

CYBER SECURITY DAY  
October 3, 2014

**WELCOME!**

# THE CHANGING PROFESSION OF IT SECURITY:

*HOW “FOLLOWING THE WOMEN”  
MAY EXPLAIN MORE  
THAN “FOLLOWING THE MONEY”*

**BONNIE BUTLIN**



CO-FOUNDER, SECURITY PARTNERS' FORUM (SPF)  
03 OCT 2014

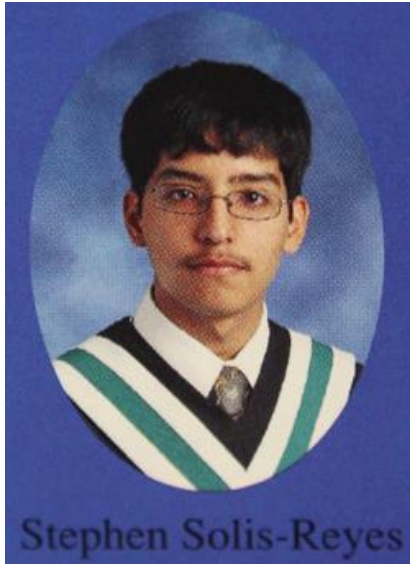
# **FOLLOWING THE WOMEN: A Useful Lens**

- Women as the canaries in the mineshaft warning of culture and collaboration problems
- Women as increasingly prominent leaders in IT Security
- Women well-positioned in Information Security and Privacy positions, in advance of problems that lie ahead

# IT CULTURE



# STEREOTYPES VS. EMERGING RISKS



## *Heartbleed*

Ottawa – April 16, 2014 – The RCMP's National Division Integrated Technological Crime Unit (ITCU) has charged a 19 year old London, Ontario man in relation to the malicious breach of taxpayer data from the Canada Revenue Agency (CRA) website.

## *CyberVor*

# STEREOTYPES VS. EMERGING VULNERABILITIES



RSAC





Black Hat USA 2013

ISC West 2013



## THE EYE CANDY LOUNGE





“if you come to the [Dotworkz ISC West Party](#) you can mingle with the 'Legendary Domewizard Party Girls.’”



Presents First Annual:  
ISC WEST Post Party  
Day 1 - April 10th 2013  
5:00 - 7:30pm  
The Public House - Venetian Hotel



Mingle with the industries finest!  
Scotch Tastings, Craft Beer and our Legendary Domewizard™ Party Girls!  
This is an Exclusive VIP Event so make sure you're on the list

Where Great Products \_\_\_\_\_  
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[Women's Security Council](#) :

*The use of women as bait is not ideal and WSC would like to see less of this activity at industry trade shows and events.*

www.dotworkz.com



PROTECT MORE THAN YOUR CAMERA™

# Sex Valley: Tech's booming prostitution trade

By Laurie Segall and Erica Fink [@CNNTech](#) July 14, 2014: 9:52 AM ET

She says that her **clients are increasingly worried about their own security**, which is one of the reasons they have been coming back to her so consistently -- they know what they're getting

Two recent events have raised concerns.

The arrest this week of an alleged prostitute, Alix Tichelman, in connection with the **death of Google executive** Forrest Timothy Hayes has prostitutes worried about the impact on business.

A second issue affecting business was the **shut down of a prominent website for both solicitation and screening of prostitutes and their clients.**

# THE BUFFALO THEORY

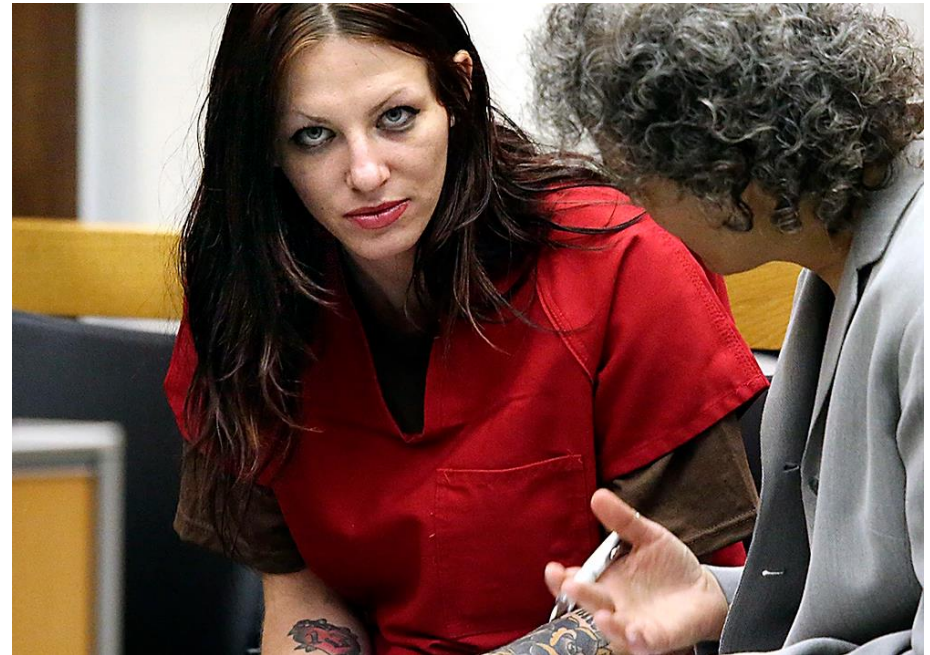


"A herd of buffalo can only move as fast as the slowest buffalo. And, when the herd is hunted, it is the slowest and weakest ones at the back that are killed first.

This natural selection is good for the herd as a whole, because the general speed and health of the whole group keeps improving by the regular killing of the weakest members."

*Urban Dictionary*

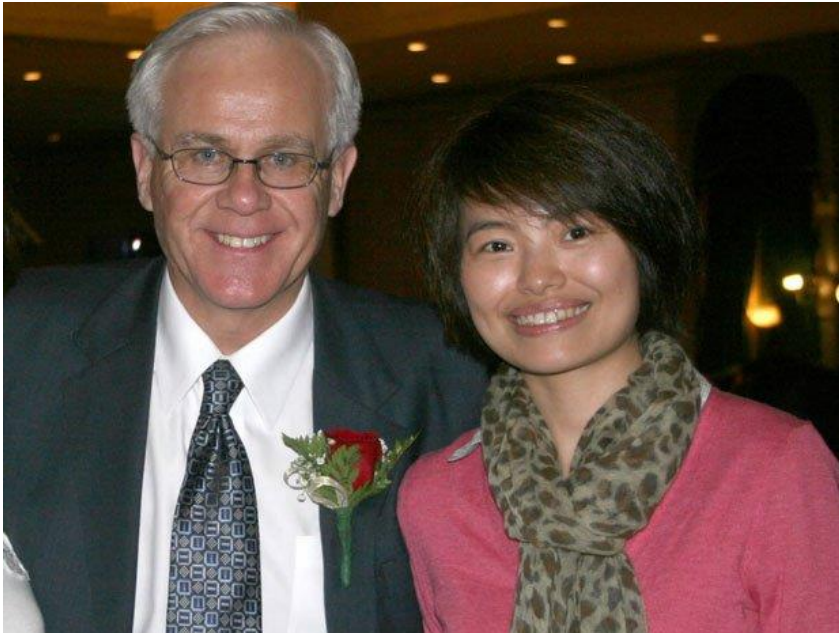
# Google executive Forrest Timothy Hayes allegedly met Alix Tichelman on a Sugar Baby site





# China's 'honey pot' spy games: Canadians must be wary of sexpionage

[John Ivison](#) | November 30, 2011 | Last Updated: Dec 1 9:22 AM ET



Foreign Affairs parliamentary secretary Bob Dechert acknowledges he sent flirtatious emails to Shi Rong, right, a Toronto-based journalist with China's state-run news agency

**2008 aide to UK PM Gordon Brown – Blackberry Stolen**

**Deputy Mayor of London – Drugged**

**Chinese Industrial Espionage: Technology Acquisition and Military Modernisation**

William C. Hannas, James Mulvenon, Anna B. Puglisi



# Róisín De Brún - IRA Intelligence Officer



**OMC, RUSSIAN OC, COMPLEX THREATS**

## **Ex-dominatrix's question to sex workers across Canada: Should she out lawmakers who've gone to prostitutes?**

National Post

Stephen Maher, Postmedia News | October 2, 2014 9:27 AM ET



**Terri-Jean Bedford prepares to testify at the Senate committee on Parliament Hill September 10.**

Fred Chartrand / The Canadian Press files

## Secret Service Director Julia Pierson



- Omar Gonzalez, armed with a knife, 19 SEP 2014
- 2011 shooting incident, not immediately identified

# Report: Secret Service Agents Partied with Strippers, Hookers in El Salvador

April 26, 2012

By RANDY KREIDER via [WORLD NEWS](#)

## [SECRET SERVICE INVESTIGATES ANOTHER TRIP](#)

A group of Secret Service agents allegedly visited a strip club and paid for sexual favors during an advance trip to El Salvador just days before President Obama's official visit there in March 2011.



## UK Daily Mail – 16 APR 2012

Senator says Secret Service brought TWENTY prostitutes to hotel - as it is revealed agents **BRAGGED** about protecting Obama while partying at Colombian brothel

## PORN IN THE COCKPIT: AIR CANADA'S MEMO TO PILOTS



## United settles suit over hidden porn found on flights

**United Airlines has settled** a federal sexual-harassment lawsuit with a former pilot who grounded herself after repeatedly finding pornography hidden on the flight decks of domestic airline flights.

Monday, March 23, 2009 at 12:00 AM  
Mike Carter, Seattle Times





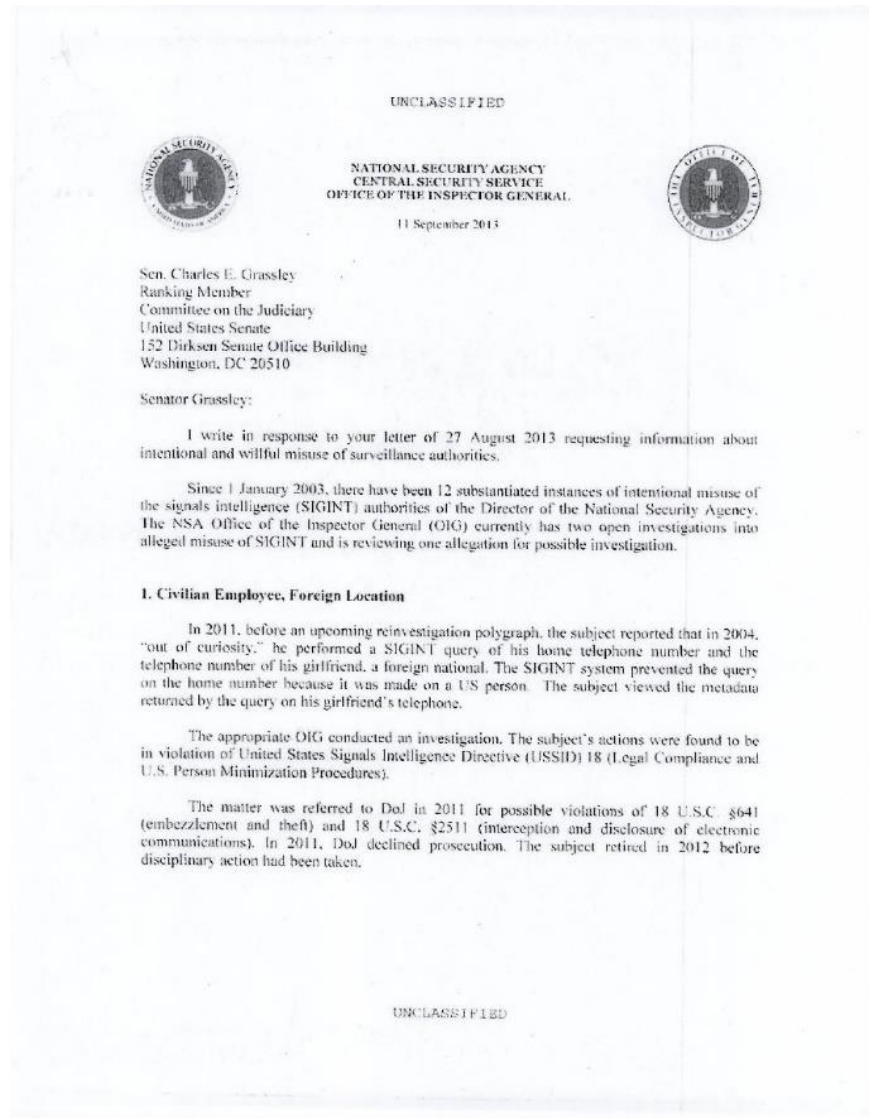


**Telegraph**.co.uk

Malaysia Airlines MH-370 co-pilot invited blondes into cockpit on earlier flight (2011)

# LOVEINT

## NSA letter offers details on spying on lovers, exes



**Security requires a collaborative, comprehensive approach.**

**Fragmentation within security remains problematic...**

A photograph of Barack Obama sitting at a table in a restaurant, looking at a young child. He is wearing a dark suit and a blue tie. The child is wearing a yellow t-shirt. There are white takeout containers and a plate of waffles on the table. In the background, other people are seated at tables. Two speech bubbles are overlaid on the image. The first speech bubble, on the left, points to the child and contains the text "Dad says you're spying us online". The second speech bubble, on the right, points to Barack Obama and contains the text "He's not your dad".

Dad says  
you're  
spying us  
online

He's not  
your dad



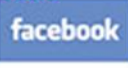


## Gen. Keith Alexander heckled as NSA chief speaks at computer conference

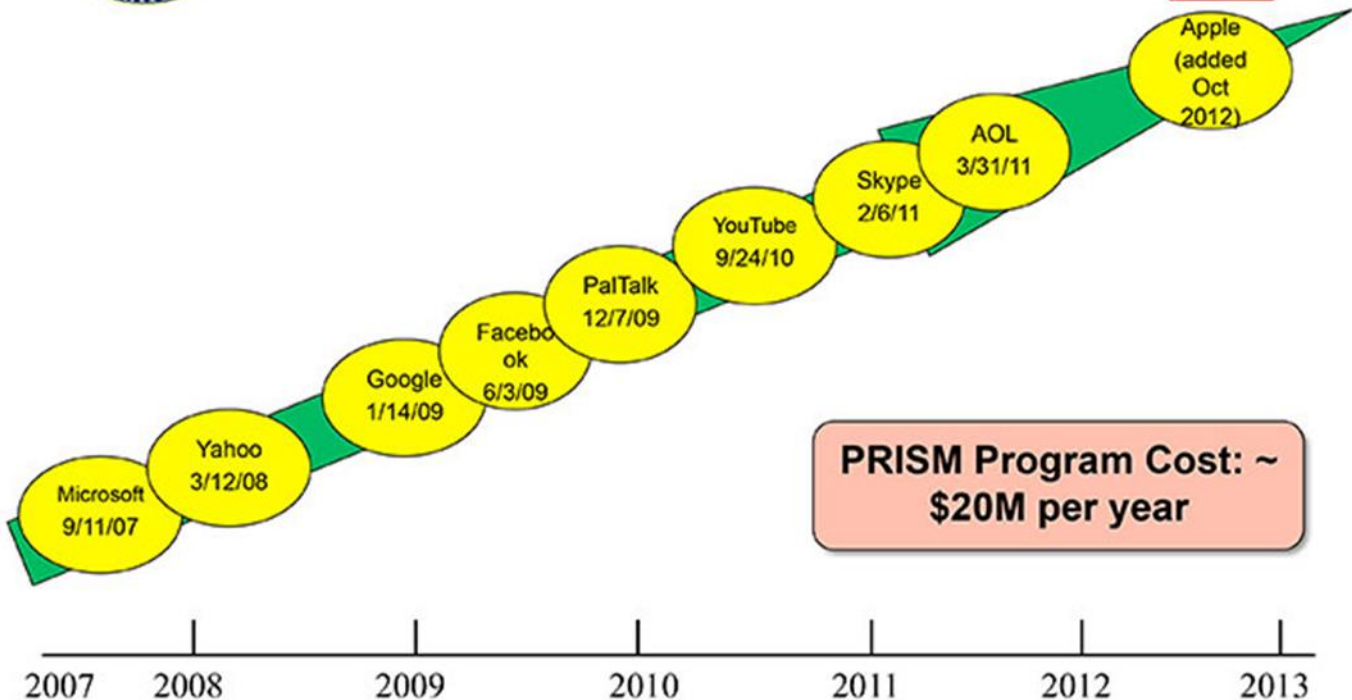
By [Shaun Waterman](#) - *The Washington Times* - Thursday, August 1, 2013

[Gen. Keith Alexander](#), director of the [National Security Agency](#) and head of the U.S. military's Cyber Command, was heckled and narrowly avoided being egged when he addressed the **Black Hat** corporate computer [security](#) conference Wednesday.





(TS//SI//NF) Dates When PRISM Collection Began For Each Provider



**PRISM Program Cost: ~ \$20M per year**

# HOW DID WE GET HERE?

- **Sense of urgency**
- **Pressures to share intelligence**
- **Economies of scale favoring computational analysis**
- **An over-reliance on technology**
- **A tech-lead effect on intelligence analysis**
- **A blurring of method and mission**
- **An over-reliance on secrecy and short-run planning**

# CYBER SURVEILLANCE: A bifurcated strategy

**Grand Strategic**

Strategic

Operational

Tactical

**Ultra-tactical**



# Black Hat and Defcon see record attendance — even without the government spooks

August 12, 2014 7:03 AM

[Richard Byrne Reilly](#)

**“...feds were noticeably absent from Defcon. Almost. No reps from the NSA or FBI were onstage, and the feds who did attend were more low-key this year and kept a covert profile, as it were. Defcon founder Jeff Moss told VentureBeat that **Defcon and the feds had entered into a cooling-off period.**”**

**“We’re waiting for the FBI, NSA to figure out ways to engage with the community instead of pissing guys off. We never said, ‘Hey, don’t come back.’ There’s weird tensions, and it’s time to think it through,” Moss said.**”

“At this point, people have had time to digest it. If the feds want to do something, they need to really think it through. If they want to engage, they need a plan.”

“We’re curious what they’re up to. And the hackers want to do good things. So let’s make that happen.”

## VB News

### **How (& why) feds killed a talk on Tor-hacking at Black Hat (exclusive)**

August 6, 2014 1:26 PM

[Richard Byrne Reilly](#)

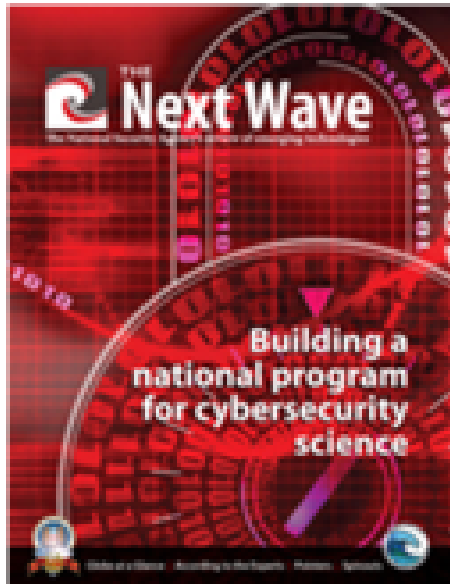
**“NSA has a long history working with academia and researchers. The relationship is sometimes amicable and sometimes less amicable. The abstracts coming from Black Hat are oftentimes how the government finds out about this kind of stuff,”** a former intelligence official who has studied Tor told VentureBeat.



## NSA Science of (Cyber)Security Lablets



The Next Wave: NSA's review of emerging technologies  
Vol. 19 | No. 4 | 2012



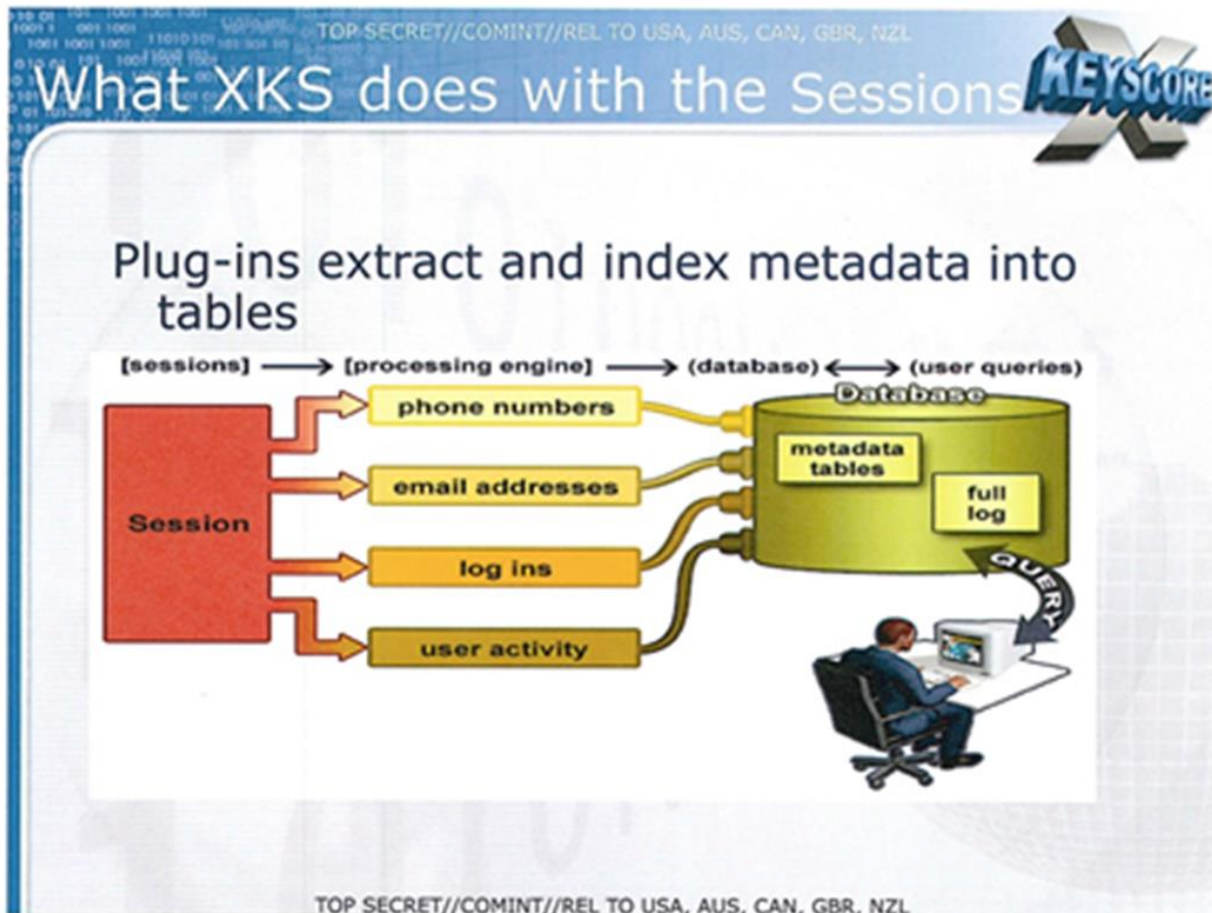
SOS Lablets  
in US universities

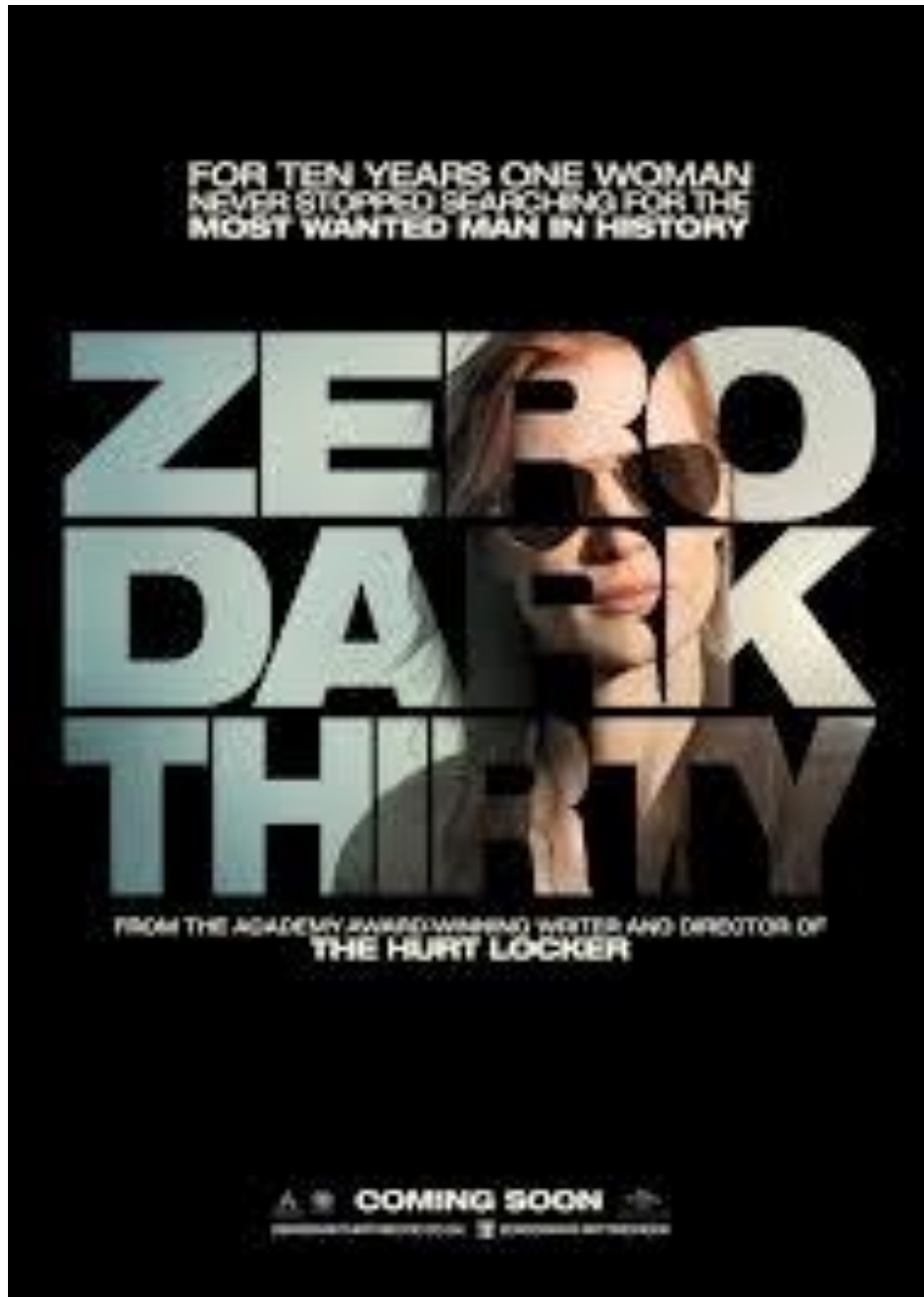
NSA Science of Cyber-  
Security (SOS)

# COUNTER-ADAPTATION

- REDUCING DIGITAL FOOTPRINTS
- BALKANIZATION OF THE INTERNET
- BEHAVIORAL CHANGES

# A RECALIBRATION OF WESTERN INTELLIGENCE TOWARD HUMAN INTELLIGENCE AND ANALYSIS





Lieutenant General Mary A. Legere, Deputy Chief of Staff for Intelligence (G-2) of the United States Army.

Lead contender to head the Defense Intelligence Agency

## Rise Of Women Transforms Defense Industry

¼ of Lockheed Martin’s major business units are run by women.

¼ of Boeing’s military aircraft business is run by women.

The President of BAE Systems and Raytheon’s intelligence and information systems business are women.

Textron has women placed in top positions across the company, including precision-guided munitions.

Female managers are across the sector.

<u>LEADER</u>	<u>COMPANY</u>
LINDA HUDSON	Head of the \$18bil U.S. unit of British BAE Systems
PHEBE NOVAKOVIC	Chairman, CEO, General Dynamics (3 <sup>rd</sup> largest defence contractor in the U.S.)
LINDA MILLS	IT Head, Northrup Grumman
GLORIA FLACH	Head of Northrup Grumman’s \$14bil Electronic Systems business
KATHY WARDEN	Head of Northrup Grumman’s Information Systems Unit
MARILYN HEWSON	President and COO, Lockheed Martin, former CEO of the Electronics Unit
LORAINNE MARTIN	Deputy Manager of Lockheed Martin’s biggest unit
LINDA GOODEN	IT Head, Lockheed Martin
JOANNE MAGUIRE	Head of Space Business, Lockheed Martin
SHEILA CHESTON	Chief Counsel, Northrup Grumman
PAMELA WICKHAM	CIO, Raytheon

## Major-General Christine Whitecross



“  
*I'm humbled when I look at the talented women who are coming up through the ranks and making huge gains. In 10 or 20 years, we're not going to be talking about 'their' gains as a novelty because it's*  
”  
*going to be common-place.*





Marissa Mayer, CEO Yahoo, July 2012

## Women in Information Security and Privacy

- 9 of 13 of the top Privacy/ Information Security positions in Canada are held by women
- 2 not held by women were previously held by women
- 1 was held by a woman in the 2-rotations past
- CIO, CISO, CSO

These positions will be critical moving forward.



## Stephen Harper says Canadians' metadata not collected

Prime Minister Stephen Harper says he's not "a big believer" in widespread electronic snooping, prefers targeted approach.

Published on Fri Sep 26 2014



Ron Deibert, director of the Citizen Lab at the University of Toronto, says "we live in a 'black hole' around CSEC's activities," referring to the Communications Security Establishment of Canada.

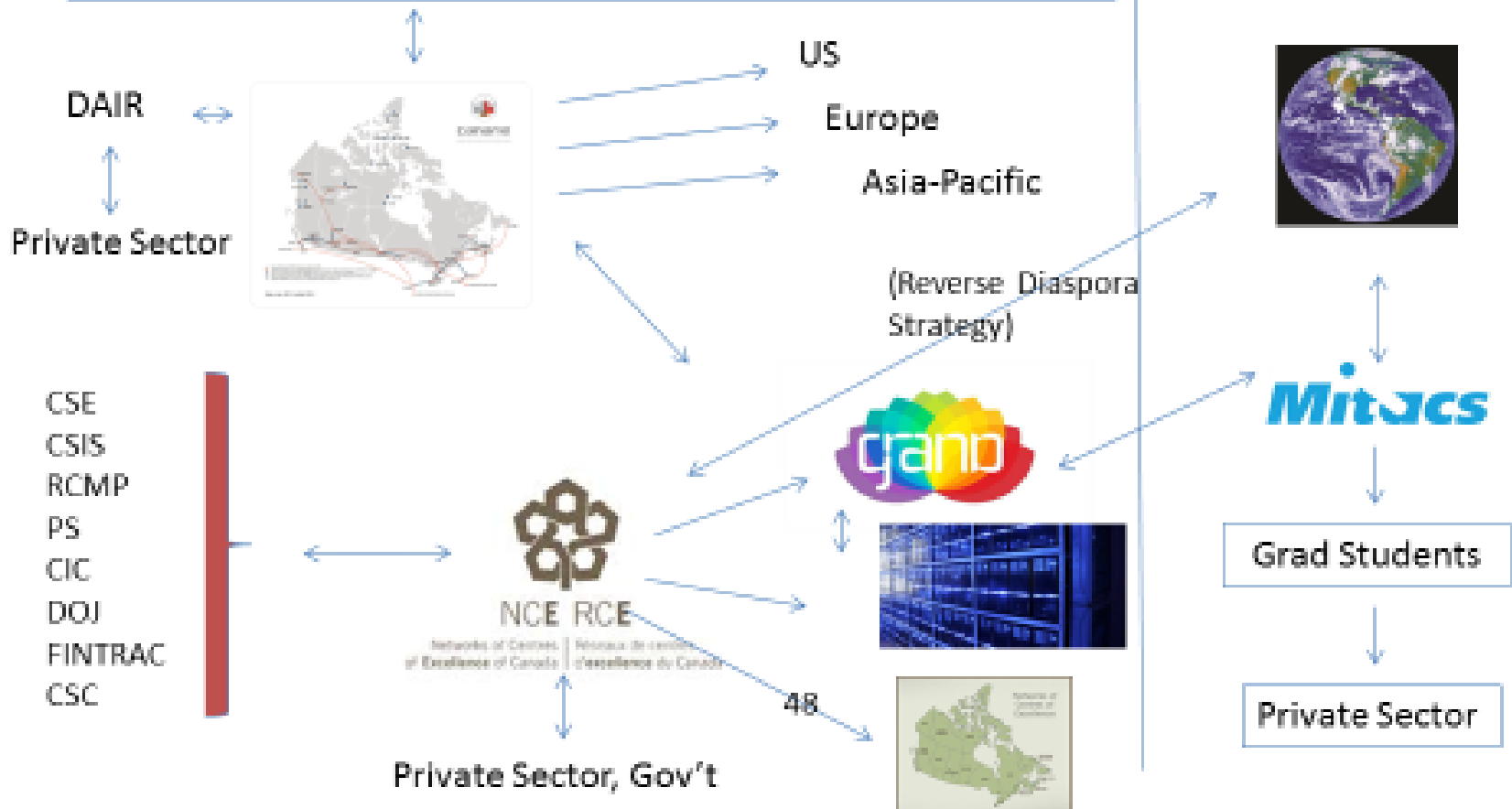
BERNARD WEIL / TORONTO STAR FILE PHOTO



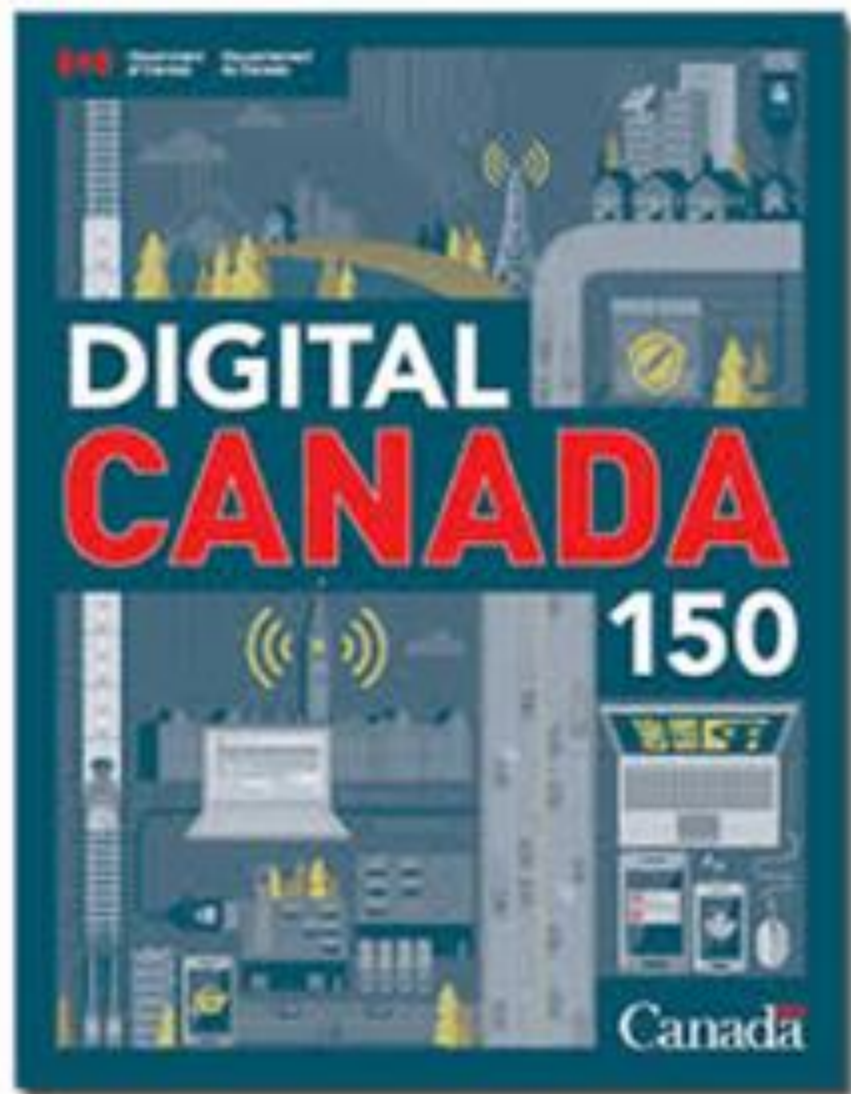
NSA Science of Cyber-Security (SOS)

SOS Lablets  
in US universities

Canadian  
Economic  
(Business and  
Trade) Add-on



# DIGITAL CANADA 150





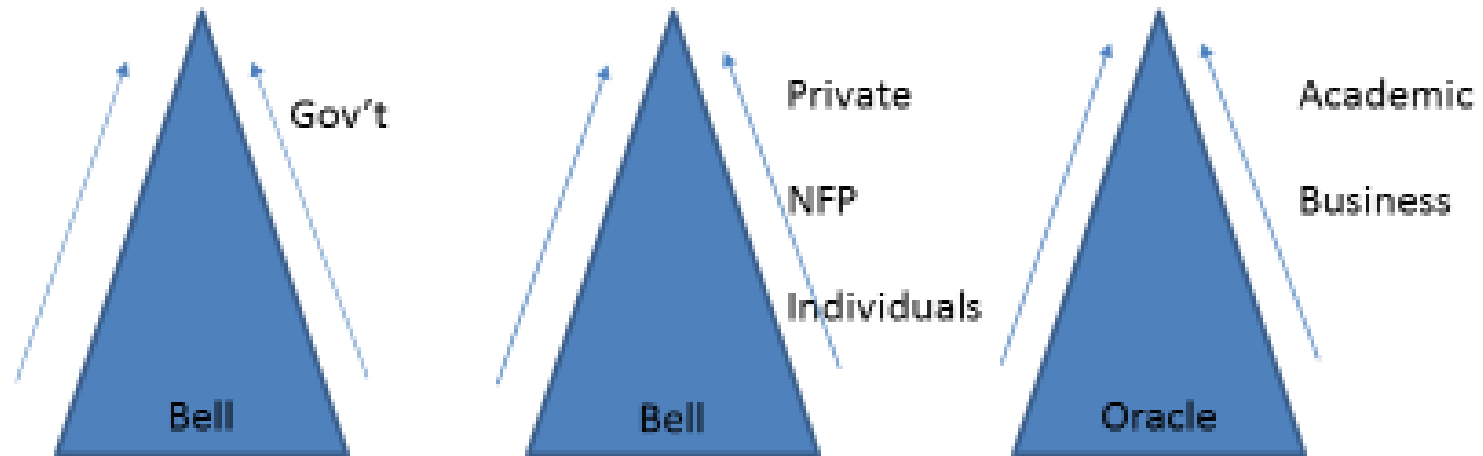
# GOVERNMENT CYBER ARCHITECTURE (NCR)

SHARED SERVICES:

Email Transformation Initiative

CRTC: CASL



PROJECT CANARIE



- **Data Centre Consolidation Initiative**  
Consolidate 485 Government data centres into seven
- **Email Transformation Initiative**
- **01 JUL 2014 Launch of CASL**
- **Networks of Centres of Excellence**

**Super-concentrated information + Super-open cyber architecture  
= High risk**

## NEW PRIVACY-REDUCING LEGISLATION AND POLICIES?

- PIPEDA – Personal Information Protection and Electronic Documents Act
-  01 JUL 2009 – Policy on Government Security
- Ministerial Orders re: CSEC
- C-46 (TP21C) - Investigative Powers for the 21<sup>st</sup> Century
- C-47 (TALEA) – Technical Assistance for Law Enforcement in the 21<sup>st</sup> Century
-  01 JUL 2014 - CASL – Canada’s Anti-Spam Legislation
- C-31 – Economic Action Plan
- C-13 – Cyber-bullying Act
- C-24 – Strengthening Canadian Citizenship Act
- S-4 – Digital Privacy Act

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## RISKS ARE SIGNIFICANT

CyberVor

Target

Home Depot

NRC

Unreported and unknown

Domestic cyber surveillance

Hold Security described the group responsible for the hack as a small group of “fewer than a dozen men in their 20s ... based in a small city in south central Russia, the region flanked by Kazakhstan and Mongolia,” and dubbed the group **CyberVor** (Russian, lit. "cyber thief"). Hold claimed the hack was perpetrated through the use of SQL injection.