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## The Main Features of Computer Viruses and Their Classification

You can bring a lot of evidence that the threat of information resources increases every day, putting in panic responsible people in banks and big companies around the world. This comes from the threat of computer viruses, which distort or destroy valuable information that can lead to financial losses.

Computer virus is a harmful software program written intentionally to enter a computer without the user's permission or knowledge. It has the ability to replicate itself, thus continuing to spread. Some viruses do little but replicate, while others can cause severe harm or adversely affect the program and performance of the system. A virus should never be assumed harmless and left on a system. It can damage or change any file on the computer disks. That means that the virus can penetrate to these files. Then it will modify and change them. Now there are known more than 87,800 viruses. Their number is constantly growing.

There are different types of viruses which can be classified according to their origin, techniques, types of files they infect, where they hide, the kind of damage they cause, the type of operating system, or platform they attack. Depending on the habitat viruses can be divided into network, file, boot and multipartite:

- Network viruses are spread over various networks. File viruses infect mainly into executable files with extensions: COM and EXE.
- File viruses can be embedded into the other types of files. Typically they are recorded in unimportant files. They will never get the full control, and therefore, they lose the ability to reproduce.
- Boot viruses infect the boot sector of the disk (Boot-c) or in a sector which contains the boot program of the system drive (Master Boot Record).
- Multipartite viruses infect both files and boot sectors.

By the method of infection, the virus can be divided into resident and non-resident:

- Resident virus during the contamination  of the computer stay in your memory resident part, then it catches the system calls to target objects and infect them. Resident viruses live in memory and are active until the shutdown or restart of the computer.
- Non-resident viruses do not infect the computer's memory and are active for a limited time.

Although the anti-virus software attempt to become updated and overcome the malwares threats, however we have to accept that virus authors are one step more ahead, because they decide how to attack first and anti-virus technologies have to only defense against their attacks. Therefore, computer virology area needs more researches and investigation to be able to guess the future coming threats.