eDriver’s License

The Convergence of Identity in Society and the future role of the Driver’s License

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What is the role of identity in society?

The State issued Driver’s License

- Originally intended as proof of driving competence
- In reality, it is our main form of ID

- Making State Driver’s License jurisdictions the defacto Identity Proofing & Identity Providers for their citizens.
  - States also issue multiple Licenses & Benefit credentials to citizens:
    - e.g. Driving License, WIC, Medicaid, Fishing, CHL, CHIP cards….

- Fraud, identity theft and tampering continues to thrive
U.S. Driver’s License position in the Identity Ecosystem

• UT Center for Identity: Mapping the Identity Ecosystem
Convergence

- A plastic card has many limitations

- Adding a secure electronic chip can do many things:
  - Becomes an electronic document authentication factor
  - Can be read electronically & securely
  - Can minimize the data read by knowledge of reading device
  - Can contain multiple firewalled identifiers for other purposes
What does an ID document need to do for citizens?

- Needs to be able to visually verify the document
  - Electronic Document Authentication is exponentially better (e.g. ePassport)

- Needs to ensure document is in hands of rightful owner
  - Linking the credential by facial photo
  - Have the credential also in the chip (e.g. ePassport)

- Needs to have consent by the holder for its usage and presentation
  - PIN ensures the owner is present and protects the information.

- Needs to verify identity in the online world, too
  - Online Identity authentication is weak (re:NSTIC)
  - Add a digital credential for the citizen
EDL & eDL : Terminology

**EDL**

*Enhanced Drivers License*

- Unique to US Market
- DHS: Contains simple UHF RFID chip with a unique identifier
- Does NOT contain advanced security mechanisms
- For Land/Sea border crossing to/from Canada & Mexico
- Can be read up to 30 feet away by UHF readers

**eDL**

*Electronic Drivers License*

- Global security solution
- Contains a secure microprocessor chip secured by advanced algorithms and encryption (same mechanism for ePassports, eHealthcare, eIDs)
- Enables secure, electronic verification and can be used online
- No battery – inert when not connected. Cannot be read by RF
- Privacy Enhancing with multi-purpose capabilities
State Centric view *

- One proofed identity per person
- Secure eDL/eID document
- Multi-purpose state license
- HHS benefits card
- Enables eGovernment services

* NSTIC Grant to State of Virginia: Driving License Jurisdiction proofing Identity for Citizen Benefits.
Citizen Centric view

One trusted ID to manage

- Can be used for additional State Licenses & Benefits

Chip protected by user PIN

- Privacy enhancing: Protecting their ID usage
- Putting Citizens in control of their ID

An online trusted digital credential

- Protecting citizens’ private online assets
  - e.g. Online banking, etc.
Firewalling the information

Example of an Internal Architecture of an eDL chip

State DMV/DPS

Security Domain 1: State Driver’s License & Identity
- Driver’s License applet
- State Citizen PKI credential applet

Security Domain 2: HHS State Benefits
- HHS Benefit #1 applet
- HHS Benefit #2 applet

Security Domain 3: State Licenses
- State Licenses applet
Driver’s Licenses across the globe

North America
- EDL (optional in some states) with RFID chip used for land border crossing (USA, CAN, MX)
- Barcode / magstripe
- REAL ID – partial adoption
- Modernization and renewal of back-ends

Europe
- All member states to implement PC DL by January 2013
- Chip optional, trend contactless, most likely no fingerprints
- UK & Ireland preparing for eDL

Latin America
- A few eDL projects (El Salvador, Mexico) to improve road safety and reduce fraud

Africa
- Slowly migrating to plastic based ID1
- eDL implemented in Morocco

Asia
- Mostly using laminated paper / PVC
- eDL deployed in India, Indonesia, Japan, and Australia (Queensland)
eDLs in use today
Nuevo Leon, one of México’s provinces, implemented eDL in 2006

- To address problems in document theft, ID theft and fraud
- Used as a main identity document, recognized by banks and other administrations

The Smart eDL enabled additional applications

- Entitles insurance bonuses by storing driving history
- Also blood type is stored in the eDL

Results

- Dramatic impact on road accidents: Fatalities, injuries and DUI* accidents all decreased significantly
- Fines & sanctions applied directly to the driver, not the vehicle
- No fraud cases reported

*Driving Under the Influence of alcohol
Summary

- Chip & PIN is coming to credit cards and debit cards soon (2015)
- The Payment infrastructure will be in place for Chip & PIN and can be adapted to read eDLs
- Adding a chip to a DL has many benefits for citizens and States, including eGovernment (online) Services
- Save money by converging Identity with State programs
- Proven and in use today
- Time to consider eDL in future plans for State Identity convergence.
Thank you

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