

BRAINJACK

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For my mum

PROLOGUE

Right now, as you read this prologue, I am sifting through the contents of your computer. yes, your computer. You. the one holding the book.

I am reading your emails, looking at your digital photos and images you have downloaded off the net, opening your most private documents and having a good read, or a good laugh, depending on the content.

To be honest, most of it is utterly boring. Except for a few files. You know the ones I mean.

I know you don't believe me, and I prefer it that way, but think about this.

When you bought this book, you (or the person who bought it for you) used a credit card or a debit card. that created a record in the massive computer systems that the banks use. The systems they claim are impregnable.

But they are on the net, and nothing is impregnable on the net.

So I monitor those systems for transactions with the ISBN of this book. that's the International Standard

Book Number. You'll find it on the publisher's imprint page on page 4. Have a look now. It's 978-0-6482879-7-1.

When your transaction went through, I got an alert from one of my monitoring programs and, as I had nothing better to do, I dug a little deeper.

I got the credit card number from the transaction log and that, with just a quick poke around in the (highly secure) databases of the bank, gave me your home address and telephone number.

I cross-matched that with the internet service providers in your area to find your broadband connection. Then I checked to see if you have a static IP (that's the electronic address of your home computer). you don't, so I raided your ISP'S DHCP server to get your current IP. It didn't take me long to find out where your computer lives on the internet.

Your router's firewall was a joke, and not even a very funny one. The built-in firewall on your PC was another story though. That held me up for a couple of heartbeats. I had to use your peer-to-peer file-sharing client to slip a trojan past your security and gain remote administrator access, shape-shifting a little as I

did it so as not to attract attention from your antivirus software. No matter. It took me less than ten minutes from seeing the transaction to obtaining complete access to your hard drive.

So now, while you're reading this, I'm looking through your computer and having a great old time. You could race over and turn your computer off, but you'd already be too late.

I could delete a few files, but I probably won't. I could change your passwords, and lock you out of your own system, but I can't be bothered.

And I won't crash your system, or delete the contents of your hard drive, or anything like that. I am not malicious or evil, or even particularly bad.

I'll just quietly leave, and erase all trace that I was ever there.

But I know you now. I know who you are. I know where you live. I know what you've got. And if the time comes that I need something from you, something that you might or might not want to give up, I'll be back.

That time is coming. sooner than you think.

But in the meantime, don't worry about me.

I'm not worrying about you.

Right now, I've got much bigger problems to think about.

BOOK ONE
BEGINNINGS.

DIRTY TRICKS

On Friday, on his way to school, Sam Wilson brought the United States of America to its knees.

He didn't mean to. He was actually just trying to score a new computer and some other cool stuff, and in any case the words "to its knees" were the New York Times' not his. (And way over the top in Sam's view.) Not as bad though as the Washington Post. Their headline writers must have been on a coffee binge because they screamed

National Disaster

in size-40 type when their presses finally came back online.

Anyway it was only for a few days, and it really wasn't a disaster at all. At least not compared to what was still to come.

A juddering roar reverberated off high-rise buildings and Sam glanced up as the dark shadow of a police Black Hawk slid across the street. His breath caught in his chest for a moment as if all the oxygen in

the street had suddenly disappeared, but the chopper didn't slow; it was just a routine patrol. It weaved smoothly between the monoliths of uptown Manhattan, a cop with a long rifle spotlighted in the open doorway by a brilliant orange burst of early morning sun.

He tried to remember a time when armed police in helicopters hadn't patrolled the city, but couldn't. It seemed that it had always been that way. At least since Vegas.

Grey clouds were seeping a dreary, misty drizzle from high over the city, but low on the horizon there was a long thin gap into which the sun had risen, teasing New York with a short-lived promise of a sunny day.

Sam cut down 44th Street and turned right at 7th Avenue to avoid beggars' row along Broadway. He took 42nd to Times Square where the tall video screens flickered intermittently or were silent and dark. The M&M's screen still worked although there were several blank spots that were said to be bullet holes.

Forty-second Street Station was crowded – jostling, bustling, shortness-of-breath crowded – at this time of the morning, but he was used to that and the subway was still the fastest and safest way to get around Manhattan.

He got out at Franklin Street Station and took Varick Street down to West Broadway. He quickened his step as he passed Gamer Alley. His nose wrinkled involuntarily at some of the odours that hung around the entrance.

Two dogs were fighting on the corner of Thomas and West Broadway but stopped as he approached. He slowed, not comfortable with the narrowing of their eyes or the jelly-strings of drool dripping from their fangs.

One took a step towards him, a low growl in its throat. The other followed, lips drawing back from its teeth.

Sam took a step backwards. The dogs moved closer, haunches high, stalking him. He stumbled backwards a few more steps. A police humvee cruised past and he half-turned towards it, hoping that the cops would

stop and intervene, but they either didn't see, or didn't care.

The entrance to Gamer Alley appeared to his right. As the dogs spread out to cut off his escape, he turned and strode into the smoky unease of the alleyway.

He glanced behind but the dogs had not followed.

The walls of the alley were high and the street was narrow, a deep saw-cut across a city block. None of the dawn glow penetrated, just a tired dullness that washed through the clouds and was swallowed up by the steam or smoke from the food stalls. Gaudy fluorescent signs appeared indistinctly through the haze, promising the latest in video-gaming technology. The games they promoted were innocuous but everyone, especially the cops, knew that once inside, the full range of games, including all the illegal ones, were freely available.

People drifted past. Both men and women with the vacant stares and twitching hands of long-term game addicts.

Sam thrust his hands into his jacket pockets, hunched his shoulders and moved deeper into Gamer Alley.

A woman in her twenties, fashion-model-beautiful, sat on a blue office chair next to an overflowing dumpster. Her hair was plastered to her scalp by the rain, and droplets of water formed on the end of her nose before breaking away in a rhythmical pattern. She did nothing. She said nothing. She just sat, watching Sam as he made his way down the alley towards her. A game addict, for sure.

As he neared, the chair swivelled slightly and although her head and neck did not move, her eyes remained fixed on him. He passed her, the chair swivelling more, her whole body turning with it to stay focused on him, her face expressionless. His shoulders crawled as he left her behind, as if the strange inactivity might suddenly explode into mindless violence. Ten yards past, he glanced back. She stared at him, unmoving.

“Want to buy a dog?”

The man in a shabby grey overcoat was right in front of him and he had to stop abruptly to avoid a collision.

“I, er ...”

“Want to buy a dog?”

The dog in question was in the man's arms. A mangy cross about the size of a small poodle, but of no detectable breed.

"He's a good boy," the man said, thrusting the dog forwards. The dog snarled and snapped at Sam, missing his arm by a fraction of an inch.

"No, I ..."

"Hardly ever bites," the man said.

"No."

Sam took a wide step around the man as the dog's teeth snapped together again in mid-air.

The end of the alley neared.

To his right, a door opened on a second-storey fire-escape. A man in his fifties burst out of the building dressed only in Mickey Mouse boxer shorts with a Hawaiian lei around his neck. He was carrying a coffee machine. He leaped down the metal steps three at a time and disappeared across the street and around the corner of a building just as two policemen, in black tactical gear, burst out of the same door, hard on his heels.

Sam escaped onto Church Street with a slight sigh of relief and a relaxing of his nostrils. His cell rang,

right on cue, as he turned into Thomas Street and he tapped his bluetooth earpiece into his ear.

“Hi, Mom,” he said.

“What kept you?” Fargas asked on the other end of the line, his mouth full of something.

Sam looked up at the building opposite. He caught a glimpse of Fargas behind a window on the second floor, the two black circles of a pair of powerful binoculars, jutting out from his long mop of unruly hair.

Sam made a discreet waving motion with his left hand.

There was a flash of white from the window that he took as a sign Fargas had waved back.

“Cut through Gamer Alley,” Sam said.

There was a short pause while Fargas digested that. “Quick hit on the way?”

“Just sightseeing,” Sam said. “What are you eating?”

It would be caramel corn. Fargas was the only person he knew who could eat caramel-coated popcorn for breakfast.

“Caramel corn,” Fargas said. “Want some? I’ll toss a couple of pieces out the window.”

“Suddenly not hungry,” Sam said. “Can’t think why.”

He walked casually past the Telecomerica building as if he had no interest in it whatsoever. He didn’t even glance at it.

“You sure this is possible?” Fargas sounded a little nervous.

“I’m sure it’s not,” Sam said. “Be no fun otherwise. They’ve got industrial-strength firewalls with a DMZ and a secondary defensive ring with ASA and IPSec. Impenetrable.”

“Then give it away, dude,” Fargas said. “I’m not going to jail for the sake of a hack.”

“Fargas,” Sam said, “you’re my brother and I love you but you gotta get your head out of your butt before you fart and suffocate yourself.”

“I’m not your brother and you don’t love me,” Fargas pointed out.

“You know you’re the one I’d turn gay for.” Sam grinned up at the window.

“I thought you liked Keisha,” Fargas said.

“I’d definitely turn gay for her,” Sam said. “If I was a chick. How is she?”

“Still not interested.”

“Her words or yours?”

“She’s a sophomore. You’re a senior. That’s just wrong. Should be illegal.”

“Have you asked her for me?” Sam asked.

“You can’t ask her yourself?”

“She’s a sophomore. She’s got to ask me.”

“Loser,” Fargas said.

Sam said, “Okay, here we go.”

The cafe was long, low and thin: a brick-lined tunnel reaching into the depths of the city block. The table Sam wanted was in use, but the smartly dressed businessman was just draining the last of his coffee so Sam loitered by the door for a moment, pretending to read the chalkboard breakfast menu until the man left.

He ordered a chai latte from the surly, mono-browed waitress and waited for it to arrive before opening his schoolbag. His bag of tricks. Dirty tricks.

His table was at the back of the cafe, deep in the heart of the building beside a large leafy pot plant with an interlaced trunk. The position had been carefully chosen.

Opening his schoolbag was both exciting and terrifying at once. It was crossing a line. It was the start

of something, like strapping yourself into a roller-coaster. No, more like a Special Forces soldier going behind enemy lines, or a spy setting out on a dangerous mission that depended on skill, wits and fast reactions to stay alive.

He pulled out his laptop and from the front pocket of his bag he took a parabolic aerial, unfolding the wings and embedding it at the base of the pot plant.

“You in place?” Fargas asked in his ear.

“Yes, Mom,” Sam said, glancing around the cafe.

It was about three-quarters full: mostly dark-suited businessmen and women. The occasional arty, Greenwich Village type, slumming it with the suits.

A man in his twenties with a completely shaven head and a spider’s web tattoo crawling up the back of his neck was seated with a stern-looking matronly-type woman, possibly his mother in a severe grey woollen dress. A small group of tourists at a table by the door were busy taking photos of each other with their cell phones and laughing.

He switched his gaze to his laptop and opened his wireless connection manager. A red light on the front panel flickered orange, then changed to green as it

picked up signals from wireless networks nearby. Green like a traffic light. Green for go.

The panel on his laptop showed seventeen networks in all; the cafe's own free network for patrons had the strongest signal. The others came from all around and above him, gigabytes of data flying through the air of the cafe. Personal, confidential, private data, broadcast by people with utter faith in the security of their wireless networks.

Nor was that faith totally unjustified. With intrusion detection and high-level encryption, it would take a very special person to hack into that data. An expert. A genius. A devil. All of the above, some would say.

Someone like Sam.

Sam ignored sixteen of the signals. There was only one that interested him, an indistinct signal from a wireless access point on the other side of the old brick wall next to him, probably quite close by, but the wall degraded the signal until it was as thin as a ghost.

The parabolic aerial he was aiming in that direction had a built-in signal booster. He turned it back and

forth, gauging the angle where the signal was the strongest.

“How you going?” Fargas asked.

“No problems so far,” Sam murmured. “Wireless security is a contradiction in terms. Like ‘military intelligence’ or ‘jumbo shrimp’.”

“I like jumbo shrimp,” Fargas said.

Sam transmitted a generic disconnect signal, dropping the other station off the network. Lost and alone, it immediately began bleating, like some kitten mewling for its mother.

He intercepted the reconnect signal and broadcast the same signal from his laptop. Less than a second later he was part of the network.

“Anything happening?” Sam asked quietly.

“A few security guards in the foyer.”

“What are they doing?”

“Linedancing,” Fargas said.

Sam smiled. “Okay, let’s do it.” he said.

With another quick glance around at the other patrons, he reached out cool cyber hands into the network, into the digital world on the other side of the wall.

TELECOMERICA

The New York corporate headquarters of Telecomerica are located on the Avenue of the Americas, but the nerve system is downtown in their offices on Thomas Street. It occupies forty-two floors of prime Manhattan real estate.

From the roof of the building, a forest of aeriels and satellite dishes poke holes in the clouds above the city. On the ground floor, security is at its tightest, with armed guards and metal detectors on every entrance. Crash bars protect the front of the building from vehicular attack and bombproof shutters can be lowered from the ceiling in seconds, if called for.

The building was designed, from the outset, to be self-sufficient and protected from nuclear fallout for up to two weeks after a nuclear blast. Back when it was built, during the so-called "Cold War" with the USSR, that had probably seemed like a good idea. Since Vegas it was a Federal requirement.

The physical security is one thing, but the electronic security is just as advanced.

A skilled hacker might make it through the outer defences but not without setting off alarms and the system administrators would shut them down before they had a chance to break through the secondary defences.

None of which mattered to Sam.

Next door to the highly secure Thomas Street facility is a small cafe, popular with the Telecomerica staff.

Just a heavy concrete wall – lined with brick on the cafe side and wooden panelling on the Telecomerica side – separates the cafe from the facility.

Sam sat at a small table on the cafe side and slowly inched his way into the computer network on the other side of the wall. The rings of firewall security were not a problem. He had already bypassed them simply by connecting to an access point on the inside. Behind all the layers of expensive security.

The trick now was to analyse the network traffic: the tiny packets of data that flowed continuously like high-pressure water through the pipes of the network.

Sam's custom-built network analyser was based on a couple of the more advanced black ops programs

used by other hackers but with special mods of his own. It didn't look like software at all. More like a random collection of code fragments in no particular shape or order. Ghillie, he called it, after the shaggy camouflage "ghillie suits" worn by Special Forces snipers.

Ghillie slithered into a small space in the network, just a shapeless pile of old code, computer droppings, lying in the memory on one of the big network routers. It lay there undetected, skimming the TCP-IP packets as they flew past, studying them, reporting on them.

The first thing Sam noticed was the silence. The TCP-IP traffic to and from the access point was minimal. There were no computers connecting to the wireless access point that he had hacked into. That indicated that the room was empty. An unused office maybe, or a conference room.

He scanned the room for peripherals: a printer, a digital projector and an interactive whiteboard. A conference room for sure.

He kept low, watching for intrusion detection programs – the network’s guard dogs, smoke alarms or trip-wires.

“One of the guards is talking on his cell,” Fargas said in his ear. “You sure they can’t detect this program of yours?”

“Positive. What’s the guard doing?”

“He’s smiling. Probably ordering Krispy Kremes.”

“Got a big router running hot on the fifth floor,” Sam said. “Think I’ll just go hide in the packet flood and hunt for a network controller.”

“One strawberry, two cinnamon twists and a chocolate iced. And don’t hold the sprinkles,” Fargas said.

Softly, softly, Sam thought, insinuating himself into the new router, and making no further movements, just keeping his head down, watching the flow of data, looking for the software that would be looking for him.

There was nothing. And yet ...

He couldn’t shake off a feeling that somewhere in the depths of the network an eye, like the eye of Mordor, was turned in his direction.

“Ever get that feeling you’re being watched?” he asked.

“You are being watched,” Fargas said from the other side of the street. “I’m watching you. Or your feet at least.”

“You’re supposed to be watching the guards,” Sam said, as he ran a triple check for all known detection programs. Nothing.

“We can back out of this,” Fargas said.

Sam ignored him and began to look around, sending tiny cyber filaments out through the network, scanning for servers.

There were hundreds of servers scattered throughout the building. Some big number-crunchers, others smaller, dedicated to a single task. The one he wanted was a network controller, one of the DHCP servers that ran the network.

It wasn’t hard to find. He simply had to trace the security requests, which all had to be routed through the network controller. This was the machine with the key to the entire system, the SAM database where the network passwords were stored. Unlock that file and the network was his.

“Got the SAM file,” he said. “I’m going to run a rainbow crack and—”

He froze. Something just passed right over the top of him, reading his code. Anti-intrusion! This was new though. Not so much a watchdog, chained to a post, barking at intruders, but something infinitely more dangerous. Something unseen that crawled in the dark places of the network, probing here and there with electronic feelers. A network spider. He had heard of them, had even got a copy of one and taken it apart to see how it worked, but had never encountered one in the wild before.

He shuddered as the digital legs of the dark creature probed his code, sifting through it, analysing it.

Then it was gone. Fooled by the electronic ghillie suit.

“What?” Fargas asked.

“Security spider. Just went right over the top of Ghillie.”

“Pick you up?”

“Cruised straight past.”

Sam traced the shape of the spider and fed it into his early-warning system. The next time the spider, or

one of its kind, came crawling in his direction he would have fair warning.

Cracking the network controller was going to be tricky. He briefly considered an ARP poisoning attack against one of the network switches, turning it into a hub and making it accessible to anyone. But that would leave evidence of the hack, which would defeat the whole purpose.

He decided on a MAC spoofing attack.

Every machine on a network has a Media Access Control address, a unique ID number programmed into the network card. Sam's next trick was to find a suitable machine and "borrow" its MAC address, fooling the network controller into accepting him as an authorised part of the network.

It didn't take long. A few minutes of watching, waiting and a new computer came online. A laptop, almost certainly, attaching itself to one of the many wireless access points on the network.

Sam smiled as the laptop revealed its MAC address in the probe request and was confirmed a nanosecond later by the probe response from the network controller. Before it even had time to authenticate the

request, Sam was in, jamming the network card of the laptop for a moment while he reprogrammed his own MAC address, “spoofing” that of the genuine machines.

The network controller looked him up and down, decided that he was the new laptop and happily authenticated him.

He was in.

Someone would be calling tech support about now, Sam thought, complaining about a laptop that was not connecting to the network. But if the help desk here was like most, it would take twenty minutes to answer, and then the first advice would be to restart the laptop.

Plenty of time.

Ethan Rix put on his telephone headset and answered the call with a click of his mouse.

Business was light this time of the morning and this was his first call since coming on shift.

Most of the problems were simple technical questions that he could clear up quickly, the same problems over and over, in fact. Some people seemed

to have the same problem each week, and never learned from the week before what the solution was.

The voice on the other end of the phone was complaining about a laptop that wouldn't connect to the network. As usual, he advised restarting the machine.

“First pinhead of the morning?”

He looked up. Erica Fogarty, one of the on-duty system administrators, was hovering over his desk.

“John Holden from fourth. Can't connect. System says he's already on. Couldn't be a MAC spoof?”

“Inside the firewall? Not possible.” Erica shook her head.

“I'll run a check of current logins, just to be sure,” Ethan said.

The spider came back as Sam was delicately probing the hard drives of the network controller. He paused and the spider passed by, although he couldn't shake off that disquieting feeling ... was it the spider? Or was there something else? That burning eye of Mordor.

There were trip-wires on the network controller.

Sections of the hard disk that, if accessed, would immediately sound the alarm. He manoeuvred cautiously around them and probed deeper into the bowels of the big server.

The SAM database is the record of all the usernames and passwords on the network, all encrypted into secure hashes with over eighty billion possible combinations.

Supposedly unbreakable security.

In fact, it took 7.7 seconds, using a rainbow crack, to retrieve the first password, and within five minutes he had the one he wanted. The SysAdmin password: the system administrator. The key to every door in the network.

Suddenly, the entire network lay open before him. Barefaced, unprotected, vulnerable.

No time though to stop and congratulate himself. He was already moving, racing through the wide-open corridors of the network.

Next stop, the primary transaction database. Millions, billions, of database records. A library of information, all laid out in neat rows in front of him with his new godlike SysAdmin powers.

“I’m in,” he said.

“You serious?” Fargas asked.

“I am God and Harold be my name,” Sam replied.

“Harold?”

“Let’s go shopping. What’ll you have?” Sam asked.

“One strawberry, two cinnamon twists and a chocolate iced.”

“Let’s start with a couple of the latest paper-thin Toshiba notebooks.” Sam scanned the database as he spoke, writing and executing SQL statements, looking up product codes and making matching entries in a sales order table.

“One of those new neuro-headsets,” Fargas contributed.

“Two headsets coming right up. Can I upsize you to a super combo?”

Records updated, the results window informed him a few minutes later. Just a miniscule drop in the massive Telecomerica data ocean. A transaction that never was, but which, to the computers that ran Telecomerica, was now a matter of record. An undisputed fact.

Job done. Time to leave.

He closed the SQL manager and waited – just for a few minutes to make sure that his covert operation had not attracted anyone’s attention.

If Telecomerica suspected the break-in, they would run checks on the data, and that would show up the change he made. Which would lead them straight to him.

But so far, so good.

“Excuse me, Erica,” Ethan called across the room.

“Yeah?”

“You using SysAdmin?”

“Nobody uses SysAdmin. It’s just a backup in case of password corruption.”

“Someone is.”

She came and stood over his shoulder again. “What are they accessing?”

Reflected in his screen, Ethan saw a horrified expression fall over Erica’s face. “The central database server,” he said.

Sam was just completing the clean-up, erasing every trace of his presence, when all hell broke loose.

The network lit up like a fireworks display as intrusion alarms went off on all the main servers simultaneously. Powerful anti-intrusion code checkers roared through the network pipes, searching, scanning for anything out of the ordinary. Spiders, not one, but a hundred of them, appeared on his radar, crawling everywhere. There were thundering crashes all around him as electronic doors slammed shut.

“Crap!”

“What is it?” Fargas asked.

“They’re on to me. It’s like the Fourth of July in here.”

“Then kill Ghillie and get out of there!”

Frantically, Sam keyed in a self-destruct command, but hesitated before pressing the button.

“Can’t do that yet,” he said.

“Sam, you know if they find it, they’ll pull it to pieces, figure it out and add its profile to the antiviral databases. You’ve got to delete it and get out of there.”

It was true. If they caught and analysed Ghillie, it would be rendered useless, not just now, but always.

Still he hesitated. Without Ghillie he was deaf, dumb and blind.

“I need it,” he said. “If they know the database has been compromised, then they’ll look for the most recent changes and that’ll lead them straight to us!”

He logged back onto the database, a desperate plan forming in his mind. As system administrator, he had full power over the database. Power to create. Power to destroy.

Gritting his teeth, he fired a data bomb right into the heart of the transaction database server. It exploded with a huge whumph, scrambling the database into a billion fragments.

Scanners swept over him, oblivious, fooled by the camouflage. That gave him a ray of hope. Maybe there was still a way ...

“Whatever you’re doing, do it fast,” Fargas said.

If they are looking for something, better give them something to find, Sam thought, reaching into his bag of dirty tricks and releasing a couple of vicious viruses into the arteries of the network. The Russian Black Flu and the Japanese Kamikaze. Self-replicating, shape-shifting viruses. Nasty little critters, highly destructive and difficult to stamp out. The network security

should cope with them, but it would occupy them for a few minutes: a distraction, a diversion.

What he needed, and needed urgently, was the location of the database backup files. They wouldn't be on site, but where would they be?

The SQL database management engine gave him the answer: London.

There were alternative backups in Washington DC and Melbourne, but London was the first go-to place if the system crashed (which it just had).

He digitally rocketed across the Atlantic and burst through the security in the London facility. Not bypassing the defences so much as kicking the front door down, using his SysAdmin powers as a battering ram.

Even as he did so, he realised that Ghillie was under attack. Something, someone – a human being not a program – was reading its code, line by line. Nothing he could do about that now. He still needed his eyes and ears if he was going to finish this.

Erica was making Ethan uncomfortable, hovering just behind him. She was on the phone now, her voice loud enough to vibrate the earphones in his headset.

“No, we don’t know how they got in!” she said.

He twisted around. “Logs show a wireless router disconnect and reconnect in Conference Three.”

“Might have pirated a wireless router,” Erica said, not too calmly. “I’ve warned and warned about wireless inside the DMZ.”

“I got viral alerts on three floors,” Ethan yelled. “Variant of the Black Flu, maybe something else too.”

“If it’s wireless, then they’re close. Get security onto it.” Erica hung up and sat down at the spare terminal next to him.

“I’ll take the viruses, you stay on the hacker,” she said.

The backup files were stored in a SAN, Sam realised. A Storage Area Network. This SAN was well secured, padlocked as it were.

He could break it but that would leave traces of his visit. He had to pick the lock. He struggled to concentrate, knowing that they were already on his

tail. He prodded the locking software gently, studying the mechanism.

“What have you done now?” Fargas yelled in his ear. “I’ve got security running around like their butts are on fire. Running out into the street.”

“What are they doing?”

“Checking cars, stopping traffic, scanning the buildings. It’s only going to take them a few seconds to figure out where you are, Sam. Get outta there! Crap, coming your way right now!”

Sam slid the laptop off the table and onto his knees as an armed guard burst in through the doors at the front of the cafe.

His heart was hammering in his chest, but casually, ever so casually, he began to sip his chai latte. It was barely lukewarm but no matter.

The guard ran his gaze around the cafe and ran back out again, shouting into his radio.

Underneath the table Sam’s fingers flew across the keyboard. He was hyperventilating now and tried to force his breathing to steady, but it would not.

The locking software sprang open and he rifled through the backup files. They were encrypted and compressed, but no trouble if you had the right tools.

He carefully edited the most recent backup of the transaction database, closed it, then reset the time and date on the file back to what it had been before he had made the changes.

When they restored the backup files to replace the ruined database they would be unwittingly putting his data right where he wanted it.

The last thing he did, before sending a self-destruct signal, was to leave traces of a digital signature that he had stolen from a Turkish hacker. Ghillie disappeared as if it had never existed.

He grabbed the parabolic antenna, flattened its wings and threw it into his backpack. He hit the shutdown on his laptop.

“Someone just ran outside with a radio direction finder!” Fargas yelled. “Now they’re all heading right your way.”

Sam was already moving. He was at the rear of the cafe by the bathrooms when the guards burst through the front door. He ducked across the hallway into the

cafe's small kitchen, throwing on a baseball cap and pair of sunglasses as he did so, running past the hotplates and startled chefs to the service entrance at the rear.

He emerged onto Trimble Place, looking back again and again, but seeing no sign of pursuit. A police humvee went past him at speed, siren wailing.

He was so engrossed in what was, or wasn't, behind him that he completely failed to notice the security camera, mounted high on a telegraph pole, that turned to follow him as he scurried along Trimble Place. He walked a little more steadily down Duane Street, eventually losing himself in the crowds thronging their way to work along Hudson Street.

Slowly, Sam's breathing began to calm. He checked his watch and increased his pace, partly to put in more distance from the scene of the crime, and partly because he was late.

It was 8.52 am.

Time for school.

CHAOS

At exactly 8.59 am, as Sam Wilson was walking through the main entrance to his school, nodding to the security guards – who ignored him – and smiling at their aggressive-looking guard dogs – which snarled at him, a series of catastrophes was striking the largest telecommunications company in America: Telecomerica.

The scrambled database server was bad enough, but two nasty little viruses, the Black Flu and Kamikaze, chewed their way through node after node on the network as the systems administrators and the antiviral software struggled to contain them.

Servers had to be shut down and rebuilt from scratch to eliminate the intruders and repair the damage.

The Thomas Street facility infected the Washington DC office, which spread the disease right up and down the East Coast, as far south as Miami, from where it raced across, via Albuquerque to San Diego, and quickly spread up and down the West Coast as well.

It wasn't simply the internet that went down, although that collapsed in a screaming heap right across the country and in many other places around the world as all the main US circuits imploded. The same circuits were used by the internal networks of banks and major corporations. Most had to close their doors.

TV stations went off the air. Radio stations broadcast static. ATMs all went offline. The stock exchange ground to a halt. The loss of the internet meant the loss of email and instant messaging. Cell phones just roamed aimlessly, looking for networks that no longer existed. Text messages sat uselessly in outboxes.

Entire regions lost basic telephone services as the sickness found its way into other networks. Some parts of the US even lost power.

Still, nobody died. There was the occasional injury when the lights went out and some rioting in Los Angeles – what was now referred to as PVPS, or Post-Vegas Panic Syndrome – but there were no fatalities.

It took three days to sort out the chaos and get America back online.