CYBER SECURITY SUMMIT 2016

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Cyber After 2016

Politics & Policy in 2017 and Beyond

Dan Paltiel, Policy Program Manager

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Agenda

- **What is Truman?**
- Cyber Regulation Shortcomings
- Cybersecurity Takes Center Stage
- The Whole-of-Government Approach
- 2017 and Beyond
- Q&A

Truman Members

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Cyberspace & Security Program

Cyber First Principles

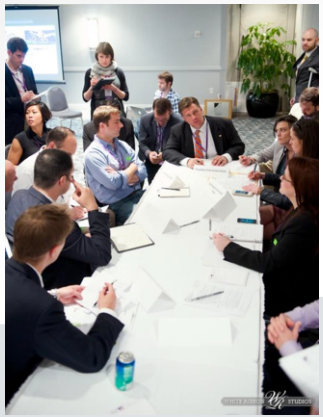
Cybersecurity ensures the confidentiality, integrity, and availability of information and information systems. It enables freedom of speech, civil liberties, innovation and free markets—principles that are proven to increase the potential for freedom and opportunity, at home and abroad.

Information networks are a tool that enables the expansion of America's mutually supportive ideals of human rights, freedom, and opportunity. They help create the conditions for innovation and human prosperity to flourish, while ensuring U.S. national security and world stability. While new technologies can provide hope to millions, they can also be used to create instability and exploit potential vulnerabilities in networks and systems.

THE CHALLENGE

Today, hostile nations, criminal groups, and individuals seek to exploit information networks—like the Internet—to further a variety of national and ideological objectives. America's banks, energy sector, and intellectual property continue to be routinely targeted by criminal hackers and foreign governments alike. A destabilizing attack on U.S. critical infrastructure would directly threaten American citizens, the U.S. economy, and America's way of life.

The problem is growing, not shrinking. As people become more dependent upon technology, opportunities for crime, espionage, and physical disruption will increase exponentially. This trend will continue unless we are able to foster an environment where cybersecurity is the rule, not the exception.



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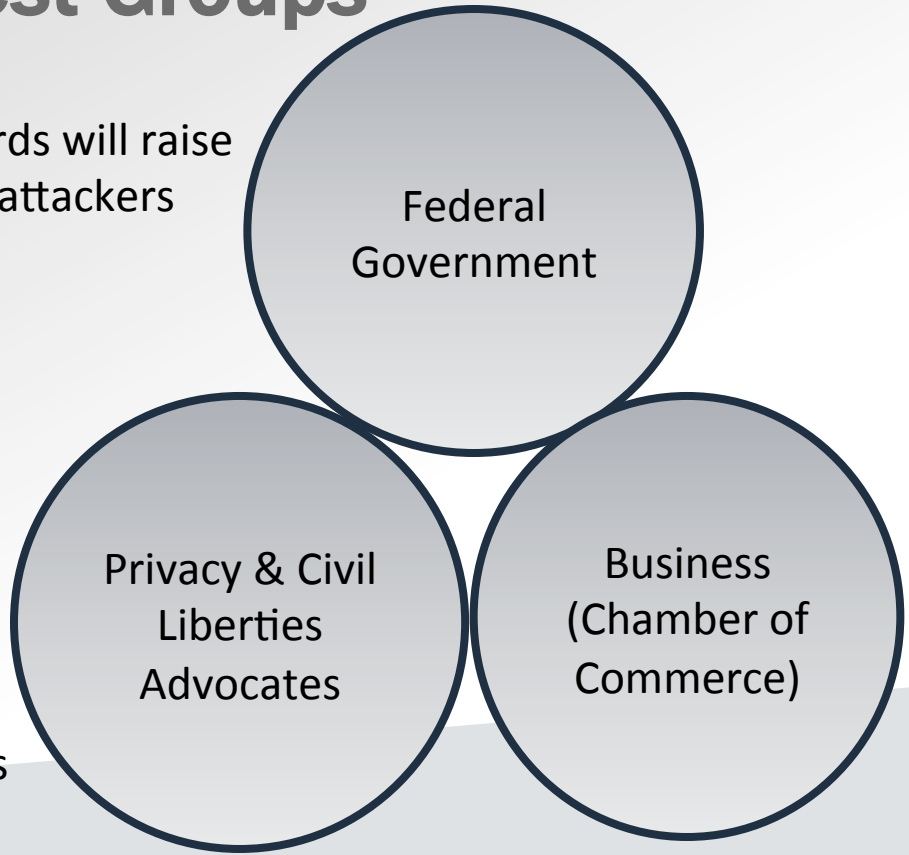
2012: The Debate on Capitol Hill

Key Pillars:

1. Critical Infrastructure
2. Information Sharing
3. Role of DHS
4. Data Breach Reporting

The Interest Groups

- Standards will raise cost to attackers



- Mandates will hurt bottom line

- Anonymize info
- Only share with civilian agencies

Securing Critical Infrastructure

Stakeholder	CSA 2012 v.1 (Senate)	CSA 2012 v.2 (Senate)	"Market Version" (House)
Federal Government			
Privacy/Civil Liberties			
Business			

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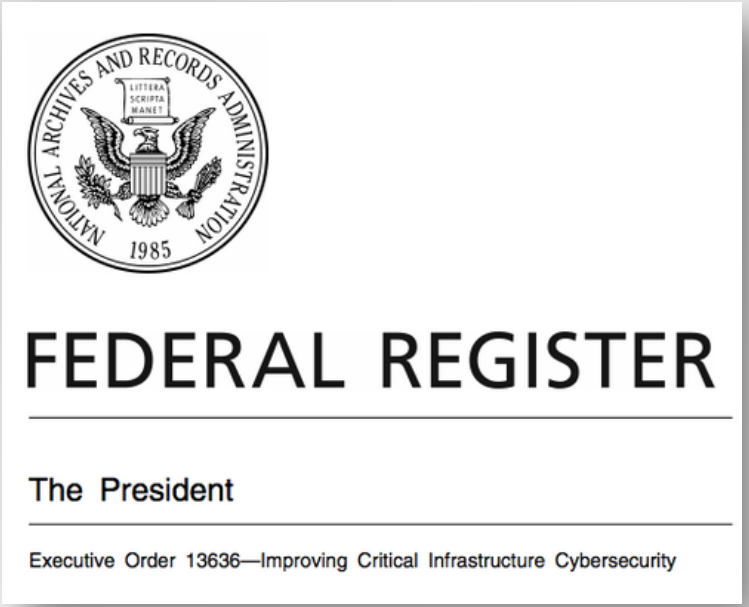
Feb 2013: POTUS Responds with an Executive Order

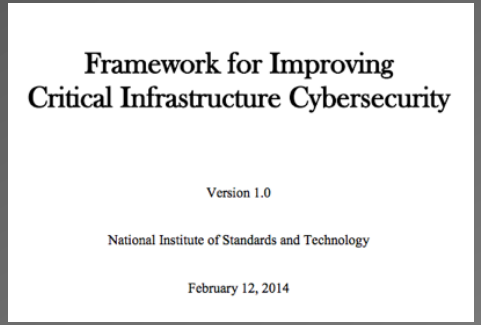


Policy Results:

- "Industry-led, government facilitated" best practices (*NIST Framework*)
- Increase USG → Industry Info Sharing
- Privacy & Civil Liberties Oversight

2014: NIST Cybersecurity Framework

- Outlines broad standards for cybersecurity
- Tech-neutral, flexible for different businesses
- Adopted by 30+ countries
- Most CI providers in US ”adopting” but each doing it differently
- Good base → but not good for regulation or mandates

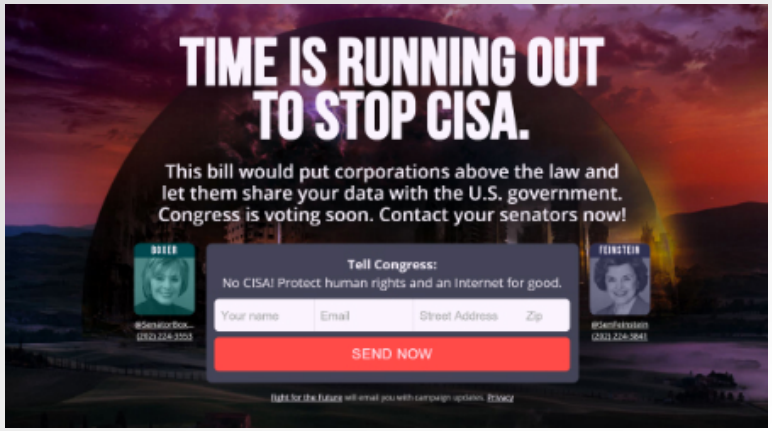

Framework for Improving Critical Infrastructure Cybersecurity

Version 1.0

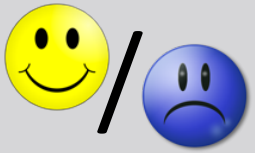
National Institute of Standards and Technology

February 12, 2014

December 2015: Passage of CISA



- Voluntary info sharing: industry → government
- No PII or info "irrelevant to cybersecurity"
- Remaining PII can be used to prosecute cybercrime

Stakeholder	Approve?
Federal Government	
Privacy-Civil Liberties	
Business	

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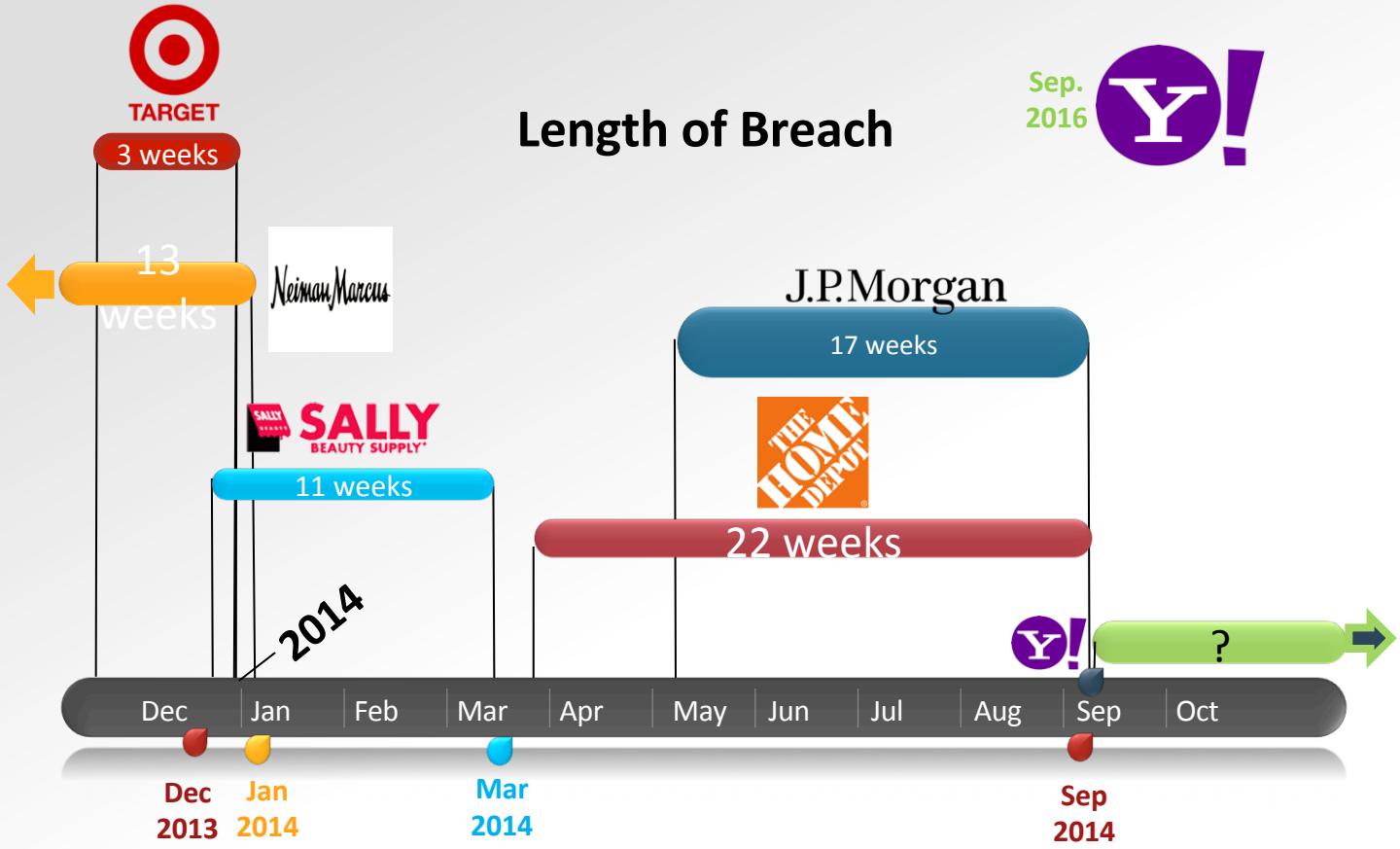
Length of Breach



Public Revelation

Setting Rules of the Road

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2015: Info Sharing + Sanctions

- *February*: Development of info sharing and analysis organizations (ISAOs)
  - Streamline classified info sharing
- *April*: Authorizes sanctions to be put in place against malicious cyber-enabled activity vs:
  - Critical Infrastructure
  - Disruption to computer network
  - Economically-motivated cyber espionage

Feb 2016: Cyber National Action Plan

- Creates cyber commission + Federal CISO
- DHS lead in private sector cyber
- Plans to modernize federal IT
- Mandates federal incident response

Cyber National Action Plan

$19 billion in FY17 budget (35% increase) → CNAP dead on arrival?

PPD-41: Cyber Incident Response

IMPACT	None	Unlikely	Some	Likely	Significant	Imminent Threat
LEVEL	0	1	2	3	4	5

No government response

Government Response

Intelligence Support

Threat Response

Unified Coordination Group (UCG)

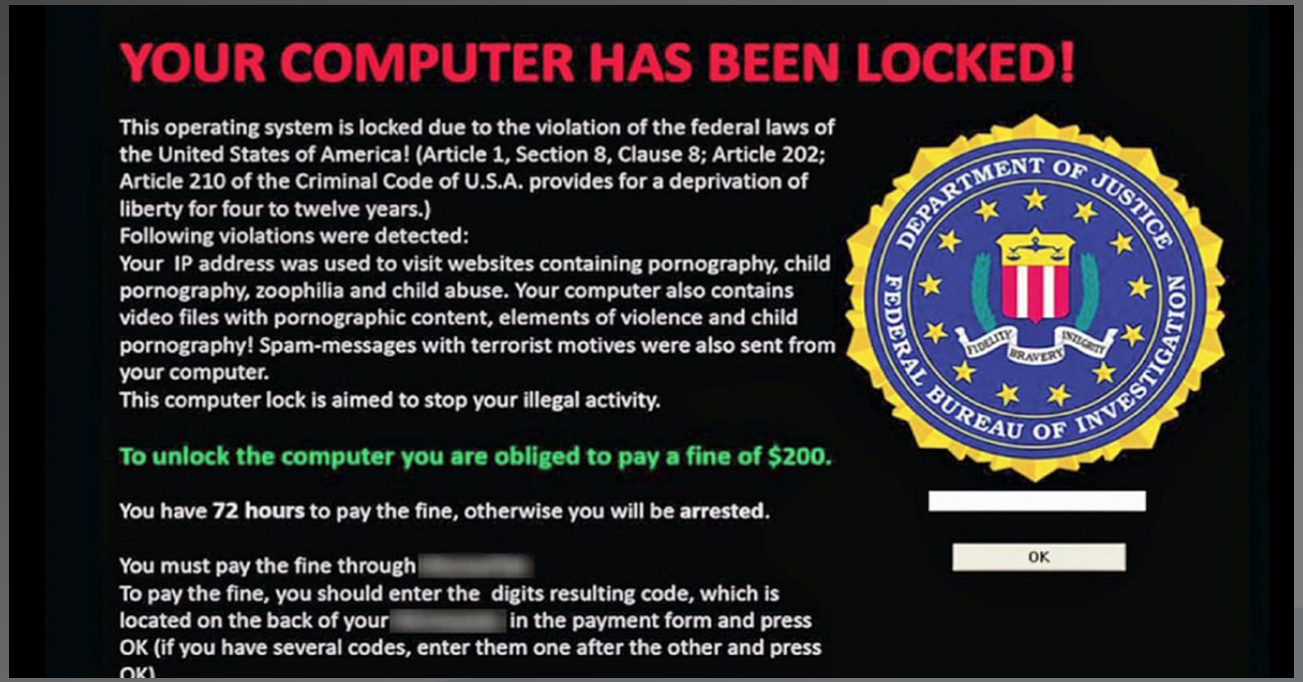
Asset Response

So where does that leave industry?

- Discovery of malicious breach **188 days**
- **81%** of victims do not discover themselves
- Attacker's ROI for exploit kit → **1,425%**

- FBI under-resourced
- Fear of liability

Cyberspace is still the “Wild West”



→ *Passive defense is not sufficient in all cases*

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Active Cyber Defense Spectrum

LEVEL OF SEVERITY	TYPE	DESCRIPTION
1	Intelligence Gathering	Ex-ante gathering, online forums, reverse-engineer exploits
2	Active Defense Measures/ Mitigation	Sandbox, honeynet, monitor traffic, beacon files
3	Investigation/Attribution	Trace IP, fingerprint servers, infiltrate underground markets, hop points, hacking email accounts/C2 nodes
4	”Hacking Back” / Retaliatory Measures	Destructive attacks, sinkhole

→ *What does the Computer Fraud and Abuse Act allow?*

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What's Next?

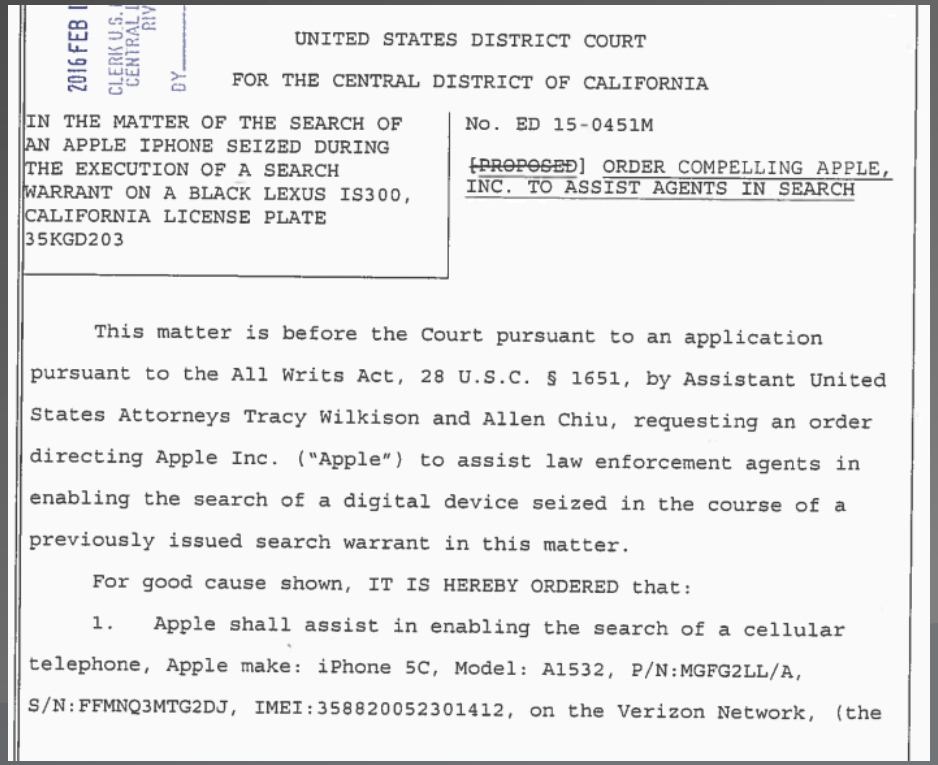
- Inaccessible Data
- Are We Keeping Pace with Threats?
- Interference in U.S. elections
- Divided Congress
- And a new administration…

“Going Dark”/Encryption Debate

Security

Security

Encryption Debate



2016 FEB
CLERK U.S.
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UNITED STATES DISTRICT COURT

FOR THE CENTRAL DISTRICT OF CALIFORNIA

IN THE MATTER OF THE SEARCH OF AN APPLE IPHONE SEIZED DURING THE EXECUTION OF A SEARCH WARRANT ON A BLACK LEXUS IS300, CALIFORNIA LICENSE PLATE 35KGD203

No. ED 15-0451M

~~[PROPOSED]~~ ORDER COMPELLING APPLE, INC. TO ASSIST AGENTS IN SEARCH

This matter is before the Court pursuant to an application pursuant to the All Writs Act, 28 U.S.C. § 1651, by Assistant United States Attorneys Tracy Wilkison and Allen Chiu, requesting an order directing Apple Inc. ("Apple") to assist law enforcement agents in enabling the search of a digital device seized in the course of a previously issued search warrant in this matter.

For good cause shown, IT IS HEREBY ORDERED that:

1. Apple shall assist in enabling the search of a cellular telephone, Apple make: iPhone 5C, Model: A1532, P/N:MGFG2LL/A, S/N:FFMNQ3MTG2DJ, IMEI:358820052301412, on the Verizon Network, (the

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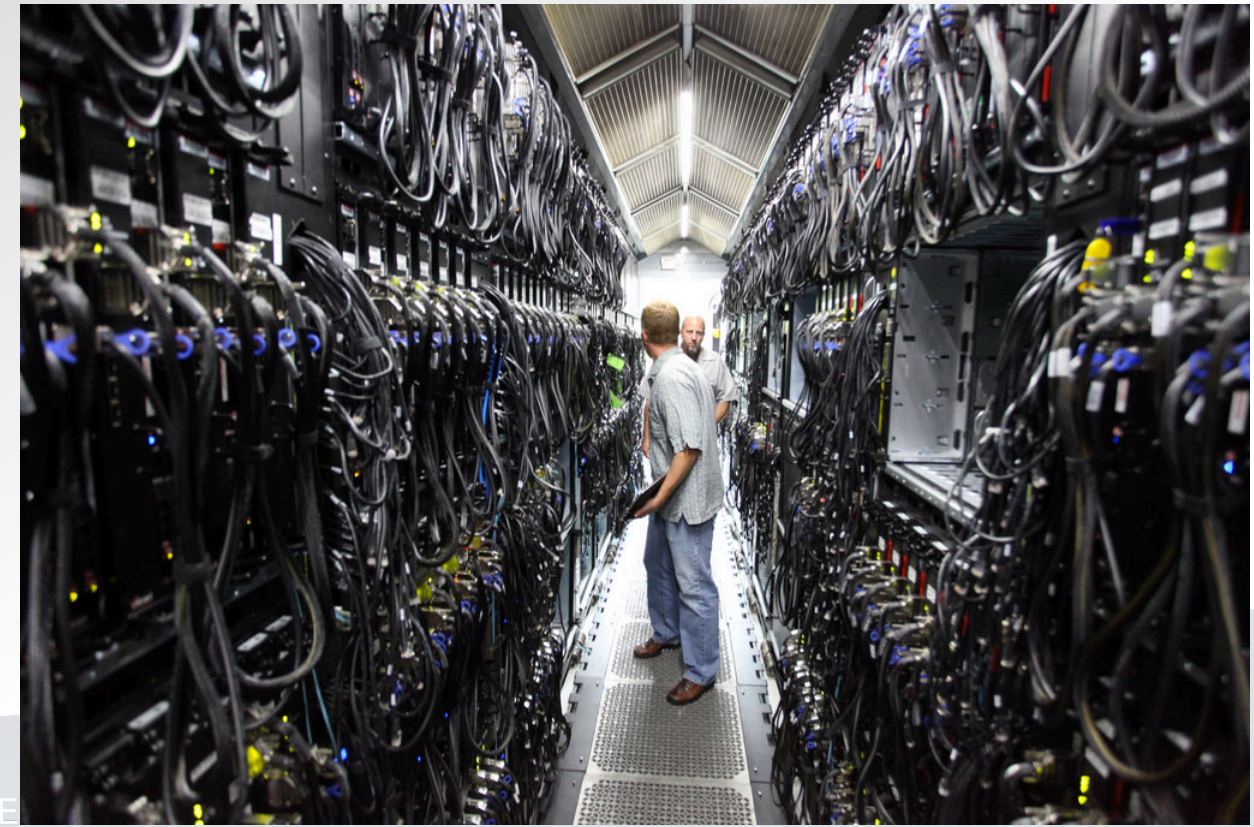
Secure Messaging Apps

Microsoft Ireland Case



Are We Keeping Pace?

12/24/2015

Dear customers!

Dec. 23, 2015, from 15:35 - 16:30, third parties were made illegal entry into information-technological system of remote access to equipment telecontrol substations of 35-110 kV JSC "Kyivoblenergo."

As a result, it was disconnected 7 (seven) 110 kV substations and 23 (twenty three) substation 35 kV. This led to the repayment of about 80,000 different categories of customers on the reliability of electricity supply.

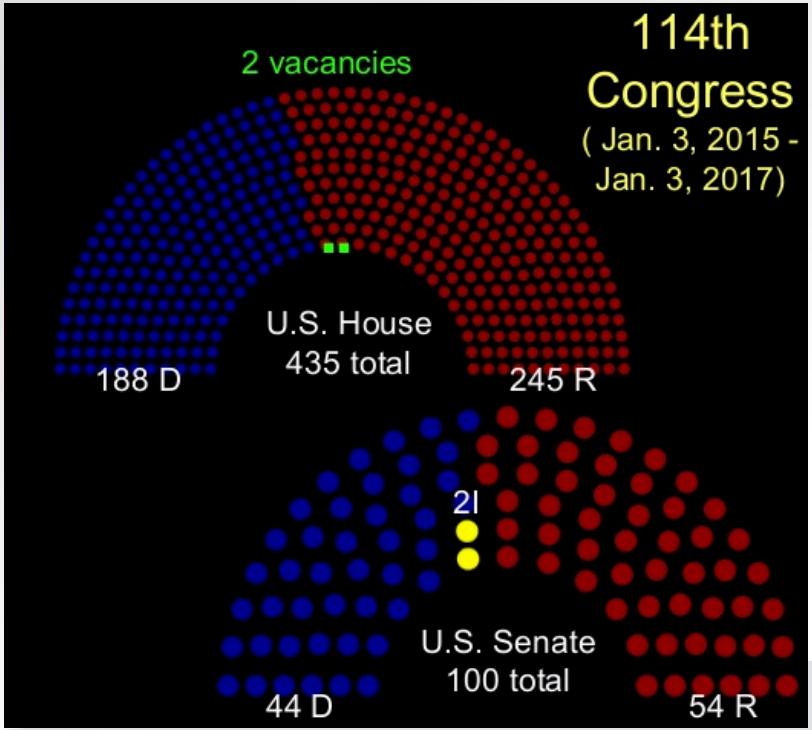
Electricity was restored to all consumers employees of the Company at **18:56** the same day.

We apologize for the situation and thank you for your understanding.

PJSC "Kyivoblenergo"

Hacking As Political Interference

Divided Congress and 2016



Ways To Move Forward

- Develop new tools to hold malicious actors accountable
- Clarify liability when companies defend themselves
- Protect small businesses that can’t afford good security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