



Chapter 6

Web Defacements and Semantic Attacks

The mass use of the Internet as a trade and distribution tool has become the source of a new type of attack—the defacement of Web page content. Due to the nature of this activity, it is frequently referred to as *Web graffiti*. Indeed, there is a lot of commonality between real graffiti sprayed on walls and fences and its computer-based Web counterpart.

Graffiti can be considered a form of news publishing, and not just in its traditional form that causes irritation to the onlooker and some costs to clean it up. When graffiti is viewed from the perspective of disseminating information, some serious consequences can occur.

In the city of Auckland, New Zealand, there are special garbage collection days (twice per year) on which residents may place items such as furniture and washers for pickup and disposal. One day, a flyer was distributed to residents stating that there would be a special additional pickup for such items. The residents happily loaded up their sidewalks with the understanding that the city would come and remove those items. The problem was that the flyer was a clever hoax. It rains quite a bit in Auckland, and, as a result, these items became wet and were not welcome back into people's homes. The city's sanitation engineers were effectively forced to remove the trash, as it would remain on the curbs indefinitely if they didn't. You can imagine the additional costs and impact to the city's budget.

The same applies to Web graffiti. The threat of Web graffiti is very real. According to mi2g, a British company, the number of vandalized sites reached approximately more than 185,000 in 2003, which is more than double the number in 2002. It is estimated that the direct cost of each incident to an institution is around \$14,000 (USD). This cost is made up of the known wage costs of the staff involved in setting up the temporary server and restoring the original one, plus an estimate of the business lost as a result of the main Web server being made unavailable. Examples of Web graffiti are shown in Figure 6.1 (before) and Figure 6.2 (after).

Figure 6.1: Original Web page before defacement

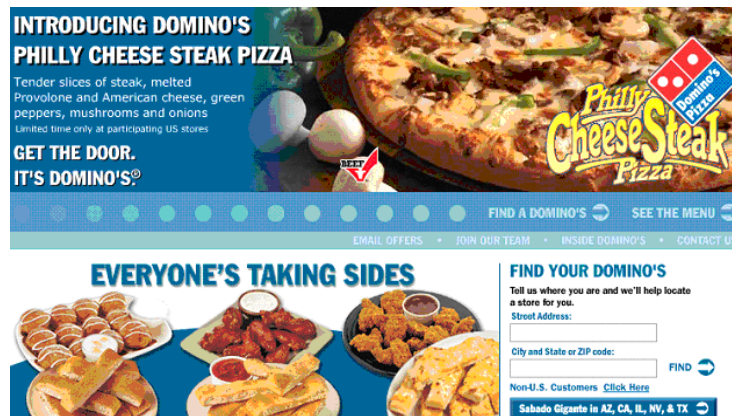
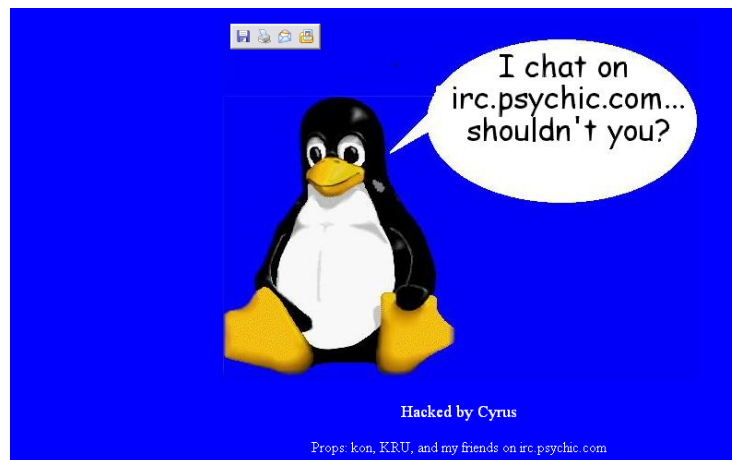


Figure 6.2: Web page after defacement



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