PRIVACY IN THE MODERN TIMES

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Introduction

- In the last years, the Internet has evolved into a formidable tool having a major impact in all aspects of life. Every half year, changes occur, so it is impossible to predict the evolution in the next 10 years.

- Currently, we are in a middle of a revolution taking place in trade and telecommunications.

Introduction

- The world economy, along with globalization, has a new dimension, "e" is eProcurement, ePayments, eGovernment, … Distribution systems, online sales are all elements that have become "e" and we no longer conceive our modern society without them.

Introduction

- Explosive development of software and hardware technology made it possible for today's technology and services to be used in all areas of activity: education, research, economics, health, trade, tourism, business, defense, etc.
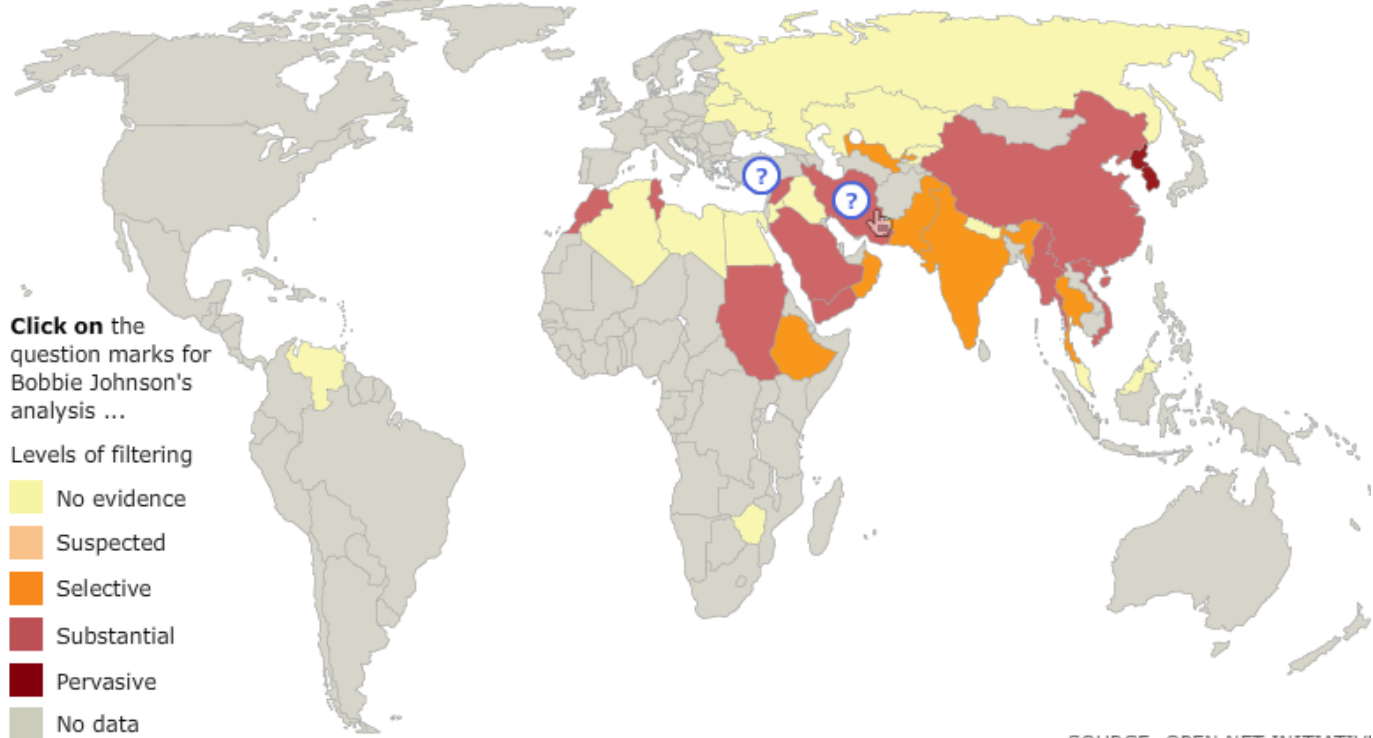
Introduction

- It have been developed applications for financial transactions online, online commerce, multimedia, online, e-Learning, online magazines, electronic libraries, information search services on the network.

Restricting Access to Internet

- Many of the advantages of this global Network which is Internet (access to information, communication) are perceived as dangerous and threats to some political regimes all over the world.

- As stated in (Human Rights Watch, 2006), in China there are more than 60 Chinese government issued regulations on Internet use.

- Amnesty International notes that China has the highest number of journalists in prison and cyber-dissidents in the world.

Internet tools Web sites that provide email, internet hosting, translation, telephone services, circumvention methods

Click on the question marks for Bobbie Johnson's analysis ...

Levels of filtering

- No evidence
- Suspected
- Selective
- Substantial
- Pervasive
- No data

SOURCE: OPEN NET INITIATIVE

SOPA-Stop On line Piracy Act

- SOPA (Stop Online Piracy Act), "PROTECT IP Act" (PIPA), and the "Combating Online Infringement and Copyright Act" (COICA).

- Bills promoted by Hollywood in the US Congress.

- This regulations would create a list of web sites that might have been shut down or restrict access.

SOPA-Stop On line Piracy Act

- DNS blocking, stop payment processors to function when accesing "blacklist" websites, censor website searching engines.

- These acts allow the Attorney General to create lists of censor sites even if no court has found evidence of breaking the copyright law.

SOPA-Stop On line Piracy Act

- Massive protest against SOPA/PIPA
    - milions of people that sent messages to Congress, petitions
    - thousands of people protested in New York City.

Facebook

- The largest social network with over 500 million registered users.

- Christopher Sartinsky, deputy CIA director
  - "Facebook….it is truly a dream come true for the CIA"
  - https://www.youtube.com/embed/8Etr_QG3Wno

Facebook

- Acquisti and Gross (2006)
  - "…twenty-two percent of our sample do not know what the Facebook privacy settings are or do not remember if they ever changed them. Around 25% do not know what the location settings are"

Facebook

- Andrew Brown (2010)
    - In his article "Facebook is not your friend" suggests that FB users are not clients but the product of Facebook. "The customers are the advertisers to whom Facebook sells the information users hand over, knowingly or not"

Backdoors in software and hardware devices

- Backdoor in a computer system is a shortcut to various computer resources like files, passwords, privileges.

- An unauthorized user has access to some article data in the target computer without using the normal authentication procedure.

Backdoors in software and hardware devices

- According to security analysts, Windows, one of the most used operating systems has built in trapdoors.

- Dr. Nicko van Someren
  - The first scientist who discovered a possible backdoor in Windows.
  - He reported his findings at Crypto '98.

Backdoors in software and hardware devices

- Zeit Online (Zeit Online, 2013)
  - IT experts within German Government believe that Windows 8 has backdoors that could be used by NSA to control computer remotely.
  - German researchers fear that will be impossible to tell what exactly the effects of the remote updates are.

Backdoors in software and hardware devices

- Researchers from Cambridge University
  - Chinese built backdoor in a microprocessor (Defence Update, 2013).
  - The microprocessor (ProASICA3P250) is used in military forces of the United States.

Backdoors in software and hardware devices

- The backdoor is programmed to create a Trojan Horse which is able to disable thousands of automated systems.

- The researcher cannot say which of the companies from the production chain is responsible for this: the Chinese manufacturer or the American designer.

Backdoors in software and hardware devices

- Steve Blank, one of the most respected IT specialist
  - "…he would be surprised if the US National Security Agency was not embedding "backdoors" inside chips produced by Intel and AMD giving them the possibility to access and control machines."

Backdoors in software and hardware devices

- Modern computers contain microcode which is remotely updated by security updates. These updates can change the computer behavior in an unnoticeable way. So, the user may be the target of a security break.

New Technology from Intel. Core VPro Processors

- New technology coming from Intel Company.
- New capabilities that make this processor unique among other processors on the market.

New Technology from Intel. Core VPro Processors

- Vpro features:
  - allows the PC's to be remotely repaired by the IT maintenance (computers do not need to be powered on)
  - offers increased security.
  - Promo materials show enhanced features that allow an administrator to shut down PCs remotely even if the PC is not connected to the network, and the ability to bypass hard drive encryption.

New Technology from Intel. Core VPro Processors

- Jeff Marek, director of business client engineering for Intel, acknowledged that the Vpro Processor had "the ability to remotely kill and restore a lost or stolen PC via 3G".

New Technology from Intel. Core VPro Processors

- Allows hackers or NSA to access information and the hard drive from the computer even if the power is off and the computer is not connected to the network.

- Webcams could be access remotely, computers could be disabled remotely.

- People privacy in danger more than ever

- Increases the risk of industrial espionage.

Can we trust our PCs ?

– The answer is NO

– The increase in computer performance paradoxically leads to the possibility that computers might be controlled more easily from outside.

- With Intel vPro, access to our computers can be done anytime regardless of whether the computer is on or not, connected to the network or not, powered or not.

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