



April 2012



How BIG is Your Digital Footprint?



Dept of Energy
IMC
Dallas, TX

Dr Rocky Young
Defense-wide Information Assurance Program
Office of the DoD Chief Information Officer
Office of the Secretary of Defense

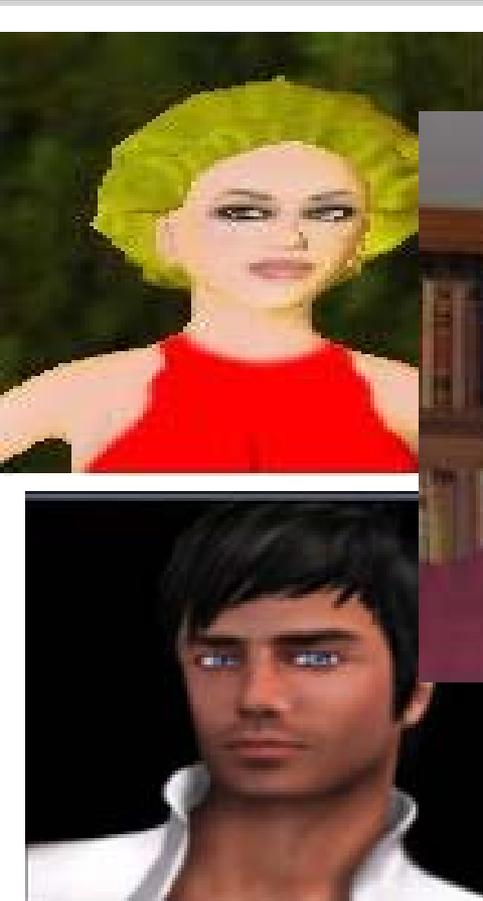


Hum ... Digital Footprint ... What about the Hands?

Something to think about as you are shaking hands @ the IMC!

Cyber Security

Knowledge is Power, Ignorance is a Problem - Choose Wisely



THINK OPSEC

IF SOMETHING DOESN'T LOOK RIGHT.....
REPORT IT



Who R We Really?

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bearsecurity.com





Freez Screen Video Capture

Record Pause Stop Options Exit

Video: Microsoft Video 1, Quality 100%, 30 fps
 Audio: MPEG Layer-3, 22.05 kHz, stereo, 16-bit
 Hotkeys: Record/Pause F7, Stop/Cancel F8

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Office of the Secretary of Defense Defense-wide Information Assurance Program Office



Spotlight on Cybersecurity & Your Awareness aka (CYA)

A Joke from my **73** y/o Mother



Welcome 2 UR New Home Sweet Old Folks Home!!!!



OUR MISSION IS POSSIBLE!!!



MISSION: Digital Persona Protection

My Challenge Begins with EDUCATION!

Today's Discussion: DoD's Challenges



Department of Defense Strategy
for Operating in Cyberspace

- ▶ **Treat as an Operational Domain**
- ▶ **Employ New Defense Operating Concepts**
- ▶ **Partner with Public & Private Sectors**
- ▶ **Build International Partnerships**
- ▶ **Leverage Talent & Innovation**

It is Up to Us to Find Opportunities



How
Can
You...



The warfighter expects and deserves access to information – from any device, anywhere, anytime...



**Measure
What U
Can't C?**



...and this is HOW & WHERE we fight

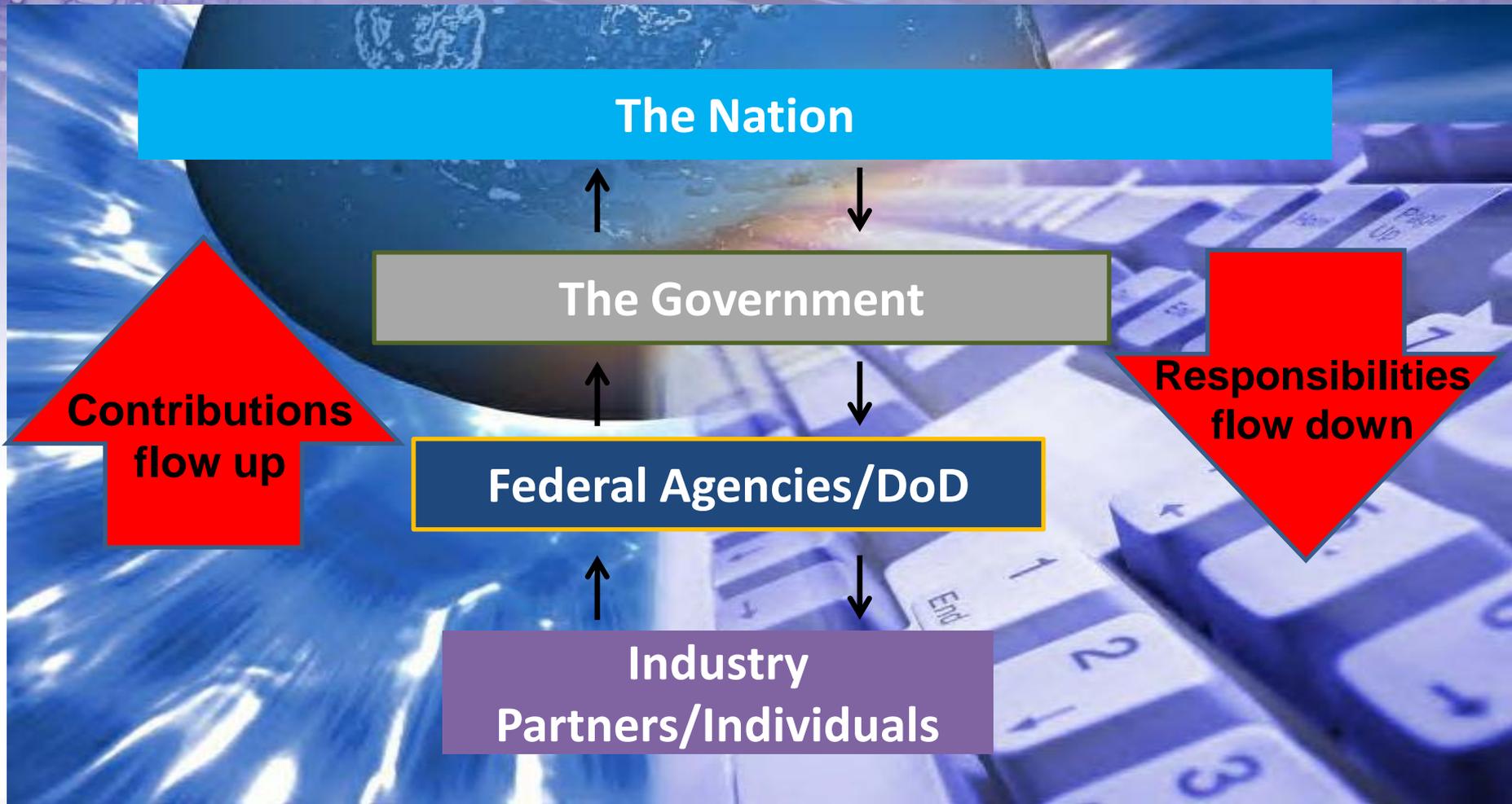


DoD Information Enterprise Context

- 
- **Exploding technologies**
 - **Demanding scope**
 - **Increasing cyber threat**
 - **Shrinking budgets**
 - **Demanding efficiencies**

We Must Transform ... Adapt!

Shared Responsibility: Our Challenge



The Challenge Comes Down to Your Contribution!

Angry Birds: Innovation or Just a Game?



What Else RU Downloading with that Game?

Cybersecurity Must Not Stifle Innovation



□ E
A
A



Think For A Change: The Cycle of Innovation

Cybersecurity: What Keeps DoD Up @ Night?



Digital Persona Protection/DIB*
Insider Threat/Continuous Monitoring
Commercial Mobile Devices
DIB/Supply Chain Management
Cloud Services
Cyber Workforce

Shared Responsibility is Our Collective Challenge

Digital Persona Protection/DIB

- Members of the DoD are coming under attack in cyber
- DoD CIO is developing a directive assigning responsibilities & outlining procedures
- Leveraging the lessons learned from past incidents

Proposes 2 types of coverage (both consent-based):

Reactive - Protection of DoD-affiliated individuals for whom a credible threat has been identified & determined to be due to affiliation w/ DoD

Proactive - Pre-emptive protection of selected senior DoD personnel

The Role of Information Assurance in Identity is Critical

DPP Risk & Mitigation Matrix

Individual

Employee
Credit M
Gov
Comme

11.
110.
700k.
1000k



US

avoidable online risk

Low

WE

Gov
gh

Some DPP Threats, Methods, Deterrence & Mitigations

Threats

Credit Threat

Identity Theft

Privacy Threat

Reputation Threat

Threats to the GIG



Methods

Doxing

Phishing

Spear Phishing

Threats to the GIG



Proactive Deterrence

Personal Risk Assessments

Tailored Family Education

Credit Monitoring

Online Intelligence Monitoring

Public Information Exposure Monitoring

Reputation Management

Reactive Mitigations

Credit Remediation Assistance

Legal Assistance

Online Reputation Remediation

Law Enforcement Assistance

Counterintelligence

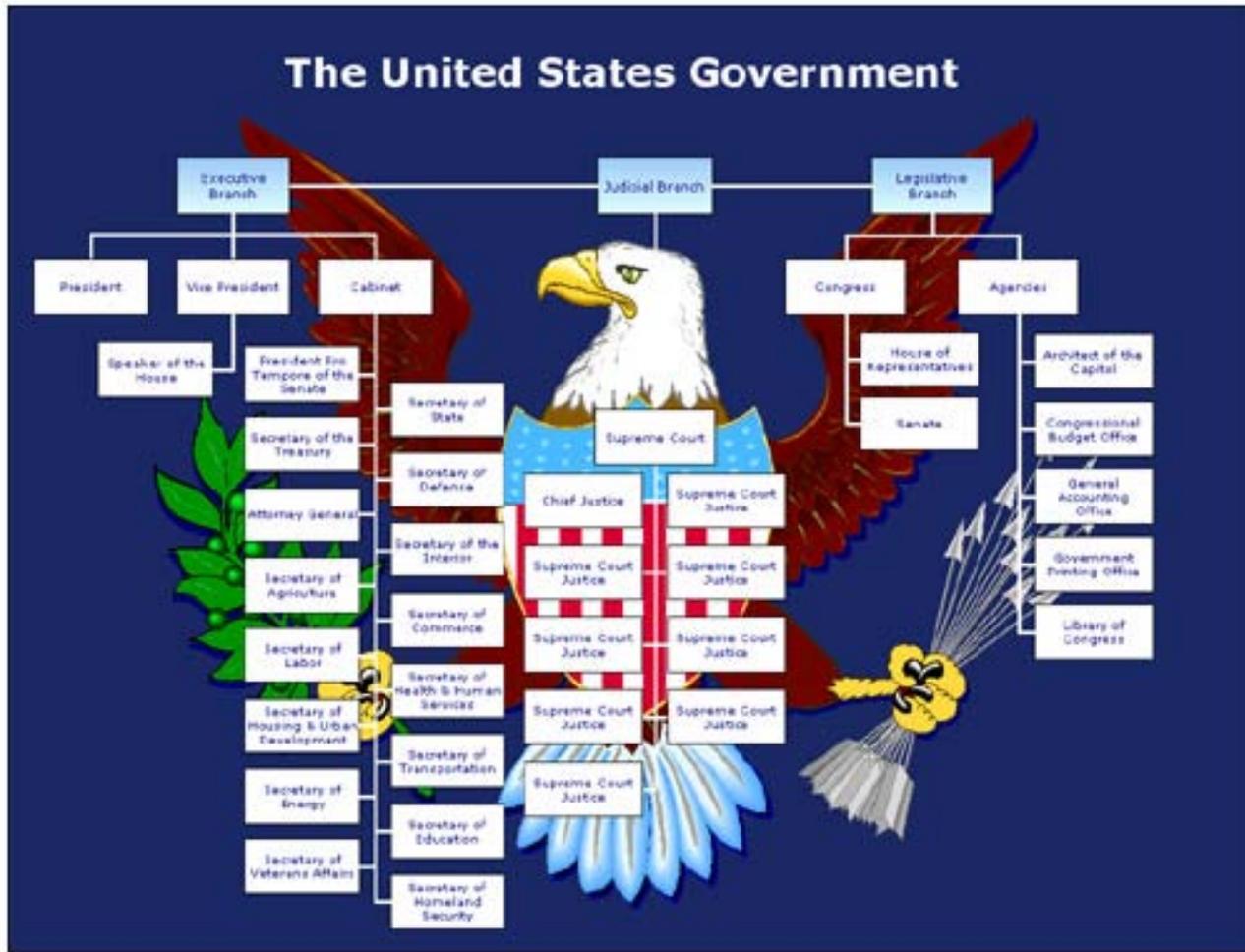


Move from "No" to "Yes" & "Here is How We Can Do it Quickly"



UR Digital Footprint = So What the Heck is PII?

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Digital Footprints



UR Digital Footprint = So What the Heck is PII?

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'personal data'
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Digital Footprints



UR Digital Footprint = So What the Heck is PII?

So where in the World is Your PII Stored? In the Cloud?



Digital Footprints



UR Digital Footprint =
PII + So Much More...

TODAY'S SPECIAL

BUY A STOLEN CREDIT CARD
GET A SECOND HALF OFF

\$10 LOW LIMIT CREDIT CARD
\$20 GOLD OR PLATINUM CARD
\$100 HEALTH INSURANCE INFO
\$150 COMMERCIAL EMAILS



Digital Footprints



UR Digital Footprint = PII + So Much More...

The screenshot displays an EMR interface for patient Rickard, James G (ID: 15385-1). The interface includes a top navigation bar with icons for Back, Next, Reload, One, Search, Patients, Schedule, EClaims, Notes, Rx, Imaging, Attachments, EMR, and Email. A left sidebar lists 'Form Sections' such as Hospital, Intake, General, and Downloads. The main content area shows a 'History of Present Illness' section with pain assessment questions and a body diagram where the right foot is circled in red. Below this is a section for 'Is your Pain affected by?' with various activity-based dropdown menus. At the bottom, there are checkboxes for 'Past/Current treatments for pain'. On the right, a 'Patient Form Properties' panel shows incident details, and a 'Drawing Tools' panel is visible at the bottom right. The status bar at the very bottom indicates '0 Form Sections records' and 'Welcome, Admin User'.

Digital Footprints



UR Digital Footprint = Much More...



Records

Vehicle Dept
their budgets
cription, facial

Risk Item: Drivers

Potential Risk: The

Source of Risk: Y

Fact: Most States

Risk Level: High (t

image

Solutions:

1) Request your St

2) Monitor for una

Costs: UNKNOWN

Digital Footprints



Find People With Spokeo

Spokeo is a search engine specialized in organizing people-related information from phone books, social networks, marketing lists, business sites, and other public sources. Most of this data is publicly available on the Web. For

example, you can find people's name, phone, and address on Whitepages.com, and you can get home values from Zillow.com. That said, only Spokeo's algorithm can piece together the scattered data into coherent people profiles, giving you the most comprehensive intelligence about anyone you want to find.

It can indeed be shocking to see how much information can be dug up about you in 15 seconds - your home address, your marital status, religion, hobbies, names of friends and family members, personal photos, a satellite image of your home, even your estimated income and credit score.

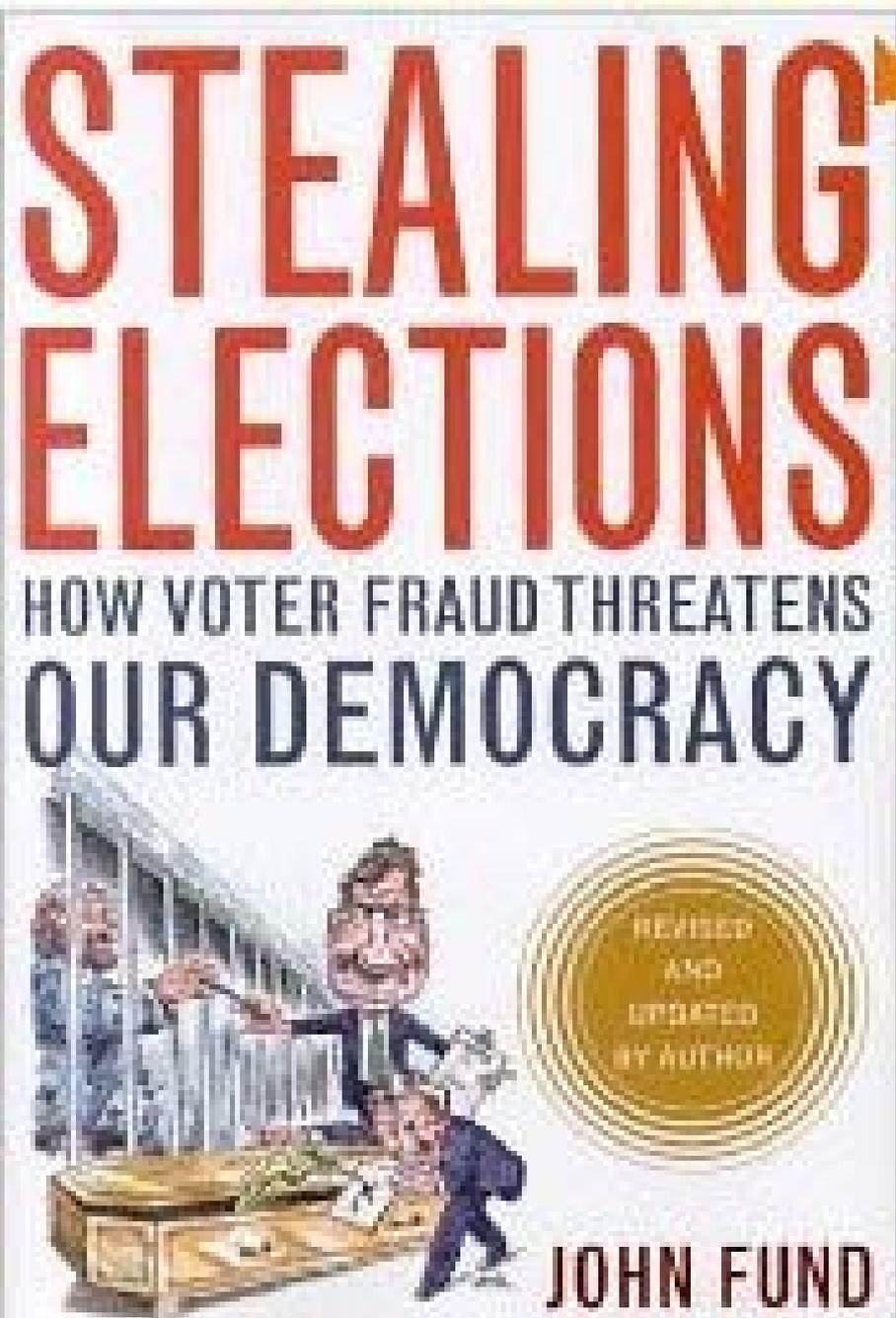
Risk Item:
Potential Risks:
Source of Risk:
Government
Fact: Your
state capitol
Risk Level:
Solutions:
1) Request
2) Remove
Costs: UN

Digital Footprints



UID Digital Footprint =
h More...

- Risk Item:** Voters F
- Potential Risk:** The
- Source of Risk:** Yc
- Fact:** Name, addre
- Risk Level:** High (ti
- Solutions:**
 - 1) Request your Vo
 - 2) Remove from pu
- Costs:** UNKNOWN



file
 ord office
 History
 & Other PII
 your records

Digital



UR Digital Footprint = PII + So Much More...

- Risk Item:** Passport
- Potential Risk:** Insider
- Source of Risk:** Defense
- Border Patrol Second**
- Fact:** 100s of documents
- Risk Level:** High (ties)
- Solutions:**
 - 1) Request State Dept for any unauthorized
- Costs:** UNKNOWN



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 leaked outside
 and Emergency ICE
 on your records
 and hard copy pull

Digital Footprints



UR Digital Footprint =
PII + So Much More...

United States CENSUS 2010

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Source
Fact:
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1) Rec
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2) Rec
Costs:

Digital Footprints



UR Digital Footprint = PII + So Much More...

Risk Item: C
Potential Risk:
Law?

Source of Risk:
the simple re
entrance into

Fact: Credit

Risk Level: H

Solutions:

Request your
any unaut

Costs: UNKN



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Digital Footprints



UR Digital Footprint = PII + So Much More...

Server Hacked

By



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#Bangladeshi Hacker

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Greetz : aBu.HaLiL501 ; w7sh.syria ; Sy-Hacker ; NmR.Hacker ; Wa7sh Hacker ; h311 c0d3

Digital Footprints

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UR Digital Footprint = PII + So Much More...

The CrISTAL Project

Critical Infrastructures Security Testing & Analysis LAB

Risk Item: U

Potential Risk

Source of Risk

Fact: Utility of

theft—do not

Risk Level: H

Solutions:

Request your

unauthori

partners”

Costs: UNK

SCADA (in)Security: Hacking Critical Infrastructures

Raoul Chiesa

Alessio L.R. Pennasilico

raoul@mediaservice.net

mayhem@alba.st

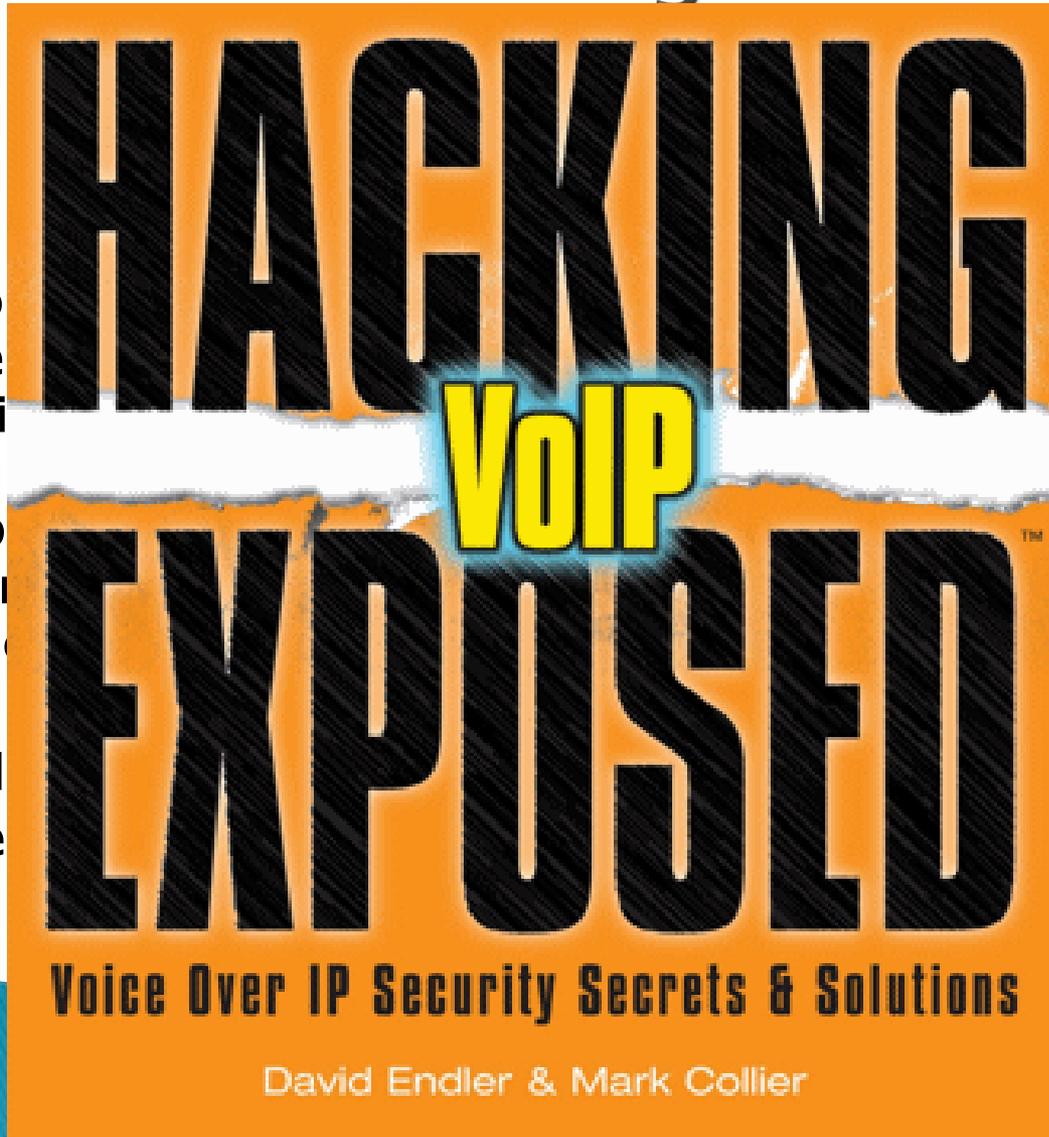
<http://cristal.recursiva.org/>

HITBSECCONF2007 - MALAYSIA
3RD - 6TH SEPTEMBER 2007 - KUALA LUMPUR
DEEP KNOWLEDGE SECURITY CONFERENCE

Digital Footprints



UR Digital Footprint = More...



Risk Item: Telephone
Potential Risk: Internet profile records (which
Source of Risk: Telephone
Fact: Makes one "p
into your risk stream
Risk Level: High (ti
Solutions:
1) Request your tel
2) Have your home
Costs: UNKNOWN

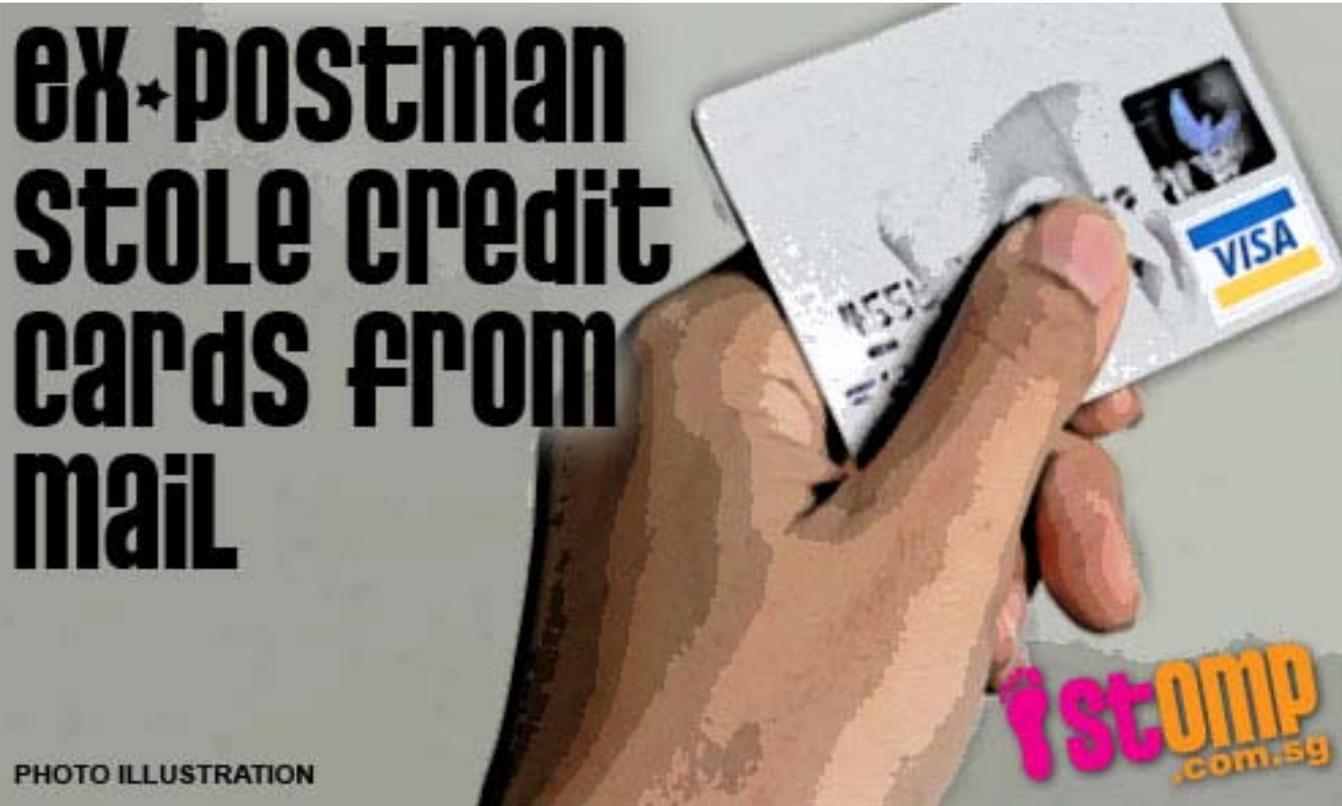
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Digital Footprints



UR Digital Footprint = PII + So Much More...

Risk Item: Ac
Potential Risk
Source of Ris
Fact: A physi
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Risk Level: H
Solutions:
1) Request th
2) Project the
3) Look for p
Costs: UNKN



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Digital Footprints



UR Digital Footprint = More...

Centralized Lease Data Repository:
Shared resource for all departments



... "Department Org/DROs"
... PII
... law
... addresses,

... unauthorized

Risk Item: Inform
Potential Risk: T
Source of Risk: :
Fact: These elect
known family, ve
Risk Level: High
Solutions:

- 1) Request DROs
internal acces
 - 2) Do NOT allow
- Costs:** UNKNOW

Digital Footprints



UR Digital Footprint = PII + So Much More...

Risk Item: Fake social network sites (SNS) and ISP accounts in your name
Potential Risk: Permanent unauthorized SNS and ISP accounts in the high risk

personnel

Source of

Fact: RUI
fraud

Risk Level

Solutions

1) Request

2) Preserve

Costs: UNKNOWN - \$\$\$\$\$



report

Digital Footprints



Personally Identifiable Information

Better 2 Have A Plan...Right?



STOP, THINK, CLICK.

A reminder to stay vigilant and safe online.

Digital Footprints

Deploying DPP to the DoD + ...

DoD IT User Base

- 1.4 million active duty
- 750,000 civilian personnel
- 1.1 million National Guard and Reserve
- 5.5+ million family members and military retirees
- 146 + countries
- 6,000 + locations
- 600,000 + buildings and structures

IT Systems

- 100 Operational systems (mission critical)
- 100 Data Centers
- 100 Servers
- 100 computers and IT
- 100s of networks
- 100s of email servers, proxy servers, etc.
- 100 Mobile Devices
- 100,000 Blackberries
- 100,000 iOS Systems (Pilots)
- ~ 3000 Android Systems (Pilots)

- >\$10 Billion for Cyber Security
- >\$3 Billion for Cyber Security

Size, Scope, Diversity and Complexity

DoD Mobile Device Superstore

Remember, this is where we fight....



Is DoD's Future in the Clouds?

Buy music
Download music from iTunes on any device.

iCloud

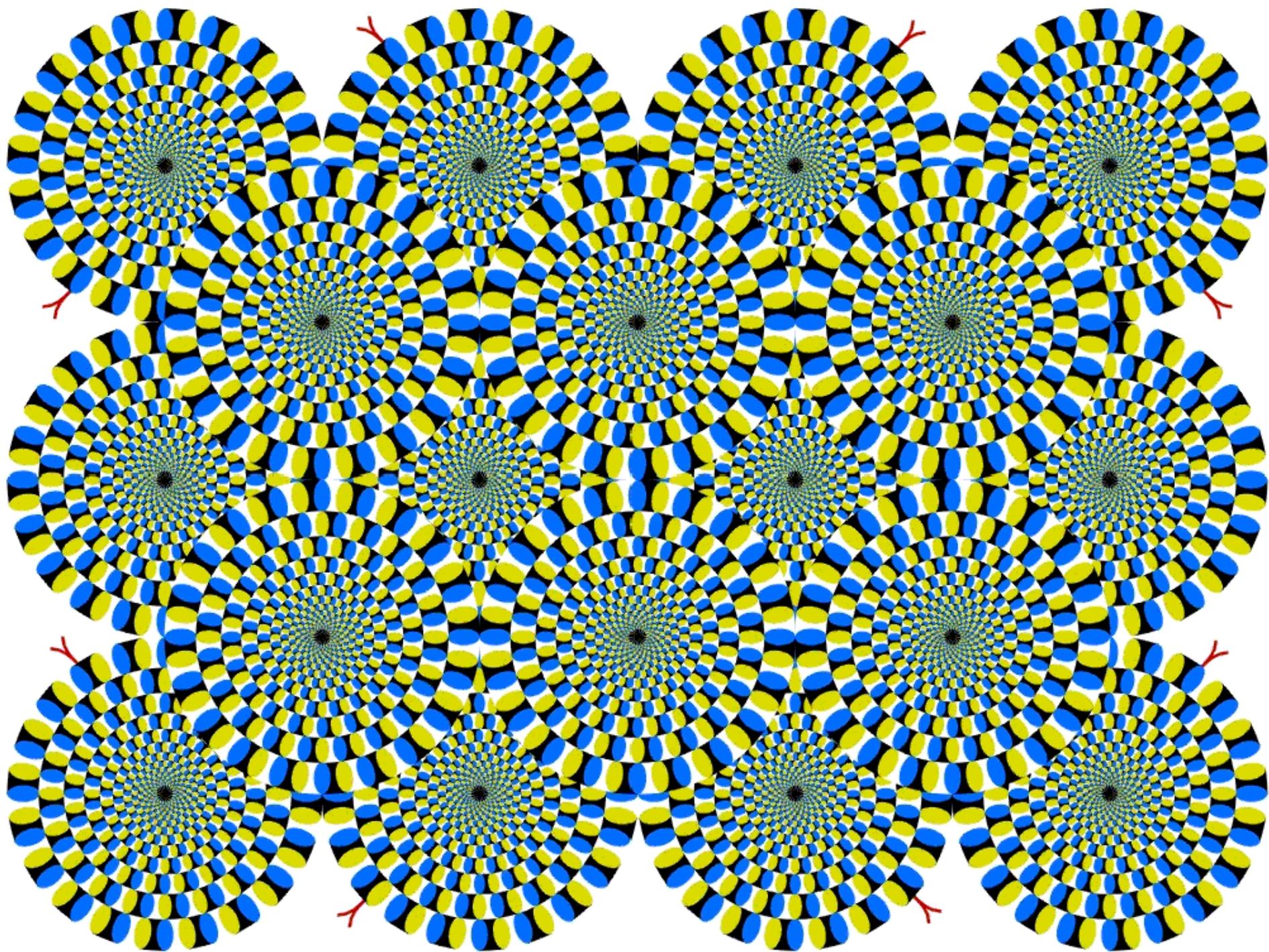
iCloud stores it
Your music is stored in iCloud.

And pushes it to your devices
Your music automatically appears on your iPad, iPhone, iPod touch, Mac, and PC.

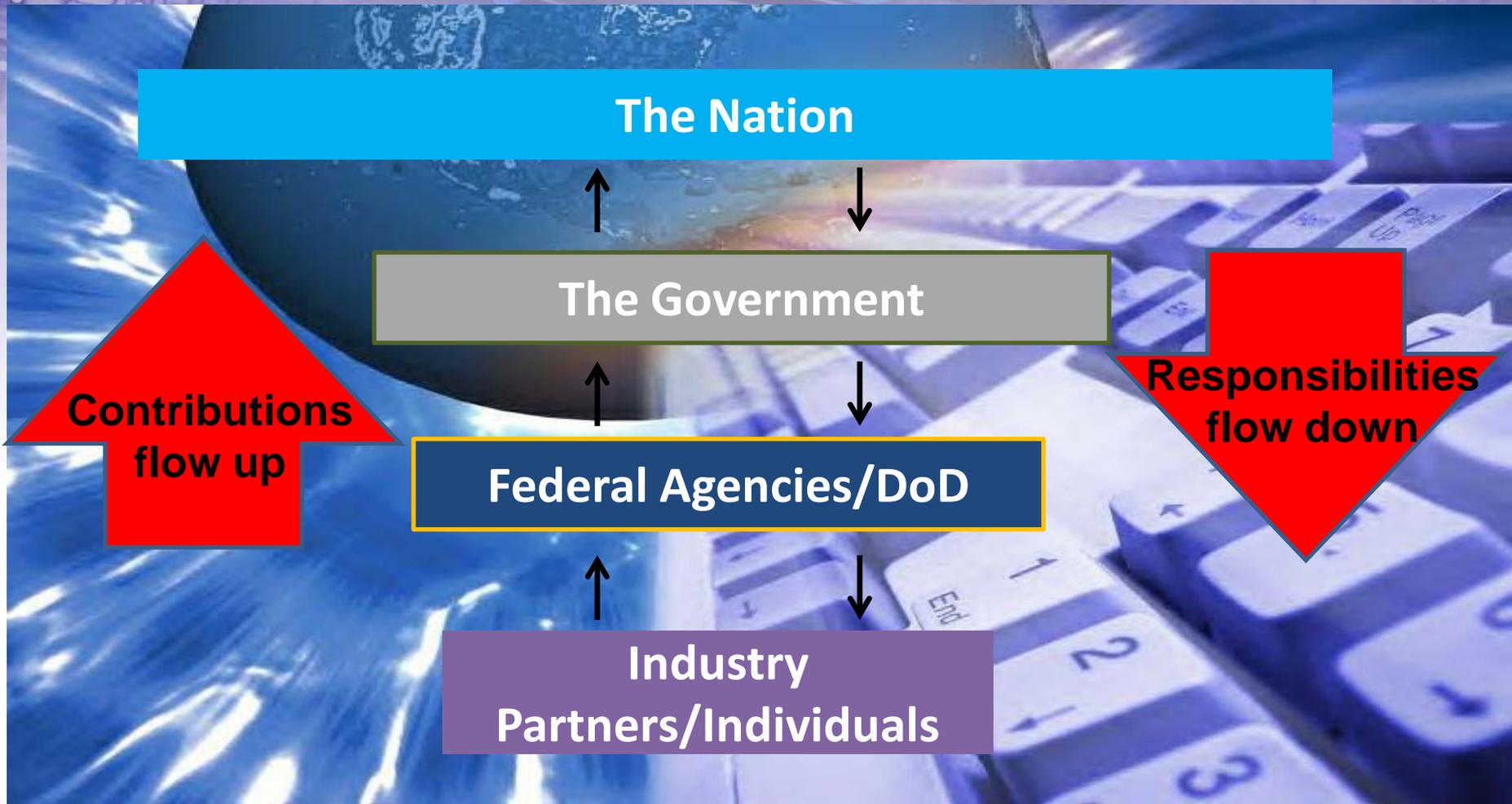
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Cloud Computing supporting DoD's Cyber Strategy



Shared Responsibility: Our Challenge



The Challenge Comes Down to Your Contribution!

If You Chose to Accept the Mission...

*It is Up to Us to **Successfully** Complete the Mission!*

If You Chose to Accept the Mission...

**This Message
will self-destruct in
5, 4, 3, 2, 1 ...**

It is Up to Us to Successfully Complete the Mission!

What's a Cropdonker?



5/1/2012

Vocabulary to Help U Relate UR Frustration...

Closing Doors of Wisdom...



- 100% of USC don't have the
- 75% of secu upper hand
- 50% of secu many hosts
- 84% of USG upper hand
- 86% of Indus upper hand

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knowing how
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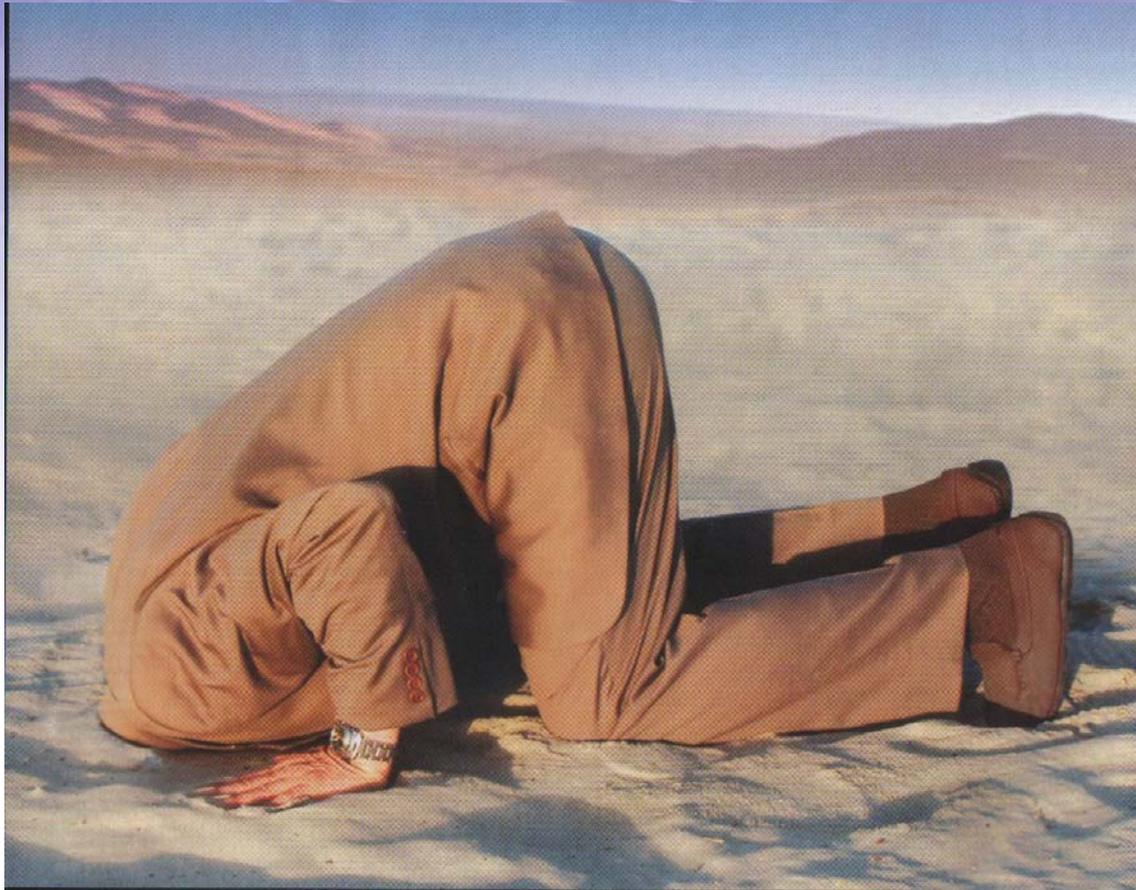
kers have the

rs have the

But don't worry

ollipop Yum!

Questions?



Another day at the beach...right?

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How Big is Your Digital Footprint?



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IMC
Dallas, TX

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Budget

DPP Mitigation Options & Rough Cost Estimates

Low Cost High Risk Acceptance*	Low Cost High Risk Acceptance	Medium Cost Medium Risk Acceptance	High Cost Low Risk Acceptance	Highest Cost Lowest Risk Acceptance
Cost: < \$1 million	Cost: ~\$1 million	Cost: ~ \$4 million	Cost: ~ \$6 million	Cost: ~ \$8 million
Web-based Education & Awareness	Web-based Education & Awareness	Web-based Education & Awareness	Web-based Education & Awareness	Web-based Education & Awareness
Employee-Purchased Credit Monitoring	Employee-Purchased Credit Monitoring	Employee-Purchased Credit Monitoring	Employee-Purchased Credit Monitoring	Employee-Purchased Credit Monitoring
Reactive Mitigations for Identity Theft	All Reactive Mitigations	All Reactive Mitigations	All Reactive Mitigations	All Reactive Mitigations
	Gov-Purchased Credit Monitoring	Gov-Purchased Credit Monitoring	Gov-Purchased Credit Monitoring	Gov-Purchased Credit Monitoring
		Online Intelligence Monitoring	Online Intelligence Monitoring	Online Intelligence Monitoring
			Tailored Family Education	Tailored Family Education
			Personal Risk Assessment	Personal Risk Assessment
			Securing Systems	Securing Systems
				Public Information Exposure/ Opt-out
				Secure Cyber Communications
				Reputation Management

* Level of activity approved by DoD Office of General Counsel

Notes

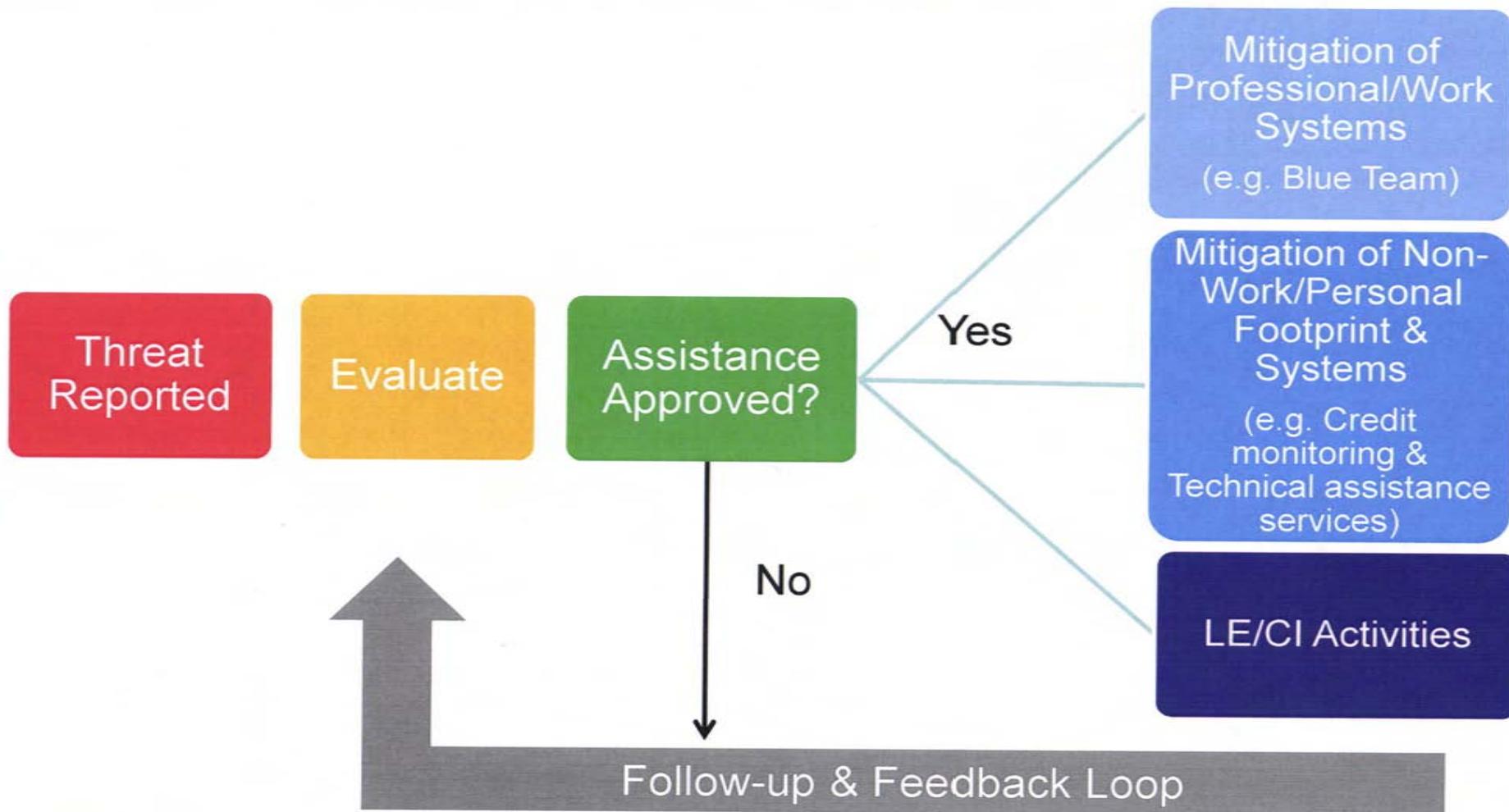
These services available to all DoD employees and at minimal cost to DoD.

Proactive services may be granted to selected HRDPs (between 20-110) in advance of a threat, in addition to those for whom a credible threat has been identified.

Reactive mitigations include: credit remediation assistance, online reputation remediation, systems remediation, and legal assistance.
Cost per Employee of Reactive Mitigations will vary greatly subject to case-by-case DoD decisions on what reactive mitigations to provide & severity of incident.

No budget exists for this type of activity

Education on Preventive Measures



Threats & Methods for Cyber Attack w/ Deterrence & Mitigation Tactics

