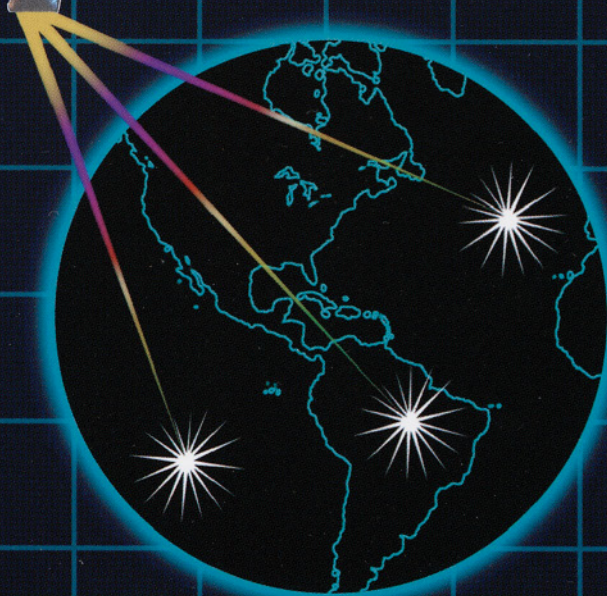


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# VIRUS

WARNING: Critical Alarm  
SYSTEM FAILURE: All Airborne Aircraft in Danger  
SITUATION: CRITICAL  
CAUSE: Unknown  
SOLUTION: Unknown



A Novel by

**Bill Buchanan**

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# VIRUS

Bill Buchanan

# PART 1

## A DISASTER OF TECHNOLOGY

Day 12 — December 18, 2014

# CHAPTER I

*THE DILEMMA, 12/18/2014, 11:15 P.M. LOCAL*  
LOGAN INTERNATIONAL AIRPORT,  
BOSTON, MASSACHUSETTS

General Dan Mason listened intently as twin General Electric engines accelerated the McDonnell Douglas flying wing down the runway into the ink black abyss surrounding Boston's Logan Airport.

As Mason scanned the runway looking for ascending aircraft lights, he saw only the pitch black of night. Every light at Logan was dark, including those used to illuminate the runway. Logan's air traffic control tower and terminals were deserted, the parking lot empty. Standing alone on the air traffic observation deck, wrapped in his wool Air Force overcoat, Mason inhaled deeply so he could hear the engine noise over the sound of his own breathing. The dense December fog off Boston Harbor smelled of kerosene and salt.

As the jet engine noise faded across the harbor, Mason cupped his hands behind his ears listening for a change in the engine's pitch and direction.

Suddenly, like a distant bolt of lightning, a brilliant yellow

flash ignited the sky illuminating rows of aircraft silhouettes parked wing to wing. Immediately after the flash, the early morning silence was shattered by the thunderous crash of an explosion.

Supreme Commander Dan Mason felt the full weight of his new command during the agonizing silence which followed. Tears welled in his eyes as the flying wing broke up, separated from both engines, then spiraled silently into the harbor. Lieutenant Colonel Wild Bill Boyd was dead; his test aircraft — designated the *Black Hole* prototype — destroyed. Mason felt emptiness, an ache in his soul he could not escape. He tightly gripped the hand rail, his knuckles white, his complexion ashen. This night had been the longest of his life and still, despite their best efforts, nothing was flying — nothing had flown for eight days.

Airports around the world stood deserted. All flights canceled until further notice.

Mason stared glassy eyed and motionless in disbelief. Transfixed to the darkness, pondering this chaos, he wondered how they'd come to this. He knew how and why this had happened, but had no solution. As Mason saw it, Hell Fire's crew was now the only remaining hope they had left.

In his dismay, Mason had forgotten to breathe. He gasped for air, struggled to catch his breath, and walked slowly toward his limo. Once inside, he put his hand in his pocket, rubbed the five star shoulder boards of his former boss, and began looking back on his memories of the events which led him here.

It would be a long ride back to his headquarters at Cheyenne Mountain.

## PART 2

# THE BAD SEED

Day 1 — December 7, 2014

## CHAPTER 2

*THE MISSION, 12/07/2014, 2:15 A.M. LOCAL*  
**HANGAR X-39A,**  
**EDWARDS AFB, CALIFORNIA**

Major Linda Scott stood staring at Hell Fire, mesmerized as she watched the fog boiling off her space plane. Nostalgic, she yearned for a return to happier times. In the past six years, she'd lost the two men in her life who'd meant the most—her father and her husband. Her life hadn't turned out like she'd imagined, but all things considered, life was good—well, work was good and work had become her life. Above all else, she loved the rush of high performance flight.

As a woman, she'd had to work harder than the men to prove herself, but she was the best and had Hell Fire to show for it. The daughter of an SR-71 Blackbird pilot, she'd loved airplanes and flying from the time she could walk. Flying was something she had to do, she'd been born to do it. It bound her to her father even after his death.

There was something almost spiritual about her flying. She had something extra going for her that no one could put their finger on. If called on to be serious, she could be

serious. If called on to be decisive, she'd deliver, but she never took herself too seriously. In flight, she became an extension of Hell Fire—together, they responded as one.

Like many fighter pilots, Scott was short by male standards. Built to fly, she stood a trim five feet seven inches tall with straight black hair cut in a nineties bob. She took pride in her well-defined jaw line and high cheek bones. At thirty-six years old, she didn't want a double chin if she could help it. She feared getting fat so she worked out hard and often. Her smooth white skin contrasted vividly with her rose colored cheeks, black eyebrows, and long eyelashes—she seldom wore makeup, didn't need it. Most of the women she knew hated the way she looked, but not the men.

Her two man crew often described her as perky, direct, and unstoppable—a woman who got what she wanted with gumption. Like her flying machine, Scott was a masterpiece to behold and fascinating to understand.

Scott'd pursued her passion for flying like an addiction, but her passion, like any addicting drug, hadn't come for free. Flying cost her the only man she'd ever loved, but that was a long time ago. Now it was over, or at least they'd been divorced five years. Divorcing Jay Fayhee had been the biggest mistake of her life, but he'd asked for the divorce—on grounds of desertion. She was never home, but neither was he. Every Air Force officer knows *the needs of the Air Force must come first*. She'd been assigned to the only XR-30 squadron in the country, located at Edwards AFB. On Jay's dream sheet, he'd asked for a space station assignment and gotten it—an assignment to the NASA installation at Huntsville, Alabama for extensive space station training. Again, the only place in the country where space station training was available. They had gotten what they'd asked for but their extended separation plus fast available women led to a painful divorce.



Occasionally filled with doubt, she wondered if she'd made the right choices along the way. Most of all, she wondered about children, the children only she had wanted, the children they never had. She wondered about who they might have been, about their hopes and dreams.

If her crew could have read her mind, they would have been surprised to find her capable of self-doubt. Mac and Gonzo believed her the best—they ought to know—they'd been through a lot together. You couldn't do any better than a space plane slot at Edwards and Hell Fire had Scott's name on it.

Jolted back to reality by a loud ratchet-like clatter, Scott peered through the fog to find Mac closing the recessed missile bay inside Hell Fire's short stubby wing.

Above all else, chief master sergeant Andrew Mac MacWilliams was a good man in a storm—tall, black, distinguished in appearance, absolutely wonderful with people, and smart—especially smart. Scott thought Mac the sort of man who could do it all—the son of a tobacco farmer who could set anything right and she loved to hear him talk. When he spoke in his deep North Carolina drawl, people couldn't help but notice his reason, humor, and honesty. Like Scott, Mac was a survivor and like many successful military men, he was one of those people who believed it was always easier to get forgiveness than to get permission. With an appreciation for Mac's strength of character comfortably entrenched in her heart, Scott turned her attention to the task at hand.

*Cruise missiles loaded* she thought.

Tonight, inside Hangar X-39A under the orange-yellow glow of Halogen floodlights, Scott and her crew climbed the access scaffold leading to Hell Fire's mammoth power plant. After stepping from the scaffold into Hell Fire's engine inlet, Scott, Mac, and Gonzo began their preflight checklist.

Deep inside Hell Fire's cavernous air breathing mouth, Scott stood dwarfed by six enormous scramjet engines, each with circular blades stretching seven feet from floor to ceiling. As she and Mac slowly turned the free wheeling blades looking for damage, Major Carlos Gonzalez shined a high intensity light into the engine from the front looking for misplaced or forgotten tools.

Major Carlos Gonzalez was Hell Fire's back-seater and Situation Awareness Evaluation Systems Officer (SAESO pronounced say-so). He'd been stuck with the call name Gonzo because of the slight twist in his nose. At first, he didn't like it much, but it grew on him. Besides, he knew three other pilots named Gonzalez with the call name Speedy. In flight, Gonzo was instinctively a no-nonsense survivor. He'd been one of the Air Force's premier flight test engineers before his space plane assignment and believed that quick, positive action was always preferable to hesitation. In high stress situations, he was prone to take any positive action that came to mind. Fortunately, his instinctive reactions were nearly always right. He flew with as little emotion as possible, forcing himself to stay cool through any crisis. Like Scott, he passionately loved flying and couldn't imagine life without it. On top of that, he fully expected to live through it all and die at home in his own bed. He sought no glory and didn't care if he pissed people off along the way. His concern was to keep flying and stay alive. He needed it like a man needs a woman.

After completing their engine inspection, Gonzo looked Scott straight in the eyes and spoke quietly. "I don't like it. We've got no control."

"Those DEWSATs could give us a bad day," Scott agreed. As she thought about their situation, she felt like throwing up. She paused, took a deep breath, then continued. "With

headquarters flying Hell Fire and Centurion controlling the DEWSATs, I feel like a sitting duck.”

Chief master sergeant Mac MacWilliams, their crew chief and reconnaissance system operator, raised both eyebrows. “Makes me feel a little skittish myself. Sounds more like a skeet shoot.”

“Yeah—Centurion’s got the gun and we’re the pigeons,” added Gonzo.

*Too many things that could go wrong, would go wrong,* Scott thought with a grimace. *Always happens.*

By the year 2014, stealth cruise missiles had been mass produced and forty-one third-world countries had them. Accumulating arms with a fanatical passion, Iran and Iraq had been conducting a huge arms buildup for over twenty years—since the end of Desert Storm. Iraq led the pack boasting an arsenal riveted with nuclear tipped cruise missiles and a small fleet of Russian Kilo-class (*Varshavyanka*) submarines.

To counter this unpredictable third-world threat, former NORAD, NATO, and Soviet countries united forming the Allied Forces, then fully deployed the Star Wars defense system—an orbiting armada of satellites.

Scott and her crew tested new weapons before they were officially accepted into the Allied arsenal. Tonight, they’d test the most important satellites in the Star Wars armada—the lethal workhorses—the DEWSATs (Directed Energy Weapon SATellites). Each DEWSAT was an orbiting counterstealth weapon system, a satellite that could detect and kill stealth missiles and aircraft from low earth orbit.

Within limits, stealth technology had made enemy aircraft and cruise missiles impossible to detect using conventional radar or infrared heat sensors. Each DEWSAT was designed to overcome stealth targets using an extraordinary radar, laser, and infrared telescope. In addition, anything airborne that

it could detect, it could destroy using its high power laser.

As part of the DEWSAT acceptance testing, Scott's mission tonight was to fly Hell Fire in an assault competition against Centurion—the space based super computer controlling the Star Wars defense system. The idea behind this testing appeared straightforward—launch stealth cruise missiles then watch Centurion track and tag them using the DEWSAT armada. Scott thought of this testing as a high-tech game of laser tag she preferred not to play because DEWSATs would steer their lasers toward both Hell Fire and her cruise missiles. When a laser tagged (illuminated) a threat, Centurion's defense team would score a hit. When any missile made it to target undetected, Scott's team would score.

Allied Headquarters believed their new *brilliant-class* DEWSAT would make stealth technology obsolete, but they needed testing and hard data to prove it. Scott, Mac, and Gonzo hoped headquarters was right but over the last two years, they'd been through several tests similar to this one.

"Twenty years in the service and I'm still working the graveyard shift," Mac said with a exhausted smile. "Looks like they're looking to put the stealth troops out'a business again."

"We've been trying to detect them for years," Scott said climbing down the scaffold. "With a little luck, tonight could be our night so let's get on with it."

"Roger Scotty." Mac toggled a blue switch on his hand held remote control unit. "Hell Fire's cooling down—fuel pumps running." Immediately, a snow white frost formed on Hell Fire's matte black nose, wings, and air breathing underbody. Hydrogen slush chilled to minus 435 degrees Fahrenheit would circulate throughout Hell Fire's heat shields during flight. Without this cooling, surface temperatures would soar to 5000 degrees Fahrenheit during hypersonic flight

and Hell Fire would disintegrate. The fastest aerospace plane ever built, Hell Fire was a massive flying engine fueled and cooled by hydrogen slush.

As Scott, Mac, and Gonzo walked under Hell Fire's nose, the trio zipped their flight jackets shut. A dense fog continuously boiled off Hell Fire and slowly settled on the hangar floor causing the temperature underneath to drop twenty degrees. Hell Fire looked like an enormous wedge of dry ice, an enormous fog machine, about the size of a DC-10.

Gonzo carried his flight systems checklist over to Scott. "Next problem: target Nevada Test Site—all missile's programmed and loaded." Gonzalez pointed to the Anti-SATellite (ASAT) missile mounting rails inside Hell Fire's stubby wings. "Mac hung'em on ASAT hard-points."

"Unarmed stealth hawks and ASATs?" Scott glanced at Mac for approval.

"Right Scotty. Twin ASATs and three Hawk cruise missiles. Headquarters ordered Hammer, Phantom, and Jammer Hawks," replied the chief as he led Scott and Gonzo to three duplicate cruise missiles on a loading rack alongside Hell Fire's front tricycle gear.

Mac looked across the hangar toward his office and noticed an ankle high fog layer had covered the floor. Extending his arm above his head, he signaled an airman to open the gargantuan hangar doors. As the doors creaked open slowly and warm air rushed in, the cool fog layer poured out of the hangar over the taxiway forming an eerie glowing ground level cloud. Hangar lights caused the cloud to glow while the warmer outside air caused it to swirl, boil then slowly dissipate.

Scott returned Gonzo's checklist and asked him, "What about Hope?"

"Covered. Got their parts and supplies loaded." Once their

testing was complete, they'd deliver replacement parts to Space Station Hope.

"And Freedom?" Scott paused. She felt her face flush. Major Jay Fayhee commanded Space Station Freedom. Her heart raced like she was a kid again in high school.

Gonzo looked at Scott's beet red face, smiled gently, then winked. "Yeah Scotty, we're bringing him everything he needs."

She looked forward to their *reunion* with mixed feelings. There was a part of Scott that wanted her dreams of Jay to come true, but another part prayed to get over him. "He meant more to me than I ever did to him," she sighed. After recovering her composure, she announced, "Then that's it. Checklist's complete. We're ready to go."

"Not quite," replied Gonzo. "We've gotta be sure those DEWSAT lasers are throttled back before we go anywhere."

Mac smiled a big toothy grin. "I'll roger that Gonzo. Those lasers deliver a twenty stick kick! They'd blow us out of the sky." From a distance of one-hundred miles, each twenty megawatt DEWSAT laser delivered a punch loosely equivalent to about twenty sticks of dynamite.

"We're expecting safe laser confirmation in fifteen minutes fellas," Scott said checking her watch.

Scott, Mac, and Gonzo climbed Hell Fire's access scaffold, carefully lowered themselves into Hell Fire's heated cockpit and strapped in. A towing vehicle attached itself to Hell Fire's front tricycle gear and slowly pulled her out of the hangar to the south facing end of the runway.

Sitting in the darkness forty feet above the green and blue runway lights, Scott, Mac, and Gonzo configured Hell Fire for take off then waited for their safe laser confirmation. Scott felt apprehensive about their sortie when she had time to think about it. For good luck, she felt underneath her

flight suit and rubbed something about the size of a dog tag nestled between her breasts. *Jay always loved it there* she thought with a smile. Around her neck, Scott wore a present Jay'd given her back in high school. Sealed in a smooth case of clear solid acrylic was a tiny four leaf clover he'd given her for good luck. As a diversion, she turned on their forward landing lights and leaned her helmet against the cockpit canopy. Watching clouds of condensation boil off Hell Fire's nose, she wondered *what's he doing now?*

## **Author Information**

Bill Buchanan, an electrical engineer formerly with Bell Laboratories and Raytheon, developed control systems and communication protocols for computer networks. In his past, as a captain in the U.S. Air Force Electronics Systems Division, he helped develop and test a side-looking prototype radar designed to penetrate foliage, eliminating the need for Agent Orange. He received a masters degree in electrical engineering from Mississippi State University after working as a graduate assistant at NASA. He and his family lived in Hampstead, New Hampshire until moving closer to his parents. He lives in the southeast now where he's writing his next novel.

### **Berkley titles by Bill Buchanan:**

**VIRUS, ClearWater, Pure Fusion**





In the 1990s, "smart" weapons have redefined how the military targets its enemies. In the near future, they will be replaced by "brilliant-class" weapons, controlled by artificially intelligent computers. Among these weapons is a devastating breed of computer supervirus that is virtually unstoppable. And when it invades the United States' defense technology, the world will burn in its fever...

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