Canadian Metadata Forum

Ottawa - September 19-20 , 2003

Implementing e-Learning Standards in Explor@ and eduSource

by
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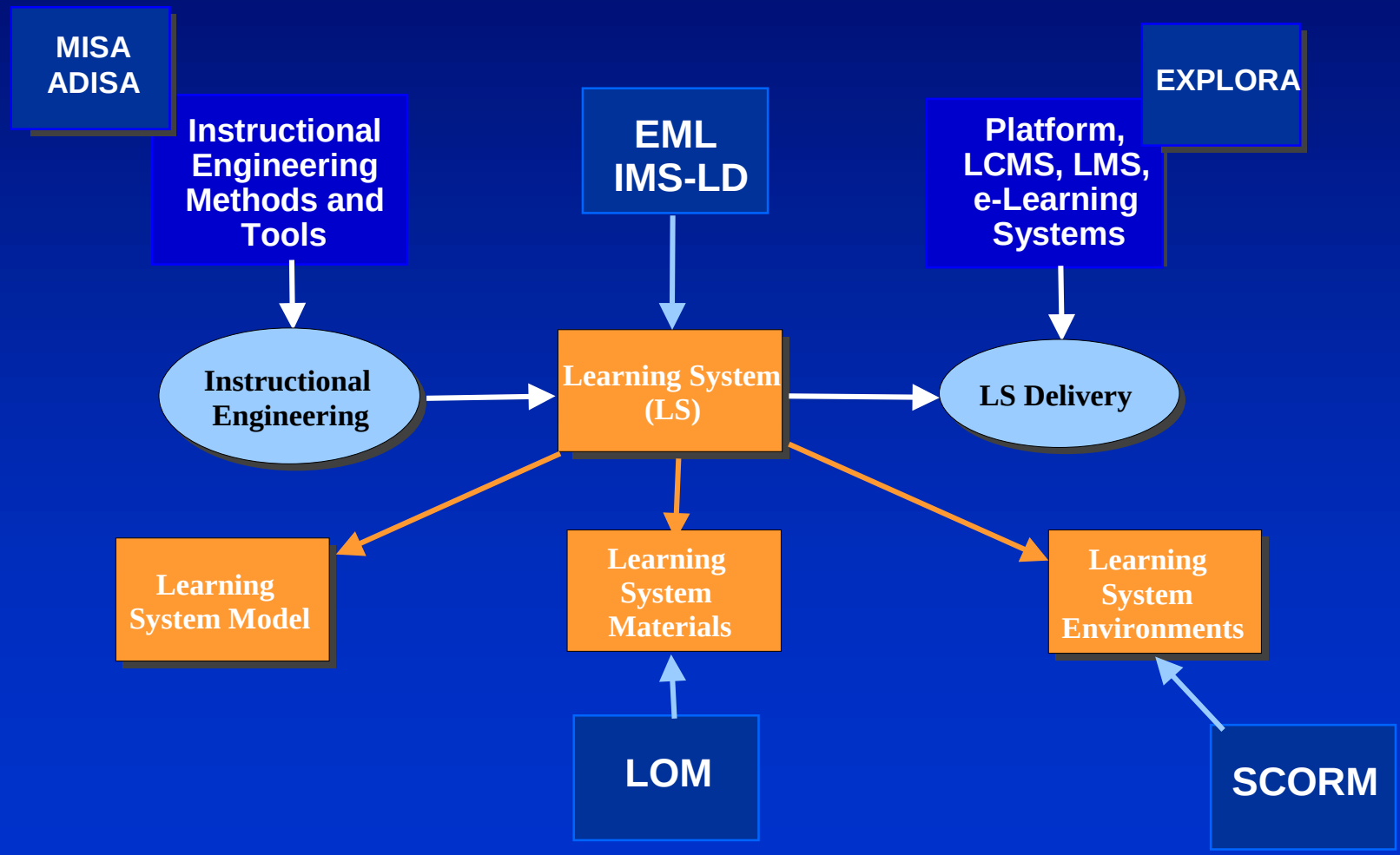
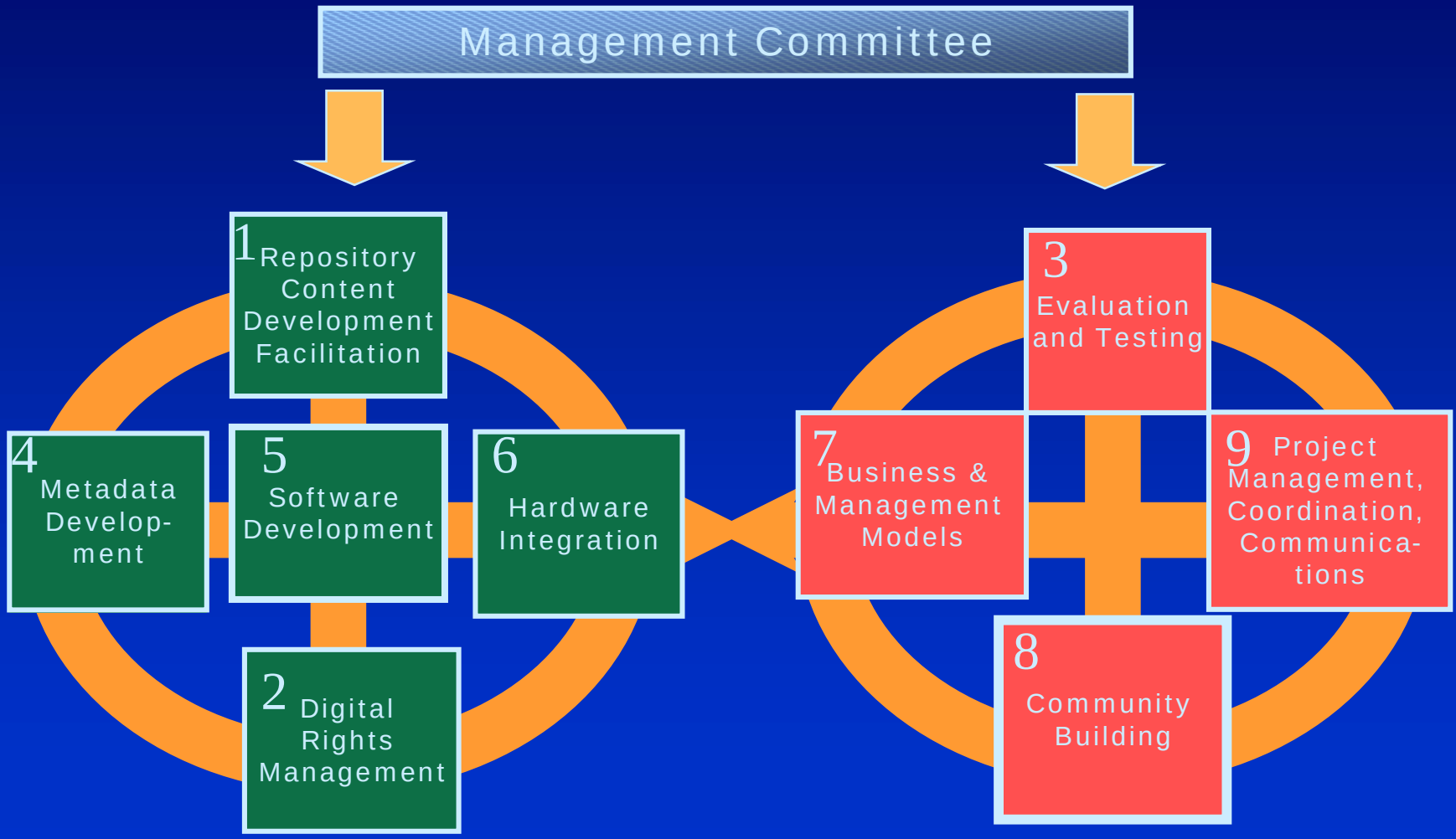
Road Map

- Organizations
  - 1972 TELUQ–Québec's Distance University
  - 1984 Canal Savoir – Broadcasting Consortium
  - 1992 LICEF – TELUQ's Research Centre
  - 1999 Cogigraph – Transfer Company of LICEF
  - 2000 CIRTA – LICEF Based Research Network
- R&D Projects
  - 1992-1995 AGD and Telecom multimédia
  - 1995-1998 HyperGuide. TL-NCE, Advisor Systems
  - 1999-2001 Explor@-1 and ADISA
  - 2001-2003 SavoirNet and Explor@-2
  - 2002-2004 eduSource Canada
  - 2003-2008 LORNET – NSERC Research Network
- Main Focus on Instructional Engineering
- Tech Transfert to Universities and Organizations

Positioning our Work



eduSource Deliverables



Exciting Megatrends

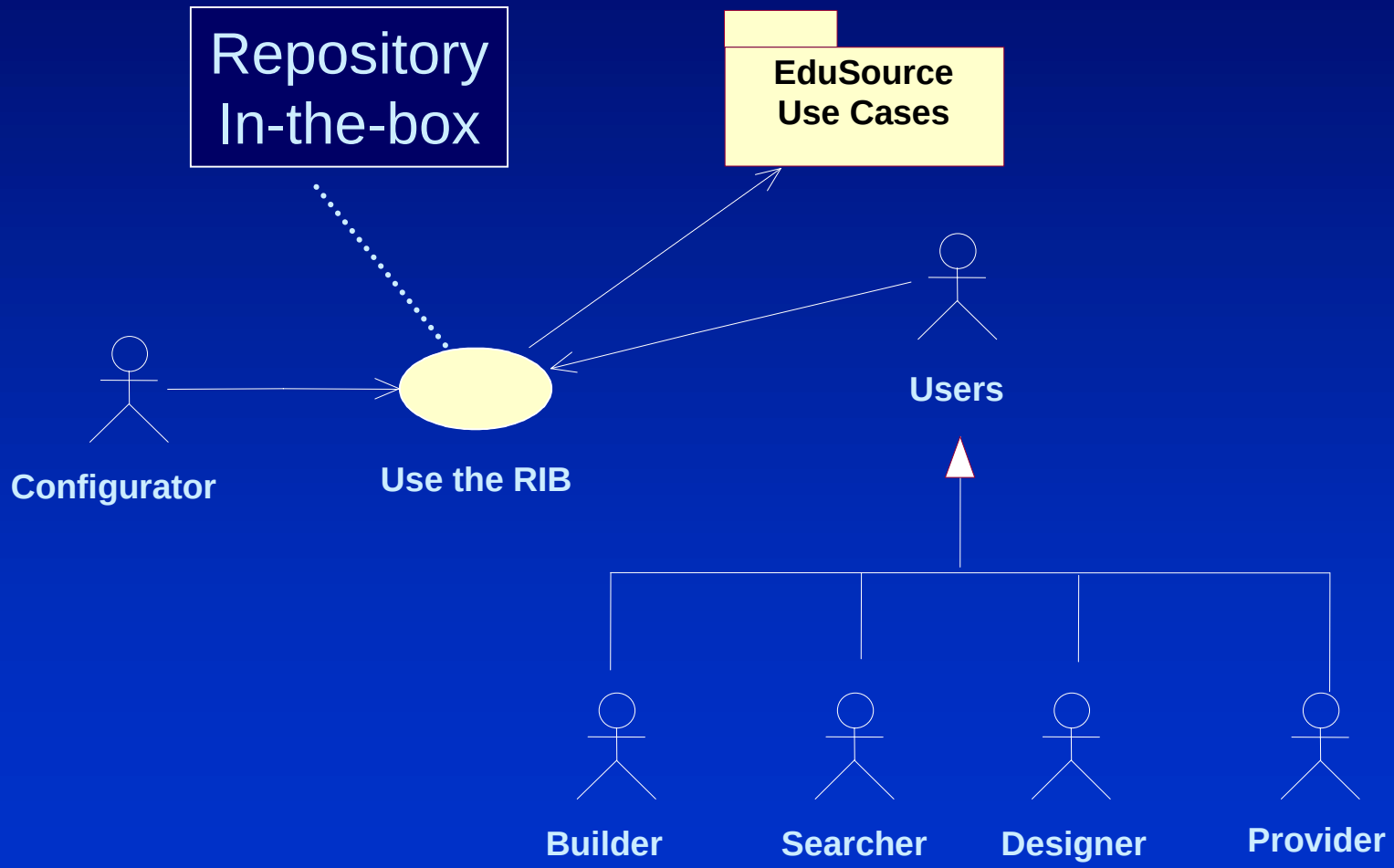
1. Third Wave, Semantic, Progammable Web
2. Knowledge Management
3. Object-based Learning Environments
4. Interoperability Standards

New Potential To Renew Pedagogy ?
What are the conditions ?

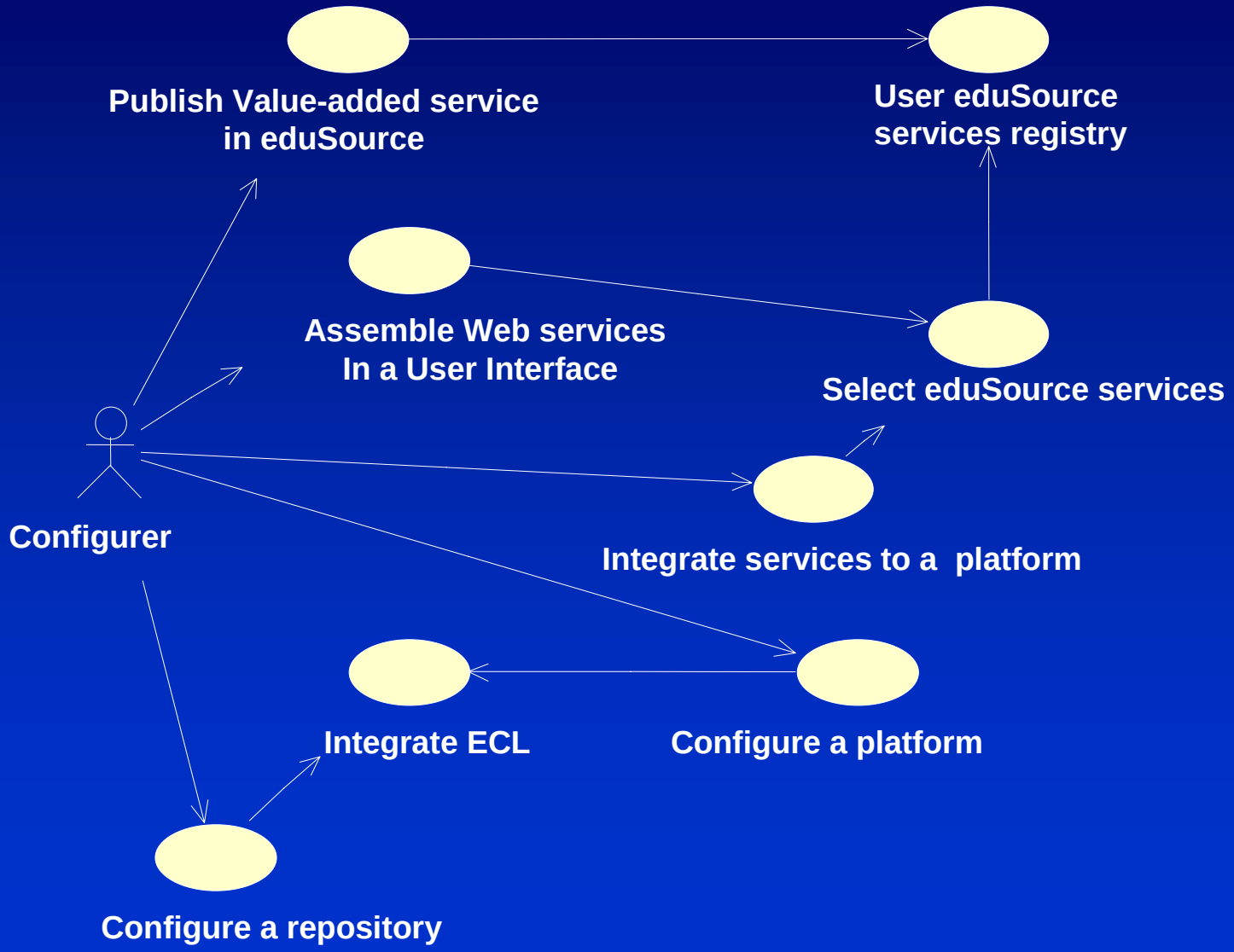
Internet's Third Wave

- First wave: STATIC TEXT and DATA EXCHANGE
  - Primarily static HTML pages: text and data services
  - E-mail, FTP, forum (asychronous communication)
- Second wave: DYNAMIC MULTIMEDIA
  - Dynamic pages, ASP, JSP
  - Facilitated transfer of images, sound and video
  - Desktop audio/video conference
- Third wave: SEMANTIC and PROGRAMMABLE
  - Integration of applications, API enabled by web services
  - Ex: Google Alerts, Amazon's API
  - Distributed computing, P2P, and mobile networking
  - Semantic web and knowledege-based technologies
  - Open source, sharing of objects and applications
  - New generation of Distributed Learning Environments

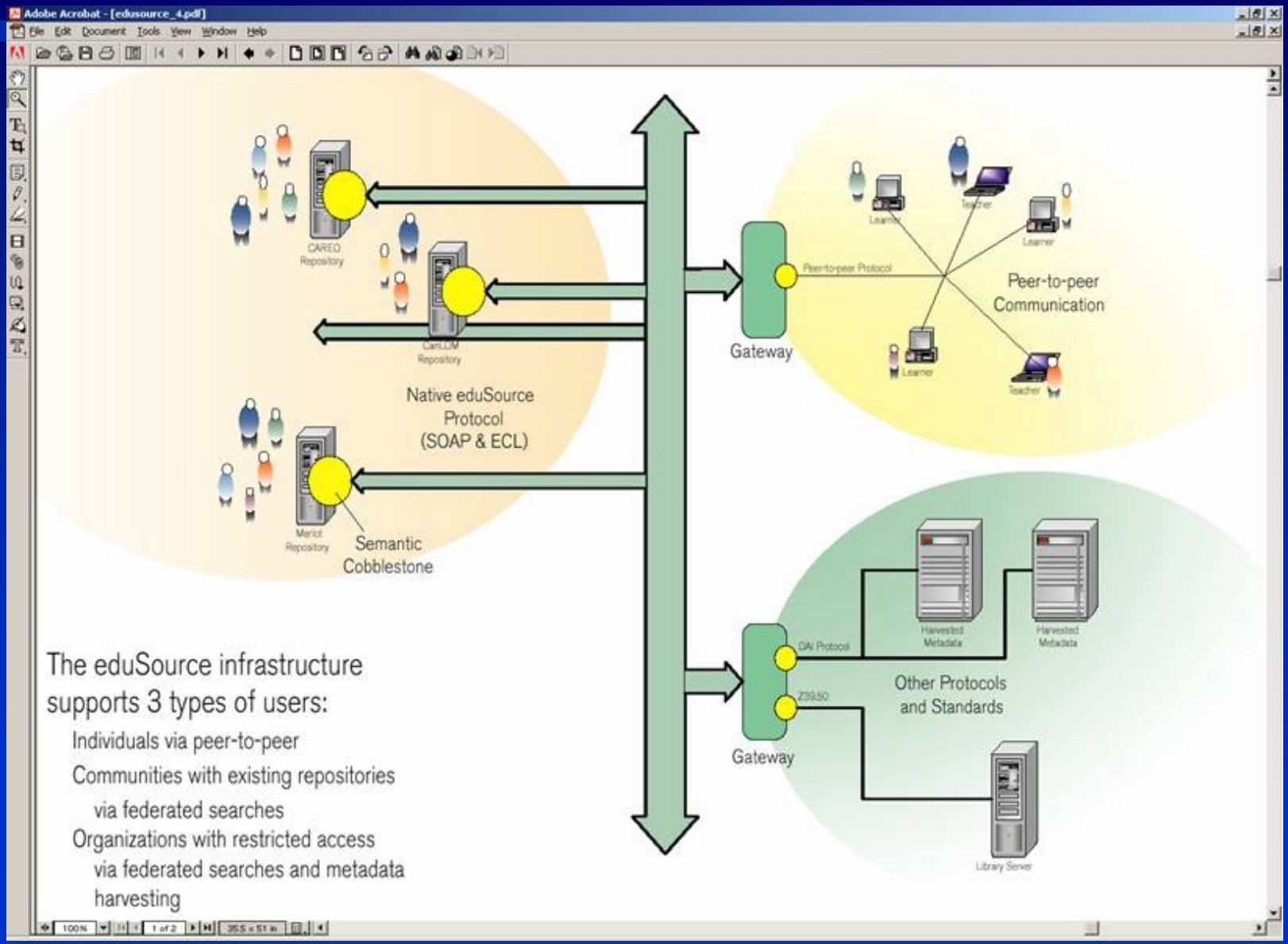
Use Cases


Repository
In-the-box
EduSource
Use Cases
Users
Configurator
Use the RIB
Builder
Searcher
Designer
Provider

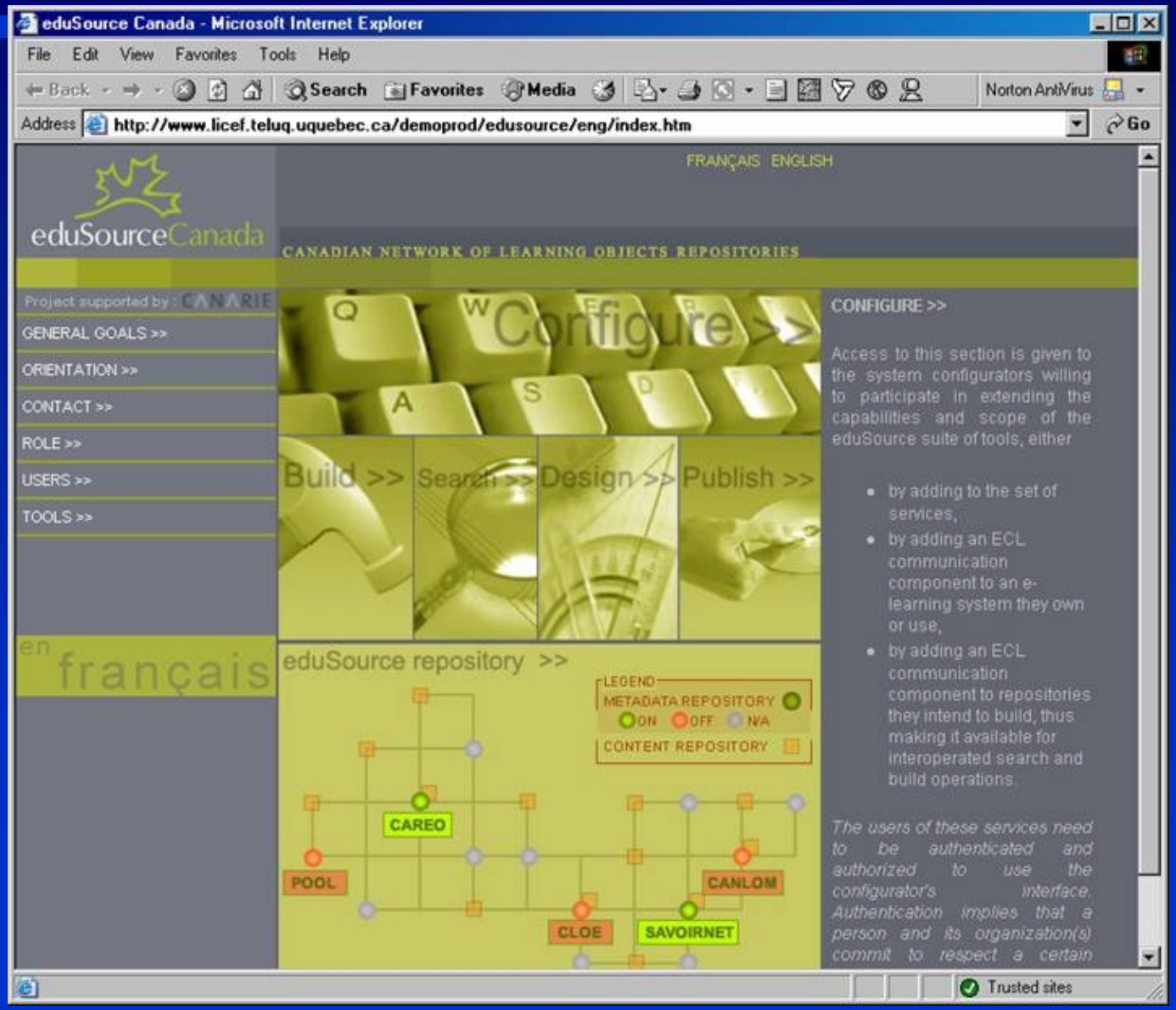
Use Cases


Publish Value-added service
in eduSource
User eduSource
services registry
Assemble Web services
In a User Interface
Select eduSource services
Configurer
Integrate services to a platform
Integrate ECL
Configure a platform
Configure a repository

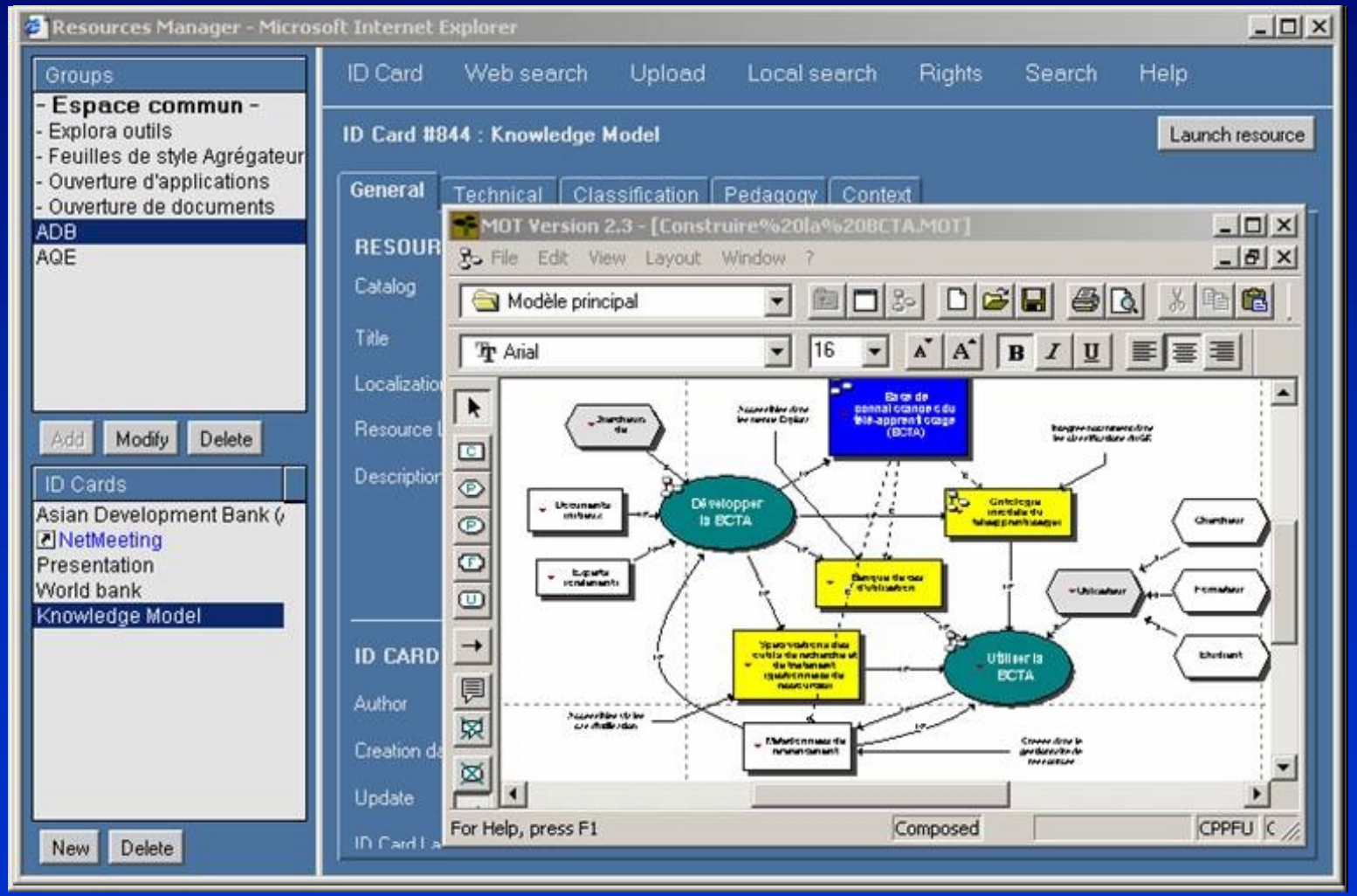
eduSource Infrastructure



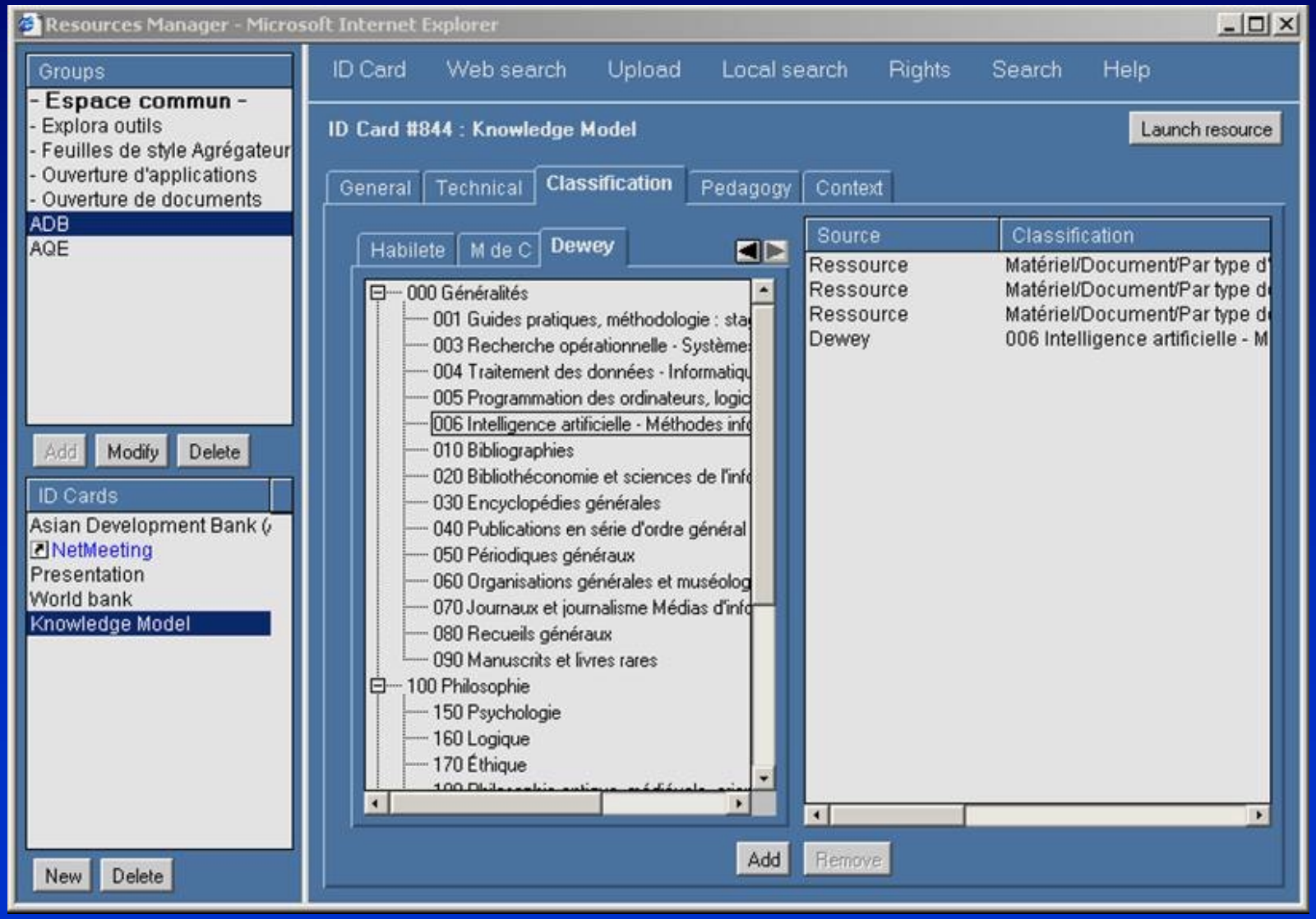
eduSource Prototype



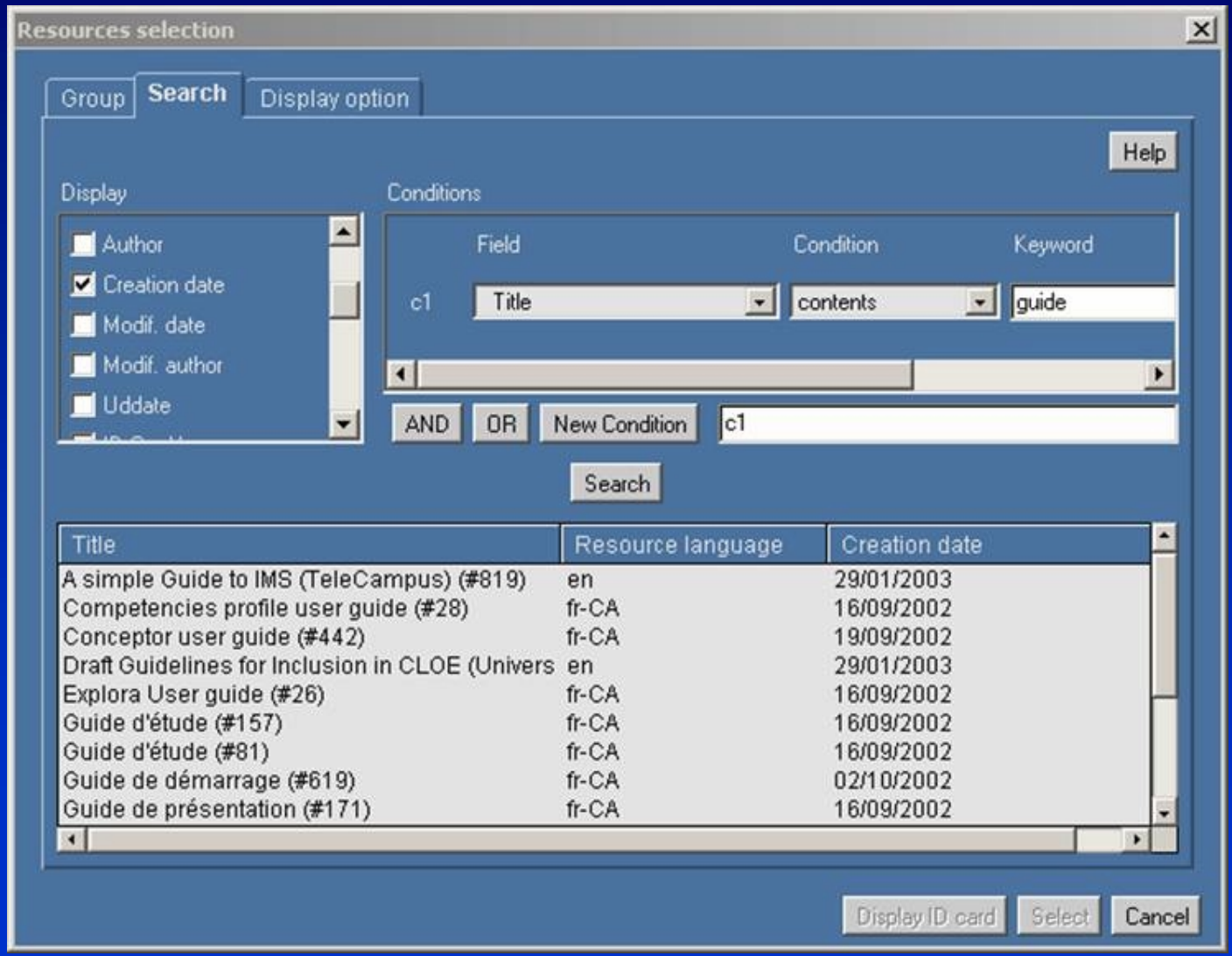
Building LO Repositories in Explor@



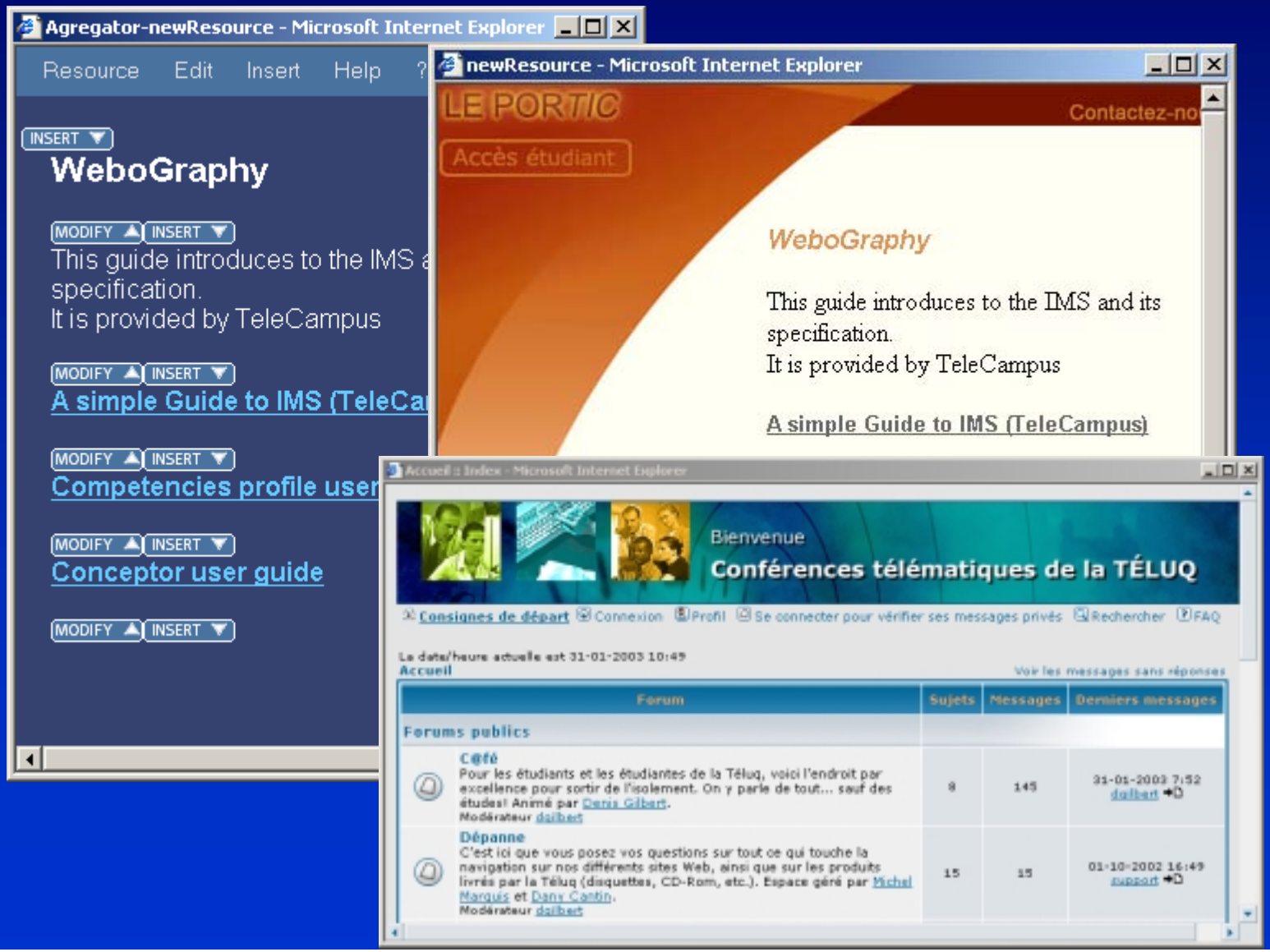
Referencing Learning Objects: describing properties and types



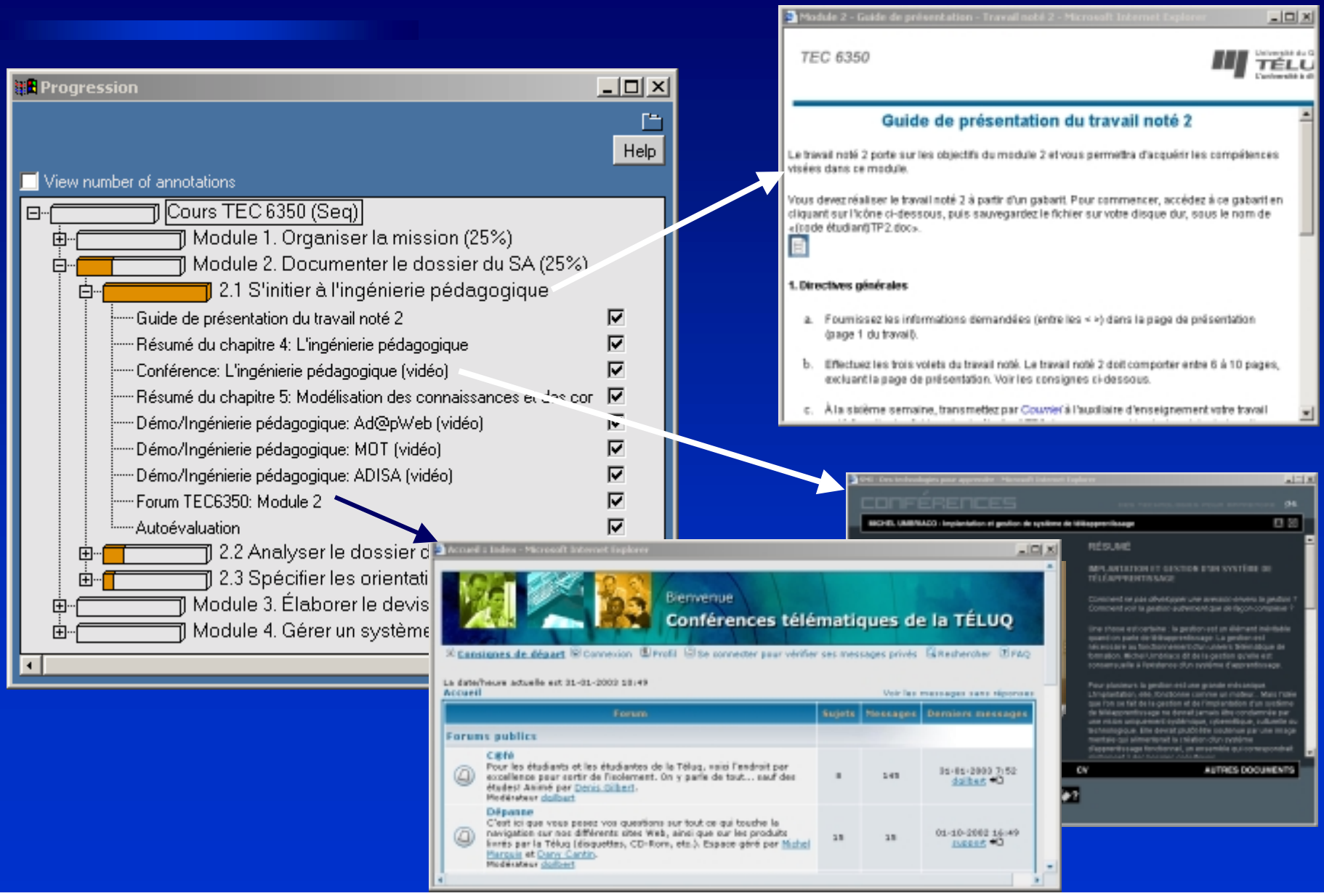
Searching for Objects



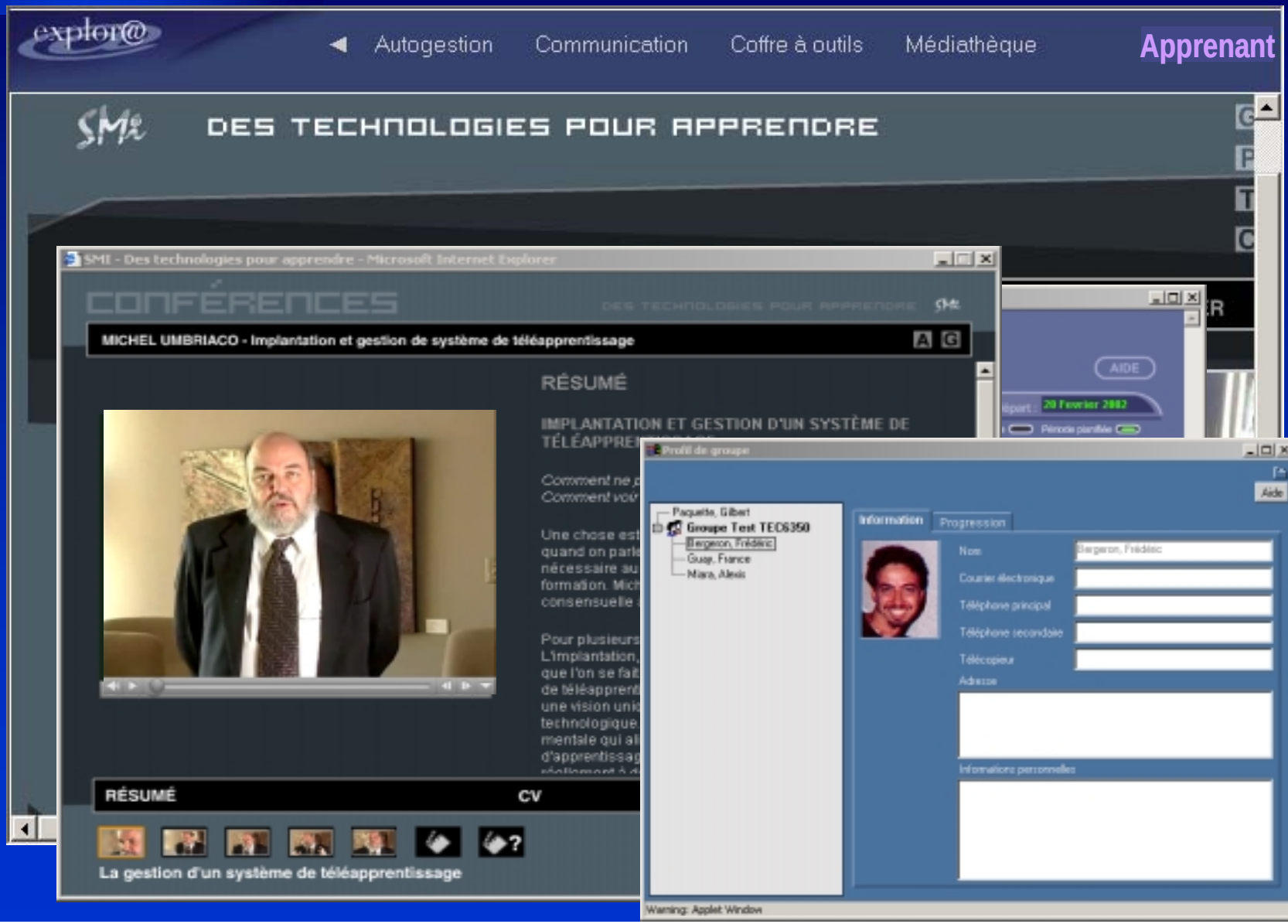
Value-added Service: Aggregation



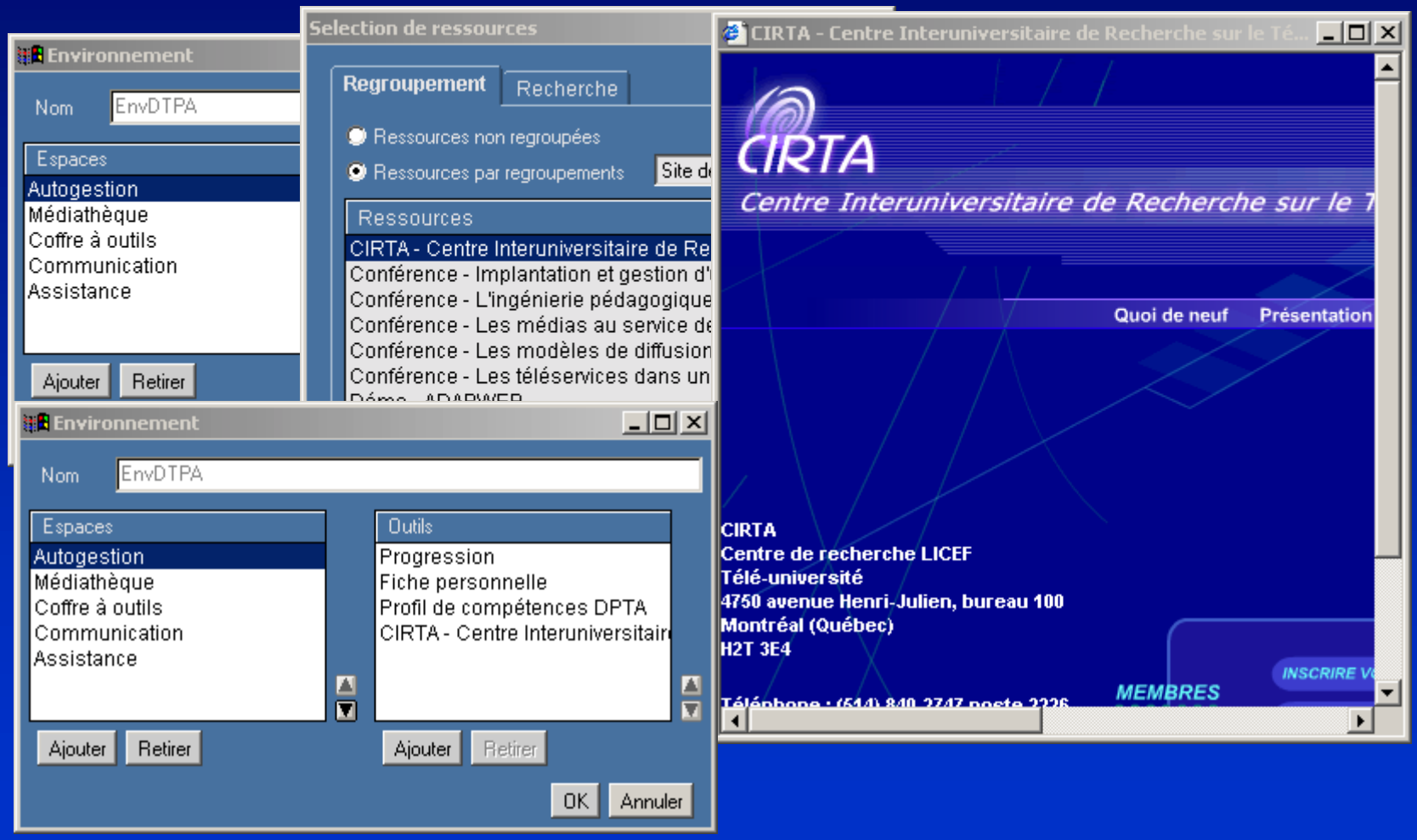
Learning Design Aggregation



Environment Aggregation



Environment Construction



Obstacles and Challenges

Technical Challenges

- Generic Software
  - Separated tools
  - Integrated Suite
  - Interoperability at the OS level

- DL System
  - Separated Tools
  - LMS, LCMS
  - Web services interoperability

Pedagogical Challenges

- The object paradigm is economical, flexible and forces pedagogical re-evaluation
- Attach more importance to communication and learning activities than medias, documents or content
- Separate content object from use scenarios and learning environments
- Reusability must protect good quality learning scenarios
- Reuse of learning models can bring more than just recycling content.

Cultural Obstacles

- Lecturing instead of facilitating learning
- The library « course »
- Lack of pedagogical training of the majority of teachers
- Reproduce the way we have been taught
- IP vs Open Source
- Collaboration between content creator and institutions

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