The Vulnerabilities of Popular Web Browsers and How they Guard Against Them

Policy Analysis Paper 1
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Mostly everything we do involves the internet in some capacity. In particular, when we do not understand something or want to learn new information we turn to web browsers to answer our questions. However the three most used web browsers–Google Chrome, Safari, and Microsoft Edge–all have underlying vulnerabilities that need to be evaluated. Most people do not think about how big companies often have their own sets of challenges that can impact the lives of everyday people. While it is rare, users of these web browsers can be harmed simply by using them. When discussing cybersecurity and how useful it is, we must first take a look at each of these three web browsers and identify the core vulnerabilities that they possess. Once that is established we can examine how these web browsers tackle their vulnerabilities and how safe they truly are.

Google Chrome is the largest web browser in the cyberworld. It is used by people all over the world to answer an array of questions. However, that does not mean it does not have its faults. According to *Browser Security: Lesson from Google Chrome* (Reis et al.,2009), Chrome has had a couple of major issues that they have found and have found ways to solve them. One of those for instance is the idea that a web browser is very complex. It has many moving parts that are all working in sync so that it can be accessed by the largest number of people possible. However, this means that only a small part of the software needs to be tampered with in order for it to not function properly. In order to combat this, Chrome has installed many different levels of security such as using a unique architecture to make it extremely difficult to tamper with. The article explains that “Security Architecture” is used by modular architecture and a low privilege

sandbox. Due to this, it becomes extremely convoluted and complex to try and throw people off of the trail. This is just one of the many examples of how Chrome is protecting itself against attackers.

After Chrome, Safari is the second most used browser. Designed by Apple, Safari is a part of a strategically setup software service that also has its limitations. According to an article by Hannah Pisani, Safari falls short of accurately and efficiently blocking different ad popups that may contain malware. Apple is known to keep their software locked down tight but Safari has had numerous issues in the past. However, over time they have strategically implemented new updates to fix the issue. This issue is something many people did not even know about. Since they did not know that Apple was struggling with the issue, they might have been exposed to any number of malware attacks. It is important to learn about your browser and see how the company is taking steps to fix it.

Lastly, Microsoft Edge is the third most popular web browser currently. It also has some vulnerabilities that can impact the life of the everyday user. One example of this is with popups. Similarly to Apple, Edge has an issue with managing popups and how the user interacts with them. In an article published by digital trends, it explains some common dangers and vulnerabilities of Edge. One of the ones that relate to Cybersecurity comes in the form of different ad popups and how the browser has trouble blocking them. Users are more often than not exposed to these pop ups and they can impact their browsing significantly. To combat this, Edge has tried updates and new software to decrease the amount of popups that are seen or interacted with.

Web browsing is something that many people around the world rely on in their day to day life. Knowing what these browsers are built upon can help us to be more careful in other aspects

of the digital world. When looking forward and expanding into national policy, we can hope for a better future. While some laws are in place. They can be changed and amended to better suit the changing times. Also many younger students should have the opportunity to learn about cybersecurity so that they can protect themselves from vulnerabilities of any kind.

Works Cited

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