Computer Virus Folklore

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Computer viruses have become an important consideration in computer information management, especially for microcomputers. Unfortunately, this dangerous area is confusing with a frustrating lack of understandable information for many computer literate users. It is difficult to separate fact from fiction when there are too many spurious sources of information. This research surveyed a broad spectrum of computer trade and academic publications as well as USENET news groups to categorize the virus folklore into seven general categories. Analysis of the folklore categories includes examples and illustrations followed by logical and factual clarification. Given this analysis, conclusions are presented for helping the information manager deal effectively in the context of the computer virus folklore.

One of the first computer viruses to gain widespread attention was introduced into the Internet in 1988. Though no files were damaged, the virus/worm replicated itself so quickly that within hours it brought the system to its knees (Denning, 1990). However, the notion of computer viruses in 1988 was met with skepticism. Even experts in the computer community said that computer viruses were the latest urban myth, in the same category as alligators in New York sewers (Ferbrache, 1992). From 1988 to the beginning of 1992, there was a slow, but steady increase in virus reports and the concept of a computer virus became credible.

But it was the Michelangelo virus scare in March of 1992 that focused public attention on the problems of viruses in computers, especially microcomputers. In the weeks preceding March of 1992, people were whipped by the popular press into an irrational frenzy over the Michelangelo virus. It was reported that Michelangelo was scheduled to strike millions of personal computers world-wide and that it had already infected about 500,000 in the United States (Schneidawind, 1992).

The hysteria surrounding the Michelangelo virus scare added a frightening aspect to computing. The legacy has been a mixture of fear and misinformation perpetuated by the media and fostered by microcomputer software manufacturers. Users are alternately scared and mislead about computer viruses and how to deal with them. The intent of this article is to evaluate the present virus situation from a factual and practical perspective which will allow an information manager to make more informed decisions.

Building a Tradition

A precise definition of a virus is difficult because the concept is contemporary and lacks standardization (Hoffman, 1990). Broadly, a virus can be defined as a computer program that can replicate itself and, when executed, can cause unwelcome consequences in the host. Attempts to define the type of virus such as a worm, Trojan horse, a polymorphic virus or something else proliferate and the reader is directed to the wealth of...

Computer viruses have become part of the computer culture and have established their own folklore. Modern folklore consists of beliefs that are shared and communicated, spreading spontaneously in varying forms that often makes good storytelling (Chen, 1993). When a situation is ambiguous and there is considerable anxiety, then rumors or myths develop that represent attempts for a collective definition of the situation (Thio, 1989). For example, when the New York Hilton’s non-computer electronic key-making system went down on March 6, 1992 some guests thought it was due to the Michelangelo virus simply because of the date and that a “computer” made the key-cards (Seymour, March, 1992). Computer viruses provide rich ground for rumors and myths.

Unfortunately, there is little empirically based evidence on viruses available to the computer literate user. Software manufacturers and the popular computing magazines state wildly conflicting facts and statistics which may scare more than they inform. Businesses and organizations are seemingly hit again and again by apparently uncontrollable viruses. The fear of viruses has resulted in a million dollar industry for anti-virus software manufacturers while the reported incidents of virus infections continue to increase.

Though there are verifiable sources, much evidence on viruses is anecdotal provided by computer users and the popular media. The term anecdotal is used to define a description of events from a personal perspective with no supporting evidence, e.g., when you hear that “the lab has been hit.” It is both intriguing and appalling to read an article in the literature on how to combat a virus infection that does not have a single reference. Clearly, this indicates a situation that is ambiguous and where there is considerable anxiety. To determine the folklore surrounding computer viruses, the media was searched and the generally accepted information was categorized into the following items of folklore.

**Computer Virus Folklore**

**#1: Viruses are in commercial products**

There are regular reports of legitimate vendors unknowingly shipping infected disks and drives to their customers. Busse (1992) reports that Da Vinci Systems shipped virus-infected eMail 2.0 demonstration disks to 900 of its customers and Leading Edge Products Inc. shipped 500 PC’s with infected hard disks. Novell notified customers that 3,800 disks of its Network Support Encyclopedia were potentially infected with a virus. John McAfee, president of McAfee Associates, a virus consulting firm, has logged 60 vendors that shipped infected hard drives, or utilities and support disks. Even worse, software retailers reshrinkwrap returned disks and spread viruses that way. Leading computer publications include stern warnings that some of the major brands of preformatted diskettes have come from the factory complete with boot sector viruses! (Goodman and Soucha, 1993).

Like all folklore, there is a basis of fact to the notion that viruses can be in commercial products. Obviously, such things can occur. It is possible. But considering the quantity of products sold, the probability of virus infection is extremely small. The point is that an extremely small number of possible cases is sensationalized to suggest that it is a common occurrence. Of course, this is not to minimize the serious impact if you are one of the unlucky small number of cases, but to note that this experience should not be expected to be a frequent event.

**#2: Viruses are increasing at an alarming rate**

A Central Point Software advertisement in 1992 or its product Anti-Virus touted the value of its product since there are about 50 new viruses popping up each month. In a 1993 advertisement, the number increased to over 100 new viruses per month. Similarly, an advertisement for Untouchable from Fifth Generation Systems stated that each new day brings an average of six new viruses into the world (Fifth Generation Systems, 1992). That makes about 180 new viruses a month, unless they are only counting working days. An ad for Novi from Certus International Corporation claimed that between three and five new viruses are created each day. This would be 90 to 150 per month. These claims are echoed in the media with wildly conflicting estimates reported by different sources.

A logical analysis would lead us to question these claims. First, the large variance of the estimates makes them suspect. Second, no references are given for the reader to check on the credibility of the information. Third, the unethical and malevolent nature of a virus make it unlikely that the author would announce its existence, though some do in a “catch-me-if-you-can” attitude. Finally, there a serious question of self-interest involved when the point of a claim is to sell a product. Seymour (January, 1992) suggests that antivirus software vendors are working against their customers’ best interests by paying rewards and bounties to people who send in viruses that they’ve “discovered”.

It is difficult to determine the true incidence of
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