

Fred Cohen & Associates - Analyst Report and Newsletter

Welcome to our Analyst Report and Newsletter

The speed of light, it's easy to forge, email is always fast, and more

As it happens, I have been encountering more and more of the bizarre lately. Perhaps it's just because I am going out more. But in the last month, I have seen instances of people swearing, in legal documents, to things that simply cannot be true. I thought I would share the top few examples to give you a sense of it.

Violating the speed of light

One of the things that folks tend to do is make claims about how fast the Internet is. The Internet is pretty fast compared to other media - most of the time. But when you swear in a legal document, you had better watch out. A good example is a claim that a message on the Internet got from New York to Los Angeles in a microsecond. Light travels at about 3×10^8 meters/second in free space - slower in other media. As fast as that is, the distance from New York to Los Angeles is, approximately, 2500 miles, or about 4000 kilometers (4×10^6 meters). That means that light travels from New York to Los Angeles in about 10^{-2} seconds, or $2/100^{\text{ths}}$ of a second. A microsecond, on the other hand, is a millionth of a second. So this claim would imply that the Internet runs 10,000 times faster than the speed of light. Oops.

Forgery is easy

While I will admit that a bad forgery is easy to do, you would be surprised at how many times I have heard that forgery is easy and that it can never be detected. In fact it is far harder to do a far better forgery, and poor forgeries, by definition, are easily detected. I don't want to help the forgers by pointing out how they could do better, but at some level, I think an example is warranted. An example of a really poor quality forgery is the alteration of a date and time stamp on a record without bothering to look at all of the other date and time stamps on the same record. For example, in a database when there are two copies of almost identical records with different dates and times, but identical supposedly-unique identification fields it just doesn't look right, and it isn't.

Email is always fast

The third example for today is the claim, that I have heard time and again, that email is always fast - delivered in less than a second, or within a few seconds. In one such legal case where such a claim was made, the email including that as a claim was delayed in delivery to me by almost 24 hours. And in a previous case, I produced a documented case of an email sent to me that was delayed by several months in delivery. Always fast? I don't think so.

Summary

People say all sorts of things, and in everyday conversations, this is no problem. But as IT professionals move increasingly into the space of digital forensics and the use of digital information in the context of the legal system, they must realize that exaggeration to make a point, or a lack of care and thought in sworn statements, may lead to disaster.