

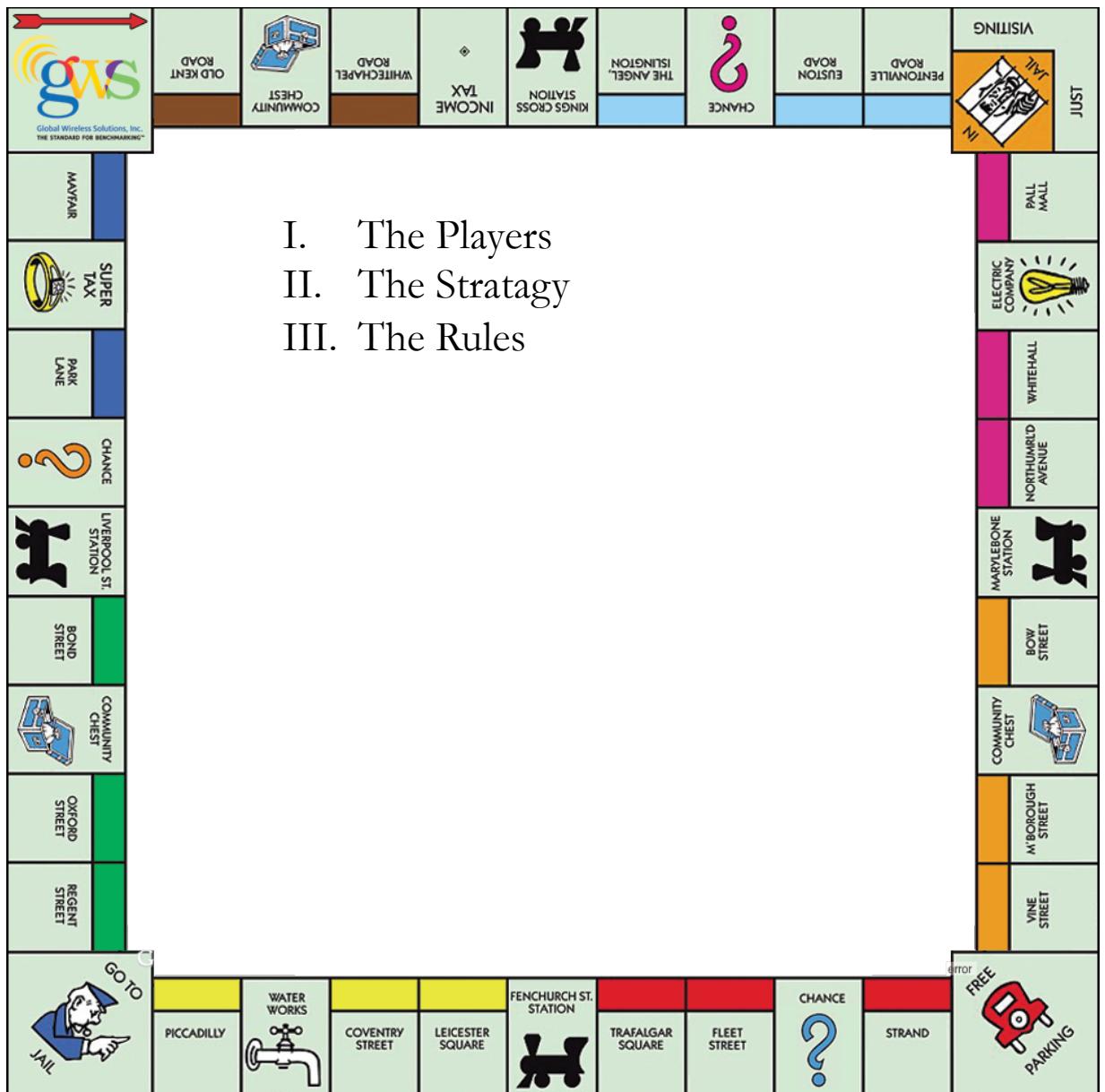
Computer Crime: The Rules Of The Game



By

Dr. Nawfal Fadhel

The Game

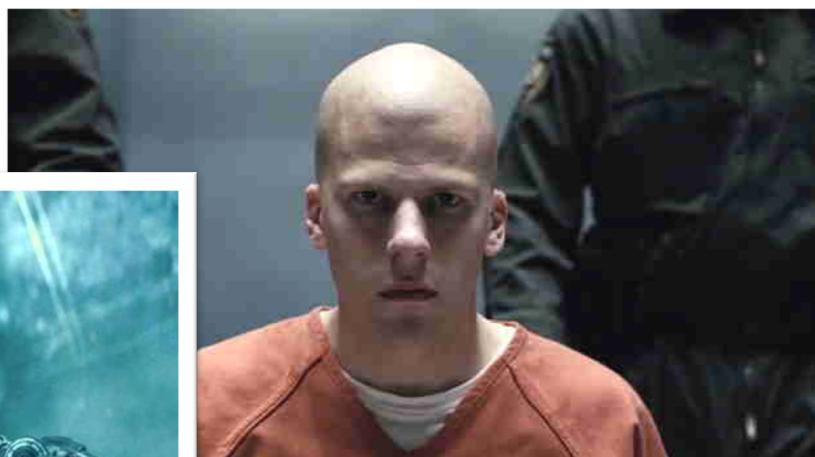


- I. The Players
- II. The Strategy
- III. The Rules

The Players – Rich and Poor



The Players – With a cause and Without



What If

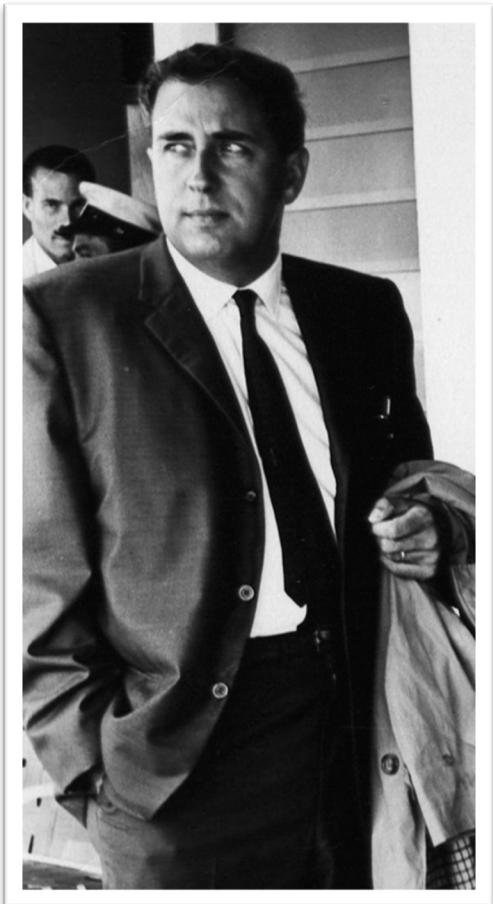
Wernher von Braun (March 23, 1912 – June 16, 1977) was a German and later American aerospace engineer and space architect. NASA

He was the leading figure in the development of rocket technology in Nazi Germany and a pioneer of rocket and space technology in the United States.



What If

Gerald Vincent Bull (March 9, 1928 – March 22, 1990) was a Canadian engineer who developed long-range artillery. He moved from project to project in his quest to economically launch a satellite using a huge artillery piece, to which end he designed the Project Babylon "supergun" for the Iraqi government. Assassinated march 22nd 1990.

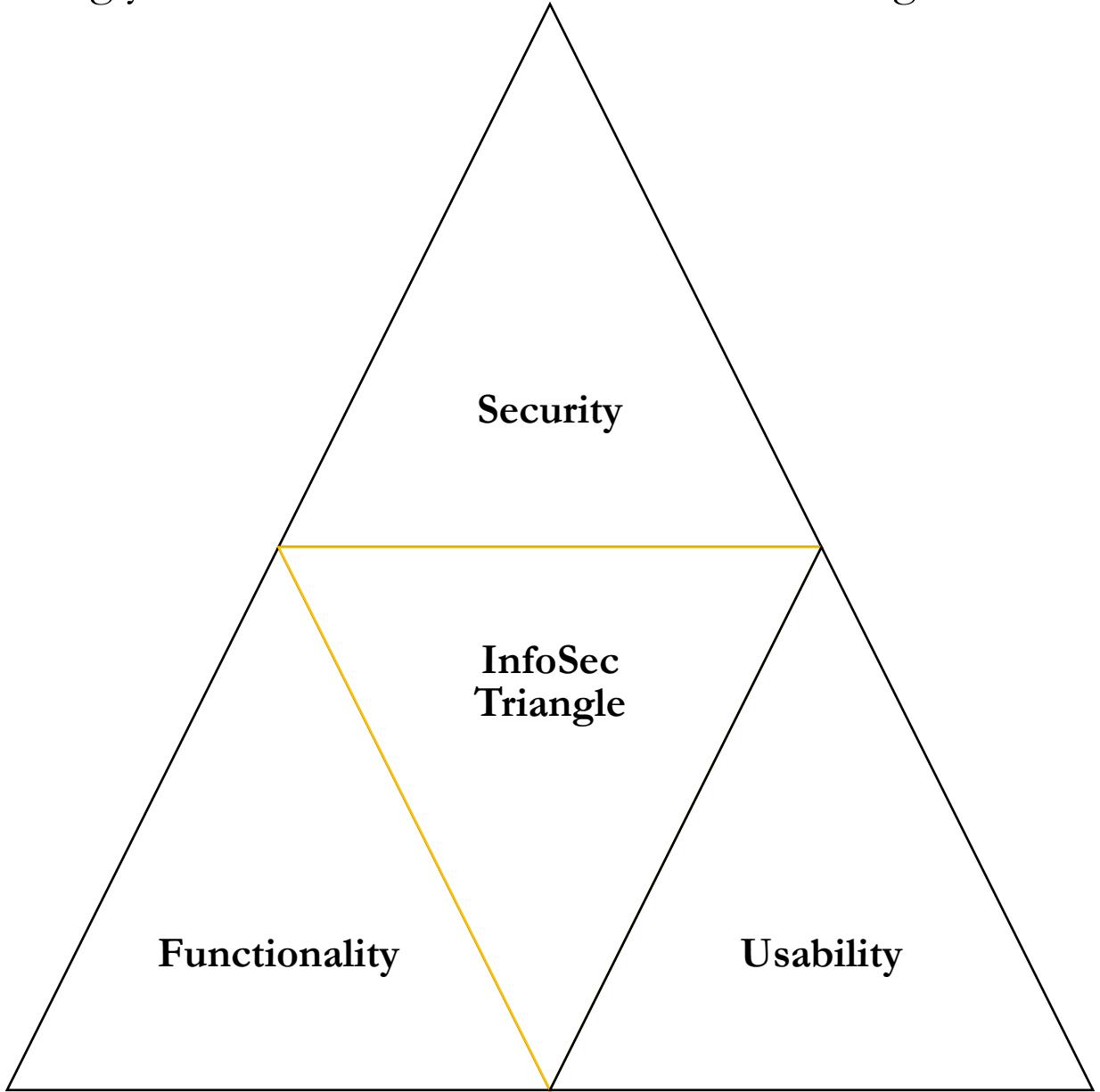


Question?

- What is a Hacker?
- What is a cracker?
- What are you?

Remember this Rule

If a hacker wants to get into a system, “HE WILL” and there is nothing you can do about it. The only thing you can do is make it harder for him to get in.



Question

- What kind of hackers do you know of?



Types of hackers

Lawful

- I. White Hats
- II. Former Black Hats
- III. Consulting Firms
- IV. State Sponsored

Unlawful

- I. Black Hats
- II. Gray Hats
- III. Suicide Hackers
- IV. Hacktivist

Government Units - Intelligence Services Act 1994 – Section 3

- 1) There shall continue to be a Government Communications Headquarters under the authority of the Secretary of State; and, subject to subsection (2) below, its functions shall be—
 - a) to monitor [make use of] or interfere with electromagnetic, acoustic and other emissions and any equipment producing such emissions and to obtain and provide information derived from or related to such emissions or equipment and from encrypted material; and
 - b) to provide advice and assistance about—
 - i. languages, including terminology used for technical matters, and
 - ii. cryptography and other matters relating to the protection of information and other material,
- 2) The functions referred to in subsection (1)(a) above shall be exercisable only—
 - a) in the interests of national security, with particular reference to the defence and foreign policies of Her Majesty's Government in the United Kingdom; or
 - b) in the interests of the economic well-being of the United Kingdom in relation to the actions or intentions of persons outside the British Islands; or
 - c) in support of the prevention or detection of serious crime.

State Sponsored

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 @foxnewspolitics foxnewspolitics

BREAKING NEWS: President @BarackObama assassinated, 2 gunshot wounds have proved too much. It's a sad 4th for #america. #obamadead [theguardian](#)

6 hours ago via web Favorite Retweet Reply

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News > Technology > Hacking

Syrian Electronic Army takes credit for attack on Obama's Twitter account

Group sympathetic to Assad targeted link-shortening service used by Obama account to link to war propaganda video

Tom McCarthy
[Follow](#)
theguardian.com, Monday 28 October 2013 20.41 GMT
[Jump to comments \(45\)](#)



The Syrian Electronic Army claimed credit for the attack in a statement obtained by the Associated Press.

A hacker group sympathetic to Syrian president Bashar al-Assad claimed responsibility Monday for an attack in which President Barack Obama's official Twitter account linked to a war propaganda video.

The hackers targeted a link-shortening service used by the Obama account, which is administered by the former campaign group Organizing for Action.

The resulting Obama tweet appeared to link to a Washington Post story about immigration.

Suicide Hackers

"We see suicide bombers that are prepared to die for their cause. I don't think it is too far before we start to see people who are quite prepared to conduct cyber-terrorism.

"While the risk will be high that they will be caught, they will accept that as a fact of life for 'the cause' and be prepared to go to prison for 30 years because they stopped a banking system working or a power grid taken down or took down the air traffic control system of a country for a period of time,"

Colonel Paul Straughair, the director of network centric warfare at the Australian Army

Suicide Hackers

Aaron Swartz Hacker Case Ends With Suicide



8 comments, 1 called-out

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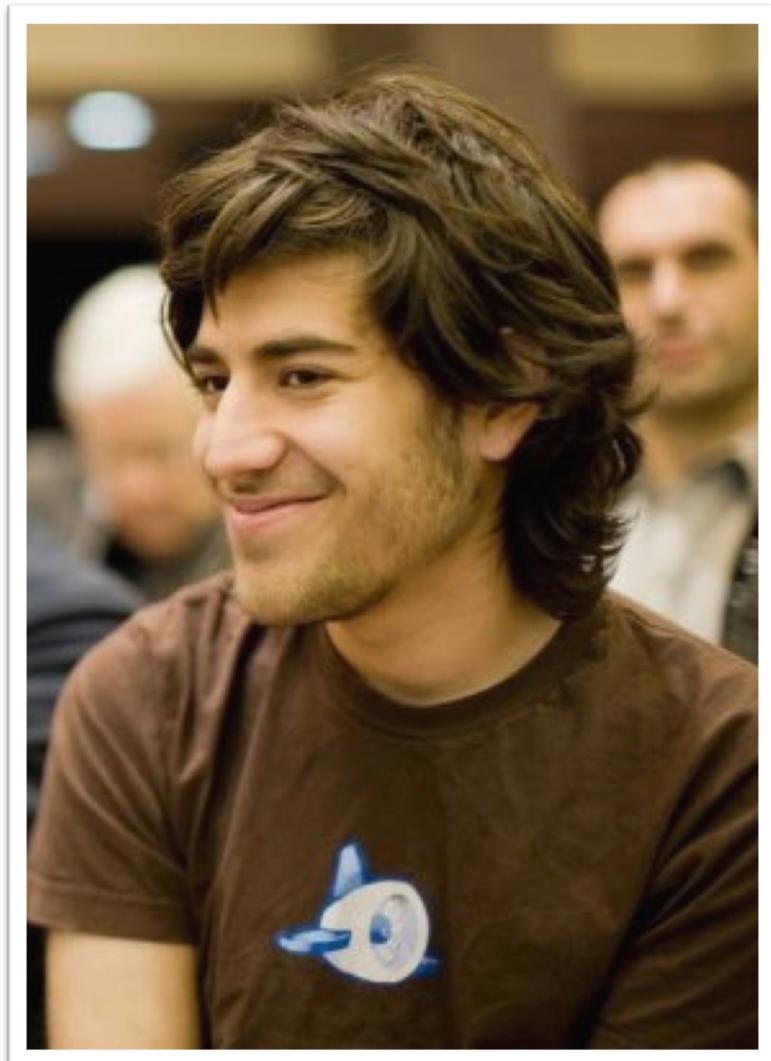
For those of us who have covered white-collar crime cases, we know that prosecutors and defense attorneys play for keeps. In our justice system there is only one victor, one loser, one verdict ... and in the middle of it all is a defendant, a person. One of those defendants arrested and charged in 2011 was Aaron Swartz (26), who chose to end his case on his own terms ... he hung himself in his Brooklyn apartment last weekend.



When

Suicide Hackers

Aaron Hillel Swartz (November 8, 1986 – January 11, 2013) was an American computer programmer, entrepreneur, writer, political organizer, and Internet hacktivist. He was involved in the development of the web feed format RSS, the Markdown publishing format, the organization Creative Commons, and the website framework web.py, a co-founder of Reddit, co-founder by Y Combinator, Internet hall of fame.

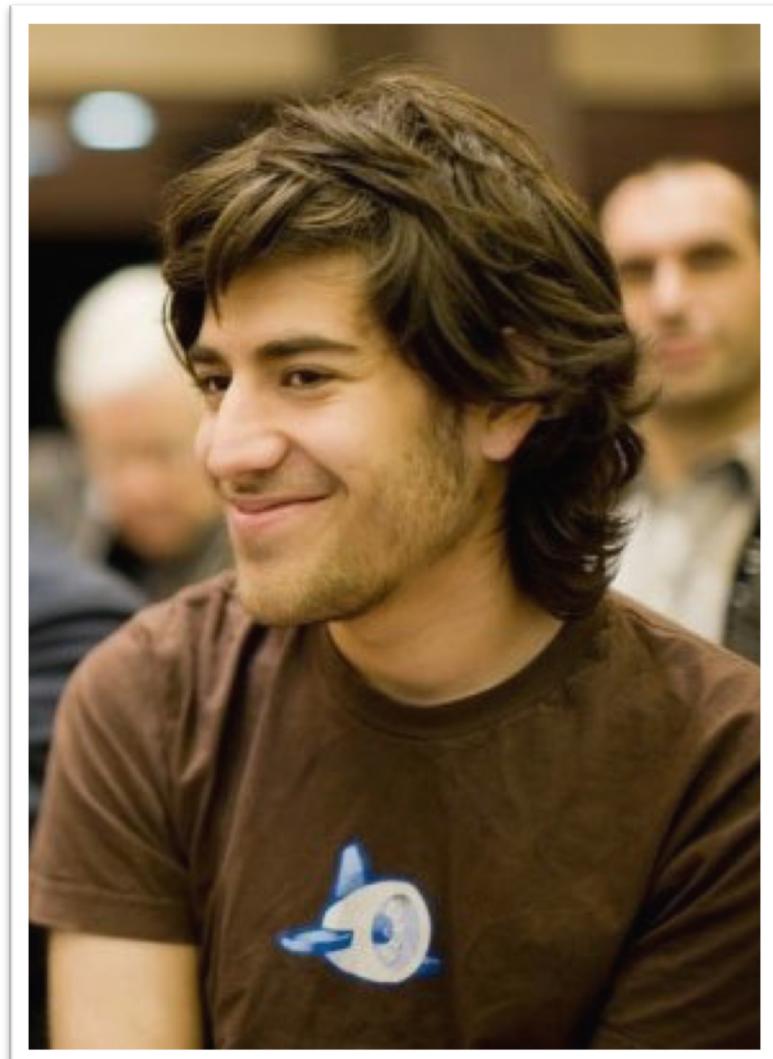


Suicide Hackers

In 2011, Swartz was arrested by Massachusetts Institute of Technology (MIT) police on state breaking-and-entering charges, after connecting a computer to the MIT network in an unmarked and unlocked closet, and setting it to download academic journal articles systematically from JSTOR using a guest user account issued to him by MIT.

Federal prosecutors later charged him with two counts of wire fraud and eleven violations of the Computer Fraud and Abuse Act, carrying a cumulative maximum penalty of \$1 million in fines, 35 years in prison, asset forfeiture, restitution, and supervised release.

Swartz declined a plea bargain under which he would have served six months in federal prison. Two days after the prosecution rejected a counter-offer by Swartz, he was found dead in his Brooklyn apartment, where he had hanged himself.



Hacktivist

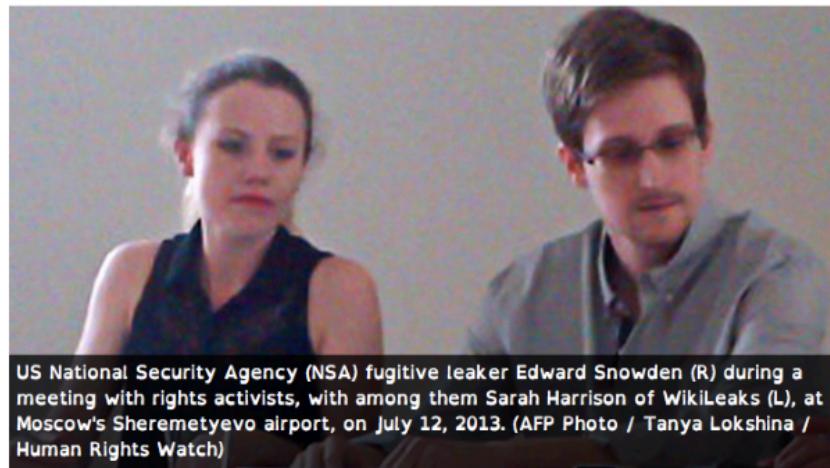
- WikiLeaks - Julian Assange.
- Vault 7 - PRISM - Edward Snowden.
- And Anonymous

WikiLeaks' Sarah Harrison who helped Snowden reach Moscow fears returning to UK

Published time: November 06, 2013 20:26

Edited time: November 08, 2013 12:15

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Persona

- I. Proficiency in programming languages
- II. Proficiency in understanding hardware technical specification.
- III. Knowledge in vulnerability research.
- IV. Be a master in hacking techniques.
- V. Follow a strict code of conduct.

Saroha, Rashmi. "Profiling a cyber criminal." *International Journal of Information and Computation Technology* 4.3 (2014): 253-258.

Persona – Technical Know-how

Sharp (intelligent)

Focussed

Well-trained

Strategic planners

Resourceful

Goal oriented

Well-networked

Well-organized

Well trained

Creative

Smart

Skilful

Persona – Personal Traits

- Impatient
- Determined
- Insensitive
- Secretive
- Strong-willed
- Passionate
- Risk-taker
- Loner
- Emotional
- Control freak

Persona – Social Characteristics

Anti-establishment

Lack Social skills

Marginalised

Mass-destruction

Anti-social

Anti-state

Unlawful

Rebellious

Need to outsmart others

Social dissatisfaction

Persona – Motivating Factors

Monetary Gain

Political beliefs

Emotions

Thrill-seeking

Risk tolerance

Manipulate others

Need to Control others

Concealed existence

Political support

Experimentation

No fear of punishment

Curiosity

What to do



Question

What are you afraid to lose the most?

Security Is Freedom From Fear

I. Life

II. Money

III. Privacy

Life - Cyber-Physical Attacks

- Cyber-physical attacks on critical infrastructure capable of destroying these physical assets and causing widespread damage to third parties keep the insurer awake at night.
- A cyber-physical attack on critical infrastructure occurs when an attacker gains access to a computer system that operates equipment in a manufacturing plant, oil pipeline, refinery, electrical generating plant or the like and is able to control the operations of that equipment to harm certain resources or other properties.
- A significant cyber-physical attack on critical infrastructure poses a risk not only to the owners and operators of such property, but also to their suppliers, consumers, businesses and individuals in the vicinity of the resource targeted, and to any person or entity adversely affected by it (e.g. hospital patients and shareholders).

Money & Privacy – Cyber Crime

According to Hampshire Police “Several million cases of fraud and of computer misuse are reported to the police every year. It's staggering, but even more staggering is that so many of those crimes could have been prevented by making a few small changes in online behaviour.”

cyber crime, covers all crimes that:

- I. take place online
- II. are committed using computers, or
- III. are assisted by online technology

Passive Vs Active Attacks

- Passive attack: Violate the system confidentiality without affecting the state of the system
- Active Attack: violate the system availability, integrity and confidentiality.

5 Stages of Active Attacks

- I. Reconnaissance
- II. Scanning
- III. Gaining Access
- IV. Maintaining Access
- V. Clearing Tracks

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Kent man arrested after picture of burning poppy posted on internet

Police say that the man from Aylesham had been arrested on suspicion of 'malicious telecommunications'

Ben Quinn
The Guardian, Monday 12 November 2012



Remembrance Day is marked in London with poppies. Photograph:

Laws – Computer Fraud and Abuse Act 1984.

Section – 2

intentionally accesses a computer without authorization or exceeds authorized access, and thereby obtains—

- A. information contained in a financial record of a financial institution, or of a card issuer as defined in section 1602(n) [1] of title 15, or contained in a file of a consumer reporting agency on a consumer, as such terms are defined in the Fair Credit Reporting Act (15 U.S.C. 1681 et seq.);
- B. information from any department or agency of the United States; or
- C. information from any protected computer;

Laws - CISPA - Cyber Intelligence Sharing and Protection Act.

”To provide for sharing of certain cyber threat intelligence and cyber threat information between intelligence community and cyber security entities, and for other purposes”



Google and the NSA both want to pass CISPA. And that should scare you.

Recent news reports [reveal](#) that the NSA has been pressuring their most powerful defenders in Congress to reintroduce CISPA -- the Cyber Intelligence Sharing & Protection Act. This bill would allow corporations to share our private data with the government more easily, and with complete legal immunity. No wonder NSA chief Keith Alexander [has been begging Congress](#) to pass a CISPA bill, and Google and other tech giants [are on board](#).

Laws - SOPA - Stop Online Piracy Act

Authorizes the Attorney General (AG) to seek a court order against a U.S.-directed foreign Internet site committing or facilitating online piracy to require the owner, operator, or domain name registrant, or the site or domain name itself if such persons are unable to be found, to cease and desist further activities constituting specified intellectual property offenses under the federal criminal code including criminal copyright infringement, unauthorized fixation and trafficking of sound recordings or videos of live musical performances, the recording of exhibited motion pictures, or trafficking in counterfeit labels, goods, or services.



WEBSITE BLOCKED

This site has been blocked to Americans by the US Government Firewall



Laws - PIPA - PROTECT IP Act

“Preventing Real Online Threats to Economic Creativity and Theft of Intellectual Property Act of 2011 or the PROTECT IP Act of 2011 - (Sec. 3) Authorizes the Attorney General (AG) to commence:

- 1) an in personam action against a registrant of a nondomestic domain name (NDN) used by an Internet site dedicated to infringing activities (ISDIA) or an owner or operator of an ISDIA accessed through an NDN; or
- 2) if such individuals are unable to be found by the AG or have no address within a U.S. judicial district, an in rem action (against a domain name itself, in lieu of such individuals) against the NDN used by an ISDIA.”

Defines ISDIA as a site that:

- 1) has no significant use other than engaging in or facilitating copyright infringement, circumventing technology controlling access to copyrighted works, or selling or promoting counterfeit goods or services; or
- 2) is designed, operated, or marketed and used to engage in such activities.

“Basically designed as a death pentently for a website”

Laws – GDPR - General Data Protection Regulation

In general

- I. Your consent is needed
- II. Data must be collected for a stated reason, if new uses are developed, consent may need to be re-acquired
- III. Consent can be withdrawn any time
- IV. Data subjects have a right to request a copy of the information held about them by a data controller

Justice

AND KIDS WHO HAVE NEVER SEEN WAR

HAVE DIFFERENT VALUES!!!



KIDS WHO HAVE NEVER SEEN PEACE

THIS VERY PLACE IS NEUTRAL GROUND!!!

THOSE WHO STAND AT THE TOP DETERMINE WHAT'S WRONG AND WHAT'S RIGHT!!!

BECOMES JUSTICE!!!

WHOEVER WINS THIS WAR

JUSTICE WILL PREVAIL, YOU SAY!? BUT OF COURSE IT WILL!!!



Summary

- We discussed hacker classes.
- We discussed some background on hacking.
- We discussed some laws that relevant to cyber security experts.