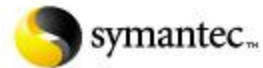




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12-14 September 2010, Ohrid, Republic of Macedonia



# Compliance Standards Interoperability: Matters of security

**Zoltán Précsényi,**  
*EU Government Relations Manager*  
*Symantec Corporation*

nextsense

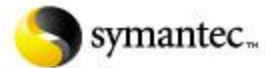




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**What are we talking about?**

# What are we talking about?



Hello, I am the citizen I claim I am.

Trust

Identity

Hi, I am the authority you believe you contacted.

I want to send you my data electronically.

Authenticity

Convenience

I need to be sure the data you send me is yours.

I want to send my data from my smart phone.

Interoperability

Mobility

I need to read your data on my PC.

I am moving to the next country. Shall I have to re-send them the data all over again?

Standards

They ask for the same data, so I should be able to share yours with them.

What if they work on Macintosh?

Interoperability

It should work all the same.

Will my data be as protected there as here?

Compliance

Security

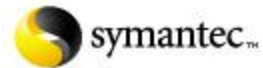
If they are as serious about it as we are, then yes.



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**Where do we stand?  
ICT is pervasive**

## ICT creates:

- New **opportunities** e-government, e-services, cloud
- New **needs**: infrastructure, skills, technology
- New **expectations**: availability, resilience, privacy
- New **challenges**: security, interoperability, data protection, trust
- New **threats**: cyber-crime

**Interoperability calls for standards.**

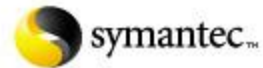
**Security requires compliance.**



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**Where does Europe stand?  
ICT is high on the EU's agenda**

## EU2020 / Digital Agenda:

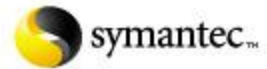
- Digital **single market**, intellectual property, eSignature
- **Data protection** in the era of ICT
- Review of European **standardisation** policy
- European **Interoperability** Framework 2.0
- e-government, e-health, European **e-public services**
- **Critical** Information **Infrastructure** Protection and Resilience
- Modernisation of ENISA, European **cybercrime** platform



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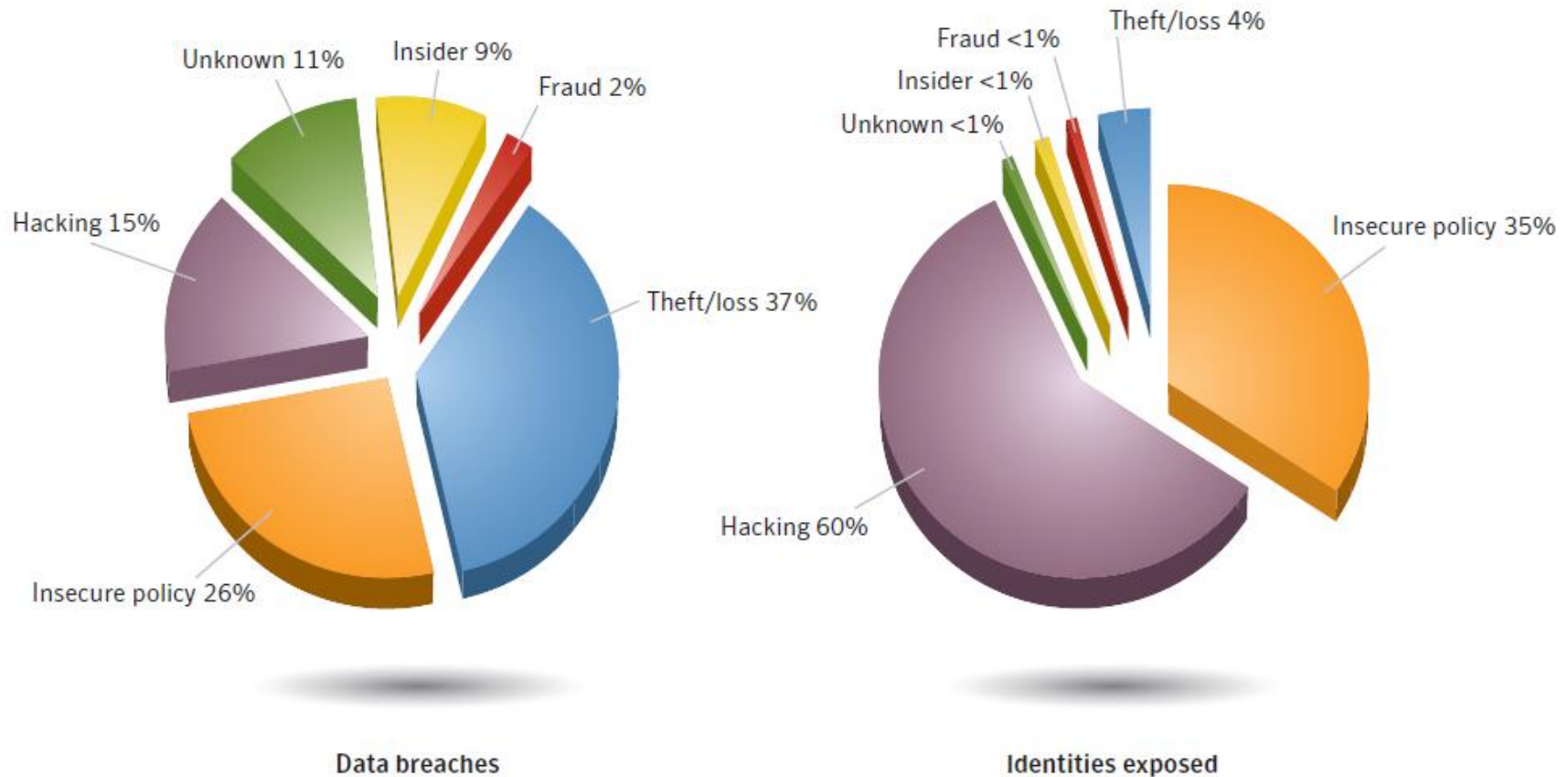


# Compliance



# Compliance: Insecure policies

Data breaches that could lead to identity theft by cause and identities exposed, 2009



# Compliance: Well-meaning insiders

2008 figures

- Data losses:
  - Of all data losses, **88% caused by well-meaning insiders.**

(source: Ponemon Institute, *Cost of a Data Breach*, February 2009)

- Data breaches:
  - Of all breaches analysed, **20% caused by insiders.**
  - **67% were well-meaning**, simply inadvertent.

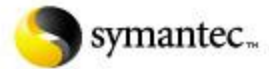
(source: Verizon Business RISK Team, 2009 Data Breach Investigations Report)



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# Standards

# Standards: Open or proprietary? That's not the issue!

## Vulnerabilities and windows of exposure of main browsers, 2009

Browser	Vulnerabilities	Window of exposure (Patch time)
Mozilla Firefox	169	<1 day
Apple Safari	94	13 days
Microsoft Internet Explorer	45	<1 day
Google Chrome	41	2 days
Opera	25	<1 day

# Standards: What's a good security standard?

## A good security standard:

- Is not a specific technological standard,
- But a **performance standard**, like:

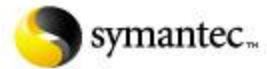
**95% DETECTION RATE  
OF KNOWN AND UNKNOWN MALWARE**



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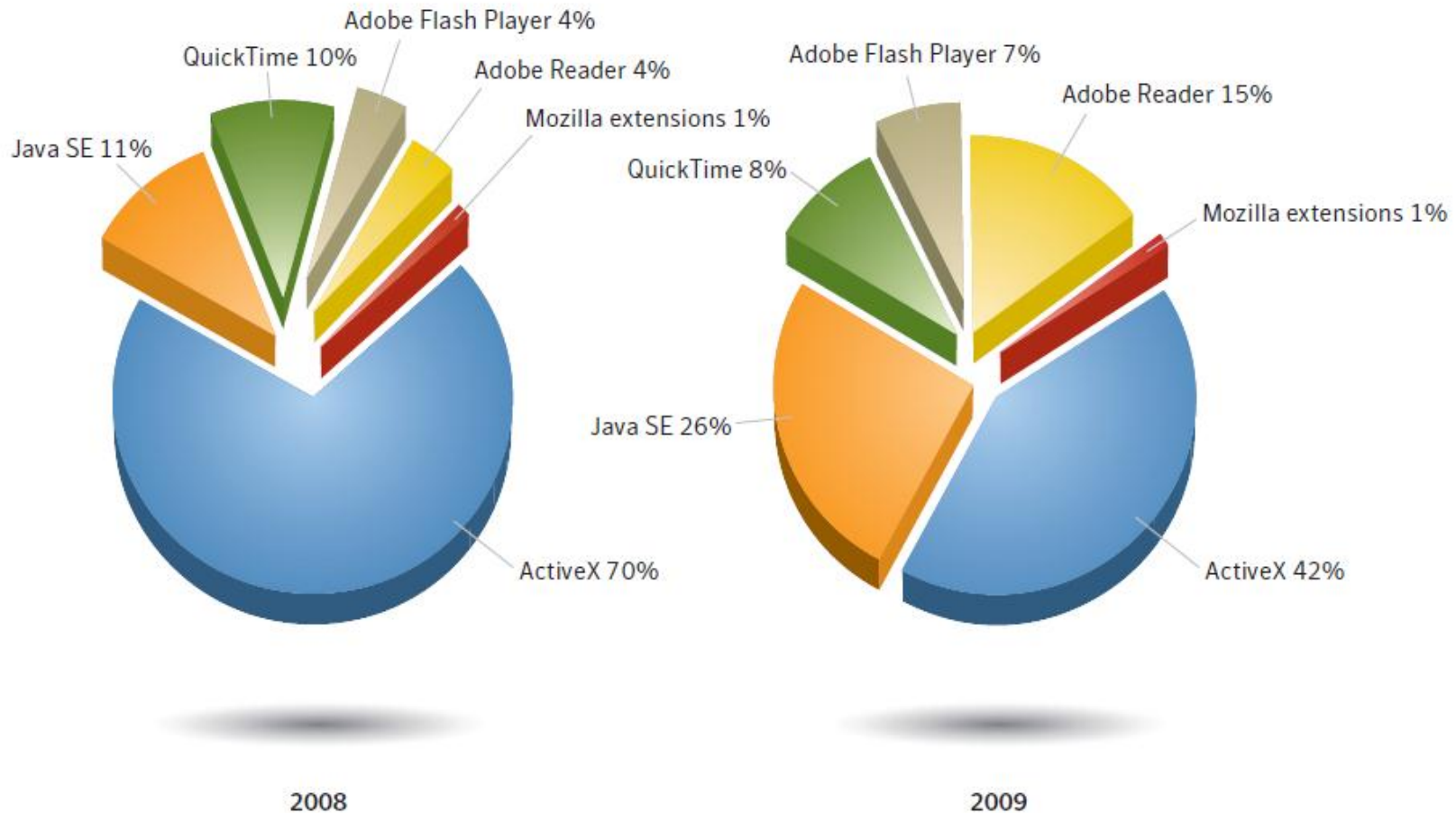
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# Interoperability

# Interoperability: The more interoperable you get, the more vulnerabilities you may propagate

Web browser plug-in vulnerabilities, 2009 (of a total of 424 identified in 2008, and 321 in 2009)



**Interoperability:** We need the upside of it;  
So let's face the downside too:

## **Interoperability:**

- Can introduce new or propagate existing **vulnerabilities**.
- Can be taken advantage of to distribute **threats**.
- Allows access to information from and to multiple sources, so:
  - It makes **protective monitoring more difficult**;
  - It gets **more resource-consuming to secure**;
  - It increases the **likelihood of data leakage**.



# Interoperability: Facing the downside: How?

## Interoperability requires:

- A **risk assessment approach** in handling security challenges;
- **Sharing this approach** among those interconnected;
- Building the **security and privacy policies** to match the risks;
- Drawing and enforcing **security measures** as appropriate;
- Regularly **auditing** and reviewing them.

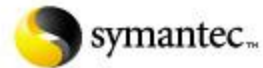
**Compliance with the highest security standards at all times is what it takes to make interoperability actually work.**



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# What we're up against: The threat landscape

# The threat landscape

## Objectives: Not fame, but fortune.

### Goods and services advertised on underground economy servers

Overall Rank		Item	Percentage		Range of Prices
2009	2008		2009	2008	
1	1	Credit card information	19%	32%	\$0.85-\$30
2	2	Bank account credentials	19%	19%	\$15-\$850
3	3	Email accounts	7%	5%	\$1-\$20
4	4	Email addresses	7%	5%	\$1.70/MB-\$15/MB
5	9	Shell scripts	6%	3%	\$2-\$5
6	6	Full identities	5%	4%	\$0.70-\$20
7	13	Credit card dumps	5%	2%	\$4-\$150
8	7	Mailers	4%	3%	\$4-\$10
9	8	Cash-out services	4%	3%	\$0-\$600 plus 50%-60%
10	12	Website administration credentials	4%	3%	\$2-\$30

# The threat landscape

## Targets: Wherever valuable digital data resides

Unique brands phished, by sector, 2009

Sector	2009 Percentage	2008 Percentage
Financial	74%	79%
ISP	9%	8%
Retail	6%	4%
Insurance	3%	2%
Internet community	2%	2%
Telecom	2%	2%
Computer hardware	1%	1%
Government	1%	1%
Computer software	<1%	<1%
Transportation	<1%	<1%

# The threat landscape

## The economics: The Underground Economy

### On offer in the underground economy:

- Botnets
- Spam zombies
- Crimeware toolkits
- Stolen credentials
- Stolen identities

You need not be a skilled hacker to mount web-based attacks.

Conversely however, skilled hackers mount more and more sophisticated attacks.

# The threat landscape

## The latest: Stuxnet

- **Nature and propagation:**
  - Worm spreading via removable storage devices
- **Objective:**
  - Steal confidential SCADA design and usage documents
- **Modus operandi:**
  - **The door:** a zero-day vulnerability affecting all versions of an OS.
  - **The cover:** a purposely developed rootkit to hide behind.
  - **The map:** knowledge of the attacked industrial assets and processes.
  - **The disguise:** stolen digital certificates to sign the malicious files as legitimate.

# The threat landscape

## The latest: Stuxnet

“ Stuxnet is the first publicly widespread threat that has shown a possibility of gaining control of industrial processes and placing that control in the wrong hands. It also shows that in this interconnected world, IT security is more important than ever and that even the unthinkable must now be considered.

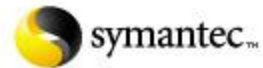
”  
*Patrick Fitzgerald,  
Security Response Manager  
Symantec*



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# Standards and Interoperability: What the future has in stock



# The future

- **Virtualisation:**
  - Independance from OS, from applications and from platforms.
- **Software as a Service:**
  - Single standardised services, single delivery medium, over any infrastructures and environments, pay per use.
- **Cloud computing:**
  - Easier access to data, easier exchange of information via commonly used networks and communication standards.
- **Mobility:**
  - Anywhere, anytime, on any device.

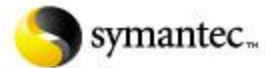
**In terms of security, it means new opportunities, but also new threats, and as many new challenges.**



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## The *take away's*

1 **Standards** can make **technologies** compatible.

2 **Standards** can make **processes** more efficient.

3 **Standards** can help **interoperability**.

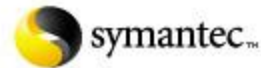
4 But **compliance** ultimately rests with **people**.



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# Security is a matter of technology, processes and people.

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Compliance, standards, interoperability: Matters of security  
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