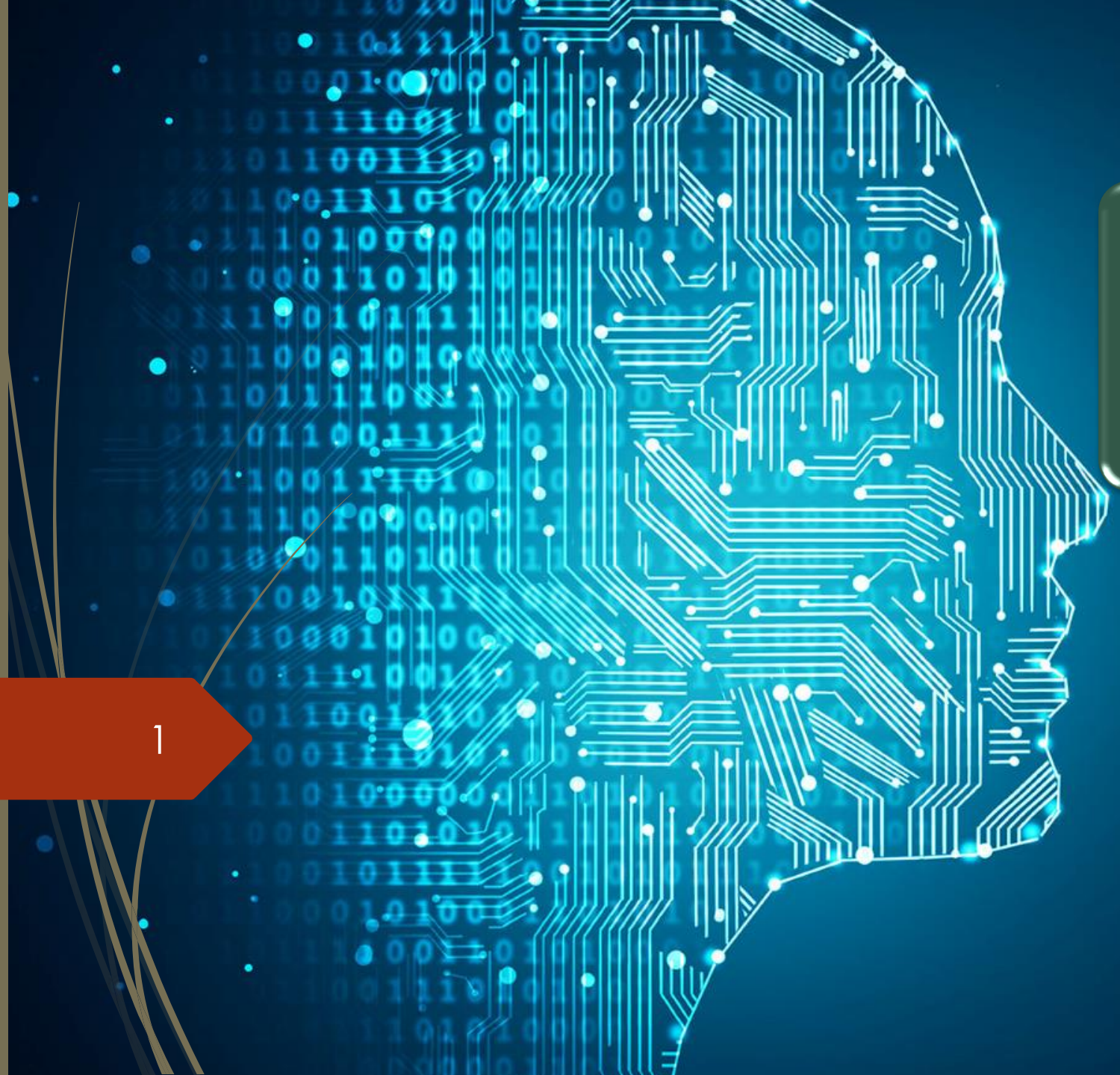

Cyber Security, The Digital Antidote Of Cyber Crime

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Outline

- Objective
- Introduction
- Literature review
- Methodology
- Statistical Data
- Result Analysis
- Future work
- Conclusion
- References

Objective

1. Clearing the basic concept of cybersecurity

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2. Looking around us and finding the example of cybersecurity as a form of both physical and digital

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4. Marking out the most frequent and malicious cybercrimes we witness

Objective

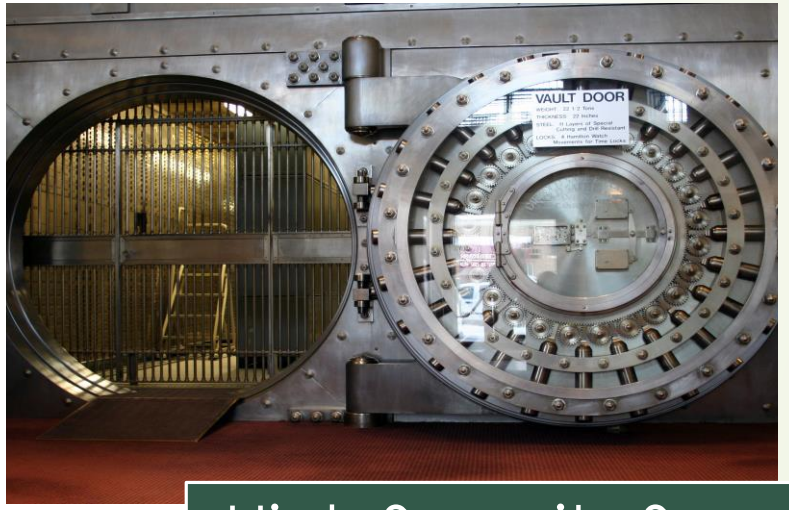
1. Clearing the basic concept of cybersecurity
2. Looking around us and finding the example of cybersecurity as a form of both physical and digital
3. Clearing the basic concept of cybercrime
4. Marking out the most frequent and malicious cybercrimes we witness
5. Collecting some statistical data and survey of some various cyber attacks and analyze , compare them along with current cybersecurity backup system

Basic forms of Cybersecurity

- Physical Forms of Cybersecurity
- Digital Forms of Cybersecurity

Physical Forms of Cybersecurity

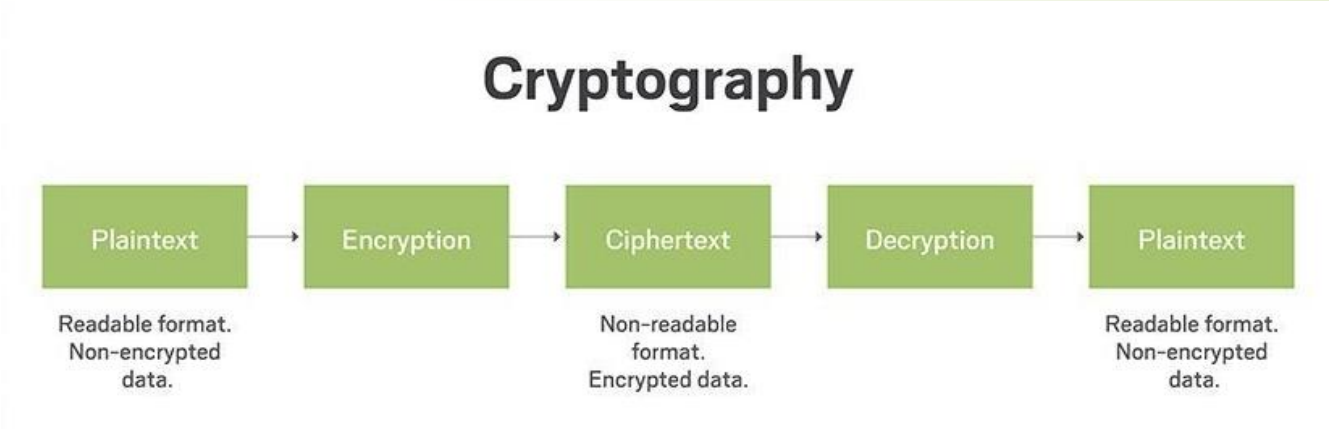
Door access and IP Cameras

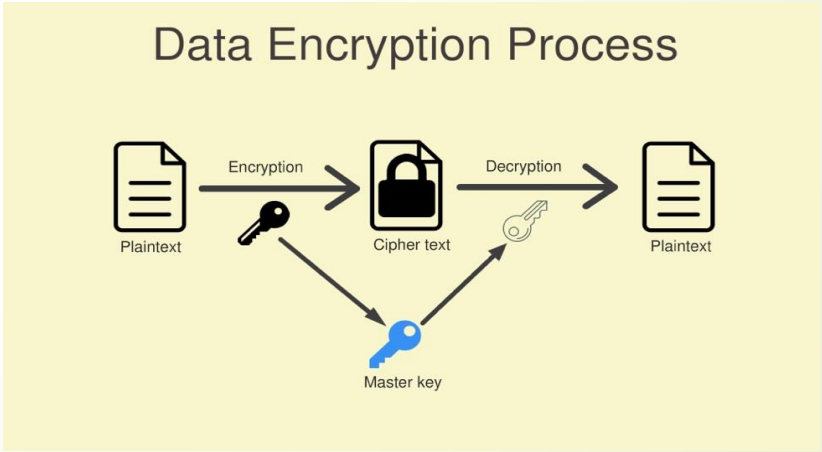


High Security Sensor Vault

Digital Forms of Cybersecurity

Anti-virus Softwares





Cybercrime, or **computer-oriented crime**, is a crime that involves a computer and a network.

- Financial fraud crimes
- Cyberterrorism
- Online harassment/ Cyberbully
- Online Drug Dealing
- Unethical Hacking
- Scamming, Spamming etc.

Literature Review

- Every message sent from source A to source B reaches the attacker before reaching its destination.
- A DoS or DDoS attack is analogous to a group of people crowding the entry door of a shop, making it hard for legitimate customers to enter, thus disrupting trade.
- Criminal perpetrators of DoS attacks often target sites or services hosted on high-profile web servers such as banks or credit card payment gateways
- Social engineering is the general term that describes techniques used to gain unauthorized access to information through human interaction.

For ensuring the improved cyber secured internet surfing some steps may be taken :

- MOVING AWAY FROM USING UNSUPPORTED SOFTWARE
- MANAGING SECURITY RELATIONSHIPS WITH SUPPLIERS AND PARTNERS
- BACKING UP OWN DATA
- USING STRONG PASSWORDS
- RUNNING UP-TO-DATE ANTI-VIRUS SOFTWARE
- DELETEING SUSPICIOUS EMAILS AND AVOID CLICKING ON UNKNOWN ATTACHMENTS OR LINKS
- ALWAYS DOWNLOADING AND INSTALLING THE LATEST SOFTWARE AND APP UPDATES

Statistical Data on Various Cyber Crimes (Phishing Domain)

- According to the Global Phishing Survey: Trends and Domain Name Used in 2016 appeared in APWG Unifying the Global Response To Cybercrime :

Table 1: Basic statistical data table on Phishing Attacks and Domains(2013-2016) (Greg and R. Rod, 2017)

	2013	2014	2015	2016
Phishing Domain	135,848	183,222	160,155	195,475
Attacks	188,323	247,713	227,471	255,065
TLDs	223	288	355	454
new gTLDs	0	72	120	228
IP-based phish	4,366	6,472	2,245	5,378
Harmful Domains	35,004	49,932	34,102	95,424

Bar chart on Domain Attack

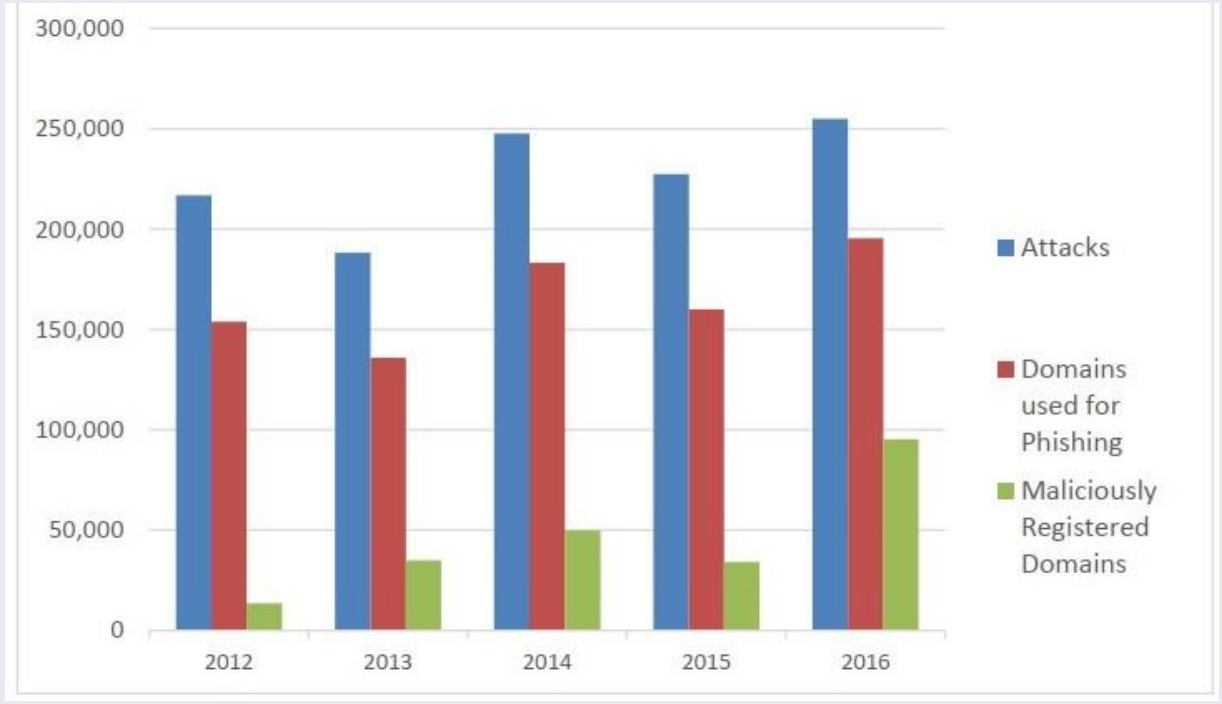


Figure: Phishing Attacks and Domains Used (2012-2016) (Greg and R. Rod, 2017)

Pie chart on some well known types of malware

According to the book named "Computer security: Protecting digital resources" authored by Robert C. Newman in 2009 , there was a survey of the types of malware

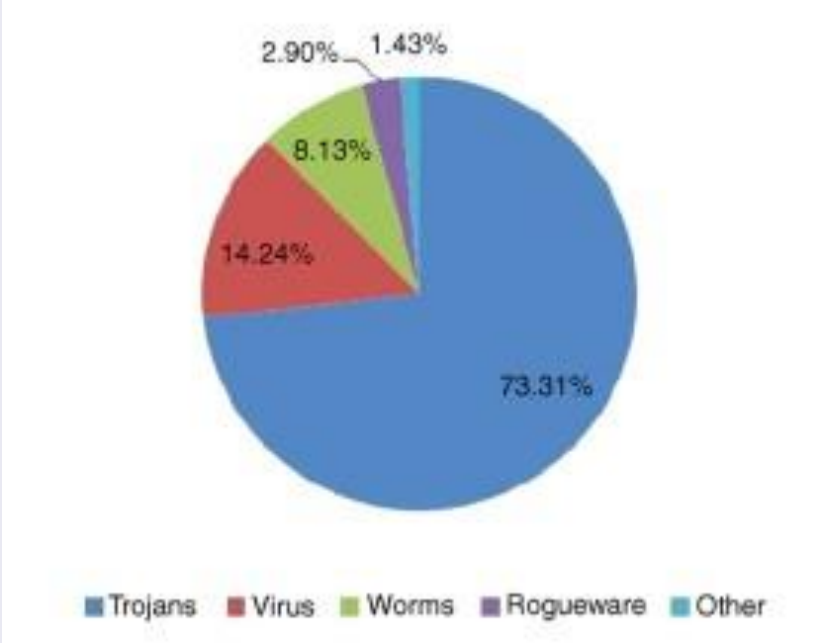


Figure: Types of malware (R. C. Newman, 2009)

Survey on market share held by Antivirus companies

According to the survey of OPSWAT IT company from their Statista 2019 bulletin, market share Held by some leading anti-malware application companies can be observed below

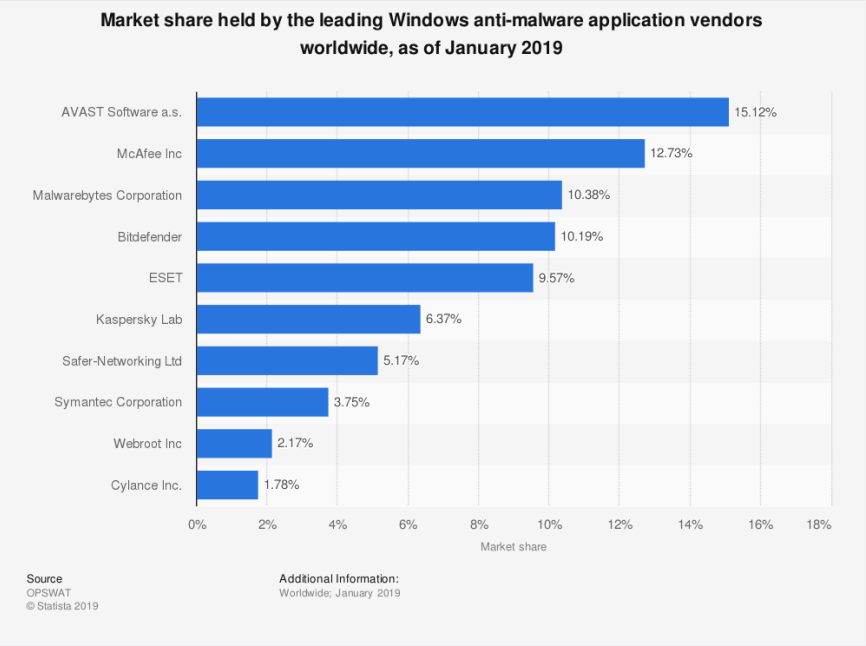


Figure: Survey on market share held by Antivirus companies till January 2019 (OPSWAT, 2019)

Final Result Analysis

- So based on the analysis of the above statistical data on both cybercrime and cybersecurity, it can be said in the end that,

- ✓ cyber crimes are emerging at a high rate of growth which is a very threatening situation. Though nowadays cybersecurity systems are advancing way to quickly to the betterment of cyberspace

- ✓ Though it is a matter of regret that still some third world countries' people aren't aware of these cybercrimes even it is as much sensitive as any other crimes around us. A proper cautious mind and ability to make the right and efficient decision can fetch the secure internet experience.

- ✓ Thus these discussed cybersecurity around us, being the antidote of those malicious cybercrimes with the aim of ensuring a safe and secure internet experience to all the users,

Future Works on the aspect of Cybercrime and security

- Though cybersecurity is upgrading itself quite in a good pace, there needs to be done some future research or upgrading works to ensure much safety and secure environment.

  - Ensuring a safer internet for upcoming generation
  - Increasing the development of trustworthy software
  - Developing Security System

Conclusion

- This rise in the widespread use of technology brought with it a rise in cybercrime. For hackers, the possibilities increased exponentially, along with the potential rewards.
- The fact that cybercrime now permeates every facet of society shows why cyber security is crucially important.
- Cybersecurity systems are advancing way to quickly to the betterment of cyberspace and with the aim of ensuring a safe and secure internet experience to all the users.
- Minimum cyber security requirements for a network should be Endpoint Protection, Firewall, Intrusion Detection System / Intrusion Prevention System, Web Filtering Software, Radius Server, Logging Softwares, Encryption. Despite new effort for secure cyberspace, more research is needed to develop new security options that will treat the most resistant strains of cybercrime.

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