



Cyber Security Update for Economic Forum

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CIO - Sandia National Laboratories

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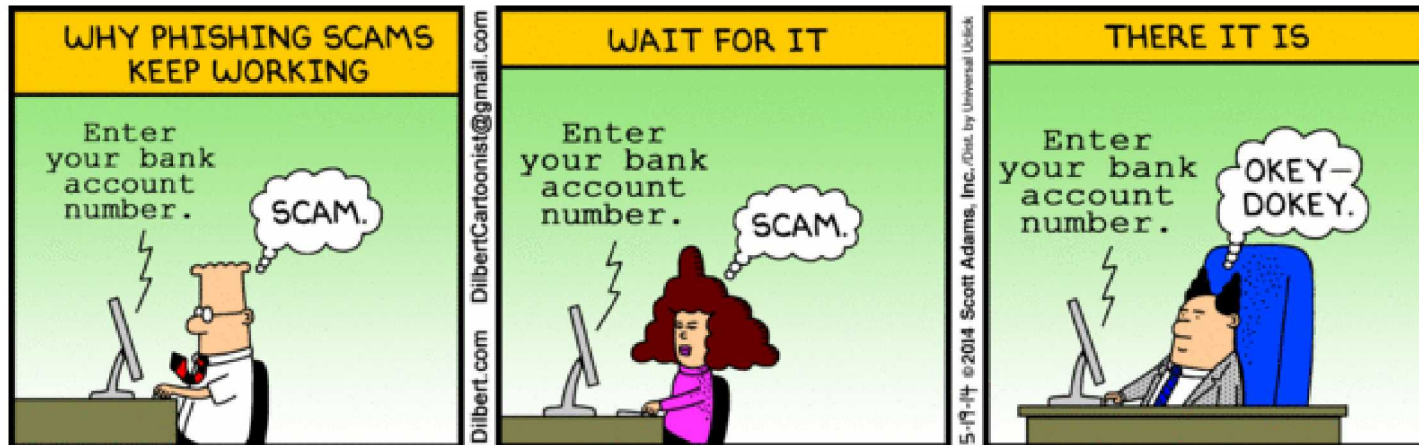
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About Phishing

- “Phishing” is the practice of using electronic communication to manipulate a target into doing something counter to the target’s interests.



Maintenance Issues



Things are not always as they appear



Example Email -Phishing



Greetings from [Amazom.com](#),

We wanted to notify you that an [Amazom.com](#) Gift Card was sent to you on 9 Dec 2013 16:04:40 GMT.

Details:

Order # 314-2520202-8371419 from 9 Dec 2013 10:49:24 GMT

Sent to:

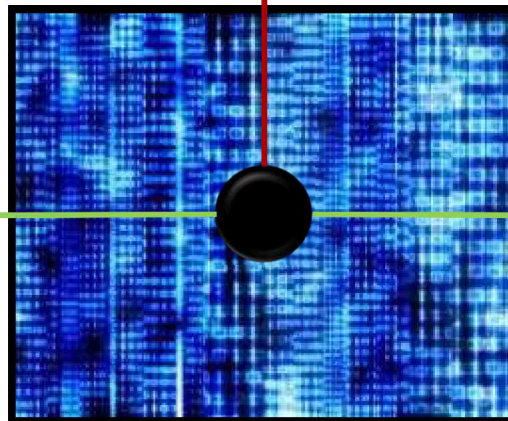
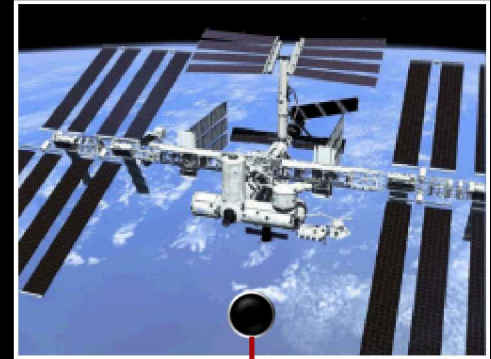
Message: **Happy Early Holidays!**

[Click here](#) to redeem your gift card.

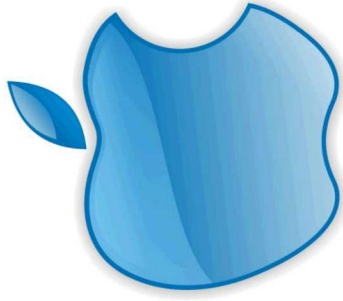
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The “Internet of Things” is the 5th domain of conflict



Recent Cyber Events Impacting Business



Cyber Theft of Intellectual Property

- The Center for Strategic and International Studies (CSIS) produced a study in June 2014 which estimates that cybercrime costs business approximately \$445 billion annually worldwide. The cost is about 200,000 U.S. jobs annually.
- Cybercrime is a tax on innovation. In 2013, CSIS researchers found that the United States notified 3,000 companies that they had been hacked. CSIS estimated that the United States lost about \$100 billion.



Zero-Day Threat

0 - Day

Advanced Persistent Threat (APT)

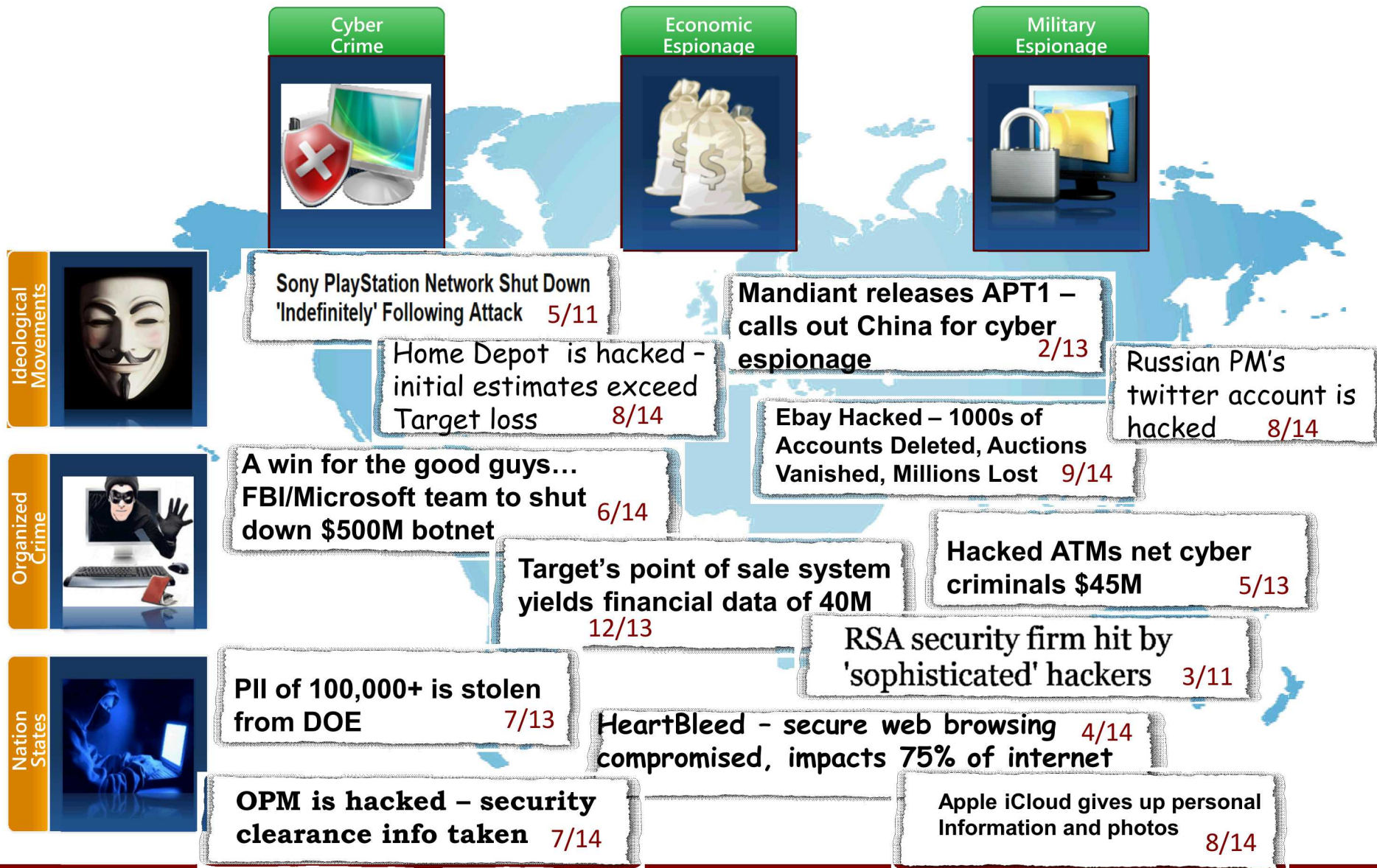


Today's Threat Environment

- Threats are real; even in Albuquerque. Example: Attack on Journal Web Site – January 2015



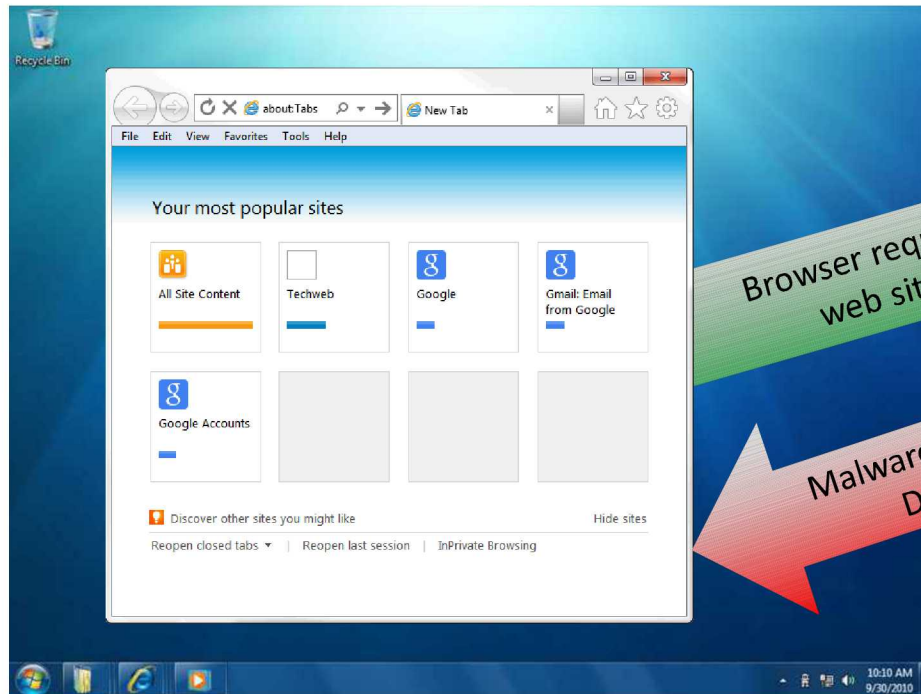
Today's Threat Environment



Typical Desktop Configuration

How it works

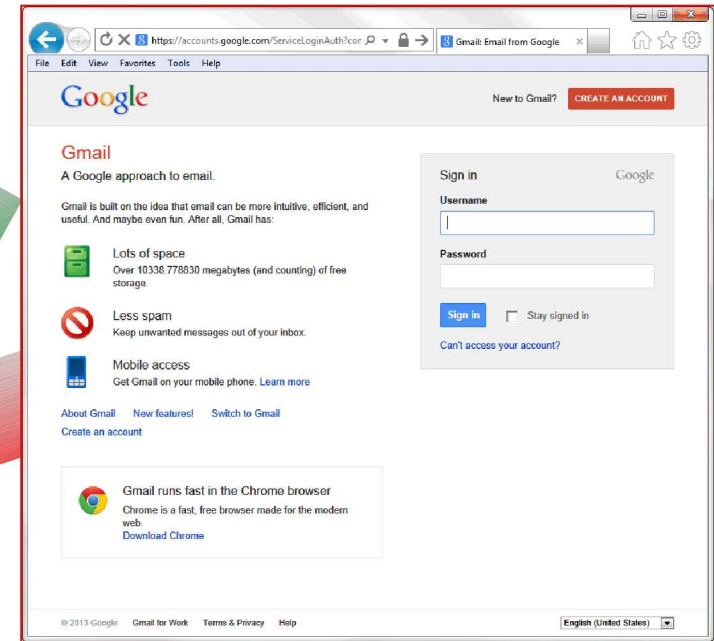
Desktop Computer - Trusted



Browser requests
web site

Malware returns to
Desktop

Outside Web Browser - Unsecure

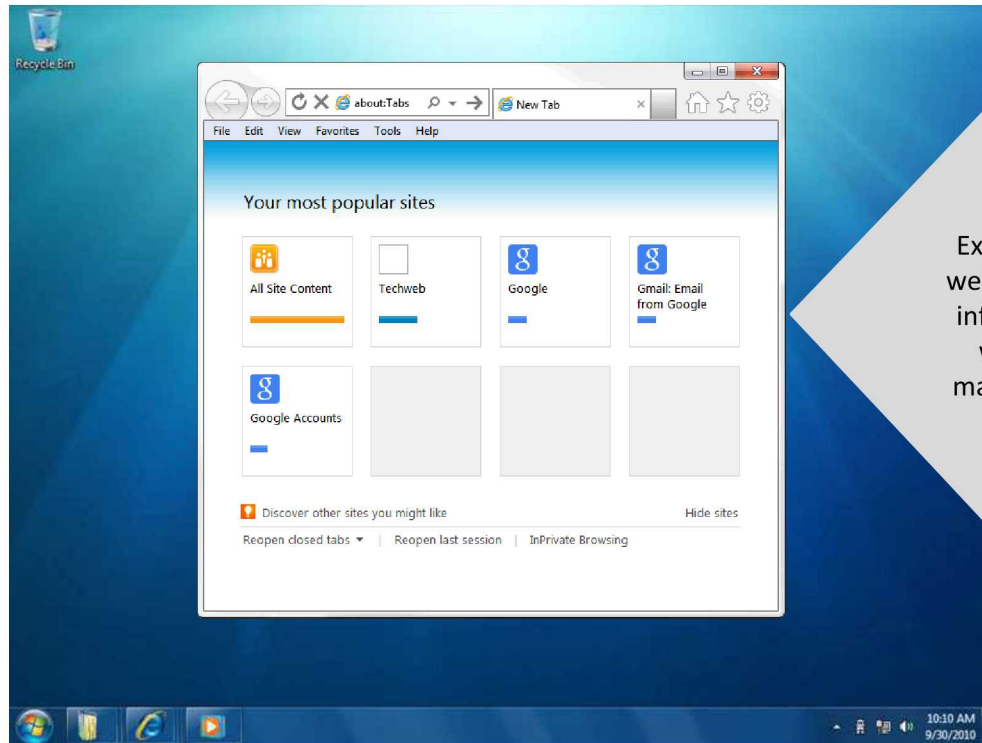


External website infected with virus

- Huge attack surface
- We can only protect against known attack vectors
- Virus is downloaded onto the trusted computer

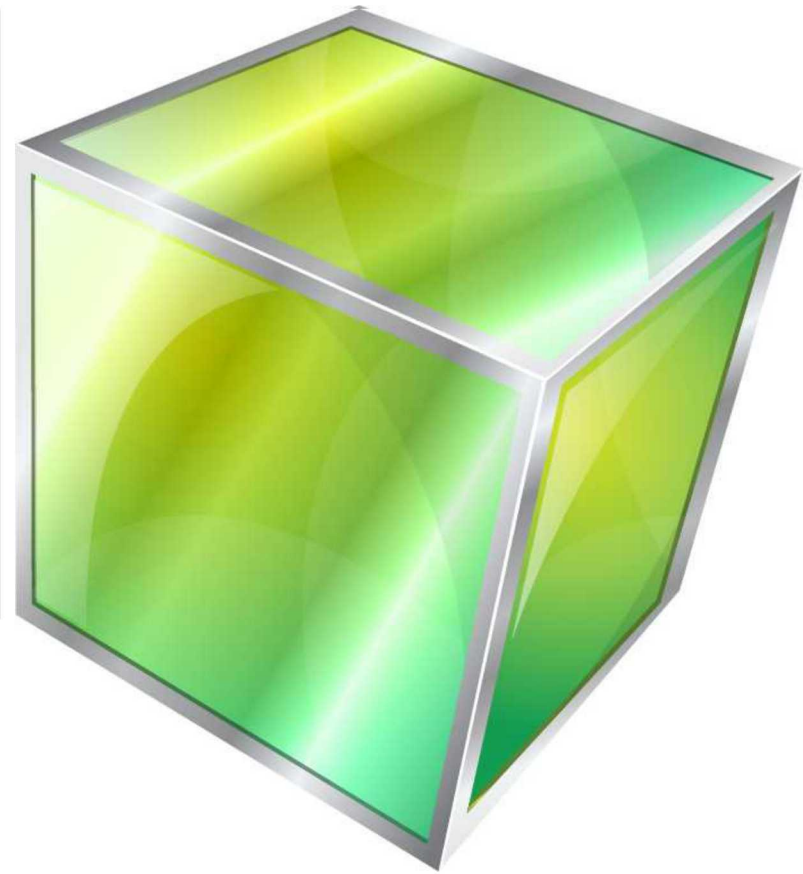
Micro-Virtualization as a Security Solution

Desktop Computer - Trusted



Outside Web Browser - Untrusted

External
website is
infected
with
malware



Future: Vehicle To Vehicle (V2V)



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