Current Developments of eID Projects

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Agenda

- Introduction and Motivation
- Survey Outline
- eID Projects
- Conclusion and Outline
Introduction and Motivation
Survey Outline

• Taxonomy based on literature survey

• Applied to
  • eID developments: traditional Federated Identity Management (FIM)
  • SSI developments: government-issued eIDs with SSI

Survey Outline

Challenges in IT (Research) Projects

- Project Management
  - Scope
  - Objective
  - Resources
  - Time/Cost Management
  - Risk Management
  - Requirements
  - Leadership
  - Procurement
  - Quality Management

- Top Management
  - Commitment
  - Champion
  - Business Model
  - Marketing

- Technology Factors
  - Expertise
  - Procurement
  - Legacy Systems
  - Integration
  - Novelty
  - Technical Choice

- Organizational Factors
  - Culture
  - Structure
  - Internal Communication
  - Documentation
  - Learning
  - People
  - Decentralized/Multiculture

- Complexity/Inside View
  - Complex
  - Large
  - Strategic Misinterpretation
  - Cognitive Biases

- Process Factors
  - Conflicting Interests
  - No Project Management
  - Procurement
  - Resource Management
  - Flexibility

- Stakeholder Management
  - Usability
  - User Stories
  - Market
  - Communication and Transparency
  - Open Source Community

- Non-Functional Factors
  - Security
  - Privacy
  - Scalability
  - Legislation
  - Sovereignty
  - Bootstrapping

- Project Specific Factors
  - Trust

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eID Projects - eID
eID Projects - eID

- Scandinavia: Commercial BankIDs widely accepted.
- Baltic States: Electronic services everywhere.
- DACH Region: Reliance on smartcard-based eIDs.
- Southwest Europe: More services with OAuth/OpenID Connect.
- UAE: Unified eID on app.
- Nigeria: Based on national identity number, even on paper slip.
eID Projects - eID

- Kazakhstan: Inspired by Baltic States and Singapore.
- Singapore: Evolved portal.
- Australia: Trusted Digital Identity Framework with different providers after failed attempts.
- U.S.: Driver’s license as eID alternative, some pilots in selected states.
- Brazil: Similar to U.S.
- Peru: Developed by focusing on eIDAS and European eIDs.
Current Developments of eID Projects - SSI

- Claims Issuer:
  - Verifies Identity
  - Signs Claims with Issuer DID
  - Issues Signed Claims

- Claims Holder:
  - Countersigns Claims with User DID
  - Stores Signed Claims
  - Presents Signed Claims

- Claims Verifier:
  - Request Proof
  - Verifies Signed Claims
  - Grants Access

Data flow:

1. Data from IPP to SP
2. Issue Claims from Claims Issuer to Claims Holder
3. Present Claims from Claims Holder to Claims Verifier
4. Request Proof from Claims Verifier to Claims Issuer
5. Verifies Signed Claims from Claims Issuer to Claims Verifier
6. Grants Access from Claims Verifier to SP
eID Projects - SSI
eID Projects - SSI

• Europe: Several initiatives, e.g., showcase program Secure Digital Identities in Germany. Several unsuccessful projects, too.
• Border cases: Sierra Leone, refugees, homeless people, farmers,…
• Busan, South Korea: Regulation-free blockchain zone with B Pass app.
• BC, Canada: OrgBook BC as exemplary service of VON.
• Brazil: Public administration encouraged SSI projects, but no recent information found.
Conclusion

• Use of personal data is strictly regulated by law.
• Once only principle, e.g., by X-Road.
• SSI centered on user.
• With eID more likely with central components, e.g., proxies.
• Design decisions may decrease privacy.
Conclusion and Outlook

● Current and future technologies may help to provide privacy.
● SSI hype may help to deliver privacy-enhanced and usable products.
● Also risks come with the hype.
● In any case, users have to adopt developments - Privacy paradox?

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