



Trustworthy ICT

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“People don’t understand the scale of criminal activity on the Internet. Whether criminal, individual or nation states, the community is growing more sophisticated. We need a kind of World Health Organization for the Internet. When there is a pandemic, it organizes the quarantine of cases.”
[Microsoft chief research and strategy officer Craig Mundie](#)

Overview

- ✘ TDL (Trust in Digital Life) Consortium
- ✘ Privacy and Trust for ICT: a challenge for our industry
- ✘ A model to drive research
- ✘ Conclusions

TDL (Trust In Digital Life) Consortium

- ✧ A consortium to propose solutions and develop a research agenda for Trust in ICT
- ✧ Founded by Microsoft, Nokia, Philips and Gemalto
 - MoU signed in December 2008
 - An open Consortium for all the stakeholders in ICT
 - Industrial products, software and services providers
 - R&D labs and Academics
 - Government entities and Policy Makers
- ✧ Announced in May 2009 at the FIA in Prague
- ✧ Inauguration Meeting held in Brussels on Dec 09, 2009 with 14 additional potential members

www.trustindigitallife.eu

TDL will be a success if

- ✘ Solutions proposed are User-Centric
- ✘ Technology, Policies and Societal issues are all taken equally into account
- ✘ Consensus on Best Practices can emerge

Simple Maths... but immense challenges ahead

Security + Privacy + Trust + Convenience

=

ICT truly embraced by Citizens

- ✧ What is the reference for Trustworthy Services today ?
 - Paper documents
 - Known Brands
 - Reputation

- ✧ Our Challenge: Create tangible facts (via technologies and policies) for Citizens to systematically prefer Digital Services when available.

A new mind set for ICT

It's no longer just about improving "speed", "performance" and "efficiency". It's also about focusing on the User Experience:

- ✘ The User should always be in control
- ✘ Digital Identitie(s) should be Citizens' property
- ✘ Data Protection should be a Citizen's fundamental Right.
- ✘ Data should have a finite life time
- ✘ Data disclosure should be limited to what is absolutely necessary

Changing our old (and bad) habits:

- ✘ Dematerialized Assets are still Assets. We have been too casual in the last 20 years on that matter.
- ✘ Nothing else than ICT runs without some level of governance

A Citizen-centric Digital World

✧ Citizens' confidence in adopting new digital services will require solutions to

- Protect their Digital identitie(s)
- Protect their Digital Assets
- Secure their Digital Transactions

✧ No one should be left behind

- Solutions must be designed to benefit to every Citizens.
- Policy Makers need to make sure that an unbearable « digital divide » does not occur



Is there a chemistry for a trustworthy ICT?

No simple recipe, but three pillars as a good start to build Trust:

✧ Identit(ies) Management

- Issuance mechanisms
- Certificates management
- Disclosure of credentials mechanisms

✧ Data Protection

- Secure storage
- Access control
- Revisions Management
- Data Retention, data termination (data life cycle management)

✧ Secure e-Transactions

- Data encryptions
- Data retention



Trends to be prepared for

- ✦ The future of the Internet is Mobile
- ✦ e-Commerce is already > 10% of global commerce
- ✦ Emerging Countries will build their ID infrastructure on Mobile Devices
- ✦ eGov is positioned to be a driving force for ICT



A proposed Model with 3 Pillars

- ✘ Identity Management
- ✘ Data Protection
- ✘ Secure e-Transactions

The next three slides propose areas of research and development where Gemalto sees direct contributions to build a Trustworthy ICT

Identity Management

- ✧ Strong Authentication mechanisms
 - To prevent Identity Theft
 - Leveraging on existing secure elements
 - eID
 - SIM OTP
 - USB Token
 - Contactless tokens

- ✧ Minimal Disclosure of Credentials
 - Privacy protection

- ✧ A new TSM business model



Data Protection

✧ Secure Storage

- Where is my data?
- Who can access to my data?
- How do I terminate a Web Service?
- What is the disaster recovery plan for my data?

✧ Revisions Management

- How do I track changes on my data?
- How can I share data with a collaborative team?

✧ Data Life Cycle management

- How long is my data kept (by a Service Provider?)
- How can I change the permissions on my data?

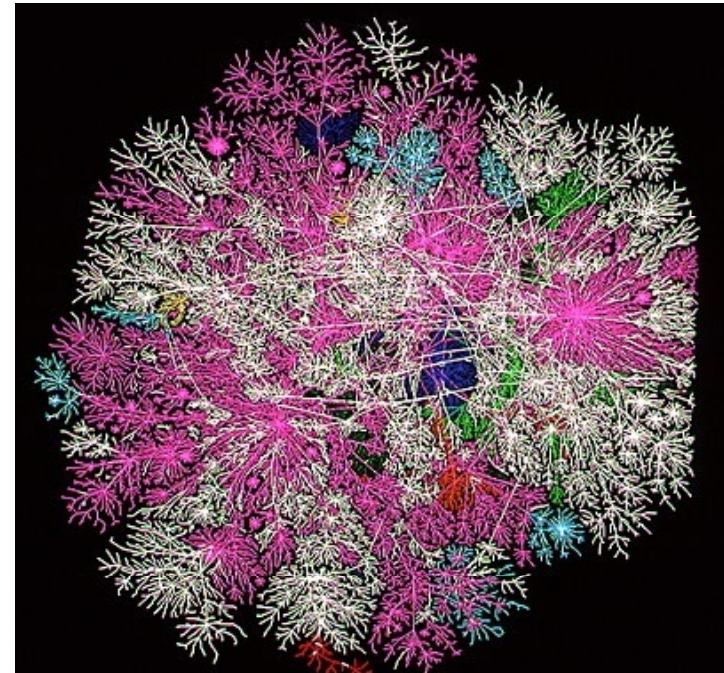
✧ Data mining and search technology

- What is the legal framework of search technology?



Secure e-Transactions

- ✧ Data encryption
 - Real-time data encoding
 - Off-line mode on the secure element
- ✧ Point-to-Point security
 - Mutual authentication mechanisms
 - Wireless networks security
- ✧ Alerts/Control
 - Prevent Pharming
 - Log traffic and provide alerts



ICT Governance: a condition for success

- ✘ Technology can deliver pertinent innovations...
... as long as Policies define Citizens' rights and duties in ICT
- ✘ Digital Security advances where facilitated by strong standard bodies and a willingness to design for interoperability

Policies + Standards bodies + Interoperability

=

Increased chances for tangible successes for trustworthy ICT



Gemalto and the Smart Card industry are ready to contribute to a Trustworthy ICT

✧ Proven solutions for Digital Security

- For Telecom
- For Payment
- For eID, ePassport and eGov services
- For Healthcare
- For Mass Transit
- For Enterprise Security

✧ Citizens are already familiar with cards]

- 4.2 Billion secure objects every year
- One of two human already uses smart cards



Conclusions

- ✘ Like Security, Privacy and Trust are not optional for the future of ICT
- ✘ The Trust model is Citizen-centric.
- ✘ Trust is a personal, individual perception. Building Trust is a constant process of measuring the acceptance of proposed innovations.

