Sharing What We Know
The creation and use of educational materials in the digital age

Merlot International Conference
Nashville, Tennessee
July 2005

Kevin Roebuck
kevin.roebuck@sun.com
blogs.sun.com/kevinr
http://www.sun.com/
650.786.5440
e-Learning as National Priority

Public Policy
Economic Development
Lifelong Learning
Technology Access
"Colleges and universities are not in the campus business, but the education business. The trend is a convergence in knowledge-producing organizations: publishers, television networks, libraries, museums, and universities."

Arthur Levine, President, Columbia U. Teachers College
The Classroom of the Future

Global

Digital

On-Demand
Learning Objects

SUN NEWS TODAY
MERLOT

On this edition of Sun News Today, we show you how Sun technology is powering an incredible innovation in higher education.

www.sun.com/news

Sun Proprietary/Confidential: Internal Use Only
Tools to Author, Gather & Share

Twin Peaks Navigator
Mid-project status report

Accomplishments
To date, we’ve designed and implemented an initial version of the Twin Peaks authoring tool for the Sakai 1.0 environment. The tool is capable of searching several resources: the IU library online catalog, EBSCO, Google Scholar, and a search via SLX. In doing this, we’ve learned quite a bit about the

Scholar’s Box

LAMS
Learning Activity Management System

openware
Pachyderm
The Digital Library

SUN NEWS TODAY
Stanford Digital Library

On the next Sun News Today, we take you to Stanford for a look at the university's new digital library.

www.sun.com/news
Digital Library Technologies

- Mass Digitization
- Federated Search
- Reference Linking
- Digital Repositories
- Archiving and Preservation
- e-Learning Integration
- RFID
- Context Management
WGBH Educational Foundation

Center for Digital Asset Management
http://daminfo.wgbh.org/

REFERENCE ARCHITECTURES
Search & Discovery

- Google captures popular imagination
  - Mass Digitization Project announced 2004
  - 5 Library Partners, 15 Million Books
    - University of Michigan, Stanford, Oxford, NYPL, Harvard
- Grokker
  - Visual Search Interface
- Searching across repositories and systems
  - What is the next knowledge gateway?
- The Semantic Web
New User Interfaces

The Knowledge Web

http://scylla.cse.ucsc.edu:8080/kweb-proto/

LOGIN: BETA
PASSWORD: SLUG
Gaming & Media Working Group

Envisioning the Future of Digital Entertainment as a Student Curriculum, as a Cultural Prototype and as a Digital Lifestyle

The Future of the Creative Process - Film, Games & Video for student and faculty expression

Global Media Strategies developing the Next Generation of Entertainment, Media & Technology Thinkers and Visionaries – Art vs. Commerce vs. Theory

Research, Development and Investment in Entertainment Technologies and Media Studies Innovation: From the University to Industry Application
• European Schoolnet
• Framework 5 Project
• Demonstrate Principles of:
  • Federation
  • Digital Rights
  • Learning Objects
  • Inter-operability
• Business Models for Digital Content
e-Learning Frameworks

- **Data**: e-portfolio's, accessibility, administrative data-exchange, performance mgt, access and identity management, gradebooks

- **Content**: Learning object repositories, test banks, curricula and assessment, LMS inter-operability, DRM, Mets and Content Packaging, Identifiers, Syndication

- **Tools and Design**: Software for designing learning activities, content development and teaching tools, authoring, collaboration, usage models and profiles

- **Deployment**: Scale, robustness, middleware and service strategy, compliance, e-learning frameworks, IDM
## Open Education Initiatives

<table>
<thead>
<tr>
<th>Software</th>
<th>Content</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sakai™</td>
<td>MIT OpenCourseWare</td>
<td>IMS</td>
</tr>
<tr>
<td>DSpace</td>
<td>Creative Commons</td>
<td>SIF Framework</td>
</tr>
<tr>
<td>moodle</td>
<td>Unlock your creative potential!</td>
<td>SIF Schools Initiative</td>
</tr>
<tr>
<td>JA-SIG</td>
<td>W3C World Wide Web Consortium</td>
<td>IEEE Learning Technology Standards Committee</td>
</tr>
<tr>
<td>OSPI</td>
<td>Wikipedia - The Free Encyclopedia</td>
<td></td>
</tr>
<tr>
<td>OKI</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Knowledge Marketplace

- Publishers
- Broadcasters
- Universities
- Libraries
- Museums
- Media and Entertainment

Learning Objects
Federation
On Demand Acquisition

Content
Extreme bandwidth
Just in Time Collaboration

SOA
Knowledge Marketplaces

Governance Model

- Formality
- Structure
- Standards
- Regulations

Department Store

- Faculty & Student Portfolio's of Digital Content
- Student purchases of digital objects
- Publishers securely pursue digital distribution
- Aggregators and Brokerages for Digital Materials

Farmer's Market

- Serves community good through “tax dollars”
- Association or Membership Fees
- Free to end users
- ID authentication for privileges (library card)
- Core collections and Peer Review

Community Park

- Direct sales between producers and consumers
- Peer-to-peer transactions
- Free exchange of information
- Serves common good for the community

City Manager & Professional Staff: Provide Infrastructure, Operations and Services

Warranty & Quality of Service
The Digital Campus

Security

Applications
- Administration
- Digital Libraries
- e-Learning
- Science and Research

Internet Infrastructure Software
- Portal
- Identity Management
- App and Web Servers and App Integration
- Collaboration (Email, Calendaring, and Instant Messaging)

Operating System

Voice
Network
Data

Students
Parents
Alumni
Staff
Faculty
Researchers
URL Resources

- Project Looking Glass  https://lg3d-core.dev.java.net/
- Twin Peaks          https://twinpeaks.dev.java.net/
- Knowledge Web       http://wiki.java.net/bin/view/Javadesktop/KWeb
- Merlot               http://www.merlot.org/
- Scholarsbox          http://raymondyee.net/wiki/ScholarsBox
- Groxis               http://www.grokker.com/
- WGBH                 http://daminfo.wgbh.org/
- Creative Commons     http://creativecommons.org/
- Seneca College       http://www.senecac.on.ca/scoe/
- D-Space              http://www.d-space.org/
- IMS Global           http://www.imsglobal.org/
- OKI                  http://www.okiproject.com/
- Shibboleth           http://www.shibboleth.internet2.edu/