

Almost every morning, we read news articles about hacking and virus damage or investigation of cybercrime. Considering contemporary high technology, it is natural that we ask a question, why is the Internet so weak? Recognizing the weaknesses of ICT will be a good start to answer the question. The computer and Internet entailed explosive increase of traditional crime and enabled new types of crime which might not have ever happened without ICT. Roughly, there are 2 types of crimes. Old crime using ICT, and new crime aiming at ICT. The 1st one is that criminals use ICT as an instrument to commit a crime. The latter one is that ICT becomes a crime target.

Characteristics of the Internet and Crime

Cybercrimes seem easier to commit than other crimes. It's probably because the 3 characteristics of the Internet make criminal attacks in the digital world more common and widespread. Automation, action at a distance, and technique propagation are the 3 characteristics. First, automation. A criminal can attempt to blackmail millions of internet users while he or she is sleeping after inputting a line of command on his or her computer to send emails automatically. Second, action at a distance. Blackmailed targets could be living on the opposite side of the Earth. Third, technique propagation. The criminal might download the mailing software and email addresses of the targets from a public website with a How-To document. For all criminal activities of the Internet, the attacker is safe behind an electronic shield, because the attack can be passed through many other hosts in an effort to disguise the origin.

Why Is the Internet so Vulnerable

Next is, why is the Internet so vulnerable? Why is the Internet so vulnerable? There are numerous causes of ICT vulnerabilities that make equipment data insecure. However in general, the fundamental causes of vulnerability fall into 2 parts. The 1st cause is structural security loopholes, which is an inherent weakness of the Internet. When the Internet started as a military project in the 1960s, the network was designed for openness and flexibility, not security. So theoretically, once connected to the Internet, a computer can be reachable from any computer with no safeguard to avoid misuse.

And any Internet packet which actually contains a content of transmission is p

potential to be intercepted by anybody in the middle of the transport. Even though a number of security counter measures were implemented to cover the inborn weaknesses, hackers and computer virus writers found security loopholes in the Internet, enabling them to compromise computers, and corrupt data. It is quite difficult to find a solution, because as security technologies developed, attackers have also developed their techniques as well.

The 2nd fundamental cause is Insecurity in Software. Hackers found that they can realize their criminal intent through some sort of software bugs. A conservative estimate places the number of bugs in software at 5 per 1000 lines of code. This means your computer might have hundreds of thousands of bugs.