Designing and Implementing a "Mobile European Student Card"

EU funded Project StudIES+
1. The “Mobile ID” ecosystem

2. The StudIES+ Approach: Secondary ID
   • Issuance
   • Usage
   • Attributes
   • Trust Model

3. Alternative Approaches
   • The ESMO Project
   • The ESC Project

4. Design Study “Student ID Card”
The “Mobile ID” ecosystem

Two basic use cases: (1) local identification (peer-to-peer)

User verification via visual comparison

Mobile-ID-App

Verifier-App

Name
Given Name
Address
Age
The “Mobile ID” ecosystem

Two basic use cases: (2) online identification

User verification via smartphone (PIN, Finger, Face)
The "Mobile ID" ecosystem

Dimensions of "Mobile ID"

- **Source**
  - Local identification
  - Online identification
  - Trust Model

- **Usage**
  - Governmental,
  - Finance-
  - Healthcare-
  - Telecom-
  - Higher Education
  - Public,
  - Private Sector

- **Life-cycle**
  - Personalization
  - Renewal
  - Revocation
  - Porting
  - Storage Local/Cloud

- **Security**
  - HW-Secure Elements
  - SW-based and
  - Server-based Security

Source

Life-cycle

ID-Data

Usage

Security
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The StudIES+ Approach: Secondary ID – Issuance Use Case

Member State A
(e.g. Erasmus Student)

Primary ID

Secondary ID

Student-ID-App

Member State B
(e.g. Guest University)

Identification

Validation / Registration

Internet

Merchant State A

(e.g. Erasmus Student)

eIDAS Network (Internet)

Issuer State B

(e.g. Guest University)

Identification

Validation / Registration

Internet
The StudIES+ Approach: Secondary ID – Online Use Case

Member State A
(e.g. Erasmus Student)

Student-ID-App
Online Service
Secondary ID

Internet

Member State „any“
(e.g. any online service)

Identification
Online Service
Acceptance
The StudIES+ Approach: Secondary ID – Local Use Case

Member State "any"
(e.g. Library at University)

Secondary ID
- NFC
- Identification
- Service

Student-ID-App

Member State "any"
(e.g. Library at University)
The StudIES+ Aproach: Secondary ID – Attribute management

**Primary ID**
(get Attributes from eIDAS-Network)

**Minimum Data Set (MDS):**
- Family Name
- First Name
- Date of Birth
- Person Identifier

**Optional Data Set**
- First Name at Birth
- Family Name at Birth
- Place of Birth
- Current Address
- Gender

**Implicitly known attributes**
- Nationality
- ID-Document

**Secondary ID**
(put Attributes onto “Student ID Card”)

**Source eIDAS:**
- Family Name
- First Name
- Date of Birth

**Source HEI-DB:**
- Student Number (ESCN)
- Course of study
- Degree program

**Source Self-enrolled:**
- Portrait Image
- Local Address

**Other, e.g.**
Public Transport data (Images, 2D Barcode)
The StudIES+ Approach: Secondary ID – Trust Model

Trust via recognition of Root-Certificates in the domain of higher education (e.g. PKD, Trust Lists)
<table>
<thead>
<tr>
<th></th>
<th>The StudIES+ Aproach: Summary</th>
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<tbody>
<tr>
<td>1.</td>
<td>Attributes are <strong>locally stored</strong> on the mobile device as Secondary ID via <strong>issuing service</strong> of HEI.</td>
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<tr>
<td>2.</td>
<td><strong>No Identity Provider</strong> at HEI required for online and local identification.</td>
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<td>3.</td>
<td><strong>Authenticity of attributes</strong> is achieved by X.509 Certificates</td>
</tr>
<tr>
<td>4.</td>
<td><strong>Authenticity of Online Service</strong> is achieved by X.509 Certificates</td>
</tr>
<tr>
<td>5.</td>
<td><strong>Trust Model</strong> relies on <strong>bilateral recognition of RootCA certificates</strong> in the domain of higher education.</td>
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</tbody>
</table>
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4. Design Study "Student ID Card"
Alternative Approaches – ESMO Project*

* www.ESMO-project.eu

Approach:
always use primary ID with additional attributes for Online Identification

Diagram:
- National eID-Scheme
- eIDAS Network
- Domain specific attributes
Alternative Approaches – ESC Project*

**Approach:** Validate ESCN against central registry for local Identification

Source: Jean-Paul Roumegas, Centre national des œuvres universitaires et scolaires, France, Project Manager ESC.

* http://europeanstudentcard.eu/
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4. Design Study “Student ID Card”
Example – App Design

Design Study of “Student ID Card”
Identify at University Online Service “eExam” to view exam results
Example – “Local Identification”

**StudIES+**

**Identify at University local Service** “Library”

to lend books and media
Example – “Issuance”

Congratulations!

From now on you can use your mobile FU Campuscard within the Student ID Card App. These services support the App:

Online
- Borrow books at the FU library
- Enrolment
- E-Exam
- Check your grades
- Top up mensa card

Offline
- Canteen
- Library
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Vielen Dank.

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