Mobile ID
Hype or reality?

Petr Šturc

Disclaimer:
I am an employee of Gemalto, but the opinions expressed here are my own, and no other party necessarily agrees with them.
ČESKÁ REPUBLIKA
OBČANSKÝ PRŮKAZ

PŘÍJMENÍ / SURNAME: ŠTURC
JMÉNO / GIVEN NAMES: PETR

DATUM NAROZENÍ / DATE OF BIRTH: 04.12.1971
MÍSTO NAROZENÍ / PLACE OF BIRTH: TURNOV, okr. SEMILY

ČESKÁ REPUBLIKA

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PLATNOST DO / DATE OF EXPIRY: 18.07.2024

POHLAVÍ / SEX: M

Podpis držitele / Holder's signature: [Signature]
History

Livret d'ouvrier, France (1803)
History
Modern identification document

attributes
carrier

photo - http://commons.wikimedia.org/ (c) Public Domain
Where do we go?
What is mobile ID?
What is it good for?
Convenience

“every time everywhere”
Cost

VS.

photo - https://flic.kr/p/6gYLHR (c) Creative Commons (CC BY-SA 2.0)
New services - contactless control

**Step 1:** Citizen driving car is stopped for road control. Policeman launches verification.

**Step 2:** Citizen accepts verification in the mDL app.

**Step 3:** Verification is done on policeman’s terminal via a wireless communication.
New services - augmented privacy

**Step 1:** Controller initiates verification by specifying type of control

VERIFICATION_TYPE = AGE_CONTROL

**Step 2:** Citizen is in control of shared attributes

Request to verify: Legal age

Touch to confirm

**Step 3:** Shared attribute is displayed on policeman’s terminal

Privacy by implementation not privacy by design!!
New services

- Authentication
- Digital signature
- Attribute sharing
- Attribute update
- Documents renewal
- Lifecycle notification
- Revocation
- ...

something “online”
“...borrowed ID has accounted for between 85% and 97% of all illegal ID use”

- “Law Enforcement Guide to False Identification and Illegal ID Use”, by U.S. Department of Justice
Which year are we talking about?
Iowans will soon be able to use a mobile app on their smartphones as their official driver's license issued by the Iowa Department of Transportation.

The app, which will be provided to drivers at no additional cost, will be available sometime in 2015, DOT Director Paul Trombino told Gov. Terry Branstad during a state agency budget hearing Monday.

"We are really moving forward on this," Trombino said. "The way things are going, we may be the first in the nation."

People will still be able to stick a traditional plastic driver's license in their wallet or purse if they choose, Trombino said. But the new digital license, which he described as "an identity vault app," will be accepted by Iowa law enforcement officers during traffic stops and by security officers screening travelers at Iowa's airports, he said.

"It is basically your license on your phone," he said.

Delaware may adopt digital driver’s licenses

Everett Rosenfeld | @Ev_Rosenfeld
Wednesday, 28 Jan 2015 | 12:53 PM ET

Delaware is aiming to be the first state to offer virtual driver’s licenses accessed through a secure smartphone app.

As consumers use their smartphones for payments and more, Delaware is considering allowing digital driver’s licenses.

http://www.cnbc.com/id/102376544
Your driver’s license could be on your phone if a California legislator gets his way

By Gregory J. Wilcox, Los Angeles Daily News

There might come a day when a cop asks to see your driver’s license, and you simply whip out your cell phone and activate an app.

San Fernando Valley Assemblyman Matt Dababneh (D-Encino) this week introduced AB 221, legislation that would let the Department of Motor Vehicles develop a mobile application for a digital driver’s license, which would be accessed via smartphone.

“California has always been at the forefront of digital innovation and last year passed legislation allowing individuals to access their automobile insurance on their smartphones,” Dababneh said in a statement.

“What my bill will do is not replace traditional licenses,” he added when contacted by phone. “It will supplement options for people who want to have a traditional ID. We’ll give people the option when they’re out and need to prove their age, who they are maybe at a security checkpoint, to use it in online commerce. It can be used as a backup in case you lose your license.”
“... we wish to make step beyond the smartcard ...”
14.3 NEID ON MOBILE PHONES
A NeID implementation using mobile phones as carriers for NeID may become relevant within the timeframe of the contract. Such a NeID could be at assurance level “high” according to eIDAS or at lower assurance levels.
ISO TC1/SC17
work item proposal

Proposal (to be completed by the proposer)

Title of the proposed deliverable.
(in the case of an amendment, revision or a new part of an existing document, show the reference number and current title)

English title
ISO/TEC 18013-x: Information Technology — Personal Identification — ISO Compliant Driving Licence — Part x: Mobile Driving Licence Application

French title
ISO/TEC 18013-x: Technologies de l’information — Identification des personnes — Permis de conduire conforme à l’ISO — Partie x: Application Permis de conduire sur téléphone Mobile
Mom, is it safe?
Counterfeit

How to take screenshots on Android
1st line verification

**Step 1:** Citizen starts mDL app and show it to controller

**Step 2:** Controller visually inspects
moving elements

interactive elements

“3D” images

visual one-time codes
Skimming and eavesdropping

BAD GUY INSIDE
Trusted Execution Environment (TEE)
It is just the signature what matters, right?
Who is who?

pixelization  explosion
Is it the same person?

Human biometric performance

20% of false negatives at 5% of false positives


Figure 5
Unfamiliar face recognition accuracy (live face to passport photo) for Australian passport office staff, as a function of employment duration (White et al., 2014).

1 ½ factor authn !!!!

1 x something you have

½ x something you are

photo - http://commons.wikimedia.org/ (c) Public Domain
Identity harvesting

Powered by Biometrics

Best match

Mr. Guy Méchant
What should you take away?
Conjecture

1) Mobile ID is here
2) What it really means is dematerialization of ID
3) Biometry isn’t a panacea
4) Security implications shall not to be underestimated
Thank you

petr.sturc@gemalto.com