Computer Viruses- Digital Bacterium

Abstract:

One of the most high-profile threats to information integrity is the Computer Virus; it is a self-replicating program which has to attach itself to a host program to replicate. The count of viruses is dramatically increasing. The damage caused by the virus is estimated to be billions of US Dollars per year. Viruses spread through connections to the internet via emails, instant messages, and file downloads. A computer hard disk and data storage devices are capable of being infected. Some viruses are capable of copying through connected computers that may not necessarily be connected to the internet or via security gaps in the operating system application.

Many of the viruses that have had the greatest impact have been intended to be benign. Unfortunately, some errors in program code led to disastrous results. The most frequent such error is when a virus program like boot sector viruses, companion viruses, encrypted viruses etc, which was intended to infect a computer only once, doesn't realize it has already done its job and keeps infecting the computer over and over. This was the problem with infamous virus released at Cornell University on November 2nd, 1988 by Robert Morris which rapidly brought the entire internet system of the computer to its knees. Where the small drain of a single virus can pass unnoticed by a computer system, millions of viruses can fill every bit of memory and use up every cycle of the computing power of the computer they have invaded.

A virus infects a computer first by launching a virus program, and then the code is loaded into PC memory and delivers its destructive payload by copying itself to other programs. A PC user should have the knowledge and total awareness about the viruses. The proposed paper deals with the propagation of viruses in the computer and how to take quick and efficient response when the virus attacks.

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