

Beowulf Battles a Modern Enemy

Thomas Smith

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“Ha! I knew it!” said Master Mateo. “These evil forces shall meet their last day when Beowulf finds them.” He pressed Enter. His screen went blank for a moment, and then some words came up:

```
Beowulf (version 0.0.1: USE AT OWN RISK)
```

```
By Master Mateo Cuadrat
```

```
Initializing.....
```

and more dots appeared after “Initializing” as his magnificent creation brought itself into existence.

Mateo was in trouble. As part of the Resistance, he spent all his time on the edge of deep trouble, but now he was really going to be in bad shape if things didn’t turn around damn fast.

He had received an email (encrypted, of course) from his associate, Andrea Gomez. It contained only joke about the personal habits of President James K. Polk. This was a prearranged code for the fact that Mateo was being actively watched by the government, and that they had apparently broken into his computer. If it had been a joke about the policies of President James Buchanan, Mateo would know that the government definitely had the capability to break into his computer, but weren’t doing it at the moment, and so on. Andrea was the best nongovernmental cryptanalyst in the world. She knew, if anyone knew, what the baddies were doing.

Mateo, Master of the Guild of XYZZY (pronounced “zizzy”), was startled back to reality by a beep from his computer. Now there were 25 dots after “Initializing,” and there was a prompt:

```
Enter search keywords (separated by commas):
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Mateo entered “government, surveillance, Trojan horse, computer” and pressed Enter. The blinkenlights on his network card began to flicker madly as Beowulf tried to understand what was going on—something that computers are bad at. Beowulf was the only program in the world that stood a chance. He found out what a Trojan horse was from Project Gutenberg and securityfocus.com, becoming the first program ever to understand the connection between Troy and a computer. He told Mateo, “Connected ‘Trojan horse’ to ‘computer’. Working on government.”

In a few seconds, `government` was replaced by `surveillance`.

Beowulf asked Mateo, “`Government is using a Trojan horse program on computer to do surveillance. Correct?`” Mateo, very pleased that Beowulf had understood the problem, pressed “y” for Yes and then Enter.

How had Andrea found out about the Government breaking in? Mateo wondered. Perhaps Andrea had woken up one afternoon only to find that suddenly the airwaves were filled with discussion about the files on Mateo's hard drive. That would be strange: Mateo took very good care of his computer. Nobody without billions of dollars of research funding could have broken into his computer. But someone had broken in. Apparently, somebody who didn't like him did and had billions of dollars to throw around. A couple of lines from *The Princess Bride* flashed through his head: "Inconceivable!" / "I do not think that word means what you think it means." Mateo reminded himself that this was why he had decided to use Beowulf instead of trying to figure it out himself: Beowulf should theoretically be much better at figuring this kind of thing out.

Looking for the gates of Troy and the wheelmarks of the Horse.

Mateo thought about how he had designed Beowulf. That program was the most beautiful thing that he had made in his life. Designing it was a task similar to designing the DNA to make a brain, along with a few fundamental laws of physics. He had read books and journals on the subject of artificial intelligence for years before he had decided to try his own hand. At first, he had only been able to think about it in a completely dark and quiet room, with exactly no distractions. It had taken him weeks to get to the point where he could use a computer at the same time. Months later, inspiration came in a rush. He had woken up one afternoon at 2:00 after a very good night's rest, and as he ate breakfast he thought about consciousness (as usual). Then, with a sensation like rolling thunder and a choir of angels, the last details had begun to come to him. He sat very still with his mouth open for a while. He understood now, with a clarity like the night sky in the desert. He walked slowly to the computer room, being very careful not to stub his toe or anything. He sat down at the console. He coded for 27 hours. He slept for 14. He coded for 30 hours. He slept for 12. He coded for 48 hours, and then realized that he was done. 12 hours later, he woke up to the sound of Andrea's voice—she had come to see him, worried because he hadn't communicated in days. This was very nice of her, given that she lived about 30 miles away and nobody (except the government) had a car. He allowed himself to be taken from the floor next to his office chair to his bed. Andrea had named the program Beowulf for reasons he had not understood at the time.

But now he knew why.

For various reasons, it is infeasible to eliminate the spyware from this computer without rather extreme measures. I can, though, break into the computers of the government. I can take them down. This will break the electrical supply grid of the country, among other things. Am I hooked up to an uninterruptible power supply?

"yes"

If I do this, there is no guarantee that my brain will be in a recoverable state: it will have to be copied to disk, otherwise it will be lost when the UPS battery gives out. The self-modifying nature of my design makes it difficult to recover a consciousness. Also, the country might not be ready for the revolution to come, but this would be an excellent opportunity. I can probably contact Andrea and several other leaders.

Mateo heard a car door slam.

“go go go”

Ok.

There were sounds of low voices. They spread around his house slowly, looking for doors and windows. Mateo started to code. He wrote *very* fast. Hopefully, this program would save Beowulf’s brain. The part of Beowulf that Mateo had written was like the lowest physical level of a brain—the wetware, as he liked to call it. Moments after the program was started, it became different from any other consciousness there ever was. You start up Internet Explorer and it’s the same every time. You start up Beowulf and he becomes a person—different from the last run. If the program stopped, Beowulf was unconscious. If there was no recovery, Beowulf was dead. Death was very important to artificial intelligence researchers.

The lights went off and Mateo’s uninterruptible power supply beeped, indicating that it was switching to battery power. Mateo noticed how quiet the room was.

If you don’t finish, at least tell my story. I could probably inspire future intelligences. Oh, one thing: the people outside the house were using encrypted satellite phones, not walkie-talkies. Hah, silly fools. I’ve knocked the phones out. Apparently also, they hadn’t gotten the final word to enter. You may have some time before they decide to come in.

“I will. Thank you. May your bits always twiddle.”

Mateo started the brain dump program just as the UPS started beeping more urgently, indicating that it was getting low on battery power. Mateo turned off the monitor. He wouldn’t be able to tell if Beowulf had been saved, but the monitor drew a lot of power. Soon, the UPS emitted one last frenetic string of beeps and stopped.

“Now for the real world,” Mateo thought.