STORK 2.0 project results: Exploring Pan-European eID interoperability frontiers

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The project
The pilot
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Overview

EC co-founded
Large Scale Pilot

3 year project
(2012 - 2015)

19 countries involved

58 partners

4 pilots
Enable interoperability of the identification of natural and legal persons and other sector identification.

Explore possible ways to address a federated & trustworthy framework for cross-border eID services at European level.

Build the basis for a future widespread use of eID solutions across borders, contributing to Europe’s leadership role of the eID market.

Facilitate digital living & mobility in the EU, envisioning eID as a Service Offering, with a strong commitment to open specifications and long-term sustainability.
All MS have their own eID infrastructure
Borders will open & National online services will improve.

Opportunities for public and private sector
The project

The pilot

Achievements

Learning

Sustainability

Conclusions
eAcademia Pilot

• **15 partners from 11 Countries**

  - Czech Republic
  - Greece
  - Iceland
  - Italy
  - Lithuania
  - Portugal
  - Slovenia
  - Spain
  - Sweden
  - Turkey
  - UK

• **24 services, 12 attribute providers**
Pilot Objectives

- **Transcend national boundaries** in higher education e-learning systems and support services.

- Provide student records as **academic attributes** from universities.

- Involve **private sector and other public services** in the use of academic information.

- Support **take-up of eID**

- Help achieve a **critical mass of users** for STORK v2.0.
Pilot Services

Academic Qualifications

Trusted Attribute Display Service
Facilitate the attribute sharing to third parties.

Job qualification Service:
Allow the verification of academic records required for a job position.

Job selection Service
Ease job selection by pre-filtering applicants through their academic status.

e-Learning

eLearning service
Shared virtual learning environment which enables course teaching and content sharing between institutions.

eSurvey Service
Cross-border, authenticated and anonymous surveys with attribute roles based population selection.
Current Achieved Status

Planned Services

- In production: 17
- In pre-production: 3
- Delayed: 4
Current Achieved Status

Planned Attribute Providers

- In production: 9
- In pre-production: 1
- Delayed: 3
Achievements

- Cross-border interoperability of services and Attribute Providers.
  - Complex sets of data exchanged.
  - Several APs accessed in a single process.
  - Multiple learning environments accessed *without individual enrolment*.
  - Restricted population surveys launched openly with *guaranteed single participation*.
  - Job offer posting for international students with *automated application requirements*.
Achievements

• Development of an academic attribute profile
  – Models academia world roles and student data.
  – Supports other educational institution’s needs.
  – Exchange of diplomas following EDS rules
    • Using Spanish CRUE XML definition
Achievements

• Authentication on behalf.
  
  – Job offers are posted in the name of a legal entity.
  
  – The poster is a physical person, a representative.
  
  – **Management of powers is centralised** at the Business Register, not per application or institution.

• Design of an **anonymity network** (onion routing, delayed delivery).
Achievements

• Extension of the Quality Assurance Authentication Model for Attributes (AQAA)
  
  – Additional to the quality of the authentication at the IdP (QAA).
  
  – Establishes a reliability for the attribute based on:
    
    • The quality of the source of the attribute.
    
    • The quality of the attribute provider.
    
    • The validity of the link between the eID and the data.
  
  – Allows the coexistence of critical services with less demanding ones.
Achievements

• Results of the pilot can contribute to the building of the EHEA by

  – Allowing students to share VLE among European universities (eLearning)
  – Providing tools for research and feedback collection (eSurvey).
  – Facilitating administrative tasks for the mobility of students and graduates (TADS / Job Qualification)
  – Improving the mechanisms for job placement of graduates and relationship with private sector (Job Selection).
Barriers & Difficulties

Organizational

- Number of partners
- Complexity and constraints
- Limited number of potential users (eIDs linked to APs)
- Job qualification validation third parties
- Legal issues with non-EU partners

Technical

- Infrastructure delays
- Low user acceptance of eID
- Late anonymity infrastructure support
Identified Benefits

End user

- Easier student and staff mobility.
- Remote trusted formalities.
- Easier job market insertion.
- Easier access to academic records.

Service Provider

- Wider potential audience for services
- Service offering to population groups by role
- Reliable acquisition of user data
- Reduction of administrative burden
- Potential for new services.
Main Lessons Learnt

- **Chicken and egg situation**: need users to attract services and services to attract users.

- **Knowledge gap on average user**.

- **Need for semantic interoperability** in academia data sets, for automated processing.
Short & mid-term Sustainability

• Majority of **partners committed to keep services running** after pilot ends.

• **Business model**: pricing or mutual benefit?

• **Connection with NREN federations** and eduGAIN: mutual benefit
  – Increment of users and available services.
  – Stronger and more reliable user authentication.
  – Access to academic data
Convergence with GÉANT

- **Initiative:**
  - GÉANT issued a formal proposal to study connection with STORK.
  - STORK2.0 partners (University of Murcia, University of the Aegean) involved in the design and testing of a solution.

- **Achievements:**
  - Built isolated test environment with two STORK and eduGAIN federations.
  - STORK Identity can use an eduGAIN SP.

- **Upcoming:**
  - eduGAIN Identity accessing a STORK SP.
Long-term Sustainability

• In the framework of the **eIDAS** regulation.

• STORK infrastructure already maintained by **ISA**.

• Planned merge of STORK 2.0 code with STORK code already maintained by **DIGIT**.

• STORK is a planned building block of the **CEF e-ID solution**. Budget for PEPS maintenance and future deployment in other MS.

• Adoption and promotion of standards.
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Main Conclusions

- **Satisfactory results** expected.
- Great **potential applications** for private and public sector.
- Opens path for a future effective and full-scale cross-border service connection.
- **Standardization needs** (protocols and data sets).
- Need for a coordinated **policy to encourage adoption** (beyond the support of infrastructure).
Welcome to the eLearning and Academic Qualifications Pilot

Facilitating cross-border academic services

The pilot will build upon the outcomes of the STORK project in order to provide a set of academic services that can be used by citizens, government and companies. These cross-border academic services, involving the exchange of identity attributes, will facilitate the use of academic information by users, government and private organizations, while also attempting to demonstrate the possibility of integrating other existing services concerned with the verification of certificates acquired in training courses other than those given by the Academia.

The role played by academic institutions in STORK 2.0 will be improved by adding the capability to provide identity attributes (API). Yet, the stakeholders involved will not be limited to the academic world, but will also include legal entities from the private sector that will be able to access academic attributes that are of value to them to accomplish their goals.

Service: eLearning

https://www.eid-stork2.eu/pilots/elearning/
Service demonstration

• Example applications:
  – Jaume I University VLE
  – Institut Jozef Stefan Job Selection
  – University Aegean eSurvey
  – University of Murcia TADS
Service demonstration

Stockholm University (Sweden)
Swedish citizen logs in to foreign
Service Providers

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Thank you for your attention!

www.eid-stork2.eu