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## THE CRASH OF '29

#### **Posted By: FastJack**

On February 8<sup>th</sup>, 2029 a virus no one had seen before appeared in NASA's satellite network. It was an exceedingly complex program: aggressive, unpredictable, and adaptable, and it quickly bypassed NASA's firewalls and spread throughout the internet. The virus's behavior was highly destructive, aimed at infiltrating systems, copying itself to other systems, deleting all files it could, and then completely and permanently disabling the system by causing hardware faults that would physically damage the system. Within minutes, the Crash Virus had infected and permanently disabled large sections of the global computer network.

The real-world impact was immediate and devastating. I remember waking up one morning and the power was out. I got dressed and went outside, but my car wouldn't start. On the walk to the café the traffic lights were out, and there was a jam—peoples' cars had stopped, and they just abandoned them in the road. At the café, maybe the lights were on, but the register was spitting out noise and the cashier couldn't take any orders. The café's television wasn't getting anything but static, and then the screen started flickering and something inside it began to overheat. Stomach rumbling, I went outside, heard a plane overhead, watched it fall into the distance—and then explode as it hit the horizon.

That was day one of the Crash.

#### ECHO MIRAGE

By the beginning of 2029, three companies—Fuchi Industrial Electronics, RCA-Unisys, and Sony Cybersystems had brought first-generation cyberterminals to market based on the ASIST (Artificial Sensory Induction System) technology developed by Dr. Hosato Hikita at ESP Systems in Chicago in 2018. These weren't the palm-sized commlinks that you see everywhere today; each cyberterminal took up an entire room and cost billions of US dollars.

The promise of a cadre of "cybercommandos" equipped with cyberterminals was too good for the United States government to pass up. My friends from those days tell me a skilled user could break through any existing security measures; any computer hooked into the worldwide network was vulnerable to intrusion. In 2028, the CIA, NSA, and IRS pooled their resources to create such a group: Echo Mirage. When the Crash of '29 hit and regular methods were clearly inadequate, the President authorized Echo Mirage—who were still undergoing testing and evaluation—to engage the virus.

The initial contact took thirty-two seconds. Of the original four Echo Mirage members, all graduates of military academies and training programs, I'm told two were rendered comatose, and two survived intact by ripping the plugs out of their skulls, but developed psychological problems so severe that they were unable to continue. Problems that still apparent thirty years later, when I found them as drooling idiots in government nursing homes.

Despite the initial loss, one thing the survivors and analysis of the record logs showed was that cyberterminal users were fast enough to combat the adaptability of the virus. With the right programs, and the right people, the Crash Virus could be fought on its own terms. An emergency draft scoured maverick programmers, computer scientists, and hackers from industry and universities; volunteers received their jacks and were run through a brutal boot camp that included recordings from the first Crash Virus encounter. Thirty-two made it through with their sanity intact.

Hacker groups were just starting to use their own homemade cyberterminals when the Crash of '29 hit; the most well known are those who would become known as Die Shockwellenrieter. I was working with them, and was one of the few to escape the Crash virus, though most of us lasted longer than the Echo Mirage team. The Egg, which operated illicitly on blacknets, severed its connections with the Matrix at large before suffering too much damage, and would later become the Nexus, the Denver Data Haven, though virus-related trouble would haunt the systems for years through many upgrades.

Meanwhile, Echo Mirage technical personnel were going over the logs of the first encounter and working on new programs to combat the Crash Virus and alleviate the psychological trauma of such encounters. With a deeper understanding of how the brain processed the ASIST signals and the latest optical chip technology, Echo Mirage engineers managed to do away with the sensory deprivation tank and conserve space; these second generation cyberterminals were the size of a desk.

In August of 2029, Echo Mirage launched another attack against the Crash Virus, which lasted 18 minutes and resulted in the death of four members by lethal biofeedback. Cyberterminals gave direct access between the brain and computers; lethal biofeedback was now a real possibility. While the Crash Virus would ultimately claim the lives of twenty-five Echo Mirage members, they continued to refine their technology and combat the Crash Virus, and became so effective that in the last eighteen months the casualty rate dropped off completely. The last concentration of the Crash Virus source code was eliminated in 2031, though sporadic glitches attributable to damage from the Crash Virus continued for years.

### AFTERMATH AND LEGACY

Without the Crash Virus, Echo Mirage was quickly shut down due to megacorporate pressure. From the first, it became apparent to government contractors that with their cyberterminals and programs, Echo Mirage could almost effortlessly access even the most secure computer systems. From 2029-2031, while governments and megacorps worked to rebuild their grids from the ground up around the quarantined and still-infected remnants of the old internet, corporations began researching ways to protect their systems.

The Echo Mirage members went underground, taking their programs and cyberterminal technology with them, which is where I met Erica Rutledge, AKA Static. She was the chief technician on Echo Mirage and went straight to the shadows, paranoid the government and corps were out for her brain. She taught me how to build my first deck.

The most famous EM survivor was retired USAF officer Major David Gavilan, who vanished in 2031 after an interview with Holly Brighton. In 2032, an individual named Damien Knight appeared on the scene and engineered the Nanosecond Buyout. This righteous hack utilized a complex program to complete a lightning-fast, incredibly intricate series of stock transfers that lasted for 63 seconds. When the dust settled, three corporations had ceased to exist, two multi-millionaires had lost their fortunes, three others had made theirs, and Damien Knight owned 22.3% of Ares. While it cannot be proved that Knight and Gavilan are the same individual, one of the other majority stockholders in Ares is a company called Gavilan Ventures.

Ken Roper and Michael Eld, two of the engineers that worked on the project, created a company called Matrix Systems in Boston, Massachusetts, and came out with the Portal, the first commercially available third-generation cyberterminal, in 2034. Eld and Roper died under mysterious circumstances and Matrix Systems was bought out by corporate raider Richard Villiers, who used the technology to buy his way into Fuchi—which would eventually become NeoNET.

Ultimately, the widescale damage caused by the Crash of '29 is what led to today's Matrix infrastructure and spurred the development of matrixware and simsense. Perhaps more importantly, the code developed by the Echo Mirage team to fight the Crash Virus—and the intrusion countermeasures reverse-engineered by the megacorporations to emulate it—set the standard for most of the combat, psychotropic, and intrusion countermeasure software used today.

One enduring mystery is the origin of the Crash Virus—where it came from and who coded it. I've talked to some of the surviving members, and while the damage was too extensive to accurately say which system it originated in, they managed to narrow it down to three: the AresSpace servers inherited from NASA, a small software subsidiary of Aztechnology called Acquisition Technologies, and a research corporation called Gossamer Threads, whose shareholders included Fuchi and the great dragon Dunkelzahn. The truth of the matter may never be known.

#### >>>> BEGIN SIDEBAR

*Excerpt from Holly Brighton's interview with Maj. David Gavilan, leader of Echo Mirage, August 13<sup>th</sup> 2031* **HB:** Echo Mirage had access to some of the first real cyberware. Tell me, did you get cybered?

**DG:** Yes I did, everyone that went into those tanks with those first-generation cyberterminals did. My first chrome was an invasive series of proto-datajacks—you can't see the holes now because I've let my hair grow out, but each of us had a dozen of them drilled into our skulls. Later on they refined the technology, and I've had the old ones removed. **HB:** Speaking of those first cyberterminals, what was it like using them?

**DG:** I had to climb into a sensory deprivation tank, a dozen wires plugged into my skull and tubes snaked both ways so they could calibrate sensors to me specifically. Once I was plugged in, I felt like ... a god. The time lag between thinking a command and its execution is miniscule. The real-time multisensory interface is immersive; the level of detail in the sensory feedback is simply unparalleled.

HB: But that was part of the problem, wasn't it? Metahumans weren't designed for that level of input.

**DG:** There were many teething problems with the first models, yes. Psychological damage, in some cases. We've developed programs that help considerably with that now, added controls to prevent dangerous biofeedback.

HB: You mean like the lethal biofeedback from the Crash Virus that killed sixty-eight members of Echo Mirage?

**DG:** Yes, exactly. The Crash Virus was designed to probe systems, analyze them, and adapt ways to break them. As far as it was concerned, we were just a different type of system. We learned quite a lot fighting it, and thankfully no one will ever have to go through that again.

HB: Really. Would you care to comment about Dragon Flame, Major?

**DG:** I'm afraid I don't know what you're talking about, Holly.

**HB:** Dragon Flame is the commercial name for an intrusion countermeasure program produced by Fuchi Industrial Electronics, designed specifically to induce lethal biofeedback.

**DG:** Is there a question in there, Holly?

**HB:** Don't you think its interesting that Fuchi, who supplied the first and second-generation cyberterminals that Echo Mirage used to combat the Crash Virus, just happens to have come out with a program that induces lethal biofeedback—just like the Crash Virus?

DG: I don't know what you're talking about. The recordings were sealed. The United States does not sell-

**HG:** You were an employee at Acquisition Technologies before Echo Mirage picked you up, weren't you, Major? **DG:** Yes, that's correct.

HG: You were part of a programming team working on programs which can cause physical damage to systems.

**DG:** I can't discuss that. **HG:** Just like the Crash Virus.

**DG:** I don't have to put up with this. I flatlined twice going against the Crash Virus. Whatever you are insinuating Ms. Brighton, you can forget it. This interview is over.

>>>> END SIDEBAR