Building a World’s Fair: Expo 67, Montreal

- Participating Nations: 60
- Attendance: 50 million
- Theme: Man and His World
Building a World’s Fair: 1851, London

- Participating Nations: 28
- Attendance: 6 million
- Exhibitors: 17,062

Our Challenge

We need to build something like an online World’s Fair for global learning BUT with more nations, more exhibits, more visitors and less cost than a physical expo
Our Strategy

Learning Objects and Learning Object Repositories are the keys to build such a World Knowledge Network

What is a Learning Object?

+ Metadata

Images

Text

Video

Audio

All of the Above
What is a Learning Object?

“A learning object is any entity, digital or non-digital, that can be used, re-used, or referenced during technology-supported learning”. (IEEE LTSC 2000)

What is a Learning Object Repository?

Metadata Repository

Content Repository
What is a Learning Object Repository?

- Learning Object Repositories are organized collections of content stored on servers and delivered through networks.
- Building learning object repositories is the crucial first step in delivering on-line education.
- Whole courses and curriculums can be built and *re-used again and again* from well-organized repositories.

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Learning Object Repositories

![Diagram of Learning Object Repositories]

- Content Repositories
- Metadata Repository
- Search Request
- Content Located
- Content sent to User
- Singapore, Delhi, Melbourne, Nairobi
e-Learning Without Repositories

- Difficult to find what you really want
- No assurance of quality
- No critical mass of content
- Nowhere to turn to for help
- Competing, incompatible initiatives
- *The World Wide Web is not designed with learning in mind*
- *There’s no real community of learners*

A National Network
An International Network

An International Network

Technical Assistance

Evaluative Research

Content Repurposing

Metadata Repository

Content Repository

Users

What is eduSource?

eduSource will:

- Create a testbed of linked and interoperable learning object repositories across Canada

- Provide a forum for the ongoing development of the associated tools, systems, protocols and practices that will support such an infrastructure
The Facts

- Start Date: July 1, 2002
- Completion Date: March 31, 2004
- Total Budget: $8.5 million
- CANARIE Contribution: $4.25 million

What will eduSource do?

- Be based on national and international standards
- Be fully bilingual
- Be accessible to all Canadian including those with disabilities through its work with the TILE (The Inclusive Learning Exchange) project
- Share and disseminate its findings with all of Canada
The eduSource Suite of Tools

- eduSource User Interface
- Interoperable Metadata Repositories
- Interoperable Content Repositories
- eduSource Communications Layer (ECL)
- Framework and Testbed
- Search Tools
- Tagging Tools
- Packaging Tools
- Rights Mgmt Tools
- Repository Registry
- WebServices Registry

The eduSource Interface

ACCESS >>
Build >> Search >> Design >> Publish >>

Configure >>

Access to this section is given to system configurators willing to participate in extending the capabilities and scope of the eduSource suite of tools, either:
- by adding to the set of services;
- by adding an ECL communication component to an e-learning system they own or use;
- by adding an ECL communication component to repositories they intend to build, thus enabling interrelated or integrated search and build operations.

Users of these services need to be authenticated and authorized to use the configurator's interface. Authentication implies that a person and its organization(s) can connect to a certain number of services according to the restrictions set by the configuration interface.
National Assembly, Quebec City, 1877-1886
by Eugène-Étienne Taché
Learning Pavilions

A Stone Soup Network

- eduSource - Server space, tagging, searching, packaging, digital rights tools
- Australia - RSS feed and EdNa Online Content
- IMS - Standards
- Everyone - Content, tools, expertise and advice
The Netera Server Farm

Test Server 1
ASF Streaming
OS: WIN2000

Test Server 2
QuickTime Streaming
OS: OS X

Test Server 3
Network Monitoring
OS: WIN2000

Netera 1
Web and Database Server
OS: Linux

Netera 2
Web and Database Server
OS: Linux

Digital Rights Server
OS: WIN2000

SGI Video Server
OS: IRIX
72 GB

Sun e450 Server
OS: Solaris
324 GB

Apple XServer
OS: OS X
128 GB

Tape Backup Host
OS: WIN2000

Compaq MiniLibrary
400 GB

Fibre Channel RAID Array
260 GB

CAREO
Metadata Repository
OS: OS X

660 GB
Backup & Storage

Fibre Channel RAID Array
260 GB

Uninterrupted Power Supplies

1 Mbps
Connection to Commercial Internet

1 Gbps
Connection to CA*net4

516 GB
Content Storage

660 GB
Backup & Storage

Building a Global Knowledge Network: 2005

- Participating Nations: 100
- Location: Everywhere
- Attendance: 100 million
- Theme: Global Learning
- Learning Objects: 100,000 royalty free
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VisualNet Software by Antarctica

Building a Global Knowledge Network: Interface
What Can Each of Us Do to Make This Happen?

- Lobby your governments to participate
- Decide what you can contribute
- Keep this dialogue going

Thank You

For further information please visit: www.edusource.ca

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