

Sakai as a Virtual Research Environment

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Outline

Overview of Sakai
Case Study: National Center for Integrated Biomedical Information
Sakai and Institutional Repositories
Sakai and Library Content / Collections
Sakai and Open Courseware
Sakai and Community Source
Conclusion / Summary

Sakai in one Slide....

Collaboration, Teaching, and Learning
FOSS - 100% free to use, modify and contribute
Sakai is 3.5 years old
Non-profit Sakai Foundation since January 2006
100+ Higher Education and 15 company members
Six paid staff members
100+ people developing and testing Sakai releases



Michael Koruska
Sakai Executive Director

Overview Video: <http://www.dr-chuck.com/media.php?id=64>

Requirements Overlap

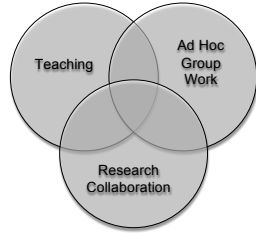
All variations on "Collaborative Activity"

Leads to building of common software which can be used as a base tool kit across collaborative activities - which can be extended to meet particular needs of a focused collaborative community.

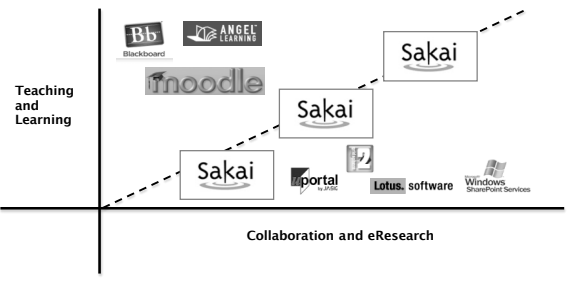
As more communities evolve - overlap may increase and software tools can be reused well-outside of their original "birthplace".

Also the use of a common toolset allows easy exchange of materials that make up the different elements of the academic life both for faculty and for students.

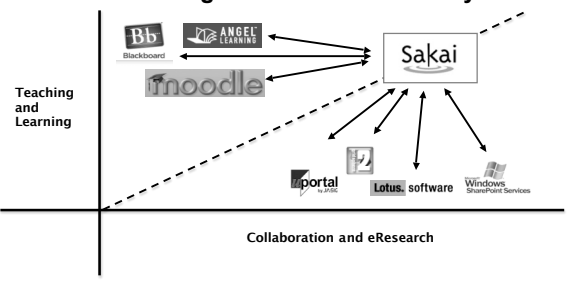
Sakai is a "Collaboration and Learning Environment".



Sakai: Product Placement



Future: Sharing Data and Functionality



Sakai Research Case Study

National Center for Integrative Biomedical Informatics
www.ncibi.org

PI: Brian D. Athey, Ph.D.
PI Institution: University of Michigan
ID: 1-U54-DA021519-01A1
NIH Program Officer (PO): Karen Skinner, Ph.D.(NIDA)



NCIBI Org Chart

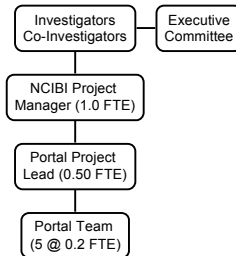
Project Manager: James Cavalcoli

Portal Project Lead: Beth Kirshner (0.5 FTE)

Team Members - Work on the portal as a portion of their role within the project

Paul - Graphic Design
Yuri - Outreach / Content
Aaron - Content / Tech Support
Zach - Content / Tech Support
Barb - HCI / Usability / Requirements

Portal Requirements collected using TRAC
Portal Team Meeting - Every two weeks



NCIBI Portal Approach

Initial public facing site developed using Plone

It was a web site - not a portal - no collaborative capability

Used "all hands meeting" to discuss across-team requirements for collaboration.

Deployed Sakai as a prototype - made available to the whole team

Engaged a small group (Diabetes Models) series of meetings

On-going facilitation from HCI expert

Attended by development team

Early adopter - Feldman Lab - Group member became evangelist

Portal Goals

Communication and Dissemination (internal and external)

Tool integration and sharing

Data Exchange

By Invitation Groups

This Image Not Included in the Handouts

Feldman Lab - Main Page

NCFBI
National Center for Integrative Biomedical Informatics

Home | Schedule | Wiki | Announcements | Resources | Discussion | Diabetes News | ALS News | Chat Room | GenPhyloTeam | Search

Calendar
August, 2007

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Recent Announcements
Diabetes
Fallows Meeting
September, Aug 15, 2007 9:26 am

Recent Discussion Items
Diabetes
There are currently no messages at this location.

Recent Chat Messages
Diabetes

Welcome back, entry
from: 'imgalt', Aug 20, 2007 3:13 PM EDT

Events for Aug 24, 2007
Academic Calendar - Academic
Activity - Academic
Meeting - Lab Meeting - Jambak, Hui

Feldman - Threaded Discussion

NCFBI
National Center for Integrative Biomedical Informatics

Home | Schedule | Wiki | Announcements | Resources | Discussion | Diabetes News | ALS News | Chat Room | GenPhyloTeam | Search

Discussion
Add Topic | Add Category | Expand All | Permissions

View: Row Layout | Search

A thread

- Discussion Paper_11 responses headline May 9, 2007 5:41 AM EDT
- ADDONAL_2008C headline May 21, 2007 11:55 AM EDT
- Edits for Andina headline May 23, 2007 10:06 AM EDT
- Thank you for your input headline May 24, 2007 8:57 AM EDT
- That's great, well done! headline Jun 20, 2007 2:02 PM EDT
- ENK_2008C_2008C headline Jun 28, 2007 8:25 AM EDT
- Current Assignments_11 responses headline Jul 13, 2007 1:11 PM EDT

3 writing team

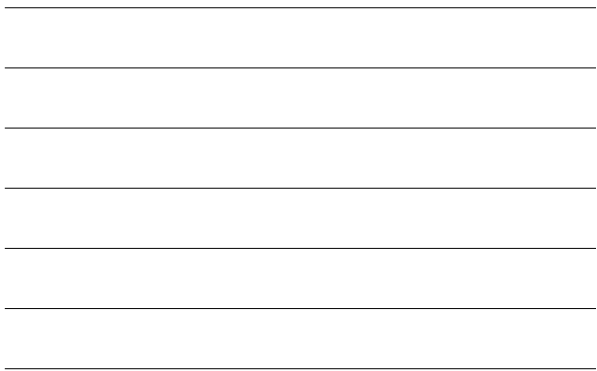
- Therapeutic approach Jul 9, 2007 3:12 PM EDT

ENDO abstracts

- Research paper in association with 11 responses headline Nov 7, 2007 12:58 PM EDT

Feldman - RSS Feeds

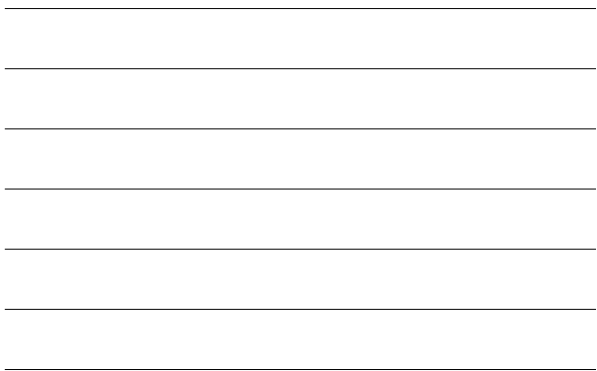
The screenshot shows the NCIBI website interface. The main content area displays the title 'ALS News' and a brief description: 'ALS (Amyotrophic Lateral Sclerosis) Terminology and Diagnostic Strategy'. Below the title, there is a search bar and a list of related articles or feeds. The page layout includes a navigation menu at the top and a sidebar on the left with various site links.



Feldman Lab - Resources

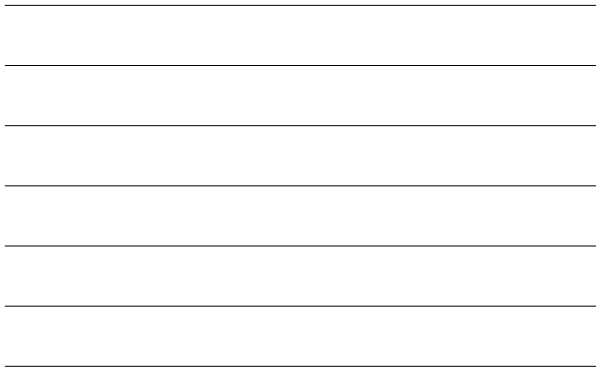
The screenshot shows the NCIBI website interface with the 'Resources' section selected. A table lists various resources, including 'Feldman Lab Resources', 'Genetics', 'Molecular Biology', and 'Bioinformatics'. Each entry includes a title, a description, and a 'Created By' field. The table is organized into columns for title, description, and creation date.

Title	Description	Created By	Modified	Size
Feldman Lab Resources		twiggan	May 11, 2007 1:03 pm	0 items
Genetics		twiggan	May 11, 2007 1:03 pm	3 items
Molecular Biology		twiggan	May 22, 2007 11:12 pm	0 items
Bioinformatics		twiggan	Jun 4, 2007 12:09 pm	0 items
Individuals		twiggan	May 11, 2007 12:57 pm	19 items
Journal Club		twiggan	Jul 5, 2007 10:59 am	1 item
Protocols		twiggan	Jun 7, 2007 11:37 am	18 items
Calendar		twiggan	May 31, 2007 1:40 pm	293 items



Feldman Lab - Wiki

The screenshot shows the NCIBI website interface with the 'Wiki' section selected. The page title is 'About the Wiki'. The content includes a description of the wiki's purpose: 'The wiki is a place to collaboratively edit and share information. It's a good place for procedures, FAQs, research plans, and whatever else you want to write.' Below the description, there is a list of 'ANNALS' with links to various documents and studies.



Success Factors

Collaboration is part of the deliverables of the grant.

Willing community of scientists

Dedicated and talented developer resource with previous experience in building scientific laboratories (1/2 FTE)

Science comes first - requirements come from the scientists and developers respond to requirements.

Sakai is simply a toolkit which gives a lot of basic raw material like calendar, wiki, etc. - these are only used if appropriate.

Some elements are done outside of Sakai and integrated into the portal.

Continuous feedback and improvement over the time of the grant. Leads to mutual trust and patience as new requirements are identified.

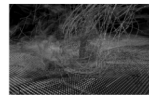
Sakai and Institutional Repositories

Long-Term Stewardship of Digital Data

"...As our systems grow more sophisticated, we will see applications that support not just links between authors and papers but relationships between users and information repositories, and users and communities. What is required is a mechanism to enable communication between these relationships that leads to information exchange, adaptation and recombination. A new generation of information-retrieval tools and applications are being designed that will support self-organizing knowledge on distributed networks driven by human interaction to support trans-disciplinary science..."

To Stand the Test of Time
Long-term Stewardship of Digital Data Sets
in Science and Engineering

A Report for the National Science Foundation from the ARL, Washington
New Collaborative Mechanisms: The Role of Academic Libraries in the Digital Marketplace
September 20, 2006
Arbeitsgruppe 06-07-006



[http://www.arl.org/info/
events/digdatartp.pdf](http://www.arl.org/info/events/digdatartp.pdf)

Overview

In September, students and faculty at Indiana University, the University of Michigan and other schools will start using new tools to access library resources from *inside* their campus Collaboration and Learning Environment.

They'll use the library's metasearch engines and Google Scholar to find materials.

They'll save "citations" for licensed digital content — including metadata fields and stable URLs.

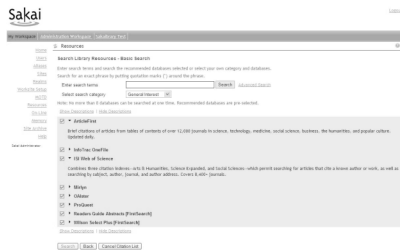
Improving the CLE

Academic Libraries are deeply integrated *inside* Sakai



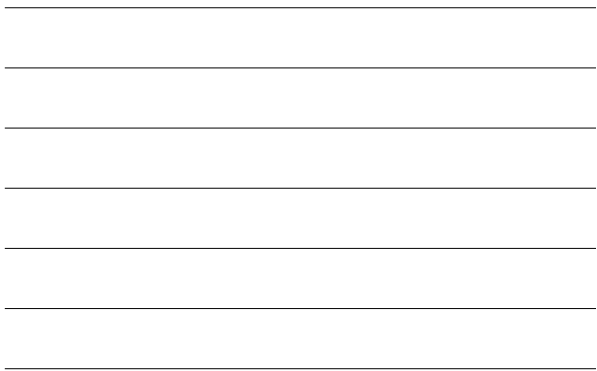
Citations Helper in Sakai's Resources Tool

Sakaibrary Demo: Basic Search



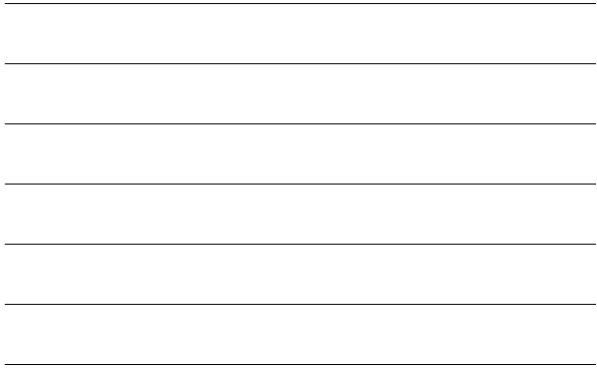
Sakaibrary Demo: Search Results

The screenshot shows the Sakai search results page. At the top, there is a search bar with the text 'Sakai' entered. Below the search bar, there are several tabs: 'All Resources', 'Search Library Resources - Basic Search', and 'Advanced Search'. The 'Search Library Resources - Basic Search' tab is selected. The page displays a list of search results, including titles like 'Sakai: A Guide to the Sakai Project', 'Sakai: A Guide to the Sakai Project', and 'Sakai: A Guide to the Sakai Project'. Each result includes a title, author, and a brief description. The page also features a sidebar with navigation options and a footer with the Sakai logo and version information.



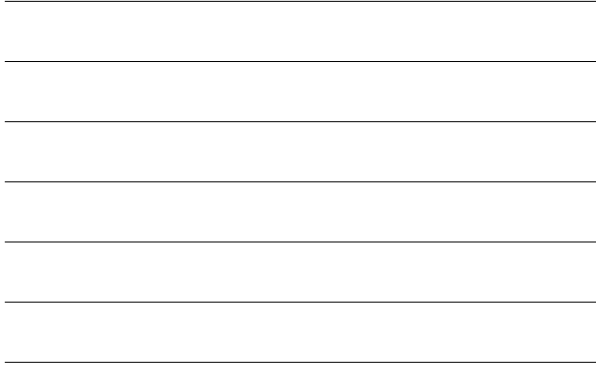
Sakaibrary Demo: Revise Citation List

The screenshot shows the 'Revise Citation List' page in Sakai. The page title is 'Sakai' and the subtitle is 'Revise Citation List'. The page contains a list of citation entries, each with a title, author, and a brief description. The entries are organized into a table with columns for 'Title', 'Author', and 'Description'. The page also features a sidebar with navigation options and a footer with the Sakai logo and version information.



Sakaibrary Demo: View Citation Details

The screenshot shows the 'View Citation Details' page in Sakai. The page title is 'Sakai' and the subtitle is 'View Citation Details'. The page displays detailed information for a specific citation, including the title, author, and a full description. The page also features a sidebar with navigation options and a footer with the Sakai logo and version information.

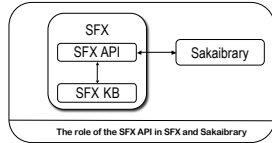


Technical Underpinnings

Linking to Library Resources

Creating OpenURL links for SFX

Plan to integrate with SFX API



Sakaibrary: Getting More Information

Project Wiki

<http://issues.sakaiproject.org/confluence/display/SLIB/Home>

Project Website

<http://sakaibrary.org>

Citations Helper Demo (free resources)

<http://sakaibrary.umdl.umich.edu>

Sakai and Open Courseware

PI : Joseph Hardin
PI Institution University of Michigan
Hewlett Foundation
Program Officer: Cathy Casserly

A strategy for OCW

Make OCW site creation part of teaching and learning

Authoring environment in CLE

Deal with IP issues, tagging and QA in Sakai



OCW Tool is available anytime in development or teaching

Manage category and IP metadata as new material is added

Perhaps student 'dScribe' has permissions to add metadata

When new document appears, dScribe tags it

Develop student incentives (e.g., better future access)

Have system flag incomplete data on objects

Direct faculty or students to items needing metadata

dScribes and OCW tool

Building social foundations of technology applications, integrating the two into socio-technical process

Blending Open Source successes with Open Content Initiatives

Mobilizing transformative processes of Web 2.0 dynamics in service of transforming the academy.

While at the same time using resulting contributions from the academy to feed Learning Web 2.0 dynamics

Developing positive feedback loop that rewards participatory pedagogies and drives both transformation in the

academy and the growth of Learning Web 2.0

OER/OCW generation at the center of both

Tools for dScribes

Workflow customized for dScribes and faculty, not 'professional OCW' staff

Build around 'participatory pedagogical' model

Faculty engagement gated, can be large or small (faculty can be their own

dScribes)

Tools integrated with learning environment, so faculty can use knowledge from

CLE tools

Create portable materials for faculty and students, and Library

Sakai and Community Source

Why Sakai?

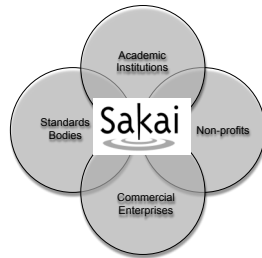
COMMUNITY

COMPOSITION — academic institutions & commercial enterprises working in partnership with standards bodies & other open-source initiatives.

GOALS — work collaboratively to develop innovative software applications designed to enhance teaching, learning, research & collaboration in higher education & beyond.

VALUES — knowledge sharing, information transparency, meritocracy, "do-ocracy."

PRAXIS — 150+ production installations; 100+ volunteers active in design, development & testing of Sakai releases.



Why Sakai?

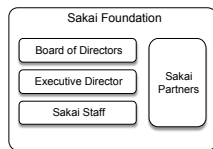
FOUNDATION

MISSION — manage & protect IP; serve as a liability shield for the community; provide basic infrastructure & small staff; help coordinate design, development, testing & distribution of software; champion open source & open standards.

GOVERNANCE — ten board members elected by member reps to serve three-year terms; Executive Director manages day-to-day operations.

PARTNERS — 112 member institutions & organizations contribute \$10K per year (\$5K for smaller institutions).

BUDGET — underwritten by members; ~ \$1M per annum funds 4-6 staffers, admin services, computing infrastructure, project coordination, conferences, Sakai Fellows Program, advocacy & outreach activities.



A member-funded non-profit
501(c3) corporation

Membership is optional

Sakai 2.4.0

PROVISIONAL TOOLS

- Blog
- Link Tool
- Mail Tool
- Portfolio
- Podcasts
- Polls
- Roster
- Search
- Test & Quizzes
- SU - Switch User
- User membership



Open Source Portfolio (OSP)

Sakai contrib

TOOLS OUTSIDE THE BUNDLE

- Agora Online Meetings
- Breeze Link
- Checklist
- Configuration viewer
- Evaluations
- Gallery
- Goal Mgmt
- Icon Service
- IMS Tools Interoperability
- Installer Package (alpha)
- JForum
- Melete modules
- Mneme Assessment Engine
- OCW Tool
- Reset Password
- SCORM player
- Skin Manager
- SiteStats . . . and more



Sakai Installer

Shared Display

Sakai on the ground

PRODUCTION DEPLOYMENTS (n = 163)



Sakai on the ground

PILOTS (n = 145*)



* Total includes institutions piloting jointly in a shared environment.

Sakai on the ground

DEPLOYMENT HIGHLIGHTS, 2004-07

Users	Institutions
130,000+	Indiana, UNISA
60,000+	Michigan
11,000 - 50,000	Berkeley, Cape Town, Etudes Consortium, New England (AU), Valencia, Virginia Tech, Yale
1,000 - 10,000	Cambridge, Cerritos, Charles Sturt, Fernando Pessoa, Lleida, Mount Holyoke, North-West, Rice, Roskilde, Rutgers, Saginaw Valley, UC Merced, Whitman, Arteveldehogeschool

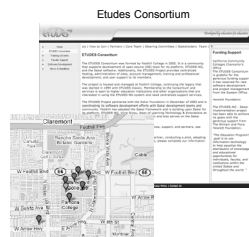


CTOOLS, University of Michigan
First production Sakai deployment, 2004

Sakai on the ground

CONSORTIA, ASSOCIATIONS & SCAs

Organization	Members/Clients in Production
Portfolio4u	30
Etudes Consortium	22
Appalachian College Assoc.	19
rSmart Sakai/OSP 2.0	8
Claremont Colleges	7
rSmart Sakai CLE	4
Ohio Learning Network	3
Total	93



Claremont Colleges

Sakai: Getting More Information

EMAIL ADDRESSES & LINKS

SAKAI FOUNDATION
Michael Korcuska, Executive Director, mkorcuska@sakaifoundation.org
Mary Miles, Admin Coordinator, mmiles@sakaifoundation.org
Anthony Whyte, Community Liaison, awhyte@sakaifoundation.org
Peter Knoop, Project Coordinator, knoop@sakaifoundation.org

SITES
Home: <http://www.sakaiproject.org>
Issues: <http://bugs.sakaiproject.org>
Collab: <http://collab.sakaiproject.org>
Wiki: <http://confluence.sakaiproject.org>

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User: sakai-user@sakaiproject.org



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Sakai Executive Director

Acknowledgements

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IMAGES & DATA
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Susan Hollar, Gaurav Bhatnagar, Joseph
Hardin, Beth Kirschner, NCIBI Project, Jim Eng,
SakaiBrary Project
