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Project 2

Draft

What is cyber security? Upon hearing the term what is the first thing that comes to mind? To most it relates to the information they have put online, but it goes further than that relating to keeping important information safe in regards to the military and even the government. With how rapidly our technology has grown in the past years, it only makes sense to also improve on our security. Since everything and anything is literally done online we must secure what information we put out there. Because the cyber world is so complex and has grown so rapidly it also means that hackers have also grown just as fast. Cyber security is important in this day and age because now everything is online or done

from a smartphone, so it only makes sense that this topic remains an important one.

The term cyber security comes from the creation of the first computer worm and virus. Robert Morris created the first worm in 1989. As described by Ted Julien from the article *Defining Moments in the History of Cyber-Security and the Rise of Incident Response* he goes on to say “This self-propagating virus spread so aggressively and rapidly that it succeeded in closing down much of the internet.” (Julien 2014). The virus itself had been in today’s world and could’ve caused a larger amount of damage than it did in 1989 because of how underdeveloped the Internet was back then. However because of this incident it showed us the kind of security measures that we must take to protect ourselves in the online world. This ultimately led to the cyber security system, as we know it. From this the establishments of the CERTs, Computer Emergency Response Teams, were created.

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From the first attack in 1989 soon viruses started to spread everywhere. There were two viruses that spread rapidly called the Melissa virus and the ILOVEYOU virus, which infected tens of millions of computers that caused email systems around the globe to crash down. These threats led to the development of antivirus software, to help protect users. Not only did this help create more security for computers but it also led to the awareness of the risks of online information usage. As we move on more into the years it develops into cyber attacks, where hackers were stealing users' credit card information and so forth. This made companies realize how serious these attacks were and armed themselves with more sophisticated security systems.

So in this day and age, where everything seems to be very up to date when it comes to technology, why is something like security still such an issue? Well the issue arises from the manufacturers. As

described by Roger Schell from his article *Privacy and Security, Cyber Defense Triad for Where Security Matters* he states,

“However, from a practical standpoint the security problem will remain as long as manufacturers remain committed to current system architectures, produced without a firm requirement for security” (Schell 2016).

He goes on to explain how it should be the manufacturers duty to provide proper security for their customers. In the early days of computers it was much easier to provide security by just providing physical isolation of the machines dedicated to security domains. Today's systems need high-assurance controlled sharing of resources, code, and data across domains in order to build practical systems, which basically means that they need ~~ed~~ more

attention because of how complex our computer systems have gotten. But Current approaches to cyber security are more focused on saving money or developing

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technical solutions than on working and protecting lives and property because this saves the manufacturers money in their pockets. Not to say that currently our cyber security systems are complete garbage but there is much room for improvement.

It is expected that it would take another 10-15 years before we develop a security system that can protect us completely in the cyber world. A first necessary step is to identify where high-assurance security matters for a system and then from ~~the~~ it implement what is needed, but until then we must stick with what we have now.

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