

High Tech Computer Viruses, Are You Protected?

*Dick Parent – Network Consultant
Electro Standards Laboratories*

Are You Immunized Against The High Tech Viruses?

Excitement! You are removing your new personal computer from the shipping container. The excitement builds as you plug in the keyboard, mouse and monitor and you connect your PC to a network and/or the Internet. Almost, instantly you are benefiting from increased productivity and life-enhancing information access services.

Sending and receiving e-mails, chatting online with friends, surfing the Internet via web browsers; and downloading data or program files are only a few of the most common activities. Unfortunately these activities also expose your PC and your company's network to malicious code threats like computer viruses and Trojans.

Today's sophisticated viruses and Trojans hide in e-mail attachments where they are often inadvertently triggered just by opening. At this point they immediately mass-mail themselves to and infect all your friends' customers' and colleagues' computers. According to the International Computer Security Association there are more than 50,000 viruses today; new viruses come out daily; and 200 new ones are created every month.

What is a Computer Virus?

A computer virus is a program – a piece of executable code – that has the unique ability to replicate. Like biological viruses, computer viruses can spread quickly and are often difficult to eradicate. Viruses attach themselves to just about any type of file and spread as these files are copied and sent from individual to individual.

Besides replication, some computer viruses have something else in common: a damage routine that can deliver the virus payload. While payloads may only display messages or images, they can also destroy files, reformat your hard drive, or cause other kinds of damage. If the virus doesn't contain a damage routine, it can still cause trouble by taking up storage space and memory, and downgrading the overall performance of your computer.

Several years ago most viruses spread primarily via floppy disks, but the Internet and networking has introduced new virus distribution mechanisms. With e-mail now used as an important business communication tool, viruses are spreading faster than ever. Viruses attached to e-mail messages can infect an entire enterprise in a matter of minutes, costing companies millions of dollars annually in productivity loss and clean-up expenses.

No one who uses a computer is immune from viruses.

Life Cycle of a Virus

• Creation

Today anyone with even a little programming knowledge can create a virus.

• Replication

Viruses replicate by nature. A well-designed virus will replicate for a long time before it activates, which allows it plenty of time to spread

• Activation

Viruses that have damage routines will activate when certain conditions are met. Viruses without damage routines do not activate, but instead cause damage by stealing storage space.

• Discovery

Discovery, not always but usually, comes after activation. When a virus is detected and isolated it is sent to the International Computer Security Association. Discovery normally takes place at least a year before the virus might have become a threat to the computing community.

• Assimilation

At this point, anti-virus developers modify their software so that it can detect the new virus.

• Eradication

If enough users install up-to-date virus protection software, any virus can be eradicated. So far no viruses have disappeared completely, but some have long ceased to be a major threat.

What You Can Do to Protect Against Viruses?

There are many things you can do to protect against viruses. At the top of the list is using a powerful anti-virus product. For further suggestions, see the International Computer Security web site at www.icsalabs.com □