

Sakai Research Edition

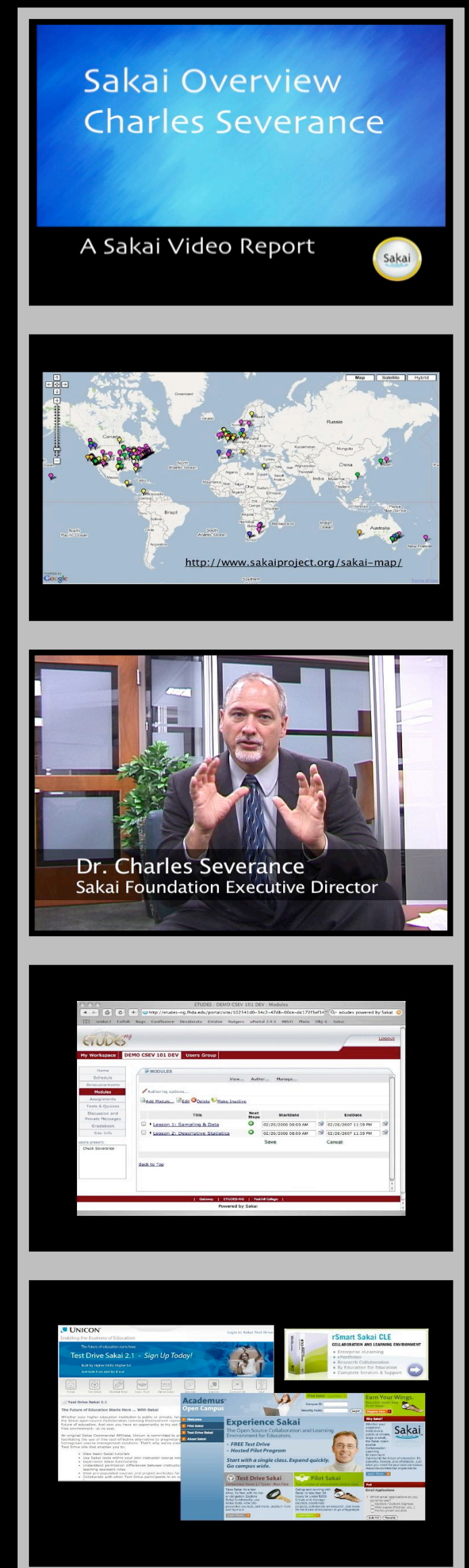
Dr. Charles Severance
Sakai Foundation
University of Michigan

<http://www.sakaiproject.org/>
<http://www.dr-chuck.com/>



Sakai in one Slide....

- Collaboration, Teaching, and Learning
- FOSS – 100% free to use, modify and contribute
- Sakai is 3 years old
- Non-profit Sakai Foundation January 2006
- Financial support from 100+ Higher Education, 15 companies
- Six paid staff members
- 100+ people developing and testing Sakai releases
- Nifty Web site www.sakaiproject.org
 - Sakai Community Google Map Mashup
 - Very cool “Sakai Overview” (10 minutes)



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

The Sakai Product

A Collaboration and Learning Environment



What's in a name?

Sakai is named after
Hiroyuki Sakai of the
Food Channel
Television program
“Iron Chef”. Hiroyuki is
renowned for his fusion
of French and Japanese
cuisine.



What's in a name?

Perhaps a better name
for this open source
project would be **Sikai**,
making use of the
Chinese characters
“Think Open”

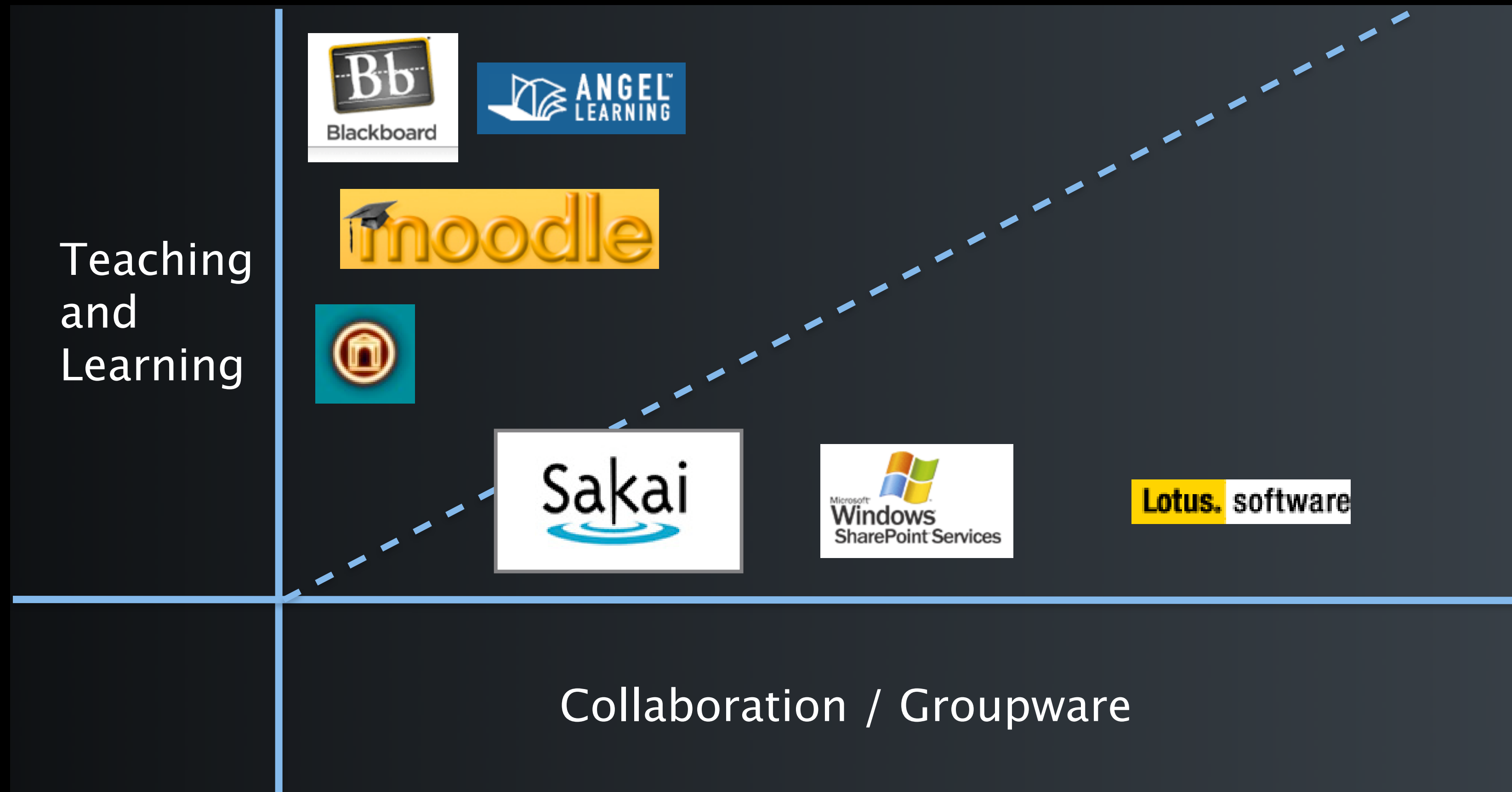


Sakai was born in 2004 –
the year of the Monkey.



Placing the Sakai Product

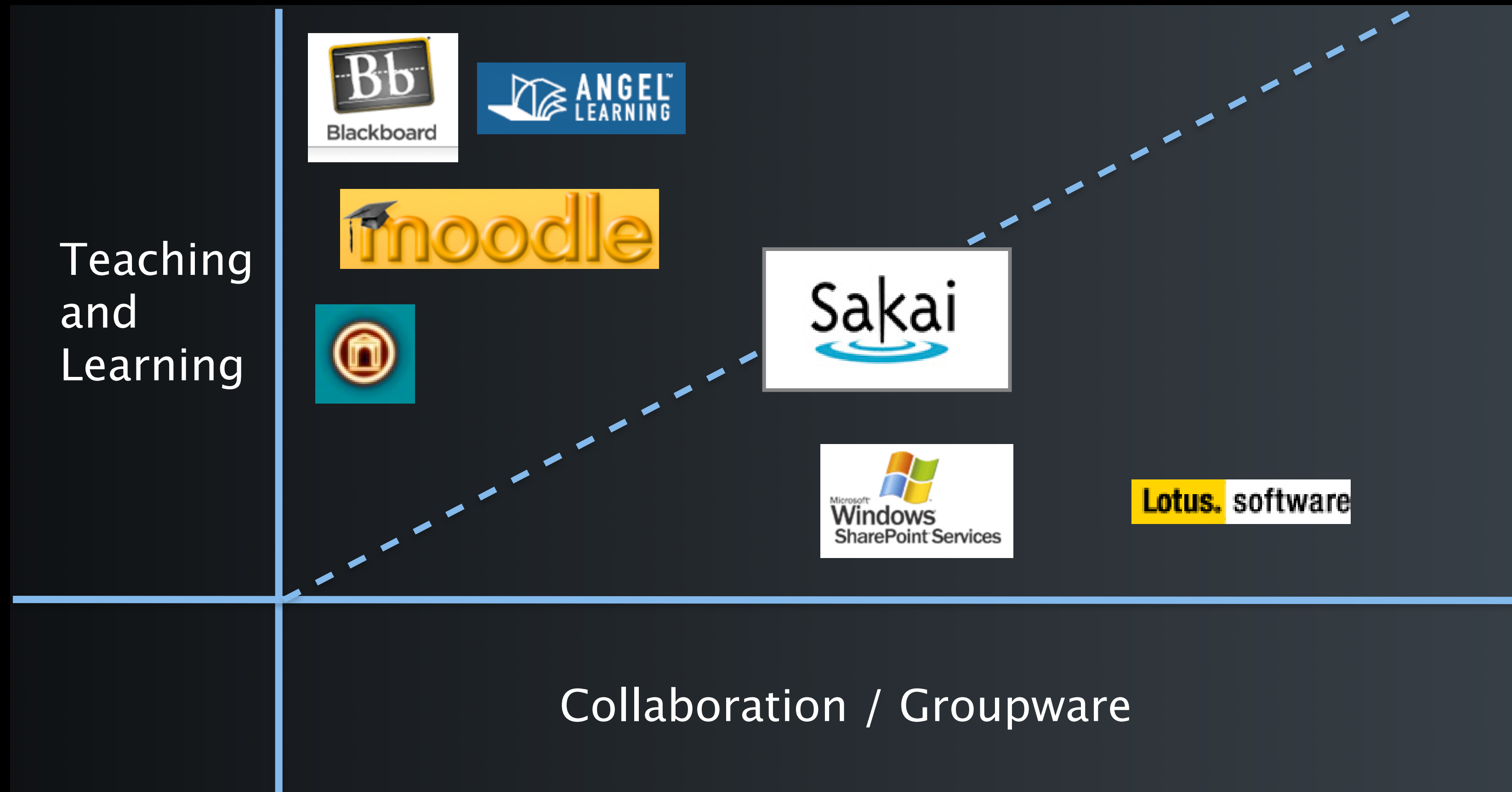
A Collaboration and Learning Environment



Portfolio Video: <http://www.dr-chuck.com/media.php?id=73>

Placing the Sakai Product

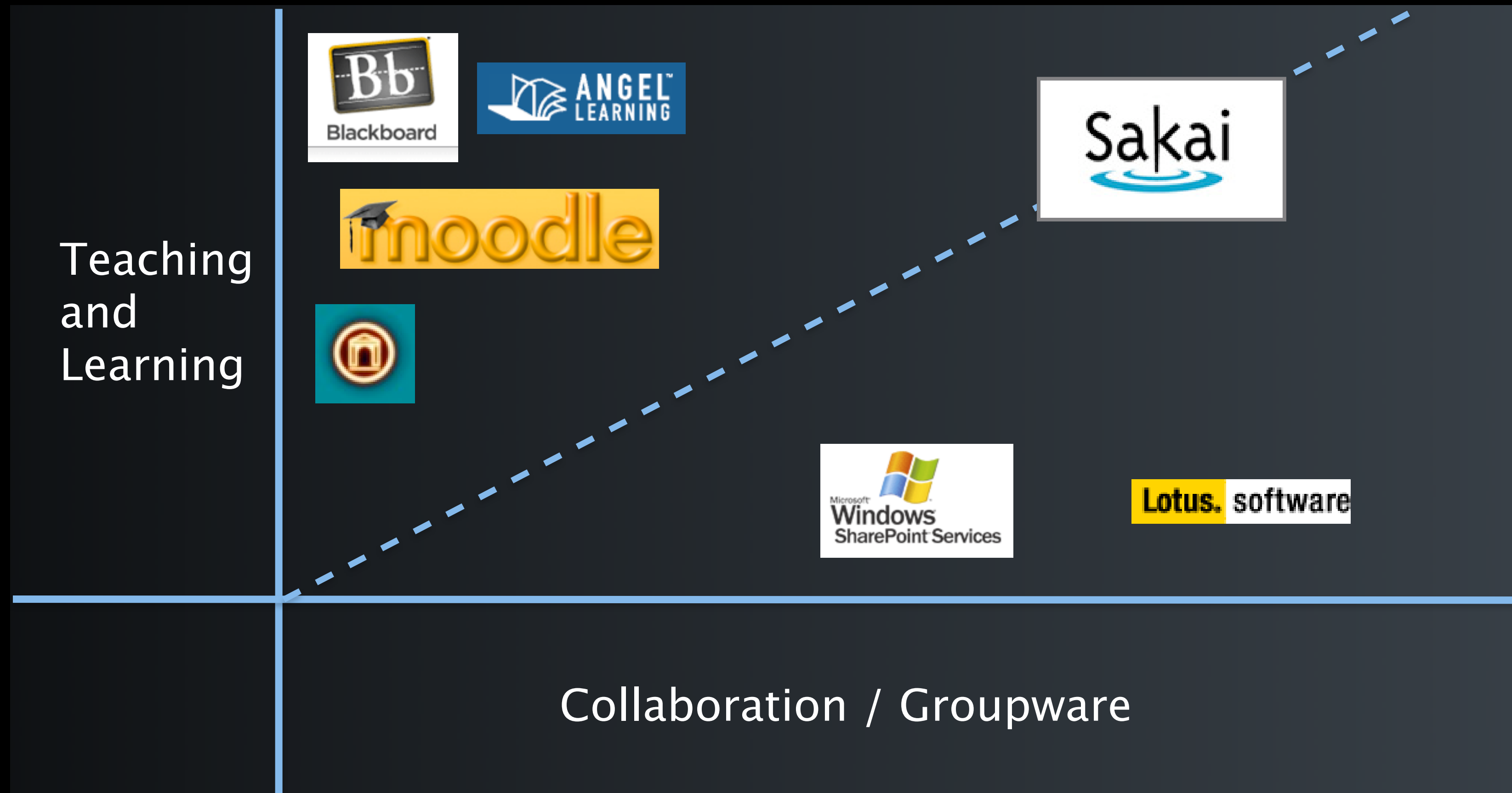
A Collaboration and Learning Environment



Portfolio Video: <http://www.dr-chuck.com/media.php?id=73>

Placing the Sakai Product

A Collaboration and Learning Environment



Portfolio Video: <http://www.dr-chuck.com/media.php?id=73>

My Workspace

sakai - a demo

Home

Profile

Membership

Resources

Announcements



Worksite Setup

Preferences

Account

Help

↑ ANNOUNCEMENTS



Announcements

View All



Viewing 1 - 2 of 2 items



show 10 items...



Subject

From

Site

Date



Announcement test

Megan Chisholm

sakai - a demo

May 1, 2006 2:01 pm

First post

Mike Rebbechi

sakai - a demo

Apr 28, 2006 5:22 pm

users present:

Matt Morten-Allen

| Gateway | The Sakai Project |

Powered by Sakai

Copyright 2003, 2004, 2005 The Sakai Foundation. All rights reserved. Portions of Sakai are copyrighted by other parties as described in the Acknowledgments screen.

Interact - 2.1.1 - Sakai 2.1.1 - Server "interact.csu.edu.au"

Sakai 2.4 Generic Tools

Announcements

Blog (*)

Calendar

Drop Box

Email Archive

Resources

Chat Room

Forums

Threaded Discussion

Link Tool

MailTool

Message Center

iTunesU

News/RSS

Podcasting

Poll (*)

Portlets

Preferences

Presentation

Profile / Roster

SakaiBrary

Schedule

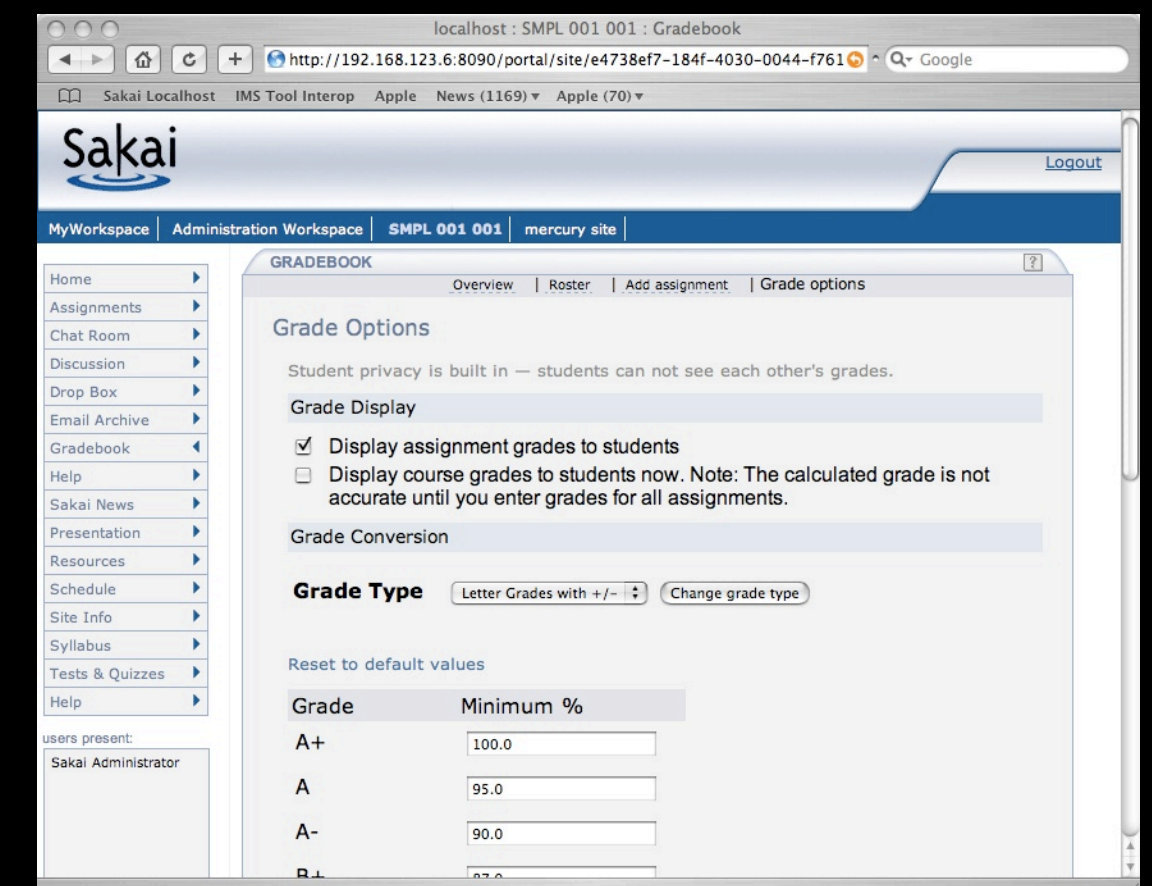
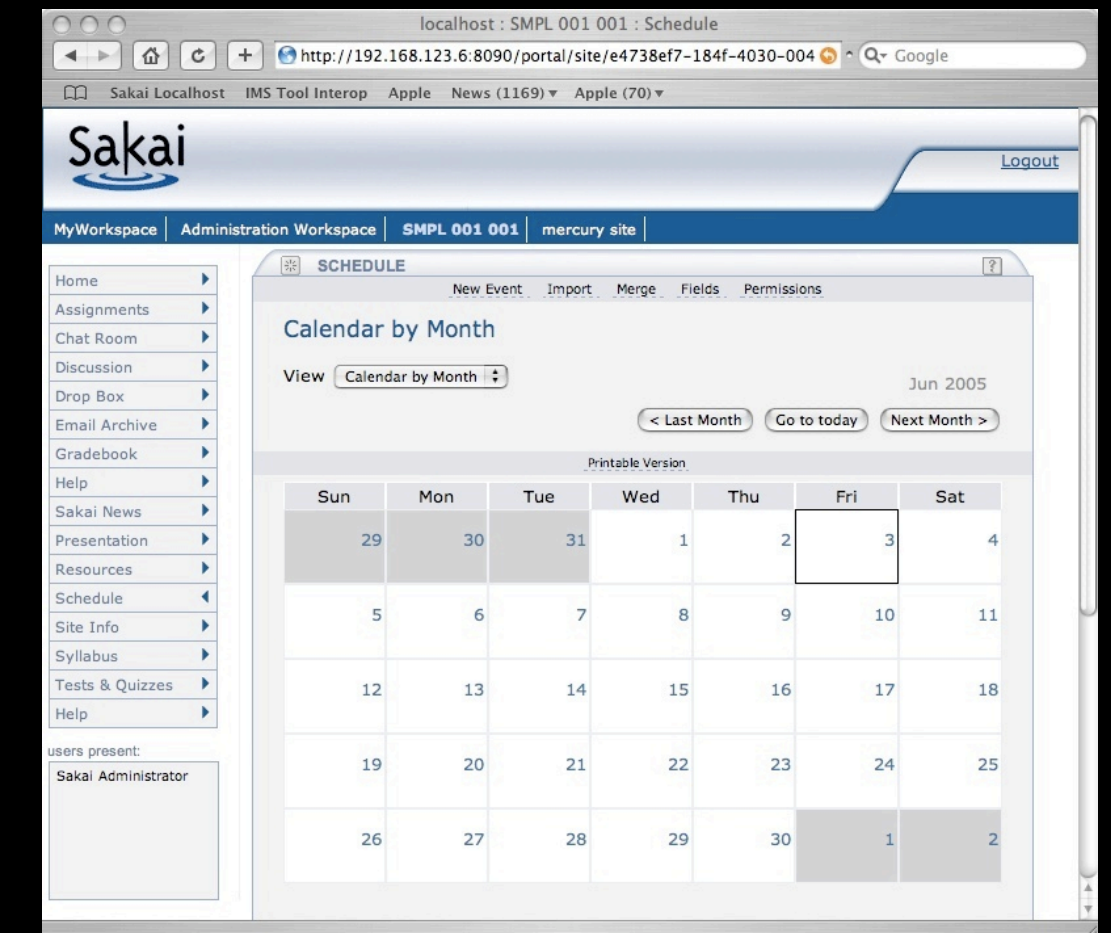
Search

Transformable

WebDAV

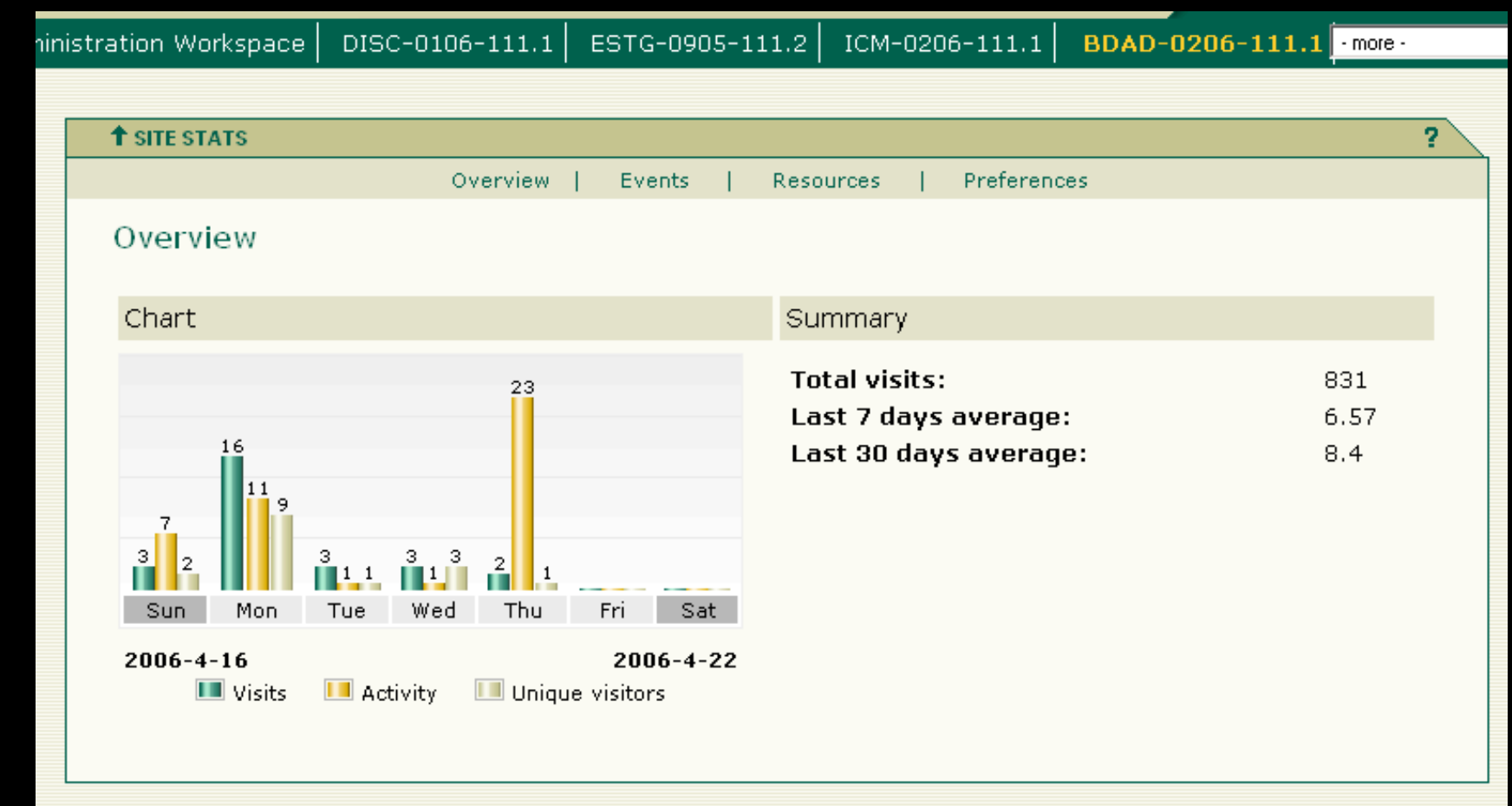
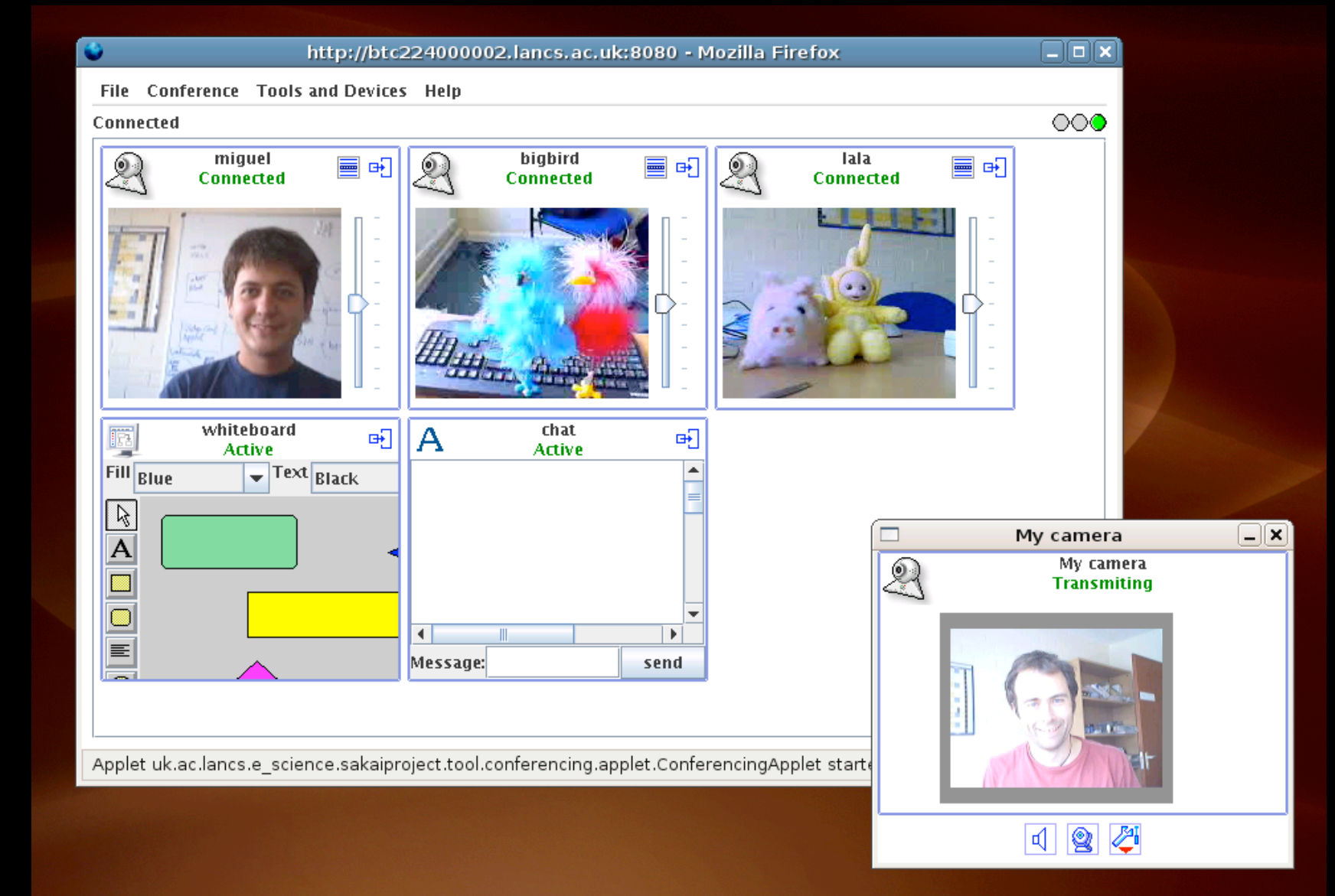
Wiki

(*) indicates tool is provisional for release 2.4



Contributed Area

- Collaboration
 - JForum
 - Image Gallery
 - Image Quiz
 - Site Statistics Tracking
 - Agora Real-Time Conferencing
 - Open Courseware Export
 - JSR-170 Repository
 - Evaluation System
 - GuanXi / Shibboleth
- Teaching and Learning
 - SCORM Support



Contributed → Provisional → Full Release

The Sakai Research Edition

A group of people around the world working to build and share a common Collaboration and Learning Environment using a Community Source approach.



Why Sakai Research Edition?

- Sakai is a very large tool kit aimed at enterprise deployments
- Sakai has too many options and is too flexible and is too hard to install and configure
- Tools like Gridsphere, Stringbeans, Liferay, etc are less well-suited to “collaboration” and yet are so much simpler to install that they get used all the time to build collaboration systems for eScience
- Sakai **finally** supports JSR-168 in Sakai 2.4
- Outsourcing it all to Google / Yahoo / Microsoft loses long-term access to **our** science activity

Cloud Services

- The market is building services that are better, cheaper, and faster to support research than we are
- Yahoo, Google Video, Google Mail, YouTube, MySpace, and Microsoft Live
- I use these services rather than my campus–provided services
- But I lose control over my data and the instances of the content is owned by commercial entities who see my videos as their asset to gain market share and eyeballs.

[Web](#) [Images](#) [Video](#) [News](#) [Maps](#) [more »](#) [Upload your videos](#)

Dr. Chuck Films Sakai

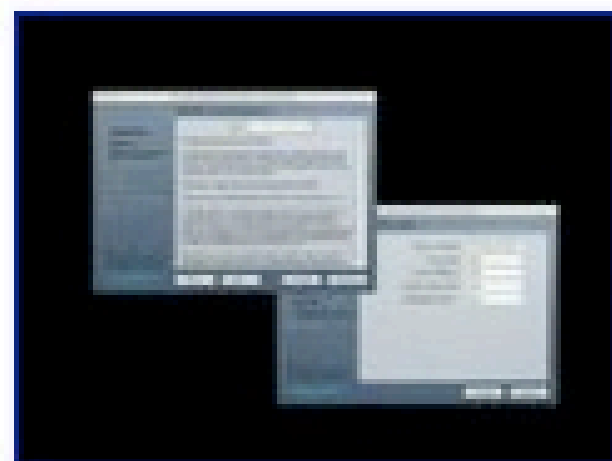
Search

[Advanced Video Search](#)[Top 100](#)[Comedy](#)[Music videos](#)[Sports](#)[Animation](#)[TV shows](#)

Results for Dr. Chuck Films Sakai

All durations

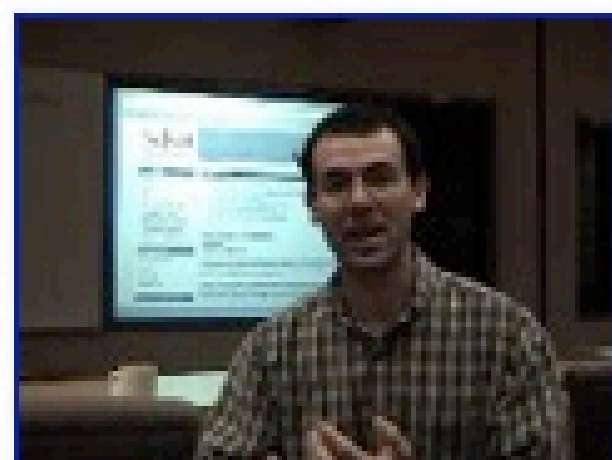
Sort by relevance

1 - 10 of about 19 (0.02 s) - [RSS](#)

[Sakai Overview](#)

csev - 11 min - Sep 2, 2006

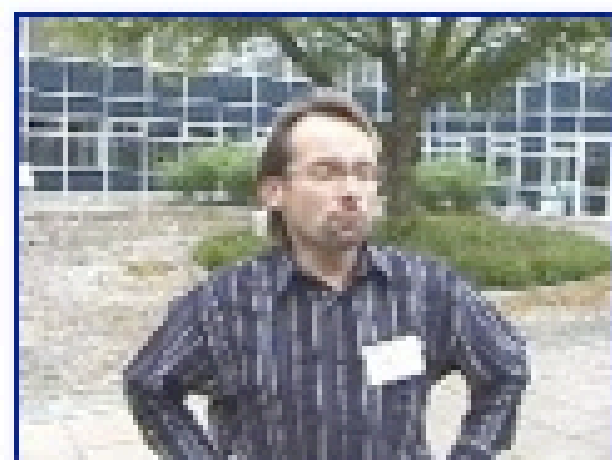
... and portfolios, how the **Sakai** community works, how **Sakai** works to improve interoperability through standards, and some technical detail about **Sakai**.

http://www.youtube.com/watch?v=_SkGi_tKBL4

[Sakai Developer Profile: Steven Githens](#)

Dr. Chuck Films - 4 min - Aug 18, 2005

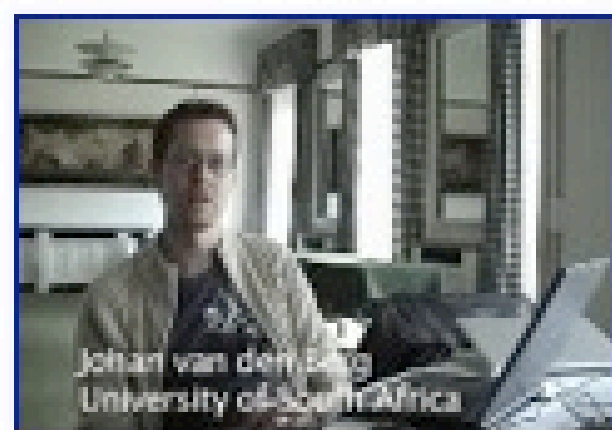
Dr. **Chuck** interviews Steven Githens at the Ann Arbor **Sakai** Developers meeting and asked him about web services, user interfaces, and the future of **Sakai**.

<http://video.google.com/videoplay?docid=4668952922063159561>

[Sakai Video Report: European Sakai Days, Lubeck Germany](#)

Dr. Chuck Films - 6 min - Sep 27, 2006

... and runs the **Sakai** system at oncampus and with Prof. Dr.-Ing. Rolf Granow who talks about the Baltic Sea Virtual Campus and why oncampus choose **Sakai**. ...

<http://video.google.com/videoplay?docid=-7598816498369623566>

[Sakai Developers @ Cambridge University](#)

Dr. Chuck Films - 4 min - Sep 26, 2005

The **Sakai** developers met in Cambridge, UK with representatives from several universities. There was discussion around production issues, and the upcoming ...

<http://video.google.com/videoplay?docid=8704496191347105466>

Sakai Research Edition and the Open Grid Computing Environment

- I was part of the 4-year OGCE project
 - OGCE 1.0 was based on NEESGrid / CHEF technology
 - OGCE 2.0 focused on building portable JSR-168 portlets to solve Grid Computing user interface issues
- Sakai Research edition will be able to include all the portlets from OGCE – I hope to include these out of the box
- There are pending requests for research funding to continue OGCE and to support Sakai-RE.

Sakai R.E. and Cloud Services

- Try to “keep up” with the innovation pace and use them as an indication of the requirements and use cases and usability.
- Build similar (likely simpler) interfaces that we maintain control over
- Integrate with those services
 - RSS Feed to Google Home Page
 - Proxy for Google Groups or Yahoo Groups
 - Publish to YouTube or Google Video
 - Make our data searchable by search engines and mark our data semantically to improve search results
- Outsource the hard bits like media conversion and high-end streaming to these services. Focus on keeping our archival copy with proper metadata.

Two Thrusts of Sakai Research Edition

- Make Sakai more attractive and easier to use for Scientists on a daily basis – “Surprise and Delight”
- Make archival and retention of science activity robust and painless

Sakai Research Edition Deliverables

- RSS Feeds, Synoptic Information, and Event Notification
- Support for JSR-168, WSRP 1.0, WSRP 2.0, JSR-286
- Federate across multiple Instances of Sakai into a single view.
 - Support for Shibboleth/GuanXi built-in
- Dramatically improve E-Mail support in Sakai – make E-Mail a general form of *interaction* with Sakai – improve Archivability and searchability
- Widgets: Desktop/System Tray Sakai monitors, Apple Widget, PDA/iPhone version of Sakai
- Simple WorkGroup Content Publishing System in Sakai

Deliverables..

- Publish Semantic data models for Sakai elements: Users, Groups, Resources, Files, Sites, Calendars, Announcements, Chats, Threaded Discussion, E-Mail Archive, Wiki, Blog
- Add RDF capabilities to Sakai
 - Able to write RDF-centric tools
 - Able to export Sakai information in RDF format
 - Re-Implement some Sakai services to be Tuple Native
- Use JSR-170 to store files, metadata and (I hope) tuple-native data

Outreach

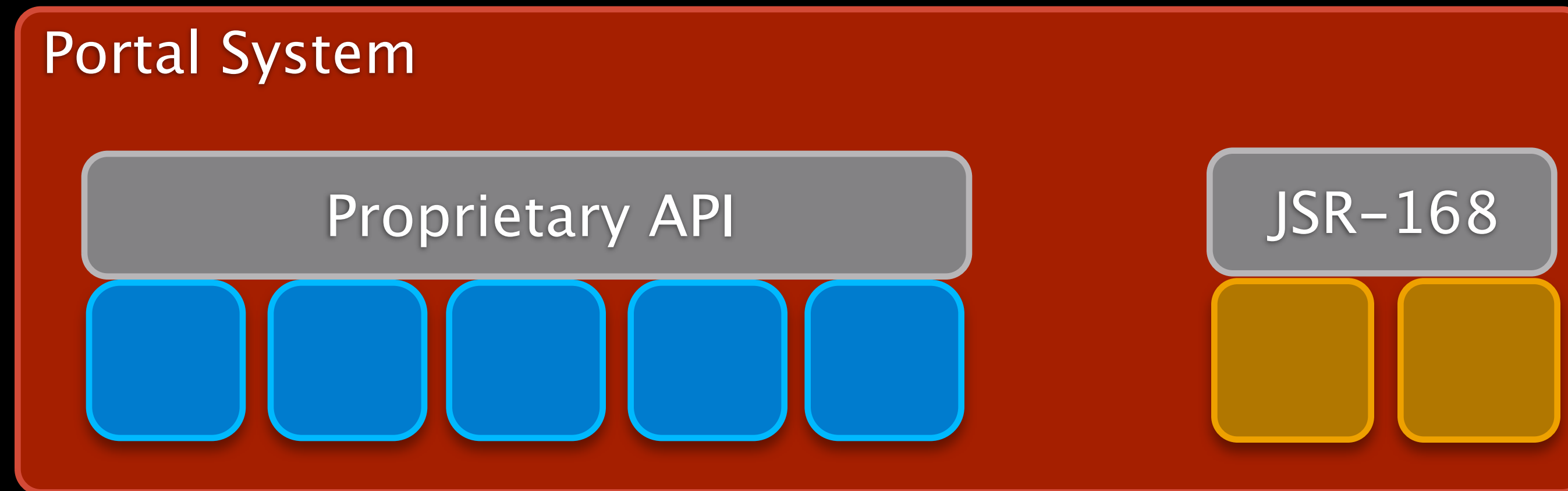
- Sakai Research Edition Web Site
- Online Training
 - Installing and configuring Sakai
 - Developing Portlets for Sakai
 - ...
- Conference Presentations
- Papers

Portal Standards

The JSR-168 (Portlet API) helps us insure portability across portals.



Modern Portal “Architecture”



All portal containers provide their own APIs for things that are not provided for in the JSR-168 standards. Their own portlets make heavy use of these APIs and most developers just starting out simply write to the proprietary API because it is faster and more convenient. As a result, organizations quickly become locked into a single portal – and even worse – the portlets they produce only work in one portal.

JSR-168

- Strengths
 - Compared to some frameworks, Portlets are like easy to write
 - Good support for light-weight persistence in the form of properties
 - Reasonable support for AUTHN, User Directory, and AUTHZ but lacking convention across vendors
- Weaknesses
 - Not portable at a binary level
 - HTML is not well-constrained – The only presentation standard for JSR-168 is a very weak CSS section
 - No provision for any kind of service oriented architecture
- Conclusion: JSR-168 portlets are **great** for some things

When to use JSR-168?

- iFrame Portlet
 - Web Clipping Portlet
 - RSS Client
 - WSRP Consumer
 - A UI that calls web services for something like Fedora
 - A simple Google Map Tool
-
- Think of things that have persistence needs of 5–10K per placement – use properties for storage and edit mode for configuration.

Looking Forward in Portals

- JSR-286 (Portlet v2) is coming
- WSRP 2.0 is coming
- JSR-170 is an excellent compliment to JSR-168
- I would like to connect WSRP 1.0 to Pluto 1.1
- We need to develop conventions outside of the standards process for:
 - AUTHN
 - AUTHZ
 - Binary compatibility for war files
- Still need some agreement
 - Service Oriented Architecture Hooks – must be simple

Initial Sakai Research Steps

Some work is already underway...



Sakai Based Service : Wiki Sample : Wiki

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🌐 http://localhost:8080/portal/site/566f19af-8e26-4896-0064-cbf0eaf333

🔍 Google

Sakai Collab Source Cafe Bugs Confluence Pluto up3 S:8080 PDA uP3 Desiderata GVideo IMSTI DNS Devbox



Logout

My Workspace | Module Sample | Web Sample | Wiki Sample

Wiki

?

Home

View

Edit

Info

History

Watch

Search:

[Home](#)

Welcome to Accounting 200



Here is the course outline

[Week 1?](#)

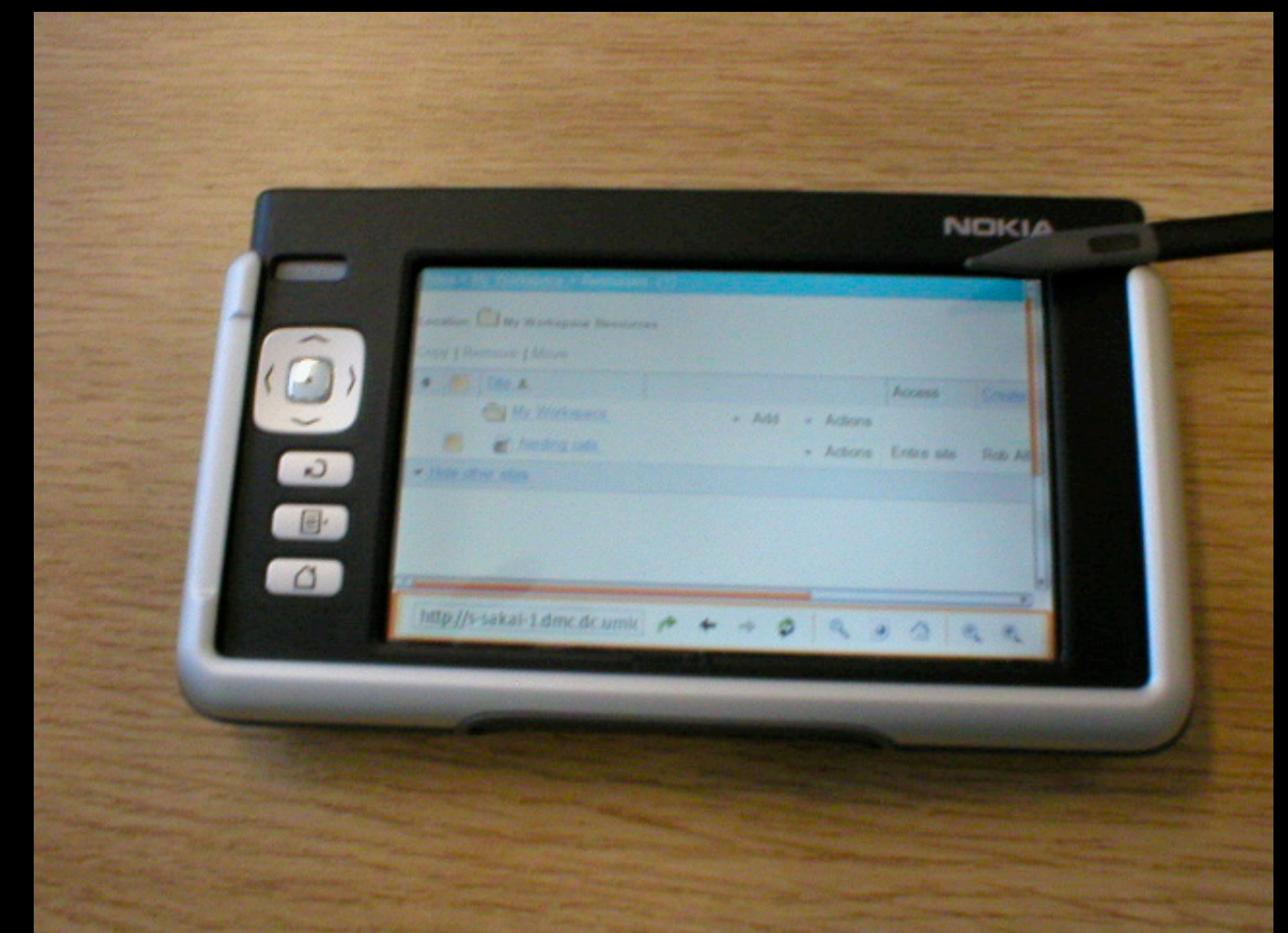
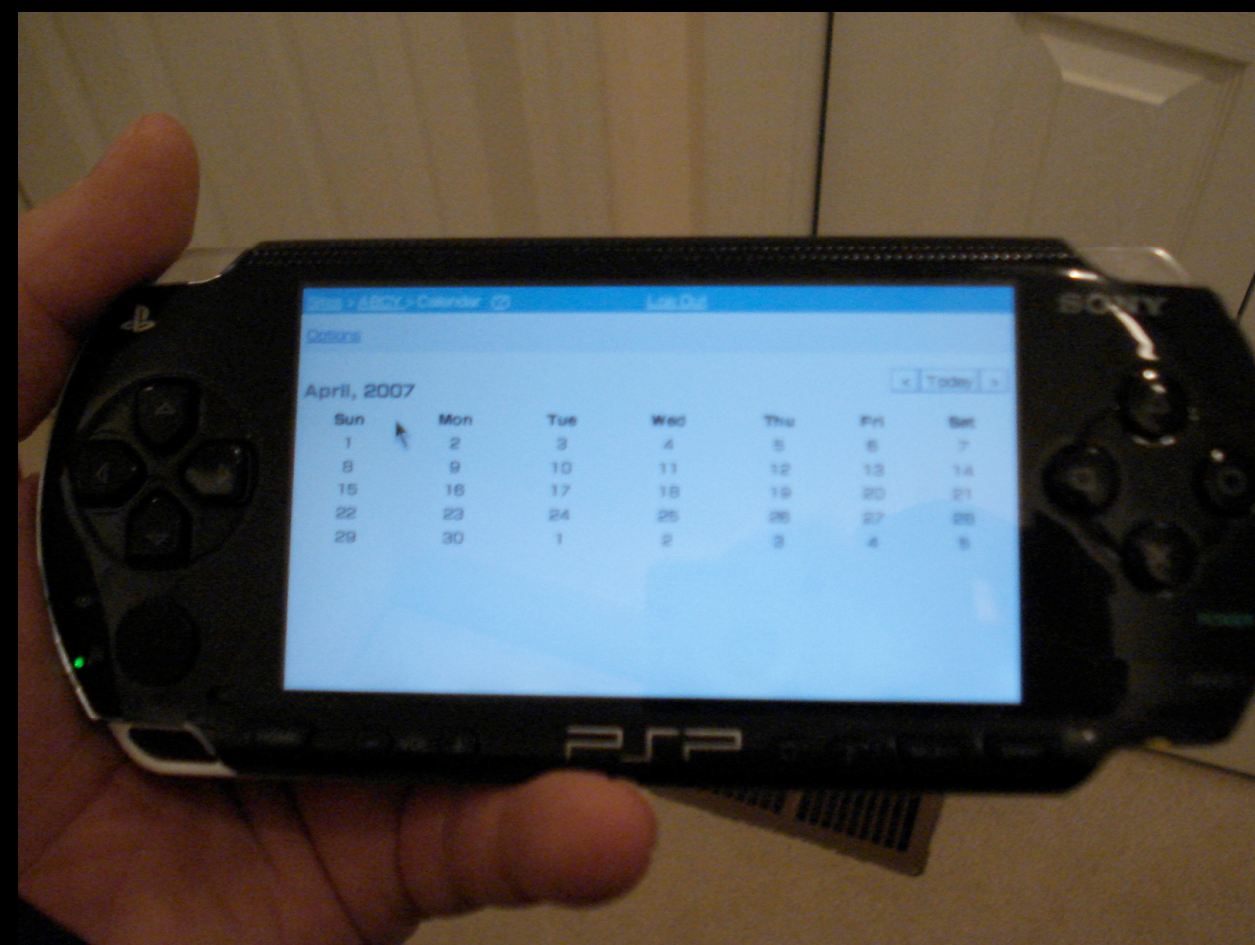
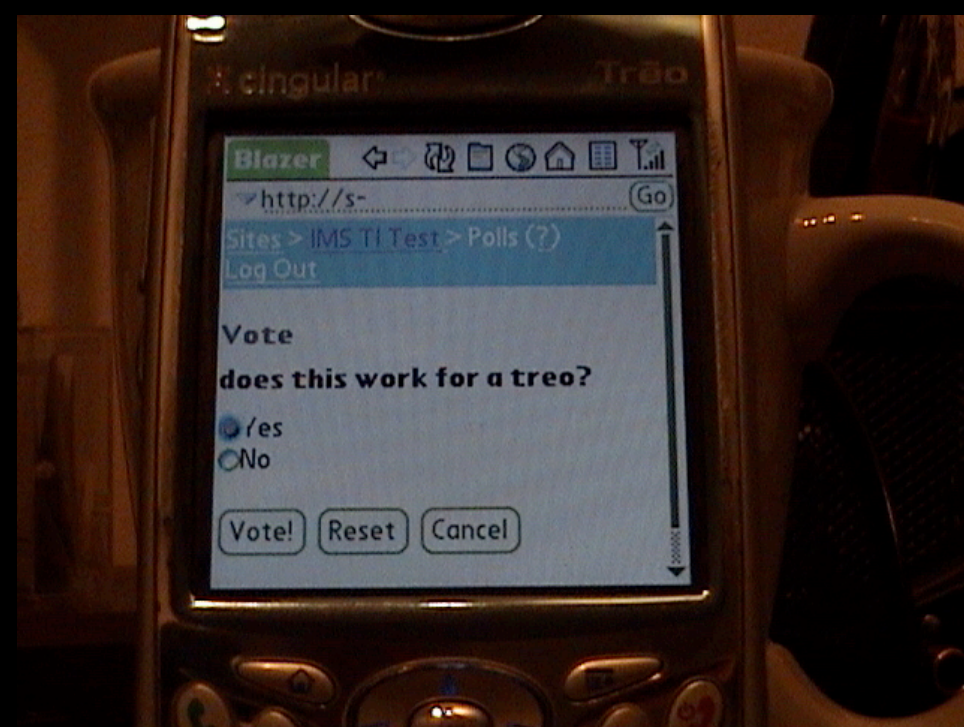
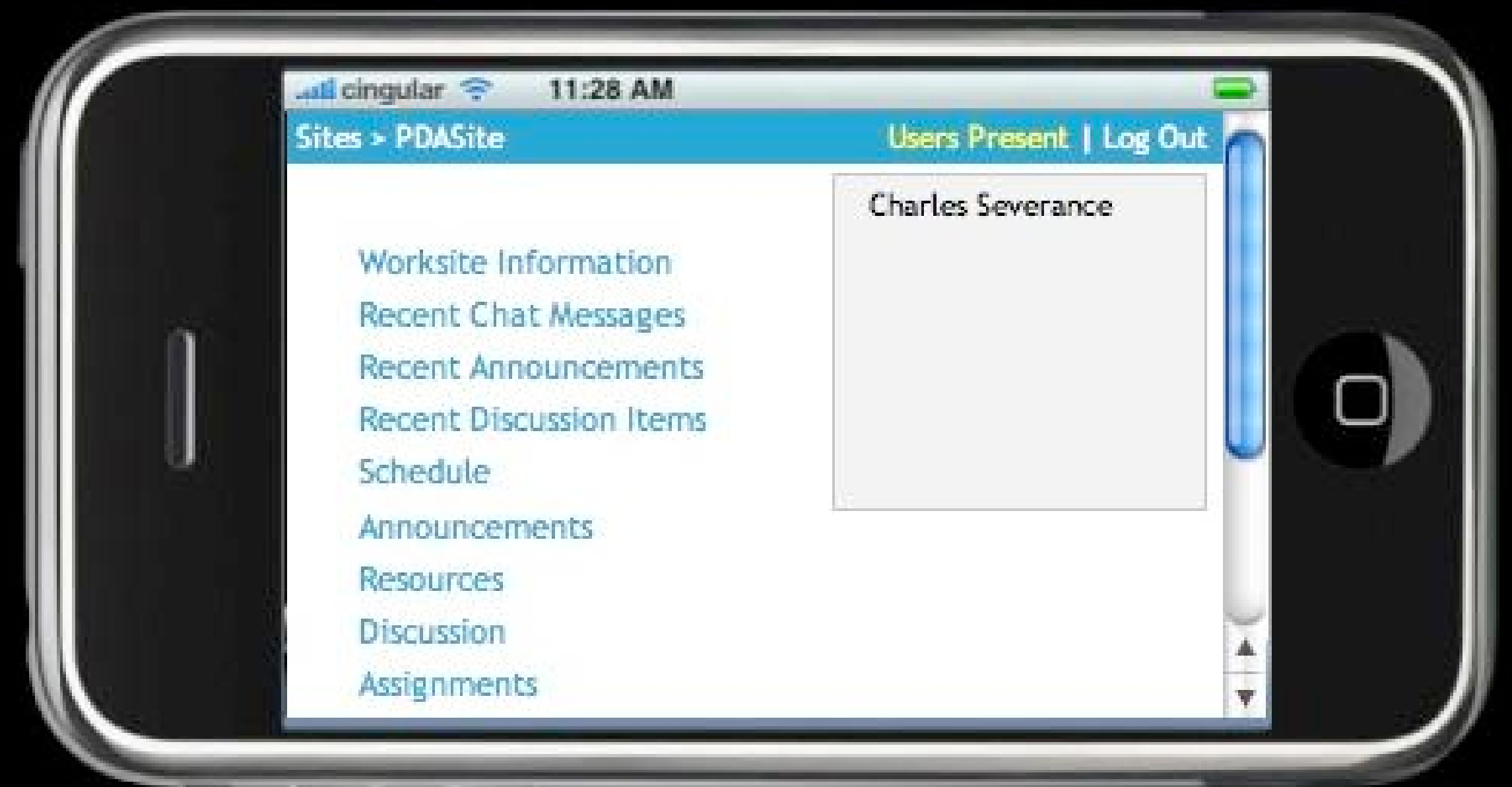
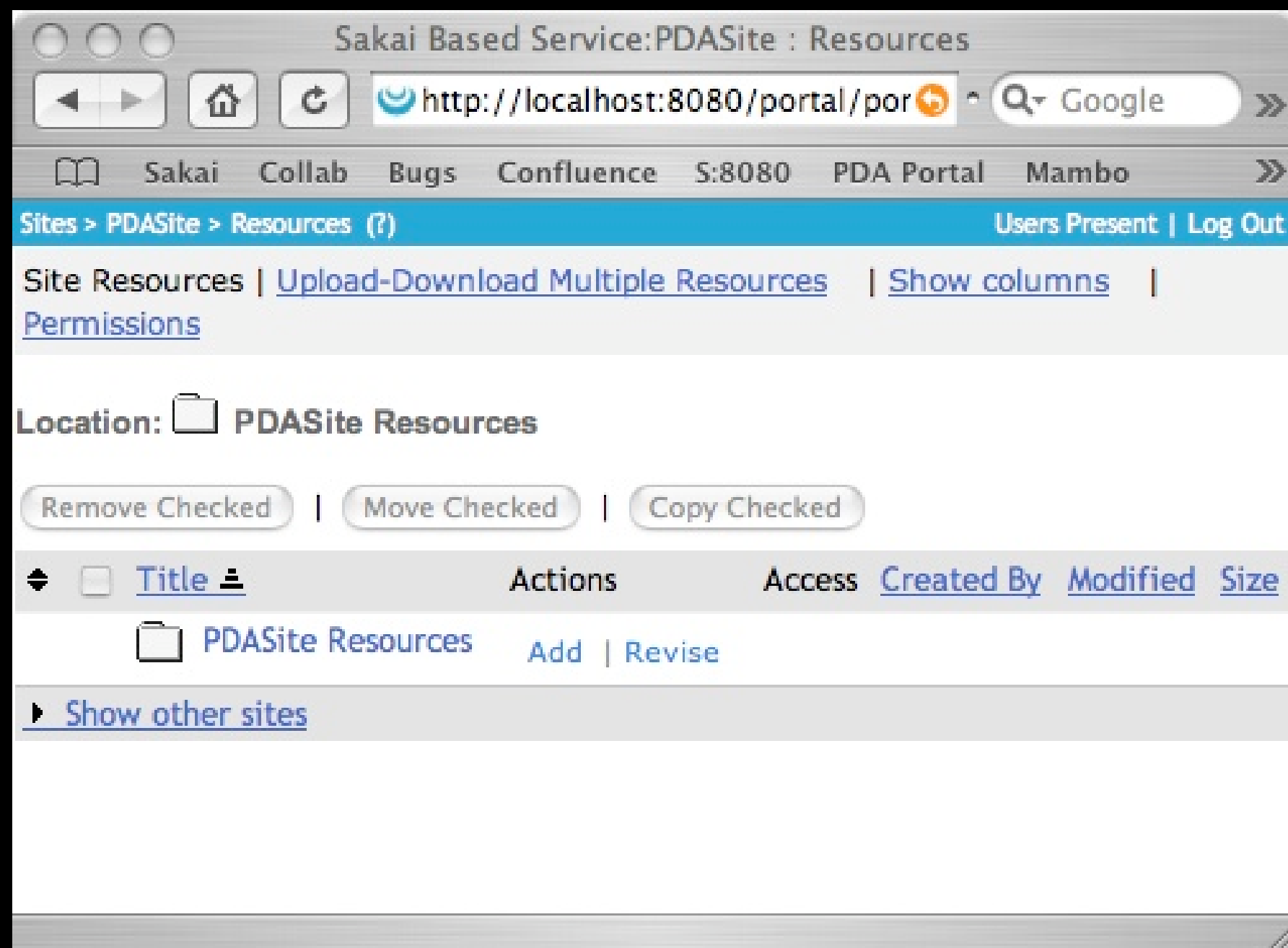
[Week 2?](#)

[Week 3?](#)

Home last modified by csev on Sat, 28 Apr 2007 16:01:35 -0400

[Comment](#)

1



Sakai RSS Feed

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feed://192.168.1.103:8080/portal/atom/

🔍

Google

📖

D

Sakai

Collab

Bugs

Confluence

S:8080

PDA Portal

Mambo

Desiderata

GVideo

»

Sakai RSS Feed2 Total

Gateway Today, 01:41 PM

Server Status, Sakai Administrator, Feb 19, 2007 1:41 pm [Read more...](#)

PDA in Sakai Today, 01:31 PM

This is an Announcement, Sakai Administrator, Feb 19, 2007 1:31 pm [Read more...](#)

PDA in Sakai

⏮

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+

feed://192.168.1.103:8080/portal/atom/snork/

🔍

Google

📖

D

Sakai

Collab

Bugs

Confluence

S:8080

PDA Portal

Mambo

Desiderata

GVideo

»

PDA in Sakai7 Total

Resources Today, 02:13 PM

[Read more...](#)

Schedule Today, 02:13 PM

[Read more...](#)

Wiki Today, 02:13 PM

[Read more...](#)

NumberGuess Today, 02:13 PM

[Read more...](#)

Discussion Today, 01:33 PM

Topic, Sakai Administrator, Feb 19, 2007 1:33 pm [Read more...](#)

Chat Room Today, 01:31 PM

Yo Fellows, Sakai Administrator, Feb 19, 2007 1:31 pm [Read more...](#)

Search Articles:

🔍

Article Length:

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≡

Sort By:

Date

Title

Source

New

Recent Articles:

All

Today

Yesterday

Last Seven Days

This Month

Last Month

Source:

PDA in Sakai

Actions:

Sakai Based Service : Gateway : Welcome

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🌐

http://localhost:8080/portal/

🔍 Google

📖

Sakai

Collab

Bugs

Confluence

S:8080

Mambo

Desiderata

GVideo

IMSTI

Pluto

GS

DNS

K12

CSU

»

Sakai

user id:

password:

Login

Gateway

Snork

Welcome

About

Features

Sites

Training

Acknowledgments

New Account

" Help

Message of the day

?

There are currently no messages at this location.

Welcome!

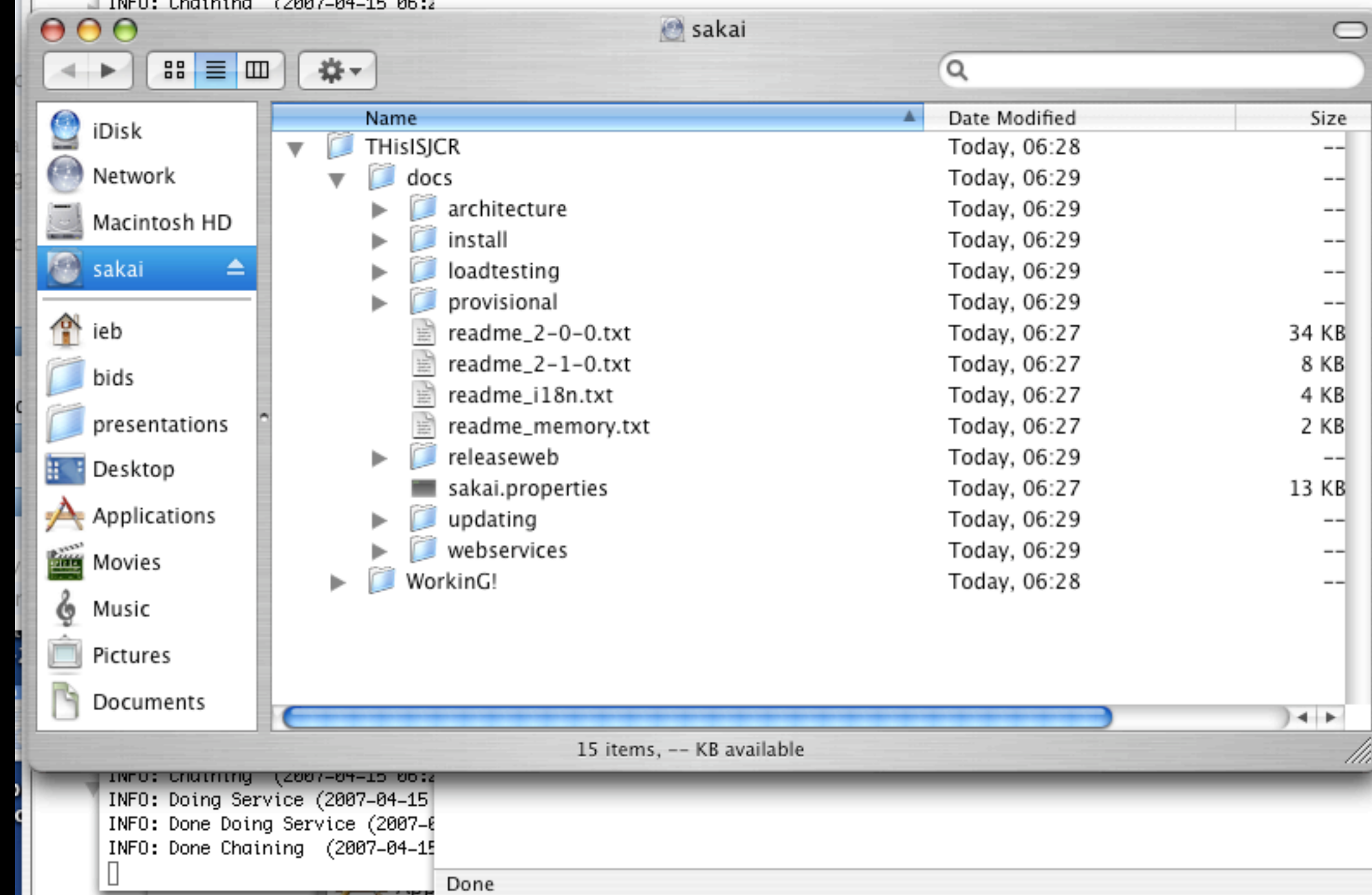
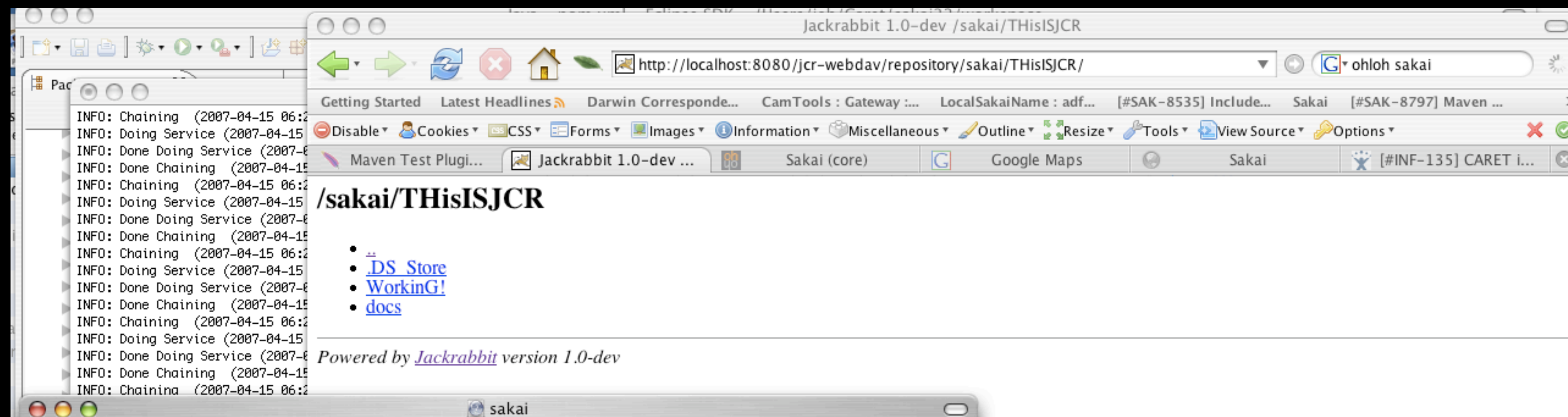
?

Welcome to the Sakai Demo. The Demo configuration was created as a way to let you get an instance of Sakai up and running quickly and easily. For more information about installing a Sakai solution appropriate for production needs please read the readme files, and visit the Sakai website at sakaiproject.org, and the Sakai Developer's site at collab.sakaiproject.org.

The information displayed here can be modified by the Sakai Administrator by editing the file sakai.properties configuration value

Default

" to point to the html file desired.

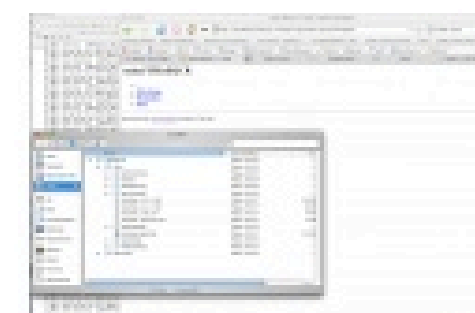


JCRService + WebDAV Working

I've now got the JCRService integrated into Sakai and working with Jackrabbits WebDAV library. The JCRService which exposes a the standard 170 API to Sakai is using a Jackrabbit implementation integrated into Sakai. The webDAV implementation uses Jackrabbits own webDAV libraries which have support for

- RFC 2518 (WebDAV - HTTP Extensions for Distributed Authoring)
- RFC 3253 (DeltaV - Versioning Extensions to WebDAV)
- RFC 3648 (Ordered Collections Protocol)
- RFC 3744 (Access Control Protocol)
- DAV Searching and Locating (DASL)

There is still some work to do in AccessManager to get all the fucntions mapped and setup some sort of default structure, but so far performance looks good, about 1000 items representing 20MB goes up in < 1Minute with some base level logging turned on. I expect this to drop a bit when the SakaiSecurity Service is fully integrated.



Pluto Portal

http://localhost:8090/pluto/portal//IMS%20Tool%20Interoperability/_pm0x3in Google

Sakai Collab Source Bugs Confluence Pluto S:8080 PDA uP3 Desiderata GVideo IMSTI DNS Devbox Gmail Band

APACHE PLUTO

Logout

Navigation:

IMS Tool Interoperability (JSR-168)

Add Merge Fields Permissions

Calendar by Week

View Calendar by Week

Apr 15, 2007 - Apr 21, 2007

< Previous Week To

Printable Version

Earlier

	Sun 15	Mon 16	Tue 17	Wed 18	Thu 19	Fri 20
8 AM						
9 AM						
10 AM						
11 AM						
12 PM						
1 PM						
2 PM						

http://localhost:8080/portal/pda/b3ab...69-ed4a-4fbf-00be-b2caeb596370/target

http://localhost:8080/portal/pda/b3abd26c-23cl Google

Sakai Collab Source Bugs Confluence Pluto up3 S:8080 PDA uP3 Desiderata

Sites > IMS TI Testing > IMSTI (?) Log Out

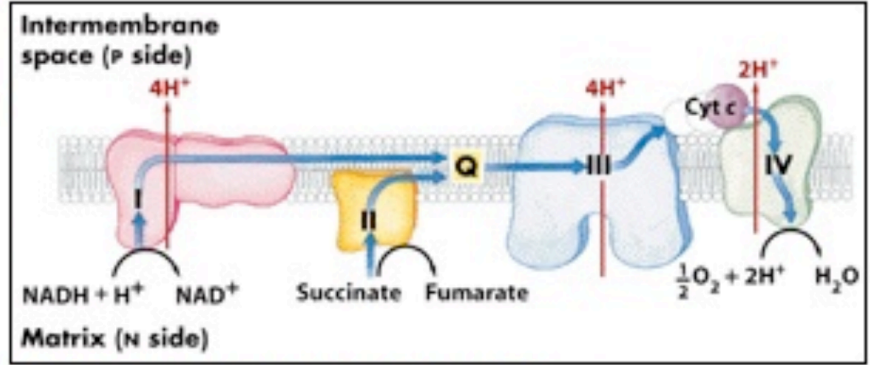
Tool List

OXIDATIVE PHOSPHORYLATION

Define Examples Connect Check

OXIDATIVE PHOSPHORYLATION

The enzymatic phosphorylation of ADP to ATP coupled to electron transfer from a substrate to molecular oxygen. Oxidative phosphorylation has the following attributes:



mitochondrial oxidative phosphorylation

- occurs in the mitochondrion (and some other compartments)
- electrons are passed down the electron-transfer chain
- redox reactions of the electron-transfer chain move protons to the intermembrane space
- phosphorylation of ADP is coupled to re-entry of protons into the matrix through the enzyme ATP synthase

Close Window



JSR-168
Portlet

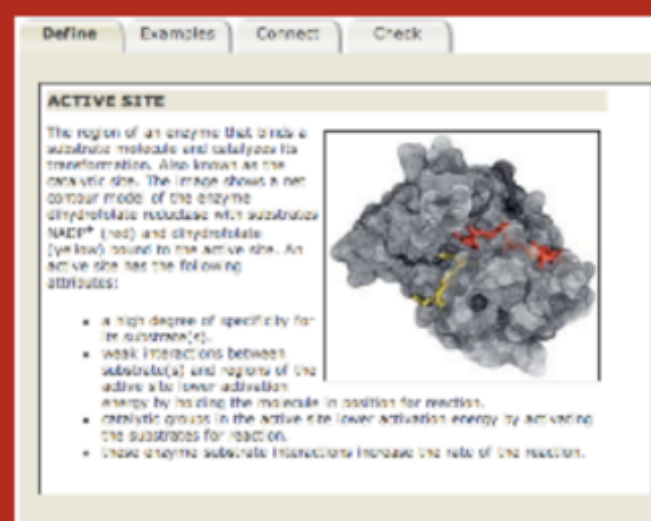


JSR-168
Portlet

Sakai
Tool

IMS TI
IMS TI
Lite

Sakai



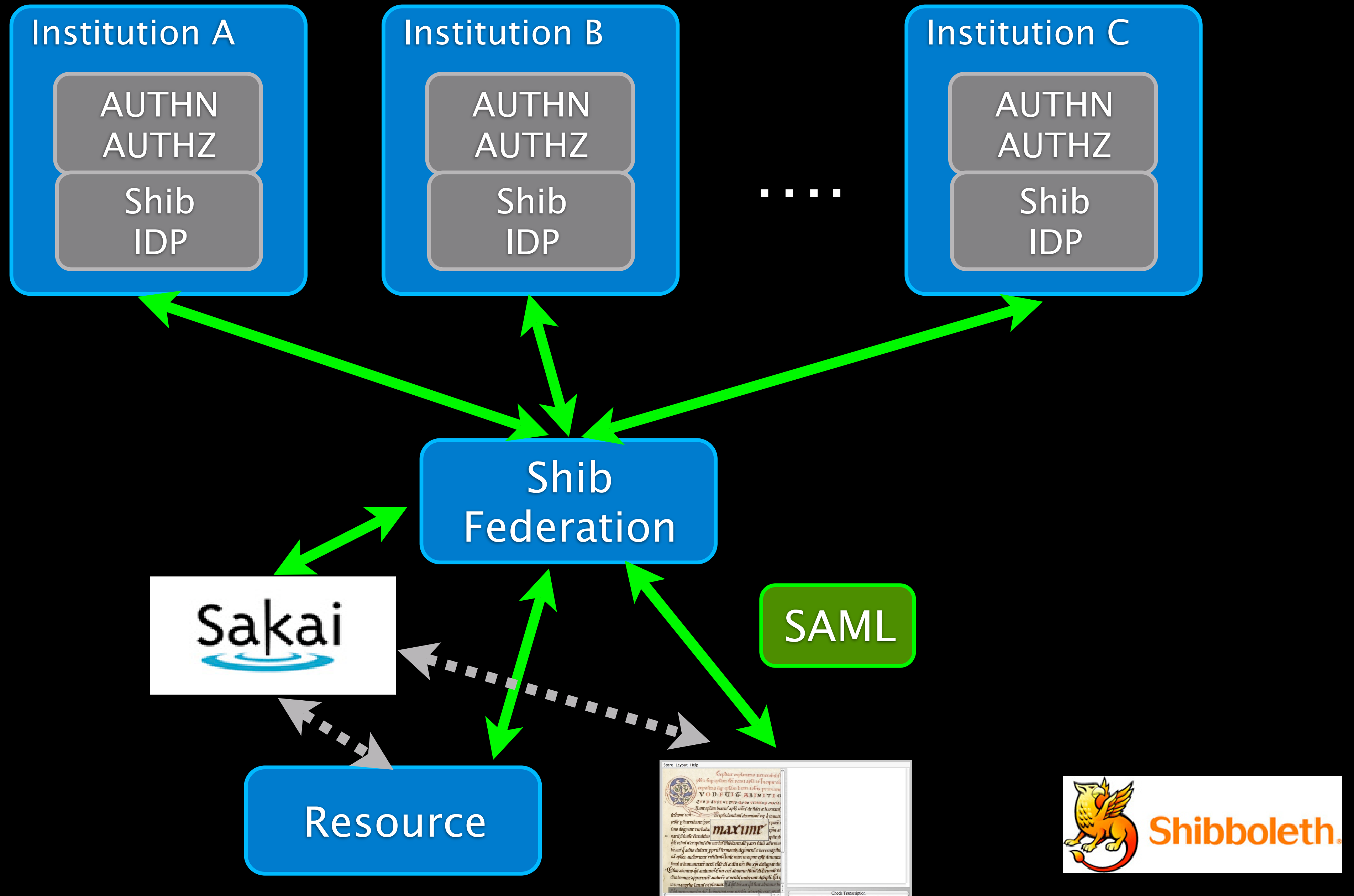
IMS Tool Interoperability (JSR-168)
Welcome to EndpointTool.php
This is the actual running tool.
SiteId= toolInstance.getContextProfile().getSourceId()
LaunchIdentifier= toolInstance.getLaunch().getLaunchIdentifier()
Role= admin
EID=
UserId=
FirstName=
LastName=

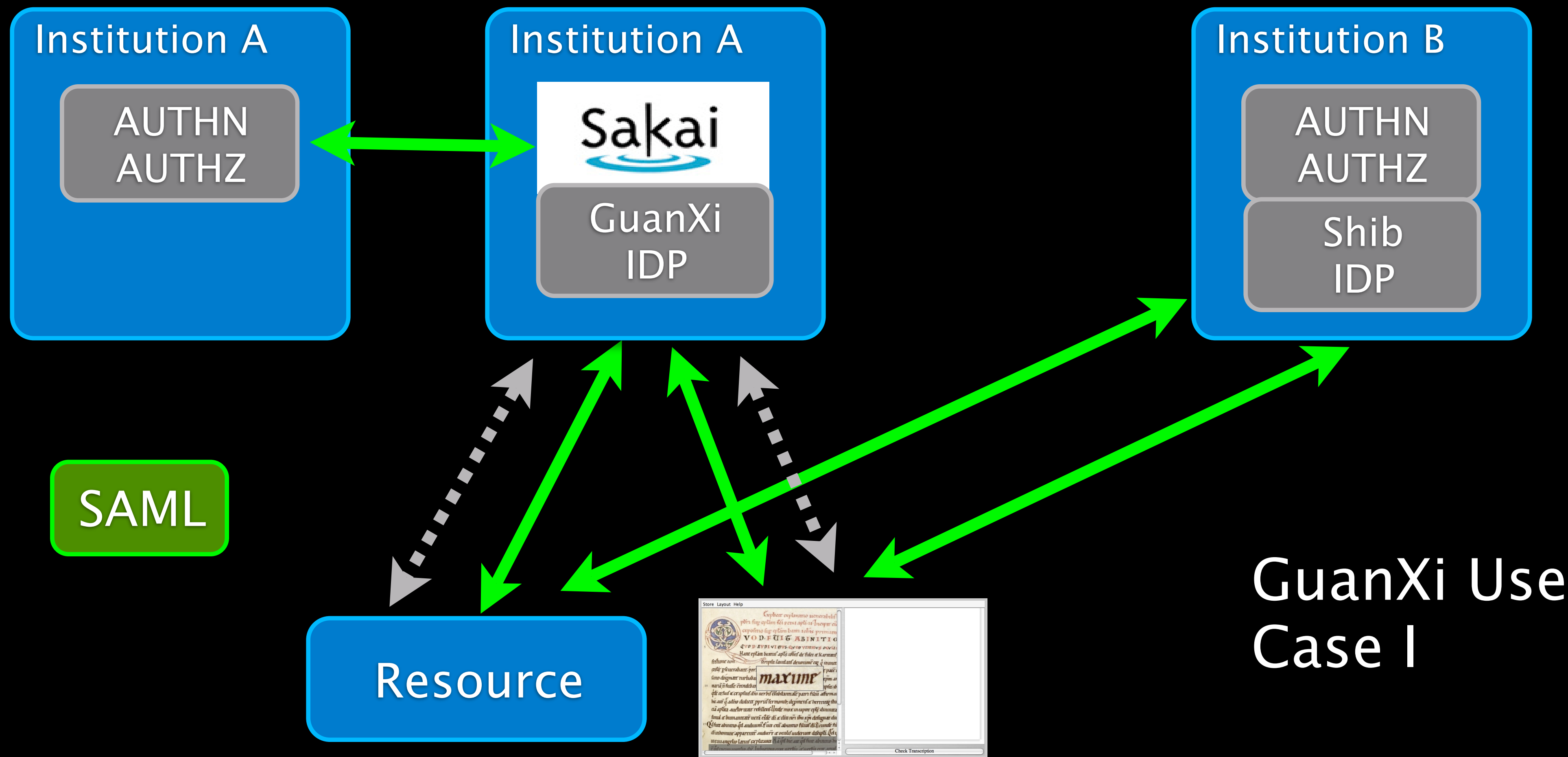
Federated Identity in Sakai

- SAML profiles – Shibboleth and GuanXi
 - SAML = Security Assertion Markup Language
- Shibboleth – Oxford
 - Federated identity for large groups to use a Sakai server with support for distributed AUTHN/AUTHZ
- Guan Xi – University of the Highlands and Islands
 - Allows inclusion of Shib-enabled resources into a Sakai Collaborative Environment
 - Allows elements of Sakai to be used/included in another environment

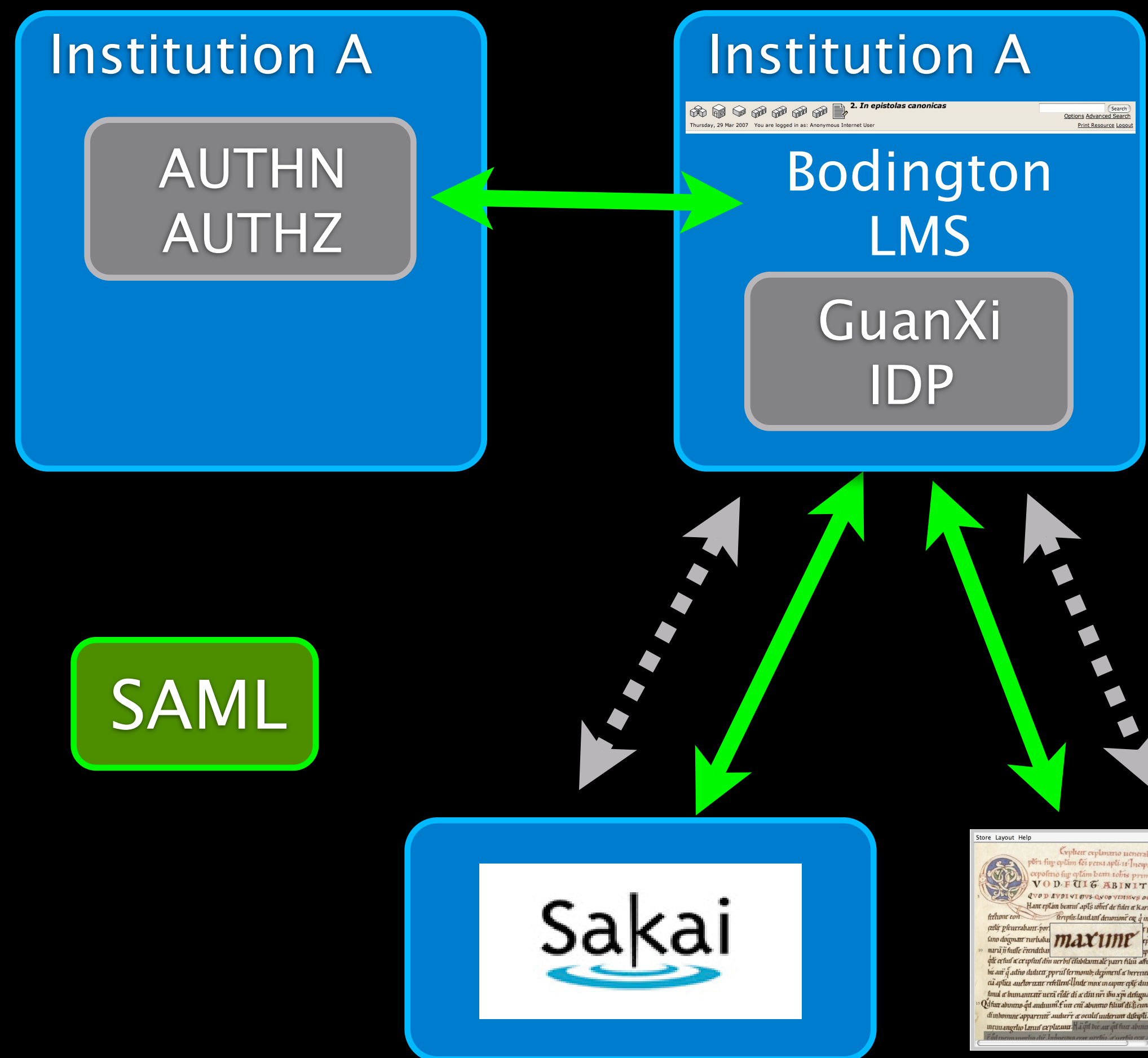
Federated Identity in Sakai

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關係



GuanXi Use
LMS Mashup

關係

GuanXi Working in Sakai



To access the resource you requested, you must first login to your Identity Provider

uhistdnt1	Username
*****	Password
Login	

Guanxi@UHI Millennium Institute

關係

Example Sakai Announcement Tool - Firefox

FileEditViewHistoryBookmarksToolsHelp

←→↺✕🏠🔍TAG

http://localhost:8080/weblearn/site/announcement/

Google

firefox:toolbaredit stylesbloglines/newbloglinesdel.icio.us/buckettdel.icio.us/post

Home Space for Matthew BuckettExample Sakai Announcement...Maven 1.x - Handling Dependencies[#SAK-6256] Control the 'Edit site ...

Example Sakai Announcement Tool

Public: yes

WebmailHelpTinyURLNotify MeOptionsAdvanced Search

MyWebLearn Signup

12/01/2007

You are logged in as: System Administrator (Logout)

AddMergeOptionsPermissions

Announcements

ViewAll

Viewing 1 - 1 of 1 items

<<<>>>

show 10 items...

>>>

Subject	From	For	Date	Remove?
First Announcement Edit	System Administrator	site	Jan 12, 2007 3:38 pm	☐

Update

Cancel

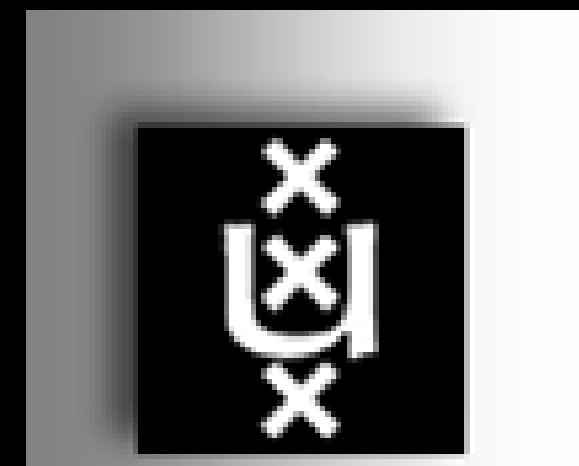
Done

Prototype of Sakai working in
the Bodington Learning
Management System

Thank you for your time...

- www.sakaiproject.org
 - www.sakairesearch.org
- Sakai-wide collaboration area
 - collab.sakaiproject.org
 - DG: Portal
 - DG: Research

Sakai Conference:
June 12–14, 2007
Amsterdam, NL



Sakai Track at JA-
Sig Conference
June 24–27, Denver

