

PROLOGUE

FROM HIS OFFICE WINDOW, Gaijin could look down over the East Gardens of the Imperial Palace and see the Sapia Tower at the JR Central Railroad Station in the distance, but tonight the blinds were drawn to the dazzling lights of Tokyo, and the tiny office was lit only by the glow of the twin LCD computer monitors on his desk. Two bags of organic blue corn tortilla chips brought by a cousin from America rested atop a bird's nest of business cards in Japanese, English, Hebrew, and Ukrainian; an empty can of Coke stood squeezed in among assorted joysticks and game controllers; and a red iPod Nano, its white ear-bud cord dangling over the edge of the desk, perched atop a stack of magazines and unopened envelopes that nearly crowded out an oversized keyboard packed with extra color-coded keys.

Gaijin stuffed another handful of corn chips into his mouth, wiped his hands on his tee-shirt, then returned them to the keyboard. He frowned in concentration. He was deep down into the kernel, the very heart of the software, trying to slip the last little fragment of his methodically planned modi-

fication into it before the production team burned the master DVD for manufacturing.

The theme from *Battlestar Galactica* announced an incoming call on his cell phone. He retrieved it from beneath the detritus on his desk, flipped it open, and said, “Yo!!” in a quiet but assertive tone.

“It’s me, you know, except you told us we aren’t supposed to use names, so I just say it’s me.” The high, breathy voice on the line was slightly choppy and rang with a buzzy metallic echo, symptoms of a VOIP call from a computer with a low-bandwidth connection rather than one made on a land line.

“I know, asshole. I said don’t call. I’ve got,” he glanced at his on-screen clock, “just sixteen minutes before they lock down the binary and transmit it to Taiwan. Go away.”

“No, don’t hang up, we have trouble. Elliot’s not ready with the communications link for Nagasaki. He...”

“I warned you that the kike was a loser. Screw it. We go ahead anyway. Look, you write the damned communication protocols. Suck the specs off Elliot’s machine and get it coded. Now! Absolutely correct! We can test against my package after the go-live.”

“But, what if...”

“No ifs. My code is spot on. It’s always spot on. We’ll be right. Just you get your routines right. Test-driven development, remember, and regression test on integration into the software suite. Best practices, methodical, all the way. I don’t want anything else to break because of some bonehead little mistake by you—or anybody. And lose that Jew before he pulls the whole thing apart.”

“He’ll want to be paid. And he’s been asking who the client is.”

“Tell him the client is an Australian. That’s all he needs to know, all anyone needs to know.” Gaijin thumbed the off button and held it until the phone powered down. He slipped it into his jacket pocket while continuing one-finger typing with his free hand. He slowly and methodically scanned the meticulously crafted program patch displayed on his screen. He had typed it in from memory rather than risking accidental discovery of a file sitting on his machine or on the server. He would have preferred to load it from a thumb drive, but security was so tight that management had disabled all the USB ports on every computer in the place. No worries, he thought. He knew there was always more than one way to mine a harbor, as eco-terrorists had taught the Kiwis when a fishing boat loaded with orange roughy had been scuttled by remote control off the coast of New Zealand.

The short block of code displayed on his screen was, of course, only the last small bit that linked and completed scattered pieces of code in the patchwork quilt that he had surreptitiously stitched together over the past year. It had been his second-shift job, a secret job with no employer of record. Even Gaijin was not sure exactly who his off-hours client was, although he knew well the organization that was his immediate contact. In any case, the generous payments were regularly wired to his account, which was part, but only part, of the payoff of his work.

He was proud of what he had accomplished, both for his Japanese employer and for his other client. It was, as he unabashedly told his covert and nameless colleagues, a work of art, although only he knew how deep the artistry went. This final piece was the keystone of a bridge, a bridge between two technologies that, once linked, would be unbreakable. He

congratulated himself now on his foresight on a previous contract when he had installed a backdoor into software that would soon become the other anchor point in the span he was building. It distinguished his style from that of the lesser beings who surrounded him. He did not see each programming job as an end in itself or as merely a means to pay for food and fun, but as one stone in a larger edifice, a structure he had been carefully crafting for years.

He had learned his craft from the best: his weird cousin from the States who brought him corn chips; the skinny Bulgarian electrical engineer, Konstantinov; the Ukrainian hackers who boasted about their criminal connections; Paulo, the Brazilian student with whom he had swapped tools and coding tricks but never met; and now the Japanese programmers. He had learned from the best and was now ready to best them all. If he succeeded, no one would ever see his code. That was the whole idea. No one would ever know.

Gaijin was not his name, but it had become his handle, his code name, since he had started as one of the small coterie of *gaijin*, foreigners, brought in as contract programmers to help the Japanese electronic games giant, Aniomoto, produce its next-generation video game system. The programmers were working on-site instead of through remote access because the company was absolutely paranoid about leaks and terrified of the competition. In their presence, the contract employees were referred to by the less dismissive term *gaikokujin*, foreign nationals, but everyone knew what they were called in their absence and how they were viewed by the fiercely tribal in-group of the company's own local game developers. It was precisely for this reason that Gaijin had embraced the moniker.

Gaijin was not logged in on his own account, and he was exploiting a bug in the version-control software that managed updates and revisions to the complex game programs. He entered the authorization sequence that would allow him to overwrite the binary image, the actual ready-to-run computer code, by copying the doctored image from his computer to the code safe, the server where the production-ready program and other resources were stored.

A quiet ding and a message box flanked by exclamation points told him that the substitution had been rejected because of an invalid checksum. The checksum was just a number, a number computed from all the numbers comprising the computer program, but a number that made it possible to catch transmission errors—or tampering.

Now what? he thought. He had double-checked everything. He had verified that his patches wouldn't change the checksum. That was the cleverest part of the carefully calculated dummy code that he had left in his routines, creating space in which to overwrite with his patches without changing the checksum. He cursed mentally. Some idiot must have done an unauthorized and unlogged change after the release candidate of the software had been frozen. He wondered how he would now force the patch through without it being detected. He glanced at the time—not enough time to write a routine with which to search for values that could fill in some empty table and force the correct checksum. “Shit!” he said to the screen. “What the fuck am I going to do? Gotta think.”

He would need to make an actual revision as a cover, but one that could be explained away without raising too much suspicion. He stared at his own reflection, just faintly visible on the glossy monitor screen. His pitch dark eyes were two

voids in his pale round face. You've been away from the sun too long, mate, he said to himself. And look at you, with your hair pulled back in a ponytail. Where do you belong now, *gaijin*? In a flash of inspiration he started typing, his index fingers dancing over the keyboard.

"What in blazes are you doing?"

Gaijin jumped at the voice but kept typing, completing the coding and then the command that would force the system to accept his changes and, in the process, compute a new checksum.

"Just a last-minute flourish, nothing consequential," he said as he retyped the authorization code to confirm and complete the operation. He turned to look up into the battered face of Markus Wildemann, German ex-pat and lead software architect for the team of contract programmers that he had assembled for the project. Wildemann was respected by his team, not for his modest coding skills but for his negotiating prowess.

"You know that's the final release image," Wildemann said with a sweep of his hand. "No one touches that code. No one. We burn masters in the morning. How the hell did you even make a change at this point? It's supposed to be frozen. And, wait a minute," he added, leaning closer to the screen. "Why are you logged in under Martine's account?"

Gaijin held up his hands as if surrendering to the police. "Look, no worries, mate. Martine just borrowed my machine late this afternoon and forgot to log out. Don't be hard on her; she's probably anxious about the baby, you know. Anyway, I went to log out for her and just got this flash of perverse inspiration. You know how I am. Anyway, everything is cool, Markus. I didn't really change anything."

“What did you do, then? Why is the code safe showing a new version flag? If we have to delay rollout in order to run the entire series of regression tests again just to prove out the system, I’ll have you fired. I’ll have you blacklisted! Hell, I’ll castrate you myself with my own bare hands.”

“It’s nothing. I’ll show you.” Gaijin launched a hardware emulator that would make his computer function as if it were the new model of the company’s game console, then checked out a copy of the newly tweaked program file from the version control system and dragged it to the emulator. The company’s inimitable animated splash screen started its visual pyrotechnics on the second monitor.

“It’s in the Easter egg,” he said, referring to a hidden bonus feature that game developers sometimes embed in their work. Carefully positioning his hands above the keyboard, he pressed five keys at once. Suddenly, the splash screen disappeared to be replaced by a series of disembodied heads careering across the display. As each reached center screen, it paused briefly while the name of one of the project team members appeared beneath it before name and face both faded out. Some of the faces were photos, some sketches, some big-eyed animé caricatures, but one was a blank white silhouette, a fat, pony-tailed profile with a black question mark over it. When it paused in the center, instead of a name, two Japanese characters appeared below it, *kanji* for “outside” and “person”: *gaijin*.

PART ONE

1

THE PHONE WAS RINGING. Des knew that the answering machine would pick up, but it irritated her irrationally to be only feet from the phone and unable to answer in person. It violated some unstated law of symmetry in human-machine relations. Des Allen preferred technology to keep to its place, assisting without intruding, responding like a good waiter: as—and only as—needed. To her, answering machines and voicemail were in that ambiguous borderland between help and hindrance, a technological no-man’s land of ever-growing proportions.

She was just unlocking the deadbolt on the apartment door as her recorded greeting ended and the caller started talking. She quickly entered, struggled with her wet boots, got one off, then hopped on one stocking foot down the short hallway.

“Listen,” a man’s voice said, “I posted and posted but you never seem to reply, which is why I am calling again. The team needs you. If you’re not going to play, then opt out. Pick up if you’re there so we can strategize.”

She reached the phone and picked up the handset. “Who is this? What are you talking about? Why do you keep calling me?” Too late. The caller had already hung up. She looked at the caller ID on the base station: Out of area—caller ID unavailable. She had no idea who the caller was but recognized the man’s voice from earlier, equally assertive and mysterious messages. They had started just after her birthday, two weeks earlier. Although she assumed they were just wrong numbers from a caller who still hadn’t caught on, they had begun to creep her out.

There were three other messages: two from Harry—“just checking in”—and one from her best friend. “It’s me, Dina. Thanks for forwarding me the confirmation from your boss. I’m so glad he said yes, even thinks it’s a good idea for you to go to the conference with me to broaden your background, shake up your creative juices, as he put it. Course, he would say that, since it doesn’t cost him anything. Sid sure is a sweetie, though. Lucky you. My boss is a prick. Anyway, I got us a room at the new Meredith, the official conference hotel—better to soak up the ambiance—so we’re roomies again, like old times. Text me when you get this. Or no, you better give me a call. I got lots to talk about, as in ‘LG,’ and I don’t mean the Korean high-tech company.”

Edina Gustafson, who called herself Dina (“Dina as in Shore, Gustafson as in Swede”) had been her college roommate at George Washington University. The agnostic Minnesota Lutheran and the secular Los Angeles Jew had quickly discovered they had many things in common, starting with a guilt complex as wide as a soccer field coupled with a deep sense of social responsibility that had been hammered home by their once-radical parents. The aggregate in the

cement of their relationship included chunks of mild mutual envy—each thought the other to be the “pretty one” of the pair—and a few grains of well-sublimated sibling rivalry, a late addition to the interpersonal repertoires of the two young women, both of them only children.

Both had become international relations majors, brimming with unwarranted idealism and unrealistic career fantasies, but Dina had stumbled into a job in DC as a journalist the day after graduating from GW, having barged into the offices of the Business News Network to protest what she regarded as a garbled news story on small businesses engaged in international trade. Des, more cautious and methodical, had waited anxious months for the State Department to respond to her résumé. State and every other agency on her short list rejected her in turn. She had always suspected her parents were to blame.

Celise Greenberg, her mother, was not merely a well-known economist; she had a well earned reputation as a radical, a perennial pest, critical of administration economic policy regardless of which administration was setting it. Her area of interest in recent years was energy economics, and she had become a major force in the peak oil perspective, which maintained that the world was at or very near the half-way point in using up the planet’s fossil fuel. No one likes a doomsayer, least of all a doomsayer who was beginning to look more and more like she might be absolutely right.

Des’s father, Josh Allen, with his years in the front ranks of protest marches of every ilk and his drop-out lifestyle, was completely beyond the pale. Des was quite sure that the FBI had thick dossiers on both of them. So, to pay the rent, she had punted, parlaying a computer graphics elective in college

and a summer job at Razorfish into a career in web design that ultimately landed her at Scenaria, in Reston, Virginia. The network security firm paid her what she thought was a bit too much for work that was a bit too easy, but she was not one to argue with fortune. The price of the deal was an occasional spasm of self-doubt about selling out to the corporate world, a spasm usually soon quieted by the rationalization that, if not on the front lines of the fight for a better world, she was at least working on the right side of the good-and-evil divide.

“Destiny Allen is an artist. Like her father,” her dad would say. “It’s in her blood. Creativity courses in her veins.” It was a dig at his wife, who, by her own and everyone’s assessment, did not have so much as a creative corpuscle in her. To the dig, Celise typically responded with a jab of her own, yet another reminder that, as a tenured full professor of economics, she earned twice what her husband did from his part-time job as a welder and the sporadic sales of his gonzo sculptures. But she was also the one who had lobbied for IR as a job ticket for their daughter, and neither Josh nor Des would ever let her live it down.

Des had tried on many occasions to set her father straight. “I do web graphics, Dad, mostly on the intranet, the internal corporate site, so basically nobody even sees my work anyway. I’m as much an artist as the poor schlemiel who stencils names on the doors.” But nothing she said or did would dampen his fatherly pride. “My daughter, Destiny, the graphic artist,” was how he would introduce her.

Beside her telephone, Des had some of her father’s art: a weird miniature he had given her as a birthday gift when she turned sixteen. She once confessed to him that she thought it

looked like a rust-hued, skeletal horse being mounted by a misshapen frog. He had just smiled and said, “Whatever floats your boat, honey.” He never explained any of his work to anyone. “The art speaks for itself. It is what it is,” he always insisted. Appropriately, all his major works had been named simply with question marks. His latest sculpture, titled “?????????????????????????????????????” and 28th in the series, stood in the entrance hall to the Orange County Museum of Contemporary Art. It was his first major commission and earned him a grand total of \$5,000 for four months of welding, cutting, sanding, and grinding. The check, never cashed, was still push-pinned to the wall of the garage where he worked. He matched his wife’s professional and personal passion for all things economic with a complete disdain for monetary matters. “Art is not about function or finances,” he would say. His wife would say it was an altogether convenient conviction, given that so few of his works ever sold.

Des put down the rusty sculpture that she had been holding absent-mindedly. She picked up her phone and called Edina but got her voicemail. She hated telephone tag, so she said only that she’d email. Then she dialed Harry Krebber’s cell phone.

“Hey you,” she said sweetly.

“Not a good time,” he answered, with an impatient tone. “If it’s about the meeting next week, catch me first thing at the office Monday.”

“Ah, I get it. Dottie’s there. But we’re still on for lunch, aren’t we? A long lunch?”

“Yes, I think that will work. I’ll have the draft of the specifications ready.”

“Great! I’ll make the res as usual.”

“I concur. Good action plan,” he said, still speaking in code. There was a tinkling crash and a squeal of toddler laughter in the background. “Gotta go, duty calls.”

“I love you.”

“Right,” he said and hung up.

Des put the handset back in its cradle, hopped back to the door, and tugged off her other boot. As she headed back down the short hallway, she paused at the mirror, where she could not resist smiling at what she saw: wisps of ginger hair draping her forehead, light gray eyes smiling above cheeks still pink from the chill. In temperament she was her father’s daughter, but she had inherited her mother’s slim build and sweet, inviting face. She smiled again.

“Don’t be smug, you slut,” she reproached herself. “This is going nowhere. He’s got kids, for God sake. But you are looking good, girl. A bit of office intrigue does do wonders for the complexion, to say nothing of how romance helps with your seasonal affective disorder.” She unwound the cashmere scarf from around her neck and hung it on a peg beside the mirror. A present from Harry, it had arrived with a note saying that jewelry would be a better expression of his true feelings but too conspicuous at the office. Jewelry might have been cheaper, too, as she had learned after checking out the price of the designer-label scarf on the Nieman Marcus website.

It’s all out there on the Web, she thought, everything stacked and stored in cyberspace. There are no secrets anymore, no lapses of memory. Nothing is ever forgotten; our every step leaves a digital footprint. The Internet has become God, all-knowing, everywhere, incapable of forgetting. If you did it or said it, somewhere there was a record, etched in

magnetic domains or scribed in microscopic charges, and someday someone would find it. And use it.

She thought about Harry, the calls, the trysts. They were leaving a trail, she knew, though they both were savvy and had been cautious from the beginning. They paid cash at restaurants and hotels. Their frequent calls on company cell phones were like tracks in the snow, but would be easy to explain because their work required collaboration. The big risk would be someone from Scenaria seeing them together, a risk that haunted them both. Well, we'll burn that bridge when we cross it, she thought. Is it worth it, girl? Don't know yet, but God, it is good while it lasts. And it does last, doesn't it. She grinned at the thought of slow, unhurried lovemaking.

She undressed to her slip on the way to the kitchen, tossing her clothes into a hamper as she passed her bedroom door. A quick survey of the refrigerator turned up nothing promising. She thought of calling for takeout from the Thai place down the block, but settled on a frozen entrée. She stabbed the plastic cover several times with a kitchen knife, slid the tray into the microwave, and impatiently speed-dialed 444 on the touchpad before pressing start and heading back to the living room, where she opened the roll-top desk in the corner and booted up her laptop. Des was not one to sit quietly waiting—ever.

There was email from Dina with a link to the conference details. She clicked through, and the website for GAME IX, the ninth annual Game Arts and Media Expo, opened with an animated splash page of strange metallic creatures carrying bright neon bull's-eyes as they scurried in and out of a graphic landscape littered with deformed trees and rainbow-tinged rocks. A voiceover that sounded like a sex-starved female

buzz saw invited visitors to “Hit the target for GAME IX, *the* place for electronic game designers and developers!” Finding no link to skip the intro, Des hit the escape key and was rewarded by a spinning visual vortex that brought the conference homepage into view.

By comparison to the over-the-top splash page, the main site of GAME IX was tame, with a straightforward layout and simple navigation. Des mentally rated it an acceptable but uninspiring B-minus. She quickly downloaded details of the presentation schedule and special events, then called Dina again only to have to leave another message: “I’m good. I’ll take the train into the city and meet you at the conference registration at nine Monday morning. I still don’t know why I’m going to a conference for game developers. I do dull graphics for corporate. But I’ll be there.”

She was about to say more when she jumped at a sound. Her heart was pounding as she said a quick goodbye and set the phone down. She could hear someone in her kitchen.

2

HARRY KREBBER, JAW SET and forehead furrowed beneath his receding hairline, hunched over in the posture chair, studying the monitor screen as if ready to pounce on anything suspect. His index finger flicked rhythmically on the wheel of his mouse as he scrolled slowly through the logs for the third time. There was nothing there, and yet, he had seen the activity with his own eyes. On special request from the big boss, Richard Talpa, the Scenaria network was being shut down over the weekend for system maintenance. He hated having to come into the office on a weekend and knew he would be hassled by his wife, Dottie, for the absence from home, but Scenaria had a new project starting for the Department of Defense, and he needed to be sure that everything was shipshape and up to date for the unannounced but not unexpected site visit coming up.

Two telescoping LED task lights cast pools of ghostly brightness over the keyboard and a couple of open service manuals. Harry, convinced it helped focus his attention, kept the overhead fluorescents turned off whenever he was

working on a tough problem. There was little of interest to see around the room. Despite Harry's pivotal position in the firm, the crowded office was the epitome of grungy pragmatism, its walls lined with dun-colored filing cabinets and dull gray metal utility shelving, every shelf filled with manuals and books and binders. A second desk that Harry used as a work table was spread with papers and manila folders. Save for the soft ticka-ticking of a disk drive, the ratcheting of the scroll wheel on his mouse, and the muted hiss of cooling fans, the office was quiet. The only other person in the entire building was DB, an overweight database administrator and resident übergeek at Scenaria. DB, thinking that nobody knew, was contentedly playing computer games. Harry knew, and Talpa knew, but neither of them cared, because Douglass Botteneau, known as DB to everyone except his mother, worked 16-hour days, delivered his assignments on time, and never asked for overtime pay or extra leave. Besides, he was the best database man in the business.

Harry knew it wasn't DB. DB's computer was connected to a subnet that had been completely isolated. Nothing could go in or out. And yet there it was. The little flashes on a display panel that said something in the server bank was trying to talk to the outside world when nothing should have been. A few packets, that was all, and then it was gone. But Harry just happened to be looking at the right moment, and now he couldn't stop looking.

Had he worked any place else in the world, Harry Krebber would have written the glitches off as gremlins in the machine, an irreproducible fluke, and then gotten on with other work. But Scenaria was not any place else. Scenaria was, by the slimmest of margins, the leading security software

vendor in the country and arguably among the best in the world. Many thousands of companies and dozens of countries depended on Scenaria to protect them against malware, the endless and growing varieties of malicious software swimming like sharks through cyberspace. Scenaria was the arch enemy of software Trojans, viruses, worms, spyware, browser exploits, spam email, phishing scams, and drive-by downloads. Scenaria's products were the frontline troops and the last lines of defense against digital dreck and electronic evil. They kept hackers from altering websites and from turning PCs into zombies vomiting millions of unwanted email messages under remote command. They kept modern-day mafias and contemporary computing cabals from creating networks of bots that could batter the computer barricades and bring down a company—or a country. The attack on Estonia a few years earlier had been a crude warning shot across the bow that proved the concept, and the capability had grown exponentially in the years since. That capability, the capacity for malicious action, was the soil within which Scenaria's seeds took root and flourished. They thrived on the spreading paranoia and were nourished by virtual threats.

And now it looked to Harry that Scenaria's own systems might have been compromised. This was serious enough to take all the way to the top. And Richard Talpa, who was not given to speechmaking when not on camera, would say two words: "Fix it!" First, Harry had to isolate it, reproduce it, figure out what it was and what it was doing. Then he could think about fixing it.

He had disconnected the Scenaria system completely from the Internet. The company's web servers in Herndon, Virginia, were still online, telling the world that all was well

and everyone could sleep secure, but Scenaria itself was no longer part of that world. Harry next plugged in a specialized instrument and turned it on. It was a hardware packet sniffer, a small metal box that did nothing but sit and watch every chunk of information—every packet—that passed between Scenaria’s computer systems and the outside world. Software packet sniffers were more sophisticated and more flexible, but the crude capability of hardwired equipment was all that Harry would trust at the moment, since his job had taught him well that software, however carefully conceived, however thoroughly protected, could never be made absolutely inviolable. On the other hand, the wires and gates of hardware were what they were and did what they did. Period. No patch or email attachment or web script could make them do or become anything else.

Harry knew that the safety of hardware was, of course, only relative, because almost everything in the world of any sophistication was now computer controlled, and the computers were controlled in turn by software programs. DVD players, clock radios, copiers, TV sets, electrical meters, aircraft, and even power plants and substations, all were controlled by computer programs. His mini-van in the company parking lot not only had a main computer that monitored and controlled the engine and most vital electronic functions but also dozens of smaller, simpler, more specialized computers of more limited capability. And every single one of them, like almost everything digital on the planet, had a program in it—software.

Everything, that is, except for his shoe-box sized packet sniffer: a custom-engineered, handcrafted instrument that Harry, an engineer by training and a lifelong electronics

hobbyist, had wired himself. It was as big as it was because it was built out of hundreds of separate logic gates and components. It was Harry's obsession as Network Manager to have at least one tool that could not, even in theory, be compromised. It could not be programmed to do anything else but what it was wired to do. There was no program embedded in it. For this reason it was also obsolescent. There was no way to update it to deal with changing technology other than to take it apart and rewire it. Mostly it sat on a shelf in Harry's office, where it served as a conversation starter with job applicants but otherwise gathered dust.

Now, its power-on light was glowing again, and Harry was staring at the front panel. After twenty minutes without activity, Harry gave up. Under other circumstances, he might have headed for the company workout room to push his frustration into a vigorous round of weight training, but instead, he paced the halls aimlessly, obsessing, mentally chasing chimera, until he passed the only occupied cubicle in the building. Reflexively, DB shifted his display to show a complex entity-relationship diagram the moment he heard someone approaching. The diagram was a picture, an abstract and obscure one, of a proposed new scheme for storing information coming back from Scenaria customers.

Harry made small talk with DB, feigning interest in the data modeling problem on the display and pretending not to know that DB had been playing games. As long as the talk was technical, DB could be garrulous, quick to offer an opinion or suggestion, always eager to help, but Harry knew that the moment conversation became personal, even in the most casual way, DB could become awkward, retreating into monosyllables and shrugs. The whole office was curious

about the photo of a young woman that had recently appeared taped to DB's computer monitor, but everyone knew better than to ask. Rumor had it that she was somebody he had met online.

"When are the servers going to be back online?" DB asked, after a few minutes of chitchat about database normalization and the high art of configuring stored data for speed and reliability of access and update. "I need to stash a backup copy of this model before too long. We are not supposed to have the only current copy on our desktop machines. The Mole doesn't like it." He had used the nickname by which most of the techie types in the firm referred to their CEO. Some of the newer hires conjectured that he had once been a spy, a mole, for the CIA, and some stories even said that it was his work as a spy that had landed him in a wheelchair, but Harry knew that Talpa had lost his legs in the last days of the war in Vietnam and that the nickname had followed him since childhood, after a school chum had discovered that *talpa* was the Italian word for mole.

"I'm working on a puzzle," Harry said, without offering further explanation. "We should have the servers up and all of us back online to the world pretty soon. An hour, maybe two. I promise." He turned and departed for his office.

Harry's magic box was still winking silently, but a strip of paper was sticking out like a mocking white tongue from the built-in logging printer. On it were a few printed lines of network activity, including some asterisks for packets of types the box had not been wired to recognize. Harry checked several displays to verify that nothing was running except the bare core of the operating system, yet something was trying to talk with the outside world. What if I actually reconnect and

let the packets out, he wondered. Who or what might respond? He threw a switch on a hardware firewall and waited and watched, checking displays for twenty minutes before the printer once more spat out a few lines. Nothing came back, but when he returned a half hour later with a grande latte from the Starbucks down the block, the printout showed a single packet, flagged with an error code. Harry stared at the undeciphered message from the outside world before ripping off the strip of paper and wadding it into a tiny ball that he snapped with precision into the wastebasket beside his desk.

Despite his promise to DB, he kept the servers offline over the entire weekend. Nothing more appeared on the printer of his magic box. Maybe it was gremlins. Harry, however, did not believe in gremlins. And neither did his boss. There was going to be hell to pay on Monday unless he found something, an explanation, or at least devised a plausible story. But he knew that only actually figuring it out and fixing it would be fully acceptable to Talpa—or to himself. He took another sip of coffee before setting out on the tedious task of rebuilding the system software from scratch. It would take him all night.

He was still at it when he heard a soft whine as Richard Talpa came rolling down the hall just after seven in the morning. Talpa pivoted his computerized wheelchair smartly and precisely into Harry's office. Always at the leading edge of any technology, Talpa had signed up for the \$26,000 "mobility system" when the iBOT was first announced and then bought four more just before the product had been discontinued in 2009. Talpa and his wheelchair were the face of Scenaria. Photos of the broad-chested billionaire with his buzz-cut gray hair and bushy eyebrows—always dressed in his

trademark black blazer and gray MIT tee shirt combo and seated like Internet royalty in his high-tech mobile throne—were almost as ubiquitous in the trade press as the company logo was.

Talpa would be among the first to acknowledge that he was not the only genius at Scenaria—he prided himself in attracting and retaining the brainiest in the business—but he was the one who had started the company and steered it on the road to success. His patented algorithms for recognizing the telltale signatures of malicious software and detecting suspicious program activity were the engines that powered their products, and his knack for astute business moves just ahead of the competition had steered them steadily toward market domination. They were on their way to becoming the Google and the Microsoft of security software largely because of his brains and his determination. He was an aggressive manager who would do whatever it took to build the company—his company—and he was not above bending rules if it advanced his agenda. Employees and suppliers said he acted like he owned the place; as majority stockholder, he did.

“What’s up?” he said, as he pulled up beside Harry, a hint of impatience impressed on the casual question. “The network is still down?” His dark Mediterranean eyes narrowed as he cocked his head.

Harry put his head in his hands for a moment before answering. “We got malware in one of the servers, I think. Can’t see how, but it was there. Doesn’t seem to do anything as far as I can tell. All the files seem fine, and none of the computers I checked has been turned into a zombie, but there was something in there that was trying to call home. Now it just seems to be waiting for Godot.

“The thing only seems to be on one box, and it was pure luck that I found it. I’ve done a byte-by-byte check of the operating system files and turned up nothing. Then I wiped and scrubbed the disk and rebuilt the system from scratch and got the same signal that shouldn’t be there. I finally just powered down the box. I don’t know what else to do at this point.”

“That doesn’t make sense, Harry. There’s just no way our systems could get infected. And surely you had the box isolated when you worked on it.” Harry nodded. “All right. Do what you have to. Just make sure we are clean. Absolutely clean. Understood?”

“Yeah. I’ve got a hardwired packet sniffer that I’ll use to check each box before it goes back online. Don’t worry, I’ll give you a clean system. I promise.”

But it turned out to be a promise he couldn’t keep.

3

KARL LUSTIG SAT, TURTLE-LIKE, his shoulders hunched, his white-bearded chin tucked into the front of his down jacket as he fussed over the final paragraphs of his regular blog for iTech Weekly Online. He had already turned down the heat in the apartment in preparation for once again abandoning his Beacon Hill pied-à-terre and returning to Israel. The business trip had been a sweet-sour success, a messy multi-way negotiation of property swaps and purchase-and-sales agreements the net result of which had been to dump an apartment building that had become the victim of both the real-estate slump and shifting demographics. It was not a good time to be selling property in Boston, but the complicated deal Karl had managed would help to minimize his losses. Karl did not enjoy managing Benjamin and Hamm LLC, the business he had, in effect, inherited, when he had married Shira, the widow of an old college chum. He would have preferred to cash out completely, but it was also not a good economic climate in which to be thinking of unloading the business. On the plus side, the corporation did give him regular excuses to

fly back to Boston and see friends. On the minus side, it took him away from his family and the work he really loved, which was not the work that showed on his business card, the one that read: Consultant and Technical Writer. Someday he wanted to be able to strike the first three words.

Karl finally gave up trying to find just the right wording for the closing paragraph of his blog and simply posted it as it was. He knew that few other bloggers and even fewer of his nerdy readers would care that much about his choice of words or his phrasing, but he had a perfectionist streak a yard wide and held himself to high standards. It was, he knew, one of the things that kept him from progressing toward the one-word business card of his dreams.

He was about to close his laptop and finish packing for the trip home when he noticed an icon in the system tray winking at him from the lower corner of the screen. There was a text message from Anat Dorfman in Israel that asked him to call her on her private office line before leaving Boston. The number was intentionally not in his contact list nor his phone book, and it had been some time since there had been any need of calling her, so he had to open an encrypted folder to retrieve the phone number.

She answered in Hebrew but then switched to English when she realized who was calling. “I am so glad I caught you before you left the U.S. I could have gotten your new cell number from Shira, but, well, I have a small favor to ask, and I didn’t want to bother her.”

Karl hesitated, but said, “Sure. How can I help?” In his experience with Anat and her cohorts, small favors had a way of ballooning into bigger favors and even bigger trouble. Anat worked for *HaMossad l’Modiin u’l’Tafkidim Meyuhadim*, the

Institute for Intelligence and Special Operations, the elite Israeli intelligence group known colloquially as simply *HaMossad*, the Institute.

“Your itinerary shows you are flying back through IAD,” she said.

His impulse was to ask her how she knew his flights, but, of course, knowing things was her job, and as Chief of Technical Services, she had the technology to find out pretty much whatever she wanted. Karl just grunted noncommittally into the phone.

“Look,” she said, “we need to rebook your return with a stopover in DC so you can attend a conference next week and check out some people for us. The usual arrangement.”

This time Karl groaned in response. The “usual arrangement” made Karl a temporary *Mossad* asset but would leave him swinging alone in the wind if anything went wrong. He was neither a trained agent nor a mere *sayan*, one of the thousands of unpaid volunteer sympathizers who provided selective support and occasional services for the *katsas*, the field operatives of *HaMossad*. Karl had, in a sense, married into the business after becoming involved with the widow of one of the Institute’s star players. His was a life of liminality, poised on a threshold, neither inside nor outside, his roles as fluid and shifting as the sands on the Cape Cod shoreline.

“Karl, I wouldn’t ask, but we just recalled our permanent senior DC *katsa*. We would much rather use professional resources and, if we had the right person in place with a plausible cover story ready we would, but we need some information quickly, it’s technology deep, and you just happened to be there now, ready-equipped with a real cover story. We just need some preliminary intelligence to give us a

leg up while we assemble the right resources. Nothing really high risk for you, not at this point. You still carry, don't you?"

"No real risk, eh? Yes, I still carry. But I haven't had any need for a handgun since that target practice with the robots."

Anat laughed at the allusion to his last work on behalf of *HaMossad*, when he had ended up being drawn into fending off an assault on *Har HaBayit*, the Temple Mount. "Well, you shouldn't need it," she said. "It's just video games this time."

"Now I'll admit you have my interest," he said. "Fill me in."

"Not now. We'll courier a package to you through the Embassy in DC."

"Okay, I had better get on the phone and try to postpone my flight back to Tel Aviv."

There was a muffled conversation in the background, a quick exchange in Hebrew. "No need to do anything, Karl. My people just took care of that for you. And we already arranged with your publisher for you to be on a new assignment, which your editor will explain. We have you booked into the brand new Meredith Hotel. Pretty posh digs. The conference is in the convention facility practically across the street. But all the details are in the package. Look, it's late here, and I still have some things to sort out on this end. Good luck."

"You seem to be way ahead of me on this, Anat. You do know, don't you, that I might have said no."

"No, you could not have said no. We know you, Karl Lustig. We know you. So, have fun in DC. Work fast, be careful. Shalom."

Karl wanted to ask another question but just said, "Shalom." Anat had already hung up.

He checked his watch and started ticking off items on his mental to-do list. He would need to let Shira know. The details would have to wait until after he picked up his package in DC, but in the meantime he needed to work on his own “plausible cover story” for his wife. He quickly drafted an email saying that he had gotten a bonus assignment from InterMetroGroup and would be staying over a few extra days in Washington. If she learned he was working with Anat again, she would not be happy, particularly since he had promised after the baby had arrived not to get involved anymore. So much for promises, he thought. Karl winced. He prided himself in being loyal and trustworthy, and he hated even the smallest deception when it came to Shira. But he also knew that saying more now would only make her needlessly anxious. She had enough on her plate with taking care of the kids alone and keeping up with her business. A successful silversmith, she had recently accepted a request to design a complete line of jewelry for an upscale American chain. It was a new direction for her, and she was working long hours against an approaching deadline. Karl did not want to give her yet another reason to be stressed.

He finished his email to her with an apology for the change of plans, his hopes that the work on her new contract was going well, and a promise to call her from DC after he was settled in there.

Working his way down his revised list of things to take care of, he started to pull apart the telescoping handle of his well-traveled rolling duffle bag. From inside the thick extrusion, he retrieved the parts of a one-of-a-kind Glock that was on long-term loan from Ulrich Bremer, an industrial designer and old friend in Germany. No ordinary weapon, the

9mm automatic had been designed and custom built by hand to break down and fit discreetly into the luggage handle. With its exotic materials and its few metal parts designed to cast ambiguous shadows in x-ray images, the handgun and the bag had already made it through airport security in seven countries without detection.

Karl reassembled the Glock, checked the action, and pantomimed a few practice shots before breaking it down again and restoring it into the storage space inside the handle. Karl, whose shooting skills had first been honed on the target range in college competitions when he was still a student at MIT, had never particularly liked the Glock, but it had proved useful on more than one occasion ever since Ulrich had tricked him into taking it with him on his very first trip to Israel, the trip when he had met Shira and started on the path that had led him to a new home and a new life. It was a life that had proved to have a perverse way of entangling him in intrigue.

He wondered what Anat was getting him into that would prompt her to ask if he was carrying. He would find out soon enough, he surmised.

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In a small office in a non-descript high-rise building in Tel Aviv, Anat Dorfman finished an on-screen form and turned to her assistant. “I know what you are thinking, but it’s right up his alley, and he’ll be on-site in the morning. It’s about computer programming, just programming and technology, stuff he is good at.” She arched her thick eyebrows and opened her broad mouth as if posing an unasked question or looking for approval from Rahel. Technically, Rahel Hassan

was her assistant, but, ever since Anat had taken over as Chief of Technical Services, they had developed a close working relationship that was more like a partnership than boss and subordinate.

Rahel, who in her typical rush-around fashion had already started to leave for her own desk across the hall, swiveled quickly with a toss of her short ponytail. The worried look that was her everyday face deepened with disapproval. “Lev set a bad precedent,” she said, referring to Lev Novikov, Anat’s husband and predecessor in the post Anat now held. “Karl is a nice guy, not one of us.”

Anat took a deep breath. “You’re right, of course. And he’s an amateur. But he consistently comes through. He is calm in a crisis and can, when needed, be deadly. If he were younger, I would be recruiting him. As it turns out, his age is to his and our advantage. Who would suspect a quiet, gentleman geek with white hair? He’s American, a journalist, of sorts, and has deep loyalties to Israel. He knows how our game is played, and he plays it with dogged precision. Need I go on?” She flipped open a folder on her desk. “Anything new from the analysts who have been going over the disk from that laptop?”

“Not yet. That’s what we have: one missing hacker, presumed dead, and a hard drive full of incriminating emails and cryptic code. We do know that Elliot Feldersmann was registered for this conference in DC and had booked a flight but never got on the plane. He left behind his laptop, his MP3 player, a video game console, and all his clothes. We presume we got to his apartment before *Shabak* or anyone else did because we had him under surveillance since he was released from custody and knew the very instant he was a no-show for

his flight. There could be hell to pay if it ever comes out that we were operating inside Israel and stepping on *Shabak's* shoes, but Feldersmann did contact us first from Japan before he was deported.” The territorial disputes between *Shabak*, Israel’s domestic intelligence unit, also known as *Shin Bet*, and *HaMossad*, it’s elite international agency, were a long standing tradition in the intelligence community, much as were the occasional skirmishes between the FBI and the CIA in the United States. In both countries there was both cooperation and competition—the cooperation sometimes somewhat short of full and the competition not always of the friendliest variety.

“Well, I hope Karl can get something for us quickly. Of course, not all our eggs are in that basket. Stay close to Shimon and his computer cowboys, and let me know the minute they decipher anything more.” Shimon Weizkopf was in charge of the computers that were, to the consternation of some of the old-timers, increasingly becoming the eyes and ears and memory of *HaMossad*. Weizkopf also honchoed some of the brightest computer hackers in Israel, an elite group of gifted mental misfits he had personally recruited and nurtured into a vital resource in the current era of cybercrime and Internet terrorism. It was *HaMossad's* unofficial and unacknowledged answer to Unit 8200, the military intelligence group known for its cyber-warfare exploits. Relationships between the Institute and *Aman*, which oversaw military intelligence, were often as muddy as those with *Shabak*.

“This is decidedly weird business,” Anat added, after a pause. “Why computer games? Why security software? We depend on that software for the integrity of our own computer

systems. We need to figure out what is the link between Feldersmann and this Destiny Allen, who works in software security but is attending a computer game conference. What is the connection here?”

Rahel chewed on her lip, but said nothing.