

CHAPTER 5

Monday, December 2

Decker sat at his workstation at the NCTC, with Vladimir Ivanov perched on a bright purple Pilates ball at his side. On loan from the NSA, the young Russian-American was Decker's favorite code jockey—not so much for his computer skills, but for his wit and unconventional thinking. They were watching a host of computer terminals. One alternated between a satellite image of downtown Philadelphia, Center City, at Arch Street and Third—H₂O₂'s loft—and a view of the same building from a traffic cam down the street. Thermal imagery revealed a figure moving about in the kitchen area. Another three monitors displayed the screen content of H₂O₂'s three computers, courtesy of his ISP. And the last featured a video image of Special Agent Chip Armstrong in the apartment just down the hall, across from H₂O₂'s loft. Three other agents in body armor and helmets stood around him by the kitchen counter, drinking coffee.

“So, how did you find this guy?” Armstrong asked.

“It was Decker,” said Ivanov. “He wrote this tense algorithm that searches for code abnormalities. Go on, tell him. Frankly, I didn't think it would work.” He reached into his pocket and pulled out a candy bar.

“There's no food in the Crypt, Vlad,” said Decker.

“This isn't food. It's a Snickers bar.” He ripped off the wrapper and took a large bite. Ivanov was barely in his twenties, and yet worked for one of the most secret intelligence-gathering agencies in the world. He wore a pair of black jeans so tight you could read the date on the quarter in his front pocket, a dark purple paisley shirt, and a skinny black leather tie. His head would have been remarkable as being rather too big for his body were it not for the glasses he favored. With black plastic rims and thick lenses, they dominated his face. He looked like a Russian Buddy Holly.

“The NSA has other hackers you know,” Decker said. “You could always go back to Camp Stuxnet.”

Ivanov blanched. “Gulag Stuxnet, you mean. You wouldn't.” He stuffed the rest of the candy bar into his cavernous mouth. “Don't get mad—get Vlad. You see.” He opened his mouth. “All gone, Mat.”

“Mat? *Eb tvoju mat'*,” cursed Decker in Russian. His accent was flawless.

“What's Stuxnet?” asked Armstrong.

“A computer worm designed to penetrate and slow down Iran's nuclear efforts,” said Decker. “Came out of Bush's Olympic Games program. Took out nearly a fifth of Iran's centrifuges at Natanz before it somehow escaped.”

“Escaped? You make it sound like a zoo animal,” Armstrong said. “What do you mean escaped?”

“In the old days, CIA introduced faulty parts and such into Iran's nuclear systems, but that didn't do much,” said Ivanov. “Then, General Cartwright of StratCom persuaded George W to try a computer worm instead. Remember, this was after the President had been caught overstating Iraq's WMDs. So, since he'd already cried wolf once with Saddam, Bush turned to cyberwarfare, figuring no one would believe him enough to support traditional attacks on Iran. The plan was to gain access to the Natanz plant's computer controls and take down the centrifuges they were using to refine uranium. To dissuade the Israelis from carrying out their own preemptive military strike, the Shin Bet was brought into the program. That way the Israelis would know it was working. And, for a while, it sure did.”

“What happened?” asked Armstrong.

“In the summer of 2010, shortly after a new version of the worm had been activated, it escaped,” Ivanov said. “It was designed to stay in the Natanz machines but it spread to some engineer's laptop when it was hooked up to the centrifuges. Later, when the engineer took his laptop home with him and went online, it jumped to the Net. For some reason, the worm failed to recognize the environment had changed.”

“Bad programming by the Israelis,” Decker said. “That's what I heard.”

“It wasn't Unit 8200,” countered Ivanov.

“That's Israel's Cyber Warfare group,” Decker explained. “How do you know?”

“Because I know those guys,” Ivanov said in a huff. “I'm telling you, it wasn't their code.”

“Then it must have been yours.” Decker suddenly remembered that Ivanov was Jewish. Russian, by way of Astoria, Queens.

“Wasn't ours either.”

“Then who, Vlad? Someone messed up the code. It wasn’t the man on the moon.”

The young Russian shrugged. “I don’t know. We’re still trying to figure that out. Maybe you should look into it.”

“Me!” Decker laughed. “I’m not a programmer, Vlad.”

“You got skills, yo. Go on. Tell Armstrong.”

“Tell him what?”

“About your new algorithm. It runs against server logs. Super elegant. Worked like a charm against Westlake. That’s how he spotted the break-in. It was simply a matter of waiting it out after that. How did you get the idea for it, anyway?”

“The *naseeb*,” Decker answered.

“The what?”

“It’s a kind of pre-Islamic Arabic verse, a poetic convention. Functions like a Western ‘Once upon a time.’ You know.” He stared at Ivanov, then at Armstrong on screen. “It settles the audience by setting the scene with something familiar, in this case the revisiting of a deserted camp. The Tuareg use it all the time in their poetry.”

“Oh, yeah. That cleared it right up,” Armstrong said.

Decker sighed. “In the Tuareg oral tradition, since nothing’s been fixed, written down, the same poem changes with each recitation, with each poet. Different interpretations and styles. Different details. Different names, even, in some cases. But the themes remain constant. Like the one about revisiting a deserted old camp in the desert. One such poem begins, ‘Is it because of a deserted camp whose traces are erased/That you tarry in a hidden trap of ecstasy, of love,/A place where tears are shed.’ That’s what my program was intended to do. To look for abnormalities in programming themes, algorithms exhibiting cipher characteristics across server log data sets.”

“Chasing pointers,” said Ivanov.

“My brother-in-law owns a Touareg,” Armstrong said, slurping his coffee.

“They’re a people,” said Decker. “Not just a VW SUV. They live in the Sahara.”

“What turned you on to pre-Islamic Arabic verse?” queried Ivanov. “That’s arcane even by my standards. You don’t get out much, do you, Decker?”

Decker laughed. “Not when you only count 3:00 AM raves.” Then, his crooked smile faded. “A suspect attached to the El Aqrab case was a Targui. That’s what they call Tuareg in the singular. Ali Hammel. From Algeria. I was studying his culture.”

“I hate to break up this fascinating ethno-poetical analysis,” said Armstrong. “But isn’t it time yet?” He glanced at his watch. “Now I know why I opted to work in the field instead of hanging out with you analyst types back at headquarters. Arabic poetry. Saharan love themes. Vital to Homeland Security.”

Ivanov leaned into Decker and stage-whispered, “I think Special Agent Armstrong mocking us.” His Russian accent was preposterously thick now. “I know my Engleesk not good but I can taste irony.” He stood up and put his nose to the camera. “He isn’t on yet. It’s only 2:30. He generally doesn’t get started again until 3:00.” Then he pulled back and stared blankly at Decker’s workstation panels, made of some gray washable fabric, at his orderly desk, lined with stack upon stack of tidy reports, color-coded, and finally at Decker himself.

“Speaking of hidden traps of ecstasy and love, how come you don’t have any pictures up in your cube? Everyone else does.” Ivanov fell back on his ball, spun about. “Crandall and Peterson have their wives. Thompson and McCullough, their kids. Keene and Margolis, their girlfriends.” He nodded at the other workstations in the Cryptanalysis Section, or the Crypt, as it was commonly called. “Even Castro has her significant other. But not you.”

“Haven’t found the time,” Decker answered.

“You’ve been assigned to the NCTC for six years.”

“Been busy, I guess.”

Decker was relieved to hear a small *ping* coming out of his terminal. He glanced at the thermal image of H₂O₂’s loft. The red dot marking the suspect had moved back to the living room. “He’s online again,” Decker said.

With the Associate Director's approval, they had kept H₂O₂ under surveillance for the last seventy-two hours. During that period, he'd spent most of his time holed up in his loft in east Philly. His movements were becoming predictable. He generally woke up quite late, ate breakfast at home, and went online around noon. He surfed news sites and chat rooms, read email, and downloaded porn for the next hour or so before starting his serious hacking around 3:00. The day earlier, he had returned to the Westlake Defense Systems server at 2:53. It had only been for a minute or so, and he hadn't entered any new code. He'd just lurked about for a while, no doubt checking to ensure things looked normal.

"I still don't see why we just don't arrest him," said Ivanov. "He crack-rooted a top secret facility."

"You know the procedure," said Decker. "Stronger case when you catch them online, the connection still open. Otherwise they always claim they were out buying a taco some place at the time. Someone else was using their terminal."

"I can tell that it's him."

"How do you know?"

"KRAP."

"What did you say?"

"I used KRAP—my Keyboard Recognition Analysis Protocol. That code that I wrote over Thanksgiving, remember? Exploits Javascript timing features to measure the cadence of typing as users enter login credentials. By watching H₂O₂'s logins over the past three days, I've been able to categorize his cadences into a digital pattern. Maybe one in twenty thousand share the same pattern, but by appending other data, it's probably closer to one in ten million. Believe me. It's him."

Ivanov pointed at the red dot on the terminal. Almost as if on cue, the dot started to fade. "What the . . . Look at the thermal monitor." He tapped at the screen. "He's vanishing. Is the window open? What's the temperature?"

Decker glanced at a view of the loft from the traffic cam down the street. "No, it's closed. And it isn't *that* cold."

"He's entering the Westlake Defense Systems server. Time to go, Armstrong," Ivanov said.

Special Agent Armstrong leaned forward, pressed a button, and the view on the monitor switched to the micro-cam fixed to his helmet. The view swiveled right as he reached for his M4 assault rifle. The other men picked up their weapons. Decker watched as they opened the door to the apartment and filed one by one into the corridor.

Decker glanced at one of his other monitors. The screen featured lines of code as H₂O₂ used the Trojan he'd planted earlier to slip through the Westlake Defense Systems firewall. Moments later, he was in.

"Clear," someone said.

Decker turned back to the first screen. Armstrong was out in the hall now. His camera jostled and bumped as he ran down the corridor. One of the other FBI agents stopped by apartment 5F. He was carrying a stout metal battering ram. He lifted it high in the air and pounded it with all of his might against the face of the door. The wooden frame crumbled and they were suddenly through.

Music blared in the loft. The Black Eyed Peas. *When we play you shake your ass. Shake it, shake it, shake it, girl. Make sure you don't break it, girl.*

The FBI agents streamed through the 2,000-square-foot loft, visors down, weapons drawn.

"Freeze," Armstrong shouted through the music. "FBI. Put your hands on your head."

Decker could see H₂O₂ at his keyboard, framed by a triptych of monitors. He was a skinny kid in a dinosaur t-shirt, with a shaved head and the tattoo of a bug on the back of his neck. He was wearing a set of black headphones.

"Clear," someone shouted. "He's alone."

"I said put your hands on your head!" Armstrong moved closer.

It's like playing a video game, Decker thought as the special agent leveled his carbine. *A first person shooter. Except this is reality.*

"He isn't responding," said Ivanov.

"I can see that," said Decker.

“No, I mean he’s still typing.” Ivanov pointed at the monitor with the Internet feed. “But on the cam, he’s just sitting there. See?”

Armstrong finally stepped up to the suspect and poked him. H₂O₂’s head tipped to the side, his headphones slipped off, and a fountain of blood cascaded from a hole in his temple.

The music blared on. *Turn it up, turn it up. Turn it up, turn it up . . .* One of the FBI agents touched the sound system and the loft fell suddenly silent.

“He’s dead,” Armstrong said. He let go of the young hacker’s neck. His head slumped forward onto the keyboard. In the background, on all three of the monitors, the furious typing continued.

“I don’t get it,” said Armstrong. “If he’s dead, who’s doing the typing? Do you copy? Decker, come in.”

“We copy,” said Decker.

“It’s a zombie,” said Ivanov. “A drone. His computer is being driven remotely.” He reached out for a keyboard, began entering code.

“By whom?” Decker asked him. “From where?”

“Just give me a minute,” said Ivanov, still typing away with precision. “Vladivostok. No, sorry, Vermont.”

“What?”

“I mean Uzbekistan. No, wait. That isn’t right either. From . . .”

“From where, Ivanov?”

Ivanov looked up from his keyboard. His thick lenses glowed like a pair of full moons. “I have no fucking idea.”