

September 15, 2011

Explaining International Leadership: Electronic Identification Systems

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Overview for Today

What is an e-ID?

How are e-IDs being used in other countries?

What can the U.S. learn from early adopters?



"On the Internet, nobody knows you're a dog."

What is an e-ID?

Electronic identification (e-ID) system—a system of technologies and policies that enable individuals to electronically prove their identity or an attribute about their identity to an information system.

What is an e-ID?









(Potential) Benefits of e-ID systems

- **Individuals**
  - Authentication: multi-factor authentication, SSO
  - e-signatures: securely sign legal contracts or enroll in service
  - Enhance privacy and security (e.g. reduce fraud, identity theft, stolen passwords)
- **Businesses**
  - Better interact with consumers
  - Develop new products and services using e-IDs (e.g. sign documents or e-wallet/mobile payments/e-cash)
- **Government**
  - E-government services: better and more secure
  - Sign government documents: enroll in benefits, file taxes, etc.
  - Online voting: securely vote remotely in elections
  - Secure travel document

How are e-IDs being used in other countries?

	High deployment	Low deployment	No deployment
High use	Estonia	Denmark, Sweden, Italy, Spain	n/a
Low use	Austria, Belgium, Malaysia, Slovenia	Finland, Germany, Iceland, Lithuania, Portugal	n/a
No use	n/a	n/a	United States

Table 1: Levels of deployment and use of e-ID systems, select countries

How are e-IDs being used in other countries?

- Austria
  - Initiated: 2001
  - Unique feature: multiple tokens include bank card, health insurance cards, student cards, mobile phone
- Belgium
  - Initiated: 2004, > 9 million BelPIC cards
  - Examples
    - Use e-ID with > 600 e-government services, such as reporting information to police and signing tax returns
    - Use e-ID to purchase admission to sporting event and use as ticket

How are e-IDs being used in other countries?

- Denmark
  - Initiated: 2003 (first proposed in 1992)
  - Unique feature: primarily software-based digital certificates with OTP
  - Primary uses banking, e-government and health care
- Estonia
  - Initiated: 2002, > 1 million
  - Uses: e-banking, sign tax declarations, sign documents, e-voting, access e-services, access wireless networks
- Malaysia
  - Initiated in 1999, MyKad > 19 million
  - Uses: debit card, ATM card, driver's license, travel document, e-cash, e-banking, health care, public transportation

What can the U.S. learn from early adopters?

- Collaborate with all stakeholders
- Support current and emerging technology
- Use government to increase both supply and demand
- Maximize utility for both users and service providers
- Do not eliminate useful information from the information economy
- Strive for disruptive innovation, not just incremental innovation
- Make e-IDs accessible and available to all individuals
- Design an e-ID system for the global economy



Thank you!

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