

Security Standardisation, ENISA perspective

Giles Hogben, ENISA



Overview

- ★ ENISA introduction
- Interesting new developments in Social Networking/IDM
- ★ Web 2.0 Security challenges
- * Resilience of telecommunications networks
 - the challenge of getting standards
 implemented ENISA experiences.



Key Facts

eEurope 2005 Action Plan → set up in 2004 by EU Regulation

Operational since September 2005 in Heraklion, Greece

~50 Staff

~34.8 M€ for 5 years





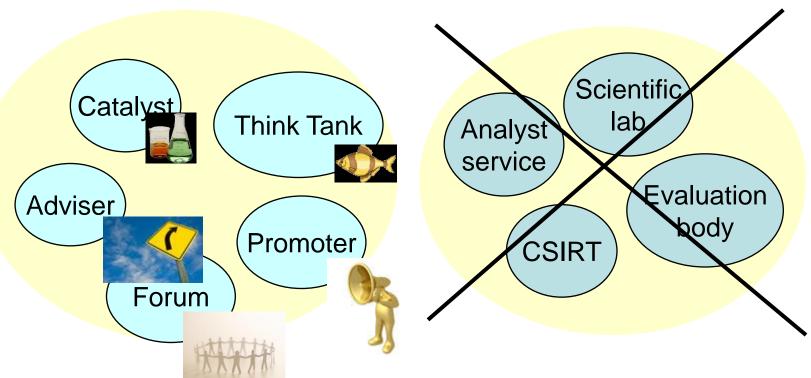
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ENISA's Role

to be a... and not a...



... maintain internal expertise, at the disposal for EU and Member State competent bodies

(respond to Requests and Calls for Assistance)





ENISA Standardisation Role

- * Security Standardisation Roadmap, (with ITU) http://enisasec.notlong.com
- **★** eID directory http://enisaIDDir.notlong.com
- Contributions from Risk-assessment studies
 - ★ Member of W3C, OASIS
 - ★ Liaison- co-operation with
 - ITU (FG-IDM, Security Standards Portal),
 - ETSI
 - CEN/CENELEC (European Citizen Card)





ENISA Activities for 2008 and beyond

Current focus on:

- **★**Identifying Emerging Risks
- **★Improving Resilience in European** e-Communication Networks
- **★**Co-operation between Member States
- **★**Building information confidence with Micro Enterprises





Emerging Risk Activity

Identifying Emerging Risks for creating trust and confidence – topic areas

- Social networking
- Reputation systems
- Mobile eID
- Web 2.0
- Virtual Worlds and Gaming
- Virtualisation security
- eID interoperability (e.g. privacy features of eID cards)





★ Social Networking



Social Networking is now an Identity Management System

- Storage of Personal Data
- Tools for managing personal data and how it's viewed
- Access control to personal data based on credentials.
- Tools for finding out who has accessed personal data.



Identity Management System

Storage of personal data

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Social Networking is an Identity Management System.

LOTS of Juicy Personal data:

Recognise these from somewhere?

- (a) Racial or ethnic origin
- (b) Political opinions
- (c) Religious beliefs
- (e) Physical or mental health or condition
- (f) Sex life



(EU Directive 95/46 – definition of sensitive personal data)



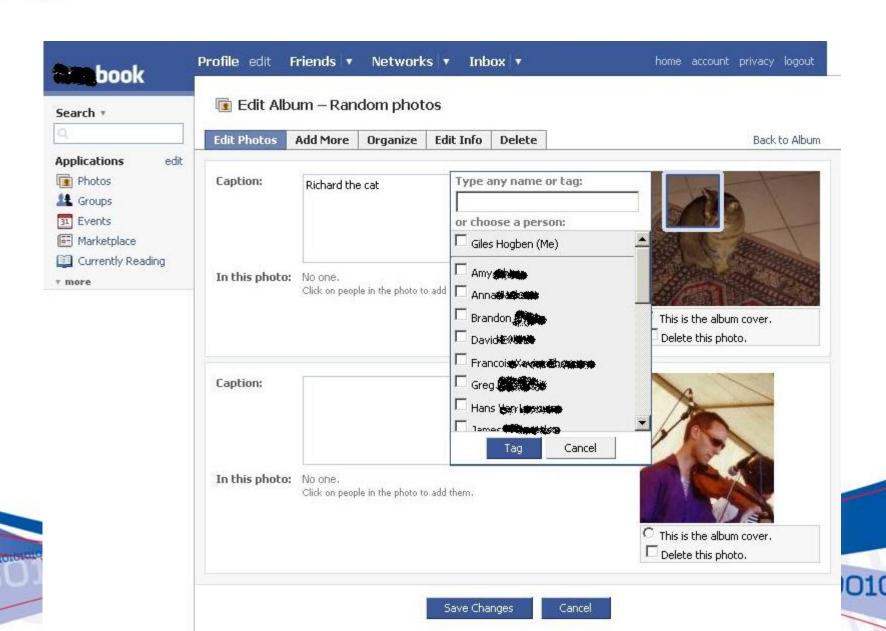
Identity Management System

- Storage of Personal Data
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Tools for Organising my personal data





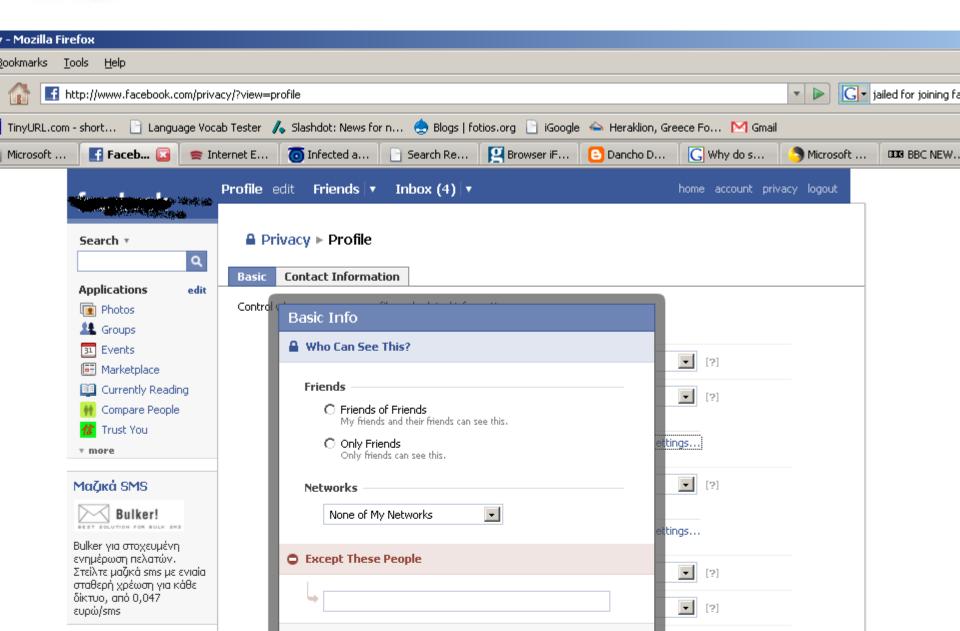
Identity Management System

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Social Networking Provides Access Control





Tools for managing access based on credentials

Privacy



Profile ▶

Control who can see your profile and personal information.



Search >

Control who can search for you, and how you can be contacted.



News Feed and Mini-Feed ▶

Control what stories about you get published to your profile and to your friends' News Feeds.



□□□ Applications ►



🔛 🧭 Control what information is available to applications you use on Facebook.

Block People

If you block someone, they will not be able to search for you, see your profile, or contact you on Facebook. Any ties you currently have with a person you block will be broken (friendship connections, relationships, etc).

Person	
	Block





Lock-in – the Hotel California effect.

"Social Networking is like the Hotel California. You can check out, but you can never leave"

Nipon Das to the New York Times



Leaving the Hotel California?

- ★ No export facility
- ★ Caches

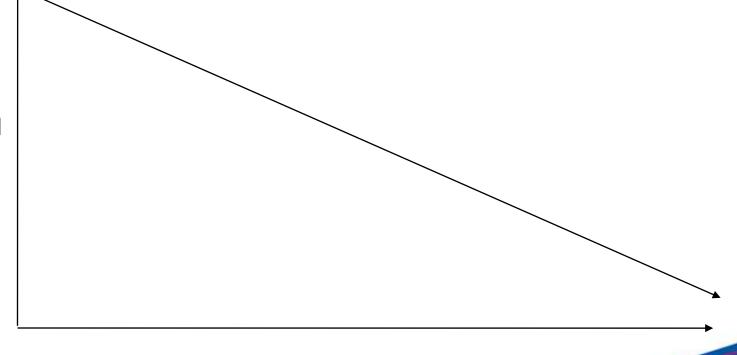
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- **★** Internet archives
- ★ "Disactivation" of the account
- ★ Delete comments from other people's walls?



 Economic success is inversely proportional to strength of privacy settings.

Speed of spread => Economic and Social Success





Attacking the root cause

- Break data monopolies to improve privacy and security:
 - Standardised portable networks (leaving the Hotel California and going to another one)
 - PLUS Portable, standardised access-control and security (with a secure briefcase).



Nice idea but where's the business model?







Important new developments in social applications

- ★ The big players embrace data portability and portable authentication...
- ★ Social Networking takes another step in the direction of IAM.



Getting started

Introduction

More information

Example sites

Grow traffic when friends connect on your site

Google Friend Connect lets you grow traffic by easily adding social features to your website. With just a few snippets of code, you deeply with your site.



Sign-up for preview release

Attract more visitors. Visitors bring along friends from soc others to interact on your site.

Enrich your site with social features. Choose engaging a gadgets provided by Google and the OpenSocial developer

No programming whatsoever. Just copy and paste snipp Friend Connect does the rest.

More information...

Please note: this is a **preview release**. Google Friend Connect is being made available to a limited number of site owners as it ap are interested in participating, please fill out this short form. You will be notified if you are approved as a partner.



Based on open FIM compatible specs

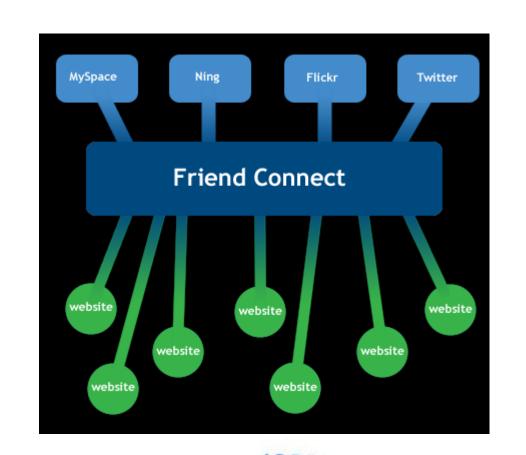








Mentionen and to the land









Google Friend Connect

- ★ Sign-in with an existing account (Google, Yahoo, OpenID...)
- ★ Invite and show activity to existing friends from social networks (Facebook, Google Talk...)
- Browse member profiles across social networks



facebook DEVELOPERS

Get Started Documentation Resources Tools News

NEWS

Archived Posts

2008

June (5)

May (11)

April (7)

March (7)

February (9) January (11)

2007

December (5)

November (5) October (10)

September (4)

August (5)

July (2)

June (1)

May (2)

April (1)

March (3) February (3)

January (3)

2006

November (1)

October (2)

September (3)

Announcing Facebook Connect

12:32pm Friday, May 9

Published by Dave Morin

At Facebook, we're committed to enabling people to communicate and stay connected wherever they go.

In August 2006, we introduced the first version of the Facebook API,

enabling users to share their information with the third party websites and applications they choose. Hundreds of companies have leveraged these APIs, allowing users to dynamically connect their identity information from Facebook, such as basic profile, friends, photos information and more, to third party websites, as well as desktop and mobile applications.

In May 2007, we launched Facebook Platform, which allowed third party developers to build rich social applications within Facebook. More than 350,000 developers and entrepreneurs from 225 countries have signed up, and started developing applications, and have seen significant adoption by Facebook users worldwide.

Today we are announcing Facebook Connect. Facebook Connect is the next iteration of Eacebook Platform that allows users to "connect" their Facebook identity, friends and privacy to any site. This will now enable third party websites to implement and offer even more features of Facebook Platform off of Facebook - similar to features available to third party applications today on Facebook.

Here are just a few of the coming features of Facebook Connect:

Trusted Authentication Heare will be able to copposit Recent News

Share +

New Profile Design Update, and New Metrics

June 17, 2008

f8 '08 is coming

June 12, 2008

Facebook at Graphing Social Patterns! June 5, 2008

Clarifying Application **Authorization Changes** June 4, 2008

Happy Anniversary (and Facebook Open Platform)

June 2, 2008

Streamlining Application Authorization

May 30, 2008

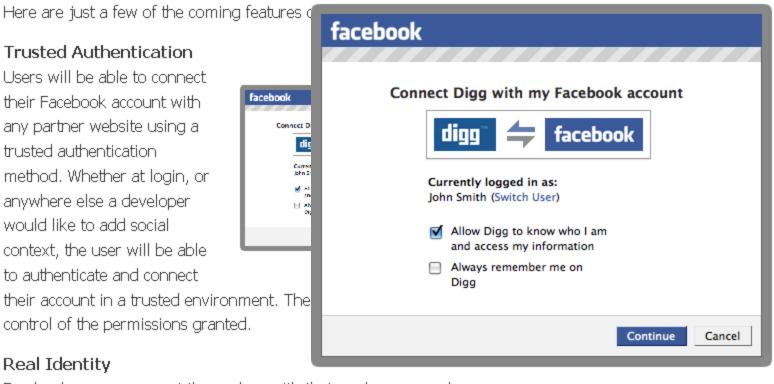
Facebook Platform Live & Interactive at GSP East 2008

May 29, 2008 Creating Feed Stories

May 28, 2008

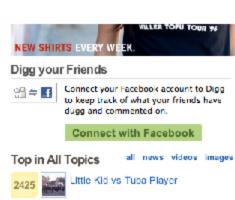
Jugust (2)

Trusted Authentication Users will be able to connect. facebook their Facebook account with any partner website using a Connect D trusted authentication method. Whether at login, or anywhere else a developer would like to add social context, the user will be able to authenticate and connect. their account in a trusted environment. The control of the permissions granted. Real Identity photos, events, groups, and more. Friends Access Users count on Facebook to



Facebook users represent themselves with their real names and real identities. With Facebook Connect, users can bring their real identity information with them wherever they go on the Web, including: basic profile information, profile picture, name, friends,

stay connected to their friends and family. With Facebook Connect, users can take their friends with them wherever they go on the Web. Developers will be able





-- Select a Product Category --

Gο

MySpace Embraces Data Portability

By HEATHER HAVENSTEIN, Computerworld, Published: May 8, 2008

MySpace Thursday unveiled its response to one of the most contentious issues surrounding social networking - information portability with a new project that allows its users to share content from their profiles with any Web site.

button, noted Chris DeWolfe, CEO and cofounder of MySpace.



▼ Go

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The new MySpace Data Availability project is its first in a series of initiatives by the company to support data portability, allowing users to take the content they create in one network and easily add it to other sites, MySpace said. Until now, social networking sites like MySpace have favored the "walled garden" approach, where they

essentially lock their users into their own site.

MySpace said that it has signed agreements with Yahoo, eBay, Photobucket and Twitter to participate in the project. Over the next several weeks, MySpace users will be able to add their MySpace data to those sites with the click of a

"We are pioneering a new way for the global community to integrate their social community experiences Web wide," DeWolfe said. "Today MySpace no longer operates as

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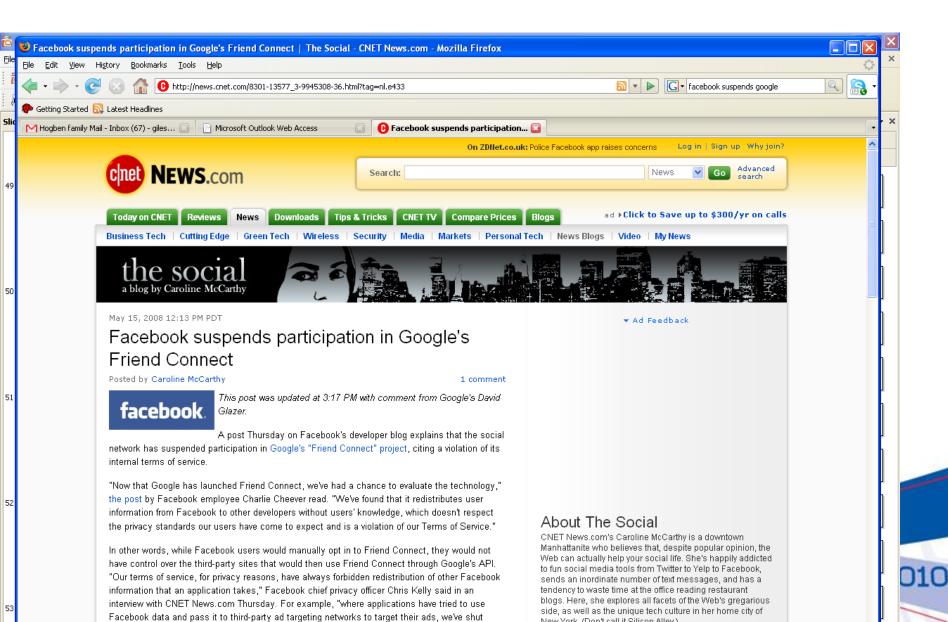


Content from this site web site blocked. ad.doubleclick.net

Please contact ENISA IT Support if you need assistance. Thank you, secured by esafe



Or does it?





Web 2.0

★ The Browser has become an Operating System in its own right.

It shares many characteristics with a virtual machine.

Browser is probably used more than any other feature of underlying OS. CI ICUCA.





Web 2.0 Security Challenges

May 2007 / May 2008 Scansafe State of the Web Comparative

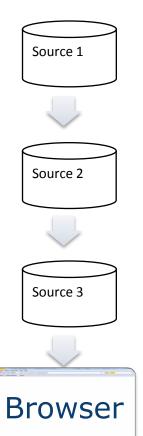
- ★ The volume of threats confronting web surfers has increased 220%
- ★ Risk of exposure to exploits and compromised web sites increased 407%
- ★ In May 2008, 68% of Web-based malware exposure was via compromised web sites





Web 2.0 Patterns -**Syndication**

Information may be syndicated (e.g. using RSS) and altered many times from its original source, making provenance, control and pedigree of information difficult to trace



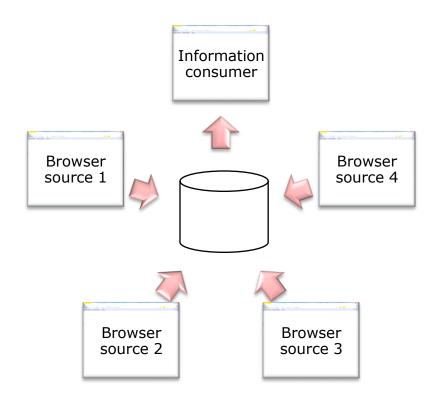






Web 2.0 patterns - Collaborative Content

Information which appears as a single source or article is edited by multiple (possibly unnamed and untraceable) users.

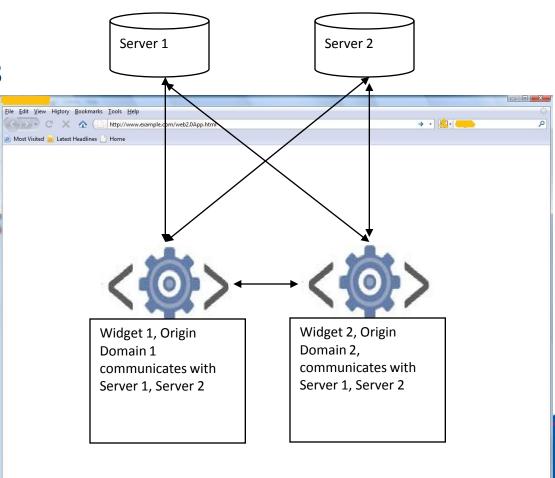






Web 2.0 Patterns - Embedded Widgets and XMLHttp

★ One page contains content and even executable code from multiple sources communicating with multiple servers



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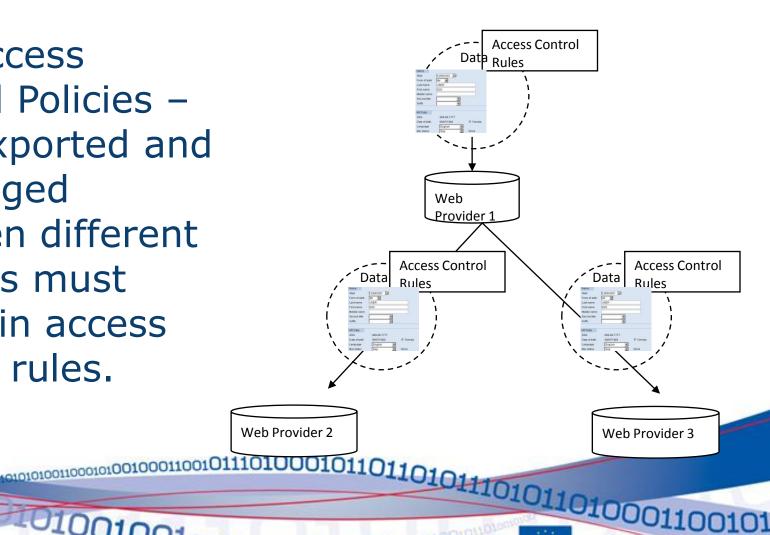
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Web 2.0 Patterns – Access Control for Services

Sticky Access Control Policies data exported and exchanged between different services must maintain access control rules.

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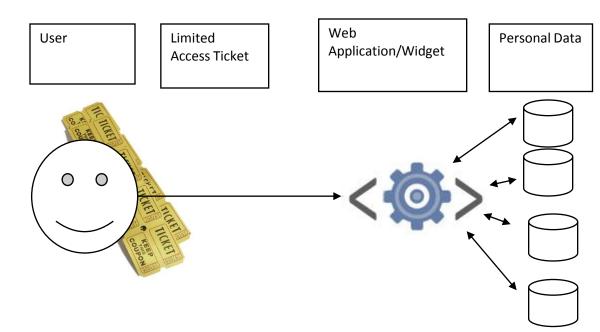






Web 2.0 Patterns - Authorisation for services

Authorisation and access delegated to services







Web 2.0 – other interesting features for security

- ★ Information and executable code sources are likely to be from private individuals
- ★ Developers with security training are very few!

★ Trust in information is established through user-votes and reputation systems rather than brand names or PKI





Web 2.0 Challenges for Access Control Standards

- "Same-origin" policy -doesn't work so well in Web 2.0.
 - Multiple "widgets" in a single browser context need to communicate across domains=>
 - Developers forced to circumvent access restrictions
 - Multiple loopholes opens users up to attacks (CSRF) but no other basis available for protecting resources.



Web 2.0 Authorisation Challenges

- ★ E.g. Delegate Access to Email/Bank account
 - ★ For limited period
 - ★ To limited fields
 - ★ Specify who authorisation can be passed to
 - ★ I can trace it if it something goes wrong



Web 2.0 and Information Pedigree

- ★ The difficulty of tracing "information pedigree"
 - ★ Pump and dump stocks
 - Astro-turfing (adverjournalism)
 - ★ Political fraud
 - ★ Fraudulent factual information



Resilience



The ability of a system to provide & maintain an acceptable level of service in face of faults (unintentional, intentional, or naturally caused) affecting normal operation





ENISA Resilience Work-Background Info

- ⋆ Objectives
 - ★ Analyze current and emerging technologies used by network and service providers to enhance the resilience of their operations
- ★ Scope
 - ★ IP backbone technologies
- ★ Target Group
 - ★ Regulators and Policy Makers
 - ⋆ Operators
 - ★ Vendors





Selected Technologies – to improve resilience

- **★** IPv6
 - ★ OSI Layer 3 technology replacing IPv4
 - * Action Plan for the deployment of Internet Protocol version 6 (IPv6) in Europe
- **★** MPLS
 - ★ OSI Layer 2.5 technology
 - ★ Used by operators in IP backbones, replacing Frame Relay and ATM
- **★** DNSSec
 - * A technology improving the security of Domain Resolution Service





Standards uptake

- ★ What policy measures can foster uptake (E.g. IPV6, DNSSec, MPLS, ECC)?
 - **★ Economic incentives** who wants to go first e.g. funding of pilots.
 - **★ Government takes liability** e.g. For identity infrastructure, DNS security.
 - **★ Lead by example** implement in government systems.
 - * Release from reporting obligations.





Uptake – standards need to make choices

* A standard which has every possible feature but is too complex to implement or understand will not fly.







Uptake – halfcompatible standards

- ★ Many half-compatible standards
 - ★ E.g. In Mobile eID area, NFC/ISO 14443A/ISO 14443B not compatible







Take Home Messages

- ★ Social networking applications are becoming big players in the Identity Management Space
 - ★ Importance of portable formats
 - ★ Access and Authorisation is a key piece of the puzzle
- ★ The browser is the new OS
 - ★ Fixing access control and authorisation is URGENT!
- ★ Standards uptake (e.g. For network resilience) needs economic and policy incentives to foster take-up.







