Distributed Digital Library Architecture for Business Solutions

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Digital Library for Business Solutions

- Designed to:
  - store,
  - manage,
  - browse,
  - search
  - access

  large sets of various digital resources
- Scalable and distributed
- Commercial and free systems

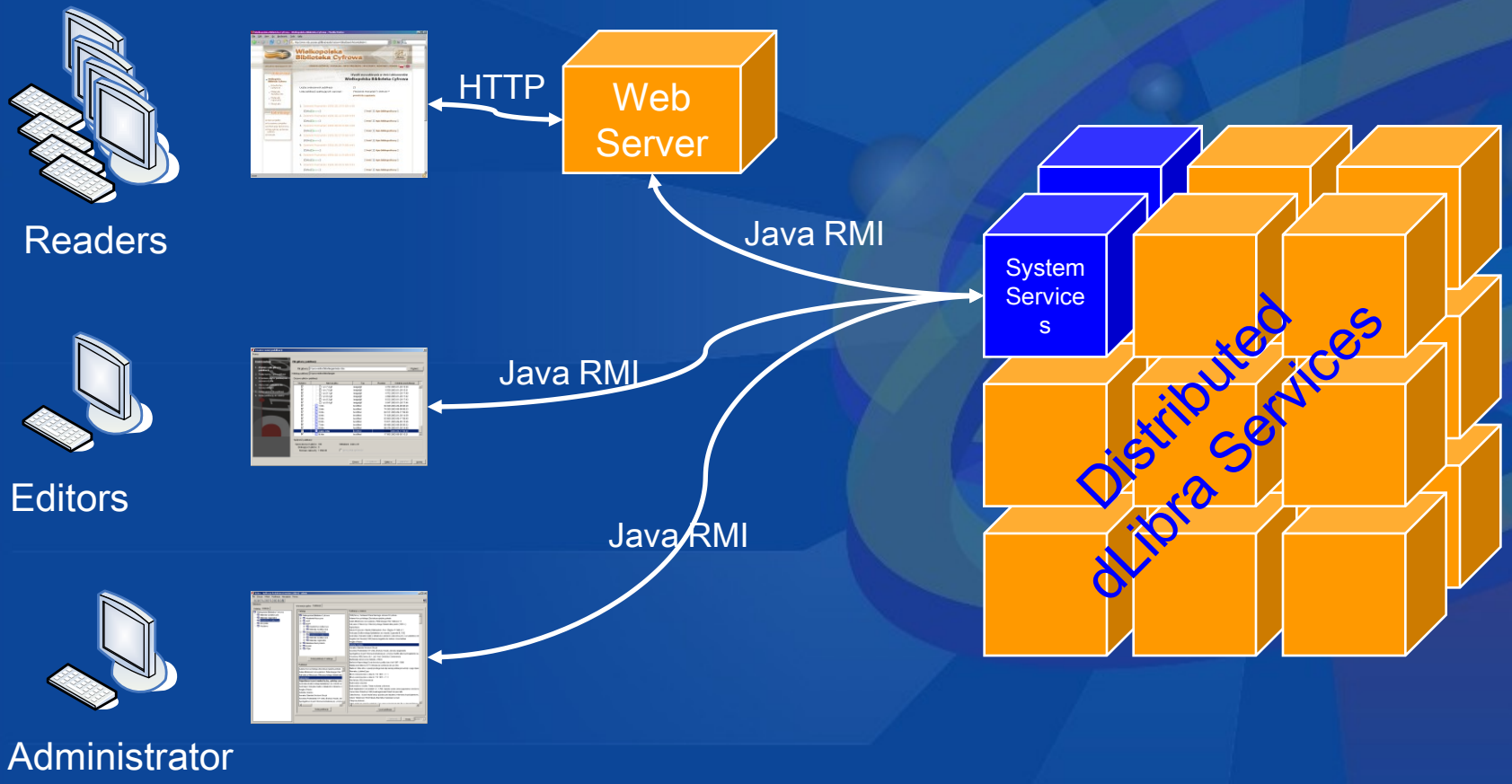
What is dLibra?

- First Polish digital library framework
- Developed in PSNC since 1999
- Now deployed in
  - Wielkopolska Digital Library (10.2002)
  - Wroclaw University of Technology Digital Library (11.2004)
  - Five other test installations in different Polish universities

dLibra Features

- Multitier, distributed and portable DL platform
- Support for multiple content types
- Hierarchic collections
- Resources versioning
- Advanced support for resources' metadata
- Multiple searching mechanism
- Extended access management

dLibra Architecture



Distributed dLibra Services

- Each service can be deployed on different host
- Services does not need to know their locations
- Services communicate through events and System Services server

Distributed dLibra Services

- Metadata server
  - for storing and managing resources metadata and metadata dictionaries
  - for managing collections
- Content server
  - for storing and managing content

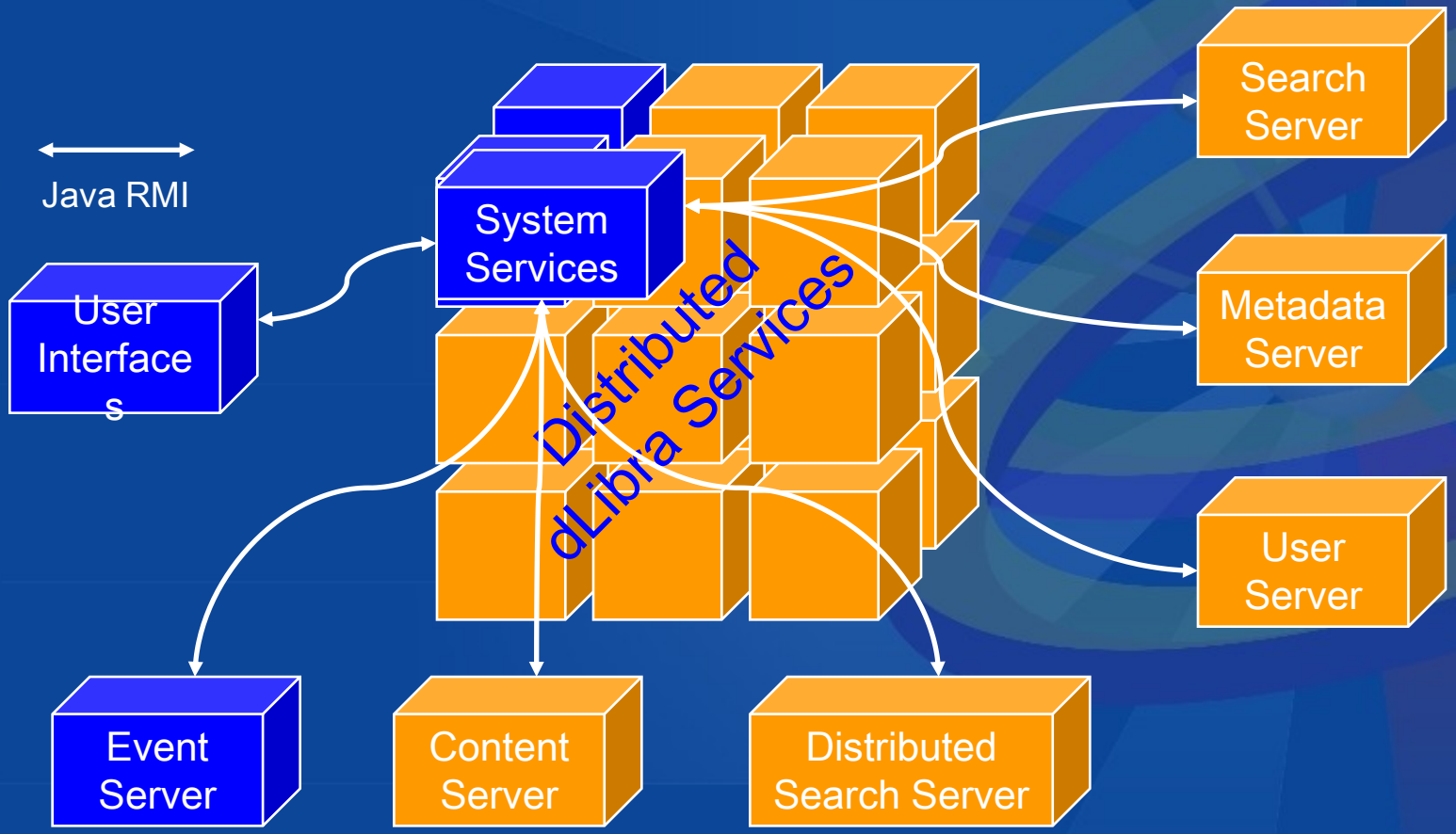
Distributed dLibra Services

- User server
  - for managing users and access rights
- Search server
  - for indexing and searching content and metadata
- Distributed search server
  - for indexing and searching multiple remote repositories

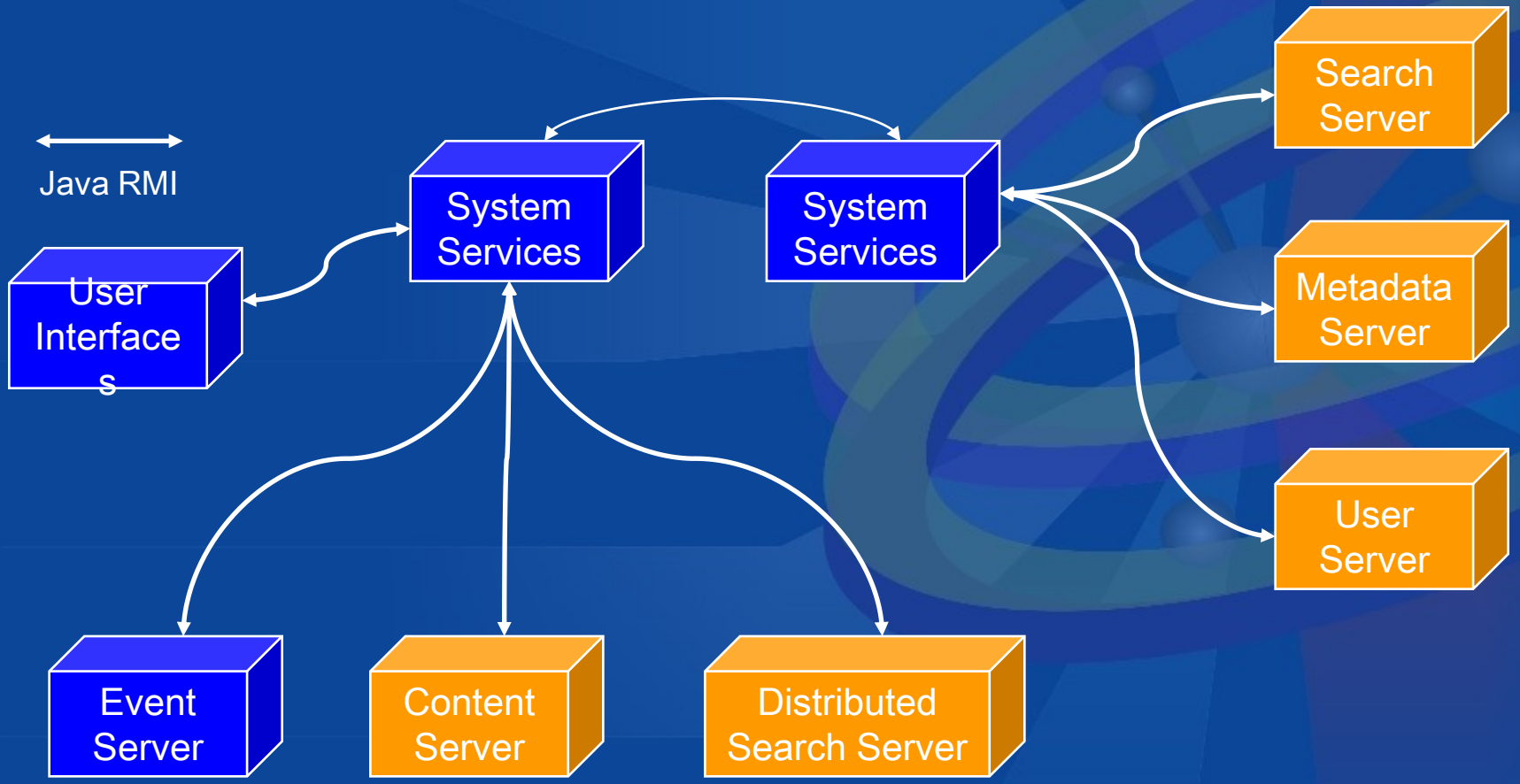
Distributed dLibra Services

- System services
  - for services registering and resolving
- Event server
  - for sending and receiving events from other services

Distributed Services Architecture



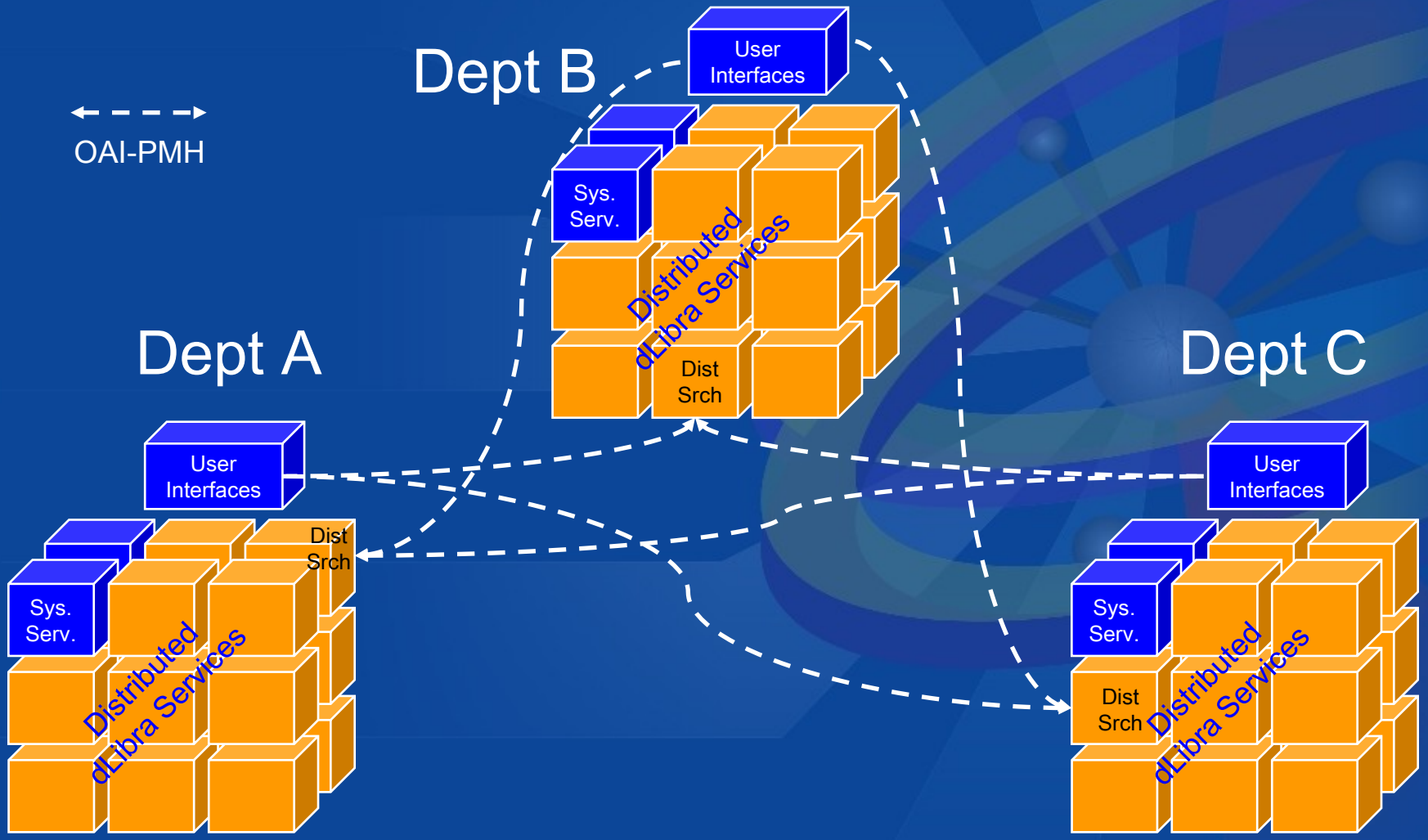
Distributed Services Architecture



dLibra in SME

- Example scenario
  - Company with several branches
  - Each branch in different location
  - Each branch has its own documents repository
  - Branch employees can modify content of this branch repository
  - Other employees can search and access repository content (if authorized)

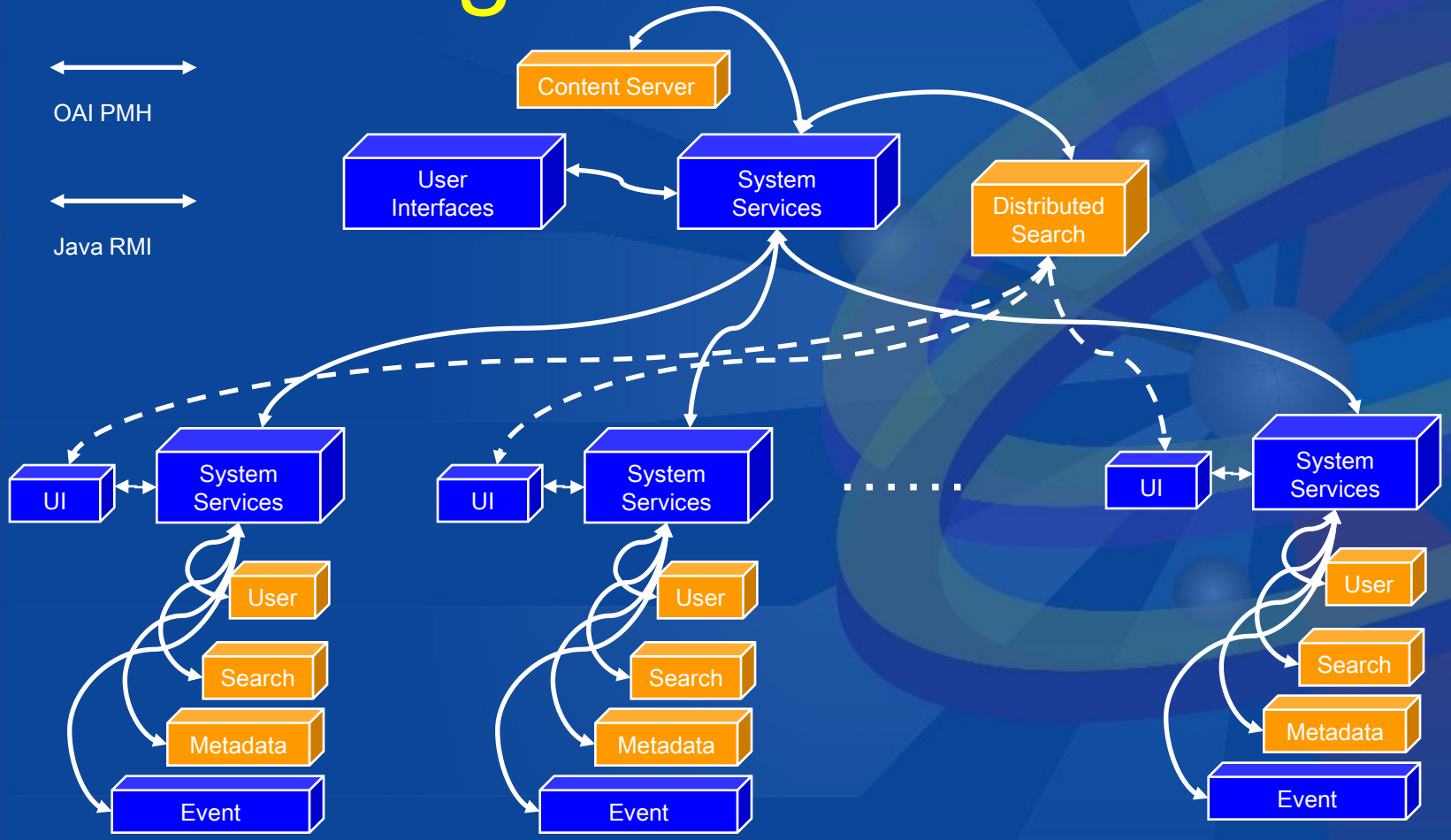
dLibra in SME



Large Scale Solution

- Example scenario
  - Company with several branches
  - Each branch in different location
  - Each branch has its own documents repository
  - Branch employees can modify content of this branch repository
  - Other employees can search and access repository content (if authorized)
  - Company uses repository to store large video files

Large Scale Solution



Future works

- Improve backup services mechanism
- Add load balancing capabilities
- Add Single-Sign-On and advanced LDAP support
- Evaluate scalability possibilities, potential bottlenecks etc.

Distributed Digital Library Architecture for Business Solutions

http://dlibra.psnc.pl/

Thank you for your attention