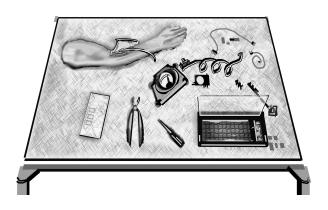
#### A BRAINS BENTON MYSTERY

# BRAINS BENTON #9 THE SUBTRACTION MYSTERY

(A Brains Benton & Tom Swift Crossover Story)

## BY SCOTT LOCKWOOD

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# This book based on the characters created by Charles Spain Verral

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This book is intended as an homage and a fan fiction

extension to the worlds of Brains Benton and Tom Swift fiction.

# BRAINS BENTON #9: THE SUBTRACTION MYSTERY

Combining the worlds of young sleuth

Brains Benton

and great inventor

Tom Swift

in one exciting story!

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# **Prologue**

Sent by encrypted e-mail to James Carson at the LA Journal:

### April 20

Okay, Jimmy, here it is. I hope this is what you have in mind. I'll be the first to admit, writing these kinds of documents is not as easy as I'd imagined. I guess I owe you an apology as well: the books you wrote about our adventures when we were kids I'd always dismissed as rather silly and overdone. Seems I did you a dishonor there, now that I've finally written one of my own.

At any rate, here is my novelization of our adventures over the past month or so at SwiftTech. I've already sent a report to both Tom Swift Sr. and Sherman Ames. How much of this they'll believe is hard to say, though Michael vouches for it as well. Plus, Dr. Wingate's wormhole generator now resides in one of SwiftTech's many basement areas.

I'm certain Tom Swift Jr. will like to take a look at it and examine the two microchips' source code, what little is left of it. The Swifts may not be happy with my having destroyed or erased all information concerning the subtractor. After all, I've only been at SwiftTech six months.

Yes, I am fully aware that Tom Swift Sr. hand-picked me to work here after my postdoctoral graduation from CalTech Cum Laude. Even so, I'm still a newbie here and can hardly start throwing my weight around to any degree. So, I really didn't need this mess so soon after my probationary period ended! All the same, I'm glad the three of us were able to stop what might well have been a weapon of such mass destruction it may well have had the ability to destroy the entire planet.

And — I'm not joking here, James — perhaps the entire known universe...

### **CHAPTER 1: MEMORIES, BITS AND PIECES**

"Barclay Benton!" a harsh voice sounded over my SwiftTalk cellphone. I sighed, knowing I should have left it on "Do Not Disturb." But Brigette might have needed me for something, and I always looked forward to talking to her.

As it turned out, it was Ophelia O'Reilly, the government liaison in charge of project reviews, and general pain in the butt to all scientists here at SwiftTech. Never met a research scientist yet that she didn't automatically assume was wasting the taxpayer's money on some worthless project. I think she learned her craft at Senator Proxmire's feet.

Reluctantly, I answered, "Yes, Mrs. O'Reilly?"

She went on, "Why haven't I received your 2033 Dash 53RR Slash 889 Internal Daily Cost Increment form? It should have been e-mailed to me before you left last night!" Only Mrs. O'Reilly would literally spell out the cost factor form's full name. Even I, who can be a stickler for correct name usage at times, use the much-simpler short name of "889" for it. As you might guess by the name, the form helps you keep track of any short-range expenses that often occur when the building stage for a project takes place.

I replied, "That's because I didn't spend any of the project's funds yesterday, Mrs. O'Reilly." You didn't dare call her anything else. "Since nothing was spent,

there was no need to file the report, was there?" I told her quite reasonably.

"And why didn't you?" she came right back. "That project of yours has a deadline, as I needn't remind you. Are you wasting time in that lab of yours, sitting around with your feet propped up on your desk, slurping cola and watching TV? Or worse, visiting porn sites??"

I swear, Mrs. O'Reilly reminds me so much of my old housekeeper Mrs. Ray it almost makes me homesick.

"No, Mrs. O'Reilly, I assure you I was hard at work the entire day. Work on the bionics limb interface was halted so I could review some of the biomechanical principles involved. There is much intricacy in this kind of work and the pace sometimes slows. It has to be done with much care," I told her.

I heard her snort in disbelief. "Don't try to dazzle me with tech talk!" she snapped. "I can see right through you so-called scientists! You all pull that innocent act whenever I'm about to catch you in some type of hanky-panky! And all the time you're smirking and sniggering behind my back. Well, I, for one, am not going to put up with it. I'm not some lowly receptionist you can pull the wool over her eyes and get away with things! I have connections! I'm a very close friend of Tom Swift Senior! I have clout and am not afraid to use it!" She went on like this for a few more minutes

When she finally ran out of breath, I answered her as I often did with Mrs. Ray. "I am very touched by

your concern, Mrs. O'Reilly, and if there is anything I can do to make your day more pleasant, please let me know. Now I must return to my work. There is a deadline involved, as I'm sure you know." With that, I hung up.

I turned back to the telejector image of the shoulder hard-wired interface, staring through it to the lab on the other side, not really seeing it. I wasn't particularly concerned about O'Reilly's pathetic attempt at intimidation. She was just a lonely old woman who like to throw her weight (which was considerable, in both senses of the word) around. I already knew that the closest she ever came to knowing the senior Tom Swift was an Applepound paperback. No, I was more worried about the lack of response I was getting from the interface. By rights, it should be functioning properly. But the prototype kept failing to boost the electrochemical nerve impulses to the proper level for the microchip to read them, and the holographic simulator refused to reveal what the flaw was

It worried me that I might have to go back to the proverbial Square One. That would never do. Not with the deadline Mrs. O'Reilly had correctly pointed out looming ahead. Oh, I could always get an extension, but a Swift scientist who kept missing his or her deadlines did not exactly get good performance reviews...

By the time five o'clock rolled around I was no closer than when I started, so I called it a day. I punched in my exit code, which, after I left, caused

the six-inch-thick Durastress door to slide shut and seal the room, as well as activating the motion and thermal sensors. I walked down the corridor to the elevators.

Punching in my access code, I placed my hand on the scanner plate, removed my glasses and allowed my eyes to be scanned as well. As usual, a computer voice asked me why I was using the elevator. I gave the standard response, "Time to go home." My voice was analyzed and a few moments later the doors slid open. There were no buttons to press of course, nor was there a floor indicator. The only thing on the panel was a hard-key override in case of an emergency. The elevator took me up to the ground floor

"Have a pleasant evening, Dr. Benton," it told me, as it did every night. I soon walked past the circular receptionist's desk. The daytime receptionist looked up from the telejector display floating in front him and nodded to me as I went by. I nodded back. Moments later I was out in the warm Southern California sunshine.

When most people think of the Swifts, they usually think of Swift Enterprises or Swift Construction. Some might think of the Citadel in New Mexico, their famous (and sometimes infamous) nuclear plant. But few would think of SwiftTech, and for good reason: it's a barely-mentioned, almost secretive R & D think-tank located in Thousand Oaks, California. The building itself was built into Tarantula Hill, across from Madrona Elementary

School. The main building was six stories high, all white stucco and gold-tinted curtain-wall glass windows

But the main labs were far underground. I have no idea myself just how far down they go, but five hundred to a thousand feet wouldn't come as any surprise. Insofar as the bedrock is a sheet of almost solid granite several thousand feet deep, the labs are as earthquake-proof as you're likely to find.

Thankfully I have no sense of claustrophobia.

I fired up my tommycar and took off. I needed to get home to my apartment and get changed before Brigette got back from her job. Not that I really needed to hurry — it would take her some time to get ready. Still, I needed to check my e-mails. Sure, I could have done so on my Swifttalk cell phone, but I'm a bit of a traditionalist when it comes to doing so from a computer.

As I drove along the two-lane road back to Ellsworth Circle and began to make my way across north central Thousand Oaks to El Monte, I continued to mull over the possible problems I was encountering with the nervous system interface. I had to stop at the entrance gate and hand the guard my security pass. He scanned it, handed it back and wished me a good evening. I just nodded in a distracted way.

Soon I was on Manzanas and heading towards Gainsborough. From there, I made my way to North Moorpark Road and headed north, then east on Janss Road, and soon reached El Monte. Finally, I reached the Pleasant Oaks apartments on Coventry Circle. This is where both Brigette and I lived. Her apartment was located on the other side, across from the pool area. Thankfully, both our apartments faced outwards, away from the constant noise.

Inside, I wasted no time getting showered, shaved, and changed. Nearby, my laptop, an advanced Swift Lightspeed gaming machine which I customized myself, showed simply the current weather on its touchscreen holographic display. I'd long since cured myself of checking the current news for local crimes.

I glanced one more time at the weather, then pressed Brigette's number on my SwiftTalk. After a few rings, she answered. "Hi, Brains!" she said in her usual cheerful voice. I was glad to hear her use my nickname; it had taken some time to get her to adapt to it. I only allow my closest friends to call me "Brains." To the rest I'm still "Barclay" or "Dr. Benton."

"Are we still on for Applebee's? Or do you have someplace else in mind?"

"No," I assured her. "Applebee's is fine. And you should be at your apartment in about three minutes."

"Brains!" she mock-chided me. "You know that freaks me out when you do that deduction thing of yours!"

"What 'deduction thing'?" I asked in return. "I know how far it is from the apartment complex to your office downtown, and heard the music from the KTEZ music van, which I knew was stationed at

Janss and El Monte today, as you passed by it. No 'deduction thing' necessary." Looking out my window I could see her car, a classic baby blue 1968 Mustang convertible, pulling into the parking area. It soon disappeared to the other side of the complex.

"Well, even so..." she muttered. Then I heard her car come to a halt. "Be with you in a few!" she said and hung up.

With a sigh I hung up as well. As with most women, I knew "a few" would probably take about an hour. I picked up a copy of the Enterprise *Journal* and leafed through it. I'd already read it once. I still found the article on the Core Cannon project very interesting.

As might be expected, of course, there was no mention of what happened to Tom's sister Sandra down in Ecuador a few months back. I only knew of it because the SwiftTech rumor mill had been in full motion scarcely a week after she returned. The nuclear explosion off of Ecuador's coast had, of course, been all over the media. But Sandra Swift and her two friends' involvement in the affair had been kept fairly quiet (it was said that Sandra's mother had something to do with that). I have to admit there had been a strong temptations on my part to see if any of the rumors might have been true, especially how the Europe's answer to SETI — Section Omphalos — was involved. But I kept them suppressed. I had no intentions of ever returning to the Old Days...

Brigette rang my doorbell the predicted hour later. She had showered and changed. I invited her in and we were soon lost in each other's arms. When we came up for air, she sort of gasped, "That really makes the whole day worth it!" and snuggled back into my arms once more. I just nuzzled her ear and told her I felt the same way. There was something about holding this girl that went way beyond ordinary lust; it was almost *spiritual* in nature. Yes, I realize how strange that must sound coming from me; if you've read the books my friend James wrote about our adventures when we were kids, you probably remember how coldly logical I was back then. Yet it's true; in a way that defies any logical analysis, whenever I'm with her I feel complete. It's enough to make me want to challenge those in the neurosciences who believe the concept of the human soul is just a neurochemical delusion. There's a certain synergy effect between two people who are deeply in love that transcends mere biology. And chances are, no matter how much they pick apart the human brain, this is something they'll never find or understand

At any rate, we soon tore ourselves from one another and got ready to go. As much as I enjoyed riding in her classic muscle car, we used my more sensible tommycar. We drove down to The Oaks shopping center and found our Applebee's. There was, of course, a wait. Tonight's was about twenty minutes we passed in just being together. Soon we were seated at a table, awaiting our waiter or waitress.

"After we finish here," Brigette said, "I thought we could go shopping at that new clothing store near

the Sherman Oaks mall."

I gave a wry grin. She knew too well that I wasn't all that big on clothes shopping. "And the new Tristran used book store that's close by?" I asked. "Perhaps we can—" I broke off, puzzled.

"Which new bookstore is that?" asked Brigette.

I sat there, baffled. I tried to recall the name of the bookstore I had just mentioned but couldn't. "I — I'm not certain," I replied, suddenly at a loss. I have a completely eidetic memory — I never forget anything. But just now I was unable to recall the name of a bookstore I had spoken out loud only moments before. "Brigette, didn't you say something about going shopping someplace?"

She looked equally baffled. "Yes, I did. I think I said the Sherman Oaks mall, which is weird, because there's no such place. There never has been."

I nodded, still puzzled. "Strange we should speak of it, then."

"I guess we were referring to some other mall," she said quickly.

"I guess..." The explanation didn't sound right, and I knew I wasn't one for absent-mindedness. But I certainly couldn't come up with any other explanation. In the end I had to shove it aside. For one thing, it smelled too much like a mystery. I had had enough of those to last me a lifetime.

After we finished eating, we decided to go up to the Park Oaks mall on Moorepark Road. We hadn't gone very far, and she was in the midst of telling me about her brother's latest troubles on a movie set where he worked as an assistant director, when, without the slightest warning, I suddenly recalled the bookstore I'd forgotten: "The Tristran!" I shouted out loud.

"What — ?" she gasped out loud, then also shouted, "The Sherman Oaks mall! Of course! How could we have forgotten it?" Once again we exchanged baffled looks.

"More importantly," I said, "why did we suddenly recall it?"

We continued to stare at one another. Then Brigette shook her head. "Maybe we'd better go over there and find out."

I shook my head, feeling suddenly queasy. "No, it's not that important. Maybe we were having a before-its-time 'senior moment.""

"Oh, come on, Brains! We suddenly forget a shopping mall — forget it to the point where we don't even believe it exists — and just as suddenly remember it? You call that a 'senior moment?'" She shook her head and abruptly turned at the next light. "I certainly won't get any sleep until I find out what's going on!"

I just grimaced and nodded acquiescence. As I said, the last thing on earth I wanted to get involved with was a mystery. And now we were headed right for one

It didn't take us long, about three minutes. Once

we were there, I fought the urge to make observations, but long-ingrained habits took over. Against my will, I noticed that all of the mall's lights, including the ones in the parking lot, were out. There was also a curious hissing sound, and I could smell water vapor in the air, though it was hard to say where it was coming from.

Leaving the car parked just inside the parking lot entrance, we moved closer to the mall itself, then Brigette let out a gasp and went sprawling. I raced over to help her up and almost tripped myself.

"Brains!" she said in a kind of strangled yell.

"I know," I kind of choked out myself: what had tripped us both was the body of a woman lying in the parking lot, her hands still holding a shopping bag. And as we got nearer to the mall entrance, more and more bodies could be seen. Inside the mall was worst of all: there were bodies of people everywhere...

## **CHAPTER 2: MALL OF 1,000 CORPSES**

Brigette clutched my arm in fright. "Brains! What could — How did—!" She was unable to continue.

I wasn't doing so hot myself. With a none-toosteady arm, I reached down and lifted the wrist of one of the bodies, expecting to feel nothing. But, to my relief and astonishment, I felt a pulse. "This one's alive!" I told her.

Brigette turned to me and stared, then she let go of my arm and knelt down by another body. She touched his neck. "So's this one!" We checked a few more. I went back outside the mall entrance and checked a few bodies out there. In each case, a pulse could be found. Then I noticed something else: nearby, I made out in the darkness the body of a large cat in a narrow alley between the stores. In its mouth was a bird, which was also motionless. As I approached them to see if the animals were alive, the cat abruptly jerked back to life. It sprang to its feet and let out what can only be described as a baffled "meow." It shook its head several times, then its body. Then it started looking around. When it saw me approaching, it let out a warning hiss. A moment later it picked up its meal and raced on down the alley, disappearing around a corner. Another piece of the puzzle, I thought to myself, then angrily dismissed it. I'm done with puzzles.

I went back in to see if Brigette had discovered

anything more. Turns out she hadn't and was in the process of calling the police. I could hear the 911 responder asking, "Say that again? Bodies everywhere?"

"Yes," Brigette told her. "Everywhere!"

"Look, Miss ... McClaran, if this is some sort of joke—"

"Look, missy, I'm a crime-scene reporter for the Los Angeles *Times*, and I assure this is no joke! Do you want to speak with my boyfriend? He's a scientist at SwiftTech! He doesn't joke around. He'll confirm everything I said. I can even send you pictures, though they'll be on the dim side because the lights are out here."

There was a pause, then the responder replied, a bit grudgingly, "I will notify the police. Please stay where you are. They should be in your vicinity in a few minutes."

"Thank you," Brigette replied and hung up. She turned back to me. "Are the bodies outside alive as well?"

I nodded. "The ones I checked on, anyway." After a moment's hesitation, I described the odd behavior of the cat. "I am uncertain just what that might mean," I concluded.

"That's really weird," she said. "But then, what *ISN'T* weird about this whole situation?"

"Not much," I acknowledged.

The police showed up about five minutes later,

lights flashing and sirens blaring. Two squad cars showed up first, soon followed by four others. Their reaction was exactly what I expected. In a way that would have done Chief Hadley proud, they emerged from their cars, shown their flashlights around, and as soon as they spotted us, they immediately screamed as loud as they could, "HALT RIGHT THERE! GET DOWN ON THE GROUND, FACE DOWN, HANDS BEHIND YOUR HEADS AND FINGERS LOCKED! IF YOU SO MUCH AS TWITCH A MUSCLE WE'LL OPEN FIRE. GET DOWN NOW!!"

Well, we knew better than to disobey, so on the ground we got, hands behind our heads. You'd have thought that lack of blood on either of us, no signs of any weapons, and the fact that we weren't moving anyway would have been rather obvious. Not to the Thousand Oaks police department. With guns still pointed at us, they raced over and cuffed us, then hauled us to our feet. Immediately the police backed us both up against the wall near the mall entrance. The police were fanning out, looking for more bodies.

One of the police officers began to interrogate us: "Why did you do this? Are you part of some terrorist organization? Why would you want to kill all of these poor people? What did they ever do to you? How can you even look at all of these bodies and live with yourselves? God, I just want to puke all over you!"

I remained silent, as did Brigette. We both knew there was no point in speaking until the man ran out of steam. Finally, though, the man's tirade came to an end. I opened my mouth to speak, but didn't get the chance.

"Hey, Robinson!" one of his colleagues called out. "You'd better come and see this."

"Later," the man called Robinson replied. "Right now I'm grilling these suspects!"

"Did you read 'em their rights?" the other officer asked.

"Who cares about their freakin' rights?" Robinson replied. "These so-called people went on a massmurder spree! I want some answers before their lawyers show up and makes them clam up!" He turned back to us. "Don't think you're going to get out of this with some fancy mouth-piece, either! You're in a parking lot — hell, a whole damned mall — filled with dead people, and you honestly think you're going to walk on this??"

Well, considering that thus far I hadn't said a single word, I was pretty certain that was going to be the case. But I could, to a degree, see his point. This really didn't look good for us. Again I tried to say something, but was, once again, interrupted by his colleague. "Hey, Robinson, knock off the bluster. You *really* need to see this!"

"See WHAT??" he bellowed.

I could guess pretty much what the other officer wanted him to see. But before he could get an answer from his partner, the answer came in a way that surprised the hell out of all of us: one of the bodies suddenly let out a moan, rolled over and stood.

He looked at us in bleary surprise, then said "What the hell was *that?*" And even as he spoke, other bodies let out similar moans, rolled over and began to get up as well. As we turned our heads this way and that, we could see it happening all over the parking lot.

At once, I turned towards the mall entrance, where I could see that it was happening inside as well. It came as no big surprise that just about everyone, as soon as they regained their composure, let out (with numerous variations) one, huge "What THE HELL is going on here?"

Which is precisely what we wanted to know.

#### **CHAPTER 3: A NIGHT TO REMEMBER**

I really didn't want to become involved with a mystery. I suppose this may come as a shock to those who have read the novels written by my good friend James Carson some years ago. The books were a somewhat-fictionalized account of the time when he and I formed our own "private detective agency." I was so full of myself back then, a huge know-it-all nerd who thought that solving some minor crimes in our hometown of Crestwood made me a regular Sherlock Holmes. And James' novels enhanced my own intelligence (though he got the arrogance part down pretty well). No, I'm sorry to tell you, but I really wasn't as smart as those novels made me out to be — a lot of those "deductions" were more like lucky guesses. Be that as it may, we kept playing detective even after we graduated from high school. But it all came to an end that summer after high school graduation.

I had already been accepted at CalTech, where I planned on majoring in biophysics and electronics. James was going to UCLA to study journalism (no doubt influenced by our good friend Lew Jarmin, who was a reporter for the Crestwood *Journal*). I couldn't resist one final adventure before we went off to college. Would to God that I had.

I'd heard on the police scanner about a cat burglar who was passing through Crestwood, no doubt on his way to a large city someplace. For whatever reasons, he was stuck in Crestwood for a few days. Apparently he planned on making the most of it by hitting a few of the wealthier parts of the city — not that there were all that many. But I anticipated the few places where he might hit. I decided that we could get the drop on him that night, another score for Benton and Carson!

Now, this cat burglar wasn't one of your movie or TV show types — there was nothing debonair or suave about him. He was a ruthless, cold-blooded killer who already had four dead people to his name. I knew this as James and I staked out the high-rise apartment building where I believed he would strike. Yet I blithely set out to capture him, believing it wouldn't be much of a problem. I already had a trap rigged up: a couple of volleyball nets woven together to form a single large net. And I had a pair of regulation handcuffs I'd recently purchased.

We were all set. Exactly as I had surmised, the cat burglar used the fire escape to gain the top of the building. From there, he used a rubber-coated grappling hook to lower himself down the side of the building. There was a new moon that night, so it was very dark and, needless to say, he was dressed all in black. Unbeknownst to him, we watched from our concealed placed (a large box painted to look like it was part of the rooftop HVAC units) as he went down the side of the building, used his burglar tools to bypass the alarm and open a window. Shortly thereafter, he emerged the same way and quickly climbed back up to the roof.

When he regained the rooftop, before he could make his way back to the fire escape, I signaled James. He had both of our flashlights — I had made enhancements to them so they were both very powerful — and shined them in the face of the burglar, yelling "Halt!" at the top of his lungs. T

his caught the burglar completely by surprise. Before he could overcome it and try to escape, I tossed the net over him, yanked on the ropes I'd strategically tied to the net and literally pulled the cat burglar of his feet. Moments later he was wound up in the net, and to top it off I was able to snap the handcuffs on him.

So far, so good. Then it went bad.

"Contact the police, Operative Three," I told James. "Inform them that we have their man!"

"Chief Hadley's gonna *love* this!" James replied with a chuckle.

We both smiled, thinking how this would look in the Crestwood *Journal* the next day, our pictures showing us with the captured cat burglar, Chief Hadley no doubt wearing the sour-lemon frown he always gets whenever we would pull off yet another victory right under his nose. I turned back to our prisoner to see if I should move him to a more accessible location — and gaped when I saw that the net was unrolled and the handcuffs were lying nearby, both cuffs opened. I was stunned by the sheer speed with which our prisoner had escaped. So, several precious moments went by before I could snap out of it long enough to warn Jimmy to watch

out. I never got the chance.

Even as I started to turn back to Jimmy, my mouth beginning to open, something slammed into my stomach like a sledgehammer. And, as I jackknifed down, it caught me right on the chin, shattering my jaw and several teeth as well. I flew almost literally head over heels, landing in a heap. I heard James start calling out "Brains—?" then he let out a scream of pain.

My head was so full of agony that I could barely make out the man working over James. Then he picked my best friend up and slammed him down over his knee. The sharp *CRACK* made me gasp in spite of myself. James was tossed aside like a piece of rubbish and the man made his way to the fire escape. It was all over in less than two minutes. The whole time, the man never said a word.

I was the one who had to go get help for us — James's back was broken. And that wasn't the worst of it: when I went over to him, he told me that he couldn't feel his legs. His whole body was twisted at an unusual angle, blood seeping from wounds to his face as well. I'm not ashamed to say that I broke down crying at the sight of him like that. But he snapped me out of it, got me to pull myself together and go get help.

It wasn't easy, going down the fire escape myself, still in severe pain, half-afraid that the cat burglar was waiting down at the bottom to pounce on me again, even though I knew how illogical that line of reasoning was.

As I made my way to a phone booth, dumped the contents of my wallet onto the small shelf and shoved change into the phone, part of me was swearing that this would never happen again. *Ever*.

Even as I dialed the number for our local hospital, all of the warnings from both our parents about the dangers of our detective agency swirled through my head, and all I could think was *WHY DIDN'T I LISTEN?* 

And, as the days went by and both of us underwent surgery, my resolve to end the Benton and Carson International Detective Agency only grew stronger.

By the end of summer, I had several artificial teeth and pins in my jaw that I still have to this day. But that was nothing: Jimmy — James — was confined to a wheelchair for the rest of his life.

I would find out later that the cat burglar had lock picks hidden on him, and that he'd escaped from custody more than a few times before. We were lucky in that sense: as I mentioned earlier, he'd left dead bodies during those escapes.

We would go on to our respective universities, just as planned. But the sense of excitement was pretty much gone. Still, all things considered, we did pretty well. James graduated at the top of his class in journalism, and I graduated early, then went on to pick up masters degrees or doctorates in biophysics, electronics, computer science and neurophysics. That sounds like a lot, and it was. I pushed myself harder than I had ever done before. For you see, I now had

one all-consuming goal in life: I was going to make sure James could walk again — complete and total use of his legs. Not just a muscle-stimulator half-measure. Complete control. All nerves functioning once again. I wanted to see him get up from that damned wheelchair and take it to the nearest cliff and toss it over and laugh when it hit the ground and was turned into a pile of scrap metal. And no two-bit, stupid "mystery" was going to stop me.

At least, that's what I thought at the time...

# CHAPTER 4: SENT TO THE PRINCIPAL'S OFFICE

Need I say that the cops soon let us go? They could hardly do otherwise, since the "corpses" turned out to be simply unconscious people. But the police had questions for the former "corpses," as well as Brigette and me: why did everyone black out? What made them wake up again? What made Brigette and me come by the mall? Were we connected with the blackout? If we were, why did we call it in? And they had a hard time — especially Officer Robinson — accepting that we somehow forgot the place, then remembered it once again.

Later we would find out that there were officers on the force who also mysteriously forgot all knowledge of the mall, then just as mysteriously regained it. Nor were they the only ones — others had the same experience. But, as I said, that would come later. For now, we had no answers to provide, any more than the bewildered people we'd found. So they warned us not to leave town for any reason and that we may be called in for further questioning.

Like it or not, we had become Persons of Interest.

\* \* \* \* \* \*

We soon returned to the apartment complex, neither of us saying very much. I could tell Brigette

was excited to have an unusual news story to look into, but I had other things to occupy my time. Yes, it was all very peculiar, and I was sure there was some sort of a logical explanation behind it. But that was for some police detective to look into. I couldn't care less. I said as much to Brigette. She seemed puzzled over my lack of enthusiasm about tonight's events, but she knew enough about me by now to know how focused I can become on my work, to the exclusion of all distractions. At least, that's how I wanted it to look. Brigette knew that I blamed myself for James's condition, but she knew nothing of the circumstances behind it. And I swore James to secrecy about it, which annoyed him to no end. But he agreed not to tell

He did tell her, however, about the Benton and Carson Detective Agency and, to make matters worse, showed her the books he'd written. So she, too, thought I was some sort of latter-day Sherlock Holmes. I try my best to dissuade her of that, but, as you've seen, it doesn't always take. Hence her disappointment. But I could live with that.

The next day I continued work on the nerve interface. Mostly what I did was tweaking: I tweaked the hardware, I tweaked the software. Several times the microchip was able to read the nerve impulses, but only at the cost of a prohibitive boost in power. Under those conditions, the recipient of the arm would need a Mighty Midget atomic capsule for a power supply. As it was, I planned for the arm to use a tiny SwiftSure solar battery.

As usual, I ate lunch in the cafeteria. I always brought my own, never really caring for the health-food-oriented menus (this is California, after all). It wasn't long after I sat down and began tearing into my ham & Swiss cheese on rye that Beth Byrd soon joined me. She was about the only friend I had at the place: most of the areas of SwiftTech were so rigidly segmented and dealt with a lot of super-top-secret projects that virtually no one talked to one another. Which is not to say there wasn't plenty of gossip about events that went on outside of SwiftTech (like Sandra Swift's curious adventure), but there was little or no discussions about our individual projects. Beth and I were lucky in that neither of ours were quite that security conscious.

Beth was a short, stocky woman in her midforties, with thick glasses and a page-boy haircut that really didn't do wonders for her brown hair. Not that I ever told her. For one thing, she had a fiery temper and was very blunt. For another, while she looked pudgy, she was really very muscular. I wasn't surprised to learn that she was a top wrestler in both high school and college, winning more than a few trophies.

Currently she was the leading researcher for visual displays; the Swift's SmartGlas was one of her major inventions, and she'd modified the 3D Telejector images to allow for haptic, touch-sensitive control and 4K resolution. She and I were collaborating on a bionic eye, one that would restore full sight even to those born without eyes. She'd also helped with my special, off-site project.

"Still no luck with the interface?" she asked, after sitting down and looking at my face.

I just shrugged and kept on eating. After I swallowed and took a drink of water, I replied, "Not without a huge power supply."

Beth nodded. "Damned amplification. Always comes back to that. Nerve impulses are just so bloody damned weak! Wish we could make the nerve probes more sensitive."

I shook my head. It was one of the first approaches I'd tried. "Then the signal-to-noise ratio kicks in, and all the microchip 'hears' is a bunch of cellular noise, which it can't differentiate. Worse, out in the real world, the chip would be bombarded by constant microwave and other electrical impulses. And don't ask me what might happen during a thunderstorm!"

Beth nodded again. "Probably fry the damned thing. OK, so increasing the sensitivity is out, and so is using a huge power supply. What's left?"

I shook my head. "That's what I've been asking most of the morning. Have yet to come up with a good answer."

"Keep at it. I know you, Brains. You'll come up with something before long."

"I'd better. The project deadline is coming up."

"That damned cow O'Reilly giving you trouble about that?" It was pretty much a rhetorical question.

"No more than usual. And in a way, she's correct:

I really should have something to show for almost six months' worth of work and thousands of dollars."

Beth was silent for a few minutes, eating her own lunch, which consisted of a hamburger and fries she'd bought at a fast food place and warmed up in one of the microwaves. Then she turned to me and said, "Do you think the human body is really meant to be melded with machinery? I mean, in spite of the movies, comic books and science fiction novels which all have us being turned into cyborgs, maybe it's just a pipe dream, Brains. Maybe we're just kidding ourselves."

"Maybe," I replied evenly, thinking of my special project. "But all we really need is a breakthrough, Beth. Just one. I wouldn't be working on this if I felt it was all in vain. And neither would you."

"Hey, I just make the cool-looking displays!" she laughed. "You're the Borg guy!"

I made a wry face at her. "But you're helping me with the bionic eye." The eye was actually coming along faster than the arm. Even now, our test animals, some of which were born blind, and others which had lost their sight due to accidents or diseases, had regained at least eighty to ninety percent of their vision. Once the eye was placed in the socket, there was also a wireless link which allowed us to see what the animal saw. Beth had contributed considerably in improving the eye's resolution.

"OK, fine," she conceded. "Whatever. Ya know, Brains, maybe it would help if you backed away from this for a bit. Ya know, worked on something else a

while, then went back to it. Maybe you'd come up with something new." I started to open my mouth, but she rushed in. "Yeah, sure, I know: the deadline. Just how far off is it, anyway?"

"Next Friday," I said. "About a week and a half. Sounds like a lot of time, but not if I keep going round in circles the way I am."

Beth chewed on her food for a few minutes, then said, "OK, take three days off, no more. The rest of the week, combined with the weekend. Just relax, chill out, work a crossword puzzle or something. Take your girl someplace, like Disneyland. Just refuse to think about the project for a while."

I looked at her. "Could *you* do that, O Fountain of Wisdom?"

She threw a french fry at me. "Hey, I just think of these things. It's for others to carry out."

"Oh, I see: 'I make the rules, I don't have to follow them,' eh?"

She shrugged. "Whatever. And it's just advice, not rules"

I smiled. "Well, I'm not saying it isn't good advice. But I have a bad habit of staying stubbornly on track when I feel I'm close to a solution. Jimmy used to say that about me whenever I was—" But I broke off, not liking where that train of thought was leading. I continued: "I mean, he used to say that about me." Beth gave me a look, but didn't comment any further. I went back to eating my lunch and soon finished it. "Back to work, I guess. I may drop by

later on to see the latest results with the eye."

Beth just nodded. Then she said, "Hey, did you hear about that weird deal at the Sherman Oaks mall last night? About all those people being knocked out by something? I wonder if it was a terrorist attack of some kind. I heard they had two suspects, but they're already covering everything up."

This caught me completely by surprise, though really, I should have seen it coming. Beth probably found out online or through an early morning news broadcast. Either way, it probably won't be long before my name comes up. I'm surprised that I wasn't called into the administrator's office already to explain what happened. And even as I thought it, my SwiftTalk buzzed.

It was, as I guessed, Michael Phydeaux, SwiftTech's administrator. And he wanted to see me. Right now.

# CHAPTER 5: A REQUEST MEETS A CHILLY RECEPTION

I took the elevator to the sixth floor, which is the topmost floor and where the executive offices were located. Phydeaux's was located at the very end. Rather than a wooden door, he had installed a pair of automatic doors that slid open, like an elevator's. They closed behind me with a muffled thud after I went in.

As might be expected, Phydeaux's office was state of the art: the desk was composed entirely of SmartGlas, with telejector displays as well currently showing various labs and the people working in them. Also several offices and cubicle areas. I had little doubt these were relayed from the main security office. A few of the screens on the desk were showing various financial statistics and graphs.

As soon as I came to a halt before the desk, he touched an icon on the desk, shifting the view of all the displays, holographic or on desk. Now they showed various scenes taken by news reporters who had converged on the scene a short time after Brigette and I got away.

"Dr. Benton," Phydeaux said. "Perhaps you would care to explain to me just what went on at the Sherman Oaks mall last night and how you happened to be involved in it?"

"You received the police report, sir?" I asked.

Actually, Michael Phydeaux wasn't as formal or as autocratic as he liked to make himself sound. Underneath that CEO manner of his was a decent individual who really cared about his employees. I knew this pretty much from my first day, if for no other reason than he'd been hired by Mr. Swift himself. And Tom Swift Senior didn't hire would-be tyrants to run his businesses or operations.

He gestured towards one of the displays. "Yes, they e-mailed me the report first thing. I knew you were still busy with the bionic arm project, so I waited until you were finished with your lunch before calling you up here."

I nodded my appreciation. Then I went into detail about the incident, including how Brigette and I lost our memories of the mall, only to regain them later on. I even mentioned the odd incident with the cat.

Michael listened carefully, jotting down notes on his desk once in a while. When I finished, he said, "All right. I can understand why your girlfriend used your name to get some action, though I wish she hadn't. I've been answering questions from the police all morning, as you might guess. They're certain SwiftTech is somehow involved in all this, if for no other reason than you were there when it happened."

I opened my mouth to object, but he shook his head. "Yes, I know, you weren't exactly there when the phenomenon took place, but you and Miss McClaran were the ones on the scene when the police arrived. Naturally, they assume we had something to do with it. Frankly, I doubt it. So my question to you

is: do you have any idea or theories as to what *did* happen?"

I shook my head no, but even as I did so, I felt a curious thrill suddenly race through my body. For a moment I was at a loss, then it hit me: his question was much the same as Jimmy's would have been in the Old Days. I repressed that sensation at once, of course, and yet it didn't go away completely.

Michael stared at me for a few moments, then said, "Dr. Benton, have you been keeping up with local news? Particularly, the subject of crime?"

"No, sir, I have not," I replied, my tone of voice bordering on icy. As you can doubtless guess, that would be about the *last* thing I would keep up on!

Michael frowned at me. "So you're unaware of two very unusual bank robberies that have taken place over the past week." It was more a statement than a question. I just shook my head. Michael continued to stare at me. He added, "In both cases, the rear of the bank, where the vault is, was somehow sliced all the way through: sides, floor, and roof. Then chains were attached to the rear wall and the whole rear half was pulled over, allowing the thieves access to all of the money. The thieves managed to grab as much money as they could, then departed before the police arrived. What no one can figure out is how it was accomplished: the walls on both side of the cut were smooth as glass! No signs of acids, cutting torches, or explosives of any sort. No noise, apart from the wall falling over."

"Obviously," I said after an awkward moment of

silence, "both you and the police believe there's a connection between these two burglaries and what happened at the Sherman Oaks mall."

By way of reply, Michael grabbed one of the floating holographic displays and shoved it over in my direction. I stopped it with my left index finger, then rotated it around so I could see what it showed. And what it showed was simply a close-up of a concrete sidewalk.

"Expand it," Michael said. Using both fingers, I did so. I didn't see anything out of the ordinary. "Keep going, but focus on the small red arrows." Said arrows seemed to frame a section of the sidewalk. So I continue to expand the image. Apparently it was taken with an ultra-high-resolution camera, because it continued to enlarge without any noticeable grain or pixilation.

Then I saw something and stopped expanding. It was a nearly-invisible dark line, straight as a ruler, running along the sidewalk. You might have mistaken it for a joint between the sidewalk slabs, but it was running at right angles to them, and was much too small besides. I began sliding the image, trying to see how far it went. It didn't seem to end.

"At that resolution, Dr. Benton, it would probably take you a good hour to see where it ended," Michael said with a note of humor in his voice.

I stopped sliding the image and turned to him. "Is this from one of the banks?" I asked him.

"No. This is from the Sherman Oaks mall, taken

just this morning. I'll save you from any further need to examine that peculiar line. The CSI people who examined it told me that it almost completely encompasses the whole mall, save for a good section of the parking lot in back. There, I might note, where the line is, there are also several cars that have either been split in half or split into a third or a quarter, depending on how they were parked. But split they were, and with the same type of precision and lack of any sort of evidence to suggest they were cut with any kind of tool. The depth of this strange line is a good fifteen feet, hence the odd mist you and Miss McClaran saw when you arrived: it sliced through water, gas, and electrical lines as well."

"That's why the power was out," I muttered to myself.

Michael nodded. "Correct. They've already taken samples and yes, this odd line matches the other 'odd lines' found at the two banks." He sighed. "I believe we can say with certainty that the three events are connected."

I nodded, then shrugged. "OK, fine. There's a definite connection. And yes, it is true that I was there at the Sherman Oaks mall after the strange event took place. But this is obviously a matter for the police to handle. I don't see why we should be involved."

Michael frowned at me once again. "Because, Dr. Benton, this obviously involves the use of sort of new technology. Perhaps it's stolen Swift technology. Or someone else's. Either way, we — I — need someone

to look into this. And, for more than a few reasons, you're the obvious choice."

Before I could object, he rushed on. "Now, I'm hardly unaware of your, shall we say, 'adventures' when you were in junior high. In point of fact, my son enjoys reading the books your friend James Carson wrote some years back. And, in spite of what happened later on — yes, I know of it in full detail, though I've been careful never to bring it up. At least, not until today — I fully believe you are the one best suited to investigate these odd events."

I glared daggers at him. "I flatly disagree." If my tone of voice was icy before, it was positively glacial now

Michael said nothing for a few moments. I thought for certain he would make further attempts to change my mind, and I mentally braced myself for them. Instead, rather to my surprise, he gave me a brief nod. "Very well. You may return to your work, Dr. Benton. I apologize for having disrupted it."

I stared at him in return, wondering if he was up to something. He certainly gave in pretty fast. But he said nothing further, simply went back to looking at the various other displays once again. Feeling somewhat awkward, I turned and went back to the office doors. They slid aside as I approached and closed quietly after passed through.

I returned to my lab, my feelings a mixture of anger, puzzlement and, to my surprise, regret. I realized it was caused by a foolish nostalgia, an odd longing for the days when a mystery like this would have been irresistible to someone like me. A time when Jimmy and I would have referred to each other as Operative X and Operative Three. But those days were over with, once and for all. They weren't coming back. So, with an exasperated sigh, I shoved all thoughts of the odd events out of my mind and turned once again to the bionic arm interface problem.

#### CHAPTER 6: A MEETING OF THE MINDS

It's been said that having a hobby helps when you get stuck with a large problem that seems unsolvable. What they really mean is that it serves as a distraction, allowing your mental processes to catch their breath, so to speak. And perhaps that's what happened up in Michael Phydeaux's office. Because as I began reviewing (for the umpteenth time) the steps I'd taken in trying to solve the interface problem, an idea began to form.

Apropos to apparently nothing, I recalled Tom Swift Jr.'s adventure down in South America, where he discovered Atomeron. Curiously, it had nothing to do with the nuclear isotope he'd found, but rather, with a radio message he'd received from a fighter pilot nearby. The rebels had jammed the message, distorting it. But Tom had been able to decode it all the same. But I wasn't able to remember just how he did it. Well, there was only one way to find out.

Taking out my SwiftTalk again, I pulled up a contact I very seldom used: Tom Swift Junior. The phone rang several times before he answered.

"Hello? Dr. Benton?" he asked, his face looking puzzled on the transparent screen. Before I could answer, there came an ear-screeching blast of noise. "Hold on a minute," he said, holding a hand to his ear. "Let me get to someplace a lot more quiet. I'm in the bore tunnel at the moment." Which wasn't hard to

guess. I saw the image on the screen bounce around, he was obviously heading for an office somewhere. This was confirmed moments later when a door opened and closed, then another. The din dropped off noticeably. Tom Swift junior sat in a chair and placed his SwiftTalk on the desk. He made a brushing gesture and the image changed a moment later. I knew he'd moved my image from the SwiftTalk's smaller screen to a monitor on the desk. "Now," he said, after he caught his breath, "how can I help you?"

I knew he was busy so I didn't waste any time. I outlined the problems I'd been having with the bionic arm interface and mentioned the way he'd been able to solve the interference problem when he was in Valepero during his first adventure.

Tom nodded. "And you think you might be able to use a similar technique for getting the chip to read signals from the nerve clusters?"

I nodded. "At least, it would give me a place to start. None of the other techniques I've tried have yielded any results."

He sighed and ran his fingers through his crewcut. "I'm just not certain if the analogy is applicable. All I really did was to use analog filters at various frequencies until I hit upon the correct one. Even then, the message was only partly audible."

I thought for a moment. "Did you manually search through the frequencies or did you have a computer do it?" I asked. He gave me a sheepish look. "A computer would probably have handled it faster, but there wasn't one installed in the Flying Lab at the time. So I had to do it the old-fashioned way."

I nodded. "All right. I still think that the analogy is, in fact, applicable. After all, we are both trying to do the same thing: extract a readable signal from chaotic background noise."

"You may need an extra chip, Dr. Benton," Tom told me

I held up a hand, interrupting him. "Barclay, please, Tom. Or better still: Brains. That was my nickname of old," I said, still feeling a pang of guilt.

Tom looked startled, then smiled. "I think we both could have gone by that nickname!" he said, and we laughed at that.

"Yes," I said, "it certainly would have fit. But getting back to what you were saying: I believe you mean I should add a chip with a built-in spectrum analysis firmware. That might be a way to go, but I'd like to get rid of the latency time that translating from analog to digital would take."

Tom shook his head. "I agree, but I'm not certain how that could be accomplished. You have a chain that consists of something to read the analog nerve impulse signals, extract the proper signal to initiate the proper action, then translate it to digital to activate the synthetic nerves and muscles in the arm. Even at computer speeds, I don't see how you can get around the lag time that's going to be involved."

"That's assuming we can extract the proper nerve impulse to begin with," I sighed. Moments later I heard a beep from Tom's end. He put me on hold for a few minutes while he spoke with someone. Then he switched back to me.

"I'm going to have to get back to work, Dr. Bent—uh, I mean Brains. We've already got another crisis going!" he said with a wry grin.

I nodded. "I understand. Thank you for taking the time to talk with me about this."

"No problem, Brains. Let me know what you come up with!"

"I certainly will," I replied. Then we both hung up.

Well, that wasn't without some benefit. An idea began to ferment in the back of my mind. I'd been assuming from the beginning that the bionic arm would need to be digital in order to execute the programmed actions. But what if it didn't? What if all of the necessary actions that an arm needs to have could be done through pure analog?

I began sketching out a new set of microchips that would use strictly analog programming. This was no small task: analog computers operated on what's known as "fuzzy logic." To do this, they needed large, bulky containers filled with mechanical devices and sprouted knobs, dials, slider controls and patch cables. And I was about to micro-miniaturize all of this onto an almost microscopic chip! But some of the groundwork had already been done for me in the form of ADC and DAC (that's analog-to-digital and

digital-to-analog converter) chips. They were used in CD players and other musical devices used for digital recording. I looked through the SwiftTech database, quickly pulling up schematics and having them projected in 3D. A few gestures on my part "exploded" the chips and displayed the type of programming they used.

A half hour later I was nodding with satisfaction: there was much here I could use. It took several hours of work, but shortly before it was time to leave, I had a virtual chip that could both distinguish and amplify nerve impulses. It took some redesign to get the other parts of the bionic arm to recognize the incoming signals, and I even used a few digital chips for minor movements where the conversion lag time would be minimal. Just before it was time to take off, I placed pantographic sensors all over my right arm. Switching them on, I began moving my arm around and was very pleased to see the holographic arm respond in kind. There was no lag: even quick, karate chop-type movements were executed without latency.

Nodding with satisfaction, I saved the specs to both the main server as well as two backup servers I'd built myself and installed both here and my other, secret location. No one knew of their existence and I planned on keeping it that way. Lessons learned from the Old Days...

Before leaving for the night, I sent a copy of the specs to the manufacturing plant located down near the basement level. This way I would have a fully functioning model within two days.

A wise decision, that: I had no idea at the time how soon I would be needing it.

## CHAPTER 7: AN UNEXPECTED BREAKTHROUGH

Jimmy screamed in pain again. I checked the holographic image displayed above him, another connection had been made. Moments later he screamed again as the feedback probe, hovering millimeters above his bare rear end, tried another nerve. A few moments from now it would try still another.

Jimmy refers to my private laboratory as "the coach house," in honor (and, perhaps, some nostalgia) of our old crime lab. Actually, it's an old warehouse at the north end of Simi Road, near Skelton Canyon, on the eastern side of Thousand Oaks. When Westlake Village opened up years ago, a lot of places like these ended up abandoned. I knew I would need a private building of my own to carry on my decidedly unorthodox research project to restore Jimmy's legs. The purchase of the land, the building, and the equipment I needed (some of it was, truth be told, black market) took a sizable chunk out of my savings and salary. But it was well worth the expense.

Every Saturday and Sunday Jimmy and I met here. He stripped naked and lay on an examination table I'd picked up cheap on eBay. Then the nerve probe would, using a subdermal laser probe, stimulate each nerve cluster just past the damaged, nonfunctioning nerves. The response of the nerve cluster was kept track of on my server arrays. The overall goal was to

build a map of the countless thousands of nerve clusters that lay beyond the damaged ones so that true feedback with the spinal column just above the damage could be achieved. When this happened, Jimmy would be able to walk again. But it was a painstaking ordeal. We'd only been working on this for about five months, and had mapped about five percent.

"It's going to be slow at first," I told him when we were just starting. "It may take years, in fact. But, as the map of your lower nervous system expands, it should start to pick up. Towards the end, I hope to be able map between one and five thousand nerve clusters per second. Then it may be only a matter of days, maybe even hours, before we'll achieve complete feedback with the nerves in your legs and you will be able to walk once more."

"Well, as long as that thing" — he gestured toward the nerve probe —"hangs over me, anyway."

I smiled and shook my head. "Don't worry, James. I fully intend to have a portable unit ready long before then."

"Brains," he asked me, "will this technique help other people who are paralyzed, or have some other form of spinal problems."

I bit a knuckle, then nodded. "I would like to think so. I believe a template can be created from your spine and applied to others as well. As for people with multiple scleroses or are quadriplegics, that's going to be much more difficult, Jimmy. The nerve clusters that would have to be mapped would number in the millions. Such a mapping project could easily take fifty to sixty years. Still, it can be done, and once the map is made, the template could easily be applied to others, with certain adjustments, of course."

Jimmy just shook his head. "Allowing the paralyzed to walk again. Seems to me this project is far more important than even your bionic limbs. This is really the project you should have been working on at SwiftTech, Brains!"

I shook my head sadly. "True, but they're not likely to have approved my method of achieving it."

"Why," he asked me. "What's so unethical about it?"

"I'm using a live human being," I answered, "for one."

"So what? I'm hardly doing this under duress!"

"Doesn't matter, Jimmy," I told him. "There are many laws against experimenting on humans, even with their consent. That's why many promising cures for cancer and other diseases never get far: they involved clinical trials unapproved by the FDA or other government agencies. You can talk all you want about 'Big Pharma' conspiracy theories, which may or may not be true, but the end result is the same: experiments such as you and I are doing are flatly illegal. Hence the need to do it here, inside a soundproof room. Just your screams alone would be enough to lock me away for years," I said with wry grin.

"What?" Jimmy said, outraged. "Do you have any

idea how glad I am to *feel* that pain! Of course it hurts, you're awakening nerves that have been dead for years. Naturally they're screaming with pain! Believe me, Brains, I treasure every moment of that pain, and wish it would last longer than a second or two!"

I held up my hand. "You don't need to convince me, Jimmy. But I seriously doubt you could convince any government official of that!"

Now, months later, we had a small percentage mapped out. After about an hour, we had our usual fifteen minute break (as much as Jimmy might enjoy feeling his nerves come back to life, it gets tiring screaming all of the time).

"So, Brains, have you come up with any theories about these weird bank robberies we're having? Or what's causing all of these equally bizarre memory lapses?"

I was fully expecting these questions, so I did not get angry with him. "No theories, James. And you should know better by now than to ask me any questions like that concerning crime."

I expected some sort of snarkish remark in return. Instead, Jimmy lay there a few moments, not saying anything. I continued analyzing the results. Jimmy continued to say nothing, and after a few more minutes I looked at him once again. I began to feel apprehensive, it wasn't like Jimmy to remain silent for so long. I was about to ask him if he was feeling phantom pains when he suddenly spoke:

"You know, Brains, no one forced me to come along that night." He spoke in a low tone of voice, I had to strain my ears to hear it. "Nor was there any possible way for you to know that the guy was practically an escape artist."

"Doesn't change the facts, James. Or the outcome," I replied as I got the probe ready once more. "My arrogance is what lead to —"

"Brains, will you please stop *BEATING* YOURSELF UP AND GET THE HELL OVER IT!!" Jimmy practically screamed at the top of his lungs. He knocked the probe out of the way and swung himself up to face me. "I am so sick to death of this never-ending guilt trip you keep laying on yourself that I swear I feel like using your head for a punching bag until I can knock some sense into that concrete-headed skull of yours — what?" he shouted, seeing the amazed look on my face.

"Jimmy," I said in a high, squeaky voice. My throat was so tight I could barely breath. "Your — legs. *You moved your legs!*"

"I — what?" And he looked down at his legs. Both were now dangling off the table. It would have been impossible for him to do so without considerable squirming on his part. And his legs moved. I saw them.

"No! They couldn't have! It's impossible!" He reached down and felt them with his hands. Then he shook his head. "No, Brains. They're still dead. I can't feel anything."

"Try moving them anyway," I said.

Jimmy concentrated, focused as hard as he could. Then he let his breath out with a *whoosh*. "No. Sorry, Brains, I couldn't even get a toe to twitch."

"But you moved them all the same. Jimmy, I'm telling you, I saw them move!"

"Maybe when I swung up..." he began. I just shook my head. Even Jimmy didn't look very convinced.

"It would have taken more effort on your part. And you did it in one fluid movement."

Jimmy continued to stare at his legs. "Then — then how did they move...?" He turned to stare at the probe, which was now almost ninety degrees to the table. "Do you think...?"

I nodded. "Of course. What else could have stimulated them? It's strange, though. The probe was in stand-by mode, not really active. Even so, somehow, when you lost your temper, it caused a very short-lived synergetic effect that forced the probe to allow momentary feedback with your lower spinal column. Tell me, in that very brief moment, do you recall feeling anything from your legs?"

"I — I don't know, Brains," Jimmy said hesitantly. "It happened so fast, and I really wasn't paying any attention to them." He sighed, then gave me a wry grin. "Maybe you need to make me blow my top more often!"

I grinned in return, then sobered. "I'm afraid that

wouldn't be a very practical way for you to get around, though. Still, this proves we've made more progress than I realized."

Jimmy shook his head. "But you told me that you've only been able to stimulate a very small percentage of nerve clusters. I still don't see how something like this is possible."

I gave him a quick nod. "Rest assured I fully plan to investigate this!" Then I grimaced as my stomach clenched at the mention of the word "investigate."

"And speaking of investigations, Brains," Jimmy spoke up again. "I'll say this again: you need look into these weird robberies. I seriously doubt there's anyone on the police force who can hold a candle to you when it comes to figuring stuff like this out!"

I sighed. "Spare me the flattery, James. Let the detectives on the police force handle it. That's what they're trained for."

To my surprise, Jimmy laughed. "Wow!" he said as I gave him a puzzled look. "Aren't things backwards now! That's almost what I used to say back when we were kids and things started to look dangerous!"

I found myself smiling in return. "Yes, I remember: 'Can't we let the police handle this, Operative X?' Or 'Don't you think we ought to turn this case over to the police, Brains?" We both laughed out loud, suddenly lost in memories. Then I looked at Jimmy's legs and sobered up fast. "And I should have listened to you, James."

Jimmy sighed and muttered, "Here we go again." He looked back up at me. "Look. OK, fine: the final case ended bad for both of us. You didn't exactly walk away unscathed, you know. The pins in your jaw are still setting off metal detectors everywhere, you know. But I'm tired of letting this scar us for life. I've forgiven you a hundred times over, Brains. When are you going to start forgiving yourself?"

I was silent for a while. "Jimmy, do you know that if I even think about the word 'investigate' I literally get nauseous? I mean, I feel like I want to vomit at the thought of trying to deduce facts that are crimerelated." I shook my head. "I can't, Jimmy. I know how much" — I paused, swallowed, then continued —'how much I used to enjoy it. I can remember it very well. But I just can't make myself do crimerelated deductive work again."

Jimmy shook his head. "You can't shut it off forever, Brains. Crime solving is in your blood. It always has been. It's in mine as well, which is why I handle the crime desk at the paper. But that's not where I want to be. I want to be out there at the scene of the crime itself. So do you. But you keep beating yourself up over this" — he slapped his legs—"every time you start to feel the itch again. You've given yourself the equivalent of writer's block. But it hardly matters, Brains. You may not want anything to do with mysteries anymore, but it's rather obvious they haven't given up on you!"

I stared at him for a moment, then barked a laugh. Moments later, we were both laughing our heads off again. A release of tension, doubtless. It felt good all the same

Jimmy soon got dressed (I'm always careful not to help him) while I made sure today's results were saved not just to the server, but to several back-up hard drives and flash drives (the latter I always carry with me and download them to both my regular laptop and one I keep hidden). He swung himself into his wheelchair and rolled towards the door. We talked about upcoming tests I planned to run to see it we could duplicate the momentary feedback again. We didn't discuss the other mystery any further. Jimmy soon loaded himself into his van and made his way to the front. He lowered his window and waved to me. "See you next time, Brains," he said. "I'll keep my ear to the ground, so to speak, about these weird memory lapses." He flashed me a wicked grin. "And I will let you know what I find out!"

Before I could retort, he rolled his window back up and fired up the van. Moments later he'd taken off

I just let out a quiet sigh and made my way to my tommycar. It quietly powered up and I drove off, lost in thought. Jimmy was wrong, I told myself. Mysteries weren't looking for me, nor I for them. Yes, that's what I told myself. And for the time being, it was true

### **CHAPTER 8: REALTIME INTERRUPT**

Monday morning I was engaged in a full-scale test of the new bionic arm. The preliminary results were very encouraging, with the arm responding to nerve impulses with fluid, natural movements. You have to understand: most modern prosthetic arms used sensors stuck onto the skin of the arm stump and responded to the movement of the muscles beneath the skin to interpret how the prosthetic should move in turn. My bionic arm was different: it used the severed end of the nerves themselves to guide the arm.

It was considerably more complicated, as I've already shown you, but the result was an arm that moved as a biological arm did, without all of the jerkiness and slowness of other prosthetics. Once this was finished, as it now appeared to be, I planned on creating a bionic leg as well. Contrary to what you might think, a bionic leg was considerably more complex than a bionic arm. Several other firms were currently working on one as well, with limited success. Now that I had the breakthrough with the arm, however, I was fairly confident that a bionic leg was equally possible.

The skin that would cover either limb would not be plastic. Plastic is usually the first choice for prosthetics. But plastic, I'm afraid, no matter what is done to it to make it more skin-like, will always look, smell, and *feel* like plastic. Once again, I was using a

different approach: a synthetic skin developed by a derma specialist back in the early 90's. The man was killed before he had a chance to perfect his prototype — it lasted just over ninety minutes, though oddly, in the dark it lasted almost indefinitely. But I soon found a workaround for that. Further, I was able to imbed nanosensors into it, giving it nearly full sensitivity. Best of all, the synthetic skin was, unlike real skin, very easily (and very quickly) repairable. A terrible gash or a bad burn that would take ordinary skin months to heal would only take minutes and leave no scar. Some of this was already undergoing clinical tests at medical centers around the country.

In the midst of the tests, I received a call from Brigette. "Yes, honey?"

"Sorry to interrupt you," she said, "but I thought you'd better know. I've been analyzing the data on each bank robbery. I know they've only struck four times, but I think I've got enough to go on to guess where they might strike next."

I looked at her image on the phone. "And you're telling *me* this why...?"

"Because I want you to join me at the bank I think they're going to hit!"

I stared at her, aghast. "Brigette, are you nuts? If you have information like this, turn it over to the police!"

"Yeah, and you saw just how effective they were, right?" she shot back.

I winced, shook my head and said, "Even so, they

might —"

"No they won't!" she countered fast. "At best I'll be told to mind my own business. At worst, they'll say I'm trying to obstruct justice or something."

"And if we *do* investigate and it turns out you're right," I said, "then they'll climb all over you for not having informed them about this!"

Brigette shrugged. "As may be," she said. "At least I'll have my story! And you may see enough to figure out what's going on."

I let out a quiet sigh and ran my hand over my face. Was *everyone* trying to drag me back into the detective business? Sure seemed like it of late. "Look, I'm really busy with the bionic arm —"

"That's fine," she said. "We'll go there tonight. If I'm right, the robbery will probably take place around two in the morning."

"Where's 'there'?"

"You'll see," she promised. "I'm really glad you decided to accompany me. I'll pick you up around 6:00 and we'll go get something to eat. Then I'll show you the place."

"Wait! What? I didn't agree to do—" I sputtered. Didn't matter. I heard a, "Bye, darling!" and her image vanished. With another sigh, I deactivated the phone and put it up.

I returned to work on the arm, though most of what I did was to type up and file reports for the rest of the day. The ending of a project involved almost at much paperwork as its beginning.

Around six, we headed over to our favorite Italian restaurant in Westlake Village. While we ate, Brigette told me how she went over all the clues from the other robberies and made her educated guess as to the next location. In spite of myself, I found I was doing the same thing. Her conclusion did seem likely. I nodded with approval. "You've made some good deductions," I told her.

She gave me a pleased smile. "So you'll come along with me to the place?" she said.

I gave her a reluctant nod. "I really shouldn't," I said. "Nor should you," I went on. "Don't underestimate the danger you could be in."

Brigette laughed and held up her hand. "Please, Brains! I have no intentions of being anywhere close to the scene of the crime. Or rather, *potential* crime. I'll — we'll — definitely keep our distance."

We soon took off and headed over to the place she'd deduced as the next possible target: the Golden Arrow Bank on Thousand Oaks Boulevard. This was an older section of Thousand Oaks and still had some alleyways. The bank was on a corner, the parking lot on the east side. We pulled into the parking lot, then got out. Brigette led me into the alley. "Just look at the back of this building," she said. "It practically screams to be hit. I mean, another fast 'hit and grab' like they've done before, and they could haul ass down one of these alleys and be gone before the police even get close!"

I nodded my agreement. While I still had no clue as to the method involved, their MO otherwise showed they didn't stick around for long. No surprise there, but they definitely needed quick in and out access, and these alleys certainly lent themselves to it.

"We'd better not stay here too long," I told her. "They may have someone keeping a watch on it to make sure someone like us isn't doing exactly what we're doing."

Brigette nodded. "Let's get back to the car. Keep in mind, it may be a long wait."

There was no point in simply waiting around until nightfall — it might look suspicious to roving police cars as well — so we ended up going to the Sherman Oaks mall after all. And, after the stores closed, we visited a Wal-Mart, killing time looking at various items. There wasn't much that appealed to us, and before long we were bored. Finally we left a little after midnight and drove back to our parking spot near the bank. We were parked far enough away from any streetlights to be relatively hidden from sight, as long as we didn't show any lights.

The hours passed. More than a few times we dozed off, only to jolt one another out of sleep when we shifted. Fortunately the car was uncomfortable enough to prevent us from any sort of deep sleep.

It was about five-thirty in the morning when we finally heard them. Just a few low voices at first. Then the sounds of footsteps going up and down the alley. I nudged Brigette, who was dozing on the other

side of the car. She came awake with a slight gasp. I shushed her to silence and she nodded. At once she gripped her camera. But it was too dark to see what was going on.

"Brains!" she whispered. "We need to get out there and get closer. We're too far away!"

I nodded, wanting to see what was going to happen. "But not too close," I said. I looked around and saw some dumpsters close by. "Over there," I motioned.

She nodded as well. "Yes, those should do fine."

Rather than risk opening a door, we lowered the windows on either side and rather awkwardly climbed out, careful not to make any noise. But the people in the bank alley were concentrating on whatever it was they were doing. As we crept over to the dumpster, their preparations seemed to be complete.

I saw one of the men pull out a cell phone and switch it on. But he didn't make any phone calls. Instead, he pulled up an app and jabbed at some onscreen buttons. What happened after that ... it's hard to describe. It's even harder to recall, but I now understand the reasons for that.

Here is what happened: first, the cell phone emitted a holographic wireframe box consisting of blue lines. The man holding the cell phone made some rapid changes to the box until it matched the bank building's height and width. But the depth wasn't more than a few feet. This curious rectangle

was formed a few feet away from the back of the bank, but the man quickly moved it so that the back of the bank now filled the holographic box.

Then he — made it disappear.

Except that Brigette and I both knew, at that moment, that the bank in front of us never had any back to it. And if that wasn't strange enough, in place of the never-was-there back of the bank a bizarre, folded-in melding together of the roof, side, and floors. But that's how it always had been. I saw the man look at a slip of paper in his hands. Then he touched a button on his cell phone, and suddenly the back of the bank was back again, along with our memories of it. It looked no worse for having vanished.

I was still very puzzled as to the purpose of this when I saw several men hurry to the bank's back wall carrying short ladders and several other items. Some other men shone flashlights on the wall, illuminating two spots at opposite ends. Two men climbed the ladders and pressed something against the bricks. There followed a muffled *THUD* sound. Moments later two more men carrying heavy chains ran up the ladders and wound the chains around what I now realized were large hooks.

I shifted my gaze even as Brigette nudged me to look in a new direction. I nodded to her to let her know I saw the pickup to which the opposite end of the chain had been attached. Even as I watched, the other chain was being hooked up to the rear of another pickup. Once this was completed, both

pickups fired up and move slowly forward, until the chains were pulled taught. I watched as the man with the mysterious cell phone spoke into it, obviously giving them instructions. The pickups began increasing their speed. It took only moments before the rear of the bank toppled over with a loud crash.

At once, the men raced forward with sacks in their hands and began scooping up the money that was piled on various metal racks. The men in the pickups backed them up a bit, then got out and removed the chains. The other men raced back and forth, tossing the sacks of money into the backs of the pickups, while the drivers retrieved the heavy chains. I timed them: it took about twenty minutes to clean out the bank. The drivers used their chains to hold down the sacks. Then they got ready to leave.

As they did, however, Brigette let out an "Ow!" and swatted at something on her leg. That was followed by a quick gasp as she realized what she'd done

The men paused and turned in our direction. I grabbed Brigette and pulled her back behind the dumpster. Keeping silent, I pointed back to the car. She nodded and we started to run. We didn't get far.

Blue, laser-like beams appeared around as we ran. Knowing what they might mean, I gave Brigette a hard shove, trying to get her outside of the enclosed area. But she'd barely started to move away when the world seemed to tilt in an impossible direction and everything froze. Everything, that is to say, within the enclosed beams

Even though it hasn't been very long since these events, it's very hard to describe what it was like. We were frozen in place, like statues. There was no sensation of time. Every thought in my head seemed to go in an endless loop. The enclosed area was devoid of color, yet it wasn't in black or white. If there was anything outside of the enclosure, I didn't see it.

Brigette later agreed with me. She couldn't see anything either. And she concurred that everything inside the area lacked color, shades of gray, or anything in the color spectrum. Yet we could see just fine. As I said, there simply wasn't any way to describe it.

After a long period of no-time, the area abruptly rotated back into the real world and we passed out.

### **CHAPTER 9: OPERATIVE X REBORN**

I woke up with a groan, completely disoriented. I had one thought in my mind that seemed to repeat itself over and over: *push Brigette out of the way!* It was hard to focus on anything else. But I heard her moaning as well. As I pushed myself up, I could see her doing the same thing. And then she screamed.

It was a scream of pure terror, but also of pain. I saw the reason immediately: her right arm was missing. Or rather, it was no longer attached to her body: it lay on the ground, close by, leaking blood. As was the upper half of her arm. Then I observed something else: someone had wrapped some bubble wrap around her arm in a crude attempt to keep the severed part attached. I would later find out that this is what kept her from bleeding to death. It wasn't until she tried to use both arms to push herself up that the severed part fell off.

I moved fast: grabbing the bubble wrap and, ignoring her screams of pain, forcing it against her stump. "Hold this in place!" I commanded her. Pain or not, she held it there as tight as she could. The plastic wrap turned red almost at once. Removing my belt, I wrapped it around the bubble wrap and yanked it tight. Brigette let out a hiss of pain. Tears were running down her cheeks. I picked up her arm and looked around for more bubble wrap. I spotted some in the dumpster we were hiding behind. I reached for it at once and yanked it free. As I did so, to my

surprise, the front of the dumpster came with it, spilling garbage all over. For a moment I stared at it, amazed. Unable to stop myself, I ran a finger along the cut edge of the dumpster. It was so smooth it was almost slick. But that was as much attention as I could give it. I wrapped Brigette's missing arm in the bubble wrap, then reached for my Swift Talk to call an ambulance.

My phone wasn't there.

I searched Brigette's purse, but hers wasn't there either. Nor was her camera.

Brigette was still on her knees, crying, completely disoriented. I went over to her and gently raised her to her feet. "C'mon, Brigette," I said. "I've got to get you to the hospital. There's a chance they may be able to reattach your arm if we can get there fast enough."

She looked at me, eyes wide with pain and fear. "Brains, what — how? What happened to us? What happened to my arm??"

I looked back at her. "I don't know, honey. But once we get you taken care of, I promise you there's nothing on this planet that's going to stop me from finding out!"

Jimmy once stated that crossing me was like tangling with a buzz saw. Whoever was behind all of this was soon going to find out how true that statement was.

\* \* \* \* \* \*

Thankfully, whoever stole our equipment left us our wallets and keys. I secured Brigette's seatbelt, the fired up the car and tore out of there fast. I ignored all red lights and raced to the nearest hospital. Fortunately, the traffic was very light and there were no police cars around. Not that I would have stopped if there had.

I took her into the ER at once. Believe me, it didn't take much to get their attention: "Miss," I said to the nurse at the station, "I need help. Her arm has been severed." And I placed the arm on the counter. The nurse let out a gasp, then got on the phone at once. There followed a blizzard of questions as to who we were, what happened to her and how long the arm had been disconnected from the body.

I gave them a rather condensed version of the truth, leaving out the strange circumstance involving the amputation. When pressed, I simply said we were unconscious at the time and didn't notice the missing arm until we regained awareness. Well, it was mostly true. It wasn't long before the police showed up as well and soon I was fending off their questions. They weren't entirely satisfied with my answers — I said nothing at all about the bank robbery or that we were anywhere near it. That would have hampered my own forthcoming investigation — but I made them plausible enough that they soon left me alone.

Brigette, in the meantime, had been rushed off to surgery. When the police finally left, I sat in one of nearby row of chairs. At nearly seven in the morning, I wasn't bothered by anyone. So, for the first time in many years, I began to amass and collate all the facts about this strange case. And, for the first time, I felt neither nausea nor cold tremors run up and down my spine as I would have only a few days ago. No, this time I felt only a barely controlled anger. Someone was going to pay dearly for what happened to Brigette...

I pushed the anger aside and concentrated on the facts. The two that stood out immediately were what we saw happen to the back of the bank, and what happened to Brigette and me shortly after: somehow, three-dimensional space had been manipulated, had been made to vanish. And secondly, to reappear once again. Another fact: when the selected space — obviously, that's what those blue rectangles had been about — was removed from reality, for some unknown reason the memory of that area went right along with it.

And another: once that area was restored, memory of it returned as well. The fourth fact: once restored, said restoration of the rotated area wasn't perfect — the subatomic bonds didn't reattach themselves but continued to remain severed. That was how the bank robbers were able to rob the banks so easily. Fact Five: inside the removed area, time — at least, subjectively — doesn't seem to exist. So a rotated area would, presumably, be frozen in time forever. Fact Six: given that the man used only his cell phone (which was obviously customized) to do this, the method involved requires very little power.

A very scary fact, that one. I could only imagine the havoc caused if everyone had a cell phone or a similar device that could do this... Fact Seven was even scarier: there was no way of knowing just how large an area could be removed from reality. A whole city? Mountains? Oceans? Half the planet? The Moon? Entire sections of the galaxy? The universe itself? Of course, an upper limit may well depend on the amount of power needed. For very large sections of space-time, you'd probably need at least a good-sized nuclear reactor (a Mighty Midget might do the trick). And finally, there was Fact Eight: all of these robberies and odd disappearances were happening in the Thousand Oaks area

Barring an unlikely bizarre discovery in a garage someplace, there was only one location that I was aware of where such a discovery could be made and the device assembled: SwiftTech!

At once, I began reviewing all of the departments I was aware of. The problem was, there weren't that many. There was Beth's visual displays department that handled SmartGlas and the telejector touch-sensitive holograms. There was the manufacturing department, and the department that experimented with new materials. They had already come up with stronger versions of Tomasite and Durastress, though they were too expensive to be released to the marketplace just yet. And that was about it.

Gossip notwithstanding, there was very little by way of communications between the departments. Even when we ate in the cafeteria, most employees

stayed with their own department people. Beth was one of the few exceptions. When I thought about it, I realized that I had no real idea just how many departments were there. As large as SwiftTech was, though, it may have between thirty and fifty altogether. I began mulling over ideas about how to find out not only how many departments there were, but what each of them did.

In the end, it turned out to be pretty easy. But I'll get to that in a bit. For now, though, I began making plans for handling the situation when I found out who was behind all of this. After all, they had a rather formidable weapon they could use on anyone who might try to interfere with their plans. And just what were their plans? I doubt very much that they would continue to rob banks. They had probably accumulated enough money by now to move on to the next phase of their agenda. But there was no point in speculating, I would find out soon enough.

About then, a doctor came to see me. He told me that they had tried to reattach the arm, but it had been separated for too long a time. "I'm afraid she will have to use a prosthetic for the rest of her life," he said.

I just nodded. It needs hardly be said that I already had one in mind...

## **CHAPTER 10: A CALL TO ARMS**

I'd already talked it over with Brigette later on the next day, when she was in a recovery room. She still had bags of blood being fed into her and was very weak. But she was quite lucid.

"No doubt they told you about the prosthesis they want to stick you with," I said.

She nodded. "Brains," she said, her voice barely above a whisper. "The arm? The arm you're working on. Couldn't we try...?"

I nodded back. "Yes, and that's what I wanted to talk to you about. With your consent, I would like to try it out on you. I've already completed most of the tests on it and it appears to function perfectly. Of course, I'll have to make some revisions to it in order for it to match your other arm. Further, once you get your strength back, I'll have to measure the strength of your other arm in order to get the bionic arm to match it."

"What?" she joked, "I don't get to have superstrength in my new arm?"

This was a question I'd long anticipated. I smiled back at her and asked, "Tell me, Brigette, how often do you wring your hands?"

She looked puzzled, but answered, "Oh, every now and then, I suppose. But what's that got to do with —?" And then she gasped, suddenly

understanding.

I nodded. "Yes, you can imagine what the result would be from a simple, ordinary, almost unconscious gesture like that."

Brigette looked pale. "I'd — I'd probably crush every bone in my normal hand! And if I were to swat, say, a gnat or a mosquito on my normal arm..."

"You'd probably end up with a complex fracture at minimum. So, no super-strength for you, honey. Or anyone else these new limbs will be attached to. They must exactly mimic the same amount of muscular strength as your regular organic arm. Durability, however, is another matter. Your new arm will be able to take a lot more punishment than your old one — not that I'm encouraging you to put your fist through a brick wall or anything!" She gave me a feeble grin. "That wouldn't be advisable in any case: the synthetic skin it will be using is covered with millions of nanosensors which will relay knowledge of damage to your brain. It will probably be acknowledged as pain, though truth be told, I'm not really certain. We'll know more during the tests. But the most unique aspect of all of this is that it won't require a team of doctors to attach the arm."

"It won't?" Brigette asked, amazed.

I nodded. "No. The part that attaches to the stump of your arm is composed of special nanobots that will perform the link. And they'll do a far better, more precise job than any team of doctors could hope to do. These nanobots were developed on behalf of Tom Swift Senior to aid in helping the human body repair

itself. Tom Swift Senior was the one who actually designed and built the first crude models. Then he turned them over to me for refinement. I realized at once what an aid they could be to help integrate bionic parts into the human body without the need of invasive surgery."

Brigette pondered that a moment, then asked me, "Why haven't you used them to help Jimmy?"

I shook my head. "Because we don't know enough yet about how to fix damaged nerve endings. Remember, a nanobot is only as good as its programmer. They're not going to suddenly, magically know how to repair damage like that if I don't know either."

"But couldn't you use them to — to bridge the damage, or something like that?" she persisted.

I smiled at her. "Rest assured that's one of the very ideas I'm looking into! Theoretically, there's no reason it shouldn't work. But the lab animals with spinal damage I've worked with, for some unknown reason, haven't regained their mobility. Something's happening to the nerve impulse signal from where it leaves the undamaged nerve ending to where the line of nanobots connect with one of the undamaged nerve clusters further down. Until I can figure out what's wrong, it remains a promising, but as-yet unrewarding idea."

She fell silent for a few minutes, then spoke up again. "Say, Brains, didn't you say something about an 'upper part' of my new arm? What did you mean by that? Isn't the arm completely whole?"

"For the most part," I assured her. "But I made the arm to be detachable. Don't worry, it utilizes specially-designed hooks and magnetic clamps, so once it's locked into place it will be very hard to dislodge. But I needed it to be removable for purposes of maintenance and upgrades. Further, this will allow the normal bionic arm to be replaced with specialty arms when needed."

Brigette gave me a lopsided grin. "I'm starting to feel like a vacuum cleaner with interchangeable tools!"

I grinned back. "In fact, honey, that's partly the idea!" We both laughed at that. "Yes, why not give your body something it never had before? Built-in tools could come in very handy, don't you think?"

She nodded, still mulling it over. Then she frowned. "Brains, will I have to detach it to recharge it? Will there be a spare arm while it's on the recharger, or however that's going to work?"

I shook my head. "No worries there, Brigette! Your arm — as well as all future bionic parts — will be utilizing a SwiftSure solar battery about the size of a hearing aide battery. It'll last a good three to five years before it needs to be replaced. Even better, there's talk of a new miniature atomic capsule that would be about the same size but would outlast a solar battery by a wide margin. It's considerably safer as well. In fact, the capsule should outlast the arm itself! You'll never have to worry about the arm running out of power."

"I see," she answered. "So, how long before this

whole thing gets underway?"

"Sweetheart, you need to get your strength back first. That's going to take a few weeks. Then we can see about attaching the new arm. We'll want to do that back at the lab, for obvious reasons. That means getting you security clearances first, which might take some doing."

Brigette drummed the fingers of her remaining arm on the bedspread. Then she said, in a surprisingly strong voice: "Days, Brains, not *weeks*. You make this happen soon! I have no intentions of lying here bedridden when a huge story is about to break! I know I'm weak now — I'd probably fall to the floor if I tried to get out of bed — but I'm going to start working on getting my strength back. And I plan on getting it back soon. I want out of here in a week or less. And when I do, you and I are heading straight for your lab! Before the end of that day, I want your new arm in place of my old one!"

I couldn't help but grin at her determination. Hardly an hour ago she was lying there, weak as a day-old kitten. Now she sounded like a tiger getting ready to spring. I patted her shoulder, then squeezed it. "All right. That's fine with me also. Just be careful not to push yourself too hard or too fast — you'll end up back in here again otherwise. In the meantime, I'll start getting things moving at my end."

She gave me one of those heart-melting smiles of hers, the kind that made me fall for her in the first place. "I know you will, honey. And I'm glad to see that you're finally going to start investigating once again."

I stared at her, astonished. "How did you know...?" I started to ask, then stopped. The answer was pretty obvious, actually.

"That you were going to investigate all of this?" she finished for me. "After everything that just happened to both of us, I'd be shocked out of my gourd if you didn't want to!"

I nodded and let out a sigh. "You're right of course. Damn right I'm going to find out who and what's behind this. I've already been mentally listing various facts and clues while you were in surgery."

"So what have you got so far?" she asked, and I told her everything I'd come up with. When I finished, she just looked at me and nodded. "I agree with your conclusions, Brains. It sounds to me as if someone at SwiftTech invented something unique, then lost it to a gang of thieves. It probably won't stay with them for long, though. Can you imagine what a weapon for assassins this thing would be? Just make your target disappear from the space-time continuum, and nobody would remember who they were! No muss or fuss, no crime scene!"

"And that's just for starters," I told her. "You could take out entire armies with this gadget, or, conversely, conquer a nation's capital by rotating it out of the real world, then rotating it back in moments later. Everybody in the city would be out of it for a hour or more, allowing an army to invade without a single shot having to be fired."

Brigette sighed and nodded. "Oh, I suppose some good could be done with it. You could use it on really nasty, evil criminals if you don't want to resort to the death penalty. They wouldn't be dead, but completely unable to harm anyone again. And you could use something like this to stop things like tornadoes or hurricanes — well, theoretically, anyway."

"Rotate them out of reality, huh?" I answered her with a grin. "But we don't know what the long-term effects of subtracting that much space would have on the Earth or the environment. While those are interesting notions, honey, I see far more harm than benefit from something like this. Continually subtracting space like this can't be good for our space-time continuum."

"Brains, why isn't there a hole or something when this happens?" she asked. "Why does space scrunch together like someone pulling in the hole in a ripped shirt? Nature abhorring a vacuum or something?"

I nodded. "Probably. Though it may be closer to what happens when you use a spoon to remove some water or some other liquid from, say, a soup bowl. What does the soup automatically do?"

She caught on. "Oh, I see. Yes, it fills in the hole, though the amount of soup is noticeably lower." She thought for a moment. "Brains, one thing that puzzles me: why was the Sherman Oaks mall, um, rotated like that?"

I nodded. "That puzzles me too. From what I heard, absolutely nothing was stolen. My first thought that it was an experiment on the part of the

bank robbers, perhaps to test the range of the device. But the robberies started well before that incident. At the moment, I have no explanation."

We let it go at that. Brigette was feeling very sleepy once again, so I let her get some rest — or about as much rest as you can get in a hospital.

I drove on back to SwiftTech, a plan already in place to find out more about the other departments. On the way, I contacted Michael Phydeaux and told him I needed to speak with him. "Is this about the bionic arm?" he asked me.

"No," I replied. "This concerns the bank robberies you wanted me to investigate." As I expected, Phydeaux's face, on the dashboard display, took on an astonished look.

"I thought you said you weren't going to investigate that!"

"I changed my mind. I'll explain when I see you." He nodded and told me to come on up.

Once inside Michael's office, I wasted no time telling him everything that had happened. And the fact that Brigette was going to be the very first person to wear the new bionic arm. "And she's OK with that?" he asked. I nodded. "She'll still have to fill out a bunch of nondisclosure and release forms," he told me.

"We'll take care of that later," I replied. "For now, though, bring up the information you have on all of the departments."

At once, Michael tapped some commands on the desk's keyboard. Moments later the lists were floating above his desk. I grabbed one and flipped it around. For the first time I realized just how big SwiftTech was: there were almost as many departments as there were sciences. I flipped around several other lists before I found a department that looked interesting. I tapped on the department heading — Topological Research — and it expanded to fill the holographic screen. According to the synopsis, the department of topological research examined the uses for Tom Swift's Gravitex generator, looking to create artificial black holes, singularities, dark matter, and other exotic forms of multidimensional physics. The department head was Dr. Deborah Wingate. There was a picture of her head, a rather pretty brunette with an unsmiling, no-nonsense face. She had several PhDs in theoretical physics as well as a Masters in Electronics Engineering. She impressed me at once as the sort of person who could invent the device I was looking for.

I said as much to Michael. "I'll get her up here so we can ask her about it."

He reached up and flipped the hologram around, then touched the picture of Dr. Wingate. A bar of icons appeared next to her image, one of them a phone icon. He was about to touch it when I said, "Wait!"

Michael paused and looked at me. "What?"

"If we bring her up here for questioning, we'll end up tipping our hand. Instead, we'd better be discreet." Michael looked at me. "What are you suggesting, Barclay? We bug her lab?"

I nodded. "That's exactly what I'm suggesting." All the labs at SwiftTech have cameras, of course, but they are only activated after we leave for the day. Tom Swift Senior didn't want us to feel like we were working for Big Brother. "I'm aware of how unethical it sounds, but it's about the only way to see if she is involved or not."

Michael grimaced, but nodded. "We'll have to do it after she leaves."

"Which brings up another point," I told him. "Have you kept up with her weekly reports?" All SwiftTech departments are required to send in progress reports each week, complete with photographs where applicable. "What has she been working on?"

"Hold on a minute," he replied and touched another icon. At once, a long line of holographic papers appeared beneath her image. Rather than waste time turning them around, I walked around to Michael's side of the desk. Michael was already flipping through them.

"Stop," I told him. I motioned the images back to the beginning and began skimming through them. Michael waited patiently as I did so. Most of the work seemed concerned with trying to determine just what method the Swift's Space Friends used to get around the speed of light limit. It was obvious they had a means to get around the galaxy without traveling near lightspeed. Dr. Wingate thought the answer lay in the old science fiction chestnut of "hyperspace." While many mathematicians and scientists postulated higher dimensions, they were much different than simply another dimension at right angles to the first three.

Most of these upper-level dimensions were picometers in diameter and curled in knots or spirals, leftover cosmic debris from the Big Bang. Not something you could readily fly a starship into. But Dr. Wingate clearly felt otherwise. As I skimmed through the reports, I could sense a growing frustration with various methods and attempts to find a useable higher dimension. Then, about a month ago, a report showed a fantastically complicated equation with the word "fulcrum" in it. Eagerly, I moved on to next week's report — and stared at it in astonishment

"What?" Michael asked me. "What is it, Brains?" If I hadn't been so engrossed with what I was reading, I might have smiled at his sudden use of my nickname. I just held up my hand and motioned for the next report to appear. I looked at it, then moved on, until they came to an end. Then I went back to the one with the word "fulcrum" in it, then looked at the following week's report once again. I turned to Michael with a grim smile. "Take a look at this report here."

"The one with the rather intimidating-looking equation?" he asked.

"That's the one." Michael looked at it a few moments. "Now, look at the one from the following week." I slid the holographic report over to him.

"Looks different somehow," he murmured.

"And the next one," I said, repeating the process.

"Same here," he said with a frown. He peered at it closer. "There's something odd about the math. What is it?"

"Odd?" I repeated. "I'll say it's odd. The math you see in this one," I pulled the "fulcrum" page back, "is legitimate. The rest," I slid them back into view, "are completely bogus. One hundred percent fake. These so-called equations look like the kind you'd find in a Hollywood movie or a sitcom where you have some impressive-looking equations on a chalkboard or a whiteboard in the background just to establish the fact you're in either a lab or a classroom. But that's all it is. Dr. Wingate obviously made some sort of discovery, then covered it up with a lot of phony math designed to look legit."

Michael slid the "fulcrum" page back into view, then enlarged it. We both stared at the dense equations for a few moments. Michael soon turned to me and shrugged. "Any ideas what this is supposed to indicate?"

I shook my head. "Unfortunately, no. I never studied topology to any great length. We'd need an expert, obviously someone other than Dr. Wingate, to tell us what it's supposed to mean. However, it's obvious from the use of the word 'fulcrum' that she came up with some technique that is related to what's been happening of late."

Michael nodded his agreement. "All right," he said. "If I had any reservations about spying on her before, they're gone now. Come up to my office after work and we'll start laying out where to plant our spycams."

## CHAPTER 11: TOM LENDS A... HAND?

Not much goes on at any of the Swift facilities that either or both Tom Sr. and Tom Jr. don't get involved in at some level. Anything on the more administrative side and it is the older inventor; anything having to do with inventions and the younger inventor seems ready to lend his brain and experience to. At this point I was ready to call for the cavalry and the Marines, and that meant Tom Jr.

"What can I do for you, Brains?" he asked as I stood in front of the 3D image, facing him from only 2,487.8 air miles away but seemingly as if we were five feet apart. "Anything to do with the strange happenings I've been hearing about?"

"Well, perhaps and not exactly, Tom," I told the man who was about my same age but was decades ahead of me in experience. I told him about the issues I was having with fine-tuning the artificial arm. I also had to admit my personal desire to get it working for Brigette's sake.

He laughed and his blue eyes twinkled, something perfectly duplicated by the three-dimensional high resolution projection. "It sounds to me like you have more than ample reason to succeed. Well, we all want that. For you, for your girlfriend, and for all of our companies. I don't need to tell you what a boon something like this can be."

"No, you don't. It's one of the reasons I jumped at the assignment when it was first offered to me."

His smile turned into a more serious look. "I'll assume that you are alone?" I nodded. "Good." He let a sort of puff of air out through his nose. "I'm not certain how to word this, but along with all the great things I hear about your work, I have been getting some, well, flack from a certain Federal watchdog who sits in your building. I think you know who that is." I did: it was Ophelia O'Reilly, damn her.

"Let me guess," I said, holding up my hands in mock surrender. "I'm either wasting taxpayer's money or not spending enough of my budget and she is having a hissy fit over the books not ending up at exactly zero. Correct?"

Tom laughed long and hard. "Yes. And, if you can believe it, she has a counterpart, practically a clone, out here in Shopton who is riding my sister Sandy over what she spent down in South America! It was completely company funded but she has been trying to make a literal federal case of it. Well, I just wanted to let you know that I'm calling off the hounds as of today. This project of yours, and any help I can give, are strictly Swift owned as of this minute." It was stunning and welcome news to me.

We spoke for another half hour before Tom had to attend a meeting of Enterprises' executives, but he promised to come out to California the following morning.

When he arrived at my front door at 7:03 in the morning, I was flabbergasted, to say the absolute

least. I invited him in and shook his hand warmly. It was our very first real meeting and I took an immediate liking to him; most people did.

"I flew in around five this morning into LAX in one of our cargo jets and drove my tommycar down the ramp and to the facility, but I couldn't get in! The early morning receptionist tells me I can't get in until 8:00 a.m. because I am not a facility employee." His arched eyebrows said a lot and we both started to chuckle over this ridiculous situation.

"Well," I said, "I can get us in any time after 7:45 but as with everyone except Michael Phydeaux and perhaps a couple others, it's everyone out and everything locked up by 6:00 p.m. Do you have any idea how much farther along I might be if I could be allowed to work an extra hour or two each day? Or, come in on weekends?"

Tom nodded, but his slight frown said almost as much as his next words. "That is correct, but from a purely psychological standpoint, we end up getting more out of people every year by not allowing them to overwork themselves. Sorry, but it's the way things go for now."

We headed over to SwiftTech five minutes later. As I expected, I was able to get both of us in with ease. Partly because I was a badged facility employee but mostly because the daytime receptionist knew Tom and was appalled that the nighttime counterpart had refused the number two man in the entire company access.

We keyed into my lab and Tom requested an hour on the computer to review everything I had so far. "Successes and failures as well," he insisted on. The area around the computer was soon filled with holographic images that Tom either modified with the keyboard or manipulated with his hands.

At the end of that time he leaned back and stretched a little, then ran his fingers lightly through his blond hair. On seeing my grin at his well-known actions he grinned as well. "You ought to see me when I go into full chin-rubbing mode when I get a good think going!"

By the middle of the afternoon we had thoroughly inspected my working prototype arm, testing every motion and checking the computer code to see if things were at absolute maximum efficiency. He spotted three problems in the first hour, none of which had seemed important to me. I was mortified until he told me a few of the times he had overlooked tiny things and how they had often come back to bite him

"When I was building my Star Spear rocket, the one Bud Barclay and I — hey, it just hit me that your real first name and his last name... well, that's got to be why I took an immediate liking to you, Brains! Anyway, a very minute detail in my fuel kicker nearly led to us crashing, and it was only a last-second swap-out with the spare my father insisted I take along, even though I wanted to save that seventeen pounds of weight, that saved us. In my haste to build the kicker I had never taken into

account impurities in the fuel. And, believe it or not, there has never been a batch of rocket fuel or even oxidizer that didn't contain little specks of impurities of some sort."

We overcame those three issues and plunged on. By quitting time I'd spotted another issue with the programming and Tom had all but come to the conclusion that a lot of the remaining digital circuitry was getting in the way. With absolutely no way to provide direct digital input from things like mechanical joints, motors, or the artificial skin sensors, the crude analog to digital chips I was using were creating a digital log jam.

"You get rid of that," Tom told me, "and the arm's response time should speed up considerably." He paused a moment, rubbing his chin. "As a matter of fact," Tom went on, "I happen to know of a data chip prototype that can do the trick. And, conveniently enough, it's being tested right here at SwiftTech! Michael probably forgot to mention it to you; maybe he didn't see the potential applications right away. Anyway, once you substitute it for the other A/D chips, the nearly one-third-second delay you are seeing in reaction time ought to be cut down to a few hundred microseconds."

Tom accessed the lab where it was being tested and brought up the image of the chip. He exploded it and showed me the core coding as he told me more about the data chip. I was delighted with the chip's ability to rapidly assimilate and send dynamic motion data to the processing chips, data that did not need to be strained through other electronics.

Tom insisted on taking me to dinner, but only after we visited Brigette. He wanted to meet the woman who would be testing this arm.

She had just woken up from a nap when we stepped into the room. I was treated to a nice if still a little weak one-armed hug that I gave back as gently as I could before she seemed to see Tom for the first time.

"Oh, golly!" she exclaimed. "You're Tom Swift!"

Tom spun around to look behind himself and then out the door into the hall. "Where? Where is he? I want to see Tom Swift, too!" But as he said this he turned around to face her and smiled. "Hi. I know from both Brains' description of you and from the name typed in very large letters on the chart hanging off the end of you bed that you are Brigette. It is a pleasure to meet you."

She was stunned. My Brigette, a woman who had once stood up to the Vice President of the United States when he dismissed her serious question at a press conference with a smirk and chuckle, the woman who had eventually received a letter of apology from that same individual, the woman who had calmly accepted that she had lost nearly a complete arm, was at a loss for words.

Tom took her partially-offered hand, gave it a slight squeeze and a small shake. That seemed to

bring her around and she did something else I have never heard from the woman I believe I love.

Brigette giggled like a little girl.

Within minutes she had come back to reality and even offered to let Tom see her stump. Although not a doctor, he recognized the skill the surgeon had displayed when closing off the wound and making it so any prosthetic might be well seated to the remaining part.

"But," he told her, "I have a good feeling that between Brains here and a little something or two I might add, we will have an incredible working arm for you by the time you are ready for it. What did they tell you? Three months? Four?"

"Brains will tell you how determined I can be," Brigette responded. "Already, instead of the three weeks they want to keep me prisoner in this room I've convinced them that I will be ready to go in five more days... six at the most. And Brains told me that he would move heaven and Earth—or at least try his darndest—to have something for me by that time." She batted her eyelashes at Tom.

"Well, then — other than my absolute failure a few years ago as a boyfriend to keep track of personal time and not go out on dates as often as my lady, Phyllis, would have wanted — I must tell you I never try to disappoint a lady. The temporary team of Dr. Barclay Benton and Tom Swift will work as much magic as we possibly can. And you, young lady, will have to be brutally honest with us. Or, him. Anything that isn't right, you can't just shrug it off. Nothing is

insignificant. We may be building this one for you, but thousands... maybe even tens of thousands of amputees will benefit if we get this right!"

She looked up at me and smiled. "Brains has never let me down and I won't let you down either, Mr. Swift!"

"'Tom', please!" he said with a smile. "When you say 'Mr. Swift', I half-expect to find my father standing behind me!"

Brigette laughed that delightful laugh of hers. "Tom, then!"

I almost cried. I have been thinking, over and over, that had I not shoved her as the space-rotation box formed around us, she might not have reached out for balance and might not have lost her arm.

On the other hand, as Jimmy pointed out several times, had she not stumbled and fallen at that particular point in time, she might have moved forward far enough so that the edge of the rotation field could, in fact, have cut her in half...

The following morning as I was keying into my lab with Tom standing right behind me, we were startled by a squeal and the sound of feet pounding down the hallway. We both spun and went into some sort of defensive crouch until we realized it was Beth Byrd coming at full tilt. Tom stood back up she flung herself the final five feet and into his arms, wrapping hers around his neck and kissing the top of his head.

As she lowered herself to the ground, she said, "Hey, skipper! What's up that brings you out to this

hole-in-the-ground?" I was appalled at her calling the facility that. I thought it was just something whispered by the employees.

"Hey, Birdy!" he returned. "I've been hearing great things about this man, and also about your latest project, and could believe the first and not the second, so here I am to check up on you!" His grin told us both how deeply he was kidding and, to my surprise, she took it with a laugh.

He invited her into my office/lab and they spent a half hours just talking over common friends and her project. But, when she looked at the clock on my wall, she stood and excused herself.

"I've got a review with Mi-Phy in five minutes, Tom. Hope you can give me another bit of time before you head home." She went up on tiptoe and lightly kissed his right cheek before racing out the door

I looked at Tom and he looked at me. "I will appreciate it if you can do two things for me, Brains. First, never call our Mr. Phydeaux by that nickname and don't make a big thing about that hug and kiss. Beth and I have known one another for over four years and she would take exception to having that bandied about"

Nodding, I told him, "Got it!"

He changed the subject. "Your Brigette seems to be an exceptional woman. I'd say that you have personally done well with her in your life, and the entire Swift organization is going to benefit from having her around to test this arm."

Again. I felt my eyes mist up a little, though I chided myself for getting too emotional.

Over the next few days as Tom and I continued eliminating the various programming errors, I kept thinking how lucky I was that only her arm had been outside the field that night...

## **CHAPTER 12: OF ARMS AND LEGS**

"So now," I told James as he levered himself up onto the table that evening, "the cameras in Dr. Wingate's office are in place. Hopefully, in the next few days they'll reveal something of interest."

"Did you search the place while you were at it?" he asked

I nodded. "As carefully as we could. Not surprisingly, there was nothing out of place."

"Brains, do you think this Dr. Wingate is behind the, um, 'subtracting'-gadget burglaries? Or did someone steal it from her? Maybe she's trying to get it back herself."

"All possibilities, of course," I acknowledged. "Yes, this could easily be something that got away from her and she is trying desperately to recover it. If so, I'll try to help her as best I can."

Jimmy nodded, then sighed.

"Something wrong?" I asked him.

"No," he answered, "not really. It's just that — well, I remember a time when you would have insisted that we would have helped her as best we could "

"I know." I shook my head, then activated the scanner. "Well, no time for nostalgia. If you ever want to get back to helping me out like that, we need

to finish mapping the nerve clusters."

"Which is still years away," he muttered.

I positioned the scanner over Jimmy's lower back, touched and icon on the screen, and prepared to start sending the subdermal probe impulses to the nerve clusters. What I wasn't prepared for was what the display suddenly showed. I let out an audible gasp at the sight.

"Brains?" Jimmy turned his head towards me. "What is it?"

I was so confounded by what I saw displayed, I wasn't able to answer for several moments. I tried refreshing the screen, thinking that some bizarre glitch was involved. But the screen continued to display the impossible results. "This can't be..." My turn to mutter.

"What is it?" Jimmy asked. "What's wrong?"

I turned and stared at him, then looked back at the screen. I turned back to Jimmy again. "Nothing's ... wrong," I said in a quiet voice.

"What??" he demanded. The display screen was made of SmartGlas and therefore transparent, but I turned it around anyway so Jimmy could see.

He looked at it, obviously puzzled. "What are all those weird-looking lines in my legs..." This time it was his voice that trailed off. He squinted his eyes as if to see better. He tried to talk, then choked, cleared his throat and tried again. "Brains, are those my — my nerves??"

I nodded. I looked at the display as well.

"But how —?" he asked.

"I don't know," I answered. "But somehow, at least eighty percent of your nerve clusters have now been mapped!"

We stared at each other for a few moments. Then Jimmy shook his head. "Brains, that's crazy! You told me it would take years before we'd even begin to approach that amount!"

"I know what I said, Jimmy," I replied. "Something happened the last time you were here. When you lost your temper at me and swung yourself up to face me, that adrenaline surge somehow forced the scanner to make a direct connection to your legs and in doing so mapped most of the remaining nerve paths."

"OK, fine," he said. "But you told me that scanner was on standby, so how could it have done so?"

"I thought it was on standby," I told him. "But now I wonder. I never really mentioned this to you before because I hadn't meant to worry you unduly, but there have been times in the past when the scanner has glitched on me." I held up a hand before he could speak. "And before you say anything, keep in mind that this is mostly a home-built scanner, not something that was manufactured to strict specs. I designed it at my apartment, then cobbled it together with parts I ordered over the Web. It performs well most of the time, but like I just said, there are glitches once in a while. Mostly in the form of power surges.

One came dangerously close to frying the equipment. It's entirely possible that it happened again just as you started to heave yourself up."

Jimmy frowned. "I remember knocking the scanner out of the way, though."

I nodded. "Which may be why the scan was incomplete. Nevertheless, that curious bit of serendipity may well have saved us years of work."

"So, what now? More scanning?" he asked.

"I've got a better idea," I answered. "Care to find out how well your legs work?"

Jimmy stared at me, his eyes alight with hope. "Can we do that?"

I shrugged. "Only one way to find out." I moved the scanner out of the way and rolled in the spinal feedback bridge. It bore a close resemblance to the scanner, save that it was shorter and thinner. I programmed it, using the information from the scanner. "Ready?" I asked him.

"Go ahead," he said.

Without hesitation, I touched the icon on the screen.

Jimmy screamed loud enough to wake the dead.

I almost switched it off when I saw that his legs were moving again, and that Jimmy was running his hands up and down them, squeezing, as if trying to massage them. At once I realized what had happened: in spite of a commitment to daily exercises for them, Jimmy's legs were knotted with Charlie Horses. And

that didn't include the pain of all those nerve endings suddenly coming back to life!

I waited anxiously a few minutes, not disturbing Jimmy in any way. Gradually his screams subsided to moans of pain. He continued to massage his muscles. A moment later I gave myself a mental kick in the head. Racing over to the sink, I grabbed some towels and ran them under hot water, almost hot enough to scald. Then I hurried back to Jimmy. "Here, wrap these around your legs!"

Jimmy did so. He gasped, then gasped again. Hardly a moment later he let out an almost theatrical sigh, indicating that his muscles were now relaxing. "Ohhhhhhh..." he half-groaned, half-sighed. Then, a few moments after that, he suddenly began laughing. At first I wondered if something had gone wrong, then realized it was from pure joy. "It worked, Brains! It works! I can feel my legs again. Damn, but that hurt! But it was the best hurt I'd ever felt!" He went on like that for several more minutes before settling down.

"Jimmy, once you've gotten a bit more used to feeling them again, I need for you to tell me if there's still some numbness in them. Remember, the bridge is only operating at eighty percent efficiency."

Jimmy nodded, his expression still blissful. "Yeah. Yeah, just give me a few more minutes. This is — this is ecstasy beyond anything I've ever felt!"

"Take your time," I said with a smile. The spinal feedback bridge remained positioned about a foot over Jimmy's lower torso. I planned to test its limits later on. Once the range parameters were established, I could start work on a portable device.

Jimmy continued to lay on the table, moving his legs this way and that, sometimes arching them and then snapping them out again. He even tried a few rudimentary sit-ups. Didn't take long for him to fall back, exhausted. "Not in as good a shape as I thought," he joked.

Soon I had Jimmy try to stand up. He cautiously swung his legs off the table and dropped them gently to the floor. Immediately, he let out a cry and tried to stop himself from collapsing as his legs gave out from under him. But we both were expecting that. Jimmy pulled himself back up. "Wow, they're weak!" he muttered, more to himself than to me. Keeping a tight grip on the table, he lowered himself down to a crouch, then tried to raise himself up on leg power alone. I was more than a little gratified to watch him do so, albeit with considerable exertion. He tried for a second deep-knee bend, but had to use his arms in the end.

"Looks like we've got our work cut out for us," I told him.

"No kidding!" he replied. "By the way, Brains, you're right," he said, slapping his upper thigh. "I'm starting to notice some numbness in my legs, as though they haven't quite 'woken up."

I nodded. "We still need to continue mapping until all the rest of the nerve clusters are back online, so to speak. With the bulk of the work accomplished, I don't foresee it taking much longer. Another three to four weeks should do it. For now, though, let's test the range of the bridge."

With my help, Jimmy began walking away from the table. We didn't go far before his legs began to lose their feeling again. I soon marked the distance on the floor, it came to five feet. I told him that I was amazed it reached as far as it did. Jimmy gave me a worried look. "Brains," he asked, "I'm not going to be getting cancer from this thing, am I? You know, like cell phone users are supposed to?"

I smiled at him. "No worries there, Jimmy. The Bridge doesn't use a continuous blast of microwave energy. It's strobed so that it's never on long enough to harm you, but never off long enough to disrupt the flow of nerve impulses. Having it on continuously would consume too much energy anyway. Now that I know the range, I can begin designing a portable version of the bridge. It might take a bit, though, since I'm going to be working on Brigette's new arm as well."

"So, what now?" he asked.

"Obviously, you'll continue to strengthen your legs each visit while I keep scanning the remaining nerve clusters."

Jimmy grimaced. "That's going to be a nuisance, you scanning, then me exercising."

I grinned and shook my head. "Don't worry about that, Jimmy. The need for you to lie naked on the table for the scans is over with, as of today. From now on, we'll do both at the same time. In point of fact, it would be advantageous for you to exercise during the scans, it will aid the software in pinpointing the unresponsive nerves."

"Cool," he responded. I winced at the use of that worn-to-death word. As Jimmy has noted before, I have a loathing for clichés. But, no matter. He could use entire paragraphs of them, I was so happy to have my almost life-long goal of having him walk again nearly achieved. I was already making plans for the upcoming combination bridge and scanner.

"For now," I told him, "continue to exercise your legs, then we'll call it a day. But let's not wait our usual week to get back together. Depending on how the investigation goes, I'll let you know when we can get back together again. But I plan to make the intervals short."

"Brains," Jimmy said, a bit hesitantly. "Could you — I mean, is there a way I could, uh, you know, aid you with your investigation?"

I stared at him for several moments. I had every reason in the world to tell him flatly NO. Not only no, but *hell no!* I even opened my mouth a few times to say exactly that. But nothing came out. Instead, rather to my surprise, I found myself scrambling for reasons to say *yes!* I surprised myself even further when I nodded and said, "Yes, Jimmy, you can. In fact, I was about to ask you if you felt up to lending a hand with this job."

"You're not just saying that to make me feel better, are you, Brains?"

I glared at him. "Don't be ridiculous, Operative Three. We now have a case. We've been indolent long enough!" That made him grin. "It's time for Benton and Carson to get off their rear ends and back to work."

Jimmy was still grinning. He gave me a salute. "Operative Three reporting, X!" We both stared at one another, grins wide enough to snap the upper portions of our heads off. Then we cracked up laughing.

When we quieted back down, I told Jimmy what I needed him to do. "Jimmy — or rather, Operative Three — Brigette's going to be out of it for a while as she undergoes the attachment of her new arm, as well as calibration and adjustment. So I need you to get together with her find out everything she knows about the robberies. Get back to me with the information as soon as you can. In the meantime, I'll see what develops at Wingate's lab during the off-hours."

Jimmy nodded. "Alright, X. I'll pay her a visit on Monday. In the meantime," he grimaced, "it's back to *that* thing." He nodded toward his wheelchair.

"Hopefully, not for much longer," I promised him.

"Yeah, hopefully," he replied. In an unsteady manner, he walked over towards it, turned around, then collapsed into it. He gave me a wry grin. "Admittedly, it does feel good to sit down. My leg muscles are screaming their heads off!"

I smiled in return. I backed up all of the day's

data, then shut down the bridge and the scanner.

Jimmy grimaced as his legs lost all sensation once again. Then he shrugged and began to wheel himself out of the lab.

## **CHAPTER 13: TAKEN**

Several days passed. Crime-wise, nothing remarkable took place. Dr. Wingate's lab remained uninhabited during the after-work hours.

Tom and I had worked non-stop on the artificial arm for Brigette. Even though it was ultimately a U.S. Government project, and would be first used to help military amputees get back a normal standard of life, and because of our work each arm could be custom-made to exactly fit each person, making it absolutely right for her was imperative. He had to leave me after just three days, but they were days in which we managed to make so many important improvements that I knew I would be able to carry on with the last of the current work.

My estimation of him as both an inventor and as a man had grown five-fold by the time he left. And, although I wasn't to know this until months later, he was so impressed by our working relationship that this would not be the one and only time we worked closely together.

In my lab, Brigette's new arm was undergoing final calibrations. It had attached itself successfully, I was pleased to see, and she was making rapid strides in learning how to operate it, the idea being that the final version would need little in the way of a "learning curve" to be successfully used.

"How does it feel now?" I asked her.

She shook her head. "Still on the cold side." Brigette was currently wearing a black one-piece swim suit that allowed access to her new arm. "Any ideas, Brains?"

The arm's sensors were working fine, but she kept getting an odd sensation of cold, describing it "as though I'd stuck my arm into a deep freeze!" I thought for certain the artificial skin sensors were malfunctioning in some way, but all of the diagnostics showed them operating properly. I frowned at the holographic display floating in front of me. Nothing was out of line, so why the strange coldness?

I touched an area of her upper arm, where the stump and the permanent socket were joined. With a faint clacking sound, the arm detached itself. I placed it in its diagnostic cradle, which also allowed the solar battery to recharge. On the SmartGlas screen, I ran another simulation, one that would indicated what a recipient of the arm should feel. I blinked in surprise: the readout showed a drop in temperature, to about twenty degrees Fahrenheit. "Well, small wonder your arm feels like it's in a freezer," I muttered

"What?"

I showed her the readout. "Weird!" she exclaimed.

I nodded agreement. "Let's see if we can find out why."

Well, it took about two hours, but I finally got the problem narrowed down to a single logic inverter chip that wasn't shutting off when it should. I tossed it out, obtained a new one and reprogrammed it, and placed it in the arm. Problem solved.

Once I reinstalled it, Brigette exclaimed at how warm her arm felt. "Too warm?" I asked. "I can tone it down a bit if necessary." But she assured me that it felt fine.

By this time, Brigette had the basic use of her arm down pretty good. She learned what she could and couldn't do with it. We also worked on the arm's movement latency — originally, it didn't respond as fast as her organic arm. But now we had it to the point where she could barely tell the difference between them. The arm's response to damage was curious: an organic arm's response to sudden pain was almost lightning fast. The bionic arm, however, transmitted an odd sensation that wasn't pain. "It's more like an odd numbness," she told me. "It doesn't hurt, but it lets you know it's there."

When I tried using a sharp-pointed object, she told me she felt the same sensation of numbness, only in a very small area. It didn't take me long to realize that the embedded sensors must be turning themselves off when the artificial skin becomes deformed, then switching back on when the pressure against the skin is removed. To test this, I wrapped my fingers around the arm and squeezed; gently at first, then hard. Brigette nodded. "Yes, it's going numb again. When you first started squeezing, it felt normal, just like my other arm. Then it went numb when you increased the pressure."

That cleared up the mystery, but I wasn't really certain if anything should be done to correct it. Was the absence of normal pain a blessing or a curse? And if the latter, how, exactly, would I go about correcting it? Normal skin has direct connections with the pain and pleasure centers of the brain. The artificial skin doesn't. I was pleased that it was transmitting information to the brain at all. But there didn't seem to be any way to specify just where the information should go. I gave a mental sigh and filed the problem away for another time. At the moment, it wasn't anything harmful.

Brigette was still admiring her new arm when I told her that it wasn't going to be the final arm by any means.

"How do you mean, 'not the final arm?" she asked.

"Don't forget that for all its sophistication, it's still just a prototype," I informed her. "I won't be resting on my laurels, as it were. There'll soon be a Mark II and a Mark III arm. You'll have the fun of testing them all out. And not only the upgrades: I already have in the design stage several specialty arms I'd mentioned to you earlier." I touched an icon in the holodisplay. A new arm appeared, this one showing a bare metal arm without a hand. Close by floated several detached hands — but not ordinary hands. They had built-in tools: screwdrivers, drills, ratchet tools, metal files, and so on. In short, just about every power tool attachment I could think of. All of them thought-controlled. "And — and I'll be able to swap

all of them out, like vacuum-cleaner attachments?" she asked, slightly bewildered.

I nodded. "Just like I told you the other week. When we get them built, anyway," I added. "At the moment, they're still in the design stage. In fact, when we upgrade your arm, it will come with a detachable hand as well."

"But Brains," she objected, "what on Earth am I going to use these things for?"

"Just to test them," I said. "Yes, in return for this arm, I'm afraid you're going to be something of a guinea pig for these new toys." Brigette just gave me a wry look. "Sorry, honey, but that's the most honest way to put it. Does the idea of this bother you? If it really does, we can probably come up with other ways to test them," I assured her.

She thought for a few moments, then shrugged. "Oh, it might be kind of interesting at that! But I don't know if I'll have to the time to come in and undergo the tests. I mean, I imagine the testing will run a few hours." She looked at me for confirmation.

I nodded. "Probably. But don't worry, we'll work out a time schedule that won't disrupt your work day."

I soon wrapped up the arm calibrations and had her practice using it. In the end, it still felt a little heavier than her organic arm, but she said it felt "sturdier," too. We had her practice with a heavy punching bag, one of the cylinder types used by boxers and other martial artists. Brigette had never really had any formal martial arts training, apart from some very basic courses back in high school gym class. I'd kept up with my karate and judo practice over the years, so I showed her some basic punches. We soon learned that, powered down or not, her new arm hit much harder than her organic one. I tried to adjust it so they would be equal, but it quickly became evident that the arm mechanics could only be geared down so far before the arm was rendered useless. So I ended allowing the arm to have a certain amount of "super strength."

I had Brigette practice with the arm: everything from swatting a mosquito on her body to catching soap bubbles. Needless to say, she ended up with a lot of bruises. But it didn't take her long to learn how to control the arm's power. A week after the arm had been attached, she could now pluck a soap bubble out of the air and carry it the length of the lab before it popped. And wring her hands without causing any pain.

After a final test of sorts — signing all of the non-disclosure forms without crushing the pen — I told her, "Looks like you won't have any further excuses for hanging around my lab."

"I'm free to go?" she asked, giving me a rather sad smile.

I nodded. "Fraid so, sweetheart. Time to see how well the arm does in the real world. Of course, we'll be able to monitor the arm's performance in real time, due to its built-in telemetry. But I'll be counting on you to let me know about any other problems that

we can't monitor from here."

"Rest assured I will!" she said with a wicked grin. Then she leapt to her feet, wrapped her arms around me and gave me a huge kiss. For the first time, I felt the power of the new arm first hand. Brigette was careful, of course, but it still felt like I was being held by a lightly-padded metal pole. I let out a "Whuff!" of breath, but managed to kiss her back.

"I'll see you tonight," she whispered in my ear.

"Looking forward to it," I told her. I walked her to the elevator, where she held up her visitor's badge to the scanner. The doors soon opened and she stepped inside, grinning at the doubtless goofy expression I always have on my face after we kiss like that. After the doors closed, I made my way back to the lab.

The rest of the day was spent working with the HoloCAD, which utilized SmartGlas and telejector displays. A yellow notepad nearby served for sketching ideas for the Mark II arm. Already I had fleshed out an improved A/D interface chip as well as better-designed pseudo-muscles which should allow the arm mechanics to match the organic arm almost perfectly. As usual, I could only approximate so much on a holo-simulation, but it should be pretty close. The rest would come with tweaking and practice.

At Michael's suggestion I called Tom to go over some of my suggested improvements. The inventor only had a few minutes to spare, but we covered all five items on my "must do" list and two of the three on my "can we do" one. "Okay, Brains," Tom told me. "Go for the musts but please take a look at the report I mentioned. Dad found that last night in a physical therapists' journal. I agree with him that it is a lot easier to have someone train their own brains to accommodate small differences when using prosthetics, like dealing with the lack of actual pain. It shouldn't take Brigette long to get used to it, maybe a few days." Tom glanced down at his watch. "Oops!" he said. "I've really got to go. Let me know how the new changes work out"

A second later, his image was gone.

I was about ready to leave for the day when my phone rang. I wasn't too surprised to see Brigette's image and phone number on the display. Sliding a finger to switch it on, I said, "What's up, honey?"

Her image vanished and I was suddenly looking at someone with a ski mask over their face

"It's not your girlfriend," the voice snarled. "She and your other pal are over there." The view shifted and I saw both Jimmy and Brigette tied to a metal pole. James was on the ground, his legs splayed out before him while Brigette was upright. Both were gagged and had blindfolds on. Then the image jerked back to their captor. "You are to come to the old White Front building. Be there no later than six o'clock. I seriously doubt I have to tell you what happens if you're late or you don't come alone."

And with that he hung up.

## CHAPTER 14: ADDITION AND SUBTRACTION

It's hard to say just what I felt. Anger. Fear. Frustration. All of the above in unequal amounts. First and foremost, I kicked myself for not realizing something like this could happen. I really am rusty, I told myself. Had I forgotten that they had our cell phones and probably know everything about us? That I would be walking into a trap could hardly be doubted. What could I use to turn said trap to my advantage? What did they want, anyway? For me to stop the investigation was obvious, but I knew there was more to than just that. Kidnapping my girlfriend and best friend just to intimidate me was a little over the top. Well, there was only one way to find out.

I made preparations for the meeting. I looked up the location of the White Front building, it was an old department store along the lines of Sears. It was located in the western part of Thousand Oaks off of Camino Dos Rios. It had gone out of business sometime in the early 1980s and had been abandoned ever since. Don't ask me why they haven't torn it down by now. It was the place where a lot of drug dealers hung out. The latest bunch had been picked up by the police a few weeks back, so it was currently unoccupied.

I went straight back to the apartment and changed. Then I left once again. I had no problems reaching the place. I parked the car in a crumbled-asphalt space close to the entrance. Said entrance was boarded over, but as I approached it, someone on the inside opened it up. A hand beckoned me in.

Once I was inside the door swung shut. "That's far enough, Benton," a woman's voice spoke up. I couldn't see anything at first, but the voice continued. "Search him. Chances are he's brought some gadgets to help out his friends."

Now I began to make out my surroundings. All around me were pieces of junk. Here and there a few perforated particle board shelves still stood, stripped of their metal shelving. I could dimly make out a few wrecked shopping carts, covered with rust. The remains of rotted ceiling tiles were scattered all around. Nearby were what remained of the check-out lanes. The stench of decay and rot, not to mention other unsavory smells, hung all around us. Moments later my eyes had adjusted enough to observe the others.

There were six in all, including the woman. No need to guess who she was. The others I recognized from the night of the bank robbery. Two of them approached me and began patting me down. They removed my cell phone and wallet, then handed them back. "He's clean," they told her.

"Where are Brigette and James?" I asked, not seeing them anywhere close by.

"Don't worry, they're safe," she replied. "They're currently at my other headquarters." I blinked in surprise and she laughed. "You don't seriously think this place is where I hole up, do you?" The others

laughed as well. "This is just a convenient meeting place. We won't be coming back here again."

It made sense, the place had no power and there were no signs of anything having been moved in here. I berated myself for not realizing it at once, before I even arrived here, in fact. My deductive skills, I realized with dismay, were still rusty...

"Fine," I replied. "So what is you wanted me for?" But even as I asked the question, I guessed the answer. "Never mind," I replied as Dr. Wingate started to open her mouth. "You need me to bring you some special equipment from your lab. You already know you're under observation. You also know that I've been investigating your activities and have linked you with the odd events and the bank robberies. But you're working on another project. Some offshoot or derivative of the space-time rotator you've developed. So what is it you want me to obtain?"

While most of the men stared at me in astonishment — one of them even asked "How could you possibly know that??" — Dr. Wingate just gave me a brief nod

"Quite correct, Dr. Benton. Only I call it the Subtractor. Because that's what it does: subtracts a defined portion of space-time from our universe. I built the device into my SwiftTalk phone, it's not that hard to construct and uses a surprisingly small amount of power." She shook her head, almost as if she couldn't believe it herself. "I was doing research on Tom Swift's Gravitex generator, trying to see if I

could create an artificial black hole. I hoped to use that in turn to create a wormhole. In the course of developing the mathematics behind it, I stumbled upon the Subtractor Principle." She gave me a wry smile. "You can probably guess what happened, Dr. Benton. The first time I used my prototype, I had no idea it worked, because I couldn't remember what it was I'd subtracted. I had to study the recorded video as well as the computer readouts to realize the object on the table was, indeed, gone. Then I had to repeat the experiment several more times before I began to understand."

"Do you know why it causes the strange memory loss?" I asked her.

"Well, that's really more your department than mine," Dr. Wingate replied. "Never did study neurophysics. Kinda wish I had. I can only guess that when something is removed from our space/time continuum, it does something to the brain's chemistry that causes us to forget it — and then remember it again the moment it comes back. Not really certain why it knocks you out when you come back, either. I tested it with various animals and found that period of unconsciousness always lasts about an hour — except for cats. For some reason cats are only out of it for about forty-five to fifty minutes. Beats me why. Something to do with the way their brains are wired, I suppose." She shrugged. "But I'm just guessing."

"Why the robberies, though?" I asked. "If it was to help you create your wormhole, you only had to take your subtractor discovery to the Swifts and ask for more money for the wormhole generator."

She nodded. "Yes, and that's exactly what I thought to do first. But the more I thought about it, the more worried I became about what this thing could do if the world at large became aware of it. Politicians, terrorists, even ordinary people: the havoc that could be wrought with the subtractor is almost unimaginable. Don't like your neighbor? Subtract them! Don't like that religious or nonreligious group? Subtract them! Don't like that nation? Subtract it! But what happens to the rest of the world as bits, pieces and chunks soon begin to disappear? I have no idea what the upper limit on this thing is, or how much power it would need to rotate, say, an entire continent, or maybe even the moon. You could cause the Earth's rotational period to change, or cause massive earthquakes or tsunami by creating unexpected fault lines. No thank you! I decided to keep this discovery to myself. But I still needed money."

"And that's where I come in," said one of the people there. It was the same man who had spoken earlier.

"That's my boyfriend, Sidney Gugennheimer," Dr. Wingate informed me. "We knew each other from way back. Sidney's been on the wrong side of the law a few times —"

"I've pulled off an armed robbery or two," he said with a modest shrug. "Got caught on the last one, did some time. When Debbie told me about her device, I realized that she had the perfect device for bank robbery: just subtract the back of a bank building — or wherever the vault is located — yank down the wall when you 'add' it back again. All of the bank alarms are rigged for some sort of frontal break-in. Breaking in from the rear isn't unheard of, but it's so difficult no one ever bothers with it. Nah, these days it's all about code-breaking and some elaborate plan to get past the vault door. Or, as I did, a daylight robbery. This way's a lot easier."

I looked at him, puzzled. "So why did you subtract the Sherman Oaks mall? Or was that a test of some kind?"

The man looked startled. "What? No! Believe it or not, that was just an accident. I didn't realize I hadn't shut off the subtractor app when I put my cell phone back in my pocket. I was drumming on my pocket as we were driving by the place, and I guess I must have activated it. I didn't even realize it until I answered a call a short time later."

"So you can't continuously rotate spacetime?"

Dr. Wingate answered, "No, at least not right now. In time I probably could have worked out a way to have done so. However, it would likely consume a lot of power, and there's no real need to do so. In fact, as we saw with the mall, it would be too dangerous. For now, it's better if it acts more like a camera."

I nodded and turned back to Sidney. "Then you returned and, um, 'added' the mall back in?"

He shook his head. Dr. Wingate did the same. "Nah, it doesn't work like that. Yeah, you have to be

there when you subtract something. But not when you cause it to return. You can be literally anywhere. Just pull up the memory you stored it in, hit the 'Add' button and boom! It comes back."

"Something like a pocket calculator," I muttered.

"Right," he agreed.

"Can we get back to business?" Dr. Wingate asked sardonically. Without waiting for a reply, she turned back to me. "Look, Dr. Benton, what I need you to do is to go back into my lab and get a couple of computer chips I need. Most of the wormhole equipment is now assembled — it took practically all of the money we stole to get the parts. Only the chips remained. I've about completed their programming, they just need a few more commands and a bit of editing. But they're still in my lab. Obviously I don't dare go back to get them. But you certainly can. And I have your friends. I removed your girlfriend's new arm, by the way. I don't know how strong you made it, but no point in taking chances. Anyway, just get the chips from my lab. I'll show you what they look like and where they're located before you leave here. Once you have them, give me a call and send me a photo of them. I'll know if they're genuine or not. Then I'll arrange a place where we can exchange our, shall we say, 'items.' And that's really all there is to it. We can both get back to our respective businesses"

I looked at her a moment. "But you'll be considered a criminal, Dr. Wingate! No more career, no matter how important your discovery. You're

always going to be on the run."

She shot me a superior look. "Not always! In fact, one of the first things I plan to do with the wormhole is to escape from the US. No need to say just where. But I'll be able to start all over again without any problems. I plan to build a better wormhole generator, one that isn't so power-hungry and use it to break into any vault in the world. Or anything else I take a fancy to! And if anyone comes after me or tries to interfere with my life—" she removed her SwiftTalk phone and looked me in the eye "— it won't take much to get rid of *that* problem!"

"Permanently!" Sidney threw in. "No body, no corpse, and nobody will remember them! Just a lot of head-scratching at some leftover photos or vids!"

"They can always be 'added," I replied. Then realized: "but the memory location on the Subtractor app can be erased, can't it?"

"Better believe it, Dr. Benton!" Dr. Wingate said with a laugh. "And once it's erased, it's gone for good. Whatever has been subtracted will be frozen in a pocket of space/time forever!" She continued chuckling for a few moments, then turned back to me. "No, in spite of being a criminal and no longer having a career, I'll get by just fine. Even better, in fact! No more eight-to-five workdays for me! No more commute! I'll be sitting on the sands of the Riviera, sipping margaritas and dreaming golden dreams. Or I'll have my own research firm, using the wormhole to reach other worlds, far beyond what Tom Swift or his 'Space Friends' could ever dream

of! My wormhole generators are going to obsolete every form of spaceship or transportation ever invented!"

She went on like this for a bit, spinning out halfbaked ideas and dreams about what her wormhole would accomplish when perfected. Even Sidney was starting to look impatient.

"C'mon, Debbie, enough already!" he finally exploded. "Send him on his way!"

"Getting into your lab may not even be possible," I reminded her. "You know the security setup."

Dr. Wingate gave me a disdainful look. "What? Don't tell me you haven't hacked that pathetic security system of theirs? I did on my third day there! Yes, on the surface it all seems normal. But I already put in a backdoor so I can get access anytime I need it. All you need to do is type in my passcode and it disables all the other security measures. You shouldn't have a problem." The number she gave me was a short binary code, thirteen digits long. "Now, here's where the chips are located. Just remove them, take a picture and send it to me. I'll call you back and let you know where the exchange is to take place. Don't even think about double-crossing me on this, Benton. Don't forget, I don't even have to off your friends. I can make you forget they ever existed!"

I didn't bother to tell her that if she did that, I'd hardly be very hurt by it. But I said nothing. It was obvious her current state of mind was anything but stable. She had me memorize everything I needed to get the chips, which was easy for me. Then they

escorted me out.

"Don't take too long, Benton," she said as I left. "This isn't something that should take a great deal of time. I expect to hear from you within an hour. Or maybe your girlfriend might lose her other arm as well."

"You don't need to threaten Brigette," I replied. "I can see nothing to be gained by disobeying you."

"Good," she said with a nod. "So get moving." With that, she and Sidney went back into the building. Doubtless they'd leave soon after I did.

I made my way back to SwiftTech in a grim mood. Although her work on a wormhole generator was certainly exciting from a scientific viewpoint, I had no intentions of just letting her and her "gang" walk away scot-free. But I was uncertain what to do about it. Still, something was scratching at the back of my mind. Something of a barely-formed idea. I knew better than to push it, so I concentrated on getting to Dr. Wingate's lab.

Getting back in wasn't easy either. For security reasons, once a scientist was gone from his or her labs for the day, the lab automatically shut down. It wouldn't re-open until about two minutes before the expected arrival time. And, if all of the scientists were gone from a given floor, the whole floor locked down and the elevator refused to go that particular floor. The stairwells were locked tight as well. And if that wasn't enough, you couldn't even get past the front door after hours. Dr. Wingate knew this as well as I did. So what did I do? Obviously: I just entered

her code into the keypad/card reader at the front door. It opened without a murmur.

Next problem: the receptionist. The day shift receptionist had already left for the night. The evening shift receptionist was a man named Karl Swanson. I simply waved to him and headed for the elevators. Naturally, he called out to me: "Excuse me, sir. You work here?"

I showed him my ID badge. "Of course. I know it's a bit irregular to be here after hours, but I realized I'd forgotten to shut down an experiment running in my lab. I won't be but a few minutes."

"Um, better let me clear this with the boss first," he said

"Go right ahead. Tell him it's my experiment concerning the Wingate Hypothesis."

He gave me a dubious nod, then tapped an icon on his holographic display. Michael's image soon appeared. The receptionist informed him of my return. "Let me talk to him," Michael said. Karl gestured at the display. I grabbed the image and walked away where we could talk in private.

"Dr. Benton?"

Without delay I brought Michael up to date on everything that had happened. "Even if her intentions were pure, we would still want to stop her: she's acting rogue in this, and her attempt to create an artificial black hole could very easily go wrong. You can imagine what sort of havoc something like that could cause," I concluded.

"Easily," he echoed, looking worried. "Any plans?"

"Yes, I have one. But I need to get into her lab. She gave me a bypass code to get in — seems she's hacked into your security system and set up a backdoor."

"She *what?*" he almost screamed. "That system was designed by Sherman Ames himself!" Michael raked his hand through his hair in anguish. "Man, he is going to be so ticked when he hears this!"

I couldn't help but grin. "I imagine so. Anyway, you can just as easily let me in. The faster, the better. I need to implement my plan."

"Right. Hang on a minute." He turned away from the camera and I heard him muttering under his breath. There followed some musical beeps and the sounds of fingers typing on a holographic keyboard. Then he turned back to me. "OK, you're in. Better get moving," he said, unconsciously imitating Dr. Wingate.

"Thanks," I said. I touched the "Home" icon on the image. It vanished and reappeared back at the receptionist's desk. I heard Michael talking to the receptionist, who replied, "OK, sir." As I began walking towards the elevators, I also heard him tap on his virtual keyboard a few times. Then he said, "You're cleared, Dr. Benton. Have a nice evening!" I didn't bother to reply. Even if Michael didn't get me the clearances, I had little doubt that Dr. Wingate's passcode would have allowed me access anyway.

Inside her lab, the two chips were right where she had indicated. I pulled them out, then looked around the lab. Nearby was an EEPROM programmer, attached to a laptop. On a hunch, I plugged one of the chips up and powered up the laptop. I began running through the chip's programming. Most of it was in assembly language and was considerably complex. Given time, I might have been able to determine the exact purpose of each chip. But there wasn't enough. Was there anything I could do to stop her? A moment later I realized there was. Nor would it take very long. I went into Edit Mode and typed in two short batch files. Then I did the same with the other chip. Upon completion, I shut down the laptop, placed the two chips in their carrying case, snapped a picture of them with my SwiftTalk and began to leave the lab. I called Dr. Wingate as I headed out. "Here's the image of the two chips you wanted," I told her, touching the Send icon

"About time," she grumbled, then hung up. She called me back a few minutes later. "OK, those are definitely the chips. Bring them to—" and here she gave me an address on Simi Road, not all that far from my private lab. "I'll have your friends there as well." With that, she hung up.

I pulled up Michael's number and called him, letting him know just where I'd be. I also told him my alterations to the chips. "Well, that should stop her from using them to complete her wormhole," he said. "Then what? We still won't know where her lab is located."

"Oh, I rather imagine she'll soon be in touch with me to get the passcode for the chips. I let her know that she can't have them unless we meet face-to-face at her lab."

"She might blindfold you or put a sack over your head," he told me.

"Let her. I'll have a method to get around that," I assured him. "One way or another, we'll find her lab."

"Good. And..." Michael hesitated.

"What?" I asked him.

"Well... I'd like for you to bring in her wormhole generator as well. This is an important scientific discovery all in itself, Brains! Even if she planned to use it for her own personal benefit, that doesn't mean it should be destroyed or ignored."

I nodded, because I was thinking that myself. "Agreed. But let me get my friends to safety first. Some of this plan will have to rely on improvisation," I replied.

"Fine, I'll leave it up to you. Keep me informed," he said and hung up.

I wasted no time getting to the rendezvous site. Dr. Wingate and her friends were there, waiting by an SUV. Through the windows I could easily see Brigette and Jimmy. They were neither bound nor gagged, but a man stood near them with a SwiftTalk phone pointed in their direction. I could also make out a sticky note stuck on the edge of the phone. In

addition, there were faint blue lines in the form of a rectangle surrounding the SUV. The implication was clear enough: any false moves and the SUV, along with my friends, would wink out of existence. Presumably, they had another ride someplace. Well, they wouldn't need it.

I walked over to Dr. Wingate and handed her the carrying case with the chips inside. "Here you are, Dr. Wingate. The chips as specified. And now, if you don't mind..." I gestured towards the SUV.

But Dr. Wingate didn't issue any orders. She opened the case and looked at the chips, removing them from their non-static foam. She examined each one carefully. "It took you long enough to get here, Benton," she said, sounding angry. "Too long, if you ask me. What were you up to in my lab, Benton? All you had to do was walk in, locate the chips and leave..." She turned to one of her men. "Bring over my laptop! And the EEPROM programmer!"

I felt my heart sink.

It didn't take her long. The moment she ran a simulation on one of the chips, my login window popped right up, demanding the passcode. Dr. Wingate was almost beside herself with fury. "You locked me out! Out of my chips!" She tested the other one to make certain. "Give me the password, Benton! Or you will quite literally never see your friends again!"

"Yes," I countered, "but I won't remember them either, so I'm not exactly going to be hurt by their absence, am I?"

She glared at me, her face distorted by rage. Then, without a word, she stormed over to the SUV. Brushing her man aside, she yanked the door open and dragged out Jimmy, tossing him on to the ground. Pulling out her own SwiftTalk, she formed a box of blue lines around his legs. As I watched with horror, she touched an icon. Reality blinked, and for a barely remembered split-second, I thought Jimmy didn't have any legs. But he did, and now they were severed from his body. Before I or anyone else could move, she reached in and vanked Brigette out as well, throwing her to the ground. The same box formed over her legs. "Now," she said, looking at me in triumph, "are you going to give me the code, or will you let your girlfriend suffer the same fate while your other friend bleeds to death?"

I didn't waste a single word. I knew I had to get Jimmy to a hospital as fast as I could. There was a chance that if we got there fast enough, they might be able to reattach his legs. Whether they'd come close to working again is something I'd deal with when the time came.

I typed in the passcode — really, just the same binary code she'd given me with the numbers reversed — as fast as I dared, removed the chip and replaced with the second one, then typed it in once again. "They're unlocked," I told her. "Now let me get James to a hospital."

"Fine," she said. "Take him and your girlfriend too. I'm keeping the arm, by the way. I want to study it. I might sell it to a competitor. Or keep it as a souvenir."

I wasn't paying her any further attention. I ran over to Jimmy. "Brigette! We need to make a tourniquet for each leg." Blood was already seeping out from the barely-visible cut. "Hold his legs to his body! If they move out of place, the blood will start gushing from his major arteries!"

Awkwardly, Brigette grabbed one of the ankles with her good arm and placed her elbow against the foot of the other leg. As gently as she could, she pushed forward on them to keep them in place. I looked around for anything I could use for a tourniquet.

As I did so, I saw Dr. Wingate fiddling with her SwiftTalk again. I heard Brigette gasp, and I saw a box of blue lines form around all of us. "Dr. Wingate, what are you —?"

She smiled at me and the world disappeared. Everything froze — but only for a moment. Before I could even begin to realize I'd been frozen in time once again, the world came back and I blacked out.

### CHAPTER 15: BAITED (Or, "Wormhole Food")

The stench of burned flesh woke me up. I found myself chained to a chair. And not lightly chained, either: legs, chest, arms: thick, heavy chains were wrapped around all of them. Nearby, I could see the same had been done to Brigette as well. Jimmy was on a chair, chains around his arms. His legs were gone, of course. But there was no sign of blood. I looked closer, then let out a quiet gasp. From the looks of it, they used a blow torch or something similar to cauterize the wounds.

"They ought to be awake by now," I heard Dr. Wingate say. "It's been about an hour."

I looked around for the first time. We were in a room filled with scientific equipment. From the way the floor sloped, I realized this must have been a movie theater at one time. And where the movie screen once stood, a large ring of thick copper wires now stood. It looked to be a good fifteen feet in diameter. Wires ran from it in all directions, most of them to a nearby control panel. Images were constantly being displayed on both SmartGlas panels and holographic displays.

Dr. Wingate soon marched into view. When she noticed me looking at her, she nodded. "Good, glad to see you're awake, Benton." She glanced over at Jimmy. "Don't be worried about your friend. I personally used a laser torch to seal off his wounds.

When he wakes up he'll probably scream from the pain of it and then pass out. Which is fine. As for his legs," she shrugged, "they've been disposed of. And as for why I didn't just leave you subtracted: I have no idea what other changes you might have made to the chips. So I plan to use you and your friends as guinea pigs once I have the wormhole up and running. We'll see whether or not you come through OK. In fact, I really should have thought of this to begin with!"

I stared at her in amazement. I knew some scientists could be cold-blooded pragmatists, but Dr. Wingate struck me as being borderline psychopathic. I looked over at Brigette, she gave me a faint smile. I guess she thought she was preventing me from worrying about her. I smiled back to her in turn and gave her a nod. But inside I had nothing, no plan of any kind. As secured as we were, there was little to work with.

I continued to watch Dr. Wingate as she reviewed each chip's source code on her portable telejector display. She was thorough, but it was obvious from the way she used her finger to scroll through the display that she was in a hurry as well. I was reasonably certain she wouldn't see the other batch file I'd buried deep inside the program. And with that, the inkling of a plan began to form.

For the time being, I waited patiently for Dr. Wingate to finish checking over the code. Finally she looked up at me and said, "Looks like you didn't have time to do anything else to them." She switched off

her display and removed the chips from the EEPROM checker. I breathed an inward sigh of relief. She walked over to the wormhole generator's main console, opened a panel and put the chips in place. Closing it, she flipped a large red switch, followed by a couple of smaller ones.

All at once, machinery began powering up all around us. Several holographic displays appeared, as well as some SmartGlas display panels on the console. Her boyfriend and his men were starting to give each other worried looks. They all jumped (and admittedly, I flinched as well) when the wormhole ring gave off a sudden deep humming sound, and the area inside the torus turned pitch black.

Dr. Wingate looked up as well. I couldn't see her face, but she looked startled to me. She let out a "Hmmm..." and began adjusting a large dial. She looked up again, then adjusted several more dials. The wormhole didn't change. "Well," I heard her mutter, "let's try this." She reached up to one of the holographic displays and touched a slider control, lowering it. There was no change to the wormhole. Still muttering, she tried some other adjustments, but whatever it was she seemed to be expecting, it clearly wasn't happening.

Finally she gave up. "OK, then," she said, sounding exasperated, "guess we'll just have to find out the low-tech way."

She turned back to her men. "You two, put your guns to their heads," she told them, pointing to Brigette and Jimmy. "You," she pointed to her

boyfriend, "release him." She turned to me. "I'd hoped we'd be able to see what's on the other side of the wormhole. In fact, I expected the opening to be completely transparent. But, since it isn't, you're going to step on through and find out what's on the other side. For that, of course, you'll have to be free of any restraints." She paused to glance at the men holding their weapons to my friends. "But I trust you'll do the right thing, Dr. Benton."

I nodded as I stood up. Without a word I began walking towards the wormhole portal, wondering just when my modifications would kick in. And even as I thought about it, they did.

As I went past the console, I noticed one of the holographic displays flicker a moment. So did Dr. Wingate. Then another flickered as well. The deep humming noise dipped in volume, then came back up. The blackness blinked a moment, then held steady.

"What —?" she said. For a few moments more, all seemed well. Looking back at me, she waved me on towards the wormhole. I took a few short steps, but no more than that. I didn't have to. The humming dropped once again, and the blackness vanished. When I looked back at the console, all of the displays and lights were flickering.

"Debbie?" her boyfriend asked. "What the hell is going on?"

"I — I don't..." She was frantically flicking switches and adjusting knobs. I walked over to the console. "Having difficulties, Dr. Wingate?" I asked.

She looked up at me and glared. "You!" she snarled. "You did this!"

I shook my head. "Me? I did nothing. This is something you can't blame me for, I'm afraid. But it looks to me as if some of your math was a bit more esoteric than applicable." Then I let her have one of my infamous condescending smiles, the kind that used to infuriate Jimmy so much. "Maybe you should have had me check the math over for you. Or maybe," I looked over at her men, who were all staring at her with fearful expressions, "your friend Sidney could have done so."

The insinuation that her not-very-bright boyfriend could have performed a more accurate math check than she could catalyzed the reaction I needed. With a scream of inarticulated fury, she threw herself over the console and directly at me. For a few moments I was busy warding off her sharp nails, her fingers shaped like claws. I threw her to the ground and we wrestled around on it while she called me every obscenity she could think of. My face was already covered with spittle, and she came close several times to biting my nose off. But all the while, my hands were carefully feeling over her pants, then finding what I needed: her SwiftTalk.

As carefully as I could, I removed it. I activated it (not an easy thing to do surreptitiously as we rolled around on the floor, while not allowing her men to see what I was doing either), and then saw that it required both a thumbprint and a ten-digit code...

#### **CHAPTER 16: [Deleted]**

I wasn't as dismayed you would have expected at this apparent calamity, mainly because I anticipated it. In fact, in her place, I would have done exactly the same. At once I shifted our position so that I was able to place her thumb squarely on the reader. You might have thought I was relying on luck, not knowing which thumb she used. Nothing of the kind: I'd already observed that she was left-handed. So, naturally, I used her right thumb — she was hardly that stupid. Of course, the moment I touched it to the smartphone's surface, she realized what I was up to. I stopped play-acting then and immediately flipped Dr. Wingate over, pinning her with both a knee and an armlock.

(Note: As I write this, it bothers me to recall that I had felt Dr. Wingate's ribs breaking under pressure I had applied, but I have no recollection of having actually accomplished this, as I have no exact recollection of Dr. Wingate. That said, the memory of at least three separate snapping sounds had felt gratifying at the time...)

She cried out in pain, but I ignored that as I typed in with one hand the binary code she had given me earlier. Wasn't hard to guess that was the passcode, and so it turned out to be. If there is one thing I know about people, it is they are lazy with passwords. Not just the "Enter your password: <u>PASSWORD</u>" sort, but the ones who use a single code for everything.

The main menu popped up, and the Subtractor icon was among the icons present. It had no name, just a large "—."

I thumbed it, and the click wheels for the three dimensions popped up on screen. I did a hasty estimate of Dr. Wingate's size and entered the dimensions. Once this was accomplished, and even as her men began to approach me with their guns, I leaped to my feet, took a few steps back, then subtracted Dr. Wingate from reality.

For a brief moment I had no memory of what I had just subtracted, but it really wasn't hard to guess what I'd done. As the group of thugs stopped in their tracks, now apparently uncertain what the hell to do, I immediately touched the "+" button and Dr. Wingate reappeared — and passed out.

The result of this was entirely predictable: her boyfriend, Sidney, and his men rushed over immediately, calling out to her, and as they came to a halt in a tight little bunch around her I repeated the process. The area around them pulled in once again, then sprang back to its default position as I hit the plus button a second time.

No longer in a hurry, I exited the Subtractor app to prevent any accidental triggerings, but left the phone on. Indeed, I set the Auto-Off feature to "Never." I hunted through pockets and soon found the keys. Moments later, Brigette and Jimmy were free. But Jimmy was still unconscious, which, at the moment, was a definite blessing. Brigette, of course, gave me a long, one-armed hug and a lingering kiss to go with

it

When we could tear ourselves apart, she looked over at the unconscious bodies. "Brains, what should we do with them?"

But, I already knew what to do. In its own way it was distasteful, but I knew that knowledge of the Subtractor could never be allowed to escape. Before I acted, however, I spent the next fifty minutes narrating this into my SwiftTalk (my Tiny Idiot had the largest capacity on the market: 1 Terabyte). Then I activated the Subtractor app once again, pulled up the timer function (I knew there had to be one), set it for one minute, punched in the three dimensions for all of the bodies, then tossed the SwiftTalk on top of Dr. Wingate's body. A minute later they all vanished.

None of us remembered them even being there.

# CHAPTER 17: FINALE (Or, "Up From The Ashes...")

There were still a lot of loose ends to tie up. After I contacted Sherman Ames and played my recording for him, he flew out here to SwiftTech immediately and had a talk with all of us

He wasn't in a happy mood, which was understandable considering the strange outcome of events down in South America. And now he had this to deal with. We spent some time tracking down every last bit of information concerning the Subtractor, digital or written down. Thankfully, Dr. Wingate was intelligent enough to keep very few copies of her work. All copies were either thoroughly erased or completely destroyed.

All of the modified Swifttalks that contained the app were with the now-subtracted bodies.

As for the wormhole: it's now been quietly moved to one of the SwiftTech sub-basements.

Tom came back out for a week and he, myself and two other scientists he absolutely knew could be trusted spent hour after hour pouring over every detail of the unit

Before he had to leave, his father arrived and we gave him a tour of the machine.

"Deceptively simplistic," he commented, "but devilishly difficult to comprehend. I want this device

to be so securely locked up that I'm ordering a special measure to be installed here. One that will encase the whole thing instantly in durastress should anyone try to remove it or any part of it without direct permission from Tom or myself. Do we understand this?" he asked the four of us.

To a man we nodded and agreed with him. This was not something you just locked up and forgot about. All the same, though, a few months later I heard rumors that the wormhole device had been moved to a top secret location in the Nevada desert. No telling if there was any truth to it or not.

When I'm not helping Jimmy master his new bionic legs (yes, he was in considerable pain for weeks before the legs were attached, and even afterwards), I'm also lending a brain cell or two to the new SwiftTech project: getting the wormhole device to work.

Tom Swift Senior and Junior have visited a few times in this past month. But I'm afraid the tiny but deadly tapeworm code I'd programmed into each chip did its job a little too well: practically all the assembly code has been erased. The tapeworm started as a minuscule, undetectable bit of code that, when the wormhole was activated, made it into the memory registers and woke up where it began to quickly "devour" the source code, expanding as it did so to fill in the now empty code space with random meaningless data bits. Once the wormhole came to a halt, the tapeworm did as well. By that time at least ninety-five percent of the source code has been

deleted.

Dr. Wingate (it's becoming increasingly hard to think of her like that anymore – part of me wants to refer to her as "that Wingate person", since I honestly don't recall having ever met her. I can only go by the notes in my SwiftTalk...) had not kept any paper or electronic backup of the code in those two chips. At least, nowhere within SwiftTech. Without anyone recalling anything about her other than one coworker who has a photograph on her desk with another woman she cannot recall, but we believe was Wingate, it is going to be a long, uphill struggle, even when I get the occasional day or more of assistance from Tom Swift himself

Brigette, of course, has her arm back — I attached it first thing after setting her free.

As noted, Jimmy is getting used to his new legs. Much of the pain — both from the cauterization and the attachment of the legs — has faded away. Jimmy had considerable difficulty with the new legs at first: he was unbalanced and very clumsy. But we soon compensated for his center of gravity and he learned how to walk all over again. Now he enjoys his new legs even better than his old ones.

The only remaining issue is that he complains of having trouble with stairs. When I observe him walk, his gait seems straight and sure, but, as he says, he more *clomps* up and down, moving as if he had real feet. Stealth may never be Jimmy's strong suit ever again.

That might be something to work on for the Mark

II version. For now, I have to spend as much time perfecting the measurement and manufacturing processes so that thousands of these legs and arms can be built to order.

Not a day goes by when I don't feel regret over him losing them in that needless manner, but he smiles and shakes his head at me.

"Let's face it, Brains," he told me just a few days ago. "My old legs were so weak from disuse that even if you had managed one hundred percent revival of the nerve endings, I'd still be on crutches or using a walker the rest of my life. Now, however clumsy I might be sometimes, I can walk just as I once did." He paused, then gave me a grateful look. "You did it, Brains. Just as you said you would: you gave me back my legs."

"But not quite like I meant to," I said with a grin, and we both laughed at that.

"So what now?" he asked me.

I pondered that for a few minutes. Then I threw him a sharp look. "Jimmy — Operative Three — you just said I gave you back your legs. But now that I peruse that, I realize you, in turn, gave me back something even better: my desire to investigate crime"

He gave me a startled look.

I nodded in turn and continued. "Both Sherman Ames and Michael, my boss, have asked me if I would mind investigating unusual crimes, ones that baffle the police and that the government isn't interested in unless it's terrorist-oriented. And it seems there are plenty of those in California alone. The Swift organizations seem to be natural targets and even some of our employees have found enemies out here. So what do you say, Jimmy? Care to reactivate the Benton and Carson International Detective Agency? With SwiftTech behind it, I can guarantee our new crime lab will be a helluva lot better than our old one!"

"And no Mrs. Ray wanting to barge in all the time!" he added with a grin. "Well, what else can I say, Brains? Other than, of course, 'Operative Three, reporting for duty!"

#### The End

For Now...

But Brains And Jimmy Will Return In

Case of the Other Missing Message