

Czech Technical University in Prague
Central Library & Computing and
Information Centre

Věra PILECKÁ, Helena KOVÁŘÍKOVÁ,
Lenka NĚMEČKOVÁ, Marta MACHYTKOVÁ,
Ivo PRAJER, Petr KAREL

UNIVERSITY INSTITUTIONAL REPOSITORY AND ITS PLACE IN THE UNIVERSITY INFORMATION INFRASTRUCTURE

Outline

- CTU and its repository
- Place of the repository within university information system
 - technical and process solution of the interconnection of the repository with subsystems of the university IS
 - design of the optimized data flow and data management between the components
- Assessing the solution's benefits

Our background

- Czech Technical University in Prague (CTU)
 - the biggest and oldest technical university in the Czech Republic (since 1707)
 - 8 faculties, 5 specialized institutes
 - 28,000 active users in university system (22,000 students / 2,200 academic staff / 3,800 other staff)
- University repository
 - DSpace platform (open source solution, most common in CZ – large user community)
 - current version: 1.7 with Manakin user interface

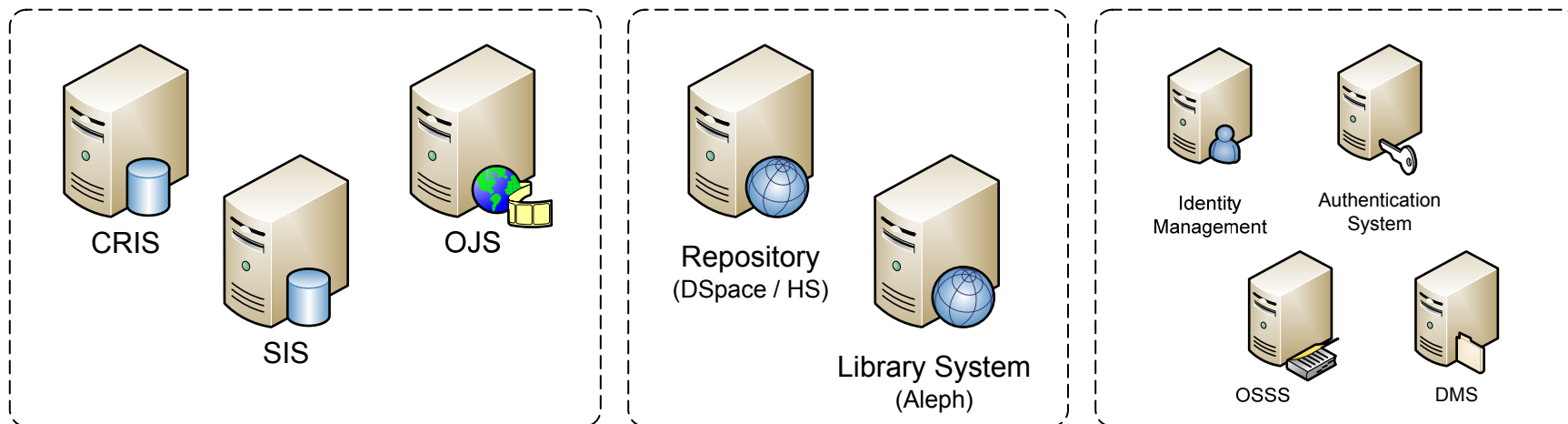
Phases of repository implementation

- 1st phase (“beginnings”)
 - legislative change regarding ETDs → repository launch in 2008 (DSpace 1.4)
 - workflow for ETDs (SIS to DSpace)
 - re-use of data from SIS, automated loading of university organizational structure (OSSS)
- 2nd phase (“foreseeing future”)
 - 2010 – workflow for research outputs (CRIS to DSpace)
 - current trends; connection to international infrastructures
 - 2014 – university demands the solution for research outputs (conditions of Horizon 2020) → we are ready
- 3rd phase (“adding value”)
 - 2013 – Open Journal Systems for university research journals (pilot with Acta Polytechnica)
 - assigning DOI to university publications (library as a coordinator)

Subsystems of the university information system involved

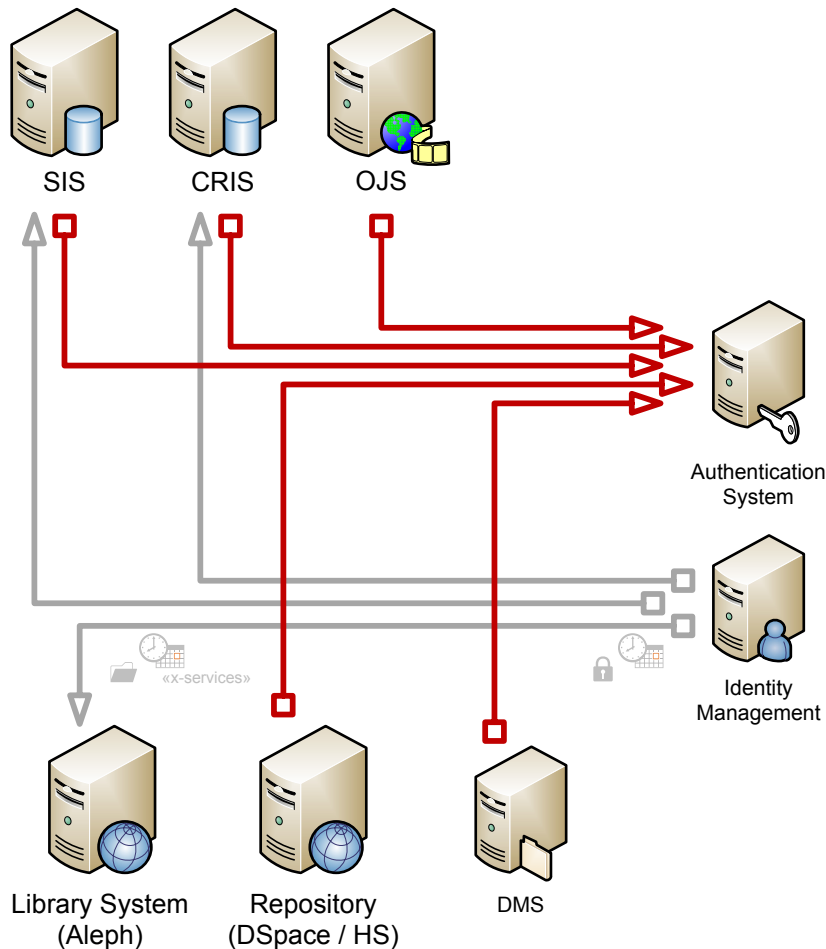
- Source systems
 - CRIS (Current Research IS): research outputs
 - SIS (Study Information System): Electronic Theses and Dissertations
 - OJS (Open Journal Systems): university journals / conference proceedings
- Supporting systems
 - AAI (Authentication and Authorization Infrastructure)
 - OSSS (Organizational Structure Source System)
 - DMS (Document Management System)
- Main target systems
 - Repository (DSpace; records and full texts from various subsystems)
 - Library System (Aleph; library entities' records, incl. ETDs' records, users' records)

Overview of main subsystems



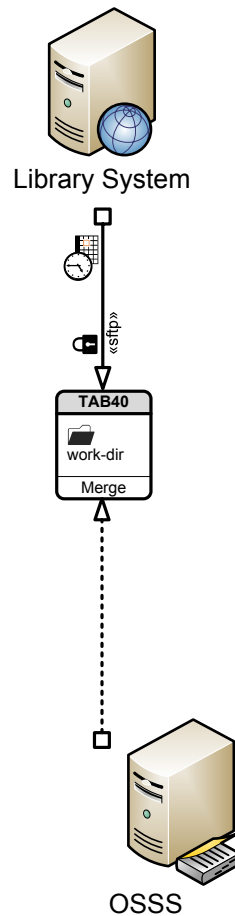
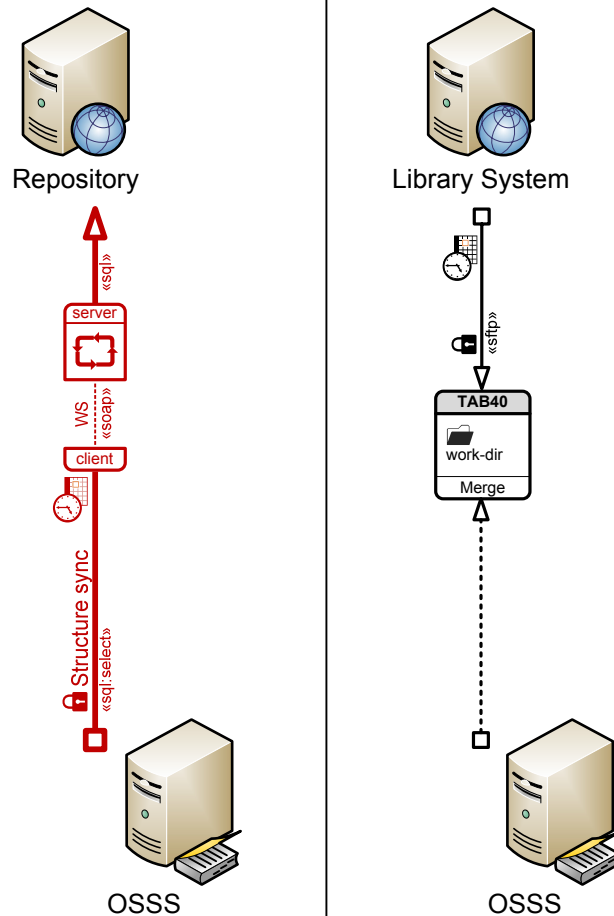
- **Source systems** – CRIS (Current Research IS): research outputs, SIS (Study Information System): Electronic Theses and Dissertations, OJS (Open Journal Systems): university journals / conference proceedings
- **Supporting systems** – AAI (Authentication and Authorization Infrastructure), OSSS (Organizational Structure Source System); DMS (Document Management System)
- **Main target systems** – Repository (DSpace; records and full texts from various subsystems), Library System (Aleph; library entities' records, incl. ETDs' records, users' records)

Identity management & Authentication



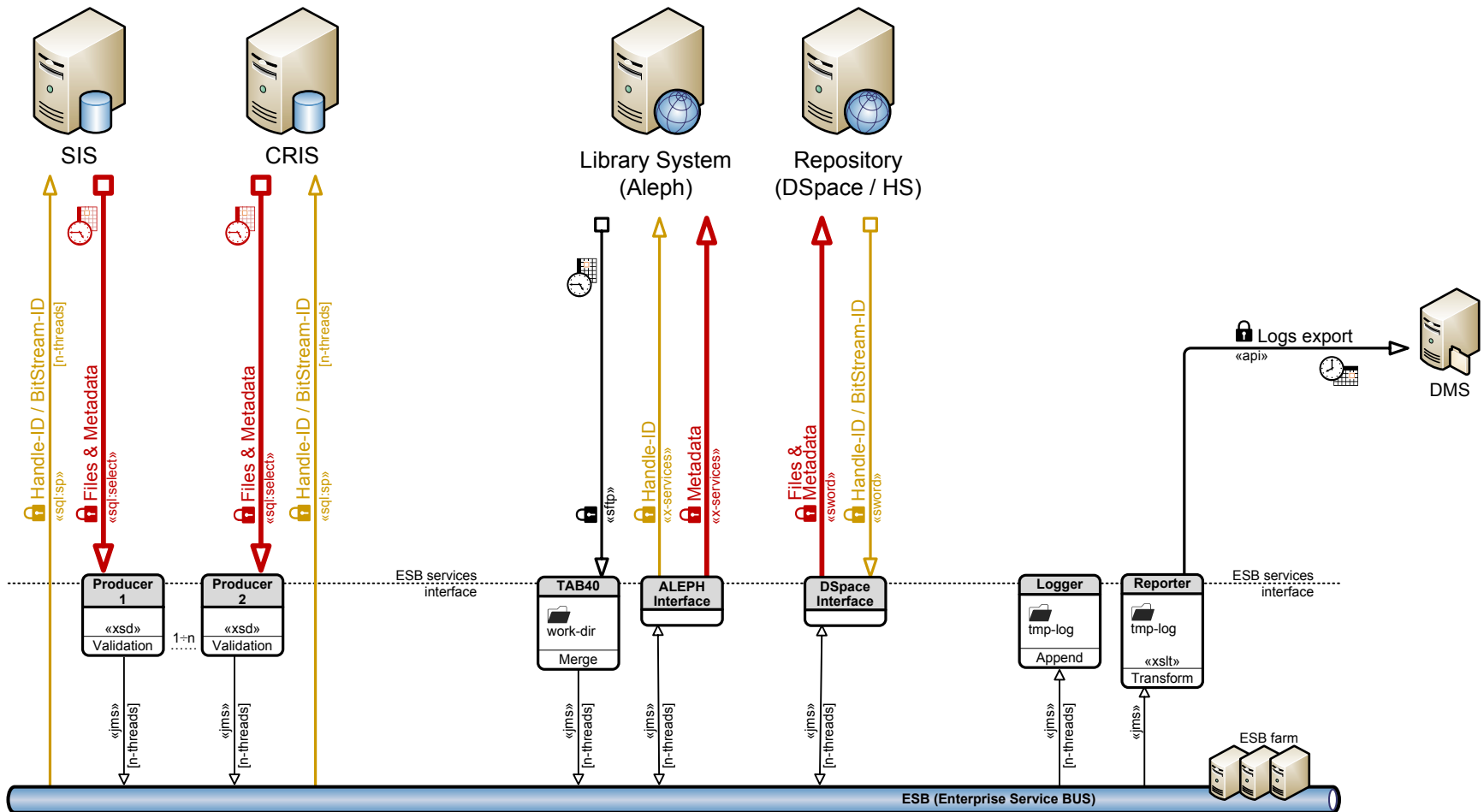
- Support unified
 - Identity management
 - Identification and authentication
- User identifiers
 - Personal number
 - UID

Organizational structure synchronizing

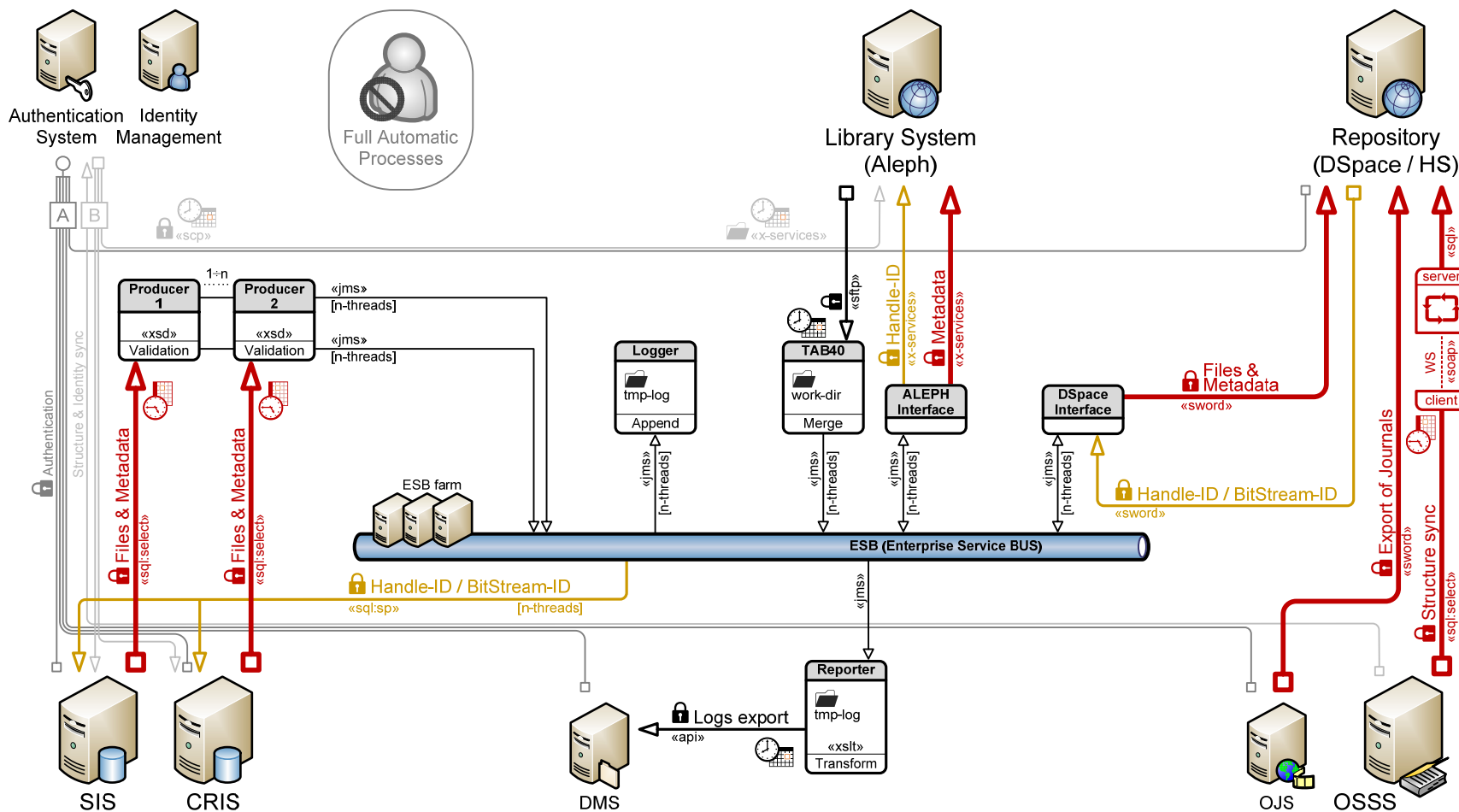


- Source – OSSS
- Automatic transfer to
 - Repository
 - Library system
- Problems with mapping
 - Deleting department
 - Splitting and joining of department

SIS & CRIS details



Summary of the whole solution



Final assessment and benefits of the solution

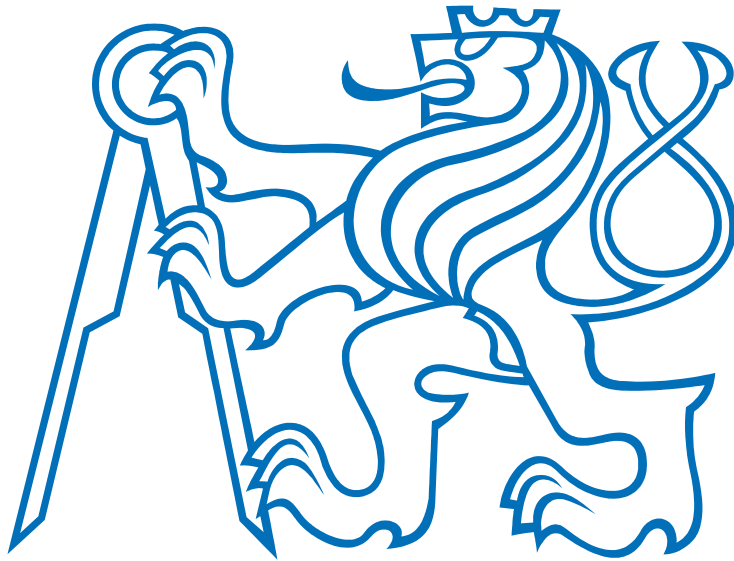
- Data reuse
 - student / researcher works with a familiar environment
 - data is inserted only once
- Automation of processes
 - e.g. automatically managed repository structure
- On-line solution
 - supporting manual, scheduled, full event data entry
- Scalability
- Expandability
 - simple connection / inclusion of another system

Current state & perspectives

- New RESTfull API of DSpace
 - Based on DSpace system RESTfull (Jersey)
 - Full writing operation (community, collection, items, bitstreams)
- Incremental update of organizational structure through ESB
- OJS change export mechanism similar to SIS/CRIS

Practical example

- Organizational structure synchronization
 - Example of full synchronization from scratch
 - Remote execution on university servers
- Steps
 - Pure installation of DSpace 4.0 (community-list)
 - Example of full synchronization (remote cmd)
 - Check the results (community-list)



QUESTIONS?

Věra PILECKÁ
vera.pilecka@uk.cvut.cz

**THANK YOU FOR YOUR
ATTENTION!**