Building Trust, Empowering the Digital Economy

eIDAS Trust Services

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Background

Ministry of Economic Affairs and Climate Policy is responsible for the Telecommunications Law

- Political responsible for eIDAS Trust Services, Ministry of Interior and Kingdom Relations is responsible for eIDAS eID
- Currently involved in the eIDAS negotiations
- Member of EU Expert Group
- Member of ETSI
- Working on Large Scale Pilots for the EU Digital Identity Wallet

EIDAS and Trust Services can boost the Digital Single Market by increasing trust and user friendliness
Prehistory

- **Signature Directive 1999/93, introduction of qualified certificate for signatures**
  - National legislation necessary; Wet elektronische handtekeningen (NL, 2002), Signaturgesetz (DE, 2001)
  - No harmonization, no SB cooperation
  - Management system audit, paper check only by SB-NL, SB-NL lack of relevant knowledge

- **PKIO, PKI for government communication**
  - 3 certificate model (CIA), based on ETSI 101456 requirements for CSPs
  - Root (Top CA) managed by the NL Government (“Staat der Nederlanden”)
  - Additional national interoperability requirements with supervision by government
  - Initial focus on B2G, G2B, G2G. First CSPs PinkRoccade, DigiNotar, CIBG, DoD
  - Services certificates (Websites, SSL), based on ETSI 102042 with same assurance level
Asteroid impact

DigiNotar hack in 2011

- man in the middle attack
- 500 false certificates issued
- caused by weak security practices (basic assurance level, PKIO certificates NOT affected)

→ Near complete shutdown of Dutch government traffic
→ DigiNator bankruptcy
DigiNotar resulted in a dramatic and substantial increase of security awareness, legal improvements and organizational measures.
Middle Ages (1)

- Report of the Dutch Safety Board Published in 2013 with a number of recommendations
- New Supervisory Body: Government Inspectorate Digital Infrastructure (RDI) with task of becoming knowledge center on Trust Services
- Ministerial crisis manual and yearly exercise
- Increase organization agility by requiring multiple vendor strategy
Middle Ages (2)

- eIDAS regulation (2014, effective July 1, 2016)
  - Direct effect so national laws obsolete
  - Harmonized requirements
  - Product certification, based on ISO 17065
  - Autonomous responsibility and inspection right for national SBs after conformity assessment by accredited CAB
Middle Ages (3)

- eIDAS regulation (2014, effective July 1, 2016)
  - Introduction of QWACs*
    - In NL QWACs required for Government organizations
  - For DoD Qualified Certificates including QWACs essential for Trust within NATO communication
  - Voluntary not-harmonized recognition of EV certificates (Green bar/lock)
    - Until another asteroid impact in 2018
Modern times (1)

- eIDAS 2 - Trust services (effective somewhere in 2024?!
  - New Trust Services (rQES, Issuing of EAA, eArchiving, eLedgers)
  - Supervision of Trust Services even more strengthened
  - Enhanced governance and cooperation between SBs
  - Force recognition of QWACs by browsers (art 45.2)
Modern times (2)

› Recognition of QWACs by browsers
  – Weapon in the fight against internet fraud
  – Element in building trust in online services and digital economy
  – GDPR requires identification of the controller
  – Public authorities encouraged to use QWACs
  – QWACs required for PSD2
  – QWACs recommended for Relying Parties in the EUDI Wallet ecosystem
Modern times (3)

- Final legal text of article 45 will consist of elements of Commission proposal, Council compromise and EP amendment text
  - User-friendly display
  - No measures taken contrary to obligation to recognize
  - Precautionary measures by browsers in case of substantial and justified concerns
Modern times (4)

› Concerns about consistency and user friendliness of QWAC indication (UI)

› Concerns why high-trust certificates need extra requirements and audits

› Concerns on unilateral decision making for forced reduced life cycle for public and private services certificates (costs, resources, lack of automation) This also frustrates use of QWACs

› Concerns on implementation of two certificate approach with prediction of a new natural disaster
True cooperation is necessary
Future (1)

- Regulating trust instead of free market powers because of geopolitics
- More stress on digital autonomy/sovereignty
- EU looking for partners that comply
- Out of the box approach needed
  - Zoning certificate stores by browsers (cf Public Trust certificates and Private trust certificates, QWACs within PSD2)
  - Adjusted indication QWACs not in certificate store
  - EU representation in CA/Browser Forum as “root program operator” (EDIFB)
  - Taking services certificates like S/MIME outside WebPKI scope