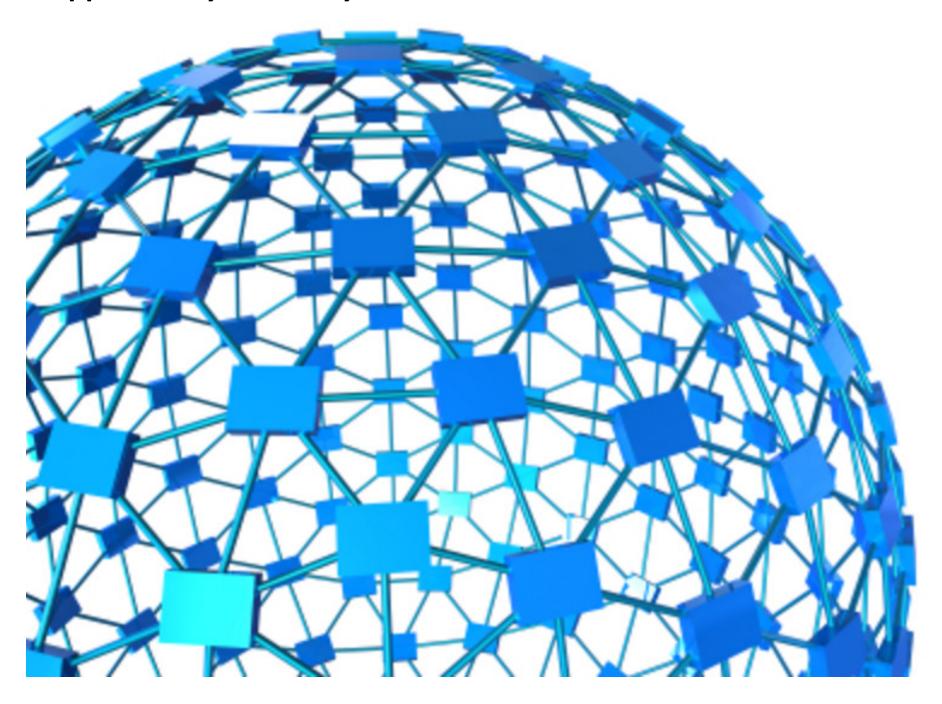
#### **Suppose They Gave a Cyberwar and EVERYBODY Came?**





## Suppose They Gave a Cyberwar and EVERYBODY Came?

William F. Slater, III, M.S. MBA, PMP, CISSP, CISA A Presentation for Forensecure 2013

### **Agenda**

- Introduction
- Cyberwar, Cyberattacks, Cyberdeterrence Defined
- Some Great Writers and Thinkers on Warfare
- Cyberweapons and the Nature of Cyberattacks
- Who Is Doing This and Why?
- The Reality of the Threats
- How Vulnerable Are We in the U.S.?
- Some Worst Case Scenarios
- What Is the U.S. Government Doing to Defend the American Population?
- What Can You and Your Business Do Today?
- The Future of Cyberwar and Cyberattacks
- Conclusion
- Questions

### Introduction

- A career Information Technology (IT)
   professional since July 1977, starting as a
   young computer systems staff officer in the
   United States Air Force supporting the
   command control information systems that
   provided real-time war plan asset information
   to the Strategic Air Command Battle Staff
- Completed Bellevue University's M. S. in Cybersecurity program on March 2, 2013
- Since 2009, I chose this topic to research and write about because as an IT professional in cybersecurity, a former U.S. Air Force officer, and a patriotic American, I am deeply concerned about the recent unfolding events of cyberattacks and cyberwarfare in cyberspace.



July 1977



January 2013

# WHAT'S REALLY HAPPENING ON THE INTERNET AND WHERE IS IT ALL GOING?

#### This image was created by Go Globe in January 2011.



Image: nfographic by- Shanghai Web Designers

#### This image was created by Go Globe in January 2011.

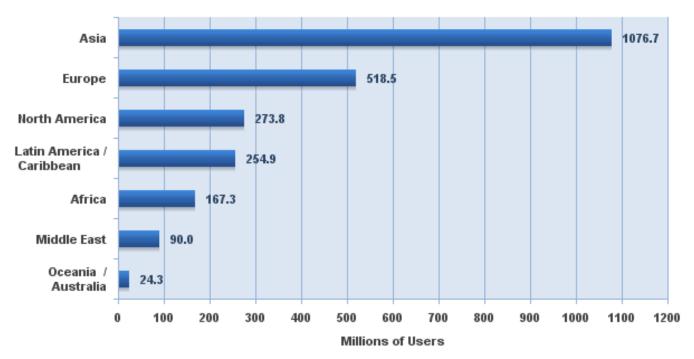


Image: Infographic by- GO-Gulf.com Web Design Company

April 16, 2013

### How Many Internet Users?

### Internet Users in the World by Geographic Regions - 2012 Q2



Source: Internet World Stats - www.internetworldstats.com/stats.htm 2,405,518,376 Internet users estimated for June 30, 2012 Copyright © 2012, Miniwatts Marketing Group

#### Over 2.4 Billion!

## Cyberwarfare, Cyberattacks, Cyberdeterrence Defined

#### Cyberwarfare

<u>Cyberwarfare</u> refers to politically motivated hacking to conduct sabotage and espionage. It is a form of information warfare sometimes seen as analogous to conventional warfare although this analogy is controversial for both its accuracy and its political motivation. (Wikipedia, 2013)

#### Cyberattacks

Known as <u>cyberattacks</u>, this coined term can deal massive amounts of damage to individuals or on a larger scale, companies or government establishments. It does not stop there though, when government establishments or military establishments are attacked through cyber methods, it is a whole new kind of attack known as cyberwarfare or cyberterrorism. (Wikipedia, 2013).

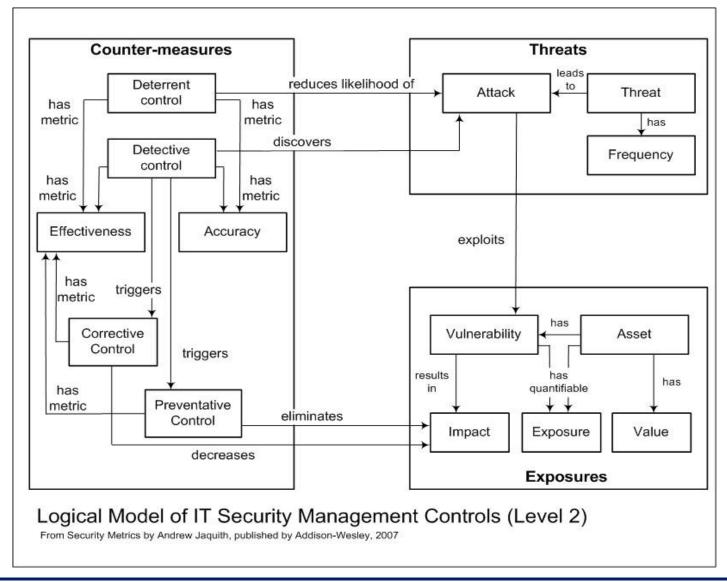
#### Cyberdeterrence

The efficacy of <u>cyberdeterrence</u> relies on the ability to impose or raise costs and to deny or lower benefits related to cyber attack in a state's decision-making calculus. Credible cyber deterrence is also dependent on a state's willingness to use these abilities and a potential aggressor's awareness that these abilities, and the will to use them, exist. (Beidleman, 2009)

#### **Critical Infrastructure?**

 NIST takes its definition of "critical infrastructure" from the 42 U.S.C. 5195c(e) which states that it is all "systems and assets, whether physical or virtual, so vital to the United States that the incapacity or destruction of such systems and assets would have a debilitating impact on security, national economic security, national public health or safety, or any combination of those matters."

### Threats, Vulnerabilities, and Controls













Sun Tzu Napolean Bonaparte

Carl von Clausewitz

Nathan Bedford Forrest

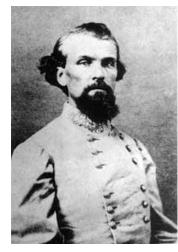
John Boyd

## ESTABLISHED THINKING AND WRITING ON WARFARE











Napolean Bonaparte

Carl von Clausewitz

Nathan Bedford Forrest

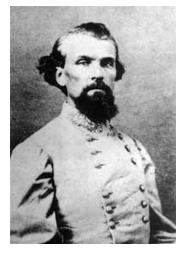
John Boyd

According to Tzu, the proper application of his principles described in the Art of War, will allow the wise commander to win. Wise commanders who seek to keep their enemy guessing, off balance and reacting instead of acting is well on their way to victory. Tzu sees the use of force almost as a last resort in war. The beauty of Tzu's principles is that they focus on victory with the least damage and the swiftest resolution. This approach preserves lives, property, and public support for the government or commanders who apply it wisely. --(Zapotoczny, 2006)











Sun Tzu

Carl von Clausewitz

Nathan Bedford Forrest

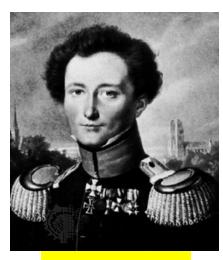
John Boyd

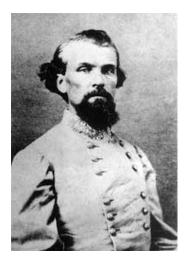
Napoleon is credited with being great tactician and a military genius of his time. He took on all of Europe and gave everyone a pretty good run for the money. His campaigns formed the basic of military education throughout the western world and a lot of the military thinking is still influenced by the great Frenchman. Few, if any, commanders, before or since, fought more wars and battles under more varied conditions of weather, terrain, and climate, and against a greater variety of enemies than the French Emperor. His understanding of mass warfare and his success in raising, organizing, and equipping mass armies revolutionized the conduct of war and marked the origin of modern warfare. From 1796, when he assumed his first independent military command, until 1809, Napoleon displayed an astonishing near-invincibility in battle and an equally astounding ability to use that battlefield success to compel his enemies to grant him his political objectives. A dazzled Clausewitz had good reason to call Napoleon the "god of war."

His genius was essentially practical, and his military concepts evolved from the close study of earlier commanders, particularly Frederick the Great. He made the fullest use of the ideas of his predecessors and breathed life into them." (David Chandler - "Dictionary of the Napoleonic wars" p 18)











Sun Tzu

Napolean Bonaparte

Carl von Clausewitz

Nathan Bedford Forrest

John Boyd

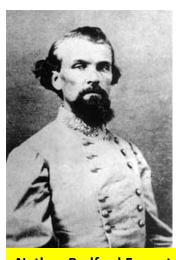
Clausewitz was largely preoccupied with the massive application of force and attempts to mitigate friction in combat operations. He defined friction as suffering, confusion, exhaustion, and fear. The problem with his line of a single definable center of gravity. Clausewitz stressed the importance of finding the center of gravity, or the critical point at the critical time, upon which the outcome of the conflict depended. In this author's view, Clausewitz makes a mistake in not recognizing that combat often presents multiple smaller centers of gravity. These multiple smaller centers of gravity can be individually exploited and isolated in the pursuit of overall advantage. By exploiting several centers of gravity simultaneously, the enemy can be quickly thrown off balance.

Clausewitz did not see the importance of unconventional operations and how they could decrease the effectiveness of large opposing forces without the need for a decisive clash of massed strength. He also did not pay attention to how friction could be used against the enemy. Instead, he focused on how to limit friction's impact on one's own forces. His concentration on the importance of destroying the enemy in combat using strength against strength goes against Sun Tzu's concept of attacking the enemy's strategy --(Zapotoczny, 2006)











Sun Tzu

Napolean Bonaparte

Carl von Clausewitz

**Nathan Bedford Forrest** 

John Boyd

Quotes

"War means fighting and fighting means killing"

"Get there first with the most"

"Whenever you see something blue, shoot at it, and do all you can to keep up the scare"

"Charge them both ways" (Forrest caught between two larger Union armies)

Tactics
Always exaggerated his own strength

Forrest's troops, if captured, would also exaggerate

Surrounded fort in the town, expressed the desire to avoid unnecessary bloodshed

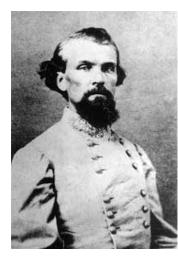
Invite the enemy commander to see for himself that he is hopelessly outnumbered

Builds campfires for a ghost army











Sun Tzu

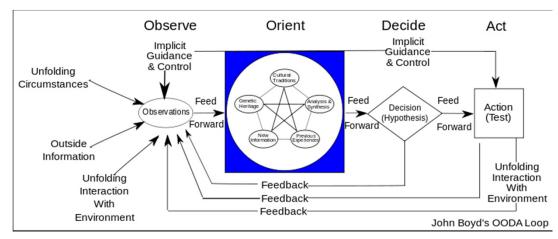
Napolean Bonaparte

Carl von Clausewitz

Nathan Bedford Forrest

**John Boyd** 

#### Revolutionized thinking on Modern Warfare with his Observe - Orient - Decide - Act (OODA) Loop



# The OODA Model (Observe – Orient – Decide – Act) for Analysis and Conflict Resolution

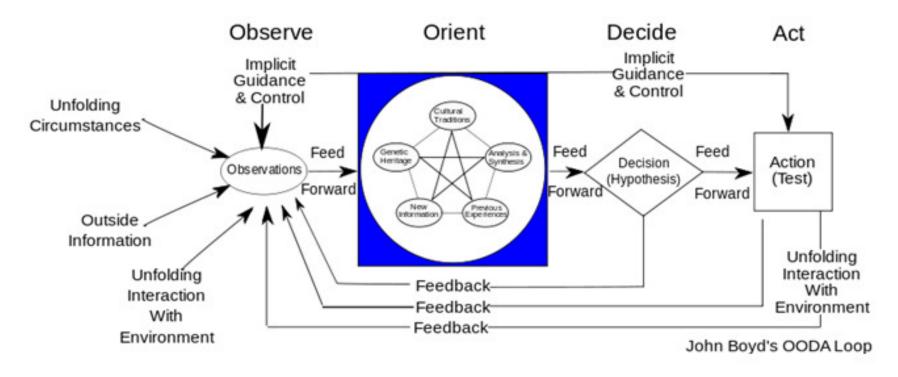
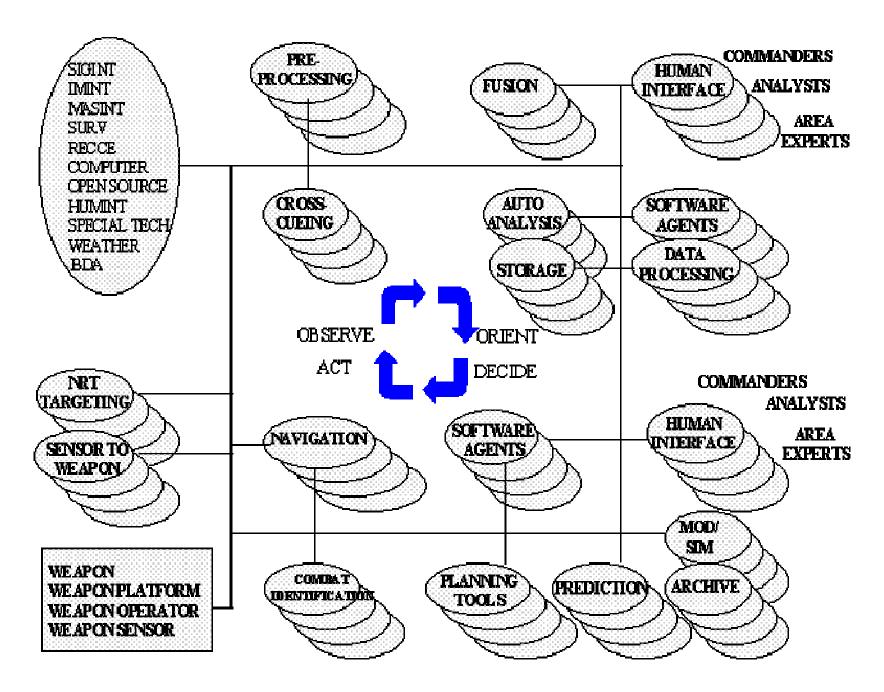


Figure 1 – Boyd's OODA Loop Model (Bousquet, 2009)



## CYBERWEAPONS AND THE NATURE OF CYBERATTACKS

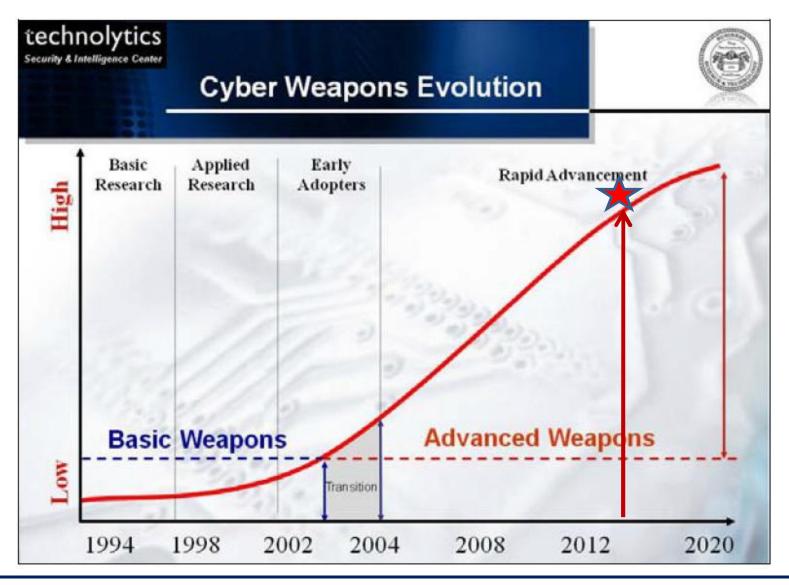
### **Some Characteristics of Cyberwarfare**

- It's fast: Cyberattacks happen at Internet speeds
- It happens in "Cyberspace"
- If you are connected to the Internet, you are vulnerable to Cyberattacks
- Targets of opportunity are plentiful (i.e. any IP-device, and also SCADA devices)
- Damage can cripple critical infrastructure, up to entire cities
- Damage from Espionage and DDoS can have far-reaching negative effects
- It's cheap and getting cheaper (thanks to Moore's Law and the "Force Multiplier" advantage)
- It's sophisticated and getting more sophisticated
- It's complex to understand and defend against
- It's extremely complex due to laws, policies, and regulations, in the U.S. and in other countries
- It's not your Father's Battlefield or War.

## What Makes Cyberwarfare Difficult to Analyze and Understand?

- Lack of Agreement on Nature and Definitions Among Major International Players
- The Secretive Nature, Lack of Disclosure, and Denials
- Attribution
- Provability
- It's unpredictable
- Who is "the enemy?"
- Who are the "good guys?"
- Constantly changing
- Increasingly sophisticated

### **Cyberweapon Evolution**

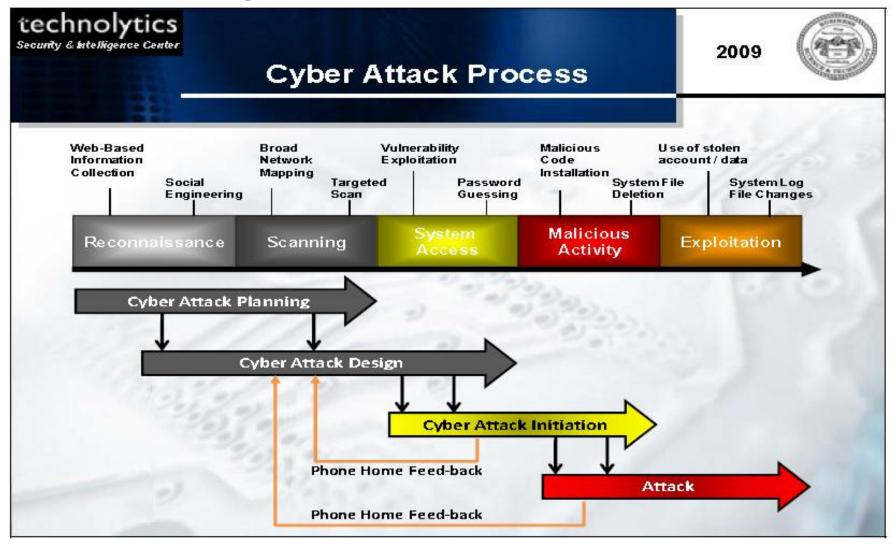


	gradunian is	Veapons Class Capabili			ř .			
Threat Class	Threat Class Rating	Working Definition	2007 Threat Rating	2008 Threat Rating	2009 Threat Rating	Detection Difficulty	Current Awailability	Current Usage
Spoofing	3.4	As spoofing attack is a situation in which one person or program successfully masquerades as another by falsifying data and therely gaining an illegitimate advantage.	3.5	3.8	3.9	3.0	3.0	3.6
Scanning	3.6	A sequential scan, potential attackers target or will randomly select an IP address in an effort to identify system vulnerabilities.	3.5	4.0	4.1	3.2	3.2	3.7
Dictionary Scanning	3.6	This type of attack exploits buffer overflow vulnerabilities in targeted client software through injection of malicious content.	3.4	4.0	4.0	3.2	3.5	3.6
Digital Snooping	4.5	The monitoring of digital networks or connections to uncover passwords or other data.	2.6	3.9	4.5	4.4	4.5	4.4
DoS & DDoS	2.9	The intentional overloading of a system with incoming traffic to cause system crashes.	2.9	3.9	3.9	1.0	3.8	3.0
Tunneling	4.3	Any digital attack that attempts to get "under" a security system by accessing very low level system functions.	3.4	3.9	4.4	4.5	4.2	3.9
Rootkits	5.0	A software tool that allows attackers to have "root leve" access to the computer, which means it runs at the lowest level of the machine - below the OS.	NA	4.2	5.0	5.0	3.2	2.1
Counterfeit Hardware	3.4	The seizure of counterfeit IT equipment has raised concerns over cybersecurity. At this time, no practical method of verification exists and supply chain procurement safeguards are very limited at best.	1.5	2.8	4.2	4.8	2.5	2.0
Micro- processor Threats	2.5	The increasing complexity of modern microprocessor chips is almost certain to lead to undetected errors that can be exploited and the possibility of malicious micro code of circuitry.	1.3	1.6	2.2	4.8	2.1	1.0
Counterfeit Software	3.3	The explosion of counterfeit code has significant security risks. It is very likely that the software is substandard with hidden cybers ecurity threats.	1.8	2.0	3.7	4.8	2.5	2.3
Cellular Attacks	2.5	Malware and becoming a node on a BotNet are now threats to cell phone users and services providers around the world. While this activity is relatively new, it is expected to grow rapidly.	NA	2.1	3.0	4.0	1.5	1.6
		to a second seco	1	- 9	3	4	15	

## Cyberweapons Circa 2011

Technolytics, 2012)

### **Cyberattack Process**



### **Cyberwar and Cyberattacks**

- Dangers and incidents related to cyberattacks and cyberwar continue to increase at an alarming rate
- Compliance with security frameworks can help
- But... entire infrastructures, cities, and countries are at risk
- The Solutions will lie in National Policy, Regulation, preparation, and some form of deterrence

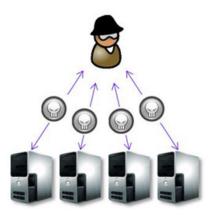


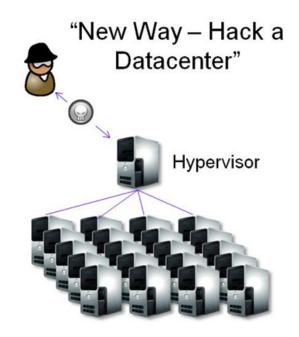
## Why Should Data Center Professionals Be Concerned about Cyberwar and Cyberattacks?

Data Centers represent huge cyberspace infrastructure targets of opportunity

#### Virtualization Concentration Risks

"Old Way – Hack a System"

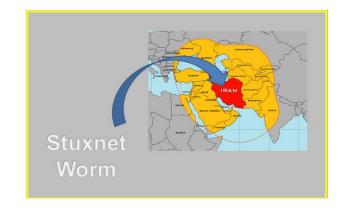




### THE REALITY OF THE THREATS

## Some Notable Cyberattacks and Cyberweapons 2007 - 2013

- DDoS Russia v. Estonia, 2007
- DDoS Russia v. Georgia, 2008
- DDoS Russian v. Kyrgyzstan, 2009
- Stuxnet U.S. and Israel v. Iran, 2009 2010
- Flame U.S. and Israel v. Iran, 2011
- Duqu U.S. and Israel v. Iran, 2012
- Shamoon 2012
- DDoS Attacks on U.S. Banks 2012 and 2013
- Cyberattacks on S. Korean Banks and other businesses on March 20, 2013
- Cyberattacks between Anonymous and Israel – April 2013



### **Threat Analysis**

- The threat of cyberattacks and cyberwar are very real
- The quantity of cyberattacks and cyberwar incidents has increased dramatically since 2007, and it continues to increase daily
- The sophistication of cyberattacks and cyberweapons has grown dramatically since 2009
- There is now a dire need to incorporate strategies to deal with the threats of cyberattacks, cyberwarfare, and cyberdeterrence into the U.S. CONOPS Plan
- The lack of effective national plans and policies to effectively address cyberwarfare and cyberdeterrence constitutes a threat itself

Country	Policy	Strategy
China  ★★  ★★	China supports cyberwarfare capabilities, especially providing such capabilities in the People's Liberation Army.	The Chinese will wage unrestricted warfare and these are the principles: Omni-directionality Synchrony Limited objectives Unlimited measures Asymmetry Minimal consumption Multi-dimensional coordination Adjustment, control of the entire process (Hagestad, 2012).
Russia	Russia supports cyberwarfare capabilities, especially providing such capabilities in the Russian Army.  The nature of cyberwarfare and information warfare requires that the development of a response to these challenges must be organized on an interdisciplinary basis and include researchers from different branches – political analysts, sociologists, psychologists, military specialists, and media representatives (Fayutkin, 2012),	The ability to achieve cyber superiority is essential to victory in cyberspace. (Fayutkin, 2012).
India	India supports cyberwarfare capabilities, especially providing such capabilities in the Indian Army.  "It is essential for efficient and effective conduct of war including cyber-war. The war book therefore needs to specify as how to maintain no-contact cyber war and when the government decide to go for full-contact or partial-contact war then how cyber war will be integrated to meet overall war objectives (Saini, 2012)."	Strategies are still under development, but will follow the guidance of policies related to the conduct of war. (Saini, 2012)

## Strategic Comparative Analysis

## The Top Four Countries in Cyberwarfare Capability (as of 2009)

Cyber Military Capabilities 2009	Cyber Capabilities Intent	Offensive Capabilities Rating	Cyber Intelligence Capabilities	Overall Cyber Rating
China:	4.2	3.8	4.0	4.0
United States:	4.2	3.8	4.0	4.0
Russia	4.3	3.5	3.8	3.9
India:	4.0	3.5	3.5	3.7

**Table 1 – Country Cyber Capabilities Ratings (Technolytics, 2012)** 

### WHO IS DOING THIS AND WHY?

#### February 2013

#### March 2013

#### Top 15 of Source Countries (Last month)

	Source of Attack	Number of Attacks
	Russian Federation	2,402,722
	Taiwan, Province of China	907,102
	Germany	780,425
	Ukraine	566,531
	Hungary	367,966
100	United States	355,341
	Romania	350,948
<b>(</b>	Brazil	337,977
	Italy	288,607
***	Australia	255,777
•	Argentina	185,720
**	China	168,146
	Poland	162,235
*	Israel	143,943
•	Japan	133,908

#### Top 5 of Attack Types (Last month)

Description	Number of Attacks
Attack on SMB protocol	27,327,356
Attack on Netbios protocol	937,476
Attack on Port 33434	687,446
Attack on SSH protocol	669,589
Attack on Port 5353	522,671

#### Top 15 of Source Countries (Last month)

	Source of Attack	Number of Attacks
	Russian Federation	2,446,164
	Germany	1,308,615
	Taiwan, Province of China	536,031
***	United States	449,853
***	Australia	378,790
0	India	358,110
	Ukraine	250,206
	Hungary	237,605
<b>(</b>	Brazil	218,265
**	China	197,152
	Italy	194,102
	France	184,073
•	Argentina	182,166
•	Japan	151,861
	Venezuela, Bolivarian Republic of	127,862

#### Top 5 of Attack Types (Last month)

Description	Number of Attacks
Attack on SMB protocol	31,077,005
Attack on Netbios protocol	1,108,033
Attack on Port 5353	921,115
Attack on SSH protocol	919,145
Attack on Port 33434	687,446

http://sicherheitstacho.eu/





### **Cyberadversaries:**

Organized, Capable, Equipped,
Talented, and Determined – From Nation
States and Non-State Actors

















Chaos Computer Club









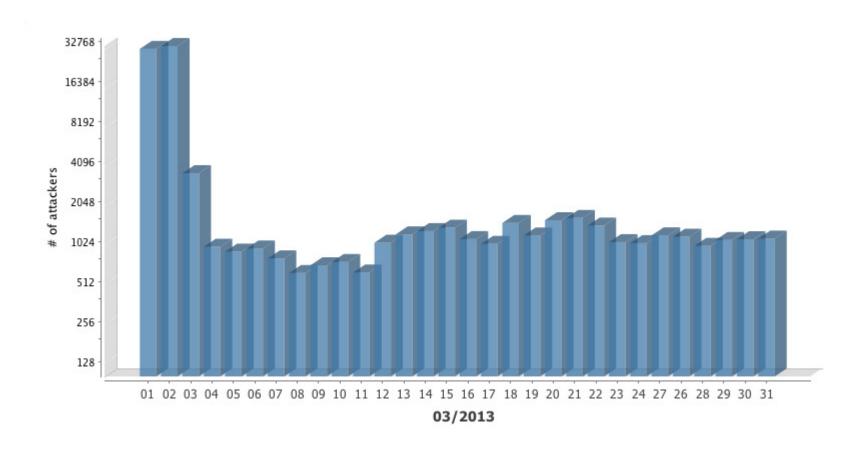






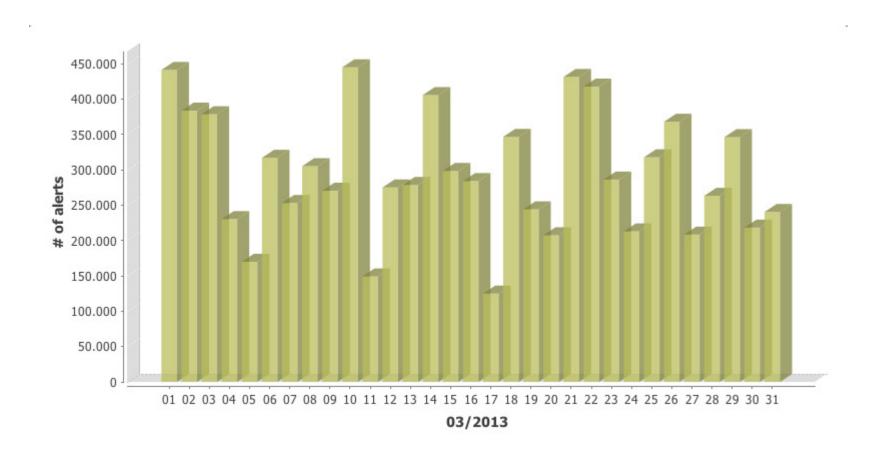
## HOW VULNERABLE ARE WE IN THE U.S.?

## Recorded Cyberattacks



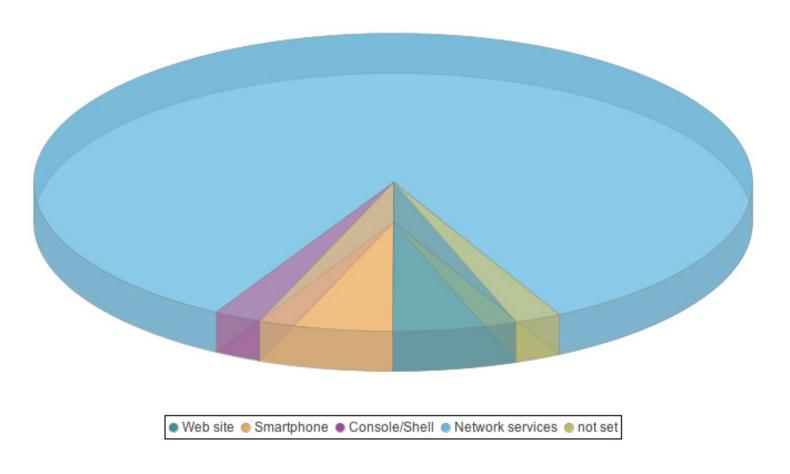
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## Recorded Cyberattacks



http://sicherheitstacho.eu/

## Types of Targets for Cyberattacks



http://sicherheitstacho.eu/

### **Some Worst Case Scenarios**

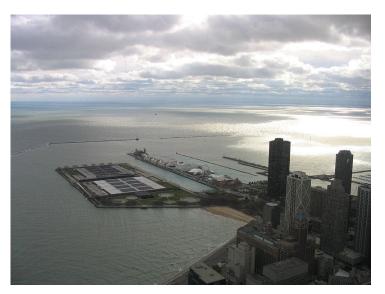
- Espionage and lost trade secrets
- DDoS attacks on banks and other financial institutions
- Attacks on SCADA systems
- Attacks on banks and the financial system
- Catastrophic attacks on critical infrastructure facilities and targets

Experts Suspect North Behind SKorea Computer Crash



Depositors try to use automated teller machines of Shinhan Bank while the bank's computer networks are paralyzed at a subway station in Seoul, South Korea, Wednesday, March 20, 2013. (AP Photo/Ahn Young-joon)





# What Is the U.S. Government Doing to Defend the American Population?

- U.S Cyber Command, June 23, 2009
- Policies that describe the U.S.'s interest in protecting and defending cyberspace
- Several Cyberwarfare units created in the U.S. Military
- Internet "Kill Switch", September 2012
- Presidential Policy Directive 20, November 14, 2012
- Executive Order on Cybersecurity and Critical Infrastructure, February 12, 2013
- New Sophisticated Offensive Cyberweapons
- Cooperation, agreements, and exchange of information with allies and organizations
- The Federal Government will spend over \$65 Billion on Cybersecurity, 2013 2018.

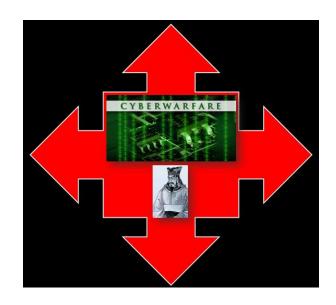


#### Motto in MD5 Hash9 ec4c12949a4f31474f299058ce2b22a

"USCYBERCOM plans, coordinates, integrates, synchronizes and conducts activities to: direct the operations and defense of specified Department of Defense information networks and; prepare to, and when directed, conduct full spectrum military cyberspace operations in order to enable actions in all domains, ensure US/Allied freedom of action in cyberspace and deny the same to our adversaries."

# Cyberwar and Cyberattacks – Some Present Challenges to Resolution

- The lack of international definition and agreement on what constitutes an act of cyberwar (Markoff and Kramer, 2009).
- The lack of the ability to clearly attribute the source of an attack (Turzanski and Husick, 2012).
- The ability for non-state actors to conduct potent cyberattacks (Turzanski and Husick, 2012).
- The inability to clearly define what the exact nature of critical infrastructure targets (Turzanski and Husick, 2012).
- The massive proliferation and reliance on ubiquitous, highly insecure, vulnerable systems based on SCADA technologies during the 1980s and 1990s (Turzanski and Husick, 2012).
- The continually changing landscape of information technology including the vulnerabilities and threats related to systems that are obsolete, yet remain in operational use for several years past their intended useful life.
- Consider the following slide that defines the complexity of defense...



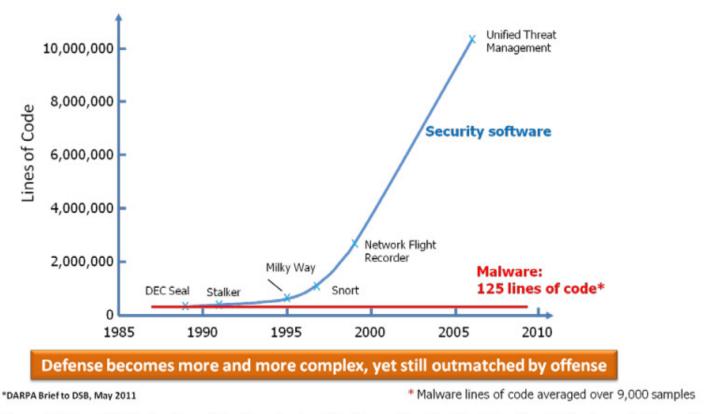
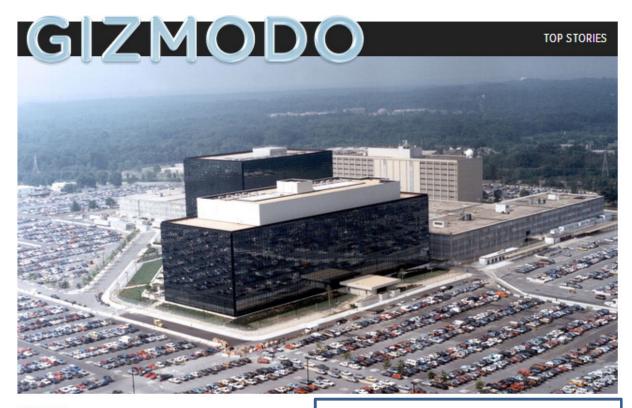


Figure 3.2 Graphic Illustration of the Complexity of Software Required to Defend and Attack our Systems. Very Small Changes (Even Single Bits) Can Cause Major Impacts to the Operation of a System

There is no single silver bullet to solve the threat posed by cyber-attack or warfare. Solving this problem is analogous to previous complex national security and military strategy developments including counter U-boat strategy in WWII, nuclear deterrence in the Cold War, commercial air travel safety and countering IEDs in the Global War on Terrorism. The risks involved with these challenges were never driven to zero, but through broad systems engineering of a spectrum of techniques, the challenges were successfully contained and managed. (U.S. Department of Defense, 2013)



#### HACKING

#### The NSA Is Training 13 Teams of Covert Hackers to Attack Other Countries

#### Kyle Wagner ©

For the first time, the United States has officially disclosed plans to develop counterattack measures against foreign nations' cyberattacks. General Keith Alexander, chief of the military's Cyber Command and the NSA, told Congress yesterday the military is training 13 teams of programmers and computer experts to carry out offensive attacks.

(Wagner, 2013)

## **Most Recent Developments – March 2013**

- Global Threat Assessment lists Cyber Threats as No. 1 threat to U.S. – March 12, 2013
- NATO's Tallinn Manual for Cyberwarfare Operations released
   March 19, 2013 (authorizes killing hackers and hacktivists!)
- Rand Beers, Under Secretary of DHS for Cybersecurity releases 12-page report about Cybersecurity, Critical Infrastructure, EO 13636 and PPD21 – March 20, 2013
- S. Korea banking organizations and other businesses endure massive cyberattack and N. Korea is the primary suspect – March 20, 2013.
- Most massive DDoS Attack ever CyberBunker v. SpamHaus – March 27, 2013

## The Future of Cyberwar and Cyberattacks

- Increasing intensity and frequency
- Greater capacities to inflict damage
- Better Intelligence
- Faster Response
- Tighter Integration and Automation
- More complex offensive cyberweapons
- Better cyberdefense and deterrence will be necessary
- Better analysis and think-tank groups
- Possibly more secret Policy Directives (i.e. PPD 20)
- Possible loss of personal freedoms



# What Can You and Your Organization Do Today?

- Continually Educate yourself, friends, colleagues and family
- Adopt and implement, and follow a security compliance framework, such as ISO 27001
- Continually improve your security controls and your security posture
- Report incidents that result in more than \$5000 damage to the Internet Crime Complaint Center www.ic3.gov
- Defend yourself (ask me more about this later)
- Do not attack or return fire
- Remain vigilant

## How does Title 10 of the U.S. Code Affect Cyberwarfare and the Average U.S. Citizen?

 American Citizens are legally prohibited from responding offensively to cyberattacks

## **Career Opportunities?**

- Yes The U.S. Government is hiring Cybersecurity Professionals
- Private Industry will be picking up more and more Cybersecurity experts



## Career Development Opportunities?

#### Illinois Institute of Technology

 M.S. in Cyber Forensics and Security

#### **Bellevue University**

- M.S. in Cybersecurity
- B.S. in Cybersecurity

http://www.itm.iit.edu/cybersecurity/index.php



http://www.bellevue.edu/degrees/graduate/cybersecurity-ms/



# Final Recommendations for Our National Command Authorities

- Create National Policies that clearly and publically define the U.S.'s capabilities and intentions related to cyberwarfare and cyberdeterrence
- Based on the principles and philosophies described in these newly created national policies, it is imperative to modify the U.S. CONOPS Plan for war with strategies for cyberwarfare and cyberdeterrence
- Following these recommendations will probably make the U.S. and the world of cyberspace a bit safer

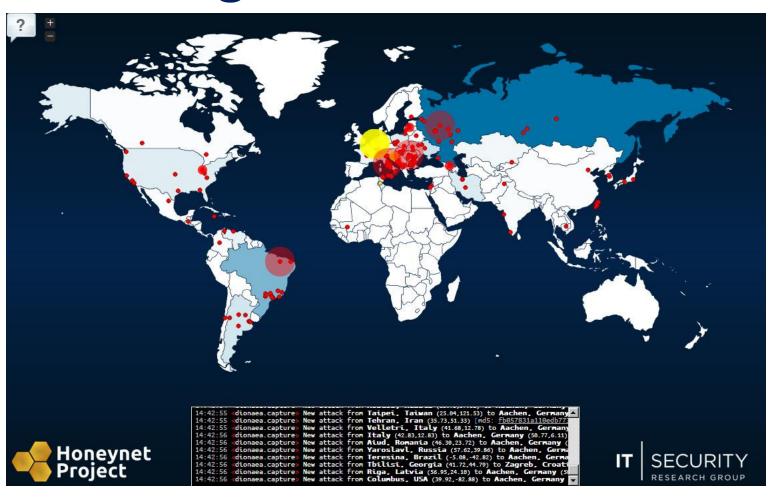
## Conclusion

- In 2012 and 2013, cyberattacks, cyberweapons, and cyberwarfare events are growing in number, frequency, and sophistication
- Due to our dependence on Cyberspace, we are living in dangerous times because of the current and worsening

cyberthreat landscape



# We Will Be Living in Interesting Times From Now On...



## **Questions?**











William F. Slater, III

## Website

### http://billslater.com/cyberwar

- Writing
- Presentations
- References



William F. Slater, III

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### References

#### http://sicherheitstacho.eu/

Realtime World wide cyberattack monitoring service launched by Germany's Deutsche Telecom Besides a real-time overview of current attacks, recorded by a total of 97 sensors, the website also provides statistics such as the top 15 source countries, distribution of attack targets, total number of attacks per day and overall sum of attackers per day.



English

German

#### Overview of current cyber attacks (logged by 97 Sensors )



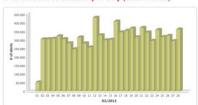
#### Live-Ticker

Date	Source	Attack on	Parameter
2013-03-19 03:18:48	Russia	Network services	dionaea.smbd.port.445
2013-03-19 03:18:48	United Kingdom	Network services	dionaea.smbd.port.445
2013-03-19 03:18:45	Ukraine	Network services	dionaea.smbd.port.445
2013-03-19 03:18:46	Chile	Network services	dionaea.smbd.port.445
2013-03-19 03:18:44	Ukraine	Network services	dionaea.smbd.port.445

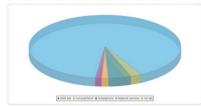
#### Overall sum of attackers per Day (Last Month)



#### Overall sum of attacks per Day (Last Month)



#### Distribution of Attack Targets (Last Month)



#### Top 15 of Source Countries (Last month)

	Source of Attack	Number of Attacks
	Russian Federation	2,402,722
	Taiwan, Province of China	907,102
	Germany	780,425
	Ukraine	566,531
	Hungary	367,966
i wa	United States	355,341
	Romania	350,948
<b>*</b>	Brazil	337,977
	Italy	288,607
<b>**</b> **	Australia	255,777
	Argentina	185,720
**	China	168,146
	Poland	162,235
•	Israel	143,943
•	Japan	133,908

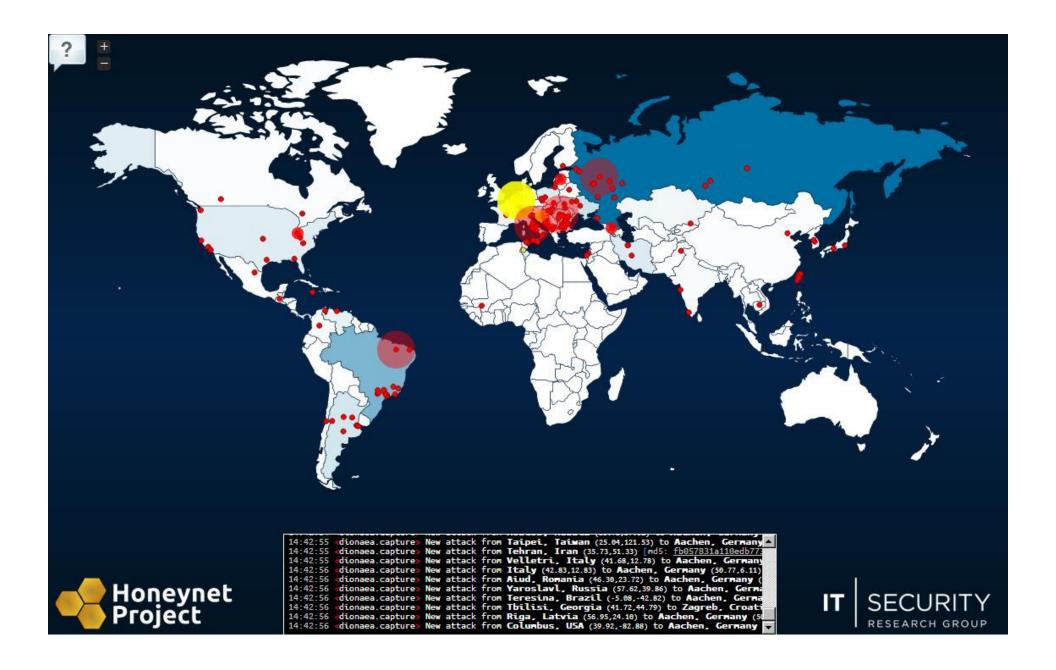
#### Top 5 of Attack Types (Last month)

Description	Number of Attacks			
Attack on SMB protocol	27,327,356			
Attack on Netbios protocol	937,476			
Attack on Port 33434	687,446			
Attack on SSH protocol	669,589			
Attack on Port 5353	522,671			

### References

http://map.honeynet.org/

Realtime World wide cyberattack monitoring service launched by the Honeynet Project.



## References

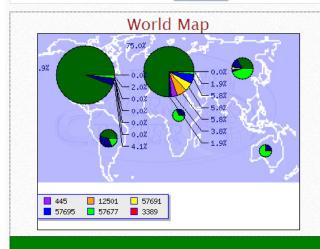
https://isc.sans.edu/dashboard.html

**Internet Storm Center** 

#### Dashboard: 2013-03-28

Handler on Duty: John Bambenek **Contact Us** 

Current Date (UTC): Thu, 28 Mar 2013 14:49:27 +0000 Refresh page every Never ✓ -or- Refresh Now



#### Today's Diaries

- Where Were You During the Great DDoS Cybergeddon of 2013?
- ISC StormCast for Thursday, March 28th 2013 http://isc.sans.edu/podcastdetail.html?id=3211

#### Search Internet Storm Center

GO site/port/ip search:

-	Top 10 Source IPs					
-	IP Address	Reports	Target IPs	First Seen	Last Seen	
	069.175.126.170 (US)	2,214,645	167,399	2012-07-11	2013-03-28	
-	061.142.106.034 (CN)	188,184	115,432	2012-11-10	2013-03-28	
-	115.095.166.247 (KR)	172,008	104,571	2012-08-26	2013-03-28	
-	061.147.119.186 (CN)	287,733	98,312	2012-11-15	2013-03-28	
-	176.010.035.241 (IS)	660,258	98,029	2013-01-26	2013-03-28	
	094.142.155.123 (IS)	399,685	93,739	2013-03-05	2013-03-28	
	069.175.054.106 (US)	1,501,920	92,325	2012-07-14	2013-03-28	
-	178.255.087.241 (GB)	93,349	83,306	2012-05-15	2013-03-28	
	060.214.139.074 (CN)	419,102	82,009	2013-02-01	2013-03-28	
-	074.216.195.099 (CA)	80,554	80,054	2012-12-04	2013-03-28	
1						

View Top Sources Page



DShield.org Top Attacker: 60.214.233.220 Top Port Attacked: 445 Last Updated 28-Mar-2013 02:28 pm UTC

#### Top 10 Ports

by Reports		by Targets		by Sources		
 Port	Reports	Port	Targets	Port	Sources	
 179	1013643	5900	82339	20612	36889	
	750100	2222			24467	

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