mind as to how they might come across. "But... I think I'm kind of special. Worth the best. It's worth waiting 'til there's something there beyond pure lust." The brunette lifted her drink and took a small sip. "Not that I object to a little healthy lust," she added, setting the glass back down.

"Well, that's nice to know," Carrie replied. She began tracing small circles on Micky's thigh with a black-tinted nail. "You know, it looks like we got here a little late to find any unattached male company. Maybe we should cut our losses, and find a little entertainment on our own?"

Micky stiffened. She'd picked up some cues from her friend before, but nothing so direct, so... un-ignorable. "Um..." She moved her own hand down and slid Carrie's off her thigh. "Look... I hope I haven't given you the wrong impression; it's just..." Her voice dropped, and she looked around nervously. "I just don't go that way."

Carrie looked into her eyes. "Never?" she purred, and licked her lips.

"Micky dropped her gaze. "Look, I guess everyone gets curious sometimes, but I'm just... not that curious. Sorry." She grabbed her glass and downed the remainder, which was a fair bit, since their waitress had delivered the beverage short minutes before.

Carrie pulled her hand back and put it on the table. "That's okay. Just checking, really." She sipped her own beverage. Then watching Micky sidewise, she licked her lips and winked. "But if you ever feel... curious again... Look me up." She licked her lips again.

"Umm... Sure..." Micky looked around for a waitress, near frantic. Another drink was definitely in order. But something else caught her eye. Two guys had just entered The Grill; one moved quickly to snag an empty table, while the other stopped to scan the room.

He was middling tall, fair haired, and rather nicely muscled, with the build of someone used to working for a living, rather than one purchased in a gym. His face, pleasant more than outright handsome, was... intriguing. Tinted with what looked like a perpetual sunburn, his face showed a happy expression as if such places were still a novelty, while at the same time displaying a sardonic smile that implied that he wasn't taking it too seriously. He seemed to be a few years younger than her usual preference, but Micky thought a change of routine might be in order. This looked interesting.

"Yo, Cal!" The guy's big - make that very big - dark haired companion shouted and waved. He'd appropriated a table as the previous occupants headed to the minuscule dance floor. The object of Micky's attention turned and headed toward the table. Hmm, cute butt, too.

Her earlier discomfort already forgotten, Micky nudged Carrie in the ribs. "Who's he?" She nodded toward the table, where a waitress was already depositing bottles of beer. Many bottles. How'd they manage that in the moments since they'd arrived?

Carrie followed Micky's glance idly, and her eyes lit as she spotted the large man. "Oh, that's Dominic Necklin." She began smiling. Perhaps the night wasn't wasted after all. Unconsciously, she began licking her lips again.

"Not Dom, you dope. I know him. Who's the guy with him?"

Carrie shifted her attention momentarily. "Oh. That's the Ice Prince," she replied in idle dismissal.

"The who?"

"I think his name's... Cal. Yeah, Calvin Schmidt. One of the surveyors."

"So what's the Ice Prince stuff?"

"Ah, when he first showed up a couple of months back, some of us asked him out. S'far as I know, we all got turned down." Her face took on a regretful cast. "I think he's gay. Too bad; he is kind of cute." Well, if the guy was silly enough to limit his fun to just half the human race... His loss, she figured.

Micky observed the new game in town across the room and considered possibilities. He was cute, and here was a guy who'd apparently been around for months without hitting on her. Given that Carrie and herself were among a small handful of females working on construction crews otherwise macho in the extreme, the odds that the guy was at least a little bent seemed high. "Or he might just be really shy," she decided. "Either way, a challenge. Unless Dom hides it really well, he isn't gay, so I doubt they're on a date." She slid out of the booth and stood up, then pulled at Carrie's arm. "C'mon. There isn't anyone else with 'em yet. Let's go see if they'd like some company before someone else thinks of it."

Carrie, who'd had her own sights set on Necklin from the time he'd come to her attention, didn't argue. She grabbed her glass and moved in for the kill, almost pushing Micky out of her way. "Yummy."

Micky followed, running down a set of opening lines for a maybe-gay/maybe-shy hunk. The night should be interesting after all.

Cal grabbed his shaving kit and headed for hallway, still rubbing his short hair dry with his towel. Once through the doorway, he hung a left towards his room. A lot of the guys didn't bother washing up after work, but Cal purely hated sitting around dirty until morning. Showering after work, then out to The Grill for dinner had become a routine. And if last night was any indication, he ought to be prepared to make a good impression. That Micky girl had caught him by surprise last night. Never at his mental best in close proximity to gorgeous ladies, her appearing out of the blue like she did reduced him to the mental level of grapefruit. Or a congressman.

At least congressmen are articulate, though. He had barely managed to get a word out. Not that conversation really seemed high on the woman's list of priorities. He'd finally chickened out when Dom left with the goth girl, and taken off, pleading an early shift. Maybe she'd be back this evening and he could apologize. Towel still hiding his pointless blush, he fumbled for his doorknob.

"Hi, Cal! How's it going?"

The words registered first, then it occurred to him that it was a woman's clear voice addressing

him in the men's barracks. Finally he remembered that his towel was around his head, not his waist. "Urk!" He dropped his shaving kit in his rush to remedy the situation. Vision now unobscured, Cal found himself looking down at the very pretty brunette whose memory had been distracting him all day. Being pursued by attractive women was a little new to him. He thought that was what was happening. "Um... uh, Hi," he got out, lamely. Articulation? We don' need no steenkin' articulation.

"Hi again." Micky repeated. "I'm not interrupting anything, am I?" Her glance slid down to his towel and she giggled.

Cal's perpetual sunburn deepened. "Well, no; not really... I was just taking a shower." Stating the obvious; great way to impress women, Schmidt. He tried smiling. "Can I help you with something?"

"I sure hope so," she murmured seductively, just barely audible. "We seemed to get along so well last night that I thought maybe we could do it again tonight." In fact, Cal had been near petrification, effectively speechless. With reasons of his own working synergistically with his usual shyness around women, he'd been fairly sure that he hadn't made much of an impression. Then operating under the panicky theory that a little beer would help him loosen up, he'd consumed enough liquid ego-enhancer to render himself useless for the sort of designs he expected the lady had on his body. He'd had better nights.

On the contrary, though, Micky had been impressed. His butt was even cuter up close. And since his fidgeting seemed to be directly proportional to her proximity, her guess was that he was straight, or bi at the very least. Interested in more than only the merely physical, she figured he was worth some pursuit. She glanced at the towel again. Nope, probably not gay. "So... Wanna go out for dinner and a couple of drinks?"

"I'm..." Something niggled at his consciousness through the fluster. He followed Micky's glance. "Um, do you mind if I get some clothes on?"

"Seems like a terrible waste of time," Micky purred.

"I've.... gotta go." He hustled down the hall. "See you around," he called.

"Well, Melendez," she scolded herself, "you screwed that up well enough." Intercepting a nude man outside his shower probably wasn't the best way to start a relationship. A non-financial relationship, anyway. "God, what must he be thinking?" She decided to try again another day. And maybe a little less... rapaciously.

Chapter 8

Year One, October 1st

Give me your tired, your poor,
Your huddled masses yearning,
To breathe free,
- Emma Lazarus

In the privacy of the other man's well-appointed office, Bill Neville shook hands with his host. "Thank you for agreein' t' meet with me, Mr. McLaughlin."

"Please, Mr. Neville, have a seat. And the pleasure is mine." McLaughlin was a short, pudgy man with a serious face. "You said you were in a hurry, so why don't we skip to what brings you to Regency?" 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 t' think with my fingers, but I usually have to tape business meetin's anyway, myself." Neville opened his briefcase and removed a folder which he flipped open.

Eyeing the folder, McLaughlin said, "I must admit, I'm certainly intrigued by all this. What could the hot new Launcher Company 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 rubber and fabric garments."

McLaughlin was puzzled. He propped his elbows on his desk, peered over folded hands, and said, "I'm afraid I still don't see the connection between spaceships and tennis shoes," he said.

Neville smiled took a glossy brochure from his folder. As he went on he slid it across the desk to McLaughlin. "Could be that's because I wasn't referrin' t' tennis shoes." The sneaker magnate picked up the pamphlet and gazed upon a computer rendered drawing of a person in a tight fitting space suit. Neville continued, "What good is space travel without affordable spacesuits for the travelers?"

McLaughlin stared at the picture. "You want us to make spacesuits?." He considered the possibility that the supposed Launcher representative was nuts.

"Yep."

McLaughlin gave the Texan a dubious look, which he also cast upon the silly brochure. "Are you crazy?"

Neville replied, "Could be," and laughed. "But we are serious, and it isn't as silly as it sounds at first." He scratched his head. "Gotta admit, when my R&D chief first suggested this, I asked him the same thing."

McLaughlin set the document down, and gestured mutely, momentarily at a loss for words. Finally, "I really don't get it. Why not go to one of NASA's suppliers and buy the things off the shelf? Surely that would be less expensive than having us retool to make something we have no experience with."

Neville started to sneer, then let good manners take over again. He eased back in his chair - not quite so comfortable as the visitor chair in his own office - and shook his head. "Hardly. In the first place, those NASA suits ain't exactly 'off the shelf'. They get custom fitted to each individual astronaut. That alone would drive the final cost out of the range'a what we have in mind." Knowing it would come up, Neville had brought along an encyclopedia illustration of a NASA extravehicular activity, or EVA, suit. He slid that across the acre or so of executive desk to his tennis shoe counterpart. "This here's what NASA uses. Take a good look at the thingy." He stood and leaned over McLaughlin's desk, the better to point out features as he spoke. "Lookit this, first the astronaut's gotta put on longjohns stitched with water tubing; that's for body temperature control. And ya got this damned near rigid pressure shell to maintain an atmosphere around the whole body. Pressurized, it might as well be completely rigid, so they use these ridiculous constant volume joints so the poor guy can move at all. Darned near gotta be a bodybuilder to move in the thing. And there's the meteor shielding..."

"Excuse me. The what?" McLaughlin interjected. "Surely I didn't hear that right."

"Meteor shielding," the spacer exec confirmed. He was getting used to that reaction when trying to describe NASA equipment.

"On a personal spacesuit?" Poker-faced inscrutability be damned. McLaughlin couldn't believe his ears.

Neville nodded sadly. "Yep."

"Now that's stupid. Certainly I realize there's debris in orbit, and the shuttles have been struck several times... But a high-rise construction site has hazards too, dropped tools and rivets and whatnot that could kill someone if they hit, but..."

"But we don't expect construction workers to wear suits of armor," Neville finished. "And neither will Launcher." He pointed to the goldbergian drawing. "Those damned things run better than a million bucks apiece these days. And we ain't even got to the life support pack that goes with it." He closed his eyes and shook his head. "And you wanna know the worst part?"

McLaughlin was considering his tax share of a megabuck designer wardrobe multiplied by every astronaut with NASA. "What?" he asked carefully.

"That damned thing is just for leaving the spacecraft, for EVA. NASA fits everybody with an entirely different suit just for the ride up and down." As a taxpayer, his wallet hurt just to think of it.

"Huh?" McLaughlin waited for the punch line. A light flashed on his intercom, but he chose to ignore it; this conversation was getting too interesting to cut short. His assistant would handle whatever it was.

"Sure. You've seen those orange outfits the 'nauts wear when they head for the shuttle. Those're spacesuits too. Different kind." He smiled. "And that happens to be more the sort we got planned." The

shoe manufactured looked curious, so Neville pushed on. "Those big monstrosities are what're called pressure, or full-pressure, suits. They work by enclosin' the whole body in air like a balloon. But the orange things are partial-pressure suits, different principle.

"The idea is that human skin is mostly airtight... Bear with me, I don't completely unnerstand this stuff, but the engineers say it's so." He shrugged. "Anyway, the only thing that keeps your skin from making a decent spacesuit is that it stretches too much; vacuum'd make it blow up like a balloon, an' the water 'n gasses inside you'd expand right along with it an' boil. A bad thing."

McLaughlin nodded. 'Explosive decompression' was a familiar image from too many bad movies, and not-so-bad novels and short stories.

Neville saw the man's understanding, and pressed forward. "A partial-pressure suit reinforces the the skin so it can handle the job. 'Course, you still have t' add a helmet t' feed the astronaut air to breathe. But you don't have t' bother with those damned constant volume joints."

"What about temperature control?" McLaughlin wondered.

"Well... NASA EVA suits are heavily insulated, t' protect the wearer from temp extremes outside in shadow or full sunlight, but that locks body heat in and cooks the guy if he doesn't have the silly plumbing underwear to carry off excess heat. But a partial-pressure suit can be porous so your own sweat glands can cool ya just like normal."

"But what happens when the astronaut does encounter the extremes a NASA suit is designed for?"

"Then the astronaut just puts on a set of insulated coveralls over his suit, aluminized on the outside to reflect the sun's heat away, or a set with the reflective coating on the inside for workin' in the cold. And if he thinks he does need some micrometeor protection, the coveralls can be made from kevlar fabric; just a layer or two, so he can still move."

"And this is what you want Regency to make for you?"

"Yep. There's more details in the engineering package, nat'rally. Stuff like the suit is made'a something like spandex, but reinforced with kevlar strands in one dimension so it stretches lengthwise an' still holds the skin tight. And there's an airtight balloon thingy runnin' along the sides of the body, arms, an' legs to snug the fit in vacuum; that's so you can make a relatively few different sizes that'll fit near anybody without custom fitting. An' doping the plastics for UV resistance, specs on helmet fittings. Stuff like that."

McLaughlin stared at Neville thoughtfully. "Oddly enough, this does sound like a job we can handle, although to be completely honest, some of the outerwear manufacturers might be a better choice."

"That could be, an' later you might see some competition from 'em. We own this design, but the basic concept of partial-pressure suits is public domain. For that matter, there are companies, like David Clark, who've been makin' 'em for decades."

McLaughlin started. "Oh? And why aren't you buying from them?" Just when it had started

making sense, the man had made an about-face.

" 'Cause I wanna see more competition from folks used t' making stuff in bulk; I figure that t' keep suit prices an' our costs down." He shrugged once more. "Besides, you can use the business."

McLaughlin squinted. "Eh?"

"We've been doin' a bit of marketin' an' investment research on the 'Net. It's clear that your company is bein' cut out by the big guys. Despite your reputation for quality." Neville lifted a stapled sheaf of papers from the folder. He glanced at the notes therein and continued. "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 t' the strain of gearin' up for a new product line."

As Neville spoke, McLaughlin flipped through the brochure. 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, mebbe. Though you may be surprised at just how many shuttle crews we expect to be workin'." He slid a sheet out of his folder. "But here's where the money is- we're gonna offer passenger service. In simple terms, Earth to orbit for eight grand per head. And back. Less, if they don't plan to come back." His own eyes went dreamy for just a moment. "I expect there'll be a demand for suits."

McLaughlin stared slackjawed, then closed his mouth. "You're kidding."

"You keep sayin' 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, an' 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've 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 everythin' t' us." He slid another sheet across the desk to McLaughlin. "Here's the deal. We'd like t' run it as a straightforward licensin' arrangement. We'll provide the suit design to your company exclusively. You pay us a royalty'a twenty dollars per suit sold. After five years, we turn all rights t' the design over t' you; it'll be yours completely."

"Twenty dollars per suit?" exclaimed McLaughlin in disbelief. "How do you expect to make any money like that?"

"Directly? We don't. But it'll be easier t' sell an orbital ticket, if the potential customer can keep

breathin' when he gets there." Neville waved a hand idly. "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. "I'm certainly inclined to deal," he said. "I don't see how this can be anything but good for Regency, if your spacecraft gets off the ground. A worthwhile I risk, I feel."

"Great!" Neville reached forward to shake the other man's hand.

"Let's not get ahead of ourselves," McLaughlin warned. "I've heard that Launcher is a tight, closed partnership with you and a few others deciding things quick. I'm afraid that Regency has a too-large board of directors that I answer to."

"Well, just explain how much money they can make with damned little risk. 'Cause I need p-suits; if not from Regency, I'll hafta go to the next outfit on my list."

"I understand completely. How much time can we have?"

"If you can't get me a signed contract in a week, Regency isn't flexible enough for the job." It was a warning, but a fair one.

But also one guaranteed to irritate the corporate legal staff who'd work overtime to analyze the contract. "I see." The shoe man paused for a moment. "Your people will be forwarding the design documents? We'll need that to make a decision."

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

McLaughlin looked at the tiny disk that just might represent 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 recently closed a fascinatin' licensin' deal for cheap inflatable spaceships with Pedersen Polymers down in Georgia."

"Inflatable spaceships? You're kid... Never mind." He chuckled and eyed the documentation on his own desk. When he thought about it, this was no sillier.

Cal stood in the entryway to the construction barracks, looking at a computer screen which doubled as a bulletin board for posting notices to the workers. The barracks wasn't much, just an old building divided into a collection of four-man rooms. The Company had provided the living space as part of the standard employment contract, along with a military-style chow hall. No one was obligated to actually use the facilities, but most of the construction workers elected to bunk there to make the most of their paychecks. Fewer bothered with the chow hall; the food reminded Cal of horror stories his father told of his military days. Now there was a profession which he was glad he'd never considered at all.

Today's bulletin board entries seemed to be the usual collection of policy change notices and job postings... "Hey," Cal muttered. "Whatta we got here?" The final message was an internal posting for

an explosives demolition person. "Quarry or excavation experience..." He began grinning. The thing didn't actually mention a license. He grabbed the keyboard and started typing.

Thomas Hazelton was the construction boss for the launch and shuttle landing strips. Physically smaller than the vast majority of his workers, he nonetheless projected an aura of toughness that seemed to impress men interested in physical prowess and strength, a type that naturally enough gravitated to the heavy construction field.

The kid in front of his desk was no hulk either, but he didn't look like a wimp either. This was the third time Hazelton had met him, for similar reasons each time. "Survey." Hazelton pursed his lips. "Didn't you just transfer to Survey from the road crew?" he asked the kid.

"That's me," Cal replied. "Somebody heard I could use a protractor and recognize a transit two out of three times, and there I was," he quipped. He figured that he had nothing to lose by being himself. The odds of landing a new job blowing things up were pretty damned slim anyway. Might as well have some fun with it.

The light dawned, and Hazelton looked at the young man carefully. "Right. You're the guy who put the store mannequin in the pour and made the imitation Han Solo in carbonite." He tried out his stern expression. "You know Neville made us bust that loose to be sure it wasn't the remains of some grunt who'd had too much to drink? A hell of a lot of work from a practical joke," he accused.

"Yep, that was one of my better pieces of art." Cal smiled proudly. "I did the pile of shit from Weird Science, too."

Hazelton didn't laugh. "So you don't mind wasting company money on your jokes?"

"Hey, the pour for the Han Solo thing was bad anyway. They didn't prep the surface and the reinforcing wire wasn't welded. I told 'em so, but Connolly wanted to keep to the stupid schedule and poured anyway. I knew it would have to come out. And I was one of the suckers who got the job of digging the dummy out. No big deal."

"And the shit pile?" Was there a hint of a grin on Hazelton's lips?

"Leftovers. Truck came to the site with the load mixed hot. Once the pours were done, he had to dump the rest somewhere, or have it set up in his truck. So why not have a little fun? I was off-clock."

Hazelton chuckled at last. "Okay. You know the big boss saw that one, too?"

"Yep. And I heard he laughed his ass off."

Hazelton gave up; the kid was indomitable. "Yeah. I thought it was kinda funny myself, once somebody reminded me of that old movie." He snickered. "Okay, so you're a little crazy. Doesn't sound like much of a recommendation for an explosives man, though. An accident waiting to happen."

Cal shrugged. "Playing with high explosives all day might be a little loony in the first place. The trick is to remember that crazy isn't automatically incompatible with careful."

"Damned well better not be, not if you're going to work on my site," Hazelton said baldly. "I'll

not have any stupid shenanigans getting people hurt or killed." And an abrupt change of subject. "Okay, you don't have a destructive devices ticket. So what demolition experience can you have?"

"Legally? None, technically, I guess." Hazelton would have expected some men to become apologetic at this point, but that certainly wasn't Schmidt's style. "But I learned the basics from a guy with a license. Dad brought him out to do some work on our little ranch, and I pestered him 'til he decided to give in. Dad paid him off with a bit of a bonus, and we finished the blasting between us with the materials the guy conveniently forgot and left behind. He got a little extra without spending all the time out there, and Dad saved a few bucks by us finishing the work and we did some extra that we hadn't planned originally." He shrugged again and smiled. "Not especially legal, but so long as you don't bother anyone else, no one much gives damn out there. So yeah, I know some explosives. ANFO, at least; which I figure you'll be using if you're clearing big rocks."

"Yeah, cheap, effective, stable and safe. I know guys who like more exotic shit, but I'm conservative. Don't want anything on my job site that I don't understand."

"Well, since 'understanding' has come up," Cal said, "How about letting me in on the secret? Why interview me for a job that I can't legally do? Why not hire some licensed outfit?"

"Normally would. But the bosses are on this kick about keeping things in-house. They'll do consultants where they gotta, but prefer employees with a stake in the business. In your case, even to the point of bonding you and getting you set up with a ticket..." Cal whooped happily. "If you can prove to me that you know what you're doing," he cautioned.

Cal froze and inspected the proposition for potential traps. "Prove how?"

Hazelton presented the kid with a nasty grin. "Well, it works two ways. If you aren't averse to a little informal test, I thought I'd see what you can do with some fertilizer and diesel. Tonight."

Suspiciously, "You want me to blow something up?"

"Yep. Got a little boulder out near the far end of the landing strip that nobody'll miss. Blow it around eight, and I don't think anybody'll notice the noise." He leaned back and looked Cal right in the eyes. "You up for it?"

Cal thought fast. "Well, improvising with fertilizer and diesel is no big deal, despite the explosives companies claims that fertilizer is unsuitable. But I'll need blasting caps and a detonator. Dad has mine back in Wyoming."

"Not a problem. If you promise not to tell the BATFmen that I've been a bad boy, I might stumble across something that fell off a truck."

The two men grinned conspiratorially.

A few days later, a group of sweaty workers were gathered around the postings terminal in the barracks foyer. "You gotta be fuckin' kiddin'," one exclaimed.

Another guy pushed closer and read the screen. "Schmidt? Ain't he the guy that superglued everything in Munoz's locker down?"

"That's him," yet another confirmed. "And don't forget the short-sheeted beds and the food coloring in the shower heads."

"At least he didn't use something permanent like Rit fabric dye." That from someone who was examining his ponytail for remaining tint. "Green ain't muh coluh."

"I kind of liked the time he replaced the mashed potatoes in the chow hall with concrete..." another began.

"...And nobody noticed the difference," someone else finished, with everyone laughing. "Still, they're going to give him bombs? And he needs an assistant?" Shaking heads all around all. "Not this good ol' boy. Momma didn't raise me to be no fool."

"Cal Schmidt needs an assistant?" Micky Melendez would have pushed her way to the terminal, but the crush of testosterone-afflicted men simply melted away for the latina beauty. She read the job posting carefully, and started to smile.

Chapter 9

Year Two, January 7th

The natural tendency of every government is to grow steadily worse -- that is, to grow more satisfactory to those who constitute it and less satisfactory to those who support it.

- H. L. Mencken

Any company whose president has gone on record condemning government as a bunch of bumbling bureaucrats and whose chief of R&D is a self-avowed anarchist is bound to attract unpleasant attention from public servants with bruised egos.

In drab pastel room, sitting at a drab, gray steel desk, the taxman glared sourly at his decrepit computer monitor. It was a VT-550, so at least the display was color. He mentally cursed the last failed billion dollar attempt at upgrading the Service's computer network as he read through various files on the Launcher Company's key personnel. Occasionally he referred to the wad of printer excrement in his left hand. "Shit." Time to make a management decision and delegate. He punched a button on an old fashioned, and quite battered, intercom. Nothing happened. He hit it again with no result. He started to lift the handset of his phone, then recalled that he didn't know Watkins' extension. "Shit." He stood, clutched at his ream of greenbar, and headed for the door. He gazed over a matrix of identical gray steel desks - just like his own - in a similarly pastel common area. He spotted the desired underling and bellowed, "Watkins!" as he stalked towards him.

A few desks away, a harried man held up one hand as he spoke on his own phone. "Yes, sir, I did receive the files you sent." Pause. "But..." Pause. "Sir, we don't accept computer scans of receipts. We have to have photocopies or the original paper..." His eyes rolled to the ceiling, and he rubbed at a balding head in sheer frustration. "Sir, I understand that you purchased the computer online and paid by credit... What do you mean the only receipt you get is electronic? Really? Well, no. I haven't ever bought anything online.... No, I am not living in the Dark Ages! Yes, I do realize this is the twenty-first century already. You come up with some hardcopy originals or... Hello? Hello?" He slammed the handset into its cradle. "Well, fuck you too, Mr. Taxpayer!" He looked up at his supervisor "What?!" Then he forced himself to be calm. It wasn't that much longer until his annual evaluation was due. "Sir."

Calmly, his boss asked, "What was that?" He tipped his head towards the phone.

"Just another goddamned 'I'm-a-taxpayer-you-work-for-me' idiot I'm auditing. Asked for receipts for stuff he claimed as business expenses, and the asshole emailed me a bunch of electronic computer files. Can't even read half of 'em with Word, got some weird file extension like TGA; must be corrupted files. Fucker's just trying to be a pain in the ass."

"So? Deal with it," the IRS supervisor directed him. "Don't piddle around on the phone. Just pull the seizure boilerplate off the network. List him as uncooperative and interfering with the investigation. Reference the bogus files and lack of receipts. I'll stamp it, and it goes to 'Court' and enforcement, and they'll seize every bank account him or his family's got. End of problem."

"But I thought..."

"Watkins, you came in back in the late '90s, right?"

"Yeah. Why?"

"So you got indoctrinated during the 'kinder, gentler' days of tax reform, back when Congress hit us with the tougher rules of evidence. Assholes."

"I suppose..."

"You gotta remember that executive order the Prez signed - national emergency and all, 'less rigorous rules of evidence', all to 'enhance revenue collection.' " The boss sneered. "Some weenie doesn't want to cooperate, you just bend him over and fuck him good." He smiled nastily. "That EO did wonders to boost our collection quotas again."

"Yeah, I guess I do tend to forget..." The words trailed off as a nasty smile lit his pasty features.

"Well, if you want to make quota, you better stop forgetting." He tossed his bundle of computer droppings on his subordinate's desk. "Anyway, you close out that job this afternoon, 'cause you got this one now; higher priority. Launcher Company."

Watkins' eyebrows rose. The company had been much in the news for months. "Launcher, huh? What's up?"

"Got a priority order in to review their finances for irregularities, since damned near everything else about how they operate is irregular."

"Priority? Like what, 'Expedite- White House'?"

"Something like that. Never matters who's in the Oval Office; the IRS is their dogboy."

Watkins sighed. "No shit. So what do I need to look for?"

"Nothing. Just make trouble. Start by issuing an order for all the corporate financial records..."

"All? How the hell can any outfit do that...? And how the hell am I supposed to be able to go through it all myself? Are you assigning a team to this?"

The bureaucratic boss smiled nastily. "They can't, of course. That's the point. We don't really have to see the crap. But we make them jump through hoops producing it. Shows 'em who's boss. Makes it easier to deal with 'em when we start auditing their officers and employees individually." He smiled his nasty smile again.

"Oh, right. Sure. I'll get right on it. Oughta be fun, even."

Of course, this was a game everyone could play.

"Good afternoon," the suit called out loudly, trying to make his voice heard over the racket of riveters and the blowers of gas-fired heaters. "Who's in charge here?" As he spoke, the stranger scanned

the building interior suspiciously. For some reason, he'd expected the hangar to be dark; the reality was anything but. Half the area of the building ends were translucent panels, there were skylights in the roof, and Launcher hadn't skimped on the electric lighting either. As he spoke, he examined his target du jour.

It looked a little like a conventional airframe being assembled, workers scrambling across the bare ribs of the fuselage as they taped, riveted, and welded titanium sheathing and other whatnot to the framework. One oddity was a lack of real wings, although their beginnings should have been in evidence by this stage of assembly. The visitor scribbled notes on a pad retrieved from a pocket under his overcoat.

"Who the hell are you, and what the hell are you doing in my hangar?" Scott Tincher, master metalworker and crew boss demanded in reply as he swaggered across the assembly area to head off the intruder. Tincher tended to be a bit possessive about his shop, and he particularly liked working at Launcher, which understood his desire to run his own shop his own way. Besides, something about this guy felt wrong. A fed? Tincher hated bureaucrats.

The suit ignored the question. He glanced at, then past, Tincher hautilly and asked, "Are you the man in charge?" Without waiting for an answer, he stepped past the big man to get a closer look at the vehicle under construction.

If Tincher had been a dog, his hackles would have been sky high; they almost were anyway. Quite consciously, Tincher sidestepped to block the man's path, and flexed his biceps, with other bits of musculature following automatically. Manipulating oddball alloys into desired shapes requires a certain amount of finesse. It also calls for more than a little physical strength on occasion. Tincher wasn't especially large, but he bulked satisfactorily. "Mister, I asked you a question." His tone was still even, but vaguely menacing even so. He stared down into the visitor's eyes.

Right about then, it occurred to the arrogant inquisitor that the machinist was big, annoyed, and rather casually toting what must have been a fifty pound sandbag in one hand. He gave up some ground, but kept up his mini-grilling. "I asked who is in charge here. And you are not being very cooperative. That will go into my report...." His pen tip tapped against the notepad suggestively.

"Yeah? Report this, prick. I work here, but you sure don't." Tincher hefted his sandbag as casually as a lesser man might dangle a mere blackjack. The sandbag was more commonly used as a base for planishing sheet metal into new and interesting forms, but the metalworker was giving some thought to reshaping something much less resistant than aircraft-grade alloy. "I suggest you get your ass out of my shop." He pointed to the hangar's personnel door which the as-yet unidentified intruder had left open. "Out the door, and hang a left for about two hundred yards. Check in at the visitors' center."

Eyes clicking back and forth from sandbag to sandbagger, the intruder made one last try. "You are interfering with an official..."

"Limpdick, you haven't seen interference yet." Tincher moved in. "Speaking of which, you're sure as hell interfering with my official business."

Mr. Suit dug into his coat and came up with an ID wallet which he flipped open and held up like a superstitious peasant's protective talisman. "Rodgers. FAA. If you don't start cooperating right now,

I'll close this operation down today. And you'll lose every FAA certification you've got." He noticed sweat plastering his shirt to his body. He'd thought it was rather chilly today, but... Must be the hangar heaters; hotter than he'd realized. He also discovered that he was closer to the entrance than he had thought. And Tincher was still coming towards him.

Except that the worker paused in surprise at the Aviation Administration official's revelation. "FAA? Aren't you a little lost? Airport's back thataway about 10 miles." He poked a thumb back over his shoulder.

"I am well aware of the location of the public airport." Rodgers decided to press his perceived advantage. "I'm also aware that you are constructing an aircraft. Since it appears that no one has bothered applying for X designation or scheduling certification inspections, the Administration has sent me..."

Tincher laughed in his face. "Man, you are in the wrong place. We've got no aircraft here."

As a usually-dreaded federal inspector, Rodgers wasn't accustomed to being laughed at. He discovered that it pissed him off. "And what the hell do you call that?" he yelled. He pointed to the rather large object behind Tincher.

"That's a goddamn ground-effect machine, you moron!" supplied another voice from the doorway. Hank Hanners stormed in. "And what the hell do you think you're doing in here, fed?"

Rodgers was now sandwiched between two men, one large and pissed, the other not quite so large, but apparently inclined to use that damned sandbag homicidally.

"Howdy, Hank," the metal worker greeted the engineer, suddenly relaxed. "You know something about this clown?" He looked down at the bureaucrat and sneered. "Dumbfuck thinks that thing's some kind of airplane."

Hank shook his head in disgust. "Yeah, so I just heard. I'll take it from here, Scott." And back to the fed, "Mister, even if we were building an aircraft, it'd be none of the FAA's business until we're ready to flight check it. And even then, you bozos don't go sneaking around private property." He snapped out an index finger and began poking the smaller guy in the chest as he ticked off points. Not-so-coincidentally, he was also guiding the man out the door. "First," poke, "you are trespassing!" Poke. "Second, you're 'way out of your jurisdiction; that's Federal Aviation Administration, moron. We aren't doing aviation in here!" Poke.

"But..."

"Shuddup!" Poke. "Even if that were an airplane, instead of a ground effect craft, you don't come in harassing our people!" Poke, and out the door into a chill breeze. "And you by god don't do any of that without a fucking warrant!"

"Goddamn it!" With the final poke, the inspector exploded like a popped balloon. "I don't know who you think you are, but I hope you have a real good lawyer! You are under goddamn arrest!"

"I strongly doubt that." A third voice interjected itself into the conversation. The fed spun to peer at another man in the glare of the sun. Two men, rather. One seemed to be a cop of some flavor, a

big one. What was it about this place and big guys? The speaker glanced to the cop. "This clown is trespassing just like the gate guard said. How 'bout haulin' his butt to jail for me?"

Dwayne Simmons smiled and stepped forward. "Certainly, Mr. Neville." And to Rodgers, "Sir, since the owner of this place says you aren't supposed to be here, and from what I'm hearin' myself, you don't seem to want to leave, I'm placin' you under arrest for trespassin'!" He nodded at the engineer, and added, "Howdy, Hank."

Hank scrambled to recall the big Amerind's name. "Howdy, ah... Dwayne. You got here pretty quick."

The deputy winked. "Dumb luck. I was over at HR filling out an application. Still up for that reference?"

"Sure," Hank agreed. "But looks to me like the boss is already impressed." He tipped his head toward the patiently waiting company president.

Rodgers eyes bugged out at this exchange. "Is everybody in Texas crazy?" He held up his ID wallet, which still dangled from his sweaty, but turning cold and clammy, fingers. "I am an inspector from the Federal Aviation Administration. I am here on official business to inspect an aircraft which this company is constructing! You can't arrest me; I'm arresting him," thumb over shoulder at Hanners, "for interfering with my duties!"

Dwayne exchanged glances with Neville and Hank, then added a look of pity for Rodgers. "Mister, you're a little out of your jurisdiction." He plucked the wallet from Rodgers' fingers and examined the plasticized card within. "Even assuming you're who you say, you've got no right to be here without a warrant or some other appropriate order. And I happen to know myself that Launcher doesn't have any aircraft in there. So I don't know what you're talking about." He reached for the man's arm to guide him to the county four-by in which he and Neville had arrived.

The furious inspector brushed off the deputy's hand. "Keep your mitts off me! I am a federal inspector!"

"I don't care if you're the tooth fairy," Dwayne replied. "You're trespassing and you're under arrest. Why don't you just spare us all a lot of trouble and come on quietly? We'll settle this back at the office."

"Look, you stupid yokel!" Rodgers pushed the deputy. "I'm.... Errk!"

At the initial push, Dwayne seized the fed's wrist. He gave it a twist, and a tug. Rodgers suddenly found himself with his back to the cop and facing Hank, who offered a snide grin but no comment. His right arm was held behind him, extended stiffly in the cop's grasp. He felt something metallic envelope his wrist. "What the fu... !"

"Give me your left hand!" Dwayne demanded.

"Fuck you! I'm gonna have your badge so fast you'll thin... ! Argh!"

Dwayne had planted one thumb alongside the point of the inspector's extended elbow. It didn't

look like much, but, "Give me your left hand!" Dwayne ordered again. Rodgers did, and the deputy finished handcuffing him. Neville looked impressed. "PPCT," Dwayne offered cryptically. "I love it." After a brief exchange with the company men, the deputy led his charge away. Neville had agreed to go to the sheriff's office a little later to take care of paperwork for formal charges.

Hank and Neville watched the deputy's car roll off down the dusty access road. "Well, shit," Hank muttered. "So it begins."

"Looks that way," his boss agreed. "FAA was dumber than the average agency. They shoulda waited 'til we actually got a spaceplane somewhere other than paper."

"I imagine we'll have NASA out here next, trying to deny a spacecraft certification."

Neville snorted. "In your dreams." The businessman was more realistic. "I'm bettin' on the IRS."

Hours later, miles away, and farther by the minute, Rodgers was still rubbing his wrists. Surely they didn't still hurt, no matter how tight that goddamned cop had cranked the cuffs. Maybe it was just the psychological effect of having been cuffed. "By a goddamned county mouny," he muttered aloud.

Roy Spencer, the inspector's supervisor, gave him the evil eye. "I don't want to hear shit out of you, Rodgers," he warned. "You are currently lower than whaleshit in my eyes." He turned his attention back to the road as he piloted the GSA motor pool minivan. "You're lucky the Launcher people decided not to press charges once we showed we could be reasonable. Shit, you're lucky the breed cop didn't hit you with 'resisting arrest' since you were dumb enough to start poking at him." His voice dropped, and he added something that Rodgers wished he couldn't hear. "We've got to raise our hiring standards."

That just pissed off Rodgers all over again. "Damn it! I'm lucky?" Sheer disbelief. "The idiots were interfering with my duties as an inspector!"

"Proof positive that your folks didn't breed for brains." Spencer half-faced Rodgers, trying to watch where he was going while chewing out the wayward inspector. "With no aircraft, you as an Aviation Administration official didn't have any duties there!"

"Damn it all, they're building a spacecraft!"

Spencer hit the brakes. They locked up with a screech, and the driver swerved the vehicle to the side of the road. Once safely halted, he continued his diatribe. "You moron! You ever read the papers? Surf the Web? Launcher hasn't started spaceplane construction yet! All they have is a big, fast gadget that never leaves the ground. Not your jurisdiction yet!"

"But... !"

"But nothing! Shut the hell up!" Spencer stopped and took a few breaths to get himself back under control. Finally, more calmly, "Right. You get the formal paper in the morning. You can appeal it all you want, but you know you'll lose, so don't bother. You're suspended, with pay." Rodgers brightened a little at that. Paid vacation. "For two weeks. And I'm putting a three page letter of reprimand in your records."

"But... Never mind." Quit while you're ahead, he told himself.

"Damned right." Spencer sniffed. "Don't expect to see your next step increase for a while now, bozo. Having to call your supervisor to get bailed out of jail is not conducive to a successful career with the FAA." More muttered curses, and, "And you managed to get your official car towed, when you left it out at launcher's hangar!" The supervisor took several slow, deep breaths. Then less angry, but still grim, "Fuck it. When you come back to work, I've got a project for you."

"Yeah?" Rodgers wondered cautiously.

"Yeah. The Launcher assholes. They might not have a bird yet, but they mean to eventually. We've been sitting an an X application for a little while, trying to decide whether to buck it over to NASA. I want you to take that over, tracking every bit of data on them you can scrape up. You'll review every piece of triplicated toilet paper they file with us. You will find problems with it. You understand?"

"Yes, sir. I think I do."

"Damned right. No one fucks with me or my people." He put the GSA motorpool vehicle back into gear and pulled onto the road. "We'll teach the assholes who's in charge."

Chapter 10

Year Two, January 30th

No boom today. Boom tomorrow. There's always a boom tomorrow.
- Susan Ivanova

Despite the winter chill, the work had him sweaty; not to mention filthy, and grinning like a maniac - which his co-worker found quite apropos. Excitement helped, too. Cal looked up at his partner from where he crouched in dusty dry caliche. "Micky, you'd better get your head down if you plan to keep it." He held up the explosives initiator to emphasize his meaning. A quick twist of the handle, a flip of a toggle, and yet another obstructing rocky outcrop would fall prey to a kilogram or so of ANFO explosive.

"C'mon," the curvy brunette dismissed any real hazard. "We're twenty-five yards off, and the charges are barely enough to split that lump into bite-size portions." Although she was a few years older than Cal, she was new to the wonders of explosives. When word got out that Cal needed an assistant cum partner to work in demolition, Micky was the only volunteer. The man had already developed a reputation for a peculiar sense of humor, and most folks were leery of insanity combined with high explosives. Micky kept her own counsel and took her chances. Like now.

"If you say so." Cal was rather obviously dubious. "Remind me to introduce you to Stubby Perkins someday." He untwisted wires and attached them to binding posts on his little gadget.

"Who's Stubby Perkins? He on the other road crew?"

"Nope; just a guy I knew back home. Didn't believe how powerful firecrackers could be. Never did get all his fingers sewn back on." He turned thoughtful for a moment. "Mainly 'cause we never found 'em all."

"Ick. Yeah, right." But she crouched down beside Cal.

"Thanks. I'd hate to have to explain to half the road crew how I got your cute little head blown off." With that, he raised a bullhorn to his mouth and shouted, "Fire in the hole!" Then he scanned the region surrounding the soon to be defunct boulder. Seeing no one close enough to be at risk, he twisted the aforementioned arming handle and flipped the switch.

There was a loud CRACK! and the rock disintegrated into gravel and dust. A fist-sized chunk of something sailed through the approximate region previously occupied by Micky's cranium. Cal smirked as she belatedly ducked lower. The woman muttered darkly. "Don't say a word," she warned.

Cal rose to examine his handiwork and beamed cheerfully. "Yee haw! Dontcha just love a job where they pay you to blow things the hell up?"

"Well, it beats hauling this trash to fill in the damned gullies, or pouring concrete." She looked back towards the near-miss. "Mostly." Then she turned up the collar of her coat against the chill as the wind picked up.

"You're one to talk. I started on the cement crew, 'til the boss heard me critiquing the goddam surveyors. Made me one to shut me up. At least it was easier work." Then he made his best wide-eyed psychotic look. And wiggled his eyebrows. "But this is ever so much more fun.". He checked that Micky's case of blasting caps was safely secured from the hazards of static electricity and RF interference, and turned on the portable radio dangling at his belt. He keyed the mike. "Star Fleet Command, this is the Mad Bomber. Another one bites the dust. Correction- another one is dust."

A tinny voice replied from the radio. "Schmidt, Road Ops," it corrected wearily. "If you can't remember our name, can't you at least remember your own? And I assume you've successfully demolished Number 127?"

Cal grinned at Micky, who shook her head in exasperation. "Yepper, Ops. I blew the damned thing up. Got anything else you want us to kill before we quit for the day?"

"Shit, Cal," the voice came back resignedly. "I guess not today. But some moron in the Head Shed finally realized that miniature mountain at the end of the launch strip is in the way. So it needs to be removed ASAP."

Cal rushed to pull out and unfold a map of the launcher range. He stretched it out over the cold ground and peered closely at one end of the marked path for the hovercraft. "Okaaay, Tom. At the risk of sounding official-like, you do mean number two-sixty, right?" For Micky's sake, he pointed to a numbered symbol on the map. She nodded.

"That's the one," Ops confirmed. "And like I said, they're in a hurry; so you get to indulge yourself. Blow it up as much as you like, so long as you're done by day after tomorrow. I'll have a drillman meet you out there first thing in the morning."

"Cool! You get me John Henry and all the ANFO I want, and Micky and I can eliminate that sucker by quitting time tomorrow, I bet."

"John Henry? I don't know him. Is he one of the new guys?"

"Sheesh, whatever happened to education in this country?" he muttered to Micky. Her only response was a blank expression, and he snorted derisively. Then into the radio again, "That's John Henry the Steel Drivin' Man. But I'll settle for Hank Roberts and his jackhammer if they're available."

"John Henry the what? Schmidt, you're getting stranger every day. But I can get you Roberts, I think. I'm signing off before you make my brain implode."

"Sure thing. Mad Bomber, over and out." Cal sighed happily as he looked to Micky. "260 and all the bombs we want. This should be fun." He started coiling up the remains of his detonator wire as he walked back to his shabby truck. "I love my job," he added.

Micky paced along beside him with a peculiar look. "You, a too-damned-big pile of rock, and enough explosives to satisfy even your craving for destruction. I don't even want to consider that without significant quantities of alcohol. What say you buy me a beer and dinner after work?"

Cal fidgeted nervously with the coil of field wire. Damn, here she goes again. Fear mode on, deflectors screens up. Sheesh, Schmidt, she's asking you out. Again. Get over the shyness already. Take

a chance. "Mmm. Well, I suppose... But don't you have a date or... something? With Todd?" Cal found it all a bit puzzling - why this lady was after him, of all people. Spooner knows, she's got her choice of any guy on the construction crews. One or two of the women too, he'd heard. It was only barely less puzzling why he continued to chicken out.

Meanwhile back at the ranch, so to speak, Micky addressed his objection. "Not until Wednesday," the brunette answered smugly. She gave a look that was purely seductive, wind-chapped face and all.

"This is Wednesday," Cal reminded her with relief. He wasn't about to explain why to a bunch of construction grunts, but he was a bit hesitant about pretty women. Stupid, and contra-survival species-wise, he figured, but a real fact.

"What? Shit! You're right." She glared at Cal in mock grim determination. "One of these days, Mr. 'Mad Bomber' Schmidt, you aren't going to have an excuse." Cal's only response was a blush mostly masked by his Wyoming-induced, Texas-enhanced sunburn. "What's wrong with me anyway?" the girl demanded.

Shy or not, the question caused him to automatically make a scan of her very nice figure. Blush now in full bloom, Cal stammered, "N-nothing. Really. I'm just... Look, never mind. Let's just head home." The pair climbed into Cal's pickup and rode back to the construction barracks in silence.

This time it was Micky's turn to smirk. One of these days, Cal...

As it happened, Cal wasn't entirely off the hook. When it came to alcohol and dinner, there were only just so many places to choose from, unless you went all the way into San Angelo. The Launcher road construction crew had adopted one such place as unofficial off-shift headquarters. _The Grill_, so named for the partially burned out neon sign that left only those words visible at night, was small, and to many newcomers' eyes, grubby and tacky. None of the furniture matched, the wallpaper pattern was indiscernible under years' worth of graffiti, and the cloth on the pool table was thin nearly to the point of transparency. You had to convince fellow imbibers to move a table to clear the tiny dance floor. Assuming the poor old jukebox was working. But the food was decent, if not terribly inspired, and the prices were damned fair. And, not inconsiderably, the owner figured that anyone old enough to work at supporting himself was old enough to buy a beer. Cal liked the place. It was comfortable.

The problem was that Todd evidently liked the place too. Or, more likely from things Cal heard, was too cheap to take his date into town. He had shown up with Micky on his arm while Cal was finishing off a burrito and a beer with Dom Necklin.

Damn, I'd probably be flattered if she didn't scare the hell out of me, Cal thought. Micky's date might've been Todd Jankowski tonight, but Cal seemed to be... in her sights, sounded about right. Micky's expression put him in mind of a predator staring at a little fuzzy animal. A hungry predator. Cal quickly downed his remaining beer and returned to the conversation at hand. "No, really. It does make sense," he told his drinking buddy.

His companion was four beers down already, and despite his huge mass looked blearily dubious. "Not t' me, bubba. I'm kinda takin' it on faith, I s'pose. The brains say it works, I'm getting paid to build the thing, and I'm gettin' shares I kin cash in for a ticket." He slurped down more brew. "But it soun's like magic, gettin' ta orbit on sumthin' that don' even leave the ground."

Cal grinned. "Tell you what, Dom. You spring for another round, and I'll try to put it in terms even a drunk like you can understand."

Dom snorted. "The things we do for drinkin' buddies." He rose to his feet and went to the bar for refills. It being a quiet night, comparatively speaking, he returned quickly with four more bottles. "Spares in case this takes too long," he explained, twisting off a bottle cap.

"A man of wisdom and foresight," Cal complimented the older man as he opened his own bottle. "So... We want to get to orbit on a hovercraft. Let's start by throwing rocks."

"Shit. I shoulda brought more beers." From spaceships to rocks. This was going to take a while. Dom could tell.

"Be quiet, drink, and listen. It ain't that bad." He fingered his bottle cap, then tossed it across the table. "Here; pitch this across the room. Try to pop Micky with it," Cal instructed, pointing at another co-worker.

"Heh heh heh. I'd like to pop her with something. No prob." Dom sent the bottle cap flying, but it dropped short of the intended victim. "Damn."

"Didn't throw it hard enough," Cal observed.

"No shit, Sherlock."

"Bear with me, Dom. I'm making a point here." Cal took another swig of beer and went on. "If you threw the cap harder, it would've gone faster. Farther. Right?"

"Well, duh."

"Duh, my ass... "

"I don't like your ass," the big guy wisecracked. "Micky's on the other hand..." He leered across the room. Micky noticed, and returned his leer playfully. And waved at Cal for good measure.

Cal felt annoyed, but attributed it to the topic drift. He dragged the conversation back on track. "Behave! Now pretend you're outside pitching the rocks I mentioned. Same principle applies; throw 'em faster, they go farther." He poked at the burly construction worker's biceps. "Now you being a real man, you can probably toss those rocks real hard. Let's say you can throw 'em over the horizon."

"Naturally." Dom's ego wasn't about to let reality get in the way of a good boast. He flexed an admittedly impressive bicep. Dom had built a reputation for being handy when heavy equipment wasn't.

"Right. However hard you're throwing the rocks, they go more or less parallel to the ground at first, then curve and fall to the ground. Right?"

"Right. Drink your beer."

Cal obeyed the entirely reasonable order, and continued the lecture. "But what if you threw one so hard that by the time it started curving back down, the rock's curve matched the curve of the Earth?"

Dom blinked and set his bottle down. "I can't quite pic... " He made a circle with thumb and fingers of one hand, and traced imaginary trajectories with the finger of his other hand. "Okay, gotcha. If the curve matches, the rock just keeps fallin' without hittin' bottom. Orbit." More beer. "I think I heard this story in school; but it was cannon balls," he recalled.

"No doubt. I did. Anyway, tossing those rocks, you can see that you don't have to throw 'em high to make orbit, just fast."

"Yep. But it's hard, thirsty work. I need another beer." That said, Dom pried the top off his sixth beer. Cal wondered which was greater; the man's stomach capacity or that of his bladder. "So it works. But what makes this so much better than shootin' 'em straight up like NASA?"

Cal opened his mouth to reply, but was interrupted when two more men approached the table.

"Howdy, Bomber!" It was Tom Hazelton, the construction supervisor - Road Ops - in the flesh, accompanied by a stranger. "You teaching class again?"

"Gotta do something to keep 'em bringing me beer," Cal answered, said beer held high as evidence. "Any probs with that requisition I filed this afternoon?"

"No; and it amazed the heck out of me. Last time anybody wanted that much ammonium nitrate, McVeigh got suckered in OKC. I guess the honchos really do want that area cleared."

"Cool!" Cal spun and yelled across the room, "Yo, Micky! Armageddon is on for tomorrow!" The woman started, and dropped her face into her hands with a shudder.

Dom's reaction was more verbal, but no less to the point. "Oh, sweet Jeezus. You're giving him more bombs..." He shook his head.

The stranger observed this and similar displays around the room and wondered aloud, "Do I want to know what this is all about?" He had a faint accent. French, Cal thought.

Hazelton glanced at him. "Sorry, Andre." He explained the joke. "This is Cal Schmidt, Construction's self-avowed 'Mad Bomber.' He takes great pleasure in ridding the state of Texas of rocky obstructions as spectacularly as we'll let him get away with." He continued the introductions. "Cal, Dom; this is Andre Grandjean, the Orbital Ops supervisor. And Dom Necklin here," indicating Cal's blurry student, "is best known for a strong back, weak mind, and an unbelievable capacity for beer." He grinned as Dom tried bowing while seated.

"I am pleased to meet you both, I think," Grandjean said with some humor. "And now that I think on it, I believe I have heard about Mr. Schmidt, if not by name." He smiled towards Cal. "You must be the individual who rather precipitately expanded our parking lot. Without warning us to move our vehicles beforehand," he added sardonically. "I believe a few of the installers discussed sending you the bill for cleaning their undergarments."

"But you'll remember that not a single car was so much as scratched," Cal noted proudly.

"True," Grandjean admitted.

Hazelton re-entered the conversation. "Andre, what do you say we let these men enjoy their beer without any more managerial interference?"

"Quite so. I do have a few things to discuss, as well. If you gentlemen will excuse us?" This last was directed to the beer-soggy construction workers.

"Sure thing." Dom tipped his bottle towards in man in casual salute.

"Nice meeting you, Mr. Grandjean," Cal added.

"Do have a pleasant evening." The bosses retreated to a table of their own.

Cal considered the dregs at the bottom of his bottle and set it aside. "Right. So where were we?" Class was back in session.

"Well, you were about four beers behind me, but then I started on number seven. So you've got some more catching up to do." Dom attempted unsuccessfully to spin a bottle cap on the uneven table surface. "Other than that, we were tossing cannon balls, I think."

"Okay. So you saw that all we need to make orbit is just forward velocity, speed."

"Check. An' I was wonderin' why NASA shoots up. So ta speak."

"Mainly because they're stupid. And politically driven, though it comes to the same thing. Back in the 1950s and 60s, the U.S. and the old Soviet Union were into the dumbest propaganda battle, to see who could get into space first." Cal shook his head disgustedly. "So rather than do it right, the morons simply took off-the-shelf ballistic missiles and replaced the warheads with crew capsules. A purely brute force approach that they could get away with because the missiles were there already." Cal noticed that Dom's eyes looked a bit glazed, but couldn't decide if it was him or the beer. Either way he'd better push on quickly.

"Anyway... The vertical boost sucks. Even more than most presidential interns." He pulled a pen from a shirt pocket and began scribbling on a napkin. "See, there's two sorts of energy, power, you need to pump into a vertical missile to shoot something into orbit..."

At their own table, Hazelton and Grandjean relaxed over drinks; the construction supervisor with scotch and water, while Grandjean considered his mediocre brandy. Then again, perhaps he should count himself fortunate in the extreme to find brandy in this... rustic setting at all. "Tell me, Thomas," he began. "What was that about Mr. Schmidt 'teaching class'? He passes his explosives knowledge on to others?" He was unsure of American law, but imagined that would be quite illegal in France.

Hazelton chuckled. "He would if you asked, but his true love, other than things that go bang, seems to be mathematics. And space science and tech, of course. He'll wear your ear off talking launch systems, spaceship design, whatever."

"Truly? Is he typical of the construction crews?"

"Not hardly. The kid... I think he's just nineteen, started with us pouring concrete. Somebody noticed that every time they needed to figure a pour volume, span length, anything to do with numbers, Cal had the right answer before they could pull it out of the estimator's handbook. Based on that, he got switched over to survey. Some mathematical talent, but then we found out he knew something of blasting. Had a shortage of explosives types, so we swapped him over again." He grinned suddenly. "I overheard someone ask where he learned demolition, because he didn't have any license or real resume' at that time. He said he learned it stump blasting in Wyoming with his father. So the inquisitive guy pointed out that Wyoming doesn't seem to have that many trees. Cal just grinned and said, 'Not anymore.' "

Grandjean sipped brandy. "Fascinating. A true... what you call a 'jack of all trades', I suppose. And he teaches math in bars on his off-shift time."

"Sure. Bend an ear in his direction and listen in. Based on past experience, it's bound to be interesting."

As the supervisors listened, Cal spoke. "...you know about forward velocity, the speed that actually gets the payload to orbit. Call that kinetic energy, and it's measured in joules. For a vertically launched missile to do what our booster does... We're the 'first stage,' good for a 15 kilometer boost or thereabouts. Ummm... Damned if I know the real mass numbers on the shuttle or booster. I'll just make up some numbers for an example...

"Say our launcher and its fuel mass... That's like what it weighs, Dom," Cal elaborated upon seeing Dom's blank look. "Pretend it weighs 400 kilos. And say the microshuttle and payload run 100 kilos. Silly numbers, but they'll make the point. Okay, I don't know the target velocity for shuttle detach, pretend it's 1000 kilometers per hour.

"So the kinetic energy required to get that whole sucker up to a kiloklick in 15 kilometers is... mass times velocity squared, divided by two.... " Cal's eyes defocused for a moment. "A smidgen over nineteen million joules."

"Sounds like a lot."

"It is; but nothing compared to what's coming." Cal's throat was a little dry, so he sipped suds. "Thing is, whether horizontal like our launcher or vertical like a NASA deathtrap, that 500 kilos needs the better part of twenty megajoules of energy to get going. But NASA... " Cal frowned. And thought about how to make the point clearly. "NASA's vertical boosters don't just go fast. They go high, too. So aside from the power needed for forward velocity, they need to apply more energy to raise that 500 kilos up off the Earth's surface; say, some 15 kilometers, as far as our launcher travels."

Dom interrupted again. "What's with the clicks and kilometers and kilo shit anyway?" he objected. "Got somethin' against miles and pounds?"

"When it comes to figuring masses, accelerations, energy requirements.... Damned right I do. Easier to figure this stuff when everything's easily divisible by ten." Cal glared jokingly at Dom. "You wanta hear this or not?"

"Go ahead." Mock resignation. Necklin was hardly as dumb as he played at, and this stuff was

interesting.

"Right. So anyway, it takes more power to go up higher. Think of it as raising your bottle from the table to take a sip as opposed to having to carry it upstairs for each drink." Cal paused to think again. "Raising that five hundred kilos up to fifteen clicks takes another seventy-three million joules or so." He shrugged. "We won't lift the launcher itself off the ground at all, to speak of. So we don't have to cough up that extra energy. That alone makes the launcher around five times more efficient than a vertical first stage booster."

"Damn."

At the eavesdroppers' table Hazelton eyebrows elevated. "Andre, you know that stuff, right? Does he have the numbers right?"

Grandjean was obviously impressed. "He simplified greatly, but he has grasped the concept correctly. I would require a calculator to check his numbers, but they also feel right." He turned a quizzical look upon Hazelton. "And this young man just pours cement and blows things up? Where did he learn these things?"

"Self taught, I imagine. Seems like a lot of folks who came out here to work on the launcher are some kind of space nuts." He sipped scotch. "Of course, in Cal's case... I heard a rumor that he turned down a scholarship to the Massachusetts Institute of Technology to work here. But if you ask him, he won't say yea or nay. Anyway, I guess he could be some sort of genius."

"Genius or not, if he has any grounding in mathematics, I may well be able to use him in Orbital Operations."

"Jeez, Andre! I buy you dinner and booze, and you steal my best people?" Hazelton was mildly indignant.

"If it gets us into space, yes." Grandjean smiled and slipped a notepad from a hip pocket. "His name is Cal... Would that be 'Calvin'? Schmidt? And he is from Wyoming?"

At the lecture table, Dom was still curious. "No, really. I don't get it. If this is really that much better, how come NASA ain't doin' it? Gotta be more than they're stupid."

Cal smiled and shrugged. "Hey, far be it from me to defend NASA." Among Launcher employees, disdain for government, and NASA in particular, ran rampant. "But to tell the truth, in the past there was a good reason to do vertical launches. Air resistance and pressure."

Dom blinked slowly. "Eh?"

"You know, air resistance, drag. The idea was to use a big powerful booster to get the rest of the craft up where there was less resistance from air."

"Ain't that a problem for this hoverwhatsit too?"

"Well, yeah," Cal admitted. "But we're getting enough of an improvement in overall efficiency that we can live with it. The other problem is rocket motors."

"How's that? A rocket's a rocket, right?"

"I wish." Cal paused in thought. "Look, Dom. You work on cars, engines. Right?"

"Yeah."

"So you know how back pressure in the muffler affects the engine efficiency, right?"

"Sure, that's why we go with straight pipe for racers and off-road shit. Mufflers block air flow enough to create back pressure that kills efficiency." Dom was on familiar ground now.

Cal saw that, and played to it. "Well, rocket motors are kinda like that too. You know the exhaust... nozzles, the venturis on rockets?" Dom nodded. "The venturis are tuned to work best at certain air pressures, back pressure from air, so to speak. And one that works close to the ground doesn't work so good up high where the air pressure is lower. And vice versa."

"I think you lost me again. This call for more beer." Dom started to stand up, then settled back into his seat. "What am I doin'? It's your turn to make the beer run."

"Okay, okay." Cal rose to meet his obligation to the cause of inebriation. But gauging his own capacity and Dom's condition, he returned with just one beer apiece. Dom was drawing crude rockets on the wooden table top with the condensation from his previous bottles.

"Alrighty, Einstein. I bet you thought I'd be too drunk to remember that you're supposed to be explainin' why shooting straight up was a good idea for the gov."

"I can always dream," Cal replied with a grin. "Rocket motors only work best at certain heights, right?"

"If you say so. Seems like the higher you go, the less back pressure you get, and the better the thing would work." Drunk he may have been, but Dom had obviously thought about it.

"Well, it doesn't really work that way. Just take my word for it, okay?"

"Sure. It might even make sense if I weren't about half buzzed."

Cal laughed. "Okay, so motors only work good at given altitudes. Therefore, NASA had to use more than one engine in different stages for when the rocket got to higher altitudes. One engine in one stage didn't do it. They had to use stages boosting vertically."

"Damn," Cal's companion complained. "You're just tryin' to confuse me tonight. If one motor won't work from the ground to up high, how is Launcher doin' it? It don' make sense."

Cal smirked. "Yes, it does. Our rocket motor won't have an exhaust nozzle."

Dom just stared, groaned, and downed his beer in one long gulp. "It's a plot to screw with my head, right?"

"It just looks that way because we're all out to getcha," Cal explained reassuringly. "Let's talk about aerospikes."

Necklin raised an arm and called out loudly, "Waitress! I need more beer! Please!"

Chapter 11

Year Two, January 31st

When the man said alcohol, tobacco and firearms, I just naturally assumed he was making a delivery.

- unknown, rec.nude

Four very grumpy men sat in the back of a black, windowless van; a poor choice, considering the hot Texas sun slowly raising the interior temperature to broiling. They were all easterners, and hadn't realized that it was possible for January to be so warm. In fairness though, chaotic Texas weather could very well dump snow on them tomorrow. For now, they sweated. Nervousness contributed to the quantity of perspiration, as well.

The men's clothing selection only exacerbated the situation. Two were in the modern stormtrooper's de rigeur uniform: black BDUs, black ballistic vests, black 'NAZI' helmets, black gloves, and even black Nomex masks. Those two bore MP5 submachine guns dangling from tactical slings. A third man was similarly outfitted, but minus gloves and helmet. He substituted a video camera for the automatic weapon.

IRS agent Watkins completed the quartet. He was dressed much more comfortably in a grey suit, and was also quite oblivious to the envious glares of his companions. He was equipped only with the most lethal of the team's arsenal - a radio. His was a bulky, gray, handheld unit with a remote microphone on a coil of wire. His companions fully expected to require full use of their hands, and were issued smaller two-ways carefully tucked into vest pockets. Thin cables led to unobtrusive earsets. Only the cameraman's earpiece was in place; the two gunmen had tired of Watkins' incessant radio checks.

"Watkins, are you sure we've got the right place?" one of the machinegunners asked for the third time. He squirmed restlessly on the inadequately padded bench seat, and moped at a dribble of sweat beading on the tip of his nose. "This place looks dead, empty."

"Yes, damn it," the agent confirmed. Again. "3828 Indian Trail. Launcher Corporation headquarters."

"Looks awful quiet for a corporate headquarters," the cameraman observed. Again. He was quite correct. In the half hour Watkins had insisted on for 'preliminary scouting', not a soul had been seen to enter or leave the targeted office. No sign of illumination in the glassed in foyer either. The mediaman shrugged at the thought of raiding a empty office; at least no one would be shooting back when they went in.

"What do you expect?" Watkins asked sarcastically. "They're running a swindle, bond fraud. All they need is a basic office for phone operators and the like. It isn't as though they're really building a spaceship in there."

"Whatever, man." Effing suit probably believed that. Oh well, easy paycheck today. He verified the condition of his recording tape and holstered batteries one last time.

Watkins' radio broke squelch. "We're ready," announced a scratchy voice.

The head fed keyed the set. "Okay, standby," he instructed the distant end. He pointed to his men, then to the building where they were parked. "Go!" The team leader grabbed the side door handle and rocked it open with a loud bang. The three toughs piled out through the gaping exit and ran to the office door. One tried the door while the leader covered him.

"Locked," the first announced.

Still sheltered in the van, Watkins activated the radio again. "Go!" he directed the second 'dynamic entry' team.

Meanwhile, the stymied team leader entry leader shouted, "Clear!" and leveled his weapon at the door lock. He loosed a long burst of fire, depleting the better part of his magazine. The 9mm rounds made a fair lockpick; lock and glass door shattered. His partner kicked the remnants of the offending door open and the agents stormed in.

From the safety of the van, Watkins stared at the shooting with eyes wide in amazement. His radio broke squelch again. "Shots fired! Shots fired!" someone screamed. Watkins began swearing.

Instant insanity. Just add feds and stir. Inside, two IRS thugs started screaming, "Federal agents! Put your hands up!" at a random scattering of trash and empty boxes indicative of a move. The reception area - indeed, the entire office - was devoid of humanity. The boxes appeared to be quite subdued, no doubt thoroughly cowed by the gunfire. The video tech captured the heroics for a bureaucratic bloopers reel. He hoped the editing room could do something about the laughter-induced jerkiness.

Watkins' team two had been positioned in the alley behind the little office park. The leader had flat refused - vehemently and obscenely - the agent's suggestion that the men hide in a trash-laden dumpster. At the suit's signal, they cracked the rear door and scrambled in at top speed, only to meet with rolls of carpet awaiting pickup. And then sudden thunder of firearms. A lagging agent was screaming about shots fired as they rushed to get to the front room. Ahead, something moved.

"Drop your gun! Drop your gun! Drop it now!" Two Leader screamed at the something. As he ran forward, one foot landed squarely on an abandoned soda can; the man went sprawling. As he fell, automatic reaction caused his grip to tighten and he release his own burst of nines. Plaster dust exploded from the wall ahead as he stitched holes through it. Psyched up and adrenaline pumping, his two followers also cut loose. Several boxes and one broken chair met untimely ends in a hail of bullets.

By then, One Leader had realized the place was empty, and was advising Watkins by radio when Team Two opened fire. He dropped and clutched at his chest, groaning voicelessly. His backup - who suddenly realized that he had somehow teleported to a prone position on the dusty concrete floor - began screaming, "Man down!" The banshee wail of a siren grew in the distance as Team Two's fire ended.

Watkins was still debating whether he should enter the office when the first squad car screeched to halt, siren wailing and strobes flashing. As the responding officers exited their car, another 9mm burst ripped loose inside the building. The two cops dropped down behind the car doors and regained control of their sphincters. The driver grabbed his radio mike and a shotgun. The second cop waddled

in a low crouch to the trunk of the car where he retrieved an M-16. He slammed the trunk closed and leveled the rifle over the ass-end of the vehicle. "San Angelo Police!" he bellowed. "Drop your weapon and exit the building! Now!"

Watkins wanted to cry. He climbed out of the van and approached the police car, blinking his eyes against the bright sunlight. "Officers, I'm Special Agent Watkins with the.." he started.

The shotgun-toter looked at him from where he was keeping cover behind his car door. "Mister, get your ass back out of the way!" He gestured violently with his microphone hand.

With placating gestures of his own, and a conciliatory tone, the agent came closer. "No, you don't understand. I'm with them." He pointed to the office. "We're raiding..."

'Nuff said for the hyped up cop. The shotgun swung around instantly. "Put your hands up! You are under arrest!" Watkins had just failed a basic life skills test by coming up on an armed cop in a shots-fired situation. Another police car pulled up, with more sirens in the distance.

"But we're the IRS!" Watkins screeched out.

The officer shouldered the 870 and pushed the safety off. Racking the slide was clearly unnecessary. "IRS or IRA, you're under arrest, fucker! Hands up!" he repeated angrily. The agent's hands levitated themselves skyward. He felt warmth spreading across the crotch of his slacks. He hadn't realized that a shotgun barrel could be so monstrously big.

Someone had a bullhorn out now, to go along with the assorted weaponry pointed at the office. "You in the building! Drop your weapons and exit the building! One at a time!"

Someone yelled back, "We're federal agents! You drop your weapons!" Give someone points for sheer gall, if not intelligence.

Bullhorn traded disbelieving stares with his partner. "I don't care if you're the second coming of Jesus Christ!" he boomed back at the office. "Drop the goddamn guns or we start shooting!" Prolonged negotiations obviously weren't the order of the day. Someone decided to reinforce the point; a grenade launcher thumped, and a tear gas canister flew in through the damaged front door. The sound of men gagging men followed immediately.

The rest was pure anticlimax. Deprived of the ability to breathe, the federales elected to come out. The leader of Team One had to be dragged by his partners, having been shot. It took a few more minutes, but the San Angelo dispatcher got an ambulance on the way. Since no one appeared to be leaking red sticky stuff, the ambulance crew was taking their own sweet time. Maybe someone had informed them that their customer was IRS.

While their respective, if not necessarily respectable, higher-ups sorted things out, two San Angelo police officers stood watch over the federal agents. One Leader was sitting up by now, clutching at his chest and half supported by his cameraman. "Shit, I think I broke some ribs," he wheezed. His discarded mask and PASGT helmet lay on the curb beside him.

One of the officers glanced over at some of his fellow LEOs, who were inspecting the federal agents' H&K 9mm's. "Shit, you should be glad you clowns don't carry real guns," he told the wounded

man derisively. "Your vest might not have stopped a decent round." He patted his own holstered Glock 22, chambered in .40 Liberty. The cop turned to his partner. "Go on now, I want to hear this."

The older officer continued the story he had begun minutes before. "So the alarm company got the alert from these idiots..." One of the IRS agents grimaced but kept his mouth shut. "...fiddling with the back door and called us. 'Bout then, it looks like American Ninja here," a nod at the injured man, "decided to shoot his door open." He sneered at the injured thug. "You clowns use Dirty Harry flicks for training films or something?" He turned back to the junior officer. "So the back door boys come running up to see who's shooting, and one of them lets loose a burst of his own..."

"I tripped," Two Leader insisted again. One Leader glared at him through his pain.

The sergeant laughed. "And that's better? Where'd you learn gun handling and safety? The INS?" Back to the story. "Anyway, I guess that's how this fool got hit."

"So why were they raiding an empty building anyway?" All the feds grimaced at that.

"Beats the hell out of me." The sergeant looked at the woebegone IRS agents. "Frickin' Keystone Feds. Days like this, you gotta wonder if those Texas Constitution secessionists don't have the right idea." No one ever admitted who fired the last burst, nor why. Of course, the San Angelo cops simply checked magazines to see which one came up short.

"Hey, Mike." This from a uniformed lieutenant who had approached the talespinner. He had a PDA out, to which he referred with a scowl. He tried to read something off the tiny screen, shielding it from the sun's glare.

"Howdy, LT," the sergeant replied. "You guys decide what we're going to do about these wanna-be menaces to society?"

The scowl faded only to be replaced with an anticipatory gleam. "Oh, yeah." The lieutenant obviously loved it. "The chief says to book 'em all." He shot a wicked look at the curbed feds and laughed aloud.

"You can't do that!" Watkins argued from his spot on the curb, finally breaking his silence. "We're federal agents..."

"The lieutenant laughed. "And I imagine that's got something to do with it, perp." He chose to enlighten the man. "Our chief is a big time supporter of the Texas Constitution movement. I'm guessing that he just loves the chance to legitimately screw with some feds. And you did break a law or two, you know," he reminded.

The sergeant had objections of his own. "Shit, LT. You're gonna have us do all that paperwork for nothing? You know the feds will get these clowns cut loose as fast as we can process them in." He looked down at the feds in disgust. "What do we charge 'em with anyway? Gross stupidity?"

"If it were on the books, yes." The lieutenant nodded. "Because we're throwing it at them." He looked at the agents free hands. "Let's get some cuffs on them and read 'em their rights." Forms must be met. At least by real cops.

"Damn it, officer... !" Watkins again.

Gazing sourly at the taxman, the lieutenant added, "Start with the part about remaining silent." Watkins took the hint.

The sergeant moved in on Watkins and opened his velcroed cuff case with a rip. "Okay, Mr. Revenuer. On your feet. Turn around and stick your hands back behind you." As he snapped the steel bracelets around Watkins' wrists, the sergeant spoke to his supervisor again. "Gonna need more cuffs over here, LT."

"Yeah." The lieutenant bellowed to the officers who were admiring the federal hardware, "Yo! Cuff call! Need five more sets over here!" The men started grinning and joined the handcuffing party gleefully.

Watching the rest of the exercise - cuffs, Miranda rights, additional pat down searches - the sergeant said morosely, "Still a waste of time. Some feddie attorney's probably already got a writ for these guys' release, you know."

"Don't bet on it," the Lieutenant countered. "Aside from the usual breaking and entering, we're hitting them with discharging firearms in city limits, destruction of private property, disturbing the peace, you name it." His smile turned purely evil. "But the kicker is this guy." He indicated Two Leader.

"What about me?" the agent wanted to know.

The lieutenant was happy to oblige him. "You're being charged with attempted murder," he said with gleeful malice.

"What? I didn't try to murder anybody! What the fuck... !"

The sergeant cut him off. "Hey, moron; you did shoot somebody. You forget that part?"

One Leader certainly hadn't. He listened to the charge with a sense of vindication. "No fuckin' kidding." He glared at his trigger-happy counterpart.

The sergeant laughed. "Of course, no way we'll get that one to stick. But it oughta look great in this clown's personnel file."

The lieutenant shrugged. "Who knows. Maybe someone in the DA's office is into TC, too."

"Shit, maybe I oughta join," the sergeant laughed.

Bill Neville got out of his chair and crossed the deep pile carpet to the sofa against the far wall. "So why was the IRS raiding our old offices?" he asked Tom Zelaski, his administrative aid. He'd rather enjoyed the amusing tale, but was still worried about the repercussions.

Zelaski was tall and lean, skinny really. His prematurely greying hair was thin too. He shrugged his bony shoulders. "It seems they were after our financial records."

"Yeah? Too bad it didn't occur to them to try asking first. What did they want anyway?"

Zelaski looked serious. "Bill, they were after all of Launcher's financial records. Everything." He settled his bony butt onto a corner of the boss's desk.

"How so everything?" Neville frowned. The statement wasn't registering. Or maybe it was, the absurdity, at least.

Zelaski gnawed at a lip before answering in dead seriousness. The time for fun and games was over. "One of the clowns was carrying an order for... 'all financial records and documents pertaining to any and all activities conducted by Launcher Corporation or anyone acting on its behalf.' They really wanted everything. And had the guns to back it up. It was obviously meant as a harassing action."

"Wait a minute..." Neville blinked at the phrasing of the order. "Did you say Launcher Corporation? They got the name and address wrong on the warrant?" He leaned forward and propped his elbows on his knees.

"Bill, none of them had a warrant. The screwball in charge just had some 'order' signed by his supervisor." He sighed. "I see hard times ahead of us. Having that FAA inspector arrested may have been a mistake. The San Angelo police said they had the impression that the IRS chose such a.... precipitate action because of the treatment the last federal rep got at 'our' hands."

"Shit. Damned if I'll drop charges for one'a those assholes again."

"Yeah. No shit." Zelaski offered a small smile. "At least NASA only sent a nasty letter." In between the abortive FAA visit and the stillborn IRS raid, a very peculiar missive had come in from the space agency. Stripped of the bureaucratese, it preemptively welcomed Launcher to the ranks of NASA's 'private access' contractors.

"Some letter," Neville grumbled. "'Sign a letter of agreement with us, spend ten years or more doing pre-design research on booster alternatives, let NASA determine the spacecraft's required parameters and mission, let Congress decide who builds anything we design, and we'll agree to reserve X number of launches and let you chow down at the federal hog trough for as long as you want. Otherwise, gaining NASA space-worthiness certification could be unnecessarily complicated, delaying your commercial operations.'" He made a face of disgust. "I could puke."

"Heck, Bill, aside from the semi-veiled threat to deny certification on the launcher, that's business as usual in government contracting. Especially with NASA; they want to make damned sure they can oversee all the private programs..."

"...And steal any good ideas they can't quash, like they killed the X-15." Neville had loved the old air-launched rocket plane. Its death at NASA's hands had planted the seeds of distrust in a much younger Neville, although he didn't realize it until a good many years later.

"Yeah. Even Boeing found it easier to take Sea Launch out of the country and work with Russia. And they're one of NASA's fair-haired children." Zelaski's face was grave. "But certification is eventually going to be a problem, sir."

"Yep." Neville gritted his teeth. "And I still don't know what t' do about it. We fought 'em off on

the launcher itself, but we hadta roll over and apply for an X number for the spaceplane. But before we can legally kick that sucker outa atmosphere from the US, NASA hasta sign off." He gritted his teeth at another thought. "Shee-it. We haven't even gotten the X number from the FAA yet. Shoulda had that months ago." Despite the claims of Mr. Rodgers of the FAA, Launcher had applied for an experimental designator for the planned spaceplane. Perhaps it had simply gotten lost in the sea of government paperwork for a while.

"And the FAA has to grant certification before we can go from testing to commercial operations." The aid cracked his knuckles a few times. "I don't suppose them dragging their feet is a coincidence," Zelaski wondered hopefully. He wasn't one to give feds benefit of the doubt.

"I doubt it. The sig on half the paper work gettin' kicked back to us - for nonexistent typos and such crap - is 'Rodgers'." Neville was starting to smolder now. In past positions, he'd simply bought foot-dragging companies like this and fired the responsible bozo. But this was a federal agency.

Blank-face for the nonce, Zelaski said, "I give up. What's the significance of the FAA signatures?"

"Rodgers was the dipstick we had busted." Ah, hindsight. "We shoulda pressed charges."

"Wait a minute. They reward a major fuckup by putting him in charge of harassing the company that had him arrested?"

"Yep."

"This does not bode well for the future, Bill."

"No shit. It don't bode particularly well for the frickin' present."

Zelaski was worried. "I'll say. Look at the record so far. We let the IRS make fools of themselves..."

"Let 'em, hell! They managed that all on their own." Despite himself, Neville started to grin again.

"True. But we did have an FAA inspector arrested. Plus, we're already getting slightly nasty messages from NASA; they don't like us or what folks like you and Hanners have been saying about them." He stared at Neville. "We could be well and truly screwed. The 'crats don't like us, and they will try to stop us."

"Um," Neville grunted noncommittally.

"Bill, this might be a real good time to close up shop. Stop construction on the strips, and get moved out of the country. Find some nation a little more receptive to the economic boost a real, effective space program can provide."

"Who? Ecuador? Argentina?" Neville dismissed the idea. "Nope. I started it here, I finish it here. We've gotta lotta support from all around the world, but mosta the money and people are US. A _whole_ lotta people. I figure even enough to give the congresscritters in DC the idea that they should

rein in their pet bureaucrats if they expect to be re-elected."

Zelaski was an avid shooter, and had taken the last few decades of congressional action personally. "Just like they pay attention to eighty million-plus gun owners?"

"It's worth a try. Let's mention it in the next newsletter."

Chapter 12

Year Two, February 1st

Not long ago, if you wanted to seize political power in a country, you had merely to control the army and the police. . . Today a country belongs to the person who controls communications.

- Umberto Eco

The happy hacker whistled as he typed on the ergonomic board nestled in a landfill's worth of Twinkie wrappers and Jolt bottles. He wasn't normally into destructive acts, but he saw the Launcher Company as an underdog doing something he thought was really zer gut. And the IRS had never been very high on his list of favorite simulated people-substitutes anyway. 'Jack 'em. Bastards.

Besides, what he had in mind wasn't quite... destructive, exactly.

Phase I was simplest. He just sent some email viruses to each regional IRS 'service' center; old hat. Not being a complete idiot, he hit a webmail server through an anon browser service to bounce the emails off various and sundry anon remailers. People had been using stuff like this since well before the the turn of the century. Most outfits were hardened against the like, rendering email bugs harmless. Even Microsquish had figured out that most users really do want the VB link/security sieves defaulted on. But the IRS still hadn't managed to upgrade its network, and had the worst security in the government. Really, the only thing at all special about this pseudo-virus, more of a trojan macro, was that it would only replicate itself to IRS domains. No civilians should get caught in the crossfire unless some IRS goon manually forwarded the infected email to someone in another domain. Which was possible. He popped the top on another caffeine-laced soda and composed an email detailing the trojan, to be sent to several anti-virus companies. He liked to think of himself as an ethical hacker, simply helping people find security holes in their networks. Yeah, right; that's the ticket.

The payload was a little different too, he supposed. It wouldn't wipe a single user file. But it encrypted anything it could get its virtual hands on; then it evaporated. The idea was to render IRS files temporarily unusable, but any civilian files accidentally caught in the battle could be recovered. He laughed when he realized that he'd thought of it as a battle. Going to war with the government? "I wanna be an data ranger. I wanna live a life of danger," he chanted quietly. He crammed the remains of a Twinkie into his mouth to kill the taste of caffeine. Next...

Phase II was a little more complicated in some respects. And again, it was something that normally wouldn't work all that well against most organizations. He was going for a classical distributed denial of service attack on every IRS server he could find.

The problem with a DDOS attack is two-fold. First, anyone who could find My Computer on a Windows desktop ought to be able to figure out how to set properties to deny external use of his machine, hence preventing it from being used in such an unwitting mass attack. Freebie firewalls were readily available for the paranoia-enhanced users, too. Second, the DDOS target can simply be set to ignore the flood of connection requests from offending domains. Commercial sites typically do constant traffic analysis to detect denial attack patterns and refuse requests from the attacking domains, all automated, without the need for slow human intervention. Government computer security, or the convenient lack thereof, was the answer to both issues. COMPUSEC, my ass, the man thought.

Since IRS network security was already notoriously lax, he planned to plant his distributed daemons on IRS machines. Which automatically took care of the second part of the problem, since the network admins could hardly tell the IRS servers to ignore requests from IRS machines without doing even more harm than the DDOS itself.

He yawned, and rubbed his eyes. He realized that the room had lightened up quite a bit. The sun was already well above the horizon outside his window, and beginning to over-power the fluorescent desk lamp perched above his computer. He looked at his watch and saw that it was already after 9AM in the eastern time zone. He smiled, clicked a couple of buttons, and waited a moment. Pleased with the status messages he got back, he logged off and went to bed.

Cry havoc, and let slip the dogs of infowar!

Chapter 13

Year Two, February 3rd

They that can give up essential liberty to obtain a little temporary safety deserve neither liberty nor safety.

- Ben Franklin

Neville was fairly sure that a not-so-great day was about to get worse. He'd already told a rabble of revenuers, who still hadn't thought up the simple expedient of getting a tame judge to sign a warrant, to piss up a rope. Now it was a guy flashing FBI credentials. Judging by the trenchcoat, his role model was Fox Mulder. But by weight, he was closer to a Mulder and a half. He looked across his desk at his FBI noir visitor, and asked, "Wanna beer?" Couldn't hurt to start off friendly.

"No thank you, Mr. Neville. What I really..."

"Well, I'm gonna have one. Been a long day . And it doesn't seem to be gettin' 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. "Truth t' tell, I'm usually more of a lager man myself; on a hot day, ya really just want somethin' t' cut the thirst." He inspected the opaque brew critically. "But when you just want a bit of luxury, a stout is hard t' beat."

"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 computer network."

Neville smiled slightly. Official sources were keeping their mouths uncharacteristically shut, but enough leaks had sprung to water a whole crop of news stories for the last two days. News and entertainment media alike were making much hay over a nameless whistleblower's claim that a hacker had convinced the tax agency's own computers to attack themselves. Supposedly the fed network shamans were still exorcising daemons. "So what's that got to do with Launcher?" the executive wondered.

"It has been suggested that your corporation may have been involved," Cartwright pronounced dramatically. He gave the company man a look that clearly indicated that he should give up and confess his computerized sins.

Mildly surprised, Neville asked, "Beg pardon? Suggested by who, Cartwright? I can assure you that Launcher was not responsible for those actions." He considered briefly, then added as the agent opened his mouth, "And suggestin' otherwise, without evidence, might be considered libelous." He squinted at the portly visitor. "Wait one." He picked up his phone and punched numbers. "Mike? Bill here," he spoke into the instrument. "Could you come up here? I've got a fan belt inspector..."

Cartwright cringed at the hated nickname. Neville evidently had friends in law enforcement "Yeah, FBI. He wants an interview, an' I've got the feelin' I don' wanna talk t' 'im alone. Thanks." He hung up and returned his attention to the federal agent. "One of my lawyers'll be here inna minute."

"This is hardly a cooperative attitude, Mr. Neville. For your benefit, I'm attempting to handle this in an informal manner." The last thing the FBI wanted to see on a fishing expedition like this was a legal-wise lawyer.

"The hell you are," Neville countered, taking the gloves off. "You're tryin' to cover your own ass an' the IRS's collective keister by keepin' this off the record. Ain't gonna wash."

Mike Campbell, a recently recruited and relocated Pennsylvania lawyer, knocked on Neville's open door. "Hi, Bill. What've we got here?"

"C'mon in, Mike," Neville directed. He proceeded to make introductions as Campbell settled down on the sofa. The lawyer set a small audio recorder on the coffee table.

"What's that?" the FBI agent demanded, eyeing the gadget suspiciously.

"Just a recorder," Campbell replied calmly.

"I'll have to insist that you turn that off. This is a confidential investi..."

"Like hell!" Neville exclaimed. "Mike, you keep that thing runnin'." He patted a similar device on his own desk, which Cartwright had seemingly overlooked. "And I'll getcha a copy of the tape I'm already runnin'."

"I must insist!"

Neville grinned. "Well, if you insist, you can have a copy, too." Then he just shook his head tiredly. "Insist all ya want. But I don' talk t' government agents without some record of what happens. Do it at meetin's with clients an' the like, too."

"Mr. Cartwright," put in the lawyer, "I'd never advise my client to allow an investigator to question him off the record. Live with it."

Cartwright scowled at the offending devices. "Very well. But this action will be reported." He glared at Neville. "I believe we discussing your corporation's role in the illegal attacks on the IRS network."

"Nope. You were makin' unsubstantiated allegations." Neville rocked his chair back and folded his hands across his flat belly. The beer was totally forgotten.

"Certainly 'unsubstantiated', since Launcher was in no way involved," Campbell interrupted. He too had read the news with great amusement.

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

"Ain't it, though?" Neville replied. "If yer inta meaningless coincidences, you might wanna look inta how many other companies and individuals the Revenuers were startin' actions against 'mere days' before that li'l infowar attack." Then he grinned. "Say, how's the NSA coming on decrypting the IRS files, anyway?"

"I'm not at liberty..." Cartwright began, then Neville's words registered. He stared at the executive suspiciously. "How did you know the files were encrypted? That information hasn't been released." He rose from his leather chair like an angel of vengeance. "I think it's time to discuss this elsewhere."

The brown bottle sitting neglected caught Neville's attention. He reached and sipped again. "Hell, Cartwright, don't ya'll ever browse the Internet? News is all over. It's only been released by every antivirus company on the 'Net. Somebody even sent Drudge the algorithm that was supposedly used. Ya'll oughta download that; bounda make decryption kinda easier." He winked.

Cartwright closed in and loomed over Neville's desk. "What the...!"

Neville continued calmly, ignoring behavior in the fed which elsewhen had rendered an occasional underling unemployed, "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 on their own." Another sip. "Could've been worse, I suppose; they could've used a one time pad system. As is, you can reverse engineer that algorithm and decrypt the files right off." Sip. "After a brute force attack on the key."

"Mr. Neville, are you condoning this activity? Let me warn you that as an accessory..." Cartwright's hands were planted on the mahogany desk, possibly just to hold him upright, as he appeared near apoplexy.

"Don't say it, Cartwright." Neville set his mug down. He rose and faced the offending fed eye to eye. "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." Birds of a feather flock together. Or at least cover each other's gluteal assemblies.

"Evidence of what?" Neville sneered.

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

"Well, duh! Not that it's any of their business - the source is pretty obvious; we're sellin' bonds t' private investors. Space enthusiasts. Anybody. Even FBI agents, if they could be bothered to read the financial news. We haven't exactly been secretive about it," he finished with a definite hint of sarcasm. "You might try reading the Wall Street Journal."

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

"Is that what's buggin' you?" Neville punned. "Well, we do since congress passed CALEA back in the '90s. And more started after that disgustin'ly fascist PATRIOT Act crap." Even as a staunch anti-crime Republican, those had stuck in Neville's craw. And most people hadn't even noticed the language that rendered unnecessary a judge's court order for a wiretap. "A man wants his privacy. Encrypted email shouldn't be news t' you; everybody uses it. Hell, even Clinton had to relax the crypto export rules just so the U.S. wouldn't lose too much market ground before he left office."

"It's un-American..."

"Privacy is un-American now?" Neville's voice went flat and his face lost all expression. Campbell looked none too happy himself. He hoped he wasn't going to have to pry his boss off the federal agent. "Mr. Cartwright, you have no warrant. And you've become offensive. Leave. Now."

"Not until..."

"Investigate to your heart's content. But get off Launcher Company premises. You wanna talk to me, you find a subpoena somewhere. Now, you just leave."

"But..."

"Good day, Mr. Cartwright." The fed gave in to the inevitable. He gathered his notes and left, fuming.

Campbell watched him go, then said, "Good god, Bill. Has the world gone nuts? What is all this?" He stared at his palms in disbelief. "That officious bastard from the FAA, the weird IRS raid, this..." He shook his head. "It's like all the old conspiracy theory and anti-government stereotypes at once. No; caricatures of the stereotypes."

"Does kinda look that way." Neville was thoughtful. He eased back down into his chair. He considered the beer for a moment, then pushed it away. "Maybe it's even a good sign."

The lawyer was startled. "Eh? Good?" he asked dubiously.

"Yeah, if you look at it right." He smiled. "There's been a growing trend for decades for the federal government to meddle more'n more. Congress passin' stupid laws, administrations issuin' oddball executive orders when even the laws weren't weird enough, individual departments an' agencies goin' even farther.

"Clinton issued some real doozies. And I recall folks predictin' Al Gore would be even worse." He chuckled. "And others sayin' it wouldn't much matter if Gore or the Shrub got elected; end result'd be the same. All things considered, who's to say now which woulda been worse. Looks about the same t' me." He shook his head sadly. "I voted for Dubya; figgered he had to be better than the other various-colored socialists runnin'. But damned if he didn't turn out even worse..."

"Is there a point to this, Bill?" Campbell was a declared Republican with some decidedly liberal views even so. Neville's budding tirade was starting to push some of his buttons.

"Sure. That kinda central government socialism appeals to control freaks, folks who're not very

good at runnin' their own lives so they've gotta compensate by runnin' everyone else's. The system selects for 'em."

"And this is good?" Doubtfully. Despite his misgivings, he still wondered where the boss was going with this line. The lawyer stretched an arm over the sofa back and crossed his legs. "Explain please."

"Mebbe." Neville felt the need to lecture, if only to himself. Campbell's presence made a good excuse. "It means that the feds are more likely t' go over the top, indulge in the sort of law-breakin' and rights-violatin' shenanigans that're likely t' finally piss off the American people enough t' do somethin' about. Guy wrote a book about just that, Unintended Consequences, way back when. About the feds' actions blowing up in their faces."

"Sounds a little extreme."

"Yep. It wouldn't be pretty." Neville was deadly serious now. "One thing in particular especially worries me..." He trailed off.

"Yeah?"

"More'n ten years ago, like under Clinton even before the solution super-saturated, the feds let eighty-some people and a church burn, maintained dogs like that psychopath sniper Horiuchi, and kidnapped a six year old boy at machinegun-point. That was just summa the more public stuff.

"And that was before they'd lost all touch with reality, post-9-11. What are they capable of now?" Neville lapsed into silence and sipped his homebrew. Campbell stared unhappily out the window behind Neville.

"You have some very unpleasant daydreams, Bill." Campbell shifted uncomfortably in his seat. "I thought you were Mister Law-And-Order."

"Daydreams? I wish." Neville frowned even deeper. "Did you know that I hafta keep a special set of travelin' clothes and a suitcase just fer when I hafta go by air? Just to be sure there's no empty brass or powder residue on me from a day at the range. Just so's I can make through airport security with my anus intact?" Neville hefted his wasp-waisted glass and held it up to the light, double-checking its opacity. His ethanolic benefactor had said something about 'hundred watt stout'. Couldn't be much darker than the news lately. "Yeah..." he sighed absently. Then firmly, "Yep, I thought law'n order was the way t' go, too. But when the law... ? Never mind. I really oughta start tossing the junk mail without readin' it first."

"Eh?" The apparent shift threw Campbell for a loop. What's... ?"

"Oh, I just got some fliers in the mail from that Texas Constitution group." He saw the attorney's bewildered expression and explained briefly. "They're the folks that point out that Texas' annexation treaty into the Union gave us the right t' secede if certain conditions weren't met. And they weren't. So these guys think Texas oughta pull out of the United States and go it alone, with a whole new constitution. T' make their point, they talk up federal excesses and abuses." His own expression turned despondent. "Don' help much that I'm gettin' personally familiar with a lot of those excesses and abuses."

Campbell had relaxed enough to start chuckling lightly. "So these bozos think they can just say, 'Sorry things didn't work out; you have a nice Union now', and pull out?"

"Careful, now," Neville cautioned. "These guys aren't bozos. Got some pretty smart and successful people supportin' 'em. But I gotta admit that they are missing a key point." He paused to drink, killing most of his remaining stout.

"Which one's that?" Campbell wondered. "That they're wrong?" He chuckled at his own wit.

Neville's glass hit the desktop a little harder than seemed quite necessary. Brown splatters beaded the polished wood surface. "Only indirectly. By now, that ol' annexation treaty is a moot point. Texas is effectively bonded into the Union by an ongoing coup." The old man kick up his feet onto the desk and stared at the ceiling. "Kinda like the folks who think the Constitution still means anything real," he said sadly.

"Now you've lost me, Bill," the lawyer said. "Of course the Constitution is important. If old English common law is the basis, the foundation, of our legal system, the Constitution is the framework built up on that foundation."

"Is it?" Neville asked, mild bitterness apparent. "Tell ya what. Pick yer favorite federal agency and come back in a week with the specific Constitutional authorization for it. Be prepared to reconcile it with the so-called Tenth Amendment. Ninth, too." He got up to fetch himself another beer. Another advantage of stout was its comparatively high alcoholic content. As he slammed the refrigerator door and faced the room again, he finished with, "Then you tell me whether'r not the Constitution is dead."

Chapter 14

Year Two, February 4th

If brute force doesn't work, you aren't using enough.
- The N.E.R.D.S.

Neville looked at his computer screen, perplexed. The morning's agenda... wasn't. Great; bad dreams all night after the FBI's visit, and now today looked to be as bad. He began to reach for his phone, when he suddenly realized the intended target was watching him from the doorway. "Tom, where the hell's my schedule for this morning? Don't tell me we've had computer probs."

Zelaski grinned. "Nope. No probs. I cleared your schedule. Nothing too terribly pressing in the first place, and in the second place you need a break." The grin widened. "And I have just the thing. The Mad Bomber is set to strike today."

"Beg pardon? Say what?" It doesn't sound like he means a bomb threat.

"You haven't heard about the Mad Bomber?" Zelaski shook his head in mock sadness. "You are definitely losing touch; you've got to get out of this office more often."

"No shit. But I still don't know what you're talkin' about."

"The Mad Bomber is a young man with a useful proclivity for blowing things up. He works on the construction crew building the launcher runway. Does most of the blasting required to clear obstructions..."

"Not to mention scaring the livin' hell outa a bunch of contractors doin' the Ops center installations," Neville finished, having finally made the mental connection. "I didn't think Grandjean was ever gonna let me hear the end'a that one."

"Funny you should mention Monsieur Grandjean." Zelaski still hadn't lost the mildly maniacal smile. "He wants to meet you out there, too."

"Out where, goddamn it?"

"Our Bomber is putting the finishing touches on a blast out at the end of the launch path, where some 'miniature mountain' is in the way of the planned turnaround. Shortly before lunch, young Mr. Schmidt proposes to remove said obstruction explosively. Given his reputation, past history, and the sheer quantity of explosives he requisitioned for this, everyone expects it to be very impressive." He grinned and tossed Neville a bottle of water. "So you're going to drive out there, relax, and have a little fun."

Neville laughed as he caught the fluid ration. "It does sound like fun at that. And what's Grandjean wantin'?"

Zelaski opened his mouth to speak, then stopped himself. If the grin got any wider, he'd probably need surgical attention. "I think I'll let him tell you."

Cal and his too-attentive partner crouched over a hole bored into the massive outcrop of sandstone. It really wasn't even a miniature mountain, of course; nor a mesa, being much too small and the wrong sort of formation. It was anything but flat. What it was was a house-sized mass of eroded rock, very irregular in shape, some twenty feet tall at its highest, and approximately twenty by thirty feet in area. Just big enough to be a damned nuisance. "Okay, so I was wrong about blowing it in one day. Gimme a break." Cal glared at his smugly smiling partner, and brushed hair away from his eyes; he was due for a trim. An errant breeze put the wispy lock right back.

"Toldja so," was Micky's simple rejoinder. She was crouched beside him, gripping a large bag once full of ammonium nitrate.

Cal carefully fed a detonator dangling on a set of wires down a bore hole. He reached bottom and called for a pour of the chemical. As Micky dumped the pellets into the hole he said, "It isn't my fault that Hank and his guys couldn't drill the charge holes fast enough."

"What the heck did you expect?" Micky demanded. "You asked for 50 sets of bores. And I still don't see the point of those lined up bores; you aren't even charging any of 'em but the outer holes."

"It's an experiment." Cal twisted wires together, then stood. He stepped over to the next bore to be charged. "It's like a shaped charge, I hope. The idea is to create a path of lesser resistance for the force of the blast to follow into the rock, towards the center of the outcrop. It should pretty well pulverize the entire mass and keep the blast confined. Sort of like the guys who demolish buildings in cities." He jiggled the wires he was playing into the hole. "Okay, this one's ready."

"Joy." Micky wrestled the bag of nitrate into place and poured. "I think it's time for you to take over pouring. My arms are giving out." A last few pellets trickled out of her bag. "This one's done. Why don't you get another bag from your truck?" she suggested.

"Right-o!" Cal jumped down from the weathered ledge and walked the short distance to his truck. His feet crunched through rock and dirt. While he hefted another bag of explosive-grade AN, Micky prepped the next bore hole with a detonator. The two were alone on the boulders. There was another blasting crew, but they had declined their assistance; Cal wanted this to be his personal masterpiece. Micky was rather taken with the idea as well. But it did mean more work for them.

As she connected the det wires to another set leading away from the small wannabe-butte, she asked, "Well, why couldn't we have just taken this sucker out a bit at a time? Be a hell of a lot easier." Just being contrary; she knew and approved the reasons.

Cal pitched his bag up, crushing a scrub mesquite bush scabbling for life in a tiny crevice. Once he had scrambled up himself, he answered Micky. "For one thing, slow as this was, it's faster overall than drilling, prepping, blasting, checking again, and do it all over. Several times." He coaxed AN down the hole after Micky's blasting cap. "Tom said to get it done fast. Besides," he grinned wildly, "I intend this to be the most fun I've had out here."

Micky watched Cal's rear as he poured AN, grinned, and headed for the next hole. "Armageddon!" she muttered.

Tom Hazelton cursed the dust as he drove up to a collection of vehicles at the planned launcher

turnabout. It seeped through door seals, cracks, and even the heater vents. Texas dust out-massed oxygen out here. We could do with a little rain, he thought. He pulled up next to someone's old pickup truck, and shut off his engine. He waited uselessly the dust to settle, but finally chose to face the grit in resignation. He climbed out and walked over to a gathering of men around the tailgate of another truck. "Hey, folks!"

Three men raised their heads to check out the new arrival; the two others turned to face him. "Hi, Tom! So you came out for the show, too," the oldest of the group called.

"Afternoon, Mr. Neville," Hazelton replied. The two shook hands. "Hi, Andre," he added, seeing the Orbital Ops supervisor accompanying the CEO. He also nodded to Hank Hanners, but as they'd had surprisingly little contact on the job, their greetings were reserved. "What brings ya'll out here?" the construction boss wondered.

"Silly question, Tom," Neville observed. "Once I heard that the Mad Bomber was setting up his piece de resistance you didn't think I'd stay away, didja?"

"Guess not. I suppose I should be glad that we didn't have to erect bleachers for the spectators." He shook his head in resignation.

"Might've happened, if it weren't out here in the boonies." Neville pointed to Grandjean with a thumb. "And I got particularly interested after Andre talked to me about young Schmidt."

Hazelton was slightly confused. "Beg pardon?"

"Andre says you've been holding out on us." Neville smiled to take the sting out of the supposed criticism.

"I am here to recruit him away from Construction," Grandjean interjected avariciously. "I did warn you."

"Yep; seems that Schmidt is some mathematical wonderboy, and Andre thinks he'd be perfect as a trainee for Orbital Ops. Lord knows we need more people there."

"Math genius?" Hank interjected.. "You sure you mean that bomb-throwing maniac Schmidt?"

Grandjean shrugged. "I did not say genius. But Tom told us of a rumor that Mr. Schmidt was supposed to be attending MIT."

Neville took over. "And Andre has a coupla 'Net contacts at MIT; got some friends to look into it. Apparently the kid blew off a partial scholarship to work for Launcher." Neville looked impressed. "The sponsor even offered to up the scholarship coverage, but Schmidt told them it wasn't the money; he just had something more important to do. I figure it took cojones to do that, since he's basically persona non grata with 'em now."

"I'll be damned," Hank said in amazement. "He turned down a scholarship to blow things up?"

Hearing the rumor confirmed was a surprise. Hazelton said, "I wonder why the hell he did that."

"He works for you; you tell us."

"Damn. Where is he, anyway?" Hazelton asked.

"Back of this hill," Neville informed him. "He said we should wait here while he and his partner made final preparations. I guess we'll wander a little closer when it's time."

"After which," Grandjean returned to the first topic, "I plan to ask him to transfer to my department. I do hope that you will not be discomf..."

"Fire in the hole!" an overly amplified voice rang out.

"What the devil..." Neville began, only to be interrupted by the veriest crack of doom. It seemed more than explosion, a BLAM! that put thunder to shame, a thud that jolted the earth, and a wall of sound pressure that hammered the men's bodies. Then it was over.

Hazelton's ears were numb at first, but soon began to ring. He worked his jaw trying to get his ears, victims of the abrupt pressure shifts, to pop. He heard a muffled voice.

"Holy mother of god," Neville exclaimed in subdued awe, staring into the air. "What the hell is that?" Hazelton turned to see what had the big boss's attention.

Dirty brown and much, much bigger than Hazelton thought a mere chemical blast had any right to, a mushroom cloud was slowly rising into the sky. His mouth fell open. He was in good company, as everyone shared the reaction.

Grandjean poked at his ears in an effort to return them to a semblance of normalcy. Failing in that, he considered Neville's dimly heard question. "That, sir, would be the man I wish to transfer to Operations."

"Shit." Pause. "Should we get checked for radiation exposure?"

On the far side of the ridge, but still safely removed from the center of the blast, Cal stood staring at his handiwork with a crazed grin. "Yee Haw!" he screeched. He started laughing insanely. Beside him, Micky shared in his glee, albeit with somewhat less mania. Then she settled down and eyed Cal craftily. He was too pleased with his handiwork to notice her attention shift.

But he did notice the tapping on his shoulder. He turned to see Micky Melendez standing there with her hands propped on her hips, long dark hair blowing in the breeze, silhouetted against the blue Texas sky. Nervously, he noted once again that it was a rather nice silhouette. "Um..." She had that predatory look again.

Micky raised her right hand, wagging her finger as she spoke. "Calvin Schmidt, as you may have noticed, we just done good. Real good. We shall, therefore, celebrate." She stepped forward. Cal moved back, very nervously.

"Um..." He backpedaled, leaving a scuffed trail in the dirt.

"Damn it, Cal! Are you gay?" She closed the gap between them suddenly, grabbed his head and

kissed him. Hard. Cal seemed shocked, but he wasn't pulling back. In fact, he looked like he was starting to enjoy himself. So she slipped her tongue in. And... Nope, he definitely wasn't gay.

After a while which Cal couldn't classify as short or long, Micky broke the kiss. "Damned well about time, " she told him, smiling and still holding him. "But... Don't get me wrong... but I thought maybe you aren't quite as experienced as some of the pussy hounds back at The Grill..."

Cal's face lit up red. "Um. Yeah. I-I a-am a v-virgin," he stuttered out. "Sorry."

"Don't you start apologizing for who you are, Cal." She smiled and hugged him. "I like you. Working with you is great. And you're cute as hell," she added slyly. "I know I make you nervous, so I just wanted to explain that you really don't have to be nervous with me." She took his hand in her own and moved it somewhere she thought they'd both like. "Here." They kissed again oblivious to the dust settling around them.

"Ahem!"

The pair jerked apart, suddenly aware that they weren't alone. Four company bosses, Neville himself in front, stood grinning at the couple. Cal blushed again. Much more of this, and he'd likely be rupturing blood vessels in his face.

"Sorry t' interrupt," Neville said with mock severity, "but ya'll are still on the clock." Then he laughed.

Micky grinned defiantly and stuck her tongue out at the older man. Cal simply wondered if it was possible to develop a permanent blush.

Neville stepped forward and offered his hand to Micky who extended her own for a shake. Instead, he held it gently and bowed over it. She half expected him to kiss her hand. "I guess we haven't met before, Miz Melendez. I'm Bill Neville." Then he did shake hands with Cal. "And you'd be the notorious Mr. Schmidt."

Oh, shit. "Well, sir, I don't know about notorious...."

The managers all laughed, and Neville responded, "I do." He waved towards the blast center. "Interestin' hobbies you have."

Cal looked. While he had been... preoccupied, the dust had been settling out. The outcrop was now visibly... gone. What little remained could be handled with push brooms. He smiled happily and said to Micky, "I knew that shaped charge effect would work." She smiled back proudly.

"Got any plans for an encore?" Neville inquired. He examined Cal speculatively.

Micky and Cal exchanged glances. "Well, not really," Cal said. Micky shrugged.

"Reason I asked," Neville explained, "is that if ya don't have any other plans, we kinda wondered if you'd like to transfer over to Operations and put some of those math skills of yours to work for Andre here." He nodded at Grandjean.

"Say what?"

"Seems a shame a waste a head that MIT was willin' to pay for, and after that," pointing to the ex-massif, "stayin' in Construction is liable to be borin'. And we need good people in Operations."

"Is this for real?" Cal asked suspiciously. Micky was watching his face carefully.

"Yep. And it comes with a raise if ya can do the work. From what Andre tells me, I expect you can."

Cal let a breathe escape in something more than a sigh. "Well, hell. I'm not stupid. Sure!" Then suddenly, "Um, uh, what about Micky? We've been a team, and..."

"Yeah, so I noticed," Neville cackled. Micky giggled too.

"Yeah. Well. The point is, what's in this for her?"

Neville smiled as he saw Cal's hand reach out for the girl's. "Fact is, son, you're the one that I already knew about. But seein' how ya'll haven't left anything t' demolish, there's no reason not t' let ya both move over. "He addressed Micky directly. "Miz, if you know computers and can handle the math, I expect Andre can use you too."

The Ops supervisor confirmed this. "I am building up my staff now. I am in desperate need of people who can train now and be ready when we begin range testing of the launch system."

"Oh, no," Micky declined. "I was already failing jock math even before I dropped out of college. A math whiz I'm not. And computers are just for letters, games, and surfing."

Grandjean looked disappointed, as did Cal. Neville shrugged. "If ya can't, ya can't. But the least we can do is getcha a raise for the good work. And bonuses oughta be in order too." He glanced at the shrapnel peppered blast zone and smiled. "Why dontcha'll take the rest of the day off, make it a long weekend. He glanced at Hazelton. "Any problem with that, Tom? Kinda looked like these kids wanted t' celebrate."

"Hell, no. By the looks of 'em, I wouldn't get much more useful work out of 'em today anyhow." He had a knowing smirk plastered across his face. "You two go on and get out of here."

Grandjean spoke up. "And Mr. Schmidt?"

"Yes, sir?"

"On Monday morning, please report to work at the Operations center." He smiled in memory of Cal's contribution to the control center's construction. "I believe you know where we are."

"Yep, right next to the crater." Now Cal was grinning, making it unanimous. "I'll be there. Eight AM?"

"Yes, that will be satisfactory." Grandjean turned to his fellow management types. "Gentlemen, I believe we are now intruding upon this young couple. I suspect that they can find better ways to

occupy themselves than in idle chitchat with old men." The four chuckled, and made their goodbyes. Eventually the two demolitionists were left alone to load up Cal's truck.

Micky was giving him that look again. Somehow, it didn't seem quite so worrisome now. Not quite. "Cal."

"Uh, yeah? he replied, still a little apprehensively .

"Lessee... We blew up a damned big pile of rock, you got a transfer and promotion, I got at least a raise. We're both getting bonuses, it sounds like."

"Uh huh," Cal said carefully. "A pretty good day."

"Damned good." She pinned him against the side of his truck. "I suggest we celebrate some more." She gave him another of those kisses with the remarkable effect on his metabolism. "In fact, I think we should make a night of it." She rearranged his hands again. "We can start with beer and dinner at The Grill." Another kiss. "Then we can go to town and try dancing."

"I can't dance..."

"Good. Then we'll skip that part and go directly to the motel."

"Um..."

"I said we're going to celebrate, didn't I? I haven't been spending every day working with you and chasing you for the last few months just to play Monopoly." In case that didn't work, she applied a more persuasive argument.

Cal conceded.

It was dark and quiet, finally. The ex-bomber laid back on the mattress in... shock, for starters; not to mention exhaustion. Micky's crack about skipping the dancing had not been a joke. It was a damned good thing running around the launcher range kept him in decent shape; Micky had been rather demanding. Hell, it was a good thing he'd been a virgin; he needed the saved-up energy to handle the vixen.

Not that he was complaining. He'd had a fair idea what he was missing, but the reality was... excellent. As he mused tiredly, Micky form-fitted herself to his side, half atop him.

"Fern," for some reason, Micky always called dollars 'ferns' or FRNs, for Federal Reserve Notes; he meant to ask about that, but kept forgetting, "for your thoughts." She rubbed her cheek against his chest. She liked the smooth skin; gorillas weren't her thing.

Cal smiled to himself. "My thoughts aren't worth airing."

"I don't see why not. 'Bout now, I'd love to know what you're thinking." She was smiling, too, although Cal couldn't see it."

"Well." He blushed a little. "I promise that I was thinking nice things about you."

"Damned well about time," she retorted with faux anger. "I've been working at it long enough." She caressed his chest with her left hand. "You know, I don't usually have to work so hard at catching a guy's eye, Cal."

Cal responded contritely. "Hey, I'm sorry... "

Micky raised herself up on an elbow and looked him in the eye. "Don't you dare start apologizing now." She eased the statement with a smile. "Tonight had better not be something to be sorry for," she jested.

"Oh, no! I didn't mean that. It's just..." Suddenly he felt miserable; seemed like he could never say anything right.

"Take it easy, Cal. I'm just teasing."

"Oh. I guess this is a little new to me."

"You do fairly well for a newby." She kissed his nipple. "So why were you so hard to get through to? If you're gay, you fake it well enough. Frankly, I'm having a little trouble believing that no girl back home grabbed you before now." Cal tensed a bit. "Did I say the wrong thing?"

He thought it over before speaking. Hell, he'd known Micky for months now. They were friends even before tonight. Partners, even. "You really want to know?"

Micky sensed that this was more important than she'd realized. "Only if it's something you really want to tell me. You don't have to give away any secrets."

"It isn't secret, just... embarrassing. A guy doesn't much like to talk about being made a fool of."

"Then don't."

"It's okay. Probably do me good to get it off my chest."

Micky, face still plastered to the young man's torso, said, "So long as that's all you want off your chest." She giggled happily, causing Cal to chuckle lightly, too..

The humor helped. "Well, part of it is that I was raised on a dinky combo ranch and farm in Wyoming out in the middle of nowhere. Closest town is population thirty-eight, on a good day. And I mostly homeschooled, so I didn't always get a lot of practice being around girls." He shrugged against the sheets. "'Course, the high school that served the surrounding towns and ranches wasn't exactly huge, so that probably didn't matter too much." He snorted at himself. "Anyway, whatever reason, I just get nervous around girls; the prettier the more nervous." He grinned and looked down at Micky. "I guess you'll be pleased to know that you just plain scared the hell out of me."

"Mmm." Her hand wandered farther south, and Cal blushed yet again, and decided the lady was going to have that effect on him a lot. "I do hope we're past the fear part by now," Micky murmured.

"Eek!" Cal squeaked. "We may have to see about that."

Micky sat up and straddled her partner. He tensed up again, so she began rubbing his shoulders. She rather liked those shoulders. "All this sounds a little extreme for being nervous around the opposite sex. Heck, Cal, everybody gets nervous."

"Just like you, huh?" he retorted playfully. "But yeah. There was more to it. The short form is that there was a girl in our county, one of the cheerleaders, in fact. Very pretty, very popular. A little bit snobbish. And one day she deigned to notice me." His face was stony now. "Once I got used to the idea, I thought I was in heaven. Going out with the dream girl of the county. She had me wrapped around her finger. I'd do anything for her."

Micky realized this no time for more jokes. She slid off of Cal, and sat at his side holding his hand. He continued his story. "If I weren't an idiot, my first real clue should have been the night she called around eight PM and asked me to bring her some chips and dip. You might think it's no big deal, but she lived in town, one hell of a lot closer to the supermarket than me. I thought it must just be some excuse to get me to come over. So I hopped in the truck, drove to town, bought some potato chips and cheese dip, and went to her house. She met me at the door, took the chips, and said good night. I heard one of her friends inside laughing."

"That was cruel..."

"Oh, yeah. It kinda hurt. But I had this totally unrealistic image of her in my head by then. So I kept going right up to where she asked me to her school's prom. Sounded great to me. Up to then, our 'dates' had been pretty private; now I could show off in public.

"Except that it was a joke. I went all the way to Jackson Hole to get just the right tux. And she waited 'til the afternoon before her prom to cancel. Seems she suddenly decided to go with the local sports jock hero... who she'd been dating all along. When I asked for an explanation, she told me I was just a joke with her friends, the point bein' to see how much she could get me to do for her.

"I was the laughingstock of the whole area, I guess. After that I wasn't much on trusting girls. Maybe I was over-reacting, but..."

"Damn, no wonder you were such a challenge. I thought I was slipping."

"Not hardly!"

Micky leaned over and hugged him, then added a kiss on the cheek. "Hey, guy, take my word for it. All us women ain't such manipulative bitches. You bring me chips and I'll make sure you're... suitably rewarded."

"Are you kidding? The way you're making me work tonight, I'm the one who needs food!"

Micky arched her eyes and smiled seductively. "Really? Let's see what we can come up with..."

Chapter 15

Year Two, March 9th

Every actual state is corrupt. Good men must not obey laws too well.

- Ralph Waldo Emerson

"Mr. Neville?" Zelaski called from Neville's doorway.

"What's up, Tom?" the man replied. He was frowning, but not at Zelaski. Procurement had run into snags with the alloy sheets that comprised the skin of the booster-to-be. Snags of the sort best eliminated by throwing large sums of money at them.

The aide rolled his eyes skyward, and Neville cracked the beginnings of a smile. Zelaski spoke on. "You've got a visitor; an Albert Callicutt. From NASA."

"Oh, joy. No appointment, right?" More snags yet. Too bad this obstruction couldn't be solved with money.

"I'm afraid not. But he's pretty insistent. And given the recent incidents with the FAA and the IRS..."

"Yeah. I guess so. Why dontcha show 'im in?" Neville sighed and looked at his cluttered desktop in resignation. He'd probably never get caught up, what with feds as thick as flies around here. He straightened his bolo tie, and opened a notepad on his computer screen in preparation for the upcoming encounter. Then hit punched REC on the desktop microcorder. Almost immediately, Zelaski reappeared with a portly, balding man in a grey suit.

"Mr. Neville, this is Albert Callicutt with..."

The pudgy man interrupted. "Good morning." He strode forward and proffered a hand. "I'm with the commercial liaison office of the National Aeronautics and Space..."

"You'd be the guy who sent us the little letter about contractin' with NASA then?" Neville indulged in a skeptical glance at the extended appendage, and shook it briefly. Then surreptitiously wiped the transferred sweat on his slacks.

"You did receive our letter, then?" Callicutt affected an expression of surprise. "We had received no response and thought perhaps it had been lost in the postal system. Hence my visit today."

Neville's visage soured momentarily. "And of course it never occurred t' you t' call for an appointment first." Federal intrusions were getting no more bearable with repetition. "Well, you're here now. Why dontcha have a seat and let's get this outa the way." He waved curtly at the chair before his desk, and seated himself.

"Quite right, Mr. Neville," the NASA man answered as he planted his plush posterior in the matching chair. "The sooner we can get your Launch Corporation integrated into the incentive pro..."

"Launcher Company," Neville corrected.

"Excuse me?"

"We're the Launcher Company, not Launch Corporation. At the very least, you could figure out who you're talkin' t'." NASA was evidently working from the same screwed up paperwork as the IRS.

Callicutt frowned. He opened his patent leather satchel and removed a spiral notebook, in which he made a short entry. "I see. But that's rather beside the point. More immediate is to be sure that you..."

"No, as a mattera fact, it isn't beside the point. We're an unincorporated partnership for a reason."

"Those legal trivialities are beyond my purview."

"This operation's beyond your purview," Neville told him coldly. "We aren't signing any pork barrel deals with NASA."

Clearly perplexed, Callicutt said, "I can hardly see how you could make such a snap decision, sir. I've not even outlined the proposed contract."

"S'okay. We weren't interested in any contract anyhow."

Callicutt's eyebrows elevated. "Not interested in financial assistance for research and development? Conceptualization? Eventual construction...?"

"Nope."

"Then how do you propose to develop a transportation system to meet the needs of national interest?"

"Can't say's we plan to."

"This is most irregular..."

"Get more fiber in your diet." Neville felt something rising. He suspected it was his lunch. "Look, let's see if I got your deal straight. You're gonna offer to cut us a deal in which you give us money to explore design concepts..."

"Well, certainly..."

"I ain't finished," the gruff Texan cut off the bureaucrat. "And since NASA'd be ponyin' up cash, you'd expect t' have some say in design criteria, like redundancy, payload mass, probably even which onboard computers t' use. Right?"

"Naturally we would expect federal dollars to be spent in the best interest of the country..."

"Since when?" Neville's face grew ruddy. "In what way does that monstrosity of an STS meet

the best interests of the country? Inefficient, needs federal subsidies just t' heave its fat ass off'a the ground. Built by low bidders, except when it served the 'best interest' of some congresscritter t' force construction of some key component in his own district. An' don't get me started on that white elephant of an ISS!"

"The International Space Station is...."

"More'n a decade overdue an' tens 'a billion of dollars over budget! Stop pretendin' that puttin' a crew aboard the crippled monstrosity in 2000 meant it was finished; ever'body knows better." Neville sneered. "Shee-it! If NASA had been explorin' North America, we'd still be sittin' in New England wonderin' if there's a northwest passage to China!"

"Your attitude is hardly proper, considering your company's reliance upon NASA certification of your spacecraft." Callicutt set his jaw and prepared to be firm with this upstart. "NASA is tasked with assuring the safety of any attempted space launch in the U.S. Working with us to assure that your designs are feasible streamlines that process. I cannot guarantee any certification if you should choose to act unilaterally."

"Crap. NASA is self-tasked with makin' sure no one makes it look bad by doing what you've been pretendin' can only be done with megabucks of other people's money, under your control." Neville stood up and loomed over the government man. "If NASA is actually in the business of assistin' private access, how come nobody's managed to get NASA certification and actually put anything inta orbit yet? Includin' the suckers who tried playin' your game? How come Boein' hadda leave the country an' work with Russia t' even make a go of it?"

"NASA assists, but cannot guarantee success in the free market..."

Neville interrupted yet again. "What free market? With government subsidies?" A rhetorical question to begin with, he chose to answer it himself. "If space were a free market, NASA wouldn't have a legislated monopoly, which it can enforce by denyin' 'certification' to its would-be competitors."

"But..."

"And where the hell is it in the Constitution that gives the government any business doing space exploration and development anyway?"

Callicutt replied condescendingly, "One would think that a man of your... experience would be familiar with the general welfare clause. Surely, husbanding the resources of space for the common good of man..."

"Callicutt, shut up!" Neville strode angrily around his desk to tower over the fat man, who in turn shrank in on himself. "I've had it up to here," he chopped at air above his own head, "with this crap! I've got trespassing FAA weenies..."

"The FAA is a separate ag..."

"...tryin' to inspect ground vehicles! I've got idiotic revenueurs shootin' themselves up lookin' for Launcher in the wrong buildin' and without a warrant anyway! I got Fan Belt Inspectors who ain't even botherin' with evidence before they come accusin' us'a hacking the IRS!" He glowered at the

bureaucrat. "And now I got you pretendin' you got the right to deny an American the right to make orbit without your say-so!"

"Mr. Neville," protested Callicutt, "I have no knowledge of, nor control over, other federal agencies. Even within NASA, I am a liaison officer rather than one who sets policy. I am merely attempting to explain that NASA has a certain jurisdiction in space matters, and that you can simplify matters with a little cooperation."

Neville abruptly calmed. In an icy voice, he asked, "And what sort of cooperation do you require, exactly? Bear in mind that signing a contract giving you oversight is out of the question."

"Should your company choose to forego our monetary aid, at the very least certification will require that you make available copies of all drawings you might use in constructing some future space vehicle." Neville blinked. Future? Callicutt persisted, "When you begin construction, we will need documentation of all phases of work. Photographs would be an excellent aid. Ideally, our own engineers will be on hand to personally evaluate the safety of any techniques..."

"Over my dead body," Neville stated flatly. "You can stop now; I've got the picture." He closed his eyes and shook his head. Leaning against his desk, he forged on. "First, when you get home, you should tell your keepers to brief you better. One reason we don't need government money for R&D is that R&D is largely complete. "He sneered at the seated man. "We've already begun construction. Booster and spaceplane both."

Callicutt's ears pricked up at the mention of a spaceplane. "Oh, no. A spaceplane SSTO vehicle will never meet U.S. launch requirements; the theoretical payload limits are much too low for..."

"For bloated, subsidized satellites the size of a greyhound bus. Well enough; we don't plan to orbit too many busses. Like I said, you haven't been briefed." Coldly angry, Neville's laid back accent was long gone now. "Not that it's any of your business, but we aren't using a Single Stage To Orbit approach. Call it Sea Level To Orbit, a ground level catapult operating on ground effect principles that accelerates an orbiter to speeds making the full ascent practical for an otherwise one stage craft." He made an orbit of his own, to return to his chair, into which he dropped heavily. "But that isn't NASA's business anyway."

"Congress seems to think it is," Callicutt riposted.

"Congress is full of idiots that think 'constitutional' is a walk to keep their bowels regular."

"But..."

"Be quiet, it's my turn," Neville ordered. "You mentioned the so-called general welfare clause of the U.S. Constitution." He paused to considered, then spun his desktop around and rapped out a series of keystrokes. A window opened, full of words. "Here we are. 'We the People of the United States, in Order to form a more perfect Union, establish Justice, insure domestic Tranquillity, provide for the common defence, promote the general Welfare, and secure the Blessings of Liberty to ourselves and our Posterity, do ordain and establish this Constitution for the United States of America.' That the clause you mean?"

"You keep the Constitution on your computer?" This clearly struck the bureaucrat as somewhat

odd.

"Damned right. And you don't, seeing that it's a set of restrictions on you as a part of the federal government?"

"The Constitution is a social contract between the people and government, describing the responsibilities of all." Callicutt parroted a line that Neville had first heard decades before.

"If it's a contract, why didn't I get a chance to negotiate and sign it? Show me the clause that assigns any duty to people rather than government." He stared down at the sweating fat man. "The Constitution is a document that defines a federal government and assigns it very specific duties. And very specifically denies it any power not explicitly granted to it within the Constitution," Neville lectured. He'd done it before. Rather recently, in fact.

Callicutt was well-suckered into the discussion. "And the Preamble assigns the government the job of guaranteeing the general welfare. That is reiterated in..." He paused. "I forget exactly. The part defining what Congress does."

"I'll be damned. A bureaucrat who's actually seen the Constitution once." Neville feigned amazement. "Were you stupid before the government hired you, or did you get a government-issue lobotomy?" Neville wondered. "The preamble is just that; a short section of preliminary remarks. It states the general intent of the Constitution. It doesn't delegate power. For that, you have to go to the clauses in the main body, and to the various amendments. Nor does the preamble say a damned thing about guaranteeing one iota; at most, the government is to promote the general welfare." He was pissed. "And the clause you're tryin' t' thinka that also mentions 'general welfare' is just the part that empowers Congress to lay taxes. Doesn't say an effin' thing 'bout NASA restricting private space access, bozo." Suddenly Neville's face reddened again, and he roared, "And how the goddam hell does regulatively forbidding space travel by the general citizenry promote the goddam general welfare anyway!" Callicutt cringed. Neville turned icy again. "You gotta copy of the agreement you wanted us t' sign with you?"

"Well, of course," Callicutt answered carefully, searching the question for more verbal landmines. "If you'd care to review it..."

"Nope. Lemme tell you what you can do with it. Just hang onta it." Neville pointed to the doorway. "And get the hell outa my office, go home. Then read the entire goddam Constitution." Now he grinned dangerously. "And tell you what... The Tenth Amendment says that the federal government ain't allowed to do a goddam thing that ain't specifically listed in the Constitution. So if you can find the frickin' clause that says the feds can tell a private individual whether or not he can go anywhere, includin' space, in whatever the hell he wants, be it little red wagon, hi-tech SSTO, or transporter beam, then I'll sign your goddam agreement. Otherwise, you take the frickin' thing, along with your goddam agency charter, fold 'em up 'til they're all sharp corners, and shove 'em somewhere you find personally uncomfortable in the extreme!" Neville rose again, and towered over the desk like a vengeful deity. "Now get the hell outa my office!" Callicutt broke and ran.

Sometime later, Neville ruminated over the encounter with Mike Campbell, fresh in from the legal department. Again.

"Bill, has it occurred to you that you've got to stop throwing out feds?" Campbell sighed loudly.

"Antagonizing the FAA was one thing; they were wrong. But we'll need their cooperation before we can start puttin' our bird in the air."

"Nope. Remember, we got 'em to put it in writin', that NASA has jurisdiction over craft intended for space travel, not them. Once we finally get 'em to issue our X number for atmospheric testing, FAA can go piss up a rope." Back to the room, Neville stared out the office window. A dust devil twisted by. "I'll admit, the IRS may be another matter, but those dipsticks seem to be eliminating themselves just fine." He frowned at his pet legal beagle. "And how are we coming on shaking that number outta the FAA?"

"Nothing yet," Campbell admitted. "Every doc we file, that son of a bitch Rodgers kicks it back for typos." He looked worried. "One of my people suggested that if Rodgers wants to make this personal, we play his game."

"Yeah? How so?" How do you get personal with a faceless bureaucracy?

"He says we should sue Rodgers personally for obstructing us through an abuse of his position. Not the FAA, but the guy. Make him bear the expense of a legal fight. And do the same to anyone else the FAA uses against us." Campbell sniffed disdainfully. "Ridiculous, of course."

"Not at all," Neville disputed the assessment. "Do it."

Campbell started to chuckle, then realize that Neville wasn't laughing. "Are you serious?"

"Damned straight. Sue the SOB. And file a complaint with the FAA over his behavior. Send some letters to our Senators, and whoever the hell's our congressthingy these days." Now Neville was starting to smile; but it wasn't an expression that conveyed much in the way of joviality. His eyes narrowed and glittered. "Mebbe we oughta sue that guy from the IRS, too. What's his name? Watson?"

Okay, the boss is serious. And who knows? it might even work with the FAA. "I wouldn't mess with the tax goon, Bill."

"Why not? I want every fuckin' fumblin' fed to find it personally expensive to not play by the same rules they claim we have to obey." He steamed.

"Yeah, well. You thought the IRS raid was bad?" Campbell sighed. "Well, Agent Watkins took a demotion over that. Was so unhappy that he arranged a transfer. To the ATF."

"Joy. The folks who torched a few dozen people over an alleged unpaid two hundred dollar tax." Neville was getting a little loose with the facts. The Bureau of Alcohol, Tobacco, and Firearms had only staged the initial raid that resulted in several deaths on both sides. Over an allegedly unpaid excise tax of just two hundred dollars. The FBI supervised the later incineration.

Campbell laughed bitterly. "Bill, you're missing the point. Pissing off feds is going to hurt Launcher." You might not like them, but we can't launch so much as a beeping sputnik without their permission..."

"Sez who?" Neville turned back to the room. "What are they gonna do, send the army after us?"

"Look, face facts." This isn't some little newspaper route or lemonade stand. Orbital launches are effectively a government monopoly in every country in the world. If you're going to challenge that, even a little bit, you have to make some compromises. Fill out a couple of forms, humor an inspector or two. And get the damned certifications!" Campbell rose from his chair and began pacing. "Look, boss, just building the launcher and spaceplane is an accomplishment. A big one. To date, Launcher is the only really private outfit to have gotten this far. We've set a precedent. Once we're operating regularly, we use that precedent to push just a little farther, open space up to a few more people. For once, we can make the slippery slope work for us; once the government has given in a little, they'll have to keep giving in."

"Kind'v an optimist, aren'tcha?" Neville noted. "Show me one time in history when people have compromised real concessions from government."

"How about the repeal of the Stamp Act in pre-Revolutionary America?"

Neville snorted disdainfully. "Good example. For me. Why, the colonists were so successful with getting the Crown and Parliament onto the slippery slope of tax repeal that we never even hadda stage a revolution and secede from England." Sarcasm definitely became the man.

"Argh." Campbell scowled. "I hate it when you're right. But I stick to my guns in this case. Unless you really want to spend the next few decades in prison. You can hardly stage a revolution over space access."

Neville glanced sharply at the lawyer, and his aspect turned thoughtful. After a few moments he said, "Mike, can you think of anything more worth fightin' for? Access to space isn't just about playin' stupid games with floatin' water balls. Not even weather or comm satellites." His voice trailed off as he became lost in thought.

Campbell waited, then, "Okay, so this is obviously more than just the money, or the satisfaction of building the launch system."

"Yeah, you could say that."

"Well, if it's going to keep getting you into trouble with the feds, would you mind sharing it with your attorney, so I can stay a step ahead?" He smiled. "Or maybe return your retainer."

Neville cackled. "Retainer my ass; I gotcha on salary now." He turned somber again. "You're what? Early, mid thirties?"

"Sure. Thirty-five. What's that got to do with anything? You didn't have a problem with my age when you hired me."

"Don't now either." Neville stared into the distance dreamily. "But you don't remember the early days of the American space program. Shepard boostin' suborbital on a rehabbed ballistic missile, Grissom spacewalkin'." His face darkened for a second. "And dyin' later. Some of us still remember 204, an' being told that those guys died to make it possible for people to reach inta space. They were heroes, died leading the way for the rest of us. And then there was Apollo." He smiled this time. "I remember sittin' at home watchin' on a dinky ol' thirteen inch Sears TV. Black 'n white, of course."

"Let me know if you approach a point any time soon." The attorney looked at his watch impatiently, a not so subtle hint.

"Oh, I am." Neville felt a brief wash of anger, but it wasn't directed at Campbell. "Apollo was the start of the point. There we were, on a roll, and everybody figuring it was only a matter of time before we started colonizing the Moon, or maybe even Mars. And the program got canceled. The politicians had made their hay on the deal, and anything more was a waste of money better wasted in their home states." He blinked a few times, then walked over to the compact refrigerator, where he obtained a brown bottle. "You want one, Mike?"

The lawyer glanced at his watch again and frowned. "No thanks. A bit early for me," he added pointedly.

"Meanin' too early for me?" Neville inquired sourly. "You an' Amy. You tend your horses, I'll tend mine." He popped the top and drank. "So then they gave us Skylab, a manned space station; a permanent steppin' stone inta space. Except the damned thing didn't work quite right, solar panels didn't deploy completely, an' it needed a frickin' umbrella to stay cool. And still the only folks goin' up were test pilots and scientists. And then they let the thing burn up and crash on Australia instead of maintaining it."

Another sip, and, "Then we had the "Handshake in Space," a purely useless propaganda job that accomplished nothin' but rubbing the taxpayin' space fanatics' faces in the fact that NASA had no place for us in their plans."

"Do I detect the faintest glimmering of a point?"

"Damned right. Everything NASA has done has emphasized big government doing bigger spendin' t' put more specialist prima donnas inta orbit at our expense. We're supposed t' settle for vicarious voyeurism, never mindin' that we grew up bein' told that us or our kids would live the real thing out there." He nodded towards the ceiling. "And now we have NASA still puttin' the STS inta orbit, at a billion bucks a pop, still pretendin' that more efficient systems never existed, that the X-15 program was a figment of our imagination. An' the only time they made even a token show of lettin' an ordinary person inta space, they managed t' blow up the damn shuttle by ignoring their own engineers who told 'em they had probs." He lifted the beer bottle and downed half the golden fluid. "Well, there's was one other time. That rich boy who paid off the Russkis for the ticket. And NASA fought that tooth and nail."

"So NASA finally learned safety. So now they want to inspect and certify to make sure our spacecraft are safe..."

"Crap. NASA didn't learn shit except t' de-emphasize manned missions. The shuttle is still the country's primary lift system, and it still has hundreds of nonredundant, mission critical components, a failure of any one of which will ground or destroy the thing. Again. What NASA learned was that they couldn't risk any real competition, or they'd be shown up as the murderous incompetents they are."

"Strong words..."

"Read up on Grissom, Chaffee, and White in 204, and Challenger. Then tell me what kinda words are called for." He snorted. "And look at 'Better, Cheaper, Faster' while you're at it. Probes

crashin' or just disappearin'. Or shakin' a satellite to pieces... Shit, never mind." He felt a headache coming on. "Okay, point is, NASA has a vested interest in never lettin' anyone show 'em up. And they're just symptomatic of the whole federal system; they got no incentive to let private people or companies show they can do anything that the government claims only they can do."

"So..."

Neville looked at his bottle. Empty already? Maybe Amy and Mike had a point. "So I don't know." He stared pensively out the window again. Wide open looked real good. "We paid our taxes, and the IRS came gunnin' for us. Literally. Hanners and some other folks got a better idea for spaceflight, and NASA and the FAA team up against us. Even the FBI... It's like the federal government has declared war on us."

Campbell persisted. "Bill, they might be... um, over-enthusiastic in their duties, but the government doesn't exactly go to war against its own citizens."

Neville laughed bitterly. "Ruby Ridge, Mount Carmel... The War on Some Drugs... PATRIOT spy act... Hell, eighty percent of the folks locked away in federal prisons are in for unauthorized sale or possession of agricultural products. A uncoerced business transaction constitutes a crime. They got so many locked up that there ain't enough regular prisons, gotta use tent cities that look more like POW camps than correctional facilities. That ain't war?"

Campbell shifted uncomfortably, frowning. "I don't like where this is going, Bill."

"Shee-it, you think I do?"

"You're criticizing normal functions of government as if you've been unfairly singled out..."

"Nope. The fact is, neither me nor Launcher's been singled out. This kinda crap has become the norm for the last twenty 'r thirty years. Prob'ly more, but mebbe I didn't notice; kept givin' 'em the benefit of the doubt. " He dropped back into his own chair, and spun to face Campbell. "I'll ask you the same thing I asked that NASA weenie. Same thing I already asked ya once. Show me the explicit Constitutional basis for any-a the bureaucratic crap they've been inflictin' on us. If you can't, then try explainin', as my lawyer, why I should cooperate in the illegal harassment 'a the Launcher Company."

"Damn it, Bill!" Campbell exploded. "You can't simply ignore the legal authority of the United States government!" He jumped from his seat across from the exec, and planted his palms on the massive desk. "There is a legal system in place to challenge actions which you believe to be improper. Follow it! Sue the hell out of them, but first show good faith by complying with your lawful obligations!" He stared into Neville's eyes. "That is my legal advice to you as your attorney!"

"Siddown!" Neville's eyes were steely, and Campbell obeyed almost without thinking. "I thought you had a better handle on what's goin' than that! Lissen up, boy!"

"One, Launcher is operating on a tight budget. Mebbe you didn't notice 'cause we're payin' you pretty good. But we figured it was better to pay top dollar for what we thought was a few of the best than to waste lotsa bucks on salaries for too damned many incompetents. What income we have is goin' into the launcher and spaceplane. We don't have any to waste on useless lawsuits, but we can sue where it might do some good. But that can't last forever. We can't afford the drain."

"Two, complyin' with those damned 'requirements' just to show good faith will cost us money! Which, again, we ain't got to waste!

"Three, I grew up believin' in the Constitution, and if it don't say the feddies can do what they're doin' then it ain't legal for 'em to require us to play their frickin' games!

"That isn't your call! The Supreme Court...!"

"Can kiss my ass! They're the assholes that say people have the right to free assembly... so long as they ask the gov for permission an' pay their permit fees. That people gotta right to bear arms... so long as they get gov approval first. That cops gotta have a warrant to search your stuff... unless they're in a hurry. That you gotta right to a speedy trial... unless the prosecutor asks for an extension. That the gov can't keep you from usin' your property... unless some spotted suck toad shows up later."

"So, what?" Campbell challenged. "You just want to ignore the legally constituted authority of the government?"

"That's my point! They ain't only exceeded their legal authority, they goddam well stolen a bunch more! And you're sittin' there tellin' me t' go broke playin' their little game by their little unconstitutional rules!"

"Damn it, Neville...!"

"Hey, boy; I figure if they've chucked the Constitution, then I am playin' their game. If they can make up the rules as they go t' suit 'em, so can I! If the Constitutional government that school used t' tell me ran the country has been overthrown by wanna-be dictatorial bureaucrats, then I got no obligation t' cooperate with a new government that I never swore t' uphold and protect!"

"Very good; spoken like a real anarchist," Campbell sneered.

"Campbell, pack your bags." Neville had gone cold again. "As an officer of this company, you had the responsibility t' protect the company's interests. Your advice has definitely been contrary t' that interest. Get outa here."

"You don't have the authority to fire me! That takes a unanimous decision by all three majority partners..."

"All four. You forgot Hanners. Wanna bet on how he's gonna feel? Ever hear him talk about big government? And I've known Cathy and John mosta their lives." Neville stared at him for a moment, and watched the shyster deflate. "You might as well start packin'; I'll have a letter for you, signed by us all, by close'a business."

"I'll file a lawsuit so fast...!"

"File away. But read your contract first. We got the right t' can your ass any time, just like you got the right t' quit anytime. All either party's gotta do is pay any outstanding monies due. I expect that a full fiscal quarter's salary'll meet our obligation, so far as any arbitrator is likely t' think. And the contract specifies settlin' disagreements by arbitration, not court."

Campbell sputtered as Neville spoke, then froze. He had agreed to arbitration. He might convince a court otherwise, but his corporate reputation would be shot. "Very well. I will clear my office. But you'd better have that severance check in with the letter, or I will see you in court." He rose stiffly, briefcase in hand, and walked towards the door. He paused and rotated back to Neville. "But for your own sake, you'd better start thinking about working with the government." He continued the short trek to the door.

But as he approached it, the door was opened for him. Tom Zelaski stuck his head in. "Hi, Mike," he began, then spoke to Neville. "Boss, we have more visitors..."

Another form appeared in the doorway behind the assistant and abruptly pushed him out of the way. "William Neville?" inquired a pasty faced, but tough-looking man in a grey suit. At Neville's affirmation, the man moved quickly to the desk, followed by two thuggish types wearing black windbreakers emblazoned with US MARSHAL. "I'm Agent John Parsons of the Internal Revenue Service." He stuck a bundle of papers under Neville's nose. The Texan grinned and tugged the documents from the agent's fingers as he went on. "This is a subpoena for the financial records of the Launcher Company dating up through February 28th of this year." He ignored Neville's smile and added imperiously, "I expect full cooperation."

The president laughed. "Far be it from me t' give ya'll an excuse t' start shootin' each other again. I'd purely hate t' get caught in the crossfire." Parsons flushed, and the marshals shifted uncomfortably. That particular fiasco was going to take some time to forget. "Hell, guys, I've been wonderin' what was takin' ya'll so long."

"Neville..."

"That's Mister Neville," he corrected coldly.

"Mister Neville, we expect cooperation, not pointless sarcasm and banter."

"Shee-it, I don't much care what you expect, if it isn't listed in this document." He waved the subpoena in the air. "But I'm thinkin' I'll be happy t' cooperate exactly. An' that oughta make my ex-lawyer," he nodded towards Campbell, who was still in the office observing the encounter, "pretty happy." He added, "And Campbell, you head on outa here; company business no longer concerns you." Next, he faced Zelaski. "Tom, get Creasing up here ASAP, would you?"

"Sure thing, Bill." The lanky man disappeared back to the outer office.

Neville kicked his feet up on his desk. "Have a seat, boys," he told the federals. "In the interest of cooperatin' exactly, I'm gonna hafta read through this thing, then my lawyer'll hafta do the same. Wanna make sure we give you just what you want."

Parsons maintained his aggressive display. "Enough of the stalling tactics. I've told you what we're here for. Your financial records. All of them." He smirked nastily. "Right up through the end of February." He leaned over Neville's desk, planting his hands to either side of the computer monitor. It reminded Neville of the departed shyster. "Do you understand?"

Neville opened up the agent's bundle of shredded tree, and began reading. "Yep," he replied

idly, not bothering to look up.

"I don't like your attitude, Neville." This wasn't going quite as the revenue agent had intended. The sense of intimidation he normally inflicted seemed oddly lacking in everyone he had encountered since entering Launcher's front gate. The marshals looked a little bemused as well.

The older man began smiling as he read. Perfect. Tiny bureaucratic minds were so predictable. "Why, what's not t' like, Parsons?" he asked, finally looking up. "Heck, I'm bein' so cooperative, that I'm gonna have all the files brought up even before my lawyer gets here. Hope you brought a big box," he added mysteriously as he lifted his handset and punched in an extension. "Hey, Leroy! Bill here. You all done with that ZIP job?" Pause. "Great! How 'bout gettin' a couple-a guys t' help you bring that stuff up t' my office, soon as you can?" A longer pause. "Sure, that's soon enough. See you in a bit." He hung up.

Parsons felt a distinct lack of control. "What do you think you're doing? I didn't authorize you to make any contacts outside of this office." One of the Marshall's raised his eyebrows and shot a look at his partner, who returned the look and shrugged.

Neville gave the agent a pitying look. "You don't authorize shit, unless you're plannin' t' arrest me for complyin' with your silly order. I got some folks comin' up from IT with the files..." There was a quick rap at Neville's door, immediately followed by the entry of a nervous young man. "Lon! Great! Why dontcha come here and read this thingy over?" He tossed the subpoena package to the lawyer. "It's pretty clear, so I already got the stuff they want comin' up, but how bout you check me on it?"

"Um, sir..." Creasing peered nervously at the federal cops. "Isn't this something that Mr. Campbell should be taking care of. He's... somewhat senior to me," he explained.

"Nah. Campbell sorta got himself involuntarily resigned. But I got faith in you. This is the stuff we had the meetin' about the other day."

Creasing closed his eyes and winced as he recalled the conference. "Sir, are you sure?"

"Oh, yeah." Neville said happily, and switched his attention back to Parsons, who obviously realized that he was missing something important. "You'll prob'ly be pleased t' hear that you'll have every single database entry you're askin' for. That'll include graphics'a all the hardcopy stuff we've scanned into the computers." He offered the IRS man an innocent smile. " 'Course, I'm afraid you'll hafta settle for some extra stuff going up t' March third. Will that be a problem?" he asked with mock concern.

The federal agent was far out of his depth, being unaccustomed to cheerfully cooperative victims. Searching for something with which to restore his grip on the situation, he jumped on the graphics Neville mentioned. "Scans? Just electronic copies of the documents?" he demanded. "Not acceptable. We require the paper originals." Let's see how happy he is about that.

"Bummer. Ain't gonna happen." Neville decided to explain, watching both the fed and his own lawyer. The latter man still looked worried, but Neville thought he saw the start of a smile. "Seein' as Launcher doesn't have a trillion dollar budget, or Carlsbad caverns for archives, we don't bother savin' hard copies. We just scan stuff, back it up t' hell 'n gone, and recycle the paper. We're very environmentally conscious around here," he finished with a beatific expression. "But you'll get copies'a

everything. Stuff oughta be here in fifteen, mebbe twenny minutes." Creasing was definitely beginning to grin. Neville decided that canning Campbell was probably a better idea than he'd first realized.

Parsons was confused. "You're assembling everything listed in the subpoena in twenty minutes?" he asked in disbelief.

"Oh, heck no. Since the shootout at the IRS Corral," Parsons flinched, and even the marshals grinned this time - the teams must have been strictly IRS, "it's been kinda obvious that you'd show up with a real court order eventually. Bein' cooperative types," wide-eyed innocent expression again, "we thought we'd go ahead and get everything ready for you."

Right about the time that Parsons was getting distinctly worried about cooperative suspects, there was another knock at Neville's door.

"Come on in!" Neville called out.

Tom Zelaski open the door and stood aside to allow two more men access to the company boss's office. "IT's here," he explained.

"Cool. Here's your material," Neville informed the agent as two ecstatic men wheeled in fully loaded hand trucks. Boxes of floppy diskettes. Five and a quarter inch floppies.

"What the hell is this?" a totally baffled revenueur demanded. Floppies?

"Your files, a'course," Neville quipped. "Kinda common knowledge that the IRS has had a bit'a trouble upgradin' your system t' modern standards, so we figured it'd help if we used media you're more familiar with."

Creasing was chuckling outright by now. One marshal's face was red and he seemed to be shaking slightly, while suspicious noises were squeaking past his partner's tightly sealed lips. Parsons simply stared. "Floppies?"

"Well," Neville allowed, "we thought the eight-inchers might be better for you, but Leroy said he couldn't find enough of those. For that matter, we hadda compress the files justa get 'em t' fit ont'a these. Things're gettin' hard to find anymore." He winked at Leroy and his compadre. "Good work, guys." Even utilizing their Internet assets, it had taken weeks to acquire enough of the old, obsolete diskettes for the project.

"These are my files?" Parsons wondered again. Floppies?

"Sure 'nough. And seein' as it's gettin' on towards quittin' time, you might wanna get 'em outa here pretty quick before we lock up." He gestured towards the waiting boxes.

At a loss for any other words, Parsons instructed his now-giggling henchmen to take possession of the hand trucks and disks.

"Whoa! Wait a minute there, buddy," Neville cautioned, to the delight of his amused employees. "You only subpoenaed the disks, not our moving equipment."

Exasperated, the IRS man muttered something inaudible. "All right then," he said to the marshals, "Get the damned boxes off and let them have their precious dollies."

Creasing giggled, then pointed out, "Um, actually those are our boxes, too. Unless you listed them in the subpoena; can't recall seeing them, though."

Definitely the man for the job, Neville thought.

"Jesus Fuc..." Parsons chopped off the words.

"Nah," Neville put in, having a little mercy on the marshals, whose sense of humor appeared seriously tested by the prospect of hauling a few thousand loose floppies by hand, "I guess we could let 'em have the boxes. As a show of cooperation," he added unctuously.

Cooperative suspects were bad enough. Laughing victims were something the IRS Thug's Handbook hadn't covered. Parsons gathered what remaining aplomb he could salvage and hustled his marshals along in their work. Presently, Neville was left alone with three chortling co-conspirators.

"So, Leroy," Creasing asked the Information Technology chief, "any guesses about how long it'll take them t' read those floppies?"

"No telling. First they'll need to get the drives." Leroy stopped to think. "Of course, it really is a very real possibility that they have plenty of five and a quarter drives." His smile widened. "About then, I suspect they'll notice that none of those disks are numbered. But their zip utility'll help them sort that out. Eventually." More laughter all around. "Once they get everything unzipped, they should realize that the files are encrypted." Another pause to consider something. "Or they might waste more time unzipping again, thinking the files are corrupted. They don't seem to be especially bright."

"Oh, yeah," Neville said, once reminded of the encryption aspect of this charade. "You have that crypto key with you? Eventually, they're bound t' think of gettin' an order for that. Might as well have it ready."

Leroy slipped a large folded envelope from a rear pocket. "Here you go. Two hundred kilobit ASCII, printed out in 6 point Stacatto font, bold face and italic, guaranteed OCR unreadable and to induce terminal eyestrain in the first ten people trying to enter it manually."

Neville was pleased in the extreme. "Well, they'll get the data, not that it's gonna do 'em any good, but they won't enjoy it."

"Welllll.... Maybe." Leroy and his partner were still grinning. "You didn't actually mention it, but we sort of thought that 'financial data' meant just that - data."

"Yeah?" Neville harbored a sneaking suspicion that he was going to like Leroy's show of initiative.

"So file and record headers only divide the data, they aren't part of the data."

Creasing laughed again. "I think I'm going to like this."

"Yep. They've got about twelve hundred megabytes of contiguous, undifferentiated, comma-delineated ASCII data and unidentified graphics. No headers, no field names, no cell formulae. They'll get it sorted out one of these days."

Neville peered at the man very carefully. Then he turned to the attorney. "Lon, would you please make a note t' be sure that I never let this man depart the company unhappy?"

Chapter 16

Year Two, March 10th

Another one bites the dust.

- Queen

At the knocking on his office door, Neville started and looked up. Amber Lennox, head of the orbiter communications team, was standing in the doorway. "Hi, Amber. How'dja slip by Tom?"

Mild guilt flickered over the middle-aged woman's face. "I'm sorry, Bill; is this a bad time?"

"Nah, no more than ever these days. I just wondered if Tom had finally decided t' take his semi-annual lunch break. Dedication's all well 'n good, but that boy's too skinny t' keep skipping meals."

"He must be eating then; he wasn't out at his desk. I wasn't sure if you'd be in either."

"Well good, he needs the break. But he's probably actually runnin' down more details. Dunno what I'd do without 'im." The corner of Neville's mouth twitched and there was a twinkle in his eyes; his mood had improved immensely after sending the IRS on their way the previous day with a truckload of obsolete floppies. "Anyway, you ain't another fed, so what can I do for you?"

Amber grinned hugely, displaying gapped teeth which were the only feature that kept her from being downright handsome, graying hair notwithstanding, and replied, "This time, it's what I can do for you." She paused, and opened the notebook computer she carried. "Slideshow time. You'll love this. We've worked out the comm and telemetry issue."

Neville smiled, and watched his comm manager appraisingly. "Somethin' off the 'Net, again?" he asked.

"Natch." Amber punched keys on the computer, then turned it so Neville could see the screen. She kept her finger on the spacebar. "We planned to settle for zero telemetry or comm with Alekseyev, 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?"

Amber grinned, hit the spacebar and said, "This." The image showed lines indicating LOS to points from around Earth to every portion of the orbit.

Neville grimaced and replied, "Yep, telemetry and trackin' stations around world would be nice. But there's no way the feds are gonna lease us time on their system. Buggers're doin' their level best t' keep us grounded in the first place."

"Don't need 'em," Amber asserted. "We got the International Amateur Radio Cooperative. 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." Spacebar. A new graphic showed three points on a stylized map- an orbital path superimposed. "We arranged with the guys on IARC.org.tv to have monitors along the entire path. We'll be in sight of at least three stations at all times, and usually nine to twelve."

"Crude, but workable, I s'pose," Neville commented.

"Crude, my skinny rear end," the comm chief retorted. "With as few as three stations triangulating on the orbiter signal we can get full positioning data- kind of like GPS in reverse. And the more stations working it, the more precise the fix. 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 shifts and phase comparisons..." She saw her boss's eyes glazing over. Money and business he knew damned well, but anything technical beyond ballistics left him baffled. "Anyway, we play some tricks with the 'plane's signal to extract some pretty precise data. And the radio club has been running an international wireless WAN over their sets for a good while now, so we can get all the data sent in to us here, in real time."

"Really? I had the impression that wireless computer networkin' was pretty well limited to short range stuff like office buildin's an' college campuses."

"Nah. It's mostly a factor of bandwidth; the faster your data pipe, the higher a frequency you generally need. And the higher your frequency, the shorter your range. But amateurs have been doing slow scan and fast scan amateur TV transmissions for next to forever. If your radio has the bandwidth to handle FSTV, it's more than adequate for even most web surfing. Some of these guys are running Internet servers from boats, using their WAN, since it's tied to the Internet. But the point is," she finished, "that it's more than fast enough for our needs."

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

"About two hundred grand in equipment, and a few grand a month to the radio club."

Neville was taken aback. "You're kiddin'. NASA pays millions for their tracking network."

Amber's grin widened. "Told you you'd like it. What can I say? You of all people should know that NASA was never really interested in efficient ways of doing things."

Neville looked at the computer screen, which currently showed a schematic of the radio network interconnections. He frowned. "Is privacy or jammin' going to be a problem with this?" He managed to present a sheepishly cautious face. "Given the hassles we're gettin', I wouldn't rule out someone 'accidentally' messin' with our trackin' system."

"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?"

"Ol' military term- Meant jamming, among other nasty sorts of interference.."

"And privacy? Encryption along the lines of somethin' like that ol' PGPfone thing, I assume?"

"Encryption, yes. A virtual private network, even. But not public key like PGP. It has its place obviously, but theoretically can be cracked give enough samples to analyze, and a few years to play around. 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 number 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." Amber smirked, and added, "Funny thing, the algorithm bears a striking resemblance to that scheme run on the IRS last month."

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

"Hand delivered to everyone involved."

Neville laughed. "Sounds like the airline tickets might be the most expensive part-a all this." He glanced at an onscreen message which he had been reviewing when Amber arrived. "Kinda too bad for NASA that they suffer from that not-invented-here syndrome. Internet's prob'ly the best thing t' ever happen t' this company."

"Lordy, Mr. Bill, the way I hear it, the company got started over an idea on the 'Net. Why stop now?"

"No damn reason at all," Neville agreed. "You're the second one comin' in today with fixes from the 'Net."

Amber was incurably curious. Neville figured she'd been a cat in a previous life or nine. "Really? What else have we got? Something up my alley?"

"Nope, this 'uns from Hank, about launchin' the 'plane offa the back of the booster. You been followin' the discussion boards on aerodynamic design?"

"Not really. It's a bit out of my line. But I have heard that there has been an endless series of problems with turbulence or something like that."

"Yeah, that's the one, best I understand it myself." Neville decided to gloat on Hank Hanners' behalf, that worthy being absent. "Hank's guys've been workin' wonders with computer modelin', an' even more since the launcher got t' the point that they could use it as a test bed; sorta a full-size wind tunnel in reverse."

"Uh huh, I heard about that, too." She smiled. "It reminded me of one thing NASA almost did right, when they flew that original shuttle mockup off the back of the 747."

Neville laughed. "Yeah, that one put the silly trekkies in their place. Wasted their pet 'Enterprise' name on an engineless, hollow shell." He shrugged. "Come t' think of it, that was prob'ly better than shaming the name by hanging it on one'a those STS kludges at that." Amber laughed, too. "But the subject at hand is our baby. Seems Hank's been tryin' t' get his spaceplane mockup to detach smoothly from the launcher at high Mach numbers..."

"Hey!" the woman interrupted, "Whatever happened to that land speed record we were supposed to get? Mach 1.8, right?"

"Got disallowed. The Committee says we gotta use wheels, or it's a plane."

"So is there any sort of air speed record we can apply for?" she asked mischievously.

"Nah. We tried that, too, an' they just kinda looked at pictures of the launcher, scratched their heads, and said they didn't know what the fuck t' make'uv it. Pardon my French," he amended.

"Bummer," Amber said lightly. "But since you brought it up, I assume Hank found a solution to his problem?"

"Yep, 'bout like you musta. He put the problem up on the board for discussion, an' it wasn't but a day or so before he got an anonymous reply makin' some suggestions and sendin' some data purportin' t' be from the ol' SR-71 program." He added parenthetically, "Seems some models'a the Blackbird could launch a remote operated drone, and they apparently had summa the same detach problems we were gettin'. Whoever it was didn't actually say so, but he strongly suggested that he might've been employed at the Skunk Works at some time or other."

"I'll be damned. That took some guts; that stuff is still supposed to be classified to hell and gone." Amber looked impressed. "And this guy's data checked out, huh?"

"Must have," Neville confirmed. "I just gotta request from Hank to bring in an independent contractor who insists on goin' by the moniker 'Pepe LePew.' " He grinned hopefully, waiting to see if she'd get it.

Definitely. "Pepe Le..." She cracked up laughing. "Well, who else would hang around the Skunk Works?"

Chapter 17

Year Two, March 13th

They're handing out rules like a prophecy chiseled in stone.

- Kim Wilde

"Hey, Abdul!" Hank called out as he entered the junior engineer's work area. Life with Launcher had been good for him. With something more interesting than dinner to finally keep him occupied, he'd shed quite a few pounds since that first odd interview with Bill Neville. He felt better too, and that was reflected in the exuberance that was rapidly becoming his trademark among the engineering staff.

Abdul had jerked in response to his boss's unexpected cry. "Christ, Hank," he complained while deleting some random junk he'd accidentally entered on his computer screen. "Have you ever heard of a quaint little custom called knocking?" He glared at the screen, then spun his chair to face Hank. "What's up?"

Hank perched on the corner of Abdul's desk and tried to sneak a peek at his monitor. "I thought I'd ask you that. You checking out today's collection of weirdness on the discussion board?" Hank had the theory that since Abdul had done so well finding the new GEM concept which formed the basis of the launch vehicle now undergoing testing, he was just the one to keep an eye on the discussion boards for more useful tidbits. Abdul occasionally regretted not having deleted the schoolkid's sim on sight.

"Weird's definitely the word." He closed his eyes and sighed. "I'm looking at a thread on microshuttle design now. If it weren't for the PR angle, and the extremely slim chance of something useful cropping up, I'd delete the whole damned thing and put me out of my misery."

"Don't off yourself; Neville and HR might not authorize a replacement for you." He grinned. "Besides, it can't be all that bad. What's the deal?" He shifted his still slightly prominent fundament into a more comfortable position.

"Would you believe I've got a set of idiots..." Abdul stopped and peered into his coffee mug. The logo read Hekimian, which struck Hank as an odd thing, Abdul being an aeronautical engineer. Just another mystery, to match the name. "No," Abdul decided. "This is more than I can take with no coffee." He stood and crossed the tiny room to a coffee maker, decanter empty. "Shit." Back to Hank. "You want some coffee?"

"Sure."

"Okay, I'm going to go get some more water. You might want to take a look at my screen; I've got the hell thread up now. You'll see what I mean." He grabbed the pot and headed for the door.

Hank watched the younger man disappear down the hallway at a fair clip. "Maybe we better put that boy on decaf." He moved around the desk and planted his butt in Abdul's chair. The computer screen had blanked, so he tried tapping the spacebar. Sure enough, the display came back to life. He read

...Yes, I understand the reasons for wanting to start with a simple winged cylinder design. It's quick and dirty, doesn't need the elaborate planning that a decent lifting body requires. It's comparatively cheap.

But it's false economy. Since Launcher is on a tight budget, flight costs matter. A lifting body will be cheaper, more efficient to operate. It's well worth starting a redesign effort now, before it's too late, with too much money down the drain. Launcher should...

The missive went on to explain that every concept Launcher had adopted was flawed and desperately needed reworking. Hank frowned. "What the fuck...?" He scrolled back up to the message header. It was time-stamped that very morning.

"From the obscenity, I'd guess that your feelings match mine." Abdul was back with water for more coffee already. He poured it into the white plastic appliance.

"I don't get it. Are people still debating the spaceplane design? Now?" Design was all but complete, with speed run tests being run with a full scale mockup to verify that the computer models transferred to reality. Since things looked so good at this point, Neville had even authorized that airframe construction begin. "It's a little late to completely change the thing now, unless it flat don't work."

"Hank, you don't know the half of it." Abdul measured scoops of coffee into the filter basket as he replied. Large scoops. Hank decided to switch him to weak decaf. "Around the time we started getting nastygrams from NASA about their commercial non-access program, the forums have been getting bogged down with idiots questioning the cost-effectiveness and feasibility of every phase of our work." He slid the basket into place and flipped the switch. The pot began gurgling immediately. They call the partial pressure suits unsafe because they don't have kevlar armor. They claim P-P suits need constant volume joints for mobility for god's sake." He slipped into a visitor's chair, leaving Hank behind his own desk.

"Constant volume....?" Hank looked suspiciously at Abdul. "Are you pulling my leg? CV joints in a partial pressure suit? Don't they even know what they are?"

"Damned if I can tell for sure. I think some of the guys are simply ignorant, and can't be bothered to read FAQs or do other research. But some..."

Hank waited, then finally prompted the man. "But some what?"

"Well, it's like that message you must have read, the one I left onscreen about switching to lifting bodies." He gestured at the computer. "That guy and a handful of others don't seem to be stupid, quite. They understand what we're doing, it seems, but anything is an excuse for a complete retrenchment and redesign. We don't have sufficient redundancy. We need to build a dozen launchers to test the effectiveness of F1As versus F1Bs versus a hybrid design using both conventional turbine jets and scramjets..."

"Scramjets?" Hank cut in. "We top out at Mach 2; why the hell would we want to try using scramjets?" The devices in question were meant for a speed regime entirely alien to that in which the launcher would operate. Maybe if it were hypersonic.

"Oh, did I leave that out?" was Abdul's sarcastic rejoinder. "Why, Mach 2 is much too low a velocity to do any good. We need to accelerate the 'plane to a minimum of Mach 10 before any single stage system can go from ground level to orbit."

"By definition, we aren't using a single stage system, and I've already seen the results from the aerospike tests. With our drop tanks, we have more than enough energy, starting from Mach 1.2 to make orbit quite safely with a maxed out payload. Can't these dopes do math?"

"Nope, and funny you mention the aerospike. That cadre of NASA-esque naysayers are also criticizing our choice of an 'unproven technology'..."

"Shit! Even NASA played with the things. And we've tested it!"

"Needs at least ten more years of development," Abdul countered with mock concern. "See what I mean? This is the kind of crap I'm seeing now." He snorted sadly. "Want to know what they decided we oughta replace the aerospike with?"

Hank rested his head on Abdul's monitor. "Probably not, but say it anyway."

"A 'conventional' rocket motor with a computerized variable-geometry venturi..."

"A variable-geom...! And they call an aerospike motor unproven?"

"...and SRBs to compensate for the lost efficiency with the goldbergian venturi," Abdul concluded.

"Ack! Solid rocket boosters? Don't have much faith in their own fucking variable venturi, do they?"

"Well, to be fair, the SRBs are also to raise the 'plane's payload limit."

Hank muttered something very low and mostly incoherent. The few intelligible bits made Abdul glad he could make it all out. "Okay, why do we need to raise the payload limit?"

"So the 'plane can haul enough mass to LEO to meet NASA's requirements." Abdul prepared to duck.

Hank exerted sufficient control to render dodging unnecessary. It was an obvious strain. "We are building a modified spaceplane. While not a true SSTO, with the launcher stage giving us a head start, we haven't dodged all of the general mass limits of a spaceplane. If we keep piling on more fucking boosters to pretend that those limits don't apply, we end up with a goddamned ballistic white elephant like the STS. If we increase payload and thrust stress, we have to beef up the plane's structure. That increases the mass of the craft. That mass complicates reentry, causing us to add cooling systems and heat shields. Those also add to overall mass themselves. We eventually have, not an efficient spaceplane which carries a small payload but does it cheaply many-many times with faster turn-around than NASA's flying fiasco, but instead that very piece of crap, which can loft a comparatively large payload by utilizing high thrust and millions of tax dollars.

"The hell with them."

Abdul stood and began clapping. "Encore, encore!"

"Smart ass," Hank griped. "Look, what else have you been getting? What's your feel of the situation?"

"You really want to know?"

"I did ask."

Abdul looked to the coffee pot. "Well, if you have time for a pot or two, I'll give you my take on it. You won't like it."

"The coffee or the news?" Hank grinned.

"Both." Abdul's heavy hand with a coffee scoop was infamous. Folks familiar with the strong, not to say viscous - or was that vicious? - coffee of the Mid-East claimed this as proof positive that the man's given name was legitimate, but the surname an obvious alias. On the other hand, Hank recalled a caffeine-addicted ex-cop he once knew and reserved judgment.

Hank spent the better part of the rest of the day with Abdul and forum issues.

FROM: R&D_Boss@the_launcher.co.us

TO: ALL

SUBJECT: The Designs Are Finalized

It has been brought to my attention that certain parties have misunderstood the purpose of this engineering discussion forum. Please allow me to correct that misapprehension.

Launcher Company is well aware of the expertise represented on the Internet. But due to physical, temporal, and financial limitations (which government agencies often pretend don't exist), it is impossible for us to hire everyone with a 'Net connection. Therefore, we have created this forum as a way for people with occasional excellent ideas to share those ideas with us in return for some financial consideration. We believe we have been fair about this, and until recently, continuing practical participation seemed to indicate that, in general, you felt the same way.

Unfortunately, the signal to noise level has degraded severely of late. Most of this noise has been in the form of pointless criticisms of moot points, calls for unnecessary expenditures of investors' money, and complaints that we aren't 'doing it' like NASA. Much of this traffic originates with a very few people who seem intent upon blunting this tool which Launcher has found so helpful, and which contributors have found financially rewarding.

So let's try a few basic facts.

1. The GEM launcher does not need to be redesigned. It is already complete. It is in the final phase of extensive testing, all of which it passed with flying colors so far.

2. The shuttle is a spaceplane. That is what we want it to be. We are already aware of the payload mass limitations of a spaceplane and find them acceptable. We are in the process of tweaking

some minor aspects of the design, but are sufficiently pleased with the results thus far that we have already begun bending metal.

3. The spaceplane will use an aerospike motor. It has been tested. It is not experimental. It does provide the thrust we require for our spaceplane, and is compatible with the mass limits we have designed for. It works, we aren't dumping it for an experimental design and SRBs.

4. We will not redesign to use more energetic cryogenic fuels and oxidizers. Safety issues and the practicalities of handling would not give us the short turn-around time we demand of a profit-making commercial system, and the tank insulation would cut into payload allowances.

Summary: We are near completion of a launch system. So far, every component tested works as desired. It is affordable. Payload for any one mission is a small fraction of that of an STS, but at a cost per kilogram so low that taxpayers may well demand that NASA planners be shot for a degree of mismanagement bordering on treasonous.

The launcher is a Ground Effect Machine, but not a hovercraft. Stop telling us that a supersonic hovercraft won't work.

The launcher will accelerate to approximately Mach 1.4, carrying the spaceplane on a set of launch rails already built (so it's a little late to change the 'plane configuration), at which point the 'plane will fire its own aerospike engine. At @Mach 1.5, an explosive bolt blows and the plane accelerates away from the launcher (yes, this has already been tested with a full-scale mockup propelled by a solid rocket motor with the same sea level thrust as the aerospike- stop telling us it won't work).

The plane will accelerate and climb in altitude, with an on-board computer adjusting the aerospike exhaust plume for maximum efficiency for the varying altitudes (yes, we calibrated this in the real world by strapping the damned thing to a 747 and doing it, and we trust our sims for altitudes beyond the reach of that aircraft- we don't want to hear it anymore). The plane will make orbit. And the drop tanks detached along the way don't crash on heavily populated neighborhoods as one apparent NASA shill claimed. We planned our flight profiles better than that.

Back on earth, the launcher shuts down its motor (a fairly conventional device drinking the same hydrogen peroxide/JP5 mix as the spaceplane- it's built, live with it) and begins slowing. Since it derives its lift from an enhanced impact lift driven by forward velocity, its 'air cushion' doesn't fail because the motor stops. We really don't want to hear that anymore either. When the launcher drops to subsonic speeds, it deploys a streamer for additional deceleration, and finally a 'chute. The vehicle is retrieved and turned around within hours. The launcher can be used more than once per day. Eat our dust, NASA.

Now, up where it counts, the spaceplane does its business which is delivering cargo, deploying satellites, whatever. When it's done up there, and pilot has resigned himself to having to come back to this mudball, it performs a conventional deorbit burn. Normal enough. But since we've ignored the idiots who thought we should overbuild the beast to NASA 'specs', reentry is a little different. Not being a ceramic-tiled lead brick, our plane does not simply punch through the upper atmosphere at dangerously high velocities guaranteed to melt most metals. That is, it isn't a NASA STS. Instead, we reenter more gradually. Excess heat is dealt with in two ways. First, the craft itself can act as a heatsink, balancing the heat load over enough of the craft so that dangerous hotspots don't develop (something that NASA knew from the X-15 program, but ignored in its unending quest for bigger budgets, the better to line someone's pockets). Second, overall heat is vented... as much of the fuselage is double-

skinned and contains water which is vented as steam, carrying off unwanted heat. Cheap and effective.

Once slowed enough, the spaceplane flies to its destination (for now, a landing strip very near the launch strip) hypersonically, slowing to supersonic and finally subsonic speeds. Since it is not an overweight beached whale like the STS, its mass on landing does not blow out tires and overstress the entire frame. The craft finally comes to a stop with the aid of its own 'chute.

On the ground turn-around consists of an inspection quite similar to that undergone by an airliner after a transatlantic flight. Worn items are replaced. A new payload is strapped in, it's mated to the launcher, the thermal mass water tanks are topped off, and the vehicles are refueled. It can be ready to go in less than 24 hours after landing. Try asking NASA why they need a major rebuild taking weeks or months after every flight.

Now that you all know what we are doing, there is no more reason for annoying and time-wasting BS. We will continue the forum for the benefit of those who simply wish to enjoying discussing the topic, but we will no longer monitor it. If you do think you've thought of something useful (and remember, this configuration is first generation and we expect to go on to better things), please send such input directly to ideas_for_cash@the_launcher.co.us and we'll evaluate it and get back to you.

For the flamebaiters... You may have noticed that your messages have been bouncing today. Please be advised that we have set our servers to bounce anything from certain domains. We found it helpful to block all .gov and .mil domains. Shortly, we'll deny all connection requests from those folks, but thought it was only fair to let them have a chance to read this.

Wrap-up: Thanks to all those who have been going out of their way to help us open space up for everyone. And the folks who think space can or should be restricted to gov-approved prima donnas can go piss up a rope, as my boss says.

Sincerely,
Henry Hanners
Chief Engineer, Launcher Company

Neville nodded quietly, then looked up from his screen to Hank, who had a defiant expression plastered over his face. He had spent the previous evening drafting the message after his chat with Abdul. But for once, he had decided to let someone else second guess his less than tactful approach to the problem. "Sounds good t' me. Go ahead 'n post it." Neville's lips were compressed in a tight line. "But don't expect much. The timin' sucks..." Hank started to say something. "No, Hank, not your timin'. The crap on the forum. Officially condoned'r not, it's plain that NASA management has made it clear t' its people that we're the bad guys."

"To them, we are," Hank stated. "We spell the end of their comfy little monopoly and cushy guaranteed jobs."

"And don't you forget it. They won't. NASA and the IRS were only the beginning. FAA is already hassling us over flight certification for the spaceplane mockup..."

"You've got to be kidding." Hank exclaimed incredulously.

"Nope."

"Shit. A mockup?"

"You got it. And OSHA is filin' a suit against us too."

"Shit again. Do I want to know for what?"

"For exposin' our welders to the risk of repetitive stress injury." He shook his head in sheer disgust. "Seems it occurred t' some moron that weldin' seams requires similar actions, hence the RSI claim." Then he grinned. "But the best part is that the fools're... Well, whoever dreamed this up is real hazy on RSI and its causes and cures. They're tellin' us t' supply all welders with wrist pads and braces. And ergonomic chairs."

Hank stared blankly. "Um... What? I don't get..."

"Uh huh. Typin' tools. Frickin' dipsticks."

Chapter 18

Year Two, May 6th

Kiss this!
- Aaron Tippin

"Ladies and gentlemen," Grandjean announced to his Operations staff, this shall be a... full dress rehearsal." He paced back and forth at the front of the room, heels clicking on the tiled floor, silhouetted against widescreen CRTs displaying launcher and 'spaceplane' status. As the mockup plane was mounted atop the launch vehicle, the latter numbers were mostly simulated. Airspace reports, and assorted launch strip views occupied other monitors. "Other than the fact that the spaceplane shall not execute an engine burn for orbit, we will treat this as a regular run. Although this run is intended for our friends in Engineering to complete their control software calibration, it should provide us with an excellent training opportunity."

The controllers sat quietly, patiently awaiting their own turns in this procedure. Theirs was a poor man's version of Mission Control, although lacking in style and élan only when compared to the NASA facility. On the intersecting walls of a front left corner, video projectors provided mercator maps of the Earth, where orbital paths of Launcher birds would someday be displayed. Soon, if the current breakneck rate of progress was a proper indicator. Arrayed before the projectors like chevrons, were two angled consoles. Each held three computer operator positions. To the right, in the other corner, was the supervisor's desk with its own computer and multiline phone. It was partitioned from the main area by floor to ceiling glass walls. A row of equipment racks mounted against the wall to the rear of the chamber held printers, two LAN servers, and the communications interface gear for the ops personnel. The back wall was occupied by a glassed visitors' gallery, currently inhabited by company bigwigs.

Cal Schmidt let Grandjean's words make a minimal impact on his consciousness. He already knew the purpose of the run. Wind tunnel tests and computers sims were fine for 'boresighting' the computerized routines that would control the collage of winglets, canards, spoilers, and air dams that stabilized and directed the supersonic craft at ground level. But when it came to 'zeroing in' the precise settings, nothing modeled reality better than reality. So the engineers were sending the launcher downrange multiple times this beautiful spring day, with the spaceplane mockup installed for complete realism. Each run would be made at an incrementally greater velocity, while the computer made trial and error estimates at controlling the vehicle stability until it arrived at optimal numbers for any given speed. Now it was time for the final run of the day, with an actual plane detach as icing on the engineers' cake. They had already run detach tests, but this one would be at the launcher's nominal top speed of Mach 2.1. Cal loved the boom of the launcher going supersonic. He wished his view wasn't filtered through a closed circuit TV monitor.

While Grandjean continued his pep talk, meant at least as much for the visitors to Ops - Neville, his partners Peters and Vasquez, and assorted engineers - as for the Ops personnel themselves, Cal started his checklists. On this run, he was the range safety officer, responsible for verifying weather conditions, and keeping a lookout for obstructions, both downrange on the strip and in the air. It gave him an excuse to keep a visual of the launch vehicle up on one of his console monitors. He thought the craft was one of the most beautiful things he'd ever seen, short of Micky.

If the sun had been just a little lower in the west, the glare on the vehicle would have washed

out the picture. It was the bright silvery color of polished aluminum and titanium. Cal knew the original design had been for a more... conventional wasn't quite the word ...rocket propelled hovercraft, but this was something else. It was long and sleek, reminiscent of an old F-104 Starfighter on steroids. Cal had built a model of the plane as a kid, and guessed that one of the engineers had done the same. But where the venerable Starfighter might have been equipped with wingtip tanks, the launcher had complex winglets, each of which had its own spoiler and air dam. Likewise, the sharp nose of the ground effect machine was rendered shovel-like with another air dam and canards. But rather than appearing clumsy, Cal thought it only underscored the vessel's aerodynamics. He'd always been a sucker for effective design. The creature looked as if it were already breaking Mach just standing still. Beautiful.

But the supersonic interceptor had never had anything like the spaceplane piggybacked atop it. Without the plethora of control surfaces found on its booster, the plane might have been less impressive in appearance. But it wasn't, it too was absolutely gorgeous, especially to anyone who'd fallen asleep dreaming of space travel. In theory, the plane was a basic winged cylinder configuration, just as NASA's own STS shuttles. But where the STS is fat and ungainly, with a minimum of streamlining, Launcher's spaceplane was quite long relative to its width and streamlined like the Concorde. It had gracefully swept delta wings and inwardly canted twin vertical rudders like the old SR-71 spy plane. Cal had heard a rumor that made him wonder about the similarity. Unlike the Blackbird, the spaceplane had a single motor mounted on its centerline in the fuselage. To someone who had grown up seeing rockets with conventional exhaust nozzles, it looked odd. Cal thumbed a joystick and zoomed in on the motor. He had a decent layman's understanding of the theory, but seeing was believing.

The motor was an aerospike rocket. In this case, a stubby ceramic cone with circular arrays of tiny combustion chambers arranged concentrically. By varying the fuel flow, and thus the power of each ring, the computer controlling the motor could use the exhaust plume to simulate its own venturi, with the virtual geometry of the plume continuously variable to peak the motor's efficiency at any given altitude. It was one of the features that made the boost from sea level to orbit with a single stage (not quite counting the launcher 'catapult') possible. Of course, the one Cal was inspecting just now was a simple nonoperational ceramic casting.

Another such feature that made the 'plane work was hard to see unless you knew what to look for- the drop tanks. Hardly anything new, of course. But these were fitted a little more closely than the conformal external stores on an F-15, and much more so than the external tank for an STS. Once mounted, you'd have trouble sliding a credit card into the seam between tank and spaceplane hull. Nor did the drop tanks separate in the usual fashion of exploding bolts and air drag tumbling the things away. On these, solenoid 'bolts' held the tanks in place. Once they ran dry, the flight computer would retract the bolt and the tanks would slide to the rear of the craft on special rails. No turbulent tumble to risk damaging tank or craft. Released, the tanks would be slowed with ribbon chutes, then lowered to earth on their own canopies. The tanks were cheap enough to be considered expendable, but sufficiently durable for re-use. To that end, every drop tank was engraved with the promise of a monetary reward for its return. Hank Hanners had a bet with William Neville about how many tanks would be recovered and returned. He claimed the things would be collectors' items for a while. He'd argued for serial numbering the tanks just for the collectors' benefit. Since maintenance records demanded a means of tracking individual tanks as well, his argument carried the day.

Together, launcher and plane truly looked the part of a spacecraft. On esthetics alone, NASA should be ashamed. And judging on the improvement in efficiency that Launcher's system represented, NASA's management should be drawn and quartered.

"Clear downrange?" Grandjean's question jerked Cal back to the local reality. He quickly checked status.

"All clear. Sky's empty, and nothing on the ground but some prairie dogs who'll soon regret it." Damned things seemed to breed new pups in between launches. Cal remembered some damnfool Washington bureaucrat wanting the rodents declared an endangered species when he was a kid, and half succeeding in Colorado. Ranchers and farmers only wished the damned things were extinct.

"Very well," Grandjean acknowledged. He shifted his attention to another controller. "Launcher?"

"Stand by," another controller directed. He muttered as he ran down a checklist. "Propellant... oxidizer... electrical... electronics... avionics... all onboard controls..." He looked up. "Launcher is ready."

"Excellent. Spaceplane?" After a similar set of checks - mostly simulated, as the mockup lacked real motor, or most control systems - another clear was issued. The operations supervisor worked his way around all the primary controllers with no problems reported.

"Very good. Launch control, please initiate autostart."

"Done," someone replied. In the background, another person was on a PA system directing all ground personnel to clear the launch area. Cal verified on his displays that the injunction had been obeyed, although he figured anyone dumb enough to ignore the warning deserved what he got.

A numeric display at the front of the room started counting down from thirty. At the rear of the control center, in a glass enclosed booth, Neville and Hank Hanners observed the operation. Audio feeds let them listen in to each controller as well as Grandjean's little speech. This was the last of half a dozen test runs, and the pair had been present for all, as evidenced by the donut box populated only by crumbs and a half-gnawed bearclaw, a grease-stained pizza box, and several crumpled foam coffee cups scattered amidst spilled creamer and sugar packets.

Hank added another dead plastic cup to the pile. "You notice that no one has even commented on the biggest success today?"

"Which one's that?" Neville asked idly, eyes on the clock. Fifteen seconds.

"Well, we've put the launcher through the equivalent of five straight orbital launches..." He stopped when the clock hit zero.

A controller's shouted, "Fire in the hole!" echoed from the observatory's surround sound system; Grandjean had insisted on this little touch of luxury, anticipating media and other non-company guests eventually.

The partners directed their undivided attention to the large screens as a low rumble built around them, only partially conveyed by the elaborate speakers. It climbed to a thundering roar. One large projection showed the launcher/plane assembly, solid flame and black smoke blasting from the rocket motor, begin rolling down the strip. It accelerated at a pace that still amazed Neville, even on this sixth run. Almost immediately, the craft lifted off the ground and levitated downrange. Its speed increased at

a greater rate. The view shifted constantly as cameras lining the strip fed their images of the launch into the control center. The GEM left a cloud of smoke and dust behind as it raced downrange.

The image onscreen seemed to quiver, and suddenly a vee of Texas dust exploded into the air as the launcher went supersonic and the Mach wavefront formed in its wake. An instant later, the sonic boom reached the ops center. Nearly everyone flinched as the monstrous thud caused the metallic structure to shudder. Neville saw that one controller's reaction to the manmade thunder was grin rather than cringe. Damn me if it wasn't that crazy kid Schmidt. Hell, booms were nothing new to that one.

The screen abruptly went black. Someone said, "Shit!" And the screen lit again, showing the launcher from yet another angle.

"What was that?" Neville asked Hank tersely.

"Everything else looks good, so I'd guess that the sonic boom just blew a camera away. No big deal. We'll just anchor the next one better." He made a mental note to add a camera check to the maintenance procedures.

At that moment, the spaceplane model suddenly separated from the booster. It lifted away smoothly and sailed into the sky. It was out of camera range in an instant.

"Looks like Pepe's turbulence fixes worked again," Neville commented.

"Yep."

The launcher motor throttled down, and the booster decelerated quickly. It shuddered again as it dropped back down through Mach one. If he looked close enough, Neville imagined he could see tiny wings and rudders twitching in response to automated commands. A ribbon streamer popped from the rear of the machine, and it slowed more quickly. When it reached the neighborhood of two hundred miles per hour, a hemispherical canopy deployed. The launcher touched ground on its wheels and rolled to a stop. Ground recovery vehicles rushed out to retrieve and turn around the craft.

"Correction," Hank said smugly. "Six successful consecutive launches with nothing more than standard pre- and post-flight inspections and refueling." He nodded happily. "NASA can kiss my ass. We might not carry as much mass on any one mission as an STS, but we can launch a hell of a lot more missions in the time it takes NASA to rebuild one of those monstrosities, and we're doing it cheaper. A lot cheaper." He leaned forward and keyed the mike that connected the visitors' booth with the controllers on the floor below. "Damned good job people. But has anyone kept an eye on my model airplane?"

Someone's voice came over the speaker. "Well... Things could be better, Mr. Hanners." The engineer tensed and the controller continued. "Flight profile was nominal. She's about twenty miles downrange. I say about 'cause that's just an average. Some of it's a little closer, some a little farther."

"Shit!" Hank was pissed, with no one to properly target yet. "What the hell happened?" he demanded of the controller.

"She went subsonic with a little shaking, but nothing unexpected. Then she popped her 'chute and the 'chute popped right back. Shredded and broke loose. Your bird hit the ground at about two

hundred miles per hour. Telemetry crapped almost instantly but we got enough to see her coming apart. Sorry about that, Mr. Hanners."

"Goddamn it!" Hank snatched his phone from his belt and started speed dialing his people on the recovery crew. Some poor slob was silly enough to answer on the first ring. The R&D boss started right in, polite chitchat out the window. "Yeah, I know she crashed. " Pause. "Yeah, Abdul, looks like the 'chute... Yes, I know it was your idea to stress test the 'chute with multiple missions... No, I doubt that we'll be taking the plane out of your pay." Pause. "Look, just recover everything you can. I'll send some brooms. Try to find that 'chute. I want to know why it failed." Pause. "Yes, you can go already." He flipped the phone shut and turned to Neville. "Well, shit."

"No shit," the bossman agreed. "Any guesses?" He didn't look happy, but nor did he seem too terribly out of sorts over the loss.

"You know what I know. The 'chute failed." Hank got formal. "I respectfully suggest that recovery chutes be used for no more than three missions before being permanently retired." He searched for his coffee mug, but all he had in the room was a styrofoam disposable. He'd been rushed when he left his office that morning. "Hell, maybe we can sell the used 'chutes as souvenirs." He drank weak coffee. The controllers obviously kept Leesa and Abdul clear of the precious elixir here.

"Well," Neville consoled, "that's why we run tests. Better to scrap-pile a mockup than a real bird. This way, we only threw away 'way too many kilobucks."

"You're taking it well," Hank noted. Better than me, he thought sourly.

The senior partner shrugged complacently. "Hey, we trashed a mockup. But we found a potentially lethal problem before it could kill anybody. Sounds good t' me. Ain't that the general idea 'a testin'?" Incongruously, Neville grinned. "At this point, what's the worst that can happen? The FAA gonna tell us 'toldja so?'"

"Oh hell, Bill. Please tell me we really did get the flight certification for that thing." The Feds had been obstinate about requiring certification on the toy spaceship, but Neville had said everything was a go for testing.

Neville laughed. "Hell, ain't like we were gonna really fly the thing somewhere. And we did apply per their demands. But they kept dragging their feet." He shrugged. "Reached the point where fines for going without was gonna cost us less than the delays. Straight cost analysis said to screw 'em."

"Yeah, but now we're gonna get fined and we lost the price of that dead bird."

Neville shook his head. "Nah. Yer lookin' at it wrong, son. We paid for testin' when we built that sucker. We got that. Beyond testing, the money was already written off. So this is no additional loss, really." He winked at Hank. "But you don't wanna go makin' a habit of trashin' the mockups we got left." He turned to the plate glass window and grabbed the mike that let him speak to the control room. "Let me say thanks, guys. Andre, you got a class act here. When ya'll wrap up here, how 'boutcha'll come down to The Grill for dinner and a few beers on me?"

The controllers cheered. Grandjean faced the booth and said, "On behalf of my people, you are quite welcome, and we accept your kind invitation."

At ground safety, Cal smiled. Hey, if the boss wants to spring for munchies and beer, that was cool with him. But he'd have to see how quickly he could escape unnoticed. He had another date with Micky tonight.

Damn, but that supersonic run was fantastic! Even if the landing did leave a little bit to be desired.

Chapter 19

Year Two, May 13th

If we make peaceful revolution impossible, we make violent revolution inevitable.
- John F. Kennedy

Life in Internal Revenue sucked. These days, he dreaded admitting to acquaintances which agency he worked for. Now, aside from the usual hostility - Why couldn't people understand the importance of maintaining cash flow so the government could provide necessary services? - he had to put up with the inevitable ridicule over the Launcher seizure fiasco. Even months after the fact. Heaven only knows what people would say if they discovered he was the very supervisor who had sent that idiot Watkins out in the first place. People have no sense of proportion. Ah, well; at least Launcher hadn't sued the shit out of Watkins and himself like that poor schmuck at the FAA. Terminated, and the labor board had already upheld the firing. As may be, it was time to begin the day.

He stalled for a few more moments by arranging and aligning every document on his desk with obsessive-compulsive precision. Then he shot a furtive glance towards the doorway. Sure that he was under no scrutiny, he snuck a silver flask from a desk drawer and poured a generous dollop of illicit beverage into his coffee. Flask safely stashed once more, he took a healthy swig of doubly fortified elixir. Well, at least it made it just a little easier to face the day. He lifted his first file of the day and began reading. As he did so, he pressed the power switch on his terminal and rapped the space bar to bring up the login screen. When he'd read the executive summary on the report, he started typing his ID and password into the computer. Not a touch typist, he watched the keyboard as he started the login. So it escaped him at first.

He glanced up at the screen, expecting to see the familiar introductory menu. It wasn't there. In fact, the screen was quite blank. He squinted, frowned, and hit the break key a few times.

And a crude graphic composed of alphanumeric characters scrolled up the screen, presenting him with a computer representation of a hand gesture that many a taxpayer had offered him over the years. The ASCII graphic was as crude as the sentiment expressed, but managed to get the point across. It stopped in the middle of the screen and began blinking. After several iterations, it blinked out, only to be replaced with the words 'Sayonara sucker'. The uncouth phrase reenacted the finger's disappearing act. The screen went black and nothing he did could get a proper login display. "What the... ?" Then he heard a growing swell of mutters and peculiar thumps from the outer office. Dread seized him as he rose hesitantly from his desk to investigate. He stopped at the door and surveyed the main room.

The neat columns and rows of desks were manned by an assortment of low-level 'crats who were behaving in a most unusual fashion. Some simply stared at their terminals with perplexed expressions. Others resignedly re-entered their logins over and over, quite uselessly. A few vented their frustration by hammering on the offending computer displays in a vain attempt to unstick recalcitrant electrons. But no one seemed to be accomplishing anything helpful in the slightest.

His temple began throbbing and he wondered if he should fear stroke or heart attack the most. He closed his eyes and sighed. This was probably going to be worse than the last big hack. He quietly turned and went back into his office. He closed the door very carefully, and returned to his desk where he dumped the contents of his mug onto a potted plant. He retrieved the silver flask and filled the

vessel to the brim with the straight stuff.

Word didn't hit the papers all at once. It crept out slowly, around the edges of officialdom. One of the first signs was a stream of GSA tagged limos arriving at the White House early one morning; but that could have been attributable to any sort of perceived emergency. Maybe the Palestinians and Israelis were punctuating their semiannual cease-fire with more than usual violence. Even the delegation from the Treasury department didn't trip too many alarms; although that was an indicator of domestic snafus rather than middle eastern.. But when the senior party members in both the House and Senate got together for closed sessions, again with Treasury whizzes, that raised mainstream media eyebrows.

By then, though, the word was out on the Internet. When a few hundred million Internet users (the current unsupported guesstimate by the FCC) want to pass along a secret, it gets passed. The peculiar mailing from the IRS several days later only confirmed the more interesting scenarios. The mailings sometimes made a certain kind of sense, asking various businesses and self-employed citizens to resubmit their last two quarterly filings. Some people even complied; but far more waited to see if the circulating tales were true. The recipients of the more numerous mailings of random gibberish, manifestly the product of a dyslexic, illiterate, stuttering dot matrix printer, just scratched their heads and grinned. That was confirmation enough for them.

The cause of this consternation and amusement? Washington was hinting at a 'minor' computer crash within the IRS. The story on the Internet varied dramatically on the details. Supposedly one of the tax agency's newly hired computer security experts was more of a mole than IRS enthusiast. He, she, or they had launched a worm that endlessly grew and reproduced itself, eating virtual resources and bogging down the revenue's systems. And almost incidentally randomized every database file it encountered. In effect, the Internal Revenue Service had lost every on-line record of taxpayers, taxes paid, taxes owed, and 'delinquent' accounts.

Some folks remembered the results of the agency's attempted network upgrade in the 1980s and '90s, and its Y2K admission that it was one of the few federal agencies whose end-of-century computer problems would be bad enough to be noticeable, and wondered how well they could recover from this little misadventure.

As weeks dragged by without a clear fix emerging, the question became: Could the IRS recover? The usual second question that occurred to folks was whether this might turn into a good thing for them personally. "They can't tax me if they don't know I made any money" became a common theme for television sitcoms, editorials, websites, and personal correspondence. The IRS couldn't get its files together, but it did announce a joint task force with the FBI to crack down on the suddenly popular game of tax resistance. Given the FBI's obvious 'success' with computer network security - a tasking dating back to the end-of-century Clinton administration - as related to the IRS, odds in Las Vegas heavily favored tax avoiders and hackers.

Odds makers in DC inner circles shared the Vegas pessimism. "Mr. President, I believe you haven't quite grasped the full extent of the problem." The head of the Social Security Administration was frazzled and frustrated at his inability to get basic facts across to the chief executive..

"Drop the formal crap," the exec ordered. "If you think I don't get it, then explain it again." He'd tried to make his directive loud and forceful, but the anechoic qualities of this small secure briefing room robbed his voice of power. No matter; there was no way the cabinet wanted to discuss this fiasco

anywhere but the most secure facilities. Screw the acoustics.

Since explanations of the nature of the disaster had been the topic of discussion for the past two hours, the cabinet members stared at each other in exasperation. The Treasury Secretary bravely took up the gauntlet on his fellow Cabinetee's behalf. "It's pretty simple, Mr. President. In reality, most money exists only as a computer record. When you have five thousand dollars in the bank, the bank doesn't keep five grand in small bills and change locked up in the vault. It gets loaned out, used to cash checks, make change, whatever."

"Fractional reserve banking, right?" The President threw the term out to demonstrate his knowledge of banking. Unfortunately, hours of silly questions had already given the others in the room a pretty fair idea of the extent of his information. Fractional.

"Yes," Treasury confirmed. "The idea is to stimulate the economy by making money do two things at once; it's yours in your account, as an electronic record, and it's loaned out to stimulate business through spending."

"How can you loan more than you have?" A stupid question to the financial insiders present - particularly given the President's comment just a moment earlier - but one often asked by people with the quaint notion that spending money you don't have constitutes fraud. The Treasury secretary just wanted to cry. This was a big business millionaire? "We can do it because the money is electronic, it isn't physical, so it isn't limited to one place or transaction at a time. You can, in effect, loan out depositors' money to multiple people at once."

"So if I have five grand in the bank and write out checks for ten thousand..."

"No, that isn't the same thing!" A hint of the irritation Treasury felt could be detected by the fact that his voice was loud.

"Why not?" The President thought it a reasonable question. Isn't that what House Representatives had been doing back in the late 1980s?

"It doesn't matter!" The secretary's knuckles whitened as he gripped the edge of the conference table. "Just remember that most money isn't out there as paper. It's electronic; like paying by credit card, then paying off the credit card with a check drawn on an account full of money that came in as a direct deposit."

"Okay, that makes sense." Treasury looked across the table to Health and Human Services. They exchanged resigned shrugs. This is what you got when you selected a leader through popularity contest: Lost as soon as he ran into something his speech writers hadn't prepped him for. "So how does the IRS problem come into this?"

Shit. "Well, sir, the money the U.S. government handles is just as virtual as the rest of the economy, aside from the purely nominal production of paper bills and coinage."

"And?" the President prompted.

Moron. Treasury fought the no-doubt suicidal urge to strangle the guy. Then again, the Secret Service officially worked for him. Maybe... He shook his head. "So the vast majority of our 'money'

was electronic records of personal and corporate income taxes collected. Thanks to those fucking hackers, all that money evaporated with the files they deleted."

"So backup the stuff from your archives."

Treasury winced. "Unfortunately, as I've tried to explain, that isn't possible."

The President looked confused. But then, any issue that couldn't be settled with a wet cigar or military action had that effect on high level politicians. "Heck, even I have a CD writer for backup on my computer," he added virtuously.

"It isn't that simple," the money man grated out. "For one thing, the invading worm" - he prayed that the President wouldn't ask for worms to be explained again; but at least this president wouldn't make dirty jokes about it - "didn't openly manifest itself immediately. It seems that we went through several cycles of backup while it was running. The devious SOBs set the thing to start by trashing data being routed to archive while pretending to successfully back up files. Only after our archives were screwed did the things start on the on-line stuff and give themselves away. By then it was too late."

"The backups are corrupt?" The President thought about having someone in to inspect his CD drive.

"Yes!" Treasury shrieked. "That's what I've been telling you. We've flat out lost a full fiscal quarter's worth of revenue data!"

The President sat quietly, tapping his fingers on the tabletop. He seemed to be thinking deeply. Everyone waited. Finally, "So what should we do to fix it?"

HHS dropped her head to the table with a muted thump. Treasury sat stunned, then answered as calmly as he could manage, "That's going to be up to you, sir. We have millions of people who've paid their taxes, but we no longer in effect have the money. We don't even know who paid, and who might've forgotten. Several hundred billion dollars just went up in electronic smoke. We are bankrupt, and as soon as that occurs to everyone else in the world, the dollar will be worth jack shit." Then he laughed. "If we were still on a gold standard, at least we could just issue ourselves some more cash based on our reserves. But if we were on a gold standard, most of this couldn't have happened in the first place."

The President wanted to ask why gold would have made a difference, but it seemed beside the point. Instead, "So why don't we do that anyway?" the moron-in-chief wondered. "No one knows how much we lost, and we control the presses. Can't we just print up more to make up the loss?"

Treasury nodded unhappily. "We can do that. We probably should. Virtually speaking, naturally. The last thing we want is too much paper floating around. Of course, if we overestimate the amount we re-issue, we're going to drive inflation."

"So underestimate."

"In which case we don't have enough to meet our balanced budget requirements."

"Congress can pass an exception. I'll sure as hell sign it."

"And that'll help. In the short run."

"I'm not too concerned with what the next administration faces." The short term is all that a President is ever concerned with.

"You'd better be; because it may damned well come to a head while you're still in office." Treasury tried to wake the guy up.

"What will?"

Treasury shook his head in disgust and got ready to deliver another lecture. "Straight income tax is only part of the game. Think Social Security. When we lost the tax data, we lost all knowledge of a quarter's pay-in for a nation of workers. That's a bunch of people who aren't going to get full credit for their earnings when they're ready to draw. Some of them won't like that, and will insist it be fixed now. I don't blame them." The image was frightening. Millions of angry, checkless retirees; retirees with plenty of time to lobby congress. Photogenic retirees to get on TV to call for blood. The man shuddered. "Then there's the people drawing their pensions already. That money has to come from somewhere..."

"The SS pension fund."

Treasury and Social Security alike stared at the President. "Are you cr..." SS began.

Treasury cut in, since he'd been doing the talking so far. "The fund is a joke. Remember? That's why you campaigned on a Social Security reform plank. Remember? In reality, not counting the congressional raiding of the SS cookie jar, SS payouts to retirees are almost matched by the current contributions by today's workers. And even our own best-case scenarios said that Ponzi scheme was only going to work for a few more years before it collapsed." He paused for emphasis. "And that was pre-Attack."

"So what's changed?"

"The pay-in has changed. Tax resistance has skyrocketed. Compared to our stats for last fiscal year, our post-Attack collections are in the basement. We know just by eyeballing stacks of forms that reporting and payment are down. We used last year's data to build a mailing list of companies and individuals that paid taxes last year. We sent them a request that they forward records of their last two quarter's earnings for database collection."

"Good work," the President approved. "That should help straighten out the mess."

"Like hell," Treasury retorted. "Our response rate to the mailing was less than one tenth of one percent. Nor are we getting further payroll taxes from most of those people and companies. The general feeling seems to be that if we don't know what's due, they aren't going to help us screw themselves over." He shivered. "Shit, I'm starting to hope they leave it at noncompliance; I'm not sure what would happen if they got it into their heads to pull another Whiskey Rebellion." Despite decades of effort to defang the populace through the charade of fighting crime with gun control, there were still at least eighty million people out there with probably well over a quarter billion small arms. The people were getting uppity, and if they started throwing bullets instead of electrons... He shivered. He wasn't alone,

as other cabinet members considered the possibility of an uprising.

The President wasn't one of the shiverers. "Another what?" he wondered. American History had never been his best subject.

Okay, so the man was financially and historically knowledge-challenged. "It doesn't matter. Probably." The man steeled himself. "Okay, you want me to tell you what to do? This is it for starters." He'd known this was coming, and had some answers ready. He slipped a couple of sheets of paper from a folder laying on the glossy wood before him. One sheet he slid across the table to the President. He tapped on his copy with a pen as he spoke. "Give me an EO for emergency procedures on delinquent tax collection. We use last year's data as a base for determining what everyone owes. We dun them for the amount due. They don't pay up, we seize bank accounts, again referring to last year's data." He sighed. "Thank god so many people opt for direct deposit of refunds, we'd never know what accounts to hit otherwise."

"I guess I can do that." The Chief Executive nodded sagely, just as his PR people had taught him.

He did. But the federals, or ferals as the more determined IRS opposition was calling them, neglected to classify the executive order. Not that it would have done more than slow the unauthorized dissemination. The word was out on the Internet even before it reached most IRS branch offices. Many people simply closed their old accounts and transferred the balances to new accounts. This was a decent stalling tactic, but not a real fix. In the late twentieth century, Americans had risen up in virtual arms against a proposed federal 'Know Your Customer' requirement that banks report large transactions, among other privacy-bashing data, to the Federal Depositor Insurance Corporation. Supposedly this was to aid in the 'War on Drugs' by helping law enforcement detect money laundering by druggers. What most people missed was that the KYC rules weren't really new, but only elaborations on existing fed-directed spying by the banks. The IRS didn't miss this key point and cross-referenced noncomplying citizens with their new accounts. But it was a slow process.

Making a rare appearance at Company headquarters, Cathy Peters, one of the original partners in the space access venture, visited Neville to voice some concerns. The president figured it must be serious; his neighbor rarely involved herself in day-to-day operations, preferring to have Neville deal with the hassles. Some might've thought that a bit naive, but the two had known each other for several years; Bill and Amy stood as godparents for Cathy's daughter. The last time Cathy had visited was to watch the last series of launcher test runs. She'd hardly said a word the entire day, but simply sat grinning and cheering with each successful run. Even the final crash hadn't phased her; she was too accustomed to her own occasional model rocketry glitch. This time though, she looked considerably more somber.

Neville played the gentleman-rancher and walked the slender lady to the couch in his office. As she sank into the cushions, he offered her a choice of beverages. She declined all, and moved right to the point.

"Bill, unless you've suddenly been kidnapped and replaced by space aliens, I'm quite sure that you've noticed the little problem the government, the federal government," she corrected herself, "has been having with its finances lately." A hint of a smile did flicker across her lips, but faded almost as quickly.

"Kinda hard t' miss," Neville allowed. "Keep gettin' damn demands for us t' resubmit quarterly statements." Now that he knew the topic, Neville thought he knew where Cathy would be going with this; she was a libertarian from way back.

"Have you been sending them?" She shifted and crossed her slender legs; her short skirt exposed more thigh than most ladies her age would have been comfortable with. But most ladies her age hadn't kept themselves so well either.

Neville ran fingers through thinning hair and grinned. "Well... I did at first. Registered mail's how I had Finance send it out. A bit after that, the hackers hit the IRS again." And again, and again.

Most folks found the original email trojan and DDOS attack on the taxmen amusing, but the more recent insider attack on the main records had spurred something else. From 'Net and news reports, it looked as if someone had declared infowar on the IRS. It seemed like every day brought news of another tailored virus or web attack. Nor were the the original IRS guerrillas alone. Apparently one branch IT department had tendered their informal resignations by way of improvised thermite grenades left atop several RAID hard drive cabinets. No telling how much data the feds had lost there. And the culprits had vanished as completely as had the first crew. The feds were starting new background checks on all their computer personnel. Neville guessed that was pretty useless on its own. You didn't have to be a computer guru to stick a virus-infected diskette into a Revenuer desktop drive. Just very principled. Besides, most background checks were necessarily computer-based. When you're trying to get data from a computer on people who make a living by stuffing said data in there in the first place... Neville chuckled, which caused Cathy to raise a questioning eyebrow. "Nothing important," he assured her. He returned to Cathy's original question. "But after filin' with 'em twice, I figured it wasn't our problem if the feds couldn't look after their stuff." He smiled.

"Why, Bill," Cathy teased. "Are you losing your old Republican faith in government?"

He didn't answer for a moment. "Yep, maybe I am. I s'pose stormtroopers and snoopin' morons'll have that effect after a while."

She nodded. "I heard about how you handled the IRS thugs when they showed up with a subpoena." She speared him with a sharp stare. "You might have consulted with the rest of us before you did that." Neville had neglected to inform Cathy and Vasquez of his playful intentions regarding the financial subpoena.

"Sorry, Cath. Thought you might want a little plausible deniability."

"Nope. But I would have wanted the chance to tell you to go for it." Her stare softened and she smiled warmly. "I'm downright proud of you, Bill. You'll be a libertarian yet."

"Hmmp. Sooner'n you think, the way I'm goin' lately. Seems like the more I rely on the Constitution, the less use the feds have for it."

"I seem to recall telling you something of the sort." There was a distinct 'toldja-so' in there.

"Sure; more'n once, over the years." He looked sad. "I spent years thinkin' we just needed t' fix the problem, and the Constitution would have the government servin' the people the way it oughta." He stared out the window again. It had become his favorite meditation aid these past few months. "But I'm

seein' your point now. Revenuers with machine-guns instead a warrants, NASA tellin' us t' play their game or take our marbles home, Feebies who act like they've never heard a 'innocent 'til proven guilty'... " He shook his head in denial. "I reckon it's just the nature of a government to grab all the power it can, t' push people around. All these years, an' it's gettin' hard t' convince myself anymore that the wrongs're just the unapproved acts of a few loose cannons."

"I'm glad to hear you say that, Bill." Cathy gave him a speculative lookover. "Because I've got something I want to talk you into. Already talked to John, and he's for it..."

"What? Business meetin's, and nobody invited me?" Neville joked.

" 'Course not. Just wanted to brace you guys one at a time. Oughta talk to Hank Hanners, too."

"Heck, Cath. If it's more libertarian stuff, I'll bet he's way aheada you. I think the boy's a regular... What'd he call it? Anarchocapitalist."

The woman cracked a new smile. "Then he should like this. Bill, I want to offer all our employees the chance to opt to continue working with us as contractors, responsible for paying their own taxes, if that's what they see fit. It'll save us a little on bookkeeping, and give the folks a chance to decide where their money's going."

Neville thought silently. Probably piss off the IRS something fierce, if they can get their act together enough to realize. "What about company taxes? Do we pay those?"

"For now, yes." She looked bitter. "I don't mind the Texas taxes so much, but it irks me to pay the feds. But unless we're going to try some sort of complete break with the U.S., I don't see much choice."

"Neville wondered if her thoughts had been paralleling his own. "What sort of break are you thinkin' of? That Texas Constitution stuff?" TC21C had gained a lot of converts in the past few months, and especially in recent weeks. The current argument for secession ran "Do we really want to be caught up in these federal problems?" For a rapidly growing minority, the answer was "No."

Cathy was taking it to a whole new level though. "Not TC. Personally, emigration. I'm considering cashing out and taking LeeAnne to Costa Rica."

Neville looked surprised and worried. "Damn, Cathy I've already got pretty much everything me 'n Amy have tied up in the company. And Launcher isn't going to see much in the way of revenue until we make a successful orbital flight and start gettin' flight reservations. The license fees aren't bringing much more than minimal expenses. I can't afford to buy you out."

"William Neville, you just stop that!" the pretty blonde scolded. "When I talk about liquidating assets, I don't mean Launcher! I expect to make too much money from this to jump ship now. Besides, I'm just as big a space fan as you! Bigger."

Very relieved, "I'm sure glad t' hear that, Cath. Thought we were about t' lose you."

"No way. I'm not letting you off that easy!" She rose from the sofa, stepped forward, and gave her old friend a hug. "If anything, I'd like to talk you into doing the same. With the company, while you

can."

Neville gave her a quizzical look. "Say what? Pull the company outa the States? Why?" He hadn't thought much of the idea when others had brought it up; but this was Cathy suggesting it now.

She folded her arms across her breasts and stared back defiantly. "You have to ask?" She began ticking off point on her fingers. "FAA idiots. IRS goon squads. Federal Bureau of Incompetence. More IRS goons. OSHA, FAA, FCC, FTC, and KAOS and pretty much any other acronymmed alliance of assholes you can imagine." She shook her head deliberately. "I have a bad feeling about where this could be headed, Bill. No one else has gotten this close to private, cheap space access in the U.S. And what do we see from the feddies?" She waited, making it clear that this wasn't a rhetorical question. She wanted Bill to think hard on this.

"Trouble," he admitted.

"Damned right. So far you're seeing a conspiracy of petty bureaucrats who just see their cushy jobs threatened. A working, privately owned spacecraft does more than that. I don't think they'll allow it without a fight."

"Who's they, Cath?"

"You decide. Reagan invaded an obscure island to deflect attention from Cabinet probs. Bush bombed Iraq halfway to oblivion to protect his oil portfolio and salve the national ego. Clinton bombed Iraq again to stall impeachment proceedings after that pitiful little blowjob affair with a chubby intern. Then there was the Shrub and Afghanistan and..." She stopped, shaking her head, figuring she'd made that point already. "What do you think the government would do to protect its monopoly on space?" She took a deep breath and forged ahead. She'd planned this out and didn't want to get sidetracked just yet. "Besides, with the inflation the country is seeing now, from the Fed screwing with the money supply to 'fix' the hacker attack, you ought to be able to run the operation cheaper elsewhere."

"And you think Costa Rica is the place?" Neville tried to recall what he knew of the little Central American country. It had the best economy in the region, with a fairly liberal, in the old nonsocialist sense, government. Progressive.

"It's good enough for a headquarters, anyway. A move would give us breathing room to find a new launch location."

Neville frowned at his old friend. "No. Not unless all the other partners are unanimously for the move, and I'll try t' talk 'em outa it even so." He glanced at the picture window. "This has been my home for a damned long time; I don't care t' abandon it t' the fed looters."

Cathy was obviously disappointed, but, "I see your point, Bill. I even agree with you, more than you might think. It's just that I think the looters may have already won."

"Not if I have anything t' say 'bout it."

Chapter 20

Year Two, June 30th

You were born to fly.
- Sara Evans

Hank tuned in a talk radio/news station as he drove. Damned if he knew why exactly. This was hardly a day to let bad news, and sillier opinions, drag him down. Launch! Still...

A newsreader with the obligatory Midwestern accent babbled on. "...of the FBI's Infrastructure Protection Office announced yesterday evening that all federal databases would be isolated from the Internet, eliminating all public access until further notice. Mr. Miller said in response to questions from the press pool, that this drastic action had been rendered necessary due to the recent expansion of tax evader attacks on the Internal Revenue Service to include virtually all federal agencies with network connections."

He punched the off button and kept driving. Nothing new; clumsy grammar or not, the news was the same. Any domain ending in .gov had become fair game in the ongoing guerrilla infowar. And the feds were still trying to pretend that it was the sole work of a few "tax evaders". Hank's only question was why the hell had it taken the supposedly-libertarian Internet intelligentsia so long to decide to do something about their arch-nemesis, Big Government. He didn't count the humorous but pointless hacks on the FBI's web page that had been a running joke for years. He figured the feddie plan of disconnecting their systems from the Internet was pretty pointless, too; just ask the IRS. Locking out the irate public did nothing to protect systems from the freedom-sympathetic techs and network admins doing the locking.

And the public was getting irate. It was bad enough when the IRS seized bank accounts of nonpayers without warrants. But they weren't bothering to differentiate between those who had paid and those who hadn't. Or more to the point, they couldn't tell the difference. What few files seemed to be left on their systems were rendered inaccessible by the various viruses, trojans, worms, and killer macros viciously competing for network resources on the systems they inhabited. Hank imagined the federal network as a dark and dangerous jungle, with predators and prey competing for virtual ecological niches, clawing and biting at one another. Or maybe killer kudzu taking over the bureaucratic world. The best thing the feddies could do at this point was shut the networks down completely and start over.

"Hey, Daddy." Hank's attention was jerked back to the world at hand by his daughter's voice. "If the ferals are wrapped up in defending themselves against the 'Net militias," Erin used the clumsy term which nonetheless seemed to be gaining media favor, "will that take some of the pressure off the Company?"

"I'm not real sure, honey," he told the sixteen year old lady. "Things have eased up just lately, but that could mean they're just getting their ducks in a row for another go at us." He glanced to the side and smiled at the girl. A young woman now, he realized, not for the first time. And a scary thought that was for any father. "But whatever the reason, it has let us concentrate on the launch." He smiled wanly. "Once we see their reaction to the launch, I guess we'll know, one way or the other."

Erin looked mildly appalled at this, as if the possibilities hadn't quite registered until now. Her expression turned somber as she stared down the road for most of the remainder of the trip.

Up ahead, Hank saw a collection of cars and trucks parked in the dirt, framed against a rise of rock and dirt in shades of tan. He felt a strong sense of déjà vu until he remembered that this was the same place he'd parked to watch that kid of Andre's blow a rocky outcrop to kingdom come. But there were more cars out here today. He wasn't too surprised, but had hoped that not so many people would think of watching the launch from this vantage point. In your dreams, Hank. After weeks of inspections, more weeks of test runs, and a successful suborbital boost - still no FAA or NASA certification, but that could be feral computer woes as easily as bureaucratic intervention - the Launcher Company was about to put its first spaceplane into orbit. And Hank damned well wanted to see the launch with his own eyes. No more ops center monitors.

Unfortunately, it looked like half the county had the same plan. Hank sighed, and started for the low ridge that had once blocked his view (and probably quite a few high velocity rock fragments, to be fair) of what had been billed as the 'Mad Bomber's' masterpiece. When he'd seen the mushroom cloud of dust rising he'd been damned glad of that obstruction. Now he was glad again. It would make a dandy observation post for the launch. Hank parked on the edge of the makeshift lot, and the pair of Hanners climbed out of the recently acquired four-by Suburban - the collection of similar vehicles scattered around the area suggested that they might well be the official state vehicle of Texas - locked the doors, and headed for the ridge. Hank scrutinized the rocky rise gloomily. I should have designated this an official observation point and gotten some stairs poured. I'm not a hiker, damn it.

"Daddy, here's a good path!" Erin called down from some feet upslope of her father. One advantage of having arrived after everyone else was that the best routes upwards were now well-trodden paths, easy to follow. Even with the lost weight, he was glad of anything that made the climb easier in the summer sun. He scrambled up the dirt pathway after Erin, sliding on loose gravel and clutching at the sporadic growths of sagebrush. And occasionally sniffing at his hands after doing so. Erin had teased him about it, but he'd discovered that he loved the smell of sagebrush. He decided that he'd just been living in the wrong part of the country all those years.

In due course, he reached the top. He straightened to his full height and slowly rotated to take in the view. Erin picked out the launch strip and watched it intently, a little pointless this soon. The booster was still far out of sight, undergoing a final inspection.

They were only a couple dozen feet above the prairie proper, so the vista wasn't all that spectacular. The launch strip stretching out into the west was just another path to nowhere, looking like any other lonely Texas road. Or a road to the stars, if one were poetically inclined. Hank generally wasn't, but nor could he ignore the feelings the road instilled. Seeing beyond mere appearance; Hank and Erin knew that a spacecraft would soon streak down that asphalt path.

Erin tapped her father on the shoulder. "Yeah?" he said vacantly, still staring into the west, feeling the hot air slowly desiccate his face. Should have brought a water bottle.

"You told me to remind you to call the control center." A random puff of wind whipped her long chestnut hair around her face. She brushed it away, then pulled a clip from a jeans pocket and fastened it back, safely out of her way.

"Damn. Thanks." Sitting on the bloody damned phone during the launch was the price he'd

agreed to in order to duck out of the ops center during the launch. Neville figured his chief engineer should be handy in case of problems. Hank had argued that engineering emergencies were better handled by the engineers who had built the spacecraft and booster, not the paperpusher into which he imagined himself to have metamorphosized. Still, he had agreed. He flipped his phone open and told it, "Ops center." While it warbled quietly, he extracted an earset from his pants pocket. Once he had the blasted thing untangled, he plugged the appropriate ends into the phone and his ear. He clipped the phone back onto his western-style belt.

"Launcher Operations Center," he heard in his ear. "May I help you?"

"This is Hank Hanners." At the sound of his voice, Erin looked back at him from where she had wandered closer to the crowd at the edge of the bluff. Seeing he was on the phone, she returned her attention to the other people. The crowd included a number of young men not terribly older than herself. She indulged in a little boywatching. Hank continued his telephonic communication.

"Good morning, Mr. Hanners. I've been expecting your call. This is Albert Nugent on range safety. I get to play liaison for you during the launch."

"Thanks, Albert. How are things going so far? Any hitches?"

"No, sir. Everything's running just as smoothly as the test runs. We'll launch on schedule in five minutes."

"Smoother than some, I hope," Hank grouched, visions of shredded mockup dancing in his head. But even that had been good for a couple of laughs. After salvaging what parts they could, they'd loaded the poor dead thing on the back of a flatbed and hauled it to a metal recycling center in town. The operator's expression upon being presented with a supersleek, if slightly used, spacecraft was priceless. But back to reality. "Wha... You said five minutes? He looked at his watch. Damned thing was slow. "Crap!" He and Erin were lucky they'd gotten here on time.

Nugent spoke again. "Mr. Neville asked me to pass along a message, sir."

"Yeah?" Hank replied absently. He wanted to get Erin's attention, but she seemed intent on... uh oh. Boys. Too bad her mother couldn't be pried away from her soaps long enough to watch history being made. And keep an eye on the girl. At least Erin wasn't oblivious to the future. Or the boys, damn it.

"Mr. Neville says he's... damned ...sorry he let you out of Ops." the safety officer paused, and Hank frowned. "He says he should have made you sit in the 'damn oversize telephone booth' while he got to watch the thing for real." The man chuckled. "Come to think of it, I feel the same way."

Hank laughed lightly. "Rank does have its occasional privileges. Okay, I'm going to mute my phone; speak up if something comes, and let me in on the thirty second warning, would you?"

"Will do, Mr. Hanners."

Hank scanned the area, spotted his daughter where she had wandered while he spoke to Control, and moved closer. "Just a few more minutes, Erin."

"Excellenté!" She turned to gaze westward again, boys forgotten.

In the distant ops center, Cal tried to mask nervous fidgets by running through his telemetry checklists over and over again. He did refrain from annoying the launcher ground crew, and the pilot, Mikhail Alekseyev. He skipped over their portions of the lists until their input was required for the official run. With four minutes to launch, he forced himself to stop with a sixth list check before he drove himself nuts. A monitor at the range safety position caught his eye; a gathering of spectators on a rise that looked familiar. He began cycling through camera inputs on one of his own screens. It took a few tries to find the right one. Sure enough, it was the rocky ridge off to the side of the launch strip, at the eastern end. One of the people in the crowd caught his eye.

Yep, that was Hanners, the head of engineering. He seemed to be speaking to a pretty, slender girl with long hair. Damn it, he of all people, should know better. Cal punched a selector button on his console. "Andre?"

The supervisor's voice answered immediately. "Yes?"

"Take a look at the video from range camera twenty-two. We've got a crowd of spectators at the end of the strip, including one of the headshed types."

Pause. "I see them. Is there a problem with this?"

"Well, not unless they object to getting hammered by sonic booms. Those folks are right in the path."

"Are they not standing on that bluff where I recruited you away from Construction? That is well to the side of the launch path; I should not think there would be a problem... Let me connect with range safety."

Cal heard clicks and, "Range Safety, Nugent" You'd think the guy worked for NASA.

"Albert, this is Andre and Cal. Have you noted the people gathered upon the rise near the end of the launch strip?"

"Yes, sir, Mr. Grandjean. Mr. Hanners is out there with them."

"I see. Cal believes there may be some hazard from the Mach wavefront during the launch..."

"Darned right. I think you oughta tell them to clear that high spot and watched from further back." Cal was a bit irked at doing what should have been Nugent's job as well as his own.

Albert defended the spectators. "They're off to one side a few hundred yards, and the launcher stops before it gets that far. The plane has a several hundred feet of altitude by then. What's the problem?"

"You ever been just several hundred feet from a jet breaking the sound barrier, Al? Andre?"

"Well, there's all the launcher test runs..."

"It is a moot point, Cal," Grandjean interrupted. "We are holding at one minute. Hardly time to clear that area even if there were a problem, which I do not believe to be the case. Please proceed with final checks."

Cal shook his head in resignation. "Okay, if you say so." Heck, those were supposedly rational people out there. It was their own choice. Cal wished he were out where he could really eyeball the event, himself. All the cameras might give a better technical view, but it wouldn't be the same.

The pre-flight countdown continued. At thirty seconds, Nugent alerted Hanners.

On the ridge, Hank acknowledged Nugent's advisory. "Erin!" he called. "Less than thirty seconds!" Other spectators head his cry and turned to the west. A few, not so well informed or maybe possessed of a lousy sense of direction, faced the wrong way, but helpful folk got them turned around. Conversations dribbled to a stop.

Hank's daughter stepped closer to his side and took his hand. She wasn't so publicly passionate about space travel as her father, but she did want it, far more so than even the current publicity-driven faddish interest of her classmates at school. She also understood how important a real orbital launch was to her father, personally and professionally. Erin figured that her father could write his own ticket with any engineering outfit in the world after building the first privately operated, reusable spacecraft. She also guessed that he might have something else in mind, something which she thought she might not be averse to herself.

It started with a low rumble in the distance. Then a dark cloud could be seen on the horizon. It rose slowly towards the sky and grew. Someone shrieked, and Hank heard a man mutter, "Be quiet! It didn't blow; that's just the motor firing. Normal." The sound grew, and the dark cloud stretched into a line of smoke and dust. In seconds, a small needle form could be resolved at the rapidly approaching end of thick haze. Hank regretted not bringing a camera when the dirty line suddenly exploded into a wakelike vee trailing the launcher, which seemed to leap forward abruptly.

Moments later, a speck separated from the rushing machine and climbed into the air leaving its own exhaust trail streaming behind it. Erin's hand gripped Hank's tightly. The speck expanded with incredible speed into a sleek plane which rocketed past the ridge of dirt and rock, seemingly much closer than the hundreds of yards it must have been in reality.

Hank's head was turning to track the craft screaming for orbit when...WHAM! He felt something akin to belly-flopping into a swimming pool as the machwave slammed him. After a moment he realized that he was perched on his butt, and being sandblasted. "Sonuvabitch!" he moaned, barely able to hear himself.

Cal watched the spaceplane soar out of range of his cameras. He wasn't entirely sure what all he felt, but elation figured prominently in the mix. He yanked his attention back to the job at hand, and verified that the booster vehicle had shut down its motor properly and was decelerating. Recovery vehicles were already on the way to intercept the craft. Telemetry well in hand, Cal took a look at the image from camera 22 and felt vindicated. Launcher's chief engineer had been knocked on his ass, along with pretty near everyone else on the ridge. He sat up, then stood and dusted himself off before looking around. Cal watched him offer a hand to the young lady he'd noticed before. She let the older man hoist her erect and seemed to be wiping her eyes. And grinning. The camera resolution could have been better, but Cal thought she might resemble Hanners somewhat. He'd heard the man had a

daughter, although this girl was hardly the little kid he would have expected. Cal became aware of Andre hovering over his shoulder. He looked up and inclined his head toward the screen. "Toldja so."

Somewhere far to the east, and very high up, Alekseyev sat cradled in his form-fitted seat and tried to relax; a difficult thing for an ex-fighter pilot. In boost phase, the spaceplane was purely on autopilot. Only in the most dire of emergencies would he take over from the computer. When you're headed for Mach 25 or thereabouts, human response times weren't quite up to manual control, all the skill in the world notwithstanding. If the excrement impacted the ventilation impeller, he'd probably be a red splotch on a wall of speed-compressed air before he could do much more than twitch. The temporarily redundant control system watched his heads-up and waited with excited impatience. Acceleration crept up towards four gravities as the spacecraft burned off oxidizer and propellant, and as drag from the thinning atmosphere lessened.

The drop tanks emptied and were ejected automatically, per the planned flight regime. It happened so smoothly that Alekseyev wasn't sure he'd have noticed the slight increase in acceleration with the loss of the tanks' mass and drag if not for the status report hovering in his Heads Up Display. So far the flight was essentially identical to his previous suborbital test flight. He spoke into his microphone and verified his flight status for the earthbound flight controllers.

"Spasebo, Mikhail Petrovich," replied a voice in Russian. Alekseyev blinked and smiled. The ground controller continued in English, his memorized fragment of Russian expended. "We confirm your status. At this time, it appears that your orbit will be nominal. Well done!"

By now, the spaceplane trajectory was ballistic, and its aerodynamic control surfaces useless until the return flight to Earth. Alekseyev felt acceleration reduce, then the aerospike motor flamed out. The ex-pat Ruski glided a gloved finger across an over-sized touchpad and watched the changing data in his HUD. "Launcher Control, instruments report I have achieved projected orbit. Do you confirm?"

"YEE HAW!" Alekseyev winced as the shout pierced his ears.

"May I presume that is affirmative, Control?"

"Goddam right, Mikhail!" The voice was that of the company president, Neville himself. "Congratulations, son!" Alekseyev was in his mid-forties, but he allowed the Texan his usage. He was in orbit, by all the gods! Let Rodina re-live lost dreams of sacrificed Mir; we build something new, something better!

"Thank you, sir." He examined additional HUD screens. "Please advise Control that all indicators are nominal. I shall continue mission." He smiled and disengaged the autopilot. He flipped a joystick up, the touchpad rocking out of the way, twisted and angled it appropriately, and touched a button. Pure hydrogen peroxide was siphoned from a maneuvering reservoir to a tiny reaction chamber under the spacecraft's skin where it was jetted through platinum mesh. A spray of superheated steam and recombining hydrogen and oxygen shot from the hull. The craft began to rotate on one axis. Alekseyev arrested the motion with more puffs of hot gas when he had obtained the desired view.

Earth, puffy white and blue, floated over his head. It was as beautiful as he had thought it would be. To think, he'd been told he wasn't good enough for the Russian cosmonaut program, what was left of it. And now, here he was! "Yob tyvu maht, Zaitsev!" That for the bastard who'd turned him down. Look at me now, bureaucrat.

"Mikhail," an amused voice sound in his headset. "I thought I might remind you that your audio feed is going out to the media," Andre Grandjean informed him.

Sheisse. He'd left the microphone active.

"And I should think that the press reports are going out to Germany as well."

The pilot heard laughter in the background. Had he said that aloud as well? He smiled defiantly inside his helmet and replied haughtily, "This is Launcher Company Orbiter One, whom I now name Valentina; not NASA. Would you prefer I tell you how fantastic flight was?" After leaving Russia, he'd spent time enough among American space enthusiasts to share that bit of annoyance.

Neville's voice came over the radio again. "Hell, Mikhail, I don't much care whatcha say, so long's everything works accordin' t' plan. So what say you get on with the payload deployment?"

"Da. Beginning now." He checked his helmet seal, switched from onboard life support to PLSS rebreather. He took a few breaths to assure himself that the system was functioning. "I am opening cockpit." He flipped switches to open a set of valves. His atmosphere bled off to leave him in vacuum. He felt his suit tighten against his flesh, a combination of the expansion tubes snugging the garment and his own body attempting to expand. He noted that, just as in the groundside training simulators, he now had to forcibly exhale, while his expanded chest drew breath inward of its own volition. Reverse breathing, he thought it was called. NASA so despised the minimal effort that it insisted on draping its cosmonauts in cumbersome full pressure garments costing millions of rubles.

Launcher's more affordable suits also lacked the intrusive telemetry of their public sector counterparts. Therefore, Alekseyev verified its function for himself. As if anyone but a fool would not check his own equipment. "My garment appears to operate correctly," he informed Control. He snapped a retractable safety line on his suit harness to a small stanchion in the cockpit. "I will now leave vessel and deploy satellites."

"Sounds good, Mikhail. We'll be listening in. Speak up if you have any trouble."

"Certainly, Control." He twisted a pair of latches and opened the cockpit canopy. Next he released his seat restraints and glided out of the spaceplane. He looked up at the homeworld once more. "Bojemoi!"

"It was great!" Lennox was still jubilant hours later. "It took Alekseyev just two hours to deploy both units, using standard tools. The maneuvering thruster on number two glitched a little, but it still made an orbit we can use. Both powered up fine, and we're getting video from them now. Even the compositing software hasn't glitched!"

Neville hadn't left the control center observation deck all day. He figured it was only polite to make a show of supporting his pilot, since that worthy wasn't exactly getting any time off until he returned to Earth. He parked his skinny fundament in a comfy chair as he listened to his comm chief's not-very-technical and exceedingly glowing report on the deployment of Launcher's first payload, two navigation satellites.

Nav, yes. But these birds weren't anything like the global positioning sats maintained by the

U.S. military. They were more akin to air traffic control radar... only different. First, they were purely passive. Where airport surveillance radar lit up the sky, radio-wise, actively illuminating any aircraft in its beam, Launcher's satellites merely kicked back, relaxed, and watched, anthropomorphically speaking. Each of the comparatively tiny orbiting watchers were composed of an array of miniature solid-state cameras which worked in the ultraviolet, visible, and infra-red light spectrums. Any one satellite was relatively nearsighted by itself, barely able to resolve an object much smaller than a 747 airliner. But the video feeds from multiple sats watching the same area could be computer-manipulated into a combined and enhanced single image with higher resolution. It was the same technique which astronomers used for long baseline observations, using two observatories to obtain improved pictures of distant stars. Launcher meant to watch something much closer to home than stellar objects, naturally. Air traffic, in fact.

Lennox guzzled strong coffee to which enough sugar had been added to render the concoction syrupy. Neville attributed her current attitude to a dangerously high sugar/caffeine rush. She gloated a little more. "With just these two satellites in orbit, we've got traffic surveillance over our port for some thirty minutes out of every hour, with a resolution good enough to pick up the typical Airbus. You give me a full constellation, and we can tell the FAA to stick its antiquated ground-based system up its ass! Heck, we ought to sell feeds to the FAA for general traffic control."

"Cloud cover ain't an issue with this either, right?"

"Heck, no! That's why we went for the multi-spectrum approach. We can see right through most clouds."

"Pretty nifty." Neville was still impressed by the system.

"Damned nifty," Amber bragged. "The video bit is new, but the industry has wanted the FAA to go to a satellite-based radar system for years. Well, we've just done it."

Neville frowned. "Just you make sure that everyone in your department with access to the feeds signs those nondisclosure agreements I had Creasing draw up. ATC is one thing. but I ain't gonna have any Launcher people sellin' informal spysat pictures t' the highest bidder. We will respect folks' privacy."

Amber Lennox shrugged it off. "Sure, Bill. No problem. Let's go over the schedule for the rest of my sat launches."

"Hang on one, Amber." Neville keyed the control room mike. "What's Mik's current status? Anything I oughta know 'bout just now?" he asked the duty controller.

That worthy flipped a console switch, and stentorian snores echoed through the room. "Only if you're a masochist, Mr. Neville. He's taking a little nap right now." "Sweet Jesus," the boss muttered. "Shut that off before I decide to leave him up there." He killed the mike as blessed silence descended, the controller having anticipated the order. He spun his comfy chair back to Lennox. "Looks like we got some time. Shoot."

Chapter 21

Year Two, June 30th

We should flee in terror. Yes, that would be the wisest course.

- The Brain

Cal thought it was kind of tacky to be celebrating Launcher's first orbital success while Alekseyev was still stuck in orbit, unable to participate. But no one asked him before they started in on the beer and other sundry potables. Alekseyev and Valentina weren't rescheduled for reentry and landing until tomorrow morning. Cal'd be off-shift then, so assuming he survived tonight's alcoholic monsoon and Micky, he intended to be in the welcoming party on the flight line when the pilot brought his spaceplane home.

He sat in a corner booth of The Grill with Micky, hiding behind a small mountain of beer cans and bottles, and the dense haze of too damned many smokers in too damned small a room. Al Nugent had babbled something about Cal being the one to punch the launch initiation button this morning, and everyone else seemed to think that was significant somehow. He figured on that basis, whoever had booted that machine when the control room went on-line ought to rate a few brews, too. For now, tacky or not, he'd try not to be a party pooper. What hey? Free beer.

Wandering fingers abruptly pulled him out of his internal musings and into the unreal world of The Grill. "Eek!" He jerked and looked down at Micky, curled up next to him on the booth bench. "Don't do that!" He grabbed a napkin and wiped up spilled beer. At least it was only Lone Star; Cal didn't think that counted as alcohol abuse, as might spilling a real beer. With his other hand he got Micky's meandering fingers under control.

"Spoilsport." The brunette stuck her tongue out at him. And wiggled it.

He blushed furiously. "Why do I get the feeling that I'm not ever quite going to get used to you?" he asked plaintively.

"You don't want me to be boring, do you?" she asked... Well, 'innocently' was an adjective unlikely to ever fit the lady.

"That sounds awfully damn unlikely." He gave in and kissed her. At least she was less likely to be saying anything too embarrassingly outrageous while he kept her so occupied.

She broke from the kiss after a few moments. "Shy, huh? Looks like we cured that." She settled back against his side, feeling smug. The roar of the crowd reached a crescendo as a slightly inebriated ad hoc barbershop quartet attempted a ballad that seemed to document the meteoric impact of a spacecraft onto New Jersey. Not much of a loss, to her way of thinking; been there, didn't plan to repeat the experience. Then again...

"...To land smack on NYC!" the balladeers concluded.

Now that might be worth expending an orbiter. She giggled. Cal looked at her askance, curiosity clear. "Don't ask," she mumbled past poorly suppressed giggles. The alcohol was clearly having an

effect on her.

He smiled uncertainly, he'd obviously missed something. "If you say so." He gawked at the surrounding crowd. "Dang. I don't think I recognize more'n one in twenty of these people; whole company must have turned out for this." He sighed. "So much for this being the private hangout for us construction types."

"Who's 'us', kemosabe?" the woman replied. "I seem to recall you getting transferred."

"Only after Construction ran out of stuff for me to blow up," he said in his defense. "What else is a retired mad bomber to do in his declining years?"

"Good answer." Micky made her own surveillance sweep of the barroom. "You're right, though. Lots of new faces. Probably got a lot of folks from town here tonight, too. No law says everyone can't celebrate our success." She raised a bottle from Cal's horde. "To success, and whatever the hell comes next."

Cal lifted his own bottle and they clicked longnecks. "Yeah, whatever comes next." He thought about that. Then he noticed that Micky was staring off into the distance, lost in thoughts of her own. "Something wrong?"

"Just thinking about that 'next' part. Deciding what to do."

"What's to decide?" Had he missed something else? Damn, but ladies were hard to figure.

"You hadn't heard?" Cal stared blankly and shook his head. "Well, the company is laying off us construction types."

"What?"

"Oh, there's still plenty of work. Now that we've made a good orbital run, contracts'll be coming in, and Launcher'll need more support facilities. But buildings mostly." She drained the dregs from her bottle and pulled another from the crowded table top. "Of course, I'm basically unskilled labor. Company'll have a lot more of folks like me than they need. So I'm about to be out of a job."

Something in Cal's stomach seemed to congeal suddenly. He wasn't sure what he'd expected, but this couldn't be it. "What are you going to do? Do you have money?"

She shrugged but didn't meet his eyes. "Money's no problem. Launcher paid pretty good, and I saved nearly all of it staying in the dorm. Of course, I'll have to move out soon." She held up her bottle, this one was clear, and watched the distorted room through the refractive glass. "I guess... before I decide, I wanted to talk to you."

Cal's voice was small when he answered. "I... think this is one of those things I'm not very experienced at yet." He contemplated his own bottle. "I know what I want to say, but I'm not sure what you want to hear."

Damn the man for being obtuse. "Well, I've got some money. If I headed back home, I could probably move in with my folks and finish up college." She watched Cal's face. "Or I could hang out

here a while. Pete," the owner of The Grill, "says he expects business to be so good that he's knocking out a wall and expanding this place. He says he could use another waitress. I've worked tables before; usually get pretty good tips."

Cal grinned at this last. He scanned Micky's fine curves. "I'll just bet you do."

She didn't seem to hear him. "So I suppose I'm asking what you think I should do."

Urk. "I'm not exactly objective about this, Micky. I mean, I want you to stay..."

She brightened instantly. "Then that's settled." She kissed him firmly. "Thank you!"

Cal was thoroughly bewildered. It was that easy? Women. Well, if he was on a roll... "Well, if you need a place to live..."

"I'm not going to move into your bunk in the barracks!"

"No! I didn't mean..."

"I was joking, Cal." She squeezed his hand and smiled reassuringly.

Oh. Who can figure women? "What I was thinking is that... well, we've been seeing each other for months now."

"Four; but who's counting?" She smiled, liking where this might be headed.

"Yeah. Four. Well, I make a lot more money since I moved to Ops. I've been considering getting an apartment in town. And, well, if you're going to be here, I could find a two bedroom place. For the both of us."

"Nope." Micky shook her head firmly. "That won't do at all." Cal's face fell, hopes shattered. "Nope. Separate bedrooms just aren't acceptable. I insist on one bedroom." She smiled impishly.

Cal damned near fainted with relief. "Well, that sure as hell works for me!" He shot to his feet with a heartfelt, "Yee ha!" Most of the room's occupants went silently and stared at the man. Realizing he was suddenly the object of all attention, he blushed and stood there with a classic deer-in-the-headlights expression.

Micky glanced up, grinning. "Well, loverboy? Now what?"

While the pair of lovers worked on discovering they lacked differences to resolve, two young ladies entered the bar. They might've been a little younger than the usual patrons, but no one was noticing that tonight. It was generally a little too drunk out for such details. The first girl through the door was just short of voluptuous, with very fine shoulder-length hair so blonde as to be nearly white, and enormous blue eyes. She surveyed the room with a knowing eye; by her demeanor she was probably no stranger to such places.

One the other hand, her companion definitely appeared to be out of her element. She viewed the crowd very doubtfully, whispering something to her friend and glancing back at the entrance hopefully.

The first girl began a reply, but was interrupted.

A slim, seriously cute guy was standing up in a corner booth, blushing for some reason. He raised a beer bottle and cried, "Um... A toast! To Mikhail Petrovich Alekseyev, the foulest mouthed spacer in orbit!" Laughter and drinks rose.

The blonde wondered for a second what the joke was, but quickly discarded the thought. She spied a couple leaving a table. "Come on, Erin! There's a table." She snatched at her friend's arm and dragged her to the table, arriving just ahead of two more couples. She smiled and stuck her tongue out at them playfully.

Erin Hanners slid into a chair, already sorry that she'd let Gwyneth talk her into this. If her dad knew she'd come to The Grill, she'd probably be grounded for life. At least she knew he'd gone to the Neville's house for a private celebration; she'd heard him mention coming here occasionally. "Gwyn, maybe we should leave. These people are celebrating..."

The blonde flipped her hair out of her eyes. "That's the point, Erin. They celebrate, we celebrate, we all have fun." She opened her fanny pack and pulled out a compact to check her makeup. She looked good and knew it. Too bad she couldn't convince Erin to use more makeup; she was pretty enough, but not terribly flashy. Of course, this was a better night than others she'd spent at The Grill; a much better ratio of unattached guys than normal.

Erin whispered to the blonde. "I don't even have any ID. What if someone cards us?" She twisted a strand of brown hair around one finger anxiously.

"Relax, Erin." Gwyn was a little annoyed. "I'll bet that we don't have to buy a single beer tonight." She rarely had to pay her own way. Not with cash, anyway.

Almost as if her words had invoked them, two bottles of Pearl appeared on the table. Someone mumbled, "First round's on the house tonight," and disappeared back in to the mass of people.

"See?" Gwyn twisted her cap off and upended the bottle. She chugged down nearly half the bottle before breaking for air. She preferred to work up a nice glow early in evening, and maintain it with a more sedate drinking pace as the night wore on.

"I don't even like beer," Erin complained. She fiddled with her bottle for a few seconds, then set it back down unopened.

"Hey, that's no problem!" Startled, Erin looked up to see the source of this new voice. Two men stood there smiling at the girls. Unlike most of the crowd, who were dressed in a variety of blue and white collar work clothes, these guys were adorned in what Erin's father would have called 'Late Urban Cowboy.' A few of the genuine article present in the bar made the poseurs stand out that much more. "Tell ya what... If you little fillies would grace us with yer presence, me'n my pardner here'd be proud ta buy ya drinks."

Erin cringed. The bad dialect was almost painful. But Gwyn cooed, "Why, we be pleased if you'd join us right here! Why don't the two of you find a couple of chairs and settled down."

UC1 looked around, grabbed a recently vacated chair and dragged it over. "Thank ya kindly."

He planted his chair close to Gwyn and eased himself down onto the creaking wood as if stiff from a day in the saddle. Or maybe the spray painted Levis made quick movement torturous. He looked up at his compadre. "Tex, I'll bet that these fine ladies would enjoy a couple o' Tequila Sunrises." He pulled a wad of bills from a snap buttoned shirt pocket. "Why dontcha set us up accordin'ly?"

The still standing wanna-be range rider tipped his hat at Erin and took the proffered cash. "That does sound like a plan, Red." No rationale for the nickname seemed immediately evident. "If'n ya see another seat, how 'boutcha snag it for me?" He smiled at Erin and said, "I'll be right back now."

'Red' wrapped an arm around Gwyn. "Well, I guess we still ain't been properly introduced. I'm Red Ivarson and that," he nodded toward the departing figure, "is m' sidekick Tex. We just hit town, and we're plumb glad to have stumbled on such purty ladies right off. San Angelo must just be a piece o' heaven. And what might your names be?"

Erin sat silently cursing Gwyn for talking her into this debacle. She was not going to play Miss Kitty to some pretend Marshal Dillon. The blonde, however, was not at all disturbed by the prospect. "Howdy, Red," she drawled, imitating his accent. "I'm Gwyn and this is my friend Erin. We're so glad you've joined us. We don't know a soul in here, and we were starting to feel lonely."

Red laughed. "No need ta worry your purty head about that. A man'd be a damned fool to let such pretty Texas roses sit all by them lonesomes." He looked around at the jubilant crowd. "What's up here, anyhow? This place always so lively?"

Gwyn brushed it off. "Oh, this is just a bunch of people from Launcher. They hang out here a lot."

Erin had a better grasp of the situation. "They're celebrating because they just successfully launched a manned spacecraft into orbit today; the first private manned mission in history. And they deployed two navsats." She was proud of her father's work, and meant to make damned sure everyone knew what he'd accomplished.

Red was puzzled. "A spaceship? This is some NASA thang?" How could anyone in the state of Texas not know?

"No!" Erin was annoyed by the obscene suggestion. "It's a private operation, the Launcher Company..."

Gwyn cut Erin off at the verbal pass. "It's no big deal. It's only a little spaceship." She leaned against Red. "Why don't you tell us what you do for a living?" She looked about. "And where is Tex with those drinks? I do believe I've already finished my Pearl."

"There he is!" Red tipped his head toward the approaching cowboy. Tex had his hands full of alcoholic beverages and was dragging a chair through the press of people with one foot. Erin thought he looked like an idiot. But then, first impressions do tend to stick.

Tex managed to plant two bottles of Budweiser and a couple of glasses of some reddish fluid on the table with only a little sloshing. He settled down on his chair, pressing close to Erin. "Hi there, honey. I made it back." Master of the obvious.

"Tex, this here's Gwyn. And her friend doing you the honor of accompanyin' ya's Erin."

Tex wiped a palm on his jeans and held it out to Erin. "Pleased ta meetcha, honey." The slender girl reluctantly shook hands with him. "Now don't be shy, Erin; you go ahead and drink up." He slid one Sunrise closer to her.

Erin eyed the drink doubtfully, but tried a sip. It was sweetish, with a strong taste of alcohol. She didn't like it. "Look, I'd really rather have a coke or something."

"Oh, Erin! Don't be such a geenk," Gwyn chided. "It's good." She took a large sip of her own cocktail to prove the point.

"Sure, honey." Tex eased the glass back to her. "Try some more. It kinda grows on ya." He slipped an arm around the girl's shoulders.

Erin shrugged the unwelcome arm loose and glared at Gwyn. "Look, I think maybe I should leave..."

Gwyn missed the comment as she was already fielding a little kiss from the Old West's gift to womankind. Tex, on the other hand, placed a greasy paw on her shoulder as she began to rise. "Heck, honey. We're just gettin' started. You don't wanta be leavin' just yet." His arm went around her shoulders again.

"Please don't do that." Erin jerked and felt his arm drop free down her back.

"Honey, you just needta relax a little more." The clod tried to raise the unwanted booze to Erin's lips. "You'll feel better after a coupla drinks." He snaked his arm around her back and began to fondle her breast, tickling a nipple with a fingertip. Erin's face went white.

Through the mathematical miracle of statistical clumping, the crowd momentarily thinned on a line of sight from the girls' table to the booth occupied by Micky, Cal, and enough beers for Cal to give the Grill's management some competition. Micky was starting on a reminder to Cal that politeness did not require him to actually consume all the gifts personally and so render him temporarily useless to her.

Cal's taste ran to beer, rather than intoxication; Micky needn't have feared. And something had his attention. "What the hell?" He was staring off into the crowd.

"What? Something wrong?" Micky tried unsuccessfully to determine what had distracted her boyfriend. More than herself, even.

"Over there." Polite manners didn't always apply in venues like west Texas bars; he pointed. "You see those two girls at the table with the rodeo clowns?"

Micky lined up her sights with his finger. "Yep." She frowned a little, maybe a twinge of jealousy there, Micky? "Pretty, but aren't they a little young for you?"

"Maybe a little young for Hopalong and Gabby, too." Cal wasn't sure he liked what he saw. "I think one of them is Hank Hanners' daughter, you know, the chief engineer; we met him the day I got

switched to Ops."

"Yeah? Which one; the blonde? Seems to be enjoying herself."

"No, the brown-haired girl. I saw her with Hanners this morning." What the hell was that guy doing?

"Ah. Now she doesn't seem to be having a lot of fun. Looks a little out of her depth." Micky didn't like the looks of the guy who apparently was striving mightily to lavish some attention on the girl. She suspected that the girl didn't think much of him either.

The subject of their ad hoc investigation suddenly looked shocked. She froze, then appeared to tell the man something. He grinned nastily. She brushed the guy's hand off her breast. He put it back and tried to kiss her. The young woman looked frightened.

Cal stood up again. "Micky, let me out." His gaze was fixed on the scene. The blonde with Hanners' daughter now appeared to be scolding the young woman.

"Cal, are you sure you want to get involved?" She watched the unfolding micro-drama and decided. "Yes, we do," already counting herself in. She stepped out of the booth, letting Cal pass. She fell in behind him as he headed for the table.

Just as Cal and Micky reached their destination, the slender girl spun in her chair and slapped the pseudo-cowpoke. Hard. The man reddened with anger and reached for her wrist. Cal stepped in and blocked the grab as he faced the damsel in distress. "Excuse me, but aren't you Miz Hanners?"

Tex tried to push the knight errant out of the way. "Yo, Slim. Why dontcha find a chickie of yer own?" The background noise in the bar began dropping as more people noticed the exchange. A few who had seen the girl's previous unease executed conscience-checks and decided to take a more active interest.

Cal looked down on the guy trying to shoulder him aside. "Beg pardon, but I was talking to the young lady." He smiled at Erin. "Miss... It is Miss Hanners, right?"

Erin wasn't quite sure what was happening, but the cute toastmaster she'd noted on arrival appeared to be coming to her rescue. Or maybe he wanted to crowd in. "Yeah, I'm Erin Hanners. Do I know you?"

Tex stood up and got in Cal's face. "Look buddy, get the fuck out of here before I gotta hurt you." Red rose to back him up; safety in numbers, the usual thug's formula.

Gwyn slammed her glass down on the table. "Erin, you geek! Now look what you've done; we're just trying to have a little fun!" She glared at her companion.

Micky stared down the blonde. "Honey, have all the fun you want. But from what I saw, I think maybe this young lady has different ideas for recreation." She turned and smiled at Erin. "Miss, you don't know us, but if you need a ride home or anything, all you have to do is ask."

Tex exploded. "Look, bitch! Nobody asked you! Mind your own fucking business!" He turned

on Erin. "And you, bitch! Don't nobody slap me!" He drew his hand back to return the favor. But for some reason, it wouldn't come forward. Pissed off, he looked back. And up. And up a little more. Oh, Shit.

"Hi, Cal," Dom Necklin greeted his buddy, nonchalantly gripping the intended assailant's wrist in one ham-sized fist, but otherwise ignoring the would-be aggressor. He smiled at Erin. "This a friend of yours? Howdy, ma'am. I'm Dom."

By now, it was clear to Erin that these new arrivals weren't trouble; at least not for her. "Um, hi," she replied uncertainly. "I didn't mean to cause any trouble here."

Cal tried to reassure her. "No problem. It isn't you causing trouble, Miss." He paused and raised his eyebrows. "Oops, forgot to make introductions. I'm Cal Schmidt." He gestured towards Micky. "And this is..." Red, largely ignored through the exchange, decided to come to his partner's aid. But discretion being the better part of valor, even for assholes, he chose to sucker punch Cal rather than face the huge construction worker attached to Tex's arm. The punch never landed. Micky spotted him moving, swept Erin's untouched bottle of suds from the table, and swung it up in an arc intersecting his genitalia. He squeaked and hit the floor curled into a fetal position. "...my best friend Micky," Cal continued as if nothing had happened. He grinned up at Necklin. "Sorry, Dom, but she's better looking than you."

"No fuckin' kiddin'," the slightly gentle giant replied in a crude but lovable manner. "Can't argue that." He spotted someone pushing through the crowded room. "Hey, Pete!" he called to the approaching bar owner.

"Hi, Dom, Cal." The fat man smiled at Micky. "Good evening, Micky. When you gonna come work for me?" He didn't seem to notice either the gaudily dressed cowboy dangling from Dom's extended arm or the silently gasping figure curled up on the floor.

The men returned the pleasantries. Micky grinned at Pete. "Funny you should ask. Been talking to Cal about that. I think I'd like to take you up on that offer, Pete."

"Great!"

Erin's gaze shifted from one character in this show to another. Is this a bar and grill or a comedy club? Everyone seemed to be oblivious to the abortive barfight, including the participants. Well, not Gwyn; she was busily pretending not to be present. Getting busted in a bar for underage drinking hadn't been on her agenda.

Micky was keeping an eye on the girl and took note of her bemusement. "Honey, I think you'll be okay. Look, we all work for Launcher like your dad, and some of us figure we should look after our own." She sat down in Tex's abandoned chair. "You look like a fish out of water here."

Erin figured that was pretty obvious. She half-smiled uncertainly. "Uh, yeah. I think I should go..."

Gwyn spoke up finally. "Yeah, get your ass out of here! You've ruined my night, so you can jammin' well find another ride home!"

Pete joined the oral fracas. "Well, miss, if you've got your own ride, I'd thank you to use it. Now. Sheriff Reece is pretty broad-minded, so long as I keep the place orderly, but I don't need any underage chippies trying to turn tricks in my place."

"Turning tr... Look, you fat bastard...!"

Micky interrupted her. "Uh uh, honey." She looked to the bar owner. "What say I go on the payroll now, Pete?" She ran an appraising eye over the blonde. Her teeth bared just a little.

Pete chuckled. "Sure, Micky. We'll talk wages later. How 'bout you clean up a little?"

"Oh, yeah," the newly payrolled woman purred. She planted her hand on the back of Gwyn's neck and applied some light pressure. "Why don't I show you to the door, honey?" As she walked the burgeoning bimbo to the front entrance, she called back to Cal. "Would you pull your truck up front and give me and Miss Hanners a ride home?"

"Will do." He crammed his hand into his pants pocket for keys. "Pete, Dom. Looks like I've gotta hit the road. I'll check with you later." He smiled down at Erin. "Miss, I suppose this is a little sudden, but if I don't look after you, Micky's going to make my life miserable." He offered her a hand. "May I offer you a ride home?"

A bewildered Erin looked around. Red had dragged himself into a chair where he sat hunched over and green-faced. Tex was struggling weakly like a hooked bass. Bar scenes were never like this on TV. The bartender or manager, or whoever, seemed to approve of the guy's offer of a ride. And with a beauty like that Mexican girl waiting, she doubted that this guy was really after her skinny body. "I... guess that would be a good idea. I really don't belong here." She gave Pete an apologetic smile. "I'm sorry that I caused so much trouble, sir."

"Nah." Pete brushed it off. "I saw it from the bar. Wasn't you making trouble." But he added sternly, "But I don't think this is a place you oughta be habituatin' for a couple more years maybe. How 'bout promisin' to show a little better judgment in the future and getting outa here before someone wants to yank my license?"

"Yes, sir," Erin said in a small voice.

"Come on, Miss Hanners." Cal waved her on. "Let's get you home."

Erin blanched. "Home? Oh, shit. What am I going to tell my mother?"

"That's between you and her, I suppose. Doesn't seem to me that you necessarily have to tell her anything." Cal set his hand at the small of her back and guided her to the door where Micky was waiting patiently.

"Hey, Cal!" Dom shouted. The young controller glanced back to see Tex still dangling from Dom's vise of a hand. The burly guy was grinning broadly. "Whatta ya want me to do with this one?"

Cal looked at the hooked man and his agonized buddy. "Shit, I don't know." He gave Pete a pleading look.

The barman looked the two malefactors over, and sniffed. "Heck, Dom; I guess it must be catch-and-release day. Why don't you just let him go." He stared at Tex as he stumbled when Dom abruptly set him free. "I'm kinda hoping they see the wisdom of just getting the hell outa here without making any more waves."

Tex and Red scanned the crowd encircling them. If there were any friendly faces in the establishment, they were well camouflaged. Tex helped Red to his feet, and they headed for the door, Red still groaning and Tex trying to massage his arm back to life.

Cal drove through the night, for once not using the excuse of changing gears with the floor shifter to fondle Micky's leg. He kept his eyes on the road while his lady watched their passenger, who in turn simply stared into the night.

"Turn here." Erin pointed to the left as the truck closed on another intersection in the suburb. She was still confused by what she'd gotten herself into. It was completely beyond her previous experience. Stupid mistakes, strangers trying to... take advantage of her, and more strangers helping. For no particular reason she could see. "Thanks again for helping me."

Micky patted the girl's hand. "You're welcome, but I think you can stop saying that now."

"Are you going to tell my folks what happened?"

Cal was startled, and Micky said, "What? Of course not. It isn't our business. My personal call is that you made a mistake, and it looks like you learned better. Why dwell on it?"

"I wish my parents were that reasonable," Erin sighed. The road dead ended ahead. As Cal slowed the truck, the girl said, "There's my place; the white house with the chainlink fence on the right."

Cal pulled into the concrete-paved driveway and set the parking brake. "Well, here's your stop. You take care now, Erin."

"Oh, shit." The young lady hadn't heard what he had said. She was looking at the house. A dumpy woman in a shapeless dress or robe was standing on the porch watching the truck suspiciously. "That's my mom," Erin explained. "Now I'll have to tell her something."

"Try the truth," was Cal's suggestion. "You made a mistake, and it worked out okay. She might be mad, but most parents will be glad you're home safe and sound."

"I wish. You don't know my mother." Erin anticipated the coming encounter with dread. "I'd better head in before she..."

Too late. The older woman was halfway down the sidewalk in front of the ranch-style home, headed right for the pickup. "Who is that?" she was whining. "Erin, is that you in there?"

As Erin made the long step from the truck Micky whispered, "Ave Caesar! Morituri te salutant!" and winked.

The quote startled Erin. Her father was always saying that. She was looking back at Micky as

she rounded the front of the shabby old truck and replied to her mother. "Yes, Mom," she called out. "I'm just home a little early."

Mrs. Hanners peered into Cal's open window. He essayed a small smile, which obviously meant little to the suspicious parent. "Who's that? I thought you were with that Gwendolyn slut." she asked insistently.

"Gwyneth, Mom. We left separately, had... a disagreement. These are just some friends who gave me a ride is all."

Hanners stuck her face up close to Cal's. "I don't know you. My daughter's supposed to stay away from strangers. Trouble." She grimaced. "You look a little old to be hanging around my daughter anyway; she's just sixteen, you know."

Cal caught a strong whiff of stale booze and drew back. Some concerned mom. "Ma'am, I'm just giving your daughter a ride home." He tried for some humor to lighten the air. "Any more than that and Micky here," Micky awarded the harridan one of her best smiles, "would want to have a few words with me herself." He tried a little laughter at his own expense, to no avail.

"I don't like your looks. You look like trouble. I'm sorry we ever moved to Texas. You people have no sense of p'rp'riety!" Unseen by the elder Hanners, the younger was making apologetic expressions behind her back.

"Mom, will you leave them alone? All they did was help me out. Gave me a ride home."

Suspicious, the mother spun clumsily, and faced her daughter. "And why are you home so early? I thought you were staying out 'til midnight? And why isn't that little tramp driving? I expect you to come home the same way you leave!"

"Mom, I told you, we had a fight. I wanted to come home, and Micky and Cal gave me a ride." She shot an embarrassed glance to the truck's occupants.

Cal tried again. "Ma'am, you've got no call to be hard on Erin. Her friend took her to... a party that she didn't know about. Erin didn't like her friend's associates or their idea of fun. She made that clear, and left because it wasn't anything she wanted a part of. She did fine." Micky looked a little surprised at this abbreviated version of events, but figured it hit the high points and left out anything the drunken woman probably wouldn't handle well. She nodded to support the tale.

Erin seemed pleased, too. She gave Cal a look of pure gratitude. "Isn't that what you've always told me to do, Mom? Just stay away from trouble?"

Mrs. Hanners swayed a bit. "Well, I still don't like it. I'm going to make your father straighten you out, young lady!" She addressed Cal and Micky again. "And I don't like you hanging around my daughter!"

Cal and Micky just looked at each other and blinked. Micky shrugged. "Whatever you say, Mrs. Hanners." She rolled her eyes, and missed Erin doing the same.

Cal spotted it and laughed. "Well, I guess it's past time for us to be going. Ya'll have a nice

night." He released the parking brake, put the truck in reverse, and pulled out of the driveway. In the rearview mirror, he saw the young woman smile and wave. Then her mother grabbed her arm and dragged her into the house. "Poor kid. Sweet girl to be stuck with a mother like that. Her dad didn't seem like a bad sort when we met him, though."

"Yeah, I seem to recall that he had a sense of humor. I guess she'll be okay if her mother waits to let her dad handle it."

"I hope so. I sorta liked her."

"Don't go liking that pretty little thing too much, Cal." Micky crowded closer and let her hands do some talking, far more eloquently than simple sign language. "I've still got plans for you."

"Oh, dear. I'm terrified," he replied languidly, then chortled.

Chapter 22

Year Two, July 1st

Government at its best is a necessary evil, and at its worst, an intolerable one.

- Thomas Paine

It was a happy group gathered on the Launcher flight line. And a big one. Neville had bowed to the inevitable and declared a company-wide down day. Save for the relatively few people needed to get the Alekseyev and the spaceplane safely back to Earth, nearly the entire company workforce was waiting to see the landing of the first private manned spacecraft.

Nor were company people the only spectators present. Neville surveyed the impressive collection of local and national radio, television, and netcast news crews and grinned. Only a few locals and some netnews types representing special interest associations had bothered with yesterday's launch. Whether the mainstream media had been 'encouraged' to ignore the possibly illegal private launch or they simply hadn't quite believed Launcher could pull it off, Neville didn't know. Or much care. But they were making up for it today. He wondered if the collective microwave energy from all the studio links was quite enough to nuke hotdogs.

He welcomed the coverage, of course; he hoped there was still some semblance of respect for yankee ingenuity left in the couch potatoes of America. The weight of public opinion on Launcher's side would help in the upcoming legal battles. NASA and the Department of Transportation had already filed for an injunction against any further launches. Since Neville had told the busybodies to go diddle themselves and launched this first mission without NASA certification, he kinda thought the feddie judge wouldn't be predisposed in the company's favor. Of course, Creasing had prepped some canned restraint-of-trade suits as Legal's preflight contribution to the launch. As soon as NASA's papers hit, the lawyer filled in the appropriate blanks in the boilerplates and filed a set of countersuits.

"Mr. Neville!" Some talking head had made it past security, cameraman in tow. "Is it true that Launcher will refuse to comply with the federal injunction against more launches? Won't further launches pose a threat to public safety as Mr. Hennessy at NASA has said?"

Neville scanned the guy's press ID. Joy, that damned cable network. He countered with, "Is it true that you're an illiterate who can't read either 'No Access' signs," he pointed at the posting which the news weasel had pushed past, "or the press package you're clutchin' in your grubby paw right now?" With any luck, the guy was going out live.

The hairspray addict's jaw missed the tarmac by mere inches. "Excuse me?" His video jock shook with laughter, mentally thanking god for fuzzy logic image stabilizers. This should be interesting

Neville stared him down. "Son, your network never met a government edict it didn't like. Your coverage of Launcher has been invariably biased, takin' IRS spokescritters' lies for gospel and declinin' t' even air our responses. You skipped yesterday's press conference and the one I held just two hours ago. Now you're trespassin' and intrudin' on my private celebration t' ask stupid questions you'd already have the answers t' if you'd done your job."

"Sir, we're simply trying to maintain complete coverage of the issue..."

"Bullshit. Your outfit is the National Inquirer of TV news. Ya still haven't lived down that Vietnam nerve gas crap."

The reporter flushed. "That was years ag..." He pulled himself together. "Mr. Neville, NASA and the DoT have forbidden orbital launches whose flight profiles would take them over the continental United States for safety reasons. One might think the hazards of a rocket crashing on a school full of children would be obvious. Nevertheless, your company recklessly launched a spacecraft eastward over Texas and the southeastern U.S. Furthermore, you neglected to obtain required NASA safety certifications for your craft. Do you have any comment?"

"Your hairpiece is slipping."

"It is...?" He reached towards his head, then forced his hand down. Thank god for editing. "Do you have any comment on Launcher's recklessly unsafe activities, Mr. Neville?"

"If we ever have any, I'll letcha know."

This wasn't going well. Damn it, people were supposed to cooperate with the press. "Sir, would you please comment on NASA's allegations of safety violations?"

Neville feigned innocence. "Oh, the allegations you wanna know about. Too bad you skipped the conference. And can't read."

"Please!" the journalistic jackal begged.

Neville slipped his right hand into his inside coat pocket and fiddled with something. "Okay, you wanna statement?"

"Of course, I want a statement!"

"Calm down, son. Here's the deal. You want my comments, you agree t' air 'em unedited in their entirety. I talk, you air the remarks, and don't cut 'em. Deal?"

"We may have to edit for time reasons." Or any other reason that struck his director's fancy.

"Then go piss off. Aired, and aired unedited, or nothin'." Neville smiled grimly.

The plastic-haired mouthpiece decided it couldn't hurt to humor the old fart. His director could cut and paste a video tape more seamlessly than most people would think possible. "If that's what it takes, then yes. We air it uncut."

Neville pulled his microcorder from his coat. "Great. Glad we could reach an agreement. I'll make sure this gets t' our lawyers so we keep everythin' straight. Now start recordin'."

"You son of a..."

"You wanna statement or not, boy?"

He'd overslept this morning, and couldn't very well head back to Atlanta with nothing. "Go ahead," he answered in a surly tone.

Neville smiled grimly and started ticking off points. "Fine. Launcher's position on injunctions against space launches is that the federal government has no Constitutional authority t' restrict travel by private citizens via private transport, particularly when said travel in no way involves travel to or from a foreign country.

"Regardin' the claim that an overflight of the U.S. with our little bitty one-man spaceplane is somehow more dangerous than thousands of huge airliners constantly cruisin' overhead an' landin' right in the middle of major cities... Well, I expect that even your network oughta be able t' see how stupid that is.

"As for NASA's claim that we require a safety certification granted by them... Launcher has made several test runs and suborbital flights with no mishaps beyond a single expended unmanned mockup. We've made a successful orbital flight. Our safety record is perfect." Now it was time to close in for the kill.

"On the other hand," Neville continued, "NASA has Capsule 204 with three dead, Apollo 13, Skylab fallin' outa Australia, Challenger, Hubble, a Mars probe lost because they didn't know the difference 'tween miles and kilometers and another that likely fell outa the sky 'cause of a bum sensor. An' plenty more I'm skippin' for lack'a time.

"We figure NASA doesn't have any call to quote safety at anybody else," Neville deadpanned.

"Oh."

"Yeah. Oh. Got any more stupid questions before I have your ass tossed off company property?" Neville waved some people over.

"Kill the cam," the reporter told the vidjock. When the red lamp extinguished, he spun on Neville. "Old man, I guess you don't know who you're screwing with. You aren't making any friends giving the media trouble. We're going to make your life miserable, you..."

"Aw, just shut up," he ordered tiredly. "I ain't got time for your crap. The legit press already got their statements, and now they're coverin' the actual landin'. If you were a real reporter, you'da done the same. Now get outa here and save my folks the effort of removin' you." He nodded at some guys in white hats emblazoned with the word 'Security'. "These folks were just leavin'. Make sure they find their way out okay."

"Will do, Mr. Neville," replied the detail boss- Dwayne Simmons, Neville was pleased to see.

The newsie was still only making intermittent contact with reality. "You can't interfere with the freedom of the pre... Eep!" The security boss, one of the biggest, meanest looking Indians he recalled seeing, grasped his arm gently but firmly to lead him away. "Assault! I'm with the press!"

The security officer grinned. "And when I'm not moonlighting, I'm Deputy Dwayne Simmons." He tapped a shield pinned to his breast, a star-shaped badge different than the ones worn by his partners. "What you are is trespassing. As I see it, we can handle this privately, and you just leave with

your story. Or I can arrest your worthless butt. Any questions?"

Apparently not. Dwayne and his associates led the faux news team away. They left grumbling, but they left. Creasing approached Neville diffidently from where he had watched the exchange. "That could have gone better, sir. At the risk of sounding like my predecessor, are you sure you want to antagonize the press at this point?"

"Press, my ass," Neville grumbled. "I've hated that network since Bush's Gulf War. They ought try a little truth in advertisin', admit t' bein' the government's Ministry of Truth. Pravda Network News would be more like it."

"Maybe so, but they still get watched a lot."

"So do the Three Stooges." Neville stopped the recorder and ejected the chip. "Here, dupe this, and get it transcribed. Get copies t' Harry in PR, and tell him t' forward it t' every real press agency he's got a line inta. Somebody'll run it, if just t' embarrass a competitor. That threatenin' bit at the end should be good for some laughs."

The lawyer acceded to the role of gofer. He took the cartridge and nodded. Okay, I'll take care of it." He glanced at his watch. "But just a bit later, please. It's time we got ready for Mikhail's landing. It's just a few more minutes."

Neville consulted his own timepiece, an old-fashioned pocket watch. He detested jewelry and accouterments fastened to his hands; his wedding band was the sole exception he'd ever made. "Sure is. C'mon." He led the way to a golf cart, which the two boarded, and followed a roped off path to the orbiter reception area. There was a podium erected where Neville and the arriving astronaut would be expected to make another set of speeches, and ice chests full of beverages, soft and otherwise. Workers were laying out more potables and some snacks.

One reporter must have thought he'd found a story missed by everyone else. Equipped for man-on-the-street interviews, he aimed his shouldercam at an unwary woman setting an ice chest of sodas down on a folding table and stuck a microphone in her face. "Excuse me, I notice that cooler is full of a particular brand of cola."

She drew back from the mike. "So what? And get that thing outa my face." She tried to sidestep the guy. "I got work to do."

The scavenger followed as she tried to evade. "Has Launcher signed an endorsement contract with the bottler in return for this publicity?"

"Say what?" An expression of uncertain disbelief.

"What endorsement contracts have Launcher Company and Mr. Aleksev," he mispronounced, "signed?"

"Beats the hell outa me. I'm just a caterer."

"Then Launcher has an endorsement contract with you?"

"They let you out without a keeper?" She pushed past and got on with her job.

Neville watched the silly exchange from a short distance away. It was just one of several of the sort happening all around as bored newsgeeks tried to keep themselves occupied while waiting for the landing. Here and there, he saw talking heads interviewing each other, a pointless and ego-strokingly misleading pastime for people who were supposed to be reporters.

"Roger, Mikhail. We verify you at one hundred thousand and descending." A controller's voice blared out from scattered PA speakers. There was a click, and another voice rang out.

"Good afternoon, as you just heard, Mr. Alekseyev has reentered atmosphere and is descending from one hundred thousand feet. He's shedding altitude rapidly, as planned, and will be landing in twenty minutes. He'll be approaching from the west, so keep your eyes open, folks."

Even though it was much too soon to spot the spacecraft, Neville automatically looked to the west. "Not bad, Tom," he addressed the lawyer. "We're just twenty minutes from a perfect mission."

"Damned right," another voice answered; not Creasing. "I'll be expecting a very nice Christmas bonus for this."

Neville glanced back and saw that they'd been joined by a smugly happy engineer. "Bonus, hell, Hank. You're a junior partner in this bedlam; I'm gonna make you do the signin'." He saw a water-beaded can in Hank's grip. "I don't suppose you got another one of those for me?"

"Sure." Hank extended a can of grape soda. "Amy asked me to keep you properly hydrated today."

Neville gave the can of no-doubt overly sweet fly bait a compensating sour glance. "Damn it, everybody's ridin' me lately." He popped the tab and drank. "Guess I'll take what I can get."

Creasing spoke up. "And that's about all you can get. Amy talked to me, too." He winked.

"Damn it," Neville complained. "I've been drinkin' for years. My liver's too well preserved in alcohol to rot now," he grouched.

"Done wonders for your brain, too," chipped in yet another voice. A uniformed man contemporary in years with Neville had joined them.

"Howdy, Virge," Neville replied. "Welcome to the party. You know these guys?" He indicated his attorney and boss engineer with a nod.

"I don't think I've had the pleasure yet," the newcomer responded negatively. "Hi, folks. I'm Virgil Reece. I pretend to be the sheriff around here in my copious spare time." He offered his hand to Creasing and Hanners in turn as they introduced themselves.

Greetings now out of the way, Reece prodded Neville just a bit. "Damn, Bill. Weren't those model rockets of yours enough?" he referred to the hobby in which Neville had largely abandoned to the press of business for the past year.

"You know how us hi-power types are. Just gotta keep tryin' for something bigger'n better. After S-class, I got tired of just piddlin' 'round."

"Shit." Reece made a show of gloom. "At least you haven't shot down my chopper this time. Yet," he finished glumly, but with a twinkle in his eye.

"Beg pardon?" Creasing was clearly curious about this obscure reference, and wanted a little clarification.

Neville was happy to oblige the man. "Me'n Virge first made acquaintance some years back when his department's overly inquisitive helicopter pilot ignored a no-fly warning and buzzed my rocketry club's launch field one day when we were goin' fer'n O-class altitude record." He shot a pained look at the sheriff. "We didn't actually shoot 'im down, but we did scare the crap outa him."

"For real," Reece confirmed. "Poor guy needed a new flight suit, and nobody'd get on the helo until he'd swabbed the seat down with bleach." He chuckled. "But he never, ever ignored another flight advisory after that."

The speakers buzzed to life again. "Da, control. Altitude fifty-five thousand, descending at three thousand six hundred per minute. Airspeed down to six hundred knots. All nominal. Quite different ride than Ilyushin pigs I once herded."

"Confirmed, Mikhail. Looking good, and spaceplanes are more fun than Russki airliners. Will note. And you might note that you're on live feeds again." Mild laughter spread through the waiting crowd.

"But of course; I always look good. Damned good," the pilot added, gilding his shiny-new profane tradition.

"Fantastic," the controller replied sarcastically. More laughter. "Mikhail, come right five degrees, and see if you can't maintain thirty-six-seven for a few more minutes."

"Right five degrees, maintain thirty-six thousand, seven hundred feet," he confirmed. "Will your American President be there to give me medal? I hear is traditional."

The controller laughed. "That's a negative, Mikhail. Looks like we accidentally lost his invitation."

"Good." Reporters and video heads scribbled and recorded notes of this little exchange. "Control, I am now four-fifty knots, still at thirty-six-seven, and 80 miles out."

"Roger, Mikhail. You are now clear to descend to ten thousand feet. We'll see you in person in a few more minutes."

"Da. Descending to ten thousand feet. I shall expect you to be present with vodka. And when does your country finally convert from outlandish English measure system?"

"Vodka, it is. And we expect metric about the time hell freezes over. NASA may complete the conversion a few years after that."

Creasing listened to this radio banter and made some notes on his PDA. "Well, Bill, that should be good for another fine and reprimand from the FCC. If Alekseyev is going to keep flying for us, we probably ought to run a tab with 'em for the obscenity violations."

"Screw 'em." Neville had a crafty grin. "That ain't obscene in my book."

"Tell it to the FCC." Creasing put the electronic notepad away. "So what's next, after this?"

Neville smiled. "Lots. Those satellite phone guys made an offer, so we'll be boosting their sats in a few weeks. And I want to get our traffic control birds up as quick as they come out of the factory." His happy expression flickered for a brief moment. "And I've got some other stuff lined up, too."

Hank spoke up again. "Satellite phones? Is that the consortium trying to orbit the Iridium-style system?"

"Yep."

"Cool. I hope they have better luck than Iridium did. I was always sorry that didn't work out."

"You just like techy toys," Creasing joked.

Hank was about to fire off a rejoinder when the speakers interrupted. "Folks, Alekseyev and the plane are on final approach. If you'll keep an eye out to the west, you should see him any time now. And now I'll return you to our current program already in progress."

"...Reduce to two-eighty-five knots, and follow the MLS beam."

"Da, control. I have MLS. Flaps extended, and reducing to two hundred-eighty five knots."

"Great, Mikhail. Grandjean says this is going so well, we're going to fire you and stick computers in all the planes."

"On slope, five miles out, two-eighty-five knots. Please advise your supervisor that some things, like fine women and great pilots, cannot be mechanized."

"There he is!" Hank pointed to a speck in the distance. Neville and Creasing tried to pick it out themselves.

"Yeah, I see 'im." The president was first. "Whooley! That sucker comes in quick, don't he?"

"Two hundred-eighty five knots airspeed." Hank shrugged. "Not so fast, all things considered."

"Fast enough for me," the sheriff disputed. "Lookit that baby."

"Control, one mile out, airspeed steady. One thousand feet and dropping."

"Affirmative, Mikhail."

"Outer marker." A pause. "Easing it down."

From their places on the raised platform housing the podium, the three company execs saw it all. There must have been more radio traffic, but they never heard it. The spaceplane, looking like some beautiful DC-10-sized jet fighter, sleek and shiny, flashed over the fencing at the end of the runway. Flaps extended, and airbrake surfaces pushed out from the fuselage, and the plane touched cement with a small puff of smoke from the landing gear. The craft rolled down the runway, slowing dramatically, but still eating up a couple of thousands of feet of distance. A drag chute ejected from its tail, and the plane rolled to a stop. The loudspeakers directed recovery teams out to the vehicle. As they raced out, the cockpit canopy opened.

"Control, it would appear that I have landed beautiful beast successfully."

"It sure looks that way, buddy. Not too shabby. If you'll just hang tight, we'll get you out of there and over to meet Mr. Neville and a hell of a lot of reporters."

"Perhaps short intermission first, control. I would appreciate opportunity to investigate flight line latrine first. And we must speak to suit designers about improved plumbing."

"Roger, Mikhail. One pit stop coming up."

Hank scratched the tip of his nose and grinned. "Hmm. I think I can see how our boy got passed over for the Russian space program."

Neville returned the engineer's glance blandly. "You think?"

The delay wasn't excessive, except to the mediamuckers who thought their deadlines took priority over real life. Security had to forcibly eject one news anchor and her camerawoman from the latrine, where they were hiding in stalls to ambush the astronaut. Sheriff Reece made his apologies as he left to supervise the arrest; the reporter had gotten downright nasty over missing her scoop. The greater part of the delay came from the sheer press of people and reporters - by then, Alekseyev wasn't prepared to grant reporters human status - who wouldn't clear a path for his golf cart. Everyone wanted an autograph or an exclusive interview. Finally, someone brought a pumper truck up and threatened to cut loose with the water cannon if they didn't let the astronaut's cart pass. News crews concerned with the effects of water on expensive electronics and even more expensive coiffures gave way first, but everyone relented before the rescuer felt obliged to make good his soggy threat.

Eventually, Alekseyev made his way up the short set of steps to the podium where Neville waited. He still wore his skin tight pressure suit and had his helmet tucked under one arm; but he had shed the concealing coveralls. If half of what Neville had heard was true, the astronaut was intentionally showing off for the ladies watching TV. Neville was almost done with his sixties, and still hadn't figured out the species' better half; but he suspected Alekseyev's ploy would work. He grinned.

Alekseyev stepped up to his boss and began a salute. He stopped himself and turned it into a distinctly unmilitary wave. "Mr. Neville, as my friends around here say... Howdy!"

Neville's grin widened. He nodded approvingly. "Mikhail Petrovich Alekseyev... Not too shabby." He reached into a coat pocket and removed an envelope. "Since you brought my toy back without breakin' her, I thought you rated this." He handed the packet to the flier.

Alekseyev peeked into the envelope and smiled avariciously. "Spasebo, Mr. Neville. I shall endeavor to always return her in fine shape."

Neville moved back to podium, vaguely noting some more activity at the platform steps, which he assumed to be reporters. He pulled the microphone a little closer to his mouth. "Well, let's make it official. We're all damned proud 'a Mikhail for a great mission. And yeah, he just got a little bonus. His came personally, but everyone else'll be seein' a little somethin' in their paychecks this week.

"And since the first successful, private, manned orbital mission is complete. I can pass on some more word. This was just a first. We're already committed for at least a dozen more launches in the next two months! Let's see NASA or anyone else match that kinda turn-around time!"

He gestured for Alekseyev to step forward. "But I'll get outa here now. Here's the guy ya'll really wanna talk to!"

"Excuse me, but we're going to have to delay these proceedings while Mr. Aleksev clears customs." The voice came from close behind the president and was picked up clearly by the live mikes.

Neville looked back, puzzled, and saw a group of men in white shirts. It took a moment for the badges and insignia on two of the men to register. Customs agents? "And who are you to be interruptin' us?"

One of the badged men pulled away from the company security men escorting him. "Customs. Having just arrived in the U.S., Mr. Aleksev..."

"Alekseyev," the astronaut corrected frostily. He recognized these uniforms. He'd had some trouble when first coming to America, with a Customs clod who'd seemed unaware of the fall of the old soviet regime. "Nye kulturni. Chekista!" He sneered at the snoop.

"Alekseyev," the Customs man grudgingly allowed, "will have to submit to a search..."

"A search of what?" Neville wondered aloud. He pointed at the form-fitting pressure suit, which rather obviously wasn't hiding anything. Alekseyev's display might do him even more good than he'd first thought.

"This man fits a profile. It will be necessary for him to undergo a body cavity search."

Alekseyev mouthed the words silently to be sure he had understood correctly. "Nyet. Body search? Hmmph. My ass," he declined, borrowing a phrase he'd picked up locally.

"That's exactly what these goons have in mind, Mik," Neville said

"If perverts wish to probe assholes," the pilot said loudly, "let them play with each other." He looked down his nose at them and sniffed. "They look like they are accustomed to such... pleasantries." The insult was picked up by the podium mikes and amplified for the entertainment of the spectators on the tarmac. The broadcasts were probably doing wonders for network ratings, too.

Neville looked to Creasing and saw him frantically reviewing something on his wireless PDA.

He shrugged and decided to wade in on his own. Again. "Lemme get this straight. You're out here to body search a guy who made a flight originatin' an' arrivin' in the U.S.?"

"He left the borders of the U.S. As he is now entering the country, we'll have to search him."

"I've left the country an' returned without ever gettin' my butt probed by one 'a you weasels."

The Customs men gritted teeth at the insult. "Maybe we ought to rectify that, mister," one said hotly.

His partner pulled him back. "One at a time, man." He turned to Neville. "The spaceboy gets searched." He smiled nastily. "And on suspicion of smuggling contraband, his aircraft is impounded." That for the old bastard.

Neville's eyes narrowed to mere slits. "Not fuckin' likely, goon," he hissed. He took a deep breath and contained himself. "Boy, you an' your buttbuddy're on private property, and as the owner I can guaran-damn-tee that you weren't invited. Get the hell off'a Launcher property."

The thug tapped his badge. "Official business, mister. You don't want an obstruction of justice charge, do you?"

Neville smiled, very much aware of the cameras and mikes focused on this charade. "The only thing obstructed here is your anus, thug. Looks like you got your head stuck up your ass." He nodded to his security detachment. "Get these trespassers out 'a here, Dwayne."

"Are you stupid, old man?" the Customs agent demanded. "We are here on official business. Oh, fuck it." His hand went to the small of his back for a set of handcuffs. "You're under arrest."

Neville watched him move in with the cuffs. Not nearly so smooth as Dwayne at the job. "Got a warrant?" He asked nastily.

"I don't need a warrant to bust your ass!"

Neville began to wonder if the guy had been picked for this job on the basis of sheer stupidity. "Boy, you do need a warrant." He smiled for the cameras. "This is private property, not a public airport where you normally work. You're out'a your jurisdiction. That means you need a warrant. Let's see it."

The man grabbed at Neville, and abruptly found himself under restraint, arms pinned by two Launcher officers. The second agent went for his holster.

"Uh uh uh," Dwayne Simmons chided, sidearm targeted on the bridge of the man's nose. A thoroughly department-unapproved laser sight painted a red dot between the man's eyes, marking the expected point of bullet impact.

The agent stared up the barrel of what must be the biggest, blackest handgun he'd ever seen. He opted against continuing his draw. A bright flash, noticeable even in the Texas sunlight, distracted him for a moment. He remembered that he was performing for a gaggle of reporters. This was probably even going out live. He eased his pistol back down into the holster, then spread his hands away from his body, palms forward and empty. The security officer's aim drifted enough to shine the bright laser

light into each of his eyes, then back to the jerk's low brow. The officer was well aware that it left annoying afterimages.

Deputy Simmons decided to put himself back on official duty. His badge was already attached to his company shirt. "Okay, let's get this straight. You claim to be Customs officers, but you're trespassing on private property. Since any action by legitimate Customs personnel here would require a properly issued warrant, you were asked for one. Instead of producing a warrant, you assaulted a citizen and drew a firearm." Without lowering his weapon or turning his head, Dwayne spoke to one of his officers. "Lee, find the sheriff. Get him over here ASAP. Shouldn't be too hard; I expect he's here somewhere like the rest of the county."

"I'm on it," the woman replied, cellphone earset in place. She tapped a key and spoke quietly.

The deputy spoke again. "Roy, Jim. Relieve these guys of their toys."

"You can't do...!" the withdrawn fed started. Dwayne flicked the laser light back into one eye and the goon shut up. Two company men frisked the agents quickly and efficiently, relieving them of assorted handguns, collapsible batons, OC spray, a blackjack, and a two small stunguns. After locating and removing keys, they handcuffed the agents with their own restraints. Dwayne lowered and holstered his gun. Once it was no longer pointed at the hot-tempered Customs man, it assumed the normal dimensions of a .45 caliber Glock 21. Dwayne was a traditionalist when it came to combat cartridges.

"Now then," Dwayne said, more relaxed. "One more time, who has a warrant?"

Abbot and Costello glanced at each other, then shook their heads. "We don't have a warrant," the original speaker said. "We never use warrants for searches." He realized that he'd drawn the attention of all those cameras upon himself and cursed inwardly. "I mean... We don't have to... The court says..." He decided to shut up.

Neville shook his head in amazement, then moved back to the podium. "Well, folks. I guess that ends the floor show portion of today's entertainment. Now, if anyone has any questions for Alekseyev here, I expect I'm about t' be real busy. So I'll see ya'll later." He smiled and waved at the cameras, and left the podium. He saw Sheriff Reece coming up the steps and went to discuss the current fiasco.

Politics may make strange bed partners, but it has nothing on Texas bars. Hunter finished counting out bills for the celebratory round he'd just bought; he figured Launcher's first mission was worth a toast or three. But he scowled slightly as the bartender retrieved the money. It was more than it used to be, not so long ago. He thought about exchanging bucks for pesos, which were doing better in the international money markets than US dollars these days. Thinking about feds and money reminded him of something. He sipped scotch and water and considered his drinking companion. "Liz, you still handling the federal accounts over where you work?"

Liz Montoya blinked at the sudden shift from their previous topic, SSTO versus air launch. "Yeah. Why do you ask?" She was an accounts manager for the electric company, and mainly dealt with state and federal accounts.

"Just wanted to compare some notes." Hunter was a manager, too; city manager for a largish telecommunications outfit. He'd first met Liz at a Texas Constitution meeting and been instantly

charmed by the latina's sharp wit. Damned shame she was so thoroughly married. "We handle a lot of the feds' telephone and data circuits. Local, LD, Internet connections, lotsa private line. Pretty much everything."

"So?" She waited for him to reach the general vicinity of a point.

"So..." More scotch. "...They haven't been keepin' up with their bills too well since the Info Warriors took out the IRS." Not to mention several other agencies targeted since. "They doin' any better on their electric bills?"

"Not really. We used to get EFTs pretty regular. Then they tried sending paper checks. Our banks won't honor 'em anymore." Surely Hunter wasn't thinking...

Surely Hunter was. "Gee. All those delinquent accounts. Be a damned shame if we finally had to terminate service for nonpayment, wouldn't it?" His expression had turned downright evil.

Liz giggled, inspired by alcoholic visions of frantic feds trying to call around to get certified checks so they could get their electricity turned back on at federal offices across the city. She shared the vision with Hunter.

His dreams were more grandiose. "No, no, no. You don't get it, quite," he corrected. "Try imagining the feds trying that coordination with their phones cut off at the same time." He cackled evilly. "Wouldn't that be fun?"

"Ooooh. I like. A lot." Then it struck her. Why not... She set her drink down and twisted on her stool. "Bud, you deadset on finishing that drink?"

"Huh? Well, I was plannin' on it." He gave the cocktail a critical stare. "Any reason I shouldn't?"

Liz scooted off her stool and stood up. Or as up as a five-footer can. "Well, if we hurry, we can probably still catch Jake at party headquarters." Jake was the local Texas Constitution coordinator.

Hunter made a melodramatic show of confusion. "And we need to catch Jake... Why?"

She smiled, and it wasn't pretty. "I think we should share your demonic notion with the whole party. Just think... How many folks with the authority to issue cut-off orders around the state do you suppose are TCers?"

"Oh. Yeah." He looked one last time at his glass, then slipped some inflated FRNs under it as a tip and hopped off his stool. "My car or yours?"

"Mine. You're a drink ahead of me." They made a break for the entrance, both cackling evilly.

It was a less jolly evening for Harold Rodgers, ex-FAA inspector, despite the fact that he was doing his damndest to work up a warm, alcohol-fired glow of his own. His lawyer had asked to meet him, and now he wished the shyster would just evaporate. He threw back a shot of bourbon and washed it down with beer. Then, "Whaddya mean they won't settle? I lost my job; what else do they want?"

The yuppie across the table shuddered at the man's cocktail choice and sipped his own mineral

water. He topped off the glass from the small bottle the waiter had left, and replied to Rodgers question. "Mr. Rodgers, it's that simple. Launcher will not settle out of court. I received a written response to our offer this afternoon, and spent the remainder of the day trying to contact anyone on the company's legal staff. I managed a few minutes on the phone with a paralegal who explained the situation." He paused for another sip, a stalling tactic. "They don't care about the money. They want your ass."

"How so?" Apparently the man was having trouble making out simple facts through the alcoholic haze.

"Mr. Rodgers. Launcher's intent is to ruin you. You are to be their object lesson for all civil servants who might be inclined to be... less than totally compliant with the law." He smiled grimly. "Neville wants your tanned hide tacked up on his office wall as a gentle warning to bumbling bureaucrats everywhere." Another sip. "And he's going to get it. Even your former employer disavowed your actions; indeed, the FAA fired you for them. You aren't going to be able to claim that you were acting in good faith. You have no defense."

"Can't we at least try to make out like I'm just a little guy getting screwed by a big corporation? Win over the jury?"

The lawyer actually laughed. "That's exactly why Launcher wants a jury trial, Mr. Rodgers. This is Texas, and you're a 'fed'. In today's antigovernment climate, you don't stand a chance."

Rodgers was pissed. "What the hell am I paying you for? You gotta do something!"

The lawyer presented him with a sour look. "And that's another key factor. You haven't paid me. And now you're unemployed. And when Launcher is done with you, you might be left with enough to pay tonight's bar tab." He cast a derisive glance at the paired glasses before Rodgers. "But I doubt it." He rose, already grasping his brief case. "Mr. Rodgers, do have a nice night. I wish I could say it's been a pleasure doing business with you, but it hasn't. Perhaps if you can scrape up the funds to pay me, we can continue our business association." He turned towards the entrance, then paused to add, "But I doubt that, as well."

Rodgers watched wordlessly as the lawyer departed. He really was well and truly screwed. He hung his head and stared morosely at the table top for long minutes. Then he checked his wallet, and peered about for his waiter. He needed another round to lubricate his thought processes. What the hell was he gonna do?

Chapter 23

Year Two, July 2nd

I hate you, you hate me.
We're a dysfunctional family.
- unknown

"So the judge refused to release them on their own recognizance? Icy!" Abdul crowed as Hank filled him in on the previous day's adventures in fed-baiting.

Hank slid his feet off of his desk and planted them back on the carpeted floor. "Yeah, it was pretty funny. They tried claiming that the judge had no jurisdiction over federal officers at all, especially ones doing 'their duty'. That pissed off old Harriman no end, and he told them and their In-Justice Department attorney that whether they were acting in the line of duty had yet to be determined. Then he allowed that he'd have to excuse himself from the bench if the actual case came to his court, because he damned well couldn't see how two guys with no warrant, running around private property, attacking old men and drawing guns could in any way be construed as doing one's duty. Unless one lived in NAZI Germany. Then he suggested they try for a change of venue out of state, 'cause any other judge in Texas isn't going to look favorably on 'em either." He smiled craftily. "I hear tell Harriman's another TCer. Man, it's getting to the point that everyone's telling feds to fribble off." He lifted his coffee mug and downed the remaining bitter dregs. Then he glanced at his watch. 3:37PM.

Abdul was still laughing. "Man, I wish my name would get pulled out of the hat for that jury pool." He looked into his own mug and saw only stained china. He got up for a refill at Hank's pot. "You want a refill, bossman?"

"Nah. I gotta get out of here pretty quick. Got some personal business to take care of."

The younger engineer prepped his refueling mix. He spoke over his shoulder. "What I still don't get is why the hell they tried a customs inspection like they did. In theory, the guys have jurisdiction over incoming traffic. All they had to do was get a warrant. Plenty of fed judges who'd be happy to give 'em permission to screw us over these days. And hell, they've got the IRS as an example, the FAA snoop, even the Feebies. Why go on national television and violate the hell out of the Constitution and make fools of themselves?" He sat back down in Hank's visitor's chair.

Hank smiled just a little, and let a calculating look settle on his face. "Funny that. Tweedledee and Dumb were sent over by their supervisor. Apparently these two are noted for their heavy handed manner, and he told them not to take any shit from us." He stopped and his smile got marginally bigger.

Abdul waited for the punch line. When it wasn't immediately forthcoming, he prompted his chief. "So?"

Hank stared absently at a spot on the wall behind his assistant. "So... their supervisor, one John Thomas McKenzie with 12 years in Customs, resigned unexpectedly yesterday morning. Like, just after the goon squad departed on their little errand. No notice, no forwarding address, no reason given." He grinned openly. And when the FBI got out to his apartment, he was gone. Moved. Forwarding address his landlady had was for Busch Stadium in Saint Louis, Missouri." For obvious reasons, Hank

found that part especially amusing.

Abdul blinked and thought it over. "So... this guy... What?"

Hank cackled. "I think he was a mole. Got sick of the crap, and finally decided to make the Customs Service look like idiots on the way out." He looked at his watch again. "Hey, Abdul, I've gotta get going. I'll see you tomorrow. We'll head over to the hangar and check out the turnaround inspections."

"Sounds like a plan, Hank. Have a good one."

He steered his coffee cup out the door and down the hall to his own office, where he closed files and shut down his computer. Then he grabbed his briefcase and headed out the door, only to pause for a moment. He returned to his desk for his PDA, which he slipped into its holster. Damn it. He shot another look at his watch. He still had time.

Several minutes later, Hank was parked in the Ops center parking lot, waiting for shift change. He had more time than he'd expected; the controllers typically spent fifteen to twenty minutes in shift briefings. Shortly, he saw people starting to trickle out of the metal pre-fab building. He kept a look out for a tallish blonde man.

Sure enough, there he was, looking pretty much the same as when Hank had met him out of the launch strip construction site back when, blowing things up. Schmidt was walking with a couple of people, a man and a woman, apparently exchanging jokes as all three were laughing. Hank wondered if one of them was the joker from the radio yesterday. The group split, Schmidt heading for a pickup truck and the couple getting into a car together. Hank got out of his SUV and approached the young controller. "Excuse me. Calvin Schmidt?"

Cal was opening the truck door when he heard the question. He turned and saw a familiar face. "Hey! Mr. Hanners, right?"

"Yep. I wanted to talk to you, if you've got a couple of minutes."

Cal checked his watch. He was supposed to pick up Micky at The Grill after work. "Well, just a couple. Got someone to meet." Visits from the chief engineer were hardly the norm for him, and given the timing, he assumed that this was about the man's daughter and her activities of a couple of nights ago. Testing the hypothesis, "I'm off shift now. If this is something we can handle tomorrow morning..." He left the finish to the guy's imagination.

Hank shook his head. "Uh, no. This doesn't have anything to do with company business."

Bingo. The girl it was. "Then what can I do for you, sir?"

"I wanted to talk about my daughter. I understand you gave her a ride home the other night."

"Sure did. She had a little falling out with a friend and needed a lift. Me 'n my girlfriend figured it wasn't too far out of our way."

"Yeah, that's the sanitized version Erin gave her mom. She talked to me later, and that account

included a few more details." Cal grunted noncommittally, so Hank pushed on. "Now, Erin and her mother don't have a lot to say to each other these days, but I'm hoping that I'm doing a little better, that she trusts me." He gave Cal a quick appraisal. "Seems to me that you aren't a whole lot older than Erin. If Kristi - my wife - hadn't confirmed that you were with, pardon my use of her phrasing, 'a spic hottie', I might be a little suspicious of you driving my daughter home. Especially from a bar."

Cal darkened at the derogatory slang, but pushed it aside. "So Erin did mention the bar, huh?"

"Yep. She says she let her friend Gwyneth talk her into going out there to meet guys..."

"That she did." Cal confirmed. Not that she enjoyed the meeting.

"So she told me. She also told a story that made you sound like some knight in shining armor with a roomful of trusty squires."

This time, Cal blushed. "I think she's exaggerating a little. All I did was talk. Micky and Dom took it from there." He smiled at the memory.

"Well, Erin got the impression that damned near everyone in the room was a friend of yours, and ready to kick rhinestone cowboy butt." Hank was grinning, too. "Anyway, I wanted to thank you for helping her out. Sounds like I owe a few other people thanks as well, but I'm not sure where to find them, except maybe at The Grill."

"That would work. Micky just started working there, and Dom might as well, since he seems to live there off shift."

"I guess I could do that. Wouldn't recognize them, of course. Could I ask you to pass on my gratitude?"

"Sure. I'm heading over there now, to get Micky."

"Then I'll be thanking you for that, too." Hank became more serious. "I really do appreciate it, you know. Erin's a sweet girl, and has a pretty good head on her shoulders; but she still isn't quite as grown up as she thinks. You might not believe how relieved I am to know there are some folks out there who'll look after her, instead of taking advantage of her."

Embarrassed, Cal stared down at the dirt under his feet, and kicked at a small pebble. "It really isn't that big a deal. I think most folks would do that. There was no shortage of help the other night." He raised his head and looked Hank in the eyes. "But... Look, I just barely met her, really. But she might be a little more grown up than you're giving her credit for." He shrugged. "She was mature enough to admit to the mistake of going to the bar, and she sure wasn't the one trying to pick up those urban cowboys. And she damned sure knew she didn't want the SOB pawing at her." He grinned. "She slapped the hell outa that boy."

Hank was startled. "Huh? I guess she left something out after all. What's this?"

Cal mentally cursed himself for speaking up. If the girl hadn't wanted her dad to know... Oh, well. "One of the guys was trying to feel her up. That's when Micky and me headed over. Before we even got there, your daughter slapped the shit out of the guy."

"Yeah?" The engineer grinned. "Now that's my girl!" He preened, all proud poppa. "I wish she had told me that part. I'd have felt a little better."

"Well, sir, you see? I hope you don't come down on her too hard. Hell, we all make mistakes. Live and learn, right?" Cal wasn't entirely sure why he was defending the girl. But she had seemed nice.

Hank was nodding. "Nothing too tough. Mainly she's just grounded 'til her social security retirement kicks in..." He grinned at the controller. "Or until I think she's thought long and hard on it all."

"Sounds fair enough," Cal conceded. "Tell her I said hello, would you? And you might as well pass on a howdy from Micky, too. She'd have said 'hi' if she were here." He grinned. "Micky was impressed with the way Erin slapped that fool."

"All right, I'll do that. Thanks for talking to me, Mr. Schmidt."

"Heck, my dad is Mister Schmidt. Just call me Cal." He stuck out one hand.

The concerned father took it and shook. "And I'm Hank. Look, I figure we owe you and your friends a favor. If there's ever anything I can do for you, give me a call. I'm in the company directory... Heck." He reached down to his PDA holster and slipped a small card out of an exterior pocket. "Here's my card; business and home numbers, email."

"Thank you, sir." Cal accepted the offering, glanced at it, and dropped it into his shirt pocket. "But unless you can get me a discount on a ticket to orbit, I can't think of what I'd need."

"Orbit, huh?" Hank considered this slim young man carefully. "Tourist, or one way?"

Cal looked into the bright sky. "One way, eventually. Still saving up my money for a grubstake. I figure about the time Launcher is ready to offer regular passenger travel, I might have enough for a basic survival kit saved up."

Hank was interested. Enthusiasm for space travel seemed very nearly a prerequisite for Launcher employment, but even so, he kept meeting people who took it very seriously, very personally. Like himself. "Got any ideas of what you'd do in orbit, son?"

Cal was staring off into space, almost literally. He thought for a few moments before answering. "Wouldn't stay in orbit. I hear some Georgia plastic company is building a kind of inflatable spaceship..."

"Yep, we licensed the design to them, in fact."

"Really? Excelente'. I hadn't heard that part." He smiled. "I'm thinking that if I could get some partners together, we could buy one, maybe with several modules, and hang in orbit doing odd jobs. I'm pretty good at electronics," he said in an aside. "And once someone markets a good enough long term life support system, we could stock up on reaction mass, string a shitload of solar cells to the mods, and haul butt to the asteroids."

"Take a while to get there," Hank pointed out one difficulty.

"So?" Cal returned. "If we can recycle our resources indefinitely, and have solar for power... If it's good enough for a permanent colony, then it doesn't matter how long it takes to get out there. It isn't as if I'm coming back."

The kid did sound serious. "And what would you do out here?"

The young man grinned. "Well, I figure a permanent outpost would make a dandy place for a general store; kinda like that mountainman Jim Bridger's 'Fort Bridger'. I could peddle CO2 scrubbers, spares, fresh vegetables... I used to do some farming, and Dad had this thing about hydroponics. Then there's electronic repair. And if the numbers on the water content of carbonaceous chondrites are correct, I could sell other consumables like water, oxygen, and reaction mass." He confided in the older engineer. "I'm betting that once in space, water is going to be the first choice for reaction mass; steam rockets, heated by solar electric cells, maybe even direct solar heating in the inner solar system. And eventually we ought to see something like the old NERVA or KIWI nuclear rockets."

Hank nodded. "Yeah, nuclear would be great out there." He thought about Launcher's deal with NRU. Too bad he couldn't share that tidbit with this kid. "Fission pumped steam rockets were an incredibly dumb thing to be running in Earth's atmosphere, but out in space..." His own eyes glazed over, then he jerked himself back to current reality. "You've given all this a lot of thought, haven't you?"

"A bit, yeah."

"I may be able to help you after all." He smiled. "You may recall that I'm the chief engineer for this band of intrepid space cadets."

"I do recall hearing something of the sort." Cal laughed.

"Well, that has the bennie of letting me review all the oddball, and not so odd, colonization tech ideas that we can find. Bill Neville's into this stuff, too," he confided. "And to tell the truth, if I can convince my wife, I want to seriously consider it, myself. I think I could make a hell of a lot better home for Erin somewhere out there than in the U.S. these days."

"Tell me about it," Cal said wryly. "I'm still trying to decide how to take this up with my girlfriend. We're still a little new and fragile, and I'm not sure how to bring it up. I don't want her to get the idea I want to run out."

Hank thought about the the slapstick Customs raid. "Son, I suspect running out is the best option we have left; not running out on people, but on the system. Voting with our feet, as the saying goes."

Cal checked his watch again. "Oh, shit! Speakin' of running out, I have to get going. Micky's going to be pissed." He ran back to the waiting truck and climbed in. "Tell Erin I said 'Hi!'" He slammed the door, cranked the engine, and roared out of the lot in a spray of gravel.

Hank watched the kid leave with some amusement. If Erin hadn't stressed how cute the boy's lady friend was, he'd have suspected he'd bored him to tears. He snickered to himself and returned to

his own vehicle.

Getting home took longer than it had when he'd started with Launcher last year. While not yet up to Saint Louis 'dawdle hour' standards, the company's operations were generating considerably more traffic lately. Hank punched the garage door remote as he swung into the driveway. The metal door clanked open and he pulled in and parked.

On his way into the kitchen, he peeked into the trash can waiting to be carried out to the curbside bin. Another empty vodka bottle. If Kristi kept drinking like this, she'd probably kill herself. Her current excuse was the move to Texas, but she'd been drinking heavily for years. He knew one reason Erin had made so little fuss over the relocation was that she'd have the chance to start fresh with new friends who didn't know what a lush her mother had become. In Missouri, her friends had stopped coming over to the Hanners' place. He braced himself and entered the house.

The kitchen was empty. He set his briefcase and PDA on the table and went to the living room, where he heard music blaring. Erin was stretched out on the sofa with what looked like a fashion magazine, listening to old classic rock. One of the music channels was doing a revival week according to the onscreen banner. Rush, playing 'The Trees'; he'd forgotten how much he liked the group, even with Geddy Lee's slightly screechy voice. "Hi, Erin," he called out over the music.

The voice startled the girl. She looked up and saw her father, and grabbed the remote. The volume dropped to a murmur. "Hi, Daddy. You're early today." She sat up and flipped her hair back behind her."

"A little early I guess. I left the office early." He smiled. "I went out to the control center..."

"Grande! When are you going to get me a tour of the place?" Erin had always been interested in Launcher activities; the successful orbital flight only intensified it, and being grounded wasn't about to change anything.

"Possibly never, kiddo," her father joked. "It seems that your... 'cute' rescuer, Calvin Schmidt, works there."

The teenager's face lit up. "Really? You saw him?"

Hank settled onto the sofa beside Erin. "To tell the truth, I went out there to talk to him. I wanted to get his perspective on the other night." And make sure the guy was the benevolent altruist that Erin painted him as; daddies can get nervous when grown up men might be showing interest in their little girls, especially when they aren't so little any more. "And to thank him for helping you."

Erin's face fell. She couldn't read her dad's mind, but the words were bad enough. "What did he tell you?"

"Well, he did mention the part you left out about being groped and slapping the guy." He looked at his daughter and his eyes twinkled. "I knew there had to be something you left out, since I couldn't see a bunch of bar patrons running to your aid just because someone bought you a drink." The twinkle was joined by an approving smile. "And frankly, I'm glad you had the ba... nerve to slap the guy down and put him in his place."

"You aren't mad?"

"A little disappointed maybe, sweets." He held her hand. "Sometimes it seems like a teen's greatest enemy is her parents; that's pretty much how I felt when I was your age. But I'm trying not to make the same mistakes my folks made. I want you to be able to trust me."

"Maybe she wouldn't get into so much trouble if you did less trusting and more disciplinini!" Kristi Hanners yelled from the doorway where she'd been listening in.

Hank's eyes widened; and Erin flinched in reaction. He took a deep breath and let it out slowly. He winked at the girl, and twisted to face his wife. "Kristi, Erin gets in very little trouble. She's an honor student who's graduated early. She doesn't come home drunk," his lip curled at that, "and she's never been arrested. She..."

"She goes to bars and picks up men and comes home at all hours...!"

"I do not!" Erin shouted. "I made one, repeat one, mistake, Mom! I've only gone to that one bar in my life and I left! I even came home early! Which you'd know if you weren't always too drunk to read a clock!"

"Erin! Be quiet!" her father ordered. "I'll take care of this."

"Like you took care of her coming home with a strange man the other night by going and thanking him for messing around with your daughter?" Kristi had been listening to the conversation.

"No, Kristi, I thanked a guy and his girlfriend for coming to my daughter's rescue!" He shook his head in anger and disgust. "Only in your drunken, sick dreams would coming home early, dropped off by a couple very involved in each other," Erin had stressed that part to him, maybe a little too much; Schmidt seemed quite innocent in the manner, but Hank suspected Erin was working up a crush, "mean something dirty! Get off her case!"

"Whadda ya mean drunk?" Kristi shrieked. He definitely struck a nerve with that shot. Nothing like a little guilt to get the blood pumping.

"I mean there's another empty liquor bottle in the trash, just like yesterday, and the day before, and the day before that. Damn it, Kristi! Before you go pointing fingers at Erin who's mostly doing pretty good, which you'd know if you were conscious a little more often, clean up your own act!" Anger did nothing to improve Hank's grammar and syntax. But it got his point across.

"Would you two stop it!" Erin pleaded. Hank looked down - he wasn't sure when he'd stood up - and saw the girl crying. Hank was like many men; female tears turned him to jelly. Her next words finished the job. "I'm sorry I messed up! I'm sorry I make you fight! But please stop; I can't handle it anymore!" She leapt to her feet and ran from the room. Hank stared at her back, speechless, numb but scared even so. Erin had never said anything like that before.

"Now see what you done!" Kristi jumped into the verbal void. "If you'd stayed in Sain' Louis, this'd never happen! But noooo! You gotta be a big shot chief engineer!"

"Yeah, a chief engineer making more than I used to, liking it a hell of a lot more, and liking

where I live better, too. And in case you didn't notice, which I imagine you didn't, Erin wanted to come out here, too!" He stomped forward to stare in his wife's face. "And do you know why she wanted to come out here? Do you?"

Kristi cringed, but spat back, "So she could keep you wrapped around her finger, run around gettin' in trouble, and have you persect her skinny butt!"

Hank's voice was icy. "No, Kristi. That isn't why. She came out here because here she didn't have to be embarrassed, because no one knew you're a goddamned drunk. And I think that might be part of why I came too." Kristi stepped back, and Hank moved in, matching her step for step. "Here's your choices now. Keep drinking yourself into oblivion, but leave me and Erin the hell alone. Or you can finally admit you have a problem, and we can do AA and Al-Anon together. If neither of those options are acceptable, go back to Saint Louis, if that makes you happy, because I won't let you drag us down the toilet with you."

"That's what you want, isn't it?" Kristi accused. "You want me to go away, dontcha?"

"No, not really." Hank looked sad. "But it beats going crazy dealing with your problem."

"I don't have a problem!"

Hank shook his head, resigned to the inevitable. "So long as you don't have to deal with it, I guess not. But I won't let you make any more problems for me and Erin." He faced away from his wife, not wanting her to see his face. "If you won't do anything about your drinking, I think you should leave."

"You're throwin' me out?" Sheerest outrage.

"No, not at all. I'd rather you stayed and tried to be part of the family. But I'm inviting you to go be happy, if that's what you think you want." He decide to face her like a man; he set his face and turned. "I want you to stay. You're my wife, and Erin's mother. But if you're going to fulfill those roles, it's past time you stopped drinking. If you'll try, I'll work with you. If you won't..." He had to turn away. He wiped at a tear. "If you won't, Me 'n Erin will just do our best to be a family without you." His own words chilled him, and his guts churned.

Nor was he alone in this. Erin realized that she hadn't run nearly far enough. She propped herself against the kitchen wall and listened to her father's cold words. She was scared; she hadn't felt so much like a child in a long time. She certainly didn't want her mother to go away... But Daddy's demands for AA and Al-Anon were pretty reasonable. Weren't they? Fighting back sniffles, Erin stumbled back to her bedroom, where she searched out the solace of an old teddy bear. She felt like sixteen going on six right now.

Chapter 24

Year Two, July 7th

Up to the dusty attic, out with the trusty gun.
The lawyer and the law book only go so far.
- Leslie Fish

Justice Wally Smythe surveyed the participants arrayed before his bench and issued his proclamation. "Mr. Creasing, a plainer application of the commerce clause I doubt that I've ever seen. The Constitution is extremely clear on this point - Congress may regulate interstate commerce, and that conducted by states with foreign countries. I can hardly see how the commerce could be much more foreign than in outer space. Motion denied." He pounded with his gavel in a most melodramatic fashion. "For the nonce, the injunctions sought by the Department of Transportation, and specifically the National Aeronautics and Space Administration remain in effect."

Creasing shrugged nonchalantly. Frankly, he'd given the motion to deny the NASA injunction chances significantly lower than those of a compacted crystalline hydrous mass relocated to the netherworld. The current proceedings wrapped up, and he made his way out of the courtroom.

At least they'd gotten some good publicity out of the charade. Even the most pro-government news agencies were making hay of Neville's cable news comments regarding the role of safety-plagued NASA in guaranteeing space safety. The word was that the network honcho had damned near ripped out his trademark mustache before admitting that it would be less costly to air the damning statement than fight it out in court. Apparently the reporter was also out on the streets, permanently unemployable; his ill-advised threats and downright stupid recorded agreement made him an untouchable in the managed-news industry, and his total lack of any useful job skills whatsoever ruled out a paying gig in any other business. He'd be on the dole if the feds could keep their computers up long enough to enroll him. The attorney rounded a corner and was blinded by a supernova. Ack, news weasels!

"Creasing! What will Launcher do now that the judge has upheld the stop order on further launches?" The question boomed out above the generally unintelligible babble of yapping newsies. It was a reasonable question. Too bad Bill Neville wasn't there to field it.

So, a reasonable answer right back. "I don't know, right off. That's something for the partners in the company to decide, not us legal advisors."

Another reporter clamored for attention. "Do you know if Launcher will formally file for NASA certification? And if so, when it might be granted?" Now there was a good question, and it couldn't have been better timed than if he'd set it up in advance. He smiled happily and shared the news with the bustling crowd.

"Launcher filed the requisite paperwork for certification a month before the launch, via courier. A NASA functionary named Callicutt signed for the inventoried package. It was NASA's refusal to otherwise even acknowledge the request that led Mr. Neville to order the launch to proceed without certification. He felt that if NASA had objections, they'd been given adequate time to at least ask more questions." That wasn't entirely true. Neville had made it clear that he had no intention of actually

bothering with what he believed to be useless certification. But he'd estimated that NASA would attempt obstructing the flight through sheer inaction, as they had, and that it might be worth the hassle to make the agency's case that much weaker.

Judging by the elevated level of verbal buzzing, the boss had guessed right. This was news to everyone outside of Launcher or NASA. "Excuse me, Mr. Creasing." It was the same woman again. "Are you claiming that NASA filed an injunction against you for failing to obtain a certification which they themselves neglected to process?" Nice phrasing, that. Perhaps she was pro-Launcher; many of the smaller independent news services seemed to be.

"That's correct, ma'am." Creasing gifted her with a sardonic half-smile. He looked around for another question.

This was a bone the news dogs wanted to gnaw on some more. "Let me see if we've got this right. NASA simply failed to issue or deny a certificate, then filed an injunction against Launcher for not getting the certificate, and a federal judge just upheld their right to suspend your operations, and you don't have anything to say about it?" someone asked with more than a hint of cynical doubt.

The lawyer let his smile expand. "Well, Mr. Neville did say something to me in private this morning, before I came to court. And he said it might be worth repeating." A glint shined in his eyes.

Fuzzy boom mikes telescoped forward, and one-man autocams pivoted. "So what'd he say?" someone demanded.

"Well, he commented on how inconsistent the federal government seems to be about applying the Constitution, specifically the Bill of Rights. But germane to this, he said something along the lines of 'The goddamned thing says regulate interstate commerce. What the goddamn hell do they expect to regulate if they don't even allow it to exist.' " Creasing's smile faded. He picked a camera at random and stared into it. "He also stated his willingness to play by whatever rules, or lack thereof, which the the feds may choose." He pushed through the crush of electronically augmented gossip-mongers, ignoring further questions. He'd gotten out the word that Neville wanted shared; 'spreading the meme' was how Hanners put it. He wondered if he ought to expect to be disbarred sometime soon. Hey, at this rate, he could always emigrate.

It took the press about three hours to decipher Neville's cryptic comments. At 1300CDT, the company sent its spaceplane skyward once more, with an undisclosed payload. Judge Smythe issued a citation finding William Neville to be in contempt of court.

The exec's only public comment was, "No shit." At 2110CDT another spaceplane, the existence of which Launcher had never bothered publicizing, was lofted.

The President was livid. "Those damned cowboys are flaunting their disobedience of the law! I want them stopped!" He seethed. "And they're making us look stupid - two fucking manned launches in one day. NASA never managed that!"

Jack Hennessy of said Administration recoiled. He was comparatively new in his post, and could hardly be blamed for past inadequacies in the agency. But the 'Net media outlets were making the most of his pre-Launcher plans to de-emphasize manned missions even further, and bring back a new and improved Better-Cheaper-Faster. Pundits claimed that if the space agency improved space travel

any more, TSA agents would be confiscating drivers' licenses across the country and closing the Interstates. "We never had a reason to do it."

"Well, that damned Launcher outfit seems to have a reason to do it!" The President turned on Justice. "Why the hell hasn't anyone done anything to stop the launches? That disrespectful SOB down there is violating an injunction and in contempt of court. Didn't I tell you to arrest him?"

"I tried." The Attorney General looked pissed off in the extreme himself. Texas had been a Justice Department bugaboo for years. "That idiot Smythe took off to go fishing before we could get to him with a request for a warrant. The duty magistrate, whom you appointed, by the way, refused to issue one; said until someone showed him in court how eliminating commerce didn't differ from regulating it, he supported Launcher's right to fly."

"So get the sunuvabitch off the bench!"

"Lifetime appointment, remember?"

"Shit." The CinC shelved the side issue. "So what's the holdup now?"

"Smythe signed a warrant this morning..."

"About damned time."

"And we tried to serve it..."

The President stared at the AG in furious astonishment. "What do you mean 'tried'?"

The AG's frustration matched the President's. "Well, we're having a little problem with federal offices in Texas these days. Partly, it's sympathy with the upstarts, and partly they're pissed off over the financial situation." He glared at the Treasury secretary.

The chief executive noted it and expected the worst. "Okay, now what?"

"It seems that Treasury's been hacked a few more times than they've admitted." He sneered at his counterpart. "Or maybe even more than they realized. Probably using the same IT techs that trashed the IRS." He forced himself back on track, "Anyway, it seems that the various and sundry utility companies haven't been receiving payments lately. Electricity, phones, data circuits, gas, water... About half the federal buildings in Texas are blacked out. We couldn't get word to the local U.S. Marshals office."

The President cradled his head in his hands and massaged his temples. "And why is this the first time I'm hearing about this little problem?"

"Because it's new, and because the offices involved are blacked out!" The AG got a grip on himself. "Fortunately, this seems to be limited to Texas. So far."

Completely sidetracked from the Launcher issue, the President asked, "And what's that supposed to mean?"

"It means this could renew the whole 'Sagebrush Rebellion' crap all over again. The economic and environmental policies of this administration, and the past couple have had the western states claiming they're being singled out by discriminatory regulation. Bullshit, of course; but it gives the ultra-rightwingers something to whine about." He snorted. "In some ways, Texas is the worst; they've always had the historical illiterates who claim that Texas has the right to secede by way of their annexation treaty. Now, the Texas Constitution 21C group, or whatever they call themselves, are advocating secession again. They've got a few hotheads spread around causing trouble like this."

The head fed laughed, his funnybone stimulated by the ridiculous prospect of Texas quitting the country. And wouldn't that put a Texas-sized crimp in his post-Presidency retirement plans? "Now there's an idea. Wonder if they've considered what would happen to them without federal money pouring in? In fact... Somebody get the governor on the phone and explain that to him. Put the fear of god in him, and get him to put some pressure on the locals causing trouble. Maybe straighten out the damned space cadets, too."

The chief of staff spoke up. "Begging your pardon, sir. But that call might be best made by you. The weight of your office combined with your personal connections in the state..." He left the words dangling, hoping that he wouldn't need to rub the man's nose in the obvious. The President generally turned petulant when anyone mentioned his father these days.

"True. Set up the call for this afternoon. Schedule me around it."

"Yes, sir."

The President leaned back in his chair, looking a little more relaxed now. "Okay, somebody quash that warrant. Don't serve it. This ought to be a better way of handling the problem, behind closed doors. No obvious actions on our part for the press to criticize."

"Right. Let Letterman make fun of Texas for a change." That from Treasury. IRS jokes were getting pretty old, in his view. Now there was someone overdue for the audit from hell. If they could just keep their system up for fifteen consecutive minutes.

"Okay. I'll talk to the governor this afternoon. Anything else we need to cover right now?"

Defense spoke up. "Yes, sir we have a rather serious threat to national security on our hands."

"Who is it this time? The ghost of bin Laden again? Or big tobacco?" Grins all around. Something always made a reasonable excuse for yet another 'national emergency' executive order. Of course, lately the electronic attacks on federal systems made for the real thing.

"I'm not joking, sir. I attended a session of the Joint Chiefs in which a very disturbing possibility was raised." He paused dramatically.

"I've got a headache, Don. Don't waste my time."

"Launcher, Mr. President."

"Oh, Christ! Yeah, they're embarrassing the hell out of us, but in practical terms they're only a public relations threat. The real problem is these hackers. The antisocial geeks are bad enough, and the

international attacks are a bit scary since we don't who... or rather who all might be funding them. But now we're getting hammered by people who've passed serious security checks. Ordinary Americans are hitting us."

Defense nodded. "I'm not trying to downplay that threat, but imagine Atlanta vaporized by a nuclear warhead delivered via hypersonic spaceplane."

That got everyone's attention. "What?" The AG exclaimed incredulously.

"Or," Defense said, "the damned plane itself." He saw quizzical expressions around the table, and elaborated. "In '01 we saw what a low speed airliner could do to a skyscraper... the Pentagon, too... Want to see what a hypersonic impact would look like?"

So much for relaxing. Headache in full force, the President stared down Defense. "You better explain that."

"It's pretty damned simple, sir, and one of the reasons we've objected to private space efforts. Anything that can loft a satellite can boost a warhead. Look at Launcher's supersonic booster. It launches due east from near San Angelo, Texas at Mach two... twice the speed of sound," he explained for the collection of politicians. "A missile launched by that vehicle could reach Atlanta, Georgia in minutes, even assuming it didn't accelerate after launch. Or it could maneuver and reach any other city to the east. Such as Washington. Or, the spaceplane itself packs the punch of a pretty impressive missile, no warhead needed." Anyone whose attention might've drifted refocussed instantly. The threat of sudden atomic death has that effect on some people.

"I see the potential." The President considered the possibilities. "You specified a nuclear attack. What's your basis for that?"

"Launcher is known to be involved with a Costa Rican-based company known as 'NRU'. That organization employs a number of ex-government nuclear workers." Defense opened a folder and removed a slip of paper. "NRU- it seems to be the acronym for the rather childish name 'Nukes R Us' - has been conducting negotiations with several eastern nations, old soviet bloc republics with leftover nuclear hardware. NSA intercepts imply that NRU is buying plutonium. And about any other fissionable they can find."

"Shit." The President frowned. "What happened to the agreements to keep plutonium and uranium off the international markets? I thought the Russians..."

"Ex-soviet republics, Mr. President." Dimwit. "Not everyone signed on, and it looks like we got outbid anyway."

"Outbid?"

"Yes, sir. The deal was that the U.S. would provide some financial aid to reduce the economic pressures that might encourage some currency-hungry nation to balance its budget by selling bombs to Libya."

"Sounds good. What's the problem?"

Defense shook his head in disgust. "Well, you might've noticed that the U.S. dollar is presently worth a bit less than the Turkish lira, sir. And NRU is offering a variety of currencies, all worth more than our fiat bucks - Letting Treasury run off notes to cover expenses was flat stupid..."

"You're getting insubordinate, Don. That was my idea; a temporary measure, with the notes to be backed by the revenue collections we'd make..."

Defense interrupted his boss. "Except that revenues are down even further, and the hackers seem to be making sure that stays the case." He sighed. "But that isn't my problem right now. The fact is, NRU is in a position to offer hard cash and gold for plutonium. Possibly even assembled nukes. And people are taking them up on it. Given the difficulties we're having with Launcher, can we afford the risk that NRU is going to provide them with one or more tactical nuclear devices?"

The President went silent. And no one else seemed to have much to add at that point. "That is one hell of a question."

"No, sir. The real question is... What are we going to do about it?" Defense checked his notes once more. "To start, I suggest that we deploy more antimissile systems to major cities such as New York, Atlanta... and DC, naturally." Defense met the President's gaze with one just as hard. "But that's merely precautionary, and Patriots aren't one hundred percent effective. It would be better to prevent a launch in the first place."

"Any suggestions?"

"As a matter of fact, yes." The Defense Secretary stared at the Executive, grim faced. "Nationalize the bastards. Even the precedent of a private launch capability is dangerous now." To all intents and purposes the meeting ended there. No one had much to say after that.

The President tried to relax in his chair behind the famous desk in the Oval Office. It made a lousy modern work station, but the aura of the room still carried plenty of political weight; that's why he used it for televised addresses, and why he was going to use it for his teleconference with the governor of Texas. He glanced at the techs setting up the telecon gear, then returned his attention to the video news feed he was watching. One more thing to take up with the guy.

"Other than yesterday's informal comments offered by Lon Creasing, Launcher's chief attorney, at the federal courthouse, Launcher has issued no statement regarding Justice Smythe's finding against the space access organization." The news anchor turned to his associate onscreen and beamed. "I understand you have a related item, Stephanie."

"Yes, John." She flashed her artificially white teeth and faced the camera. "While Launcher has made no formal statement in response to yesterday's legal setback, they have answered rather eloquently this morning. Launcher spokeswoman Mira Bush announced that Launcher is proceeding with construction of an orbital habitat, a space station, to house industrial and research facilities, and a transfer and refueling port for extra-orbital spacecraft." The viewing angle shifted as a second camera was brought to bear. The woman turned to face the new perspective. "Also, Launcher has announced a fixed freight pricing schedule, available for download at the launcher.co.us. A passenger rate schedule is expected to be forthcoming soon."

The President threw his remote at the screen. "I'll say that's an 'eloquent' response!" The video

techs ignored the executive outburst, while a woman on the Secret Service presidential detail turned the television off. "How soon will you be ready?" he demanded of the video supervisor.

"We're ready now. Just waiting for the switchboard to put the call through."

"Oh." He checked his appearance in a mirror he kept in the desk drawer. He straightened his tie and assumed his favorite genial-political-boss expression. "Give me a heads-up when he's online, and the video feed. Don't put me online 'til I say." One of the advantages of video conferencing could be the chance to preview your opponent without his being aware of the scrutiny.

"Texas is live, sir." The supervisor gave a thumbs up and nodded towards the President's monitor. The connection was up, but the techs were carefully neglecting to run the President's image over the link.

The governor of Texas was visible as he sat talking with some aide. "SOB's as prompt as usual," the politico grouched. "Of course, he'd insist on doing this during lunch hour in Texas; damnfool never could figure out time zones." The governor was well-acquainted, though not well-impressed, with the President.

The other figure in the image laughed, and the President heard poorly suppressed giggles from his own people. He glared at them angrily. "Put me on line." Some days it just didn't pay to snoop.

On the large screen display, the governor perked up as he obviously saw the President's image appear on his own screen. "Good morning, Mr. President. What do you think the State of Texas can do for you today?" Direct and to the point; he was in no mood to exchange idle pleasantries.

"Good afternoon, governor." The President politely bowed from the shoulders up. "I was rather hoping that you might be able to exert your influence to address a few concerns we have here in Washington."

The governor looked looked to somewhere off screen and winked. "What concerns might those be, Mr. President?" If he'd been so minded, he could have listed at least a handful of possibilities himself; but better to force the DC politician make the admissions.

The President grimaced. If the clown wanted to play dumb... "Well, governor, one obvious issue is the Launcher Company," he said leadingly.

"Do tell?"

"All right. I want Launcher shut down for reasons which should be obvious. I'd prefer to avoid the potentially unfavorable press that a show of federal force might draw. I thought perhaps you could have a man-to-man chat with that Neville and persuade him to play along for a while. We can integrate them into NASA, and he'll do fairly well out of it."

The governor had a fine poker face. "I see. And my stake in this would be... what?"

"Well, I could point out the revenues that Texas will see from a orbital access program administered by NASA within your borders..."

"We'll get that already, from Launcher operating here."

So much for the velvet glove. "Then there's the lost federal revenues." Let's see if he could read the threat.

"Lemme guess. If Texas doesn't play along with you, we're going to encounter problems with our highway funds, and other assorted spending. Why, Texans might even find that their applications for college loans or various welfare payments keep getting lost."

The President smiled. "I'm glad we understand each other."

"Well, I understand you well enough; but I think you may be missing a key point or two." He shook his head and smiled ruefully.

"Excuse me?" The executive wasn't quite sure he'd heard that right.

"Hell, Mr. President, your precious federal funds have already trickled to a stop. The reports I'm getting claim that ya'll aren't even able to pay your utility bills." He had a wicked grin stretched across his face. "What FRNs are making it down here are so inflated... Hell, have you priced a gallon of skim milk lately? Stores on my southern border are giving better prices for pesos than dollars."

Somehow they'd managed to move to the next point already. "Well, damn it, if we can't keep our offices running, we aren't going to get inflation under control! Can't you at least get the local utilities to restore services to our offices?"

"Maybe, maybe not. Unless you DC types are complete idiots..." He paused and eyed the President speculatively. "Yeah, well. You should have figured out by now that the Texas Constitution folks are gaining quite a bit of momentum lately. It's TC clerks and techs in the utilities interpreting their regs as strictly as possible to order service disconnects. Not even really organized; just individuals who kinda like the idea of an independent Texas, or at least like the idea of poking Uncle Sam in the eye, working on their own, making feddies' lives miserable." The governor leaned back behind his desk. He pulled a stogie from a case on his desk, clipped the ends and fired up. He blew smoke at the camera.

The President flinched involuntarily from the virtual haze. "Are you saying that you, the governor of Texas, can't keep his state under control?"

"I'm saying that I'm liable to be governor only so long as I don't antagonize the TCers too much right now. Clamping down would only give 'em martyrs and make 'em look that much better. I'm not willing to do that yet."

The President gritted his teeth, then sighed. "Okay, I suppose you do know the local situation. But can't you get the service restorals expedited?"

"Could be. If I think it's worth the political cost. I'll get back to you on that." He reached forward to disconnect the call.

"Wait a minute. We drifted from the main point. I still need you to do something about Launcher. Get them under control until we can get them integrated into NASA."

"Heheheheh!" The governor laughed out loud. Someone in his background was laughing quite audibly, too. "You haven't been keeping up with the news, have you?" It was a rhetorical question; he explained immediately. "I just signed emergency legislation making Launcher's San Angelo facilities a tax-free commerce freeport. And it's now officially a company town. Next idiots to run afoul of their company security will be arrested at the start." He blew another bluish puff at the camera. "If you had a damned bit of sense, you'd extend federal protection to that freeport status, and watch the whole country benefit from the economic boost of everyone in the world coming to America, to Texas, for space access."

The governor watched the President's mouth open and close wordlessly. "Mr. President, let me explain some basic facts to you. I have a private space company responsible for bringing more hard currency into my state than the federal government was pumping in even just prior to the complete collapse. I have a strong pro-secessionist movement gaining ground so fast that they may be a majority in a few months. Then there's the folks who aren't really secessionist, but don't much trust the federal government. I'm getting that way myself," the governor confessed. "So you see, if I want to stay governor - and I do - publicly aligning myself with you and your foundering bureaucracy just isn't in the cards. It'd be political suicide."

"You're talking treason..."

"I'm talking getting re... No, not even re-election. I'm talking about serving out this term as governor without getting recalled or lynched."

The President went cold. "Before you make any rash decisions, you'd better give some thought to the federal facilities already within your state. Military facilities, which aren't so dependent upon external utilities as the federal office buildings."

"Mr. President, if you really want to be the first commander in chief since that two-faced SOB Lincoln to officially declare war on one of your states, be aware that's exactly the sort of high-handed action that's got people talking secession." He smiled grimly. "And I'll bet a hell of a lot of those soldiers you're alluding to are Texans, or could be convinced to be Texans. Think on that." He slapped at the disconnect, and the screen in the Oval Office went black.

Face red, temple veins throbbing, and hands trembling, the President stared at the empty display. He sat that way for long minutes, on the edge of apoplexy. An aide coughed discreetly, and the man jerked. "Get the fuck out of here!" he shrieked. "Get out! Everyone! Out now!" The room cleared in the quickest, most efficient obedience to orders he was ever likely to see.

Tensions of another sort were high in Texas, too. Erin Hanners had just returned home from Launcher headquarters, where she had applied for a clerical job. She stood in the doorway of her bedroom and watched her mother stuff clothing and other items into a set of suitcases. "What are you doing, Mom?"

"Packing. We're going home." The obviously distraught mother glanced up at her daughter. "Come pick out the things you need right away. Anything else will have to be shipped back later."

"What do you mean, going home?" The girl feigned puzzlement; she was all too afraid she knew exactly what her mother meant. That argument with Daddy the other day...

"I mean we're leaving this fucked-up town and going home to Saint Louis!" Kristi Hanners zipped one bag closed, and heaved it towards the door. It slammed against the wall next to Erin.

"No." Erin bent down and picked up the bag. She carried it back to her bed and opened it. "I'm right where I want to be, for now."

"Don't be stupid!" Kristi snatched the suitcase from her daughter and tried to close it again. "We don't belong here! Just because your father has delusions of grandeur..."

"No!" Erin tore one of her blouses from her mother's hand. "Don't make decisions for me!"

"I'm your mother! Of course, I'll make decisions..."

"Not anymore!" Erin grabbed her mother by the shoulder and spun her about to face her. "Stop it!"

Kristi's hand flew up and caught Erin across the face. "Don't you ever talk back to me again!"

Erin's face was a contrast of red handprint on white flesh. Eyes wide, she stepped towards her mother. "Don't you ever touch me again, you bitch," she hissed. She planted an index finger on the older woman's chest and began pushing her to the door. "I like Texas. I didn't like Saint Louis, mainly because you spoiled it all with your constant drinking. I won't have it anymore! If you want to go back there, and drink yourself into oblivion, go alone! I'm staying here with Daddy!"

Kristi stumbled as she was walked backwards, partly because of the awkwardness of the gait, and partly the alcohol Erin could smell on her breath. As usual. "I'm your mother! You'll come with me!"

"No, I won't! You may be my mother, but I'm staying here with my father." Erin pushed the woman through the door. "Get out!" she shrieked.

Kristi sneered. "Fine for now, you spoiled brat! But when I get back to Missouri, I'll file for custody. You'll have to come home."

"I am home." She slammed the door in her mother's face. She stared at it for a moment, then flung herself onto her bed, tears streaming down her face. How could everything go wrong all at once like this?

After a while she stifled her tears. She could hear her mother stomping around the house. Then a door slammed, and she could hear a motor start out front. As the sound faded, she began crying again.

Eventually her father came home from work to find Erin all cried out, sitting in the living room. He took one look at her face and asked, "What's wrong, honey?"

"Mom's gone." Her voice was cold, lifeless. As numb as her feelings.

"What?"

"She left. She went back to Saint Louis." Not quite cried out after all; another tear drop formed at the corner of an eye. "She wanted to make me come, too, but I wouldn't." She started sobbing. "And she was drinking again, too."

"Oh, shit." Hank spent the next half hour getting the short tale out of his distraught daughter. Then he made a series of calls to acquaintances from San Angelo to Saint Louis, hoping to establish contact with his errant wife. But it wasn't his wife or a friend who finally called at two o'clock in the morning.

Hank grabbed the phone on the first ring. "Hello? Kristi?"

A male voice answered. "This is Sergeant Frank Driscoll, with the Lawton, Oklahoma police department. I'm calling for... Henry L. Hanners."

Huh? "This is Hank Hanners. You're who again?"

"Sergeant Driscoll, Lawton PD. You're the husband of Kristine R. Hanners?"

Oh, shit. "Yes," Hank replied carefully. He looked across the kitchen table at Erin, who saw the warning in his eyes.

"Sir, I'm sorry to have to tell you this, but Mrs. Hanners was involved in an automobile accident..."

"She's hurt?"

"Sir, I'm afraid so. But not too bad," the cop added hurriedly. "Broken arm, scrapes and bruises."

Hank waited, then, "She was drunk, wasn't she?"

"Sir... I'd have to guess yes." Driscoll paused, then continued. "I saw the remains of a vodka bottle in the car, and there was a strong odor of alcohol. But maybe the bottle just broke open in the crash..."

"My wife is an alcoholic, Sergeant." He closed his eyes. "Was anyone else hurt?"

"No, sir. It was a single vehicle accident. She... left the road and went up an embankment."

"I see." He took a deep breath. "Can I talk to her?"

"I'm afraid not, not right now. She's passed out at the hospital. They should be releasing her tomorrow, and then we'll take over. She's under arrest," Driscoll explained.

"Damn." Hank looked across the table to Erin, who returned a fearful look. He tried to smile reassuringly, and she relaxed. A little. "I guess I'll get a lawyer lined up. What are the charges, Sergeant?"

"Just about everything we can throw at her, sir," Driscoll replied, slightly defensively. "Two of

our city councilwomen are members of MADD..."

"Oh shit."

"'Fraid so, sir. DUI, reckless driving, the property damage... One of the old harridans even wanted her charged with leaving the scene of the accident for passing out."

"Oh, sweet Jesus," Hank swore. Then, "Property damage?"

"Yep. When she came off the embankment, Miz Hanners took out the mayor's mail box and a few yards of his picket fence. That isn't going to help her case much either, sir."

"No, I don't imagine it will." He began rubbing his temple, trying to ward off the impending headache. "I see. Thank you, Sergeant. You said Lawton, Oklahoma?"

"Yes, sir."

"I'll make arrangements to... come get her." He concluded the call as quickly as he could, gathering the necessary details, and providing a few of his own.

Erin sat listening. Her father had said nothing to her yet, but it was perfectly clear what had happened; in general, at least. When her father hung up the phone, she said, "Mom's hurt, right?"

"Yeah. And under arrest. Erin..." He stopped.

She took a few shuddering breaths, then left the room.

Lawton was a smallish town, with little serious court activity to clutter the docket. So Kristi Hanners' day in court came in just a few short weeks. In the tense circumstances preceding the trial, Erin's birthday, normally a big deal for the only child, was largely overlooked. The trial itself, such as it was, was rushed to a conclusion. Erin and Hank both appeared with Kristi, dressed in their best, to make a properly familial show to impress the judge. It didn't work especially well.

The Honorable Hiram Watkins sat at the bench and skimmed a printed page before passing sentence. He grimaced and shook his head. Finally he looked over to the table where the Hanners all waited. He nodded to the bailiff, who called out, "Will the defendant please rise." Kristi and her attorney, a local hired by Hank, stood up, as did father and daughter. Erin slipped her hand into her mother's. Mrs. Hanners shook her hand free with an expression of annoyance. Erin bit her lip and said nothing. The judge noted the byplay and shook his head once again. "Kristine Hanners." She looked up. "You've been found guilty of a variety of charges ranging from driving under the influence to destruction of private property." He gifted Mrs. Hanners with a sour look. "Since no formal charge was made, I'll take no cognizance of your vomiting on the arresting officer's shoes." Hank flinched. The judge continued, "As this seems to be your first DUI offense, I've chosen not to render the maximum allowed sentence." Kristi relaxed. For a moment. "But as you've also shown no particular sign of remorse, I believe that you need something to feel remorseful about." He stared down at her. "All in all, it comes to three months in the county jail and three thousand dollars in fines." He handed his printout to the court reporter. "Enter the details into the record," he directed. To Hank, he said, "Mr. Hanners, I presume you'll see the clerk about the fines." His gaze shifted. "Mrs. Hanners, my bailiff will see you right now about your stay in our little facility. Court's adjourned." He rose and left the room.

Kristi turned angrily on her lawyer. "Carruthers, you asshole. You said I'd get probation!"

The attorney closed his eyes and sighed. Why couldn't his client of record be as decent as her husband and daughter? "No ma'am, I said you might get probation for a first offense. It would have been more likely if you hadn't spent your entire day in court glowering at everyone in the room." He sniffed and frowned. "And showing up for DUI sentencing with bloodshot eyes and a hangover was... ill-chosen, Mrs. Hanners." Another sigh. "Look, do everyone a favor. When you get out of jail, put yourself into detox before you kill someone, probably yourself. You have a serious problem, and an attorney can only help you with the secondary woes that the real problem causes."

Kristi's jaw dropped. "Jail... ? Aren't you even going to appeal? And what the fuck do you mean detox?" she demanded.

Carruthers replied patiently, "If you really want me to appeal, I will. But it's my duty to advise you that it's a waste of my time and your money. Cut your losses, Mrs. Hanners." He faced Hank. "Sorry, Mr. Hanners. I'll send you my bill. It won't come to too much."

"Thanks for the effort, Mr. Carruthers," Hank replied, then shrugged. "Where do I see the clerk about the fines?"

"Go out to the hallway and turn left, sir. You'll see the sign about three doors down." The directions came from the black uniformed bailiff who had been waiting quietly. "Ma'am," he said to Kristi. "If you'll come with me..."

"The hell I will!" she began, when Hank touched her arm.

"Kristi, the man's just doing his job. Please don't make your situation any worse by making trouble." She snorted, but kept her mouth shut for once.

"Thank you, sir," the bailiff said. "Come on, ma'am." He took her elbow and led her away.

Erin watched her walk away, silent. Despite her show of support, she hadn't said a word to her mother from the time the woman took her first drink the previous night. She knew she was supposed to love her mother, and mostly she did; but right now she wasn't terribly sure of what she felt. Fixated on her private thoughts, she was largely oblivious to the rest of the world as her father led her out of the small courtroom. She waited on a bench in the hall while he made arrangements for a funds transfer to pay her mother's fines. Her daze continued until a stranger approached them on the steps of city hall.

"Hey, aren't you Hank Hanners?" the jeans clad woman wondered.

"Yes, I am," Hank confirmed. "Do I... ?"

"Hank Hanners, who works for Launcher in Texas?" the small woman asked insistently.

"Yes," he began cautiously; but was cut short.

"Cool!" the woman exclaimed. "Here." She pushed a large envelope into his hands. "You've been served!" She spun and walked quickly away.

Hank stared down at the bundle, embossed with a court seal. "What the...

"...The hell?" Erin finished. "What's that?"

Hank opened the packet and quickly scanned the first page. His quizzical expression faded. Face blank, he handed the papers to Erin. "It seems that your mother is suing me for a divorce. Somehow, while we've been taking time off work to come up here and help her out, she found time to scare up a divorce lawyer on the side." He fell silent, staring into space while Erin read the summons for herself.

She realized that she knew exactly how she felt after all.

Fucking bitch.

Chapter 25

Year Two, August 19th

America is at that awkward stage. It's too late to work within the system, but too early to shoot the bastards.

- Claire Wolfe

"...The Evening News with Joel Phelps."

"Good evening, I'm Joel Phelps, and tonight's top news is the United Nations response to Texas-based Launcher Company's announcement that it has already begun offering passenger service to orbit. Dana Smith has the story from UN headquarters in New York. Dana?"

Break to a business-suited woman outside a huge building reminiscent of an over-sized grave marker. "Hello, Joel. With the U.S. ambassador abstaining, the UN General Assembly has passed a resolution condemning the operations of the Launcher Company."

Cut to yet another person; this one a dark complexioned man in a white suit. "The irresponsible space access operations of the American Launcher Company, conducted without appropriate supervision by the American government and in violation of UN guidelines regarding the use of mankind's common property, represents a criminal waste of vital resources required on Earth to support the poor of our world."

Back to Smith. "This nonbinding resolution is seen by many as an affirmation that space is a resource to be conserved for all mankind, and that its exploitation must be carefully controlled under UN auspices." She glanced at a sheet of paper in her left hand, then returned her gaze to the camera. "The U.S. ambassador has stated that the issue of Launcher operations is an internal affair of the United States, and is not subject to UN oversight. Further, she stated that it is 'an issue the United States government will handle appropriately in due course'."

Click. "Well, shit." Neville killed the television set. He muttered and grumbled inaudibly, then noticed Amy standing next to the sofa with two drinks in her hands. She held one out to her husband. He took it and sniffed at it. "What? No lectures about my drinkin' this time?"

Amy settled down into the cushions at the opposite end of the sofa and gazed through the picture window. There was still a lot of prairie visible; but so too were some spanking new Launcher buildings. "Nope. I heard that damned UN story. Seems like a drink is called for." She followed her own recommendation. "Goddam UN busies... What the hell is the U.S. still doing in the thing? We pay a quarter of their budget so they can push us around?"

Neville sipped. Once he would have gulped, but Amy's moderation campaign had made some definite progress, even if she seemed to be sabotaging her own efforts tonight. "At least it's a nonbinding resolution. No one with a military to speak of will be sending blue tops," his phrase for baby blue bedecked UN peacekeepers, "to Texas any time soon."

"Maybe not." Amy thought it over. "But what about U.S. forces?"

"Damned if I know. From what the Guv said, I don't think the President much likes us. But he also knows we're too valuable to just wipe off the map."

"Now, Bill. Don't talk like that. The government is hardly going to Pearl Harbor us."

"I suppose." He said nothing more, but thought about Ruby Ridge and Mount Carmel, so many years before. And drank.

Apparently other people shared those reservations. A few days later Tom Zelaski rapped on Neville's office door. "Hey, boss. Got some reqs you need to rubberstamp." He waved a sheaf of papers as he walked in, not bothering to wait for an invite.

Neville held up a hand, silently asking his aide to wait. He spoke to his speaker phone. "Look, Todd. I can appreciate that you wanna accelerate your launch schedule. Heck, I'd like to see your satphone constellation in place almost as much as you."

A tinny voice - damned the phone manufacturers already - replied. "Great! Then I can have another slot? We're prepared to pay a premium, of course."

Neville looked harried. "You're not gettin' me, Todd. There's no slots available. Everything's booked solid right now on a priority job."

"Mine's priority, too," the client argued. "What's the other guy paying? I'll see him and raise thirty percent."

Neville winced. "I'd love to take that offer. But I'm the other guy. And I've got to get this system in place, or I might not be able to give you slots you have paid for."

"Well, damn." The line was quiet for a few moments. "You're serious, I guess."

"Never more," Neville agreed.

"Okay. But if anything does open up, can I get dibs on it? I'll cut you a check right now for that much. I need those slots."

"Nope. No check. You've been a good customer, and I expect you to keep on bein' one. You get dibs on that basis, no money needed."

"Thanks, Bill. I appreciate that. Look, I need to talk to some more people; let 'em know this didn't work out. Can I talk to you later?"

"Sure, Todd. Zelaski's sittin' here givin' me the evil eye anyway. You give Marge a squeeze for me."

"Will do. Later, Bill." The line clicked and went dead. Neville hit his own disconnect. He set his chair to recline, and gave Zelaski his best questioning look. "Yeah?"

The aide moved closer. "Sorry about the interruption."

"No prob. Whatcha got for me?"

Zelaski dumped a pile of dead trees onto Neville's desk. "Toilets, showers, telephones, and vending machines," he replied mysteriously.

The exec rocked his chair forward and examined the pile of pulp. "Say what?"

Zelaski shrugged. "I kid you not. It's for the RV park we set up for the transients. We need a bit of an expansion."

"No kidding." Shuffling through the assortment, Neville spotted a work order for three new four-seater latrines, and a request for stop-gap portapotties. "What's goin' on here? I figured with the layoffs among the general laborers, the park would probably end up gettin' closed, not expanded."

"Some of it's crews some of our clients have sent to prep packages for launch, stuff like that. And we're getting more tourists, too. A lot more." He turned serious. "But a damned lot don't quite fall into any of those categories. And those are the ones that just started turning up."

If Zelaski was worried, maybe he should worry, too. "What's the problem with these newcomers?"

"Not a problem exactly." Zelaski seemed at a loss for words. Then, "These guys... Mostly guys, but some women, too. They started coming in after the UN crap, and the U.S. Ambassador's line about 'dealing' with us in due course."

"Uh oh." Neville frown, too. "Do I see where this is goin'?" Lordy, a collection of trigger-happy loonies is not goin' to help matters.

"Probably." Zelaski confirmed his fears. "Judging by the flags and banners we've got flying out in the park, we've got militias in from half the states west of the Mississippi. And some east." He grinned. "Met a batch who said they represent the Kentucky militia. Got to admit, they all sounded like pretty nice folks. Showed up asking what they could do to help, and volunteered to dig slit trench latrines 'til we got some potties in. And passed the hat around the park to pay for the johns. They offered to get me made an honorary Kentucky Colonel." He smiled in pleased recollection.

"Well, that doesn't sound too bad..." Neville began.

"No, they don't." Zelaski shuddered. "But then there's the guys running... Literally. Running in formation. Running around in desert BDUs and working up topo maps of the area."

"Shit."

"Yep. Creepy." Then he rubbed at his chin, obviously thinking about something. "And then there's the ones I don't know what to make of. Can't say they're... organized. They trickle in, one or two at a time. They don't say much except how much they approve of Launcher. They don't play the military games. But they obviously aren't simple tourists, and they all carry sidearms. Very polite, not threatening in any way. But they make a point of being armed." He remembered one other thing. "You know what the Gadsden flag is, Bill?"

"Neville searched his memory. "Nope. Sounds sorta familiar, but damned if I can place it."

"Flags, really. There're several variations. But they all basically run to rattlesnakes and 'Don't tread on me' slogans."

Neville whacked himself upside the head. "Right. I remember now. So what's the deal?"

"An awful lot of these polite loners are flying the Gadsden flag. Hank Hanners spotted a few and commented on it."

"So?" Neville still wasn't seeing the point.

"Hanners says the Gadsden flag is effectively the semi-official flag of the hardcore anarchists. Not the pseudo-communist would-be's, but the serious 'you let me be, and I won't have to kill you' anarchocapitalists."

"Oh, joy." Then Neville rethought it. And how did that differ from his own present course of action?

It took less than a week for UN objections to fizzle out. The condemnation resolution was primarily the work of a coalition of third world nations who feared that the wealthier, more heavily industrialized nations were securing their lock on space-based resources, to the detriment of their own people. Their suspicions may have seemed justified by the slightly rapacious modus operandi of the national space efforts. Neville and his partners settled the matter by pointing out to various commerce ministers that the U.S. federal government was certainly no silent partner in Launcher, and had no say in its operations, that the company was offering much more regular launches than NASA-sponsored missions and at a fraction of the cost, and that there was no reason why their nations couldn't improve their lot by buying some of those launch slots themselves. The logic of the situation was apparent even through history-driven anti-U.S. conditioning. The offer of specially discounted tourist tickets for select ministers probably didn't hurt either. A second resolution formally withdrawing the first was introduced in the Assembly. Neville had never been known as a foolish man. This action had been derailed easily enough; but something else was bound to come up.

Meanwhile back at the ranch-style house, Cal and Micky were socializing with the remaining Hanners. Cal accepted the can of soda Hank held out. "Thanks." He popped the top, drank, and looked over the notes that the engineer had placed before him. "This is pretty cool." He lifted a diagram of the Rubenstein air recycler. "Next best thing to a closed loop. There won't have to be any big hurry to get to the asteroids with this thing to keep you breathing." He held the drawing out to Micky. "Take a look at this, babe."

The woman glanced at the papers with a definite lack of enthusiasm. For the two or three weeks since Mrs. Hanners' sentencing hearing, Cal had insisted on her joining these evenings at the Hanners' place, discussing space colonization techniques. She thought it was sort of morbid, the way everyone seemed to be pretending that Mrs. Hanners wasn't locked up in Oklahoma. She wasn't particularly interested in the techy stuff either.

Erin certainly was, though. She slipped into the chair next to Cal, and looked at the picture. "Well, air might not be a problem, but a long trip out with no gravity could be a bad thing. Humans are evolved to a grav field, and I'll bet we never can completely adapt to freefall." She ticked off points on

her fingers and watched Cal's face. "Calcium loss, bodily fluid displacement, eating reflexes... If we take too long to get to something with a little gravity, I'll bet we won't be in the best shape."

Hank grinned. "So what do you think we should do? Constant acceleration? I don't think our tech is up to that yet, honey."

She stuck her tongue out at him. "Of course, not. We have to spin the ship for simulated gravity, naturally."

Cal pointed out a difficulty. "Which means beefing up the structure to take stress from spin grav and acceleration both."

"Nope." Erin smiled at the young controller. "We use two ships. We fly them out together, normally. Once we're done accelerating, we tie 'em together at the noses, and spin 'em like a bolo. Voila! Gravity." She shrugged. "And we take 'em apart again for deceleration."

Hank nodded to himself. "Something like that might work. Multiple ships - redundancy - is probably a good thing anyway, when you're colonizing an asteroid. Which raises another point. Which asteroid?"

Micky decided to join the conversation. "Why not Ceres; something big enough to have some almost respectable gravity?"

Cal dismissed the idea. Maybe a little too quickly. "Naw. We want a carbonaceous chondrite, somewhere we can find the stuff we need to live on."

"Your colonists will need something to mine for money, if they're going to make a real go of it out there. Ceres ought to have something worth digging up," she said defensively.

"Isn't Ceres a stony mass? Not even nickel iron?" Cal shook his head. "No good. We'll want metals to mine. But we'll still need a carbonaceous chondrite for water, and oxygen."

Erin took Cal's side in the dispute; something which Hank and Micky both noticed that she did a lot. And which neither were terribly thrilled with. "Once you're out of a deep gravity well, finding some rock to mine is no big deal. But first you have to make sure you can survive at all. Can't do much mining if you can't breathe," she explained to older girl, as if to a child. Then she smiled at Cal. Again.

Micky was a little tired of it all. "Cal, let's go home. I need to get some sleep. And so do you." She stood up impatiently.

Cal checked his watch. "Yikes! I do need to get going. Gotta get some sleep before I head to work in the morning. Want to make sure I perform well at work," he said with a sly glance at the engineer and company partner.

"Damned right," Hank agreed. "You want to earn that pay fairly." He grinned at the young man. "So you'll have enough socked away for your own asteroid spaceship."

Erin chimed in again. "We could pool our resources and go together."

Micky grabbed Cal's arm and urged him out of his chair. "Let's go already."

"Okay, okay." He unfolded himself out of the straight-backed seat. "I'll see you two around," he said to the daughter and father.

Erin jumped to her feet and gave Cal a quick hug. "See ya!" Then, "Oh! I wanted you to help me check out a truck tomorrow, a Ford Ranger. Can you come by and pick me up after work?"

"I have to work tomorrow night," Micky said, intending to head off the little expedition.

"But I don't," Cal reminded her. It hadn't occurred to him that hanging out with the younger woman without Micky's chaperoneage might not be wise. "Sure, I'll come by around... seven-thirty?"

"Great!"

Hank watched the by-play, and wondered if the boy was as innocent as he seemed. Probably. He decided to have a little chat with Erin before she caused too much trouble.

The group made their final goodbyes, and the young couple left. Hank turned to Erin and assumed his best wise-fatherly expression. "Young lady, I think we need to have a talk."

Early the next morning Cal's pickup truck rolled down the dirt road that stretched across the flat launcher-range landscape. Its high beams competed with the dim, gray, pre-dawn light. Inside the cab, he listened to a rusty-voiced country singer celebrating being on the road again. Suddenly thunder rolled over the vehicle. There was a momentary glare of light streaking in the distance, followed by an incredible boom which rocked the truck on its worn springs. In the sudden silence afterwards, Cal stared at the horizon in awe. "Sheesh. And I remember thinking a night launch of an F-4 was cool!" The old diehard fighter was long since out of active military service, but Cal's father knew a Confederate Air Force pilot with more money than sense. Cal smiled in remembrance of an impromptu air show, then drove on, his destination almost at hand. Just as well, since he was already running a little late, delayed by an unexpected detour.

Out of sight of the driver, the launcher screamed across the desert. The elaborate ground effect machine went supersonic, fighting for control with a confusion of computer-driven air dams, spoilers, and canards; it thrust forward on a powerful rocket engine drinking JP-5 and hydrogen peroxide. At Mach 1.4, another engine fired; this one mounted in the delta shape atop the launcher's back. There was a nearly invisible flash as explosive bolts fired, freeing the the mini-shuttle to shoot into the sky, where it climbed to orbit.

Back on Earth, the booster's engine shut down and aerodynamic drag immediately clutched at the sleek beast. Once it dropped below the speed of sound, the launch vehicle trailed streamers which further increased drag. Finally, it deployed a parachute. When it had come to a complete halt, recovery vehicles drove out and began the turn-around process. It would send another package skyward before the end of the day.

After a couple of months of operation, Cal was getting used to the activity, but he still loved watching a launch. It was a daily, indeed, multiple-times-per-day spectacle on the Launcher Company's range. Begun as the dream of space enthusiasts networking around the world, the Company was busily making a reality of the dream- orbital transport affordable by anyone. The Company was also busily

making a fortune building that dream; orbit is a resource that many were willing to purchase. As a launcher employee, Cal was socking away bond shares and wages with which he eventually planned to buy his own part of that resource. And more.

As the truck pulled up beside the lonely metal building, its high beams splashed across a sign- "Orbital Ops." Below that, someone had hand-lettered the extra "Home Of The Hovercraft From Hell." As always, Cal smiled at his own handiwork; while not strictly an accurate description of the ground effect booster, it was pleasingly alliterative. He climbed out of his truck and headed for the building, a refuge from the comparatively chill pre-dawn 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. Grandjean wasn't immediately obvious, and Cal mentally thanked whatever gods there might be for the break. He walked quickly towards his console.

"Cal!"

Oops. The supervisor was present after all; he came from the corner break area and approached the tardy controller. Cal did his best to appear contrite 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. There had always been something of a 'tent village' augmenting the company dormitories for lower echelon and short term workers, but it had been growing in the last few weeks. Launch clients' support crews, tourists wanting to see a boost, even the sort of permanent-tourist nomads that appear around any desert RV park. And lately there were a those with a more militantly pro-Launcher agenda.

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 completed until tomorrow."

"Joy." He continued on to his post where he began the process of relieving the night shift man. "So whuzzup, Louis?"

"Everything." The smaller, dark, and wiry controller tapped a few keys and brought up a display. "Special launches all night. Mostly LEO, inclined around thirty degrees plus or minus a few degrees." The paths would carry the new birds over Launcher's west Texas facility every ninety minutes. And the sats were staggered into orbit, providing nearly continuous coverage.

"More traffic control satellites?" Cal asked.

"I don't know. If they are, the video doesn't seem to be integrated into the regional summary yet." The night shift controller referred to a composite image built up from satellite imagery provided by multiple birds, and used by Launcher to control Freeport airspace. The company had offered to provide the highly detailed air traffic control data to the Federal Aviation Administration at cost, to supplement the federal agency's aging, if not quite totally decrepit, ground radar-based system. The move bought the upstart access company some brownie points in public opinion polls, as did the feds' refusal to accept the offer. Several airlines took advantage of the opportunity to enhance their own PR images by contracting for the feeds themselves, bypassing the FAA. The man yawned and added, "Head shed wants them watched closely." He tapped screen traces with a lightpen. "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," he drawled to himself, "somebody paid serious money for this." Each of the satellites appeared to be fairly massive; close to the four ton mass limit of a Launcher payload. "Lots of delta vee, too," he added quietly. "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 waited quietly, watching the young man run through the orbit checks, then a set of systems status inquiries. Then he spoke quietly. "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," reassuringly. "You are not in trouble. Quite the opposite." He paused, then, "I... We need to ask you some things."

Suddenly on guard, Cal asked, "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 main 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 flopped 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, the Company is in serious trouble. You know this. I will not so insult you to ask if you know of the UN resolution."

"Gods, no. But it got repealed pretty quick."

"True. But that was only a single action. Perhaps you have also noticed that the American government seems less pleased with Launcher than even the United Nations." The supervisor essayed a small smile.

Cal echoed the hint of amusement. "Yeah, I kinda noticed that." The smile faded. "You don't think the feds are going to do anything, do you?"

"No, not yet. But soon, I think." He sighed. "Maybe not today, nor even tomorrow. But it is now inevitable. I think that many people realize this now; it is why so many have come here in person to show support." He looked faintly sad. "Many have brought arms. I will not decry the right of a person to any weapon, but it is unfortunate that we seem to be coming to this point."

"So what else are they supposed to do? Hand 'em a jar of Vaseline and roll ever on their stomachs? I hear most of those people are bond holders like me. They're worried."

"I should certainly hope not. They are right to be concerned. The major company partners certainly share that concern." He squared his shoulders. "They feel that we must prepare for ill-considered actions on the part of your government."

Cal's eyes narrowed. Since Launcher had been formed, some of the federal government's better considered actions had included IRS agents gunning each other down, and causing an inflation rate that spiraled higher than a Launcher spaceplane. Other feddie blunders had a significant number of Texans openly advocating secession and the re-establishment of the Lone Star Republic. If Texas went, the better part of the western U.S. was likely to spin off their own little country, or 'Jackelope Republic', as one of his favorite authors named such a fictional nation. "How so?"

"That, Cal, is what I wish to speak of with you." Another sigh. "Launcher has many supporters within the government, also the military services. We are told that soldiers from Fort Bliss at El Paso are being prepared to enforce a presidential confiscation order."

"That's crazy," Cal objected. "What good is the damned booster without the launch strip and support facilities? Heck, without the ground support people?" He shook his head.

"Correct. Our information is that the company will be nationalized. This applies to the people who are a part of it."

"What? They're gonna draft us all?"

"In effect, yes."

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

"This is all true. This is why the controlling partners have chosen to resist confiscation." Grandjean snorted softly. "As a point of fact, the federal government has been de facto bankrupt since very long before the network attacks. But that is a moot point now."

Cal stuck to the issue at hand. "Resist how?" he asked uneasily.

Grandjean took a deep breath, then exhaled. "Now we come to what I must ask you, and the other controllers as well."

"Yeeaah?" Cal asked slowly.

"Do you understand why the people in your 'tent city' have come? Many with guns?"

"Oh, lord; you want us to fight the army." Cal felt a little queasy.

"One would hope not," Grandjean replied. "We believe that a show of solidarity will demonstrate our resolve to remain free should the Army come here. We hope that honest soldiers will be reluctant to initiate force against honest civ..."

"Free?" interrupted Cal.

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

"Stop him, and 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 of income taxes?" Grandjean asked; surely a rhetorical question.

"Hell, no! I've been paying my taxes! Company's been withholding the whole time!" Cal exploded. Cal had been hard pressed to explain to Micky why he hadn't accepted the company's offer of contractor status, with the attending effective pay hike, as the company would have ceased withholding federal and state taxes. Even though he fully intended to leave Earth someday.

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

"That's bull...!" Cal began. A murmur from the console area arose, and Cal shut up.

"Yes, I agree. Theft, as it were." Grandjean eyed Cal appraisingly. "As well, the government wishes to take the launcher. Indeed, nationalization would also take 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 to his country 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 believed that the Constitution was intended to provide a framework in which individuals could interact fairly, that it was truly meant to 'promote the general welfare.' " Grandjean sneered. "Now it appears to be a masquerade, a mask, behind which those who desire to control others because they cannot control themselves pretend to work for the general good. A good which they conveniently define themselves. And in reality they steal to recreate the same neo-communism which I once fled... because they cannot create for themselves!" Grandjean was wound up for a serious tirade. Issues which had been building pressure for months were finally popping valves.

He went on, "I joined Launcher Company because I thought we were to be free to reach for the

stars! What we have created, the government could create as well. Instead, they choose to steal what is ours." Grandjean shook his head angrily. "No. I will not allow it! And I ask your help."

Cal's eyes bulged slightly at Andre's uncharacteristic outburst. He couldn't recall ever seeing his boss so... impassioned. "Me? What can I do?" Cal asked.

"You have seen our supporters gathering in their tents and automobiles. 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 exclaimed. "I think you want my dad for that. I can't hit the broad side of a barn beyond a few yards."

"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. We must prepare now."

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

"You are liked, and respected by the other controllers. If you agree, I think it likely that 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 patiently. Cal finally looked up at his supervisor and asked, "How can I know if it's right?"

"I am told that there is no certainty on this side of death. We must simply do the best that we are capable of. 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, even if I was supposedly just a kid." 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, "For now, merely to continue with your normal duties. And also to review some files; I will give you the filenames." Grandjean's smile faded. "Please familiarize yourself with the data and specifications in the files. Later this afternoon, we will bring in more people to cover the usual work." Cal thought he could see a predatory gleam in Andre's eyes as he continued. "We shall arrange time for you and others in the simulators. Practice makes perfect, as they say."

Chapter 26

Year Two, September 21st

Stroke of the pen, law of the land... Kinda cool.
- presidential aide Paul Begala

"... recap, the U.S. President announced in an emergency address that he had issued an executive order to nationalize the Launcher Company, quote 'as it is obviously a vital element of our national security' unquote. Now here's Captain Mac with the rush hour traffic report."

The short radio snippet was typical of pieces airing across the country that day. In a few areas, an unprecedented number of call-ins had resulted in soap operas being preempted so that the Presidential statement could be re-aired several times. The Launcher Company heightened the interest by their very refusal to issue a reply to the address.

"Mr. Neville, please!"

The Launcher executive lowered his finger from the elevator call button he had pushed 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. It was as good a time as any. "Yep?"

"William Caldwell with AP Online. Might I have a few minutes of your time?" the reporter requested, bracing himself; Neville's reputation for shredding reporters and sprinkling them over cereal was fairly well established by now.

"I have a couple'a minutes. Shoot." The Texan wasn't always vicious; politeness did help.

"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. Every paper in the country is being drowned in letters to editors. Everyone seems to have an opinion one way or the other. Stockbrokers have so many conflicting opinions that Wall Street is paralyzed. Except you. Launcher hasn't released any statement whatsoever."

Neville considered, then, "So?"

"Well... Don't you have any comment at all? The President is talking about taking your company away from you and making it a subsidiary of NASA. Your... antipathy towards the space agency is fairly well known," Caldwell added straight-faced.

Neville's lips twitched. It might have been either a small smile or a baring of teeth. "Try it," he said, matter-of-factly. He turned and headed for the elevator.

"What?" Caldwell called after him in puzzlement.

Neville paused, and looked back. "You asked for my response to the confiscation order. That's it." He cocked an eyebrow at the reporter.

"Just... 'Try it'?"

"That's enough." Fortune smiled; in a display of exquisite timing, the elevator doors opened. Neville stepped in. Just as the doors began to close, someone else called out to him.

"Neville!"

He stuck out a hand to block the sliding doors. Hell, why not? "Yep?" he replied tiredly as someone pushed through the press of people in the lobby. Whoa, this was no reporter.

A gaunt man, unshaved and bleary eyed, in a bedraggled suit, approached carrying a brown paper bag. "Neville!" he repeated. "You remember me?"

"Can't say's I do, Mister..." he prompted the man for a name. Then again, maybe he was kinda familiar...

"Dontcha even know who yer ruinin', Neville?" The man moved closer, alcoholic fumes wafting around him. He reached into his jacket pocket and withdrew a small revolver. It was glittery and cheap looking. "I'm Harold Rodgers," he announced. "And you destroyed me." The gun rose wavering, pointed in Neville's general direction.

Neville's heart skipped a beat or two, then raced to make up lost time. His eyes bulged as he stared down the biggest bore he'd ever seen on such a dinky pistol. The man's identity still hadn't quite registered. "Whoa! Easy, guy. Let's talk this..."

"What's ta talk about?" The handgun shook in Rodgers' clumsy grip. "I lost my job, I'm bankrupt, my wife left with the kids... And you're still goddam suin' me, you muthafucker!" he screamed shrilly. His trigger finger twitched.

Neville dove to the side of the elevator as the gun blasted. Freed of the executive's obstructing palm, the doors quietly slid closed. Neville's ears rang from the loud discharge as he surveyed his anatomy, searching for unwanted perforations. Shee-it, the guy missed, he decided. He looked around his enclosure and spotted a small hole in the paneled rear wall. Just about heart level. "Shit." Then he realized that he'd pissed his pants. So much for dignity.

In the lobby Rodgers stared at the intruding doors of the elevator. Had he killed the old fucker or not? He lowered his little .38 and glanced at the brown bag which held his only remaining solace. He took a large swig of cheap whiskey, all he could afford after blowing most of his cash on the gun and gasoline to get here.

"Put the gun down!"

Someone was yelling at him. Rodgers raised his gaze from the bottle and saw two rentacops pointing guns at him. It seemed so unfair; their guns were bigger than his.

"Drop the gun!" the lead guard repeated. Shit, shit, shit, he thought. Two years on the force without having to draw my gun except on the range, and I get this my first day moonlighting at a fucking hotel. Shit. And the guy still wouldn't put the gun down. "Look, mister, I don't know what he did to you, but let's talk it over," he tried reassuring the obviously distraught gunman. "But you got to

put the gun down. Now. Please."

Rodgers looked around. The man who had destroyed his life was gone. All that was left was himself, cheap booze, and two men with guns. Everyone else who had been in the lobby had vanished with his shot. He shrugged, and raised the gun.

"No! Don't!" the guard yelled as Rodgers placed the muzzle to his temple and pulled the trigger. A scarlet mist sprayed against a decorative column, with bits of gray and white for texture.

Through the safety of the heavy elevator doors, Neville heard another muffled shot. He punched a random floor button in blind panic; anything to get the car moving away from that psychopath.

Hours later, Neville sat in the safety of his hotel room, sharing a therapeutic bottle of scotch with his lawyer. He'd finally escaped the cops with a promise that he'd come down to the station tomorrow for still more statements. "But goddamn if I know how many different ways I can tell 'em the same thing. Someone called my name, yelled something about bein' ruined, and started shooting. I didn't even see the finale." Thank god.

Creasing shuddered, thinking about the gruesome finish himself. He'd come through the lobby before the management got a sheet up over the stained column. It was not a decoration he cared for. The clotting brown clashed with the lobby's baby blue theme. "Don't worry about it, Bill. Mainly they just need you to read over the transcript they'll make of today's statement, and sign it." He reached for the bottle of scotch, and Neville pushed it closer to his reach. He unscrewed the cap and topped off his glass. He paled again. "God. I can't believe that guy actually survived the head shot." Another shudder. "There were bits of brain out there in the lobby."

Neville gulped his lunch back down, then tossed back more scotch to keep it company. Creasing hadn't hadda remind him of that... "If ya can call that survivin'. One'a the paramedics that looked me over said that with the size of the hole in his head, the best Rodgers would ever do again was hang out with the other vegetables in the garden; wouldn't even be up ta droolin' on his own." He emptied his glass, and the attorney passed the bottle back to him without any other prompting.

"A bureaucrat to the end," Creasing joked morbidly. "Couldn't even kill himself efficiently." He laughed bitterly, and drank.

"That ain't funny, Lon," Neville scolded. "I wouldn't'a wished that on anybody. Not even Rodgers." The police had of course filled in the Launcher executives on the perpetrator's identity. Bleakly he added, "But if we wanted an object lesson for other feds..."

"Amen."

As the reporter had noted, many people had opinions on the anti-Launcher federal action. And some did more than write irate letters to news services. A new offensive in the ongoing anti-federalist information war was set into motion. It was semi-coordinated over the Internet - a set of attacks on government systems set to occur tonight - by consensus of the hackers/crackers/whatevers who were acting in anonymous cell-of-one fashion.

Despite the traditional computerman's diet of Mountain Dew and Twinkies, he was skinny. He perched his bony butt on a beat-up secretary's chair and fondled a trackball with one hand, while

stuffing one of the aforementioned pseudo-pastries into his toothy mouth with the other. He stared at lines of near-gibberish scrolling by on a twenty-one inch flatscreen. The only other illumination in the room came from a bank of similar monitors. It was a pricey array, but money is no object when you can crack most credit companies at will. Something beeped annoyingly, and the guy scanned the racked screens. A window on one monitor was blinking a connection message.

Stripped to the basics, it was an old-fashioned war dialer. The computer used a multiport comm card to drive several modems, all of which were busily dialing phone numbers. If there was no answer after a couple of rings, or if the call completed to voice, the computer hung up and moved on to the next number in the exchange. But when a modem answered, the routine shifted. If the initial connection message indicated some private system, the software noted the data for future use and closed the connection. If the message was less informative, or - thank the Great Programmer - indicated a federal computer system, it automatically began a dictionary attack against the system's user ID/password protection. The infowarrior had selected telephone exchanges in which federal offices were known to be located, so he was making a reasonable number of connections for just one night of operation. The fact that he was using eight such systems controlling some three dozen telephone lines simultaneously probably didn't hurt either. That was another expense he wasn't especially concerned about; he'd charged that to his congressman's American Excuse card.

The beeping and blinking indicated that he'd successfully accessed another probable government computer. It had already happened several times, and he wished his script had been better written; he was spending more time cruising directories manually than he'd planned, verifying the hated governmental status of systems. On the bright side, he was finding a lot of neat little files that might be useful for blackmailing some feds later. People really shouldn't leave unencrypted stuff like that on network drives.

On systems where his software alter-ego could finagle root access, he deleted every file he could reach, and planted a secure disk wipe utility which overwrote all mounted drives multiple times, ensuring that the files would be unrecoverable. On networks with somewhat better security, he simply left a remarkably large assortment of viruses, trojans, and killer macros behind. Where possible, he also replaced virus definition files with his own custom variations which had been carefully edited to leave the systems' virus scanners effectively useless. Not elegant or pretty, but this was war.

He checked the status of this latest attack and licked his fingers clean of Twinkie goo. He tapped keys, and sent another system into death throes. That made eighteen. A glance at his watch showed that it was a little later than he'd thought. He stood, wiping sticky crumbs from his shirt. Time to go; eventually the feds were going to track the night's work to this place, and he didn't particularly want to be around when the stormtroopers kicked in the door.

He cast a final glance around the room. He was going to miss all those computers. He paused for a moment and wondered if he should make some token attempt at wiping fingerprints off the gear. But he'd never been busted, never applied for an air travel pass, so never had his fingerprints taken; what the feds might find couldn't help them. Unless he hung around here long enough to get caught. He slung a backpack over his shoulder, grabbed a laptop, and headed for the door. From here on out, the computers would be on their automated own. Maybe they could crash a few more systems by themselves.

The cyber-guerrilla over estimated the feds; it took them nearly twelve more hours to find and raid the abandoned computerized foxhole. Or maybe he'd underestimated the numbers of his fellow

stand-alone conspirators; the U.S. Marshals were slightly preoccupied with the other two dozen crackers in Houston alone.

It was a very small room for two such supposedly important men to be meeting in. But the size, and its isolation, made it easier to secure. They didn't want any recordings of this briefing hitting the news nets. The Attorney General massaged his temples and stared dejectedly at the sheaf of papers in front of him. By agreement, they had declined to bring any electronic devices; hard copy only. "Shit. Is there anybody they didn't get to?"

The Director of the FBI shook his head. "No, not to speak of." He wished his department had never been tasked with computer infrastructure protection. Damn it, we're accountants and lawyers, not network administrators. He began to say something else, but stopped.

"All right, the summary says this was all external attacks for once; no more inside jobs by moles." The AG frowned. "How'd they get in? I thought we isolated our networks from the Internet."

"Unfortunately, sir, that isn't entirely the case." He flipped to a specific page in his copy of the interim report to check something. "We limited Internet connections to the bare minimum we thought we could manage..." He sighed. "The 'Net was originally designed as a highly redundant government communication system. Even after it essentially went commercial, we continued to use it since the expanded connectivity worked to our advantage. By now, we're so reliant on existing 'Net communications - email, file transfer, and such-like - that we can't abandon it completely until we can get new data circuits installed to replace what the Internet does for us."

"And why wasn't that done?" The AG demanded angrily.

"In some areas, it was. The Bureau, for instance, is almost non-reliant on the Internet at this point. Other agencies weren't so efficient." The Director offered a tight smile. "NASA used so many connections that they've been having trouble guessing at where all their bridge connections were. Sometimes the distinction between private WAN, virtual private network, and Internet can get pretty vague, if you don't know exactly how the routers are programmed. They were so heavily infiltrated last night that... Well, NASA has temporarily become a non-issue. The agency is effectively dead."

"So I hear. Are there any estimates on when they can start launches again?"

"No. They can't even guesstimate when they'll get their networks back up. And then they still have to purge everything before they can assure flight safety." The Director looked up from his papers and stared his boss in the eyes. "As of now, the United States effectively has no space program, manned or otherwise."

The Attorney General seemed lost in thought for several moments. "Which puts Launcher in the temporary position of holding a national monopoly on space access," he finally decided. "Is it possible that they were responsible for the attack?"

The Director gave him an odd look. "That is... unlikely in the extreme. I don't think you have a handle on the magnitude of this. I mentioned NASA only because they were one of the the worst hit. This time. Revenue would have been the worst, except that they had so damned little left to target anymore.

"The simple fact is, the federal government was effectively shut down for several hours. Disconnecting from the Internet didn't stop it because we still had to have dialups for needed connectivity until the new private line circuits are in. Basically, the United States was attacked by - this is a rough estimate, and doesn't necessarily mean much. We think there were nearly three million attackers from more than a hundred countries. Granted, the vast majority of attacks seemed to come from the U.S., but we can't be sure. And that's probably only because the U.S. still has the largest proportion of Internet users of any country."

"Shit, we have PATRIOT taps on every damned telephone switch and ISP in the country," he exaggerated. Slightly. "Couldn't you even get traces on the phone accesses?"

"We might have," the Director allowed grudgingly. "But a significant number of our monitoring centers were also hit with EMP and magnetic pulses. Physical attacks, sir; and clearly timed to be nearly simultaneous. And someone lobbed thermite grenades over the fence at our Nashville facility. The equipment in those centers will have to be replaced before they can go back online, and the data is lost forever. It's dumb luck that we traced any specific attack. And generally there wasn't anyone left at those locations; just automated equipment."

"What about ECHELON? Did they get anything useful?"

"Whatever the NSA might know, they aren't seeing fit to share with us. You might suggest to the President that he put a burr up their classified asses."

The Justice boss roughly ran his fingers through his thinning hair. He winced, and discovered he'd pulled a few strands free of his scalp. "God damn it!" he returned his attention to the Director. "So what the hell is Infrastructure Protection going to do about this?"

The Director faced the AG bleakly. "First, I'd suggest that all federal agencies disconnect all computer connections to the outside world. Operate them stand-alone; no networking that doesn't use secured, dedicated circuits. No Internet. No dialups."

"That'll cripple us."

"We're already crippled. Trashing feddie systems has become the national pastime..."

There was acid in the AG's tone as he interrupted. "That derogatory term is not acceptable."

"As may be. But that's how we're viewed. Every script kiddie with an obsolete Pentium wants to crack us. It's the 'in thing'. My daughter says kids are bragging in school. The only way to stop them from killing our systems outright - again - is to cut all external access. Go back to hard copy and verbal instructions."

"Shit, shit, shit." The AG nodded acceptance. "Okay, it's bad; but I'll pass on your recommendations for lack of a better idea. Start putting together some protocols for implementing the plan in case the President..."

"I think not." The Director fanned out his paperwork and selected a page. "I quit. I no longer believe we can stop these guys, and I'm none too sure but that they aren't right. I'm getting out while the getting is good. Before someone decides to kill more than computers. Good luck." He slid the single

page across the slick table surface and got up. As the AG stared at the paper, the ex-Director quietly walked out, closing the paneled door behind him with a muffled click.

Two hours later, the Attorney General met with the President and the full Cabinet. He passed on the FBI infrastructure summary and the the disconnection recommendations. He neglected to mention the Director's resignation. He was looking bad enough already.

The President already viewed Launcher as his personal trial and tribulation, so he latched onto the revelation of NASA's total collapse even quicker than had the AG. After approximately three hours of repetitive recriminations, accusations, and backbiting, the Executive ended the meeting with seven words. "I signed the fucking order. Do it!"

In the lull before the unsuspected storm, Cal and Hank sat in Hanners' living room and enjoyed the news. As a general rule, Cal rather despised television; but the ongoing reports of foundering feddie bureaucracies was too damned entertaining to miss. He wished Micky was there to share it with him, but she had started skipping the sessions with the engineer and his daughter. She was putting in a lot of extra hours at The Grill. He figured she was saving up for the big move out to space.

Erin came back in with sodas. She handed one to Cal with a smile, then the other to her father. She settled in between the two men. "What did I miss?"

Cal grinned. "The feddies have decided to protect themselves from future info-attacks by disconnecting themselves from the rest of the world."

"I think they did that years ago," Hank muttered. He eyed Erin sideways. She either hadn't quite gotten the message last time they talked about this, or was simply ignoring his warnings. He didn't want to see her get heartbroken in some foolish battle with Micky over Cal. She seemed to be very serious in her interest in the kid. The hell of it was, Cal was a good guy, and if it weren't for the complication of the other woman in the equation, Hank might even approve of the growing relationship. At most, he had three years on Erin, and they had a lot of common interests. He wondered if Cal had any idea just how tightly wrapped around her finger Erin had him; he was coming over nearly every day now, helped Erin pick out her truck, and done the little bit of maintenance it had required.

Hell, the kid's a grown up. Let him learn the hard way about women. Shit, he was still learning himself. Kristi had found a judge who'd actually awarded her alimony; a nominal sum, true, but on top of the lump sum common property award... It had caused him to rethink his financial plans for the future. He was still working on a grubstake. But more and more, it looked like he would have to team up with another group. He hoped Cal and Micky had their money under control.

He looked at Erin from the corner of his eye and smiled. At least Kristi hadn't gotten custody, even for the months remaining until the girl's eighteenth birthday. He credited that judicial decision to the fact that Kristi had missed most of her court appearances due to the DUI incarceration in Oklahoma. Heheheh... She was still allowed visitation, but so far Erin had refused to face the woman she'd stopped calling mother the day of the sentencing.

Cal's thoughts were elsewhere naturally enough; the spreading infowar. "Hank, do you think this will distract the feddies from us any?" Andre had been updating him and the other controllers about the possibilities of a seizure, but this attack might introduce a new element to the equation.

Hank frowned at the question. He knew Cal was one of the men working in the simulators for the new system. Maybe he was getting cold feet. God knows he would himself. "I wish," he replied finally. "But the government has a traditional way of dealing with growing problems; they go kick ass somewhere else. Like Bush deflecting attention from his Cabinet scandals by invading Panama." Cal looked blank, so Hank tried again. "Or Clinton ducking impeachment by bombing Iraq and the Serbs." Maybe he'd recall that one. "I think it's possible that crazy fu... " He glanced at Erin. "...dude in the White House might think our asses are conveniently located."

"So what could he do to us?" Erin wanted to know. She was working for Launcher now, and took an unduly proprietary interest in anything concerning the company.

Cal looked over her head to Hank, who shook his head silently. Erin didn't need to know; she'd worry. "Who knows?" Cal said lightly. "Maybe he'll sic the EPA on us; I don't think they've made an appearance yet."

The Hanners laughed. Cal didn't.

Chapter 27

Year Two, October 5th

Just take your best shot and don't blow it.

- Styx

"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 was crisp with tension. Word had been passed from on high, or at least the upper levels of company management, that an Army detachment from Fort Bliss was likely to arrive today to enforce the presidential nationalization order. Everyone had carefully neglected to inquire as to the source of the data. Clearly there was a mole or two left in fed service. As may be, the news had Cal doing double duty today; shepherding both the usual batch of commercial traffic and the specialized company birds of which all the controllers knew, but none spoke.

From his desk to the rear of the room, 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 imagery which Launcher used in lieu of more expensive ATC radars.

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 placed the instrument back in its cradle.

"Andre?"

Grandjean looked to Cal, who wore a questioning expression. "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 range safety. "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. Then the supervisor addressed the remaining controllers. "Gentlemen, ladies; 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."

Aboard the inbound helicopters, a company of troops from Fort Bliss made final preparations for landing. Naturally, everything was already in as good order as could be expected, but the sergeants, and the soldiers themselves, found that the practice helped settled their nerves. No one but the Captain seemed to be comfortable with the assignment. The First Sergeant snuck a glance at his company commander and thought about retirement as they flew over a tent city that seemed to have sprung up overnight. He nervously considered the apparent thousands awaiting their arrival. Someone had told him once that as much as forty percent of the world's hundreds of millions of small arms were in the hands of American civilians. He wondered how many of those guns were waiting for him. Most of

them, it seemed in his paranoia-enhanced vision.

Oblivious to the less sanguine possibilities, the Captain mentally rehearsed his coming moment of glory. Visions of medals and early promotion danced in his head. 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 building their briefing had identified as the company headquarters building, the soldiers eyed the surrounding crowd of laborers, technicians, engineers, programmers, and general run of Launcher supporters. Arms were evident. Yeah, and Niagara Falls gets a little damp on occasion.

The top kick hated it. Too many guns, and not a friendly expression to be seen for miles. Those spectators not toting guns seemed to be bearing flags and banners; the sullen crowd was festooned with an assortment of stylized rattlesnakes and Revolutionary Minutemen. I shoulda refused the assignment, he realized. I'd have had plenty of company in the brig with the other guys smart enough to tell the Captain what to do with the job. Those who hadn't simply disappeared overnight; Fort Bliss was beginning to look deserted lately. He shuddered as he eyed the crowd again.

In the Ops center, Grandjean and his controllers were watching the projection screen intently. Some kind soul had set up a video pickup atop 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. As the Army aircraft, long since positively identified, settled down on Launcher's tarmac, the range safety controller spoke into his microphone. "Groundpounders are down, and the air is clear. Launch at your discretion." He listened for a moment, then turned to Grandjean. "They're off, Andre." As launches became routine, the procedure had been streamlined.

The Launcher representatives stopped in front of the soldiers. An elderly man whom the officer recognized as Launcher's president eyed his collar and spoke. "Well, Captain; what can we do for you today?"

The officer stepped forward. In his most officious manner he proclaimed, "By the authority of Executive Order 17329, signed by the President on September 21 of this year, 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 self-important voice.

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 booster's engine igniting. There was a huge roar, followed by a fading scream as the launcher accelerated. Thunder abruptly echoed from the distant craft as it went supersonic, followed by the near-silence once more.

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

The Captain's faced turned red. Angrily, he turned to his top kick. "Sergeant! Prepare..." He was interrupted by a ratcheting click. And another. Then still more clicks, clanks, and noisy clatter; the air was filled with a mechanical clamor. To a man, the soldiers blanched as they recognized the sound of too damned many recently banned hunting rifles, target pistols, and 'assault weapons' being charged.

In the control center all eyes were fixed on the drama unfolding on the screen. The controllers

didn't need an audio feed to know what was happening. A voice stage-whispered, "Oh, sweet Jeezus..."

Time stopped.

Under the hot sun, Neville stood staring down from his gaunt height at the military bureaucrat before him, and considered the slowly fading racket from the surrounding crowd. He had exercised more than a few doubts as to whether Americans still had the cojones to stand up to armed thugs; he had his answer now. And he hadn't even asked for these people to come, nor suggested this show of force. He smiled just a little.

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

The Captain's anger began to turn to panic. He turned back to the smug 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 their superior, the pilots began running up the engines, and the rotors started to turn.

The First Sergeant called out, "Cumpnee! Load 'em up!" Let the damnfool ossifer face down a few thousand pissed-off civilians. He remembered how civvies had taken over the top spots in the Camp Perry marksmanship championships and felt more sweat running down his sides than even the Texas heat could account for. The small of his back felt like a swimming pool. The soldiers piled back into their craft. For a moment the Captain stood abandoned on the tarmac, looking at Neville.

The exec looked him in the eye and said, "You have a good day now, Captain." He turned and walked back to the building.

The Captain stood in the glare, perspiring. He felt... exposed. And alone. He scrambled back to his helicopter, which levitated even before he strapped in. A wave of motion seemed to ripple through the crowd on the ground as weapons tracked the departing craft.

The Ops center screen went dark as the controllers' unseen benefactor shut down his camera. They muttered among themselves. Someone voiced the rhetorical question, "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 'David's 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. He thought about the unanswered question that still echoed in his head. "Who won? No one was victorious today."

Neil swore roundly, including obscenities in six languages, as he tried to untangle his cables. The musty air in the access tunnel made him sneeze, which triggered another burst of curses. He hated DC, and seeing the nation's capitol from underground didn't make it look any prettier. He figured it should have been left an un-air conditioned swamp. Funny how wetlands protection and restoration never applied to feddie holdings.

He promised himself that he'd keep his bright ideas to himself in the future, and never volunteer again. God damn how Misty could talk him into anything. He rechecked the ground strap bridged onto the heavy duty conduit that was his target, and went to work with a Dremel tool. He had to guess at what protections the fiber optic link between the White House and the Pentagon might have, but some sort of resistance check that could reveal a cut on the conduit seemed reasonable. The strap was meant to beat that. He hoped it would work.

The ceramic blade made quick work of the metallic tubing. He bent back a long flap of steel and looked at the armored cable within. The rest took rather longer. When he was finished, he had hung an odd device on every active fiber in the cable. The gadgets bore a passing resemblance to the laser signal tracers used by telecomm techs to bend a glass fiber just enough to allow some light, if any was present, to leak out and be detected. But these did a bit more than detect light. They amplified the laser signal and passed it on through a second optical fiber to a suitcase the tech had lugged through the dank tunnels.

The dozen fibers in the cable were now connected to a portable laser receiver and multiplexer. In theory, his system could now monitor any traffic passing over the government comm network. He had tried it out on some commercial networks, so he had faith in his handiwork. He hoped the gadgets he'd been given to defeat the tunnel's physical security systems worked as well; he had the idea that federal prison would be a very unpleasant place to live, assuming he made it that far.

He jacked his handheld comp into the elaborate line tapping device and set the thing to scanning for traffic. The results were fed down yet another fiber optic cable that he'd trailed behind him, like Jason in the Minotaur's labyrinth. Some other poor schmuck was stuck with the job of analyzing the data from the taps. He wondered how they'd deal with the encryption that the feds must be using. But that wasn't really his problem, so he settled his haunches down onto the chill concrete floor and pulled a worn copy of *The Venus Belt* from a hip pocket. It was a favorite anyway, and the anti-gov covert action in the tale made it seem... very appropriate just now. Neil tried to relax and read.

The General pulled the handset of the crypto phone from his ear and looked at it doubtfully. Unfortunately, he could hardly blame what he'd just heard on the complicated electronics. It took a politician to be that stupid. "An... airstrike, Mr. President?"

"Damned right. I'm forced to conclude that the Launcher Company poses a grave threat to national security. Given the present state of affairs regarding the ongoing cyber attacks, we cannot take any more chances. Launcher... Neville has resisted a lawful order and rebuffed a military operation by force of arms. I want this settled. Now."

"Mr. President, is this the best avenue to pursue?" asked the JCS chairman. "It seems to me that destroying the very asset we wish to acquire may be... ill-considered."

"General, you have your orders. Carry them out, or I'll replace you with someone who can!"

He wasn't that far from a thirty year retirement, and it seemed a shame not to play the whole thing out. The General also recalled the nuclear connection between Launcher and NRU. Perhaps it was better to be safe than sorry. "Very well, Mr. President." The men hashed out details, and the General placed more calls to put wheels into motion.

Cal was fetching his sixth cup of coffee when he heard a vehicle pull up to the building. A few moments later Bill Neville walked in carrying a large briefcase. "Good afternoon, Mr. Neville," he said.

Neville's face held a worried frown, as he looked the controller over. "Cal, isn't it?" The controller nodded, and Neville continued, "Afraid there's not much good about it; but thanks anyway." 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. When they caught Neville's eye, he 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, something that should have been ridiculously redundant in the company operations center. He considered what sort of situation could make the gear a necessity, then looked at his coffee cup. He threw it into the trash and went back to his post. His appetite had fled.

From his seat to Cal's right, David asked, "What're they doing?" He tipped his head toward the visitors.

"Looks like Ops just became Headquarters."

"That's not good. You think it's going to be us then?" David was Cal's backup for the new duty. He wiped sweaty palms on his trousers.

"I'm a-thinking so." Cal wondered if he should try calling Micky; she might be good for his nerves. Then he saw Hank slip quietly through the door, and thought about Erin; as if he didn't have enough on his mind already. He shook his head and tried to focus on the tasks at hand. And the ones that might soon be. Neville's voice broke through his thoughts.

"Okay folks, status report. Things have looked better. I've been on the phone with the President." He sighed. "That little show after lunch just plain pissed him off. He demanded our total surrender. He directed us to - I quote - 'remand yourselves t' the proper authorities t' stand trial as war criminals,' end quote." Neville shook his head in disgust. "Little bugger's nuts, 'a course. Seems t' blame us for everythin' from the hack attacks t' fluoridated water. But what's left'a the government is supportin' him." He walked out in front of the consoles where he could be more easily seen. "We've monitored a call t' the JCS. The little SOB has ordered an airstrike, and the crazy sons'a bureaucrats are goin' along with it."

"How were we able to monitor something that sensitive?" David asked, gettin the words out only a moment before Cal could.

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 use their crappy crypto algorithms that never face open source review. I hear they still use Skipjack, even."

Cal considered. "Skipjack? Isn't that the one that... ?" But then, he'd heard the feds still used

DES for some stuff, too. But at least they admitted that one was useless for anything but basic privacy.

The tech grinned and said, "Yeah. Years ago. Idiots." He continued connecting cables. Cal shook his head and laughed to himself, finding what humor he could in the life-forsaken mess.

More hours passed. The shift changed in Ops, but Cal chose to stay on. He couldn't say exactly why, but he kept thinking about the people out on the flight line who had unequivocally, if nonverbally, told the Army to go fiddle themselves. Most of them probably didn't even have any financial stake in the company, but they'd... come. Cal wondered if they knew why, exactly, either. No, he - and they - knew; it was just hard to articulate. Unless you were Thomas Jefferson. Life, Liberty, and the Pursuit.... Cal shook his head and hoped he really did know what he was doing.

Someone had replaced David on range safety, a new girl; Sunni. A fellow controller had told Cal that the long-haired, athletic babe was forty with kids, but Cal couldn't believe it. She waved to catch the CEO's eye. "Mr. Neville?"

Neville looked up. "Yes, umm... Sunni?" All things considered, Neville thought it worthwhile to try to learn the names of the people with whom he was working today.

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

Neville thought. "What kinda 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, "I think Cannon still has FB-111's. What is it at Holloman? F-15's?"

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

Neville smiled and said, "Those would be T-38's. Old trainers. Air Force never gets ridda anything that still sorta works." He shook his head. "Don't worry 'bout 'em. It's probably the 111's at..."

"Got something else now," Sunni interrupted. "Holloman. Arrowhead-shaped, so they must be the 117A's." She winked at her boss. "Even I can recognize those."

"Shee-it." Neville calculated quickly. "I don't like that." He turned to Cal.

The young man was already at work. "Yeah, boss," Cal answered; typing frantically.

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

"Umm... " Cal stared at his screens, waved his lightpen like a magic wand, and tapped keys. His face brightened. "Pretty good, if they go in the next 10 minutes. Not so good, but okay for two hours after that." He spun his chair to face Neville. "That's for either base. From orbit, there isn't that much difference."

"Good. Stay ready." Neville looked to one of his comm techs, who had long since moved the

coffee table and their gear next to the control consoles. "William, can you find me any radio traffic at either air base? I need to know."

The technician stared at his screen, evaluating the geographically distributed communications assets at his disposal, and answered, "I've got folks working 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." William watched data scroll by on his display. With computational power getting cheaper by the month, codeheads around the world amused themselves by cracking the less secure algorithms still used by the military, a hobby that was slowly convincing the powers that be in the Pentagon to upgrade their crypto systems. But it was slow going for the bureaucrats. In the meantime, the cipherpunks were feeding the Launcher Company cracked codes. William was trying to match the available crypto routines to the bases in question. "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 suspected 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. "William, where's that comin' from?"

"That's Holloman, sir." He grinned. "I guess somebody thinks we're worth the very best."

Neville ignored the quip. "Sunni, how many birds is Holloman sending?"

"I see two 117's lining up on the runway now."

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

Cal blew out a large breath he hadn't realized he was holding. "Yeah, I know." He tapped the ENTER key on his board. "Payload deployed."

Somewhere high over head, just beyond the edge of the atmosphere, a satellite dumped a bundle of ceramic rods. A small retro-rocket fired, deorbiting the package. As it hit air, it extruded a long streamer similar to those used by the launch booster 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 'fletching'. Guidance instructions came from Cal's computer, relayed by the

parent satellite. Of the two dozen arrows dropped, four were special. They too had flight control servos, 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 back to Cal.

In Texas, Cal's computer took in the four video signals, and built 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 Holloman Air Force Base seemed to shift. After a few seconds, the base appeared larger. The image abruptly jerked, bounced, blurred and cleared. Cal announced, "Package dropped, and braking chute deployed and detached. We're ballistic for now." He smiled as a random thought drifted through his mind. "Probably got folks across the Southwest making wishes on us, too." No doubt the man-made shooting stars were putting a fine display.

On the left screen, two 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. "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 anythin' fancy. They think they're attackin' a buncha helpless civilians."

That very thought had already occurred to Strike 1. This would be easier than Afghanistan, even. These poor clods don't even have obsolete ack-ack to pop his way. Go in, hit 'em, leave; all safe and sound. And home for dinner. "Strike Two, Strike One," he called to his wingman.

"One, Two. Go." Terseness and low bandwidth encryption stripped the radio voice of any humanity.

"Breaking away now. I'll illuminate initial targets for your run, then you pull back while I crater their strip." A simple reiteration of the plan to trash the launch prep facilities, then destroy the booster's asphalt runway. He wasn't too sure how effective cratering would be in preventing a hovercraft from using it, but his not to wonder why, just to do or... He derailed that train of thought.

Cal swore quietly. "One plane is peeling away! I might not..." he played with his controls for brief seconds. "Okay. The planes separated, but I split the pack, and have a few arrows targeted on both of 'em now." He was too intent on his display to know if anyone else was listening to him. The words were as much for his own benefit as anything.

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

Strike One was just leveling off on his new path when a flash to the north caught his eye. He looked, but Strike Two was nowhere to be seen, replaced by a dirty cloud lit from within with orange. Shit! "Strike Two, Strike..." he began, when his own situation went insane. His bird jerked hard, shuddered, lost stability, and every alarm she had went off. Then his world ended in a wall of bright fire.

Cal watched the video feed from the navsat composite. All that remained of the two attack craft were a streaks of smoky fire across the New Mexico landscape. He stared. It looked like a video game. But something in his guts crawled. He heard muffled curses, and wasn't even sure if any were his own.

He was lost in the image of death. And went cold with another thought. It couldn't just... stop here. Could it?

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

"Long since, Mr. Neville." William had gotten some instructions from Neville early on. In response, he'd had some guy named Neil in Washington break a fiber and splice in a connection so they could do a little more than listen in. For now, William was staring at the fiery display. The similarity to a game display struck him as well.

"Put me through to the President."

Cal turned back to his workstation and began calling up orbital tracks, and checking potential targets. He found one he liked and nudged a bird coming over the Left Coast a few more degrees to the north. His stomach started doing flipflops.

Neville was on the phone. "Good evening, miss. This is Bill Neville with Launcher Company. Yes, I believe you can help me. Would you please put me through to the President?" He paused. "Yes, I am 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 recordin'. No, this isn't a threat. Time for threats is long past." Pause. "Neville. Launcher Company." He rolled his eyes. "Yes, the folks who ran off the army." He shook his head. "Yes, ma'am, and for the record, we just shot down a flight of F-117's from Holloman 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. "Bloody bureaucrats!" he snorted. While he waited, he thought about his last words. At what point had he decided that the President, all he represented really, had no more hold over him? Ain't it a little late t' be turnin' anarchist, Billy-boy? Maybe Hank could scare up one'a those Gadsden flags for him.

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

Neville held up a hand, asking for silence in the control room. A few hushed conversations had broken out. "Yeah, Neville here. Who's this?"

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

"Then be a good little aide, and assist him t' 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..."

"No shit. Tell you what; as soon as your security people figure out that I'm apparently callin' in on one'a the Pentagon hotlines," Neville grinned at his comm tech, who beamed in pride and polished fingernails on his shirt front, "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 phone cradle and set a finger on a button. "Have a

nice evenin', Mr. Hollyfield." He hung up. "America was such a nice civilization before it fell," Neville said to no one in particular.

"Hey, boss," William called out suddenly. "Would you be interested in some telephone traffic between NEACP and what seems to be the White House?" One of William's scattered frequency watchers had found something interesting and alerted him over the 'Net.

"Kneecap?" Neville replied quizzically; the acronym went right over his head for the moment.

"N-E-A-C-P," the tech spelled it out. "Airborne command post. Sounds like the Vice-Prez is up there, just now."

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

"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, Dick!" screamed a second voice. "That goddam Launcher Company!"

"They're CITIZENS! You can't declare war on them!" The vice-president shouted.

"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?" Sunni countered caustically. "I don't think I'll like prison camp." Neville was shaking his head, as well.

"Nope." Cal leaned back in his chair, resting one arm by his keyboard. His guts had stopped churning, but only because they'd finally congealed. At least it kept his dinner down. Mostly. He could still taste bile.

"What then?" Neville wondered sadly. "I'm out of ideas. We can't fight the entire U.S. military." He sagged, and Cal thought that one of the saddest things he'd ever seen. "I never expected it all to go this far."

Cal wondered if he'd be drooping himself if he didn't have the console to hold him up. "No, we can't fight the whole army. But we can decapitate it." His own words chilled him again.

"Beg pardon?" Neville hoped he was misunderstanding the boy.

"It's an army. We take out the commander-in-chief." There; he'd said it plainly.

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

Far more calmly than he actually felt, Cal replied, "I've been thinking about this all day." He glanced over to Grandjean, and continued. "Three points- You just said it yourself; he's not our president anymore. I think you're right. Next, as a military commander-in-chief, he's just as valid a target as those fighter jocks we just killed." He stared at Neville. "Yeah, people just died. I killed 'em myself." 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 now showing an overhead of the White House, the image from the killsat he diverted shortly before. "Besides, they started it."

Grandjean was in shock. "That is more than three," he said inanely.

Cal shrugged. "So pick your three favorites, and run with 'em." He wondered at the hard facade he was projecting. Where had he found this in himself? Was getting into space this important to him?

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

Yes. It is that important. This isn't just about going somewhere; it's about being free to go. 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 at the widescreen. "Done is done. Or about to be. You can always blame me, anyway."

The entire room watched as the White House grew large on the relayed display from the arrows, then went blank.

Sunni scrambled to find another view from the navsats. "Got one. Lousy angle, though. Enhancing." She found another navsat coming over the horizon whose eyes she could add in. 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 were standing on the sidewalk looking at the destruction. In the ruins nothing moved, save fire, smoke, and an occasional toppling structural remnant. Certainly nothing alive.

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

"Mr. Neville." It was a weak, wavering voice. It sounded like a shock victim. "This is... the Vice-President."

Neville took a deep breath, and slowly let it out. For better or worse, it seemed to be time to

talk. "For lack of a better term... Good evening... Mr. President," he corrected.

"I've not been sworn in yet. There seems to be some difficulty in locating the Chief Justice. He... may have been traveling to the White House."

"I see." Neville thought carefully, and chose not to give up any ground before negotiations began in earnest. "And what exactly do you have t' tell us, Mr. Vice-President?"

"Let us come directly to the point. Through a very unfortunate and costly series of events, I am forced to accept the reality of Launcher's independence." The man's voice cracked, and he laughed bitterly. "Because of what has happened, I may even be forced to accept the fact of Texas' independence in the next few days. I deeply regret what has happened, Mr. Neville. And I fucking well hope you do, too." There was a hiss, like a suppressed sob. "You may have destroyed the Union, you son of a bitch."

"I do regret what as happened."

"Do you? Really?" A snort.

"Oh, yes," Neville whispered. Cal saw what might've been a tear beading at the corner of one of the man's eyes. "But it wasn't I who may've destroyed your precious Union. We only defended ourselves. Ya'ller the ones who couldn't bear t' let go just a little bit." The tear began a slow trek down Neville's cheek. "Ya'll are the ones who drove me t' what I've become."

A loud exhalation came over the speaker, as the VP gathered himself. "Regardless, it is an accomplished fact. 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. "Calvin," he whispered. "Where are you going?"

"Out," Cal replied through tight lips. He tried to push past the ex-pat Frenchman.

The Ops supervisor blocked him, and demanded harshly, "Now? Now you go? Why?"

"Because right or wrong, good or bad; what I've done today makes me sick and I have to throw up! Okay?" Cal shook free of Grandjean's grasp on his arm and ran to the door. He pushed it open and ran out blindly. His stomach heaved, and he bent over and disgorged sour coffee and whatever it was he had eaten during the day. Sweating, he lifted his head and discovered he was braced against his hand-lettered sign bragging on the launcher. He'd splattered his work with rank vomit.

He sucked in air, still hot and thick from the day's sun blast. He looked at the sign and wondered if it was some strange token of things to come. Had his unilateral action fouled the entire effort of the company? Of his friends? He glanced back at the Ops building. Harsh light blasted out of the ajar door. Somehow he suspected they wouldn't need him to do any more controlling today. He wiped his soiled face, and walked wearily to his truck.

Chapter 28

Year Two, October 9th

Playing with the queen of hearts,
Knowing it ain't really smart.
- Juice Newton

Cal was still in bed. Not surprising; he'd hardly left it for the last three days, except to puke or pee. There didn't seem to be much point in getting up once he'd quit Launcher. And he'd accomplished that by simply failing to go to work. He heard the phone ring, and pulled a pillow over his head. He thought he'd unplugged the damned thing. Micky must have reconnected it.

The ringing stopped and he heard Micky's muffled voice. Then, louder, "Cal, Mr. Grandjean wants to talk to you!"

He pretended he was still sleeping and eventually she shut up. He doubted that she was really buying the slumber act, though, after all this time.

"Cal!" Shit, Micky was in the room. "Get your ass out of bed!" She sounded remarkably like his mother the morning of his first and last hangover. And about as welcome an intrusion.

"Go away," he muttered into down stuffing.

His sheet was ripped away and the pillow was torn from his grasp. Micky glared down at him. "Get the hell up!"

"Why?" He figured it was a perfectly reasonable question. It wasn't as though he had to go to work. Heck, quitting now saved the company the hassle of hiring someone new when the feds arrested him. He wondered why they hadn't shown up yet.

"Because you have company coming, and there's no reason for you to look like a slob!" The dark-haired beauty grabbed his right foot and began dragging him off of the bed.

"Hey! What the fuck do you..!" His words were cut off as he hit the floor. He rolled and sat up, rubbing his bruised chin. "I don't..." A pair of wadded up jeans hit him in the face.

"Get up, get a shower, and get dressed, Calvin L. Schmidt!" Micky stood above him, stern-faced, with legs spread and hands set on her hips. She looked serious.

"Why bother?" Cal replied dejectedly. "They'll give me a jumpsuit when they arrest me."

Micky blinked. "What? Who? Mr. Neville isn't going to arrest you."

Cal was confused. Again. "Why is Neville coming here? I don't work for him any more."

A shirt followed the jeans. Then a towel. Micky spoke. "You'll have to ask him that. The company's been trying to get hold of you for days. Which you damned well know."

The phone had been ringing pretty often lately. But the young man hadn't given it much thought beyond refusing to answer it. "I don't want to see him. Tell him to piss off."

"You tell him. When he gets here. Which'll be in about an hour." She turned and left the room. Cal heard the shower start in the bathroom.

Hell with it. Might as well get it over with. He stood, and tossed the clothes onto the bed, then carried the towel to the bathroom. Come to think of it, his mouth tasted like shit. Cleaning up couldn't hurt.

Presently, he was showered and had his teeth flossed and brushed. He was just lathering up for a shave when Micky called him.

"Cal, you have company." Her voice sounded cold.

He glanced at his watch. Neville was early. He looked at himself in the mirror, and wiped off the shaving cream. The man would just have to deal with a fuzzy ex-employee. He headed to the front room, pulling on his shirt as he went.

It wasn't the company president. And he thought he understood Micky's tone. Despite Hank Hanners' fears, he wasn't completely clueless. Erin stood by the door, clearly very uncomfortable. Micky sat in an easy chair glaring at her.

"Um... Hi, Erin." Like he really needed this right now.

The girl looked toward his voice and brightened. "Hi, Cal. How are you doing?"

He opened his mouth to rattle off some canned response, and stopped. That was a damned good question. "I... really don't know." He considered the situation. "Are you sure you should be here? When the feds finally get around to busting me, you don't want to be associated with me, you know."

Now it was Erin's turn to be confused. "Huh? That sounds kinda unlikely..." She shifted mental gears. "Look, I know about what you... What happened. The fight, and you quitting. I tried phoning a couple of times, but Micky said you weren't taking any calls. So I came over." She stepped closer and watched his face with concern. He hadn't shaved for days, and there seemed to be a fresh bruise on the point of his chin. Had he been drinking?

"Sorry. Didn't know you called. I haven't been up to facing the world." An image of the White House rubble flashed through his mind and he winced. He wondered if he'd ever be up to it. Maybe he needed to disappear for a while. Now there's an idea...

Erin took his hand in her own soft fingers. "I think I understand. Maybe a little."

He laughed harshly; a bitter sound. "Understand? I doubt it." Even knowing it was the wrong thing to do, he sneered at the pretty girl. "Do you know what I did? I killed people. A bunch of them."

"You defended the launcher and a lot of innocent people from a psychotic son of a bitch." Erin looked into his eyes calmly, despite the uncharacteristic language.

She looked quite the adult. Cal thought it hard to believe that she was still shy of eighteen. But not very much younger than himself, now that he thought of it. He pushed on, explaining things to himself at least as much as to the young woman. "I killed people, Erin. Not just that psycho bastard President; but a lot of innocent people who were at the White House, too. I have to live with that."

Erin shrugged off the self-incrimination. "Just how innocent were they? They were feds sitting there helping that 'psycho bastard' order us killed."

"Us?"

"Damned right." Erin stared at him defiantly. "In case you haven't noticed yet, the launcher means a lot to me, too. I want to go into space, too. So while you sat in the Ops center with your friends, and Dad and Neville, I took Dad's old Mauser out to the flight line and joined all those people who wanted to defend it." Her face softened, and she stepped even closer. "So you see, Cal, you just saved me again." She leaned forward and kissed him on the cheek. "Thank you," she whispered.

"If you're done with your little girlfriend," Micky said coldly from her chair, "you oughta finish getting dressed. Neville will be here soon." She fixed her gaze on Erin. "We're a little busy just now, so why don't you come back some other time." The invitation to leave now was damned obvious.

"Micky, I don't want..." Erin began pleadingly.

"Just get out."

Erin looked at Micky sadly for a moment. Then she cast a glance back to Cal. A tear beaded up at the corner of one eye, and she turned and fled the house, the front door slamming in her wake. Cal stood speechless, listening to Erin's little pickup start up in the driveway and pull away.

"Good riddance," was Micky's response. She turned on Cal. "If you're looking for a new girlfriend, couldn't you at least find a grownup?"

Cal was... taken aback, but not totally surprised. "She's not my girlfriend! You know that!" Just a little guilt there, Schmidt?

"Sure," came Micky's sarcastic reply. "That's why you spend so much time at her house." She paused, and an expression of realization spread over her face. "But then, you are closer to her age than mine. Am I too old for you?"

Micky did have maybe five years on him, although he hadn't really considered it that way before. If anything, he'd wondered if he wasn't too young for Micky. "Damn it, you know why we go there - Working with Hank on colonization ideas. He's an engineer, and has data I don't."

"Yeah, and a sexy daughter." She was more obviously angry now. "Why do you have to do that anyway? You know we can make a life here, on Earth. I don't want to play space cadet!"

"Then why were you working for the company?" So many of Cal's co-workers had been latent space adventurers that he'd naturally assumed that all of them were. It was dawning on him that he and Micky had spent a great deal of time on activities other than talking. The sex was fantastic, but...

"Because it paid damned good, and because I met you! I've got no interest in rocketing across the cosmos!"

Cal was stunned. "Then why didn't you say so?"

"I did! But you were too busy dreaming about inflatable spaceships, girls in spandex spacesuits, and algae steaks to listen, goddamn it!"

"Oh." Now that he'd had his faced rubbed in the truth at last, he admitted to himself that the after-dinner space talks at the Hanners' had been three-cornered, with Erin happily taking up Micky's unnoticed - by him- slack. He fumbled for words, for something reassuring to offer his lady. He stuttered ineffectively until he was rescued by a knock at the door.

This time it was Neville. And a couple of other folks he'd seen around - a thinly pretty older woman and a stocky fellow who might've been vaguely Hispanic. And Hank Hanners; Cal hoped the man hadn't seen his daughter fleeing the scene in her little Ranger. It looked like he was being graced with a visit by the company's senior partners.

"Great. More space talk," was Micky's assessment of the situation. She scooted by the newcomers and headed out the door, slamming it hard behind her. Hank glanced at the door, then shot a quizzical look at Cal.

The ex-controller shook his head tiredly. The five of them stood looking at each other in silence, which Cal finally broke. "Well, let's get it over with. As you can probably tell, this ain't exactly a great time for me."

"Ah... Yeah. I guess not." It appeared that Neville would be the company spokesman. Well, yeah. Who else?

Cal wondered why the others had come along. Hell, why had any of 'em bothered? He'd already quit. Maybe the company was going to cover its ass by suing him. "So what's up?" He didn't bother offering anyone a seat; he wanted this over quickly.

Neville cleared his throat nervously, an odd thing to see in the man who had challenged the government itself and built the first real private spacecraft. "Cal... Mr. Schmidt. We find ourselves in an odd position."

"Tell me about it. I'm waiting for the feds to come drag my ass off to the gas chamber or whatever they do for for mass murderers these days."

The four company honchos glanced at each other and at Cal in mild confusion. "I don't think that's going to happen any time soon, son," Hank replied enigmatically.

Neville's turn again. "Son, while you may not wanna be travelin' in the U.S. much in the foreseeable future, ain't nobody gonna touch you in Texas."

This was evidently Cal's big day for incomprehension. "What the hell does that mean?"

Neville was startled. "Dontcha watch the news, read the papers?"

"Why?" No, he hadn't read the papers, or watched television, or listened to the radio, or much of anything else the past days but the imagined screams of doomed strangers.

The slender blonde shared a look of disbelief with the man Cal couldn't put a name to, and said, "Son, you need to keep up on current events. In Texas, maybe most of the American West, you're something of a hero. Texas legislature's thinking about voting you a medal for ending the war."

"I'm missing something here." Cal spread his arms in a wordless plea for an explanation.

Neville supplied one. "You really don't know? Well, son, it's like this. Two military operations waged against Texas civilians, and a third ordered, didn't sit well with a lotta Texans. A helluva lot a legislators discovered they were closet secessionists, secret supporters of the TC movement, once they started gettin' phone calls from constituents. The house is currently considering an amendment to the state constitution to formally withdraw from the United States. The TCers are pushin' it for all it's worth. If Texas goes, that Sagebrush Rebellion stuff is likely to resurrect in a big way. Heck, already is." He tried a small smile, but it died quickly. "And you're the hero of the day. Protected a buncha civvies, and offed a crazy SOB even while Congress was votin' t' impeach the bastard." Cal's jaw dropped. "Yeah," Neville confirmed. "It was kinda lost in all the war news, but the dude was on his way out. But not fast enough to stop him gettin' some more people killed, if you hadn'ta stopped him."

"Anyway, this puts Launcher in a peculiar situation. We were already a Texas freeport, but now folks are lookin' at us like some kinda brand new superpower. 'Death from above' and all that crap. Texas is about to be an independent country again, and it looks like Launcher is gonna be a little one inside it." His eyes unfocussed for a moment, and he almost chuckled, just a little bit. "Kinda like Vatican City in Italy, I s'pose. But the company looks to do pretty good out of it all."

"And it appears that we may very well owe that to you, Mr. Schmidt." It was the blonde. Cathy Something, Cal finally remembered.

"Ma'am, I'm just Cal. Mr. Schmidt's my dad. But I still don't get all this..."

Neville started in again. He seemed a little sad, and a little puzzled. "Son, what you did, what happened... That isn't what I had in mind. But I'll be goddamned if I can think of anything else we could've tried. Stalling for time for Congress mighta worked, but it might not. Turns out the Pentagon thought we had nukes..."

"Nukes?"

"Yep. If it matters, I'll explain another time. Anyway, if the late weasel-in-chief had passed that goody on to the congresscritters, I'd guess that there'd been a fair chance that the impeachment procedin's woulda stopped, and they'da backed him up."

Hank spoke up. "And if that had occurred... Well, based on the armed response of our supporters here, I think that more folks would have finally stood up to the feddies. If they'd attacked Launcher in force like the Prez wanted, we would have fought back." He hadn't talked about it with her, but he did know about Erin's presence on the flight line that day. If his seventeen year old daughter thought the feds were worth fighting, was willing to put her life on the line, who knows who else might

have made the same decision? "And that would have triggered more fighting. All around the country. I think your preemptive strike saved a lot of lives; thousands, maybe even hundreds of thousands, if it had degenerated into general revolution."

Cal shuffled his still-bare feet. "That's a lot of ifs. And it seems to assume that a lot more people would get up off their fricking sofas than have bothered in the last few decades." He snorted in self-derision. "It still seems to me that I... Hell, I don't know. Offing the Prez was probably a good idea, but I took out a lot of other people besides him." He turned his back on the partners. "I have to think about that." No, the late President was about the only casualty who didn't bother Cal in the slightest. But all those others...

"I guess you do, son." That was Neville once more. "But we're driftin' from the point." Cal turned around again to see the old man reach into a coat pocket. "You did something that none'a us had the balls for, that went 'way above the call'a duty, so t' speak." He drew an envelope from the pocket and held it out to the boy. "I know you quit, so I guess you can call this severance pay. And a performance bonus, I s'pose." He sighed. "We may not ever be able t' know if there was a better way... But all things considered, you did good, son."

Cal stared at the envelope like it was a rattler coiled to strike. He didn't touch the thing. "I don't want that." Blood money.

Neville looked at him understandingly. "Maybe not. But it's yours anyway. You did the best you could at the time... And I still can't think of another solution that wouldn'ta left more people dead. And it was my job to do just that. You did it for me. This as much for my own conscience as anything else. Please take it."

"I can't." Cal closed his eyes. "Please... I think ya'll should leave now."

Neville nodded sadly. "Okay." He rounded up the others with his eyes, and they headed for the door.

Hank paused and looked back. "Cal."

He opened his eyes and gave the engineer a bleak look in reply.

"Cal, maybe you aren't ready yet, but if you want to talk... Well, you know where to find me and Erin. Okay?"

Cal shrugged, turned, and walked out of the room. Hank pressed past the others and left the house. Peters and Vasquez followed quickly. Neville wiped at an eye, then set the envelope down on a credenza by the door. He walked out and closed the door gently behind him.

Cal sat for a long time. He wasn't sure what time it was, but it had gotten very dark outside. Micky still hadn't come back. The telephone had rung a few times, but he stopped that by ripping it loose from the wall and throwing it out a window. He hadn't bothered raising the sash first.

Going to the window had been a bad idea. He hadn't realized that there were news crews parked outside his little rental. He wondered at the lack of interruption until he spotted the company police riding herd on the newsies. More help from Neville; wonderful. He turned out the lights and waited

until the last of the reporters gave up for the night. A few camped in their cars, determined to catch an interview. Eventually, even those seemed to drift off to sleep.

He didn't know he'd made a decision until he found himself wondering where his suitcase had been stashed. He located the beat up carry-on and began stuffing things into it. Most of his possessions didn't seem worth taking. Maybe Micky could donate them to Goodwill or somebody.

Once the suitcase was as loaded as he was willing to bother with, he went to the dresser and opened a small wooden box with decorative metal inlay. Dad had given it to him; said it came from Germany or somewhere. It held what was left of his life's savings, now that the IRS had seized his bank account. For just a moment, he wondered if the seizure would be reversed, what with Texas not being part of the U.S. anymore. Then he chided himself for wishful thinking. No way the U.S. feddies were going to return money to the idiot who assassinated the President. He collected the stash of dollars, pesos, and assorted gold and silver coinage and stuffed the lot into his pockets. He hefted the suitcase and moved to leave the room. He stopped suddenly. Heck of a thing to forget. He went back to the dresser and got his father's Glock. These days, it seemed like the fine old gun was the only thing he had that worked like it should. He tucked it into the holster in his pants and moved on.

He stopped again in the kitchen. The house had been rented in Micky's name, but he wasn't going to stick her with the expense. He sorted through his cash and set the rough equivalent of two months rent on the table. He figured that left him with gas money to get... somewhere. Debts cleared, he went to the front door. He saw the envelope on the credenza.

He looked at it for a long time. But then, he wasn't in a hurry. A rush would have implied that he had somewhere to go. He picked up the packet and opened it. There was a short letter and a microdisk. The letter told him that two thousand ounces had been deposited to an e-gold account in his name. The disk, encrypted to his private key, held the access data. So that's how much it costs to kill a President, he ruminated. He stuck the disk in a pocket and left. Luck was with him for once, and no one saw him leaving until he had his speed up.

Chapter 29

Year 3, January 6th

Desperado, why don't you come to your senses?

- Eagles

He heard the vehicle pull up, and tried to ignore it. He supposed if he really wanted privacy, he should have found a place deeper in the canyon. But, damn it, it was convenient to stay near his truck. And sometimes the locals who came out to party on the weekends had decent beer which they were willing to share. Early on, some forest rangers had come out to bitch about his camp fire, but he hadn't seen them for a while now. Maybe Neville's Sagebrush Rebellion had spread and Utah left the Union, too. He didn't much care, except that he could build as big a fire as he wanted and no one was bothering him anymore. He sipped some coffee, and started typing on his palmtop again. He was working on his memoirs. He wasn't quite sure why, since no one was ever going to read them except himself, but it helped him sort out the last couple of years in his head.

Shoes scraped on rocks and crunched crusty snow as someone walked up. Rangers after all? A high, clear voice called out. "Hello? Cal? Are you there, Cal?"

That was Erin's voice. What the hell? He pulled the tent zipper up and stuck out his head to look around. The girl stood a few yards away, visible puffs of breath escaping from her mouth. "Erin? What the hell are you doing here?" Then he did a doubletake. "How the hell did you find me?"

When she saw his face, Erin's eyes lit, and she smiled ecstatically. "Hi, Cal!" And answering the latter question, "It wasn't easy. Or it was, but just took a while." She came closer, treading on the bare ground of the path Cal had worn in the snow. "Aren't you glad to see me?"

He was speechless. Then, "Damn. I guess I am." That surprised him, too. He hadn't expected to want to see anyone who knew him ever again. Life goes on. A cold breeze chilled him, and he pulled his parka zipper higher. Which reminded him... "Damn. Come on into the tent; I've got a woodstove going."

Erin ran the last few steps and flung her arms around him. "I'm so glad I finally found you. Why did you leave?" she asked through the quilted fabric pressing against her face.

For the first time in months, Cal felt... happy, he supposed. It was an unfamiliar sensation these days. He returned the hug, and found himself holding on to the... No, it was past time to stop pretending she was a little girl. "Come in where it's warm and we can talk." Suddenly he peered behind her, towards the open space beyond the boulders that delineated the parking area. He went cold with something other than the temperature. "Is anyone else with you?"

She shook her head, brown hair tumbling. "No. It's just me." She frowned, prettily at that. "Were you expecting someone else? Micky?" She stepped carefully through the zippered doorway of Cal's tent, and he sealed it behind them with a long ziiit. It was warmer inside, surprisingly well served by a sheet metal stove in one corner. Cal had acquired something like the base camp tents Erin used to see in her dad's outdoors catalogs. He might be out in the boonies, but he hadn't been reduced to really roughing it. Well, Daddy said he had enough money to stay out of trouble.

"No. Not Micky," Cal said quite definitely. "That's just one more thing that's died." Death had been on his mind a lot since last October. Not suicide, but more questions over what he'd been a part of. He still had doubts, but hadn't thought of anything else he could have done differently.

Erin seemed oddly satisfied with the answer. "Good."

Or maybe not so odd. What had been going on between him and Erin was just another thing he'd had to face during his self imposed isolation. But he tried to ignore that for the moment. He was too happy to see her to ask uncomfortable questions. He looked around at the nearly nonexistent furnishings of his tent and gestured toward his cot, where his comp sat, waiting in mid-memoir. "Umm... Have a seat," he offered.

"Thanks." Erin settled onto the camp bed and patted the sleeping bag. "Why don't you sit, too. And you haven't answered my question."

Cal opted to plant himself on the canvas floor in front of the young woman. "What question was that?" He stalled, knowing full well what she meant.

Erin fixed her eyes on his face. "Why did you leave?" She was rather anxious about this encounter, and wanted to get right to the point. This seemed to be the best way. "You just disappeared; never said a word." She looked at him in mild accusation. "You didn't say goodbye."

Cal couldn't face her. He dropped his head. "I didn't say a lot of things. And I didn't say them to a lot of people. I didn't know what to say. I still don't."

"That isn't an answer. Why did you leave? Why did you leave... people who care about you?" Coming directly to the point was tougher than she'd expected.

"Erin, I don't know. I don't know why I left, only that I had to." He stared at the fabric floor morosely. "I'm not sure... Part of it may have been that I expected the feds to be after me, and I didn't want to draw them down on friends." To his credit, that really had occurred to him; but... Stop lying to yourself. "But mostly I was running from my own conscience." He felt a smile begin to grow. "I'm over that mostly. I had to learn that just because someone wasn't actively pointing a gun at my head didn't mean they weren't threatening me. I'm still not entirely happy about the... reciprocal damage I inflicted, but I'm not losing as much sleep over them anymore."

"I think that's what I was trying to tell you the day you disappeared." She reminded him.

"I know. But I wasn't ready for it then." He looked into her eyes again. "How the heck did you find me anyway?"

She grinned. "I played detective." She giggled. "Once I was convinced that Micky really didn't know where you were, and didn't much care..."

Incongruously, that bit stung. "She didn't?"

"I don't think so. Apparently whatever you said to her before you took off convinced her that you two weren't exactly destined to be together." Erin seemed unduly pleased by that fact. Cal found

that he was, as well.

"No, I guess we weren't. How did she prove it to you, though? We had a loud, annoying argument."

Erin's eyes twinkled, and her grin turned impish. "Did you know a girl on the construction team named Carrie Pollard? A real goth; black hair, white face?"

Cal eyes squinted as he tried to remember. "Yeah, I think so. Cute, but... I was never sure which way she went. Why?"

"She moved in with Micky a couple of months ago. I'll let you guess which direction she's headed." She broke out with clear crystal laughter.

"Ah." Cal decided to leave that one alone. If he gave it honest consideration... He knew better; but he liked the idea that he wasn't beholden to the woman any longer. "I guess that explains why Micky didn't track me down." He found himself grinning. Hell, even perfectly innocent, the fact that she found a roommate to help cover the rent gave him a sense of release. "So what did you do next?"

"You mean aside from writing you email you never answered? Well, I knew you were from Wyoming, so I did some web searches and found your parents. They weren't answering my letters either, so I drove up there and ..."

"You drove out to Wyoming from Texas? Didn't your dad bitch about that?"

Erin smirked. "You know the cliché about daughters having their fathers wrapped round their fingers? There's some truth to it. I told him I was going and why. He said okay."

"Just like that?" Cal was doubtful; it sounded too pat.

"Well, it took a while to persuade him that I was serious. But once I pointed out the advantages to him, he caved in."

"What advantages?" Suspiciously.

"We'll get to that in a minute. Anyway, When I showed up on their doorstep... That is such a cool house," she exclaimed, momentarily diverted from her saga. "It looks just like a flying saucer!" She giggled a little, then returned to her tale. "Once your mom decided I was for real, and not some feddie bounty hunter, she pointed me in the direction of your friends in Utah and gave me a letter of reference."

"Damn it. I told them not to tell anyone where I was headed. There may be people out there who want me dead!" He loosed a chuff of exasperation. "Shit, I need some real security. I think it's time to move again."

"I think so, too," Erin agreed all too easily. "So I talked your friends, and they mentioned that you used to camp in the Cache national forest a lot, before you went to Texas, and told me about this little canyon. I drove around here looking for you, but didn't have much luck. Then I ran across some campers coming into Hyrum on a beer run and figured it couldn't hurt to ask them. They didn't know

your name, but they did know about a guy who'd set up a permanent camp and drove a beat-up Ford pickup just like yours. So here I am." She beamed proudly.

"Damn it, I'm selling that fucking truck."

"Good idea." Erin was still far and away too agreeable. Cal frowned at the pretty lady. He'd forgotten how pretty. "Okay. I give up. Why do you think it's such a good idea? Aren't you planning to keep tracking me down?" "Nope," she replied sweetly. "I'm planning to drag your cute butt back to Texas with me." She smiled broadly, showing dimples. "You forgot about why I'm here."

No, he hadn't. He just hadn't been ready for an answer quite yet. "Okay, why?"

"Well, basically there's three reasons." She decided to leave him hanging just a little. Besides, she was nervous all over again.

"I'm game. What reasons?"

"Well, there's the fact that feddie bounty hunters really could be after you. I think we should get you somewhere they can't reach."

"So. Texas really did secede?" Cal had pried his truck radio out of the dash and used it for target practice on his first day in the canyon. Anything was going to be news to him.

"More like the U.S. balkanized; but yeah," Erin said. "Kinda weird. But I didn't mean Texas, not in the long run." Her smile faded. "Me and Daddy are emigrating. We're packing up and leaving Earth."

"Say what?" This was abrupt. Cal didn't think development had reached the point where families could load up and pioneer the stars.

"Daddy's cashing out his share in the company and buying into a group effort that's going to settle Pallas, one of the asteroids."

"Yeah, I know what it is." One of his favorite novels, named for the worldlet, had placed a colony on there, for reasons that made pretty good sense. "So ya'll are going to the asteroids?"

"Yes. And we want you to come with us."

"Me?" Cal was surprised. "Why me?"

"Daddy needs a partner, and he says you can afford it, unless you went and blew your money in Vegas or something. And he says you're smart enough and tough enough to make it."

Shit. As a Launcher partner, Hank would certainly know how much 'severance pay' he'd received. And he'd hardly touched it; money wasn't a huge need out here in the forest. "Yeah, I've got some cash, or I can pretty quick. But it can't possibly be enough for an outer space grubstake."

"That's what you think." Erin had used her awesome daughterly powers to wheedle the amount of the award out of her father. Besides, "First, we're pooling assets with several other families - we even have an old space medicine doctor coming along - to form a company. That cuts the individual

expenses down a little. And the Launcher Company is starting to grant loans for stakes; the idea is to get their money back in profit-sharing on the pioneer's station. That helps a lot, too. Mr. Neville says that it won't be long before it doesn't cost any more to pioneer than it did for the old western settlers, when you figure in inflation."

"Excellente! I knew it would happen, but this is a lot sooner than I'd thought. Cool!" He was nodding unconsciously. "I've got to admit, it sure sounds good." He blinked. "Hey, wait a minute. That's only two reasons."

Erin silently cursed her own fears. "Well..." She stopped, unable to continue.

"Well, what?" Cal saw the oddest expression on Erin's face.

"The third reason is that I want you to come," she got out in a rush.

Cal felt something that he hadn't experienced since the early days with Micky, but not exactly. Dare he ask? He took a deep breath. "Is there.. " He paused, then pushed on bravely. "Should I know why you want me to come?"

Erin blushed. "Damn it, I'm not good at this. I'm just a kid..."

"You're no kid," Cal said softly.

"Thanks," she said, gratitude in her eyes. Maybe this wouldn't be so bad after all. "I want you to come... because I think I'm in love with you."

"Oh." Cal knew he should have been surprised, but he wasn't. He felt... "Erin, I'll be honest with you. I don't know just how I feel about you." She looked small and scared, but he continued. "I like you. A lot. Maybe more than I thought, because when you showed up today, I was real damned glad to see you."

A smile started to form on Erin's lips. "Cal..."

"Wait a minute. Please," he pleaded. "I'm not an expert on feelings. Gods know I was wrong about what was between Micky and me." He bit his lip. This was no time to be talking about another girl. "What I feel for you is different than what I felt with her. Maybe that means it's really love. I don't know, because I've never felt it before." He took another deep breath and let it out slowly before he went on. "But if you'll give me a chance, I'd like to find out for sure." He watched her face hopefully.

She positively glowed at his revelation. "I want that. I'm like you; I'm not sure if this is love or not. Ain't been there, ain't done that, don't bloody well know yet. But I think at the very least, we ought to make good partners."

"Me, too." He stuck out his hand to shake.

Erin grabbed it, and dragged him to the cot. "You damn well better kiss me now."

Cal wasn't about to argue that. He complied. Passionately, and at great length. And after they broke the kiss, he kept holding her close. Even with the damned parkas in the way, it felt... right. He

smiled outright, the first time since he'd left Launcher. "So... I guess we oughta get packed up and outa here," he said finally

Erin snuggled closer. "Yep. The sooner the better, I think." But she seemed in no particular hurry to move.

"Well... It's kinda late in the day to get far today." Cal considered options. "You could probably find a room in... Probably not Hyrum. Maybe Logan's better. Then we could pack up here in the morning and get an early start."

The girl bit her lip. "Um." Pause. "Why couldn't we just stay here tonight, and save even more time?"

Cal replied nervously. "Well, I've only got the one cot, but..."

"The cot sounds fine to me." She pulled back so she could look into his eyes. But she kept his hands tight in her own. "I'd like to stay here with you, but..."

Cal interrupted. "Wait a minute, please." Gods, I don't believe I'm saying this. "The problem with staying here is... Look, I like you so much. But I'm still sorting my head out. I don't want to start with... Well..." He glanced down at the cot beneath them. "You know..." he stuttered in embarrassment. "If we've got a relationship going here, I don't want to fumble it by rushing things." He blushed furiously. And mentally kicked himself for a damned fool to be passing up...

Erin wrapped her arms around him again. "That's okay. Believe it or not, I agree. If we're going to be together for a long time... Then that means that we've got plenty of time to not rush a damned thing." She tilted her head and kissed him on the cheek. "But I do want to be with you, and you have to promise to hold me." Her impish grin returned. "I think that much is acceptable at this point."

"I think I can keep that promise."

Epilogue

Year 5, February 28th

It's the end of the world as we know it,
And I feel fine.
- R.E.M.

Follow-up negotiations between the Launcher Company and a thoroughly chastised central government established that government's lack of authority over the launcher, the feds' inability to collect taxes on the company, and the company's general disregard for the concept of regulation for the sake of regulation.

Launcher also refused to intervene in the continuing scrambling of federal computer systems, maintaining that they 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. Individually.

Broke, its information infrastructure in a state of chaos, and incapable of performing as a government, the federal government was de facto and de jure bankrupt and out of business inside two years. In short, it dried up and blew away. Since its few useful functions had been taken up by private businesses, and state and local governments, few noticed. Those who did often arranged block parties.

"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 street revel. 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 malfunction?"

The younger officer frowned at the man, and demanded, "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, and slightly soused, 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 the generous gesture. "Independence Day? I still don't get it."

Blue-Hair 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 Company 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." The senior cop's envious resignation was clear.

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. That's how I'm doin' it."

Interested, the cop asked, "Yeah? How so? What's in it 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 the azure coifed space cadet.

The older man looked at him, clearly disgusted. He considered something for several silent moments, and unpinned the shield on his breast. He tossed it to the kevlar generation officer, who fumbled it in surprise. "Here, kid. Go find a jaywalker to harass." He turned back to Blue-Hair and asked, "You still got that beer available? I seem to be off duty all of a sudden." He laughed; feeling relaxed for the first time in weeks. Hell, make that years.

"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 turned their backs on the young cop, who stood there in shock.

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

Author's Notes

This is a work of fiction.

It may seem odd of me to be telling you this, but some of my other works of fiction have spurred the darnedest discussions in which people have demanded to know if the world of Net Assets will happen.

I don't know. In fact, I doubt it.

Some things in the story I would very much like to see happen: More individual freedom, cheap space access, colonization. Other things I hope never come to pass. Violent revolution scares me, and you can never be sure how well the outcome might suit you.

Previous stories have also drawn questions about the technology I posit. Let me admit right here that I'm no aeronautical engineer (my tech background is largely in electronics and telecommunications, but I'm a jack of all trades). So I don't *know* that such a ground effect launcher will work. Nor do I know that it *won't*. But I do know that I'm not the only person who suspects it might work. A few years after I first dreamed up the idea, I happened across a proposal for the very ground-effect seaplane launch system to which Neville alludes in the book.

It's possible I'm completely full of it, and none of the things I suggest in NA can be done. But I don't wish to debate it endlessly. If you think I'm wrong, fine. But to quote Hank Hanners: "...*don't just talk; _prove_ I'm wrong.*"

Even better, prove I'm right.

Sincerely,

Carl "Bear" Bussjaeger

<http://www.bussjaeger.org/>

<http://carlbussjaeger.blogspot.com/>

Other Books by Carl Bussjaeger

Bargaining Position

The sequel to *Net Assets*.

The Anarchy Belt

The collected short stories of Carl Bussjaeger; includes several more tales from the *Net Assets/Bargaining Position* universe.