IMS Basic Learning Tools Interoperability Free as in Freedom

Charles Severance
Osakai Japan

Sakai is Seven Years Old!

http://bit.ly/gHPQWT

http://www.slideshare.net/csev/jasakai-ims-tools-interoperability-free-as-in-freedom

Three Meanings of 'Free'

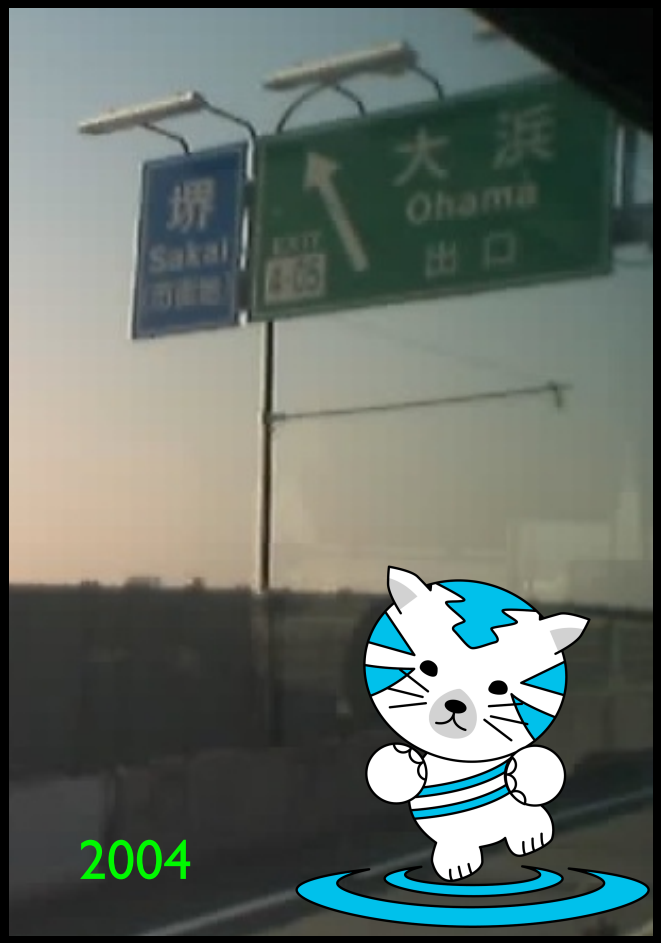
Free as in 'Free Beer'

Free as in 'Free Puppies'

Free as in 'Freedom'

The City of Sakai

Sakai was an autonomous city run by merchant citizens. In those days it was said that the richest cities were Sakai and Riku. The famous Zen Buddhist priest Ikkyu chose to live in Sakai because of its free atmosphere.



http://en.wikipedia.org/wiki/Sakai,_Osaka

A Person Named Hiroki Sakai

2004

Sakai Book

奮闘記

Passion

Failure

Laughter

Mistakes

Success

Friendship

Tears

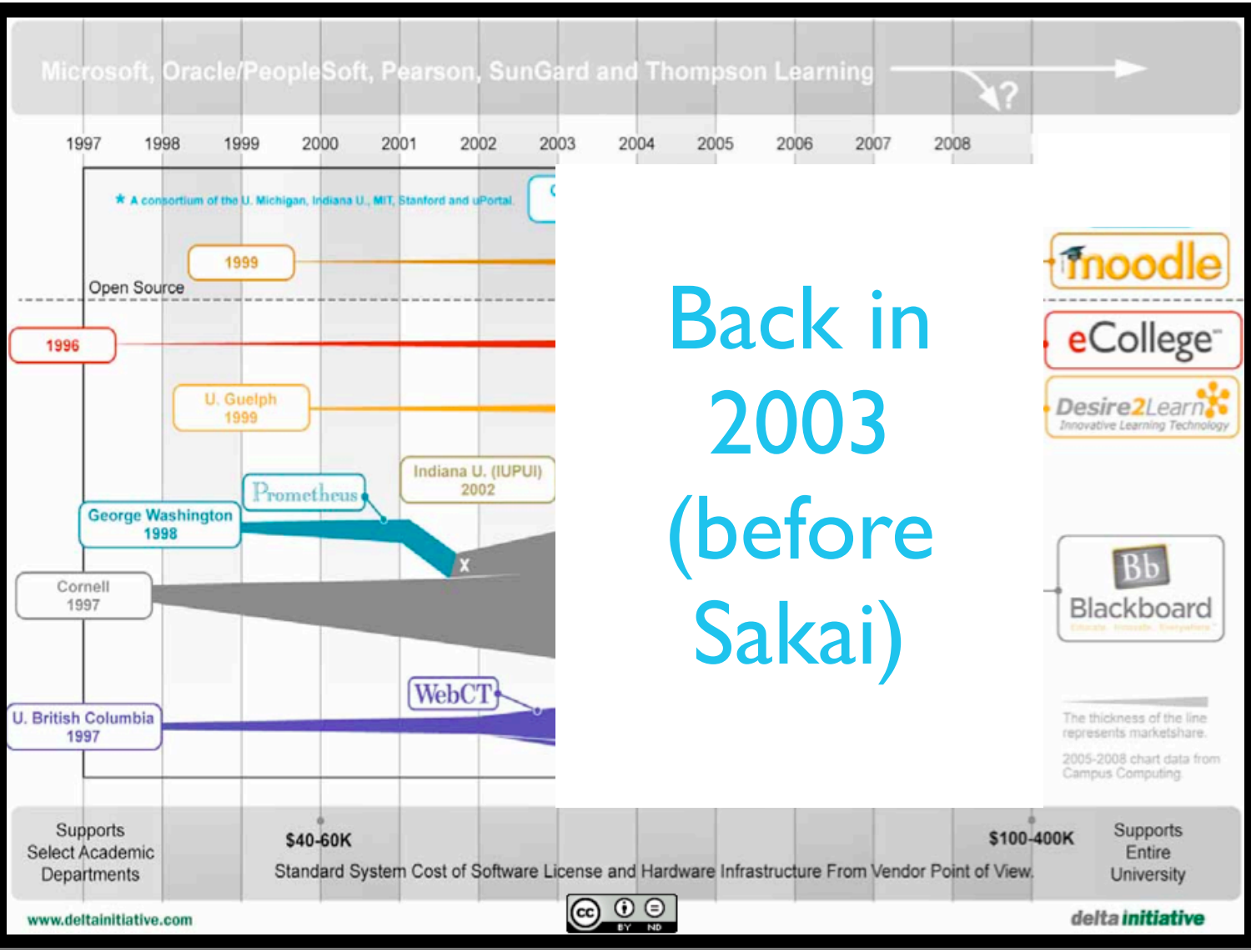
Frustration

Freedom

Joy

2003: Before Sakai

- Blackboard had a dominant market share
- Prometheus had been acquired and shutdown
- WebCT was starting to grow, Vista was begin created
- Moodle was tiny in terms of market share - no top schools
- Top schools all had their own locally developed LMS code
- Not much innovation, competition or cooperation - no Karaoke


Microsoft, Oracle/PeopleSoft, Pearson, SunGard and Thompson Learning
?
1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008
★ A consortium of the U. Michigan, Indiana U., MIT, Stanford and uPortal.
1999
Open Source
1996
U. Guelph
1999
Indiana U. (IUPUI)
2002
Prometheus
George Washington
1998
X
Cornell
1997
WebCT
U. British Columbia
1997
Back in 2003 (before Sakai)
moodle
eCollege
Desire2Learn
Innovative Learning Technology
Bb
Blackboard
The thickness of the line represents marketshare.
2005-2008 chart data from Campus Computing
Supports Select Academic Departments
$40-60K
$100-400K
Supports Entire University
Standard System Cost of Software License and Hardware Infrastructure From Vendor Point of View.
www.deltainitiative.com
delta initiative

The Sakaiger's Accomplishments

- Built a world-class open source CLE
- Built a world-class volunteer community
- Made the world safe for open source in higher education
- Drove standards for interoperability and portability
- Created an ecosystem across open source and commercial that is both competitive and cooperative - and Karaoke

Sakai Means 'Freedom'

- Freedom for Teachers
- Freedom for Students
- Freedom for software adopters
- Freedom for software developers
- Freedom for commercial activities

"The Sakaiger is a happy dancing creature. It is the logo of the hip, cool, karaoke singing, silly elements of the Sakai Community (that is pretty much everyone)."

www.sakaiger.com

Look into the
gaze of
Sakaiger,
protector of
our freedom

Cambridge
Oxford
Yale
Stanford
Johns Hopkins
Berkeley
Australia National University
University of Virginia
Nagoya University
University of Michigan
Duke
University of Capetown
Georgia Tech
And Many More...

The world's greatest universities give the Sakaiger its legndary strength, courage, and endurance.

Aaron Zeckowski
Adrian Fish
Alan Berg
Anthony Whyte
Beth Kirschner
Brian Richwine
Bryan Holladay
Chris Maurer
David Horowitz
David Roldan Martinez
Duffy Gillman
Gonzalo Silverio
Jean-François Lévêque
John Lewis
Karen Tsao
Jim Eng
John Bush
Lance Speelmon
Lydia Li
Matt Jones
Megan May
Nicola Monat-Jacobs
Noah Botimer
Sam Ottenhof
Savitha Prakash
Seth Theriault
Steve Swinsberg
Stephen Marquard
Zhen Qian

And Many More...

A worldwide network of volunteer leaders are the heart, mind, eyes and hands of the Sakaiger

Community Source

- Brad Wheeler, Indiana - Open Source Portfolio, Kuali Financials
- Mara Hancock, Berkeley - Fluid Project, OpenCast
- Jutta Treveranius, Ontario College of Art and Design - Fluid Project

Educause and Sakai

EDUCAUSE

- In 2004, Educause was anti-open-source, viewing Sakai an ineresting diversion
- In 2010, the Educause board has four members from the Sakai community (Brad Wheeler, James L. Hilton, Thomas L. Maier, and David Lassner)
- Ted Dodds is from Kuali

Dodds

Wheeler

Lassner

Hilton

Maier

Sakai

PATENT BUSTING PROJECT

Blackboard

August 2006 -
February 2007

Blackboard Patent Pledge

Blackboard hereby commits not to assert any of the U.S. patents listed below, as well as all counterparts of these patents issued in other countries, against the development, use or distribution of [any] Open Source Software or Home-Grown Systems to the extent that such Open Source Software and Home-Grown Systems are not Bundled with proprietary software.

February 2007

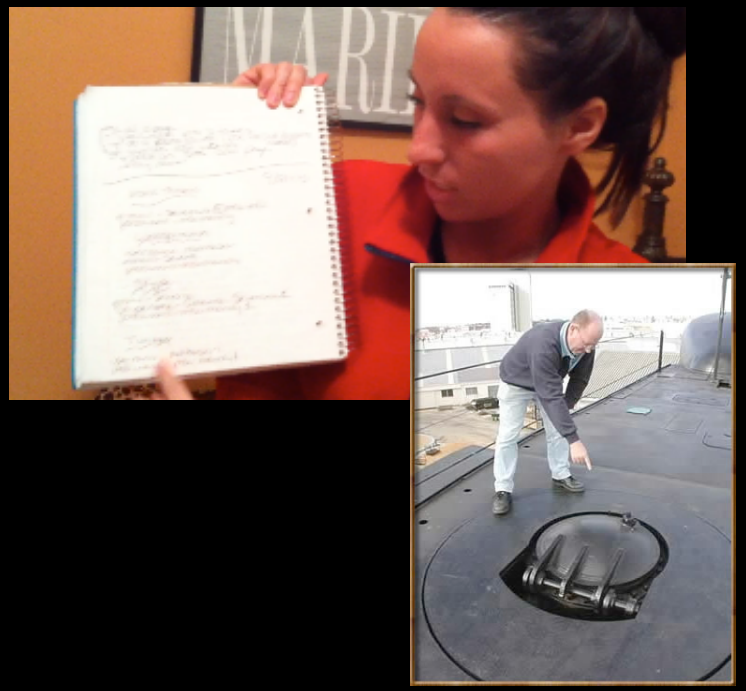
Sakai: The Social Network

Dr. Chuck - Up in the Air

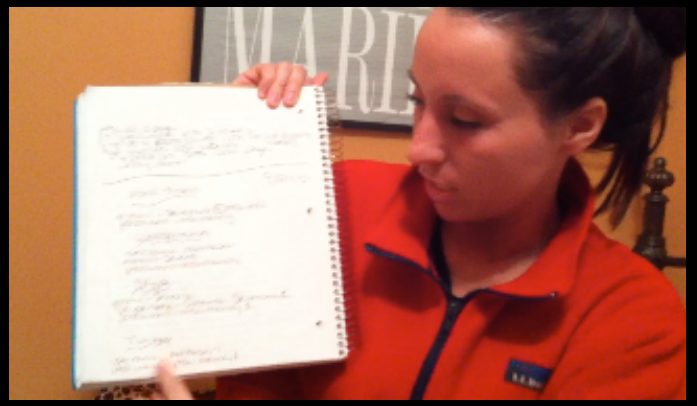
Why are we here?
What is our purpose?
Why fly a million miles?

Improving Teaching and Learning

- Students and Teachers literally do not care at all if their learning software is open source
- They are limited by the software that is installed and upgraded by their local IT staff
- IT organizations almost always fear innovation



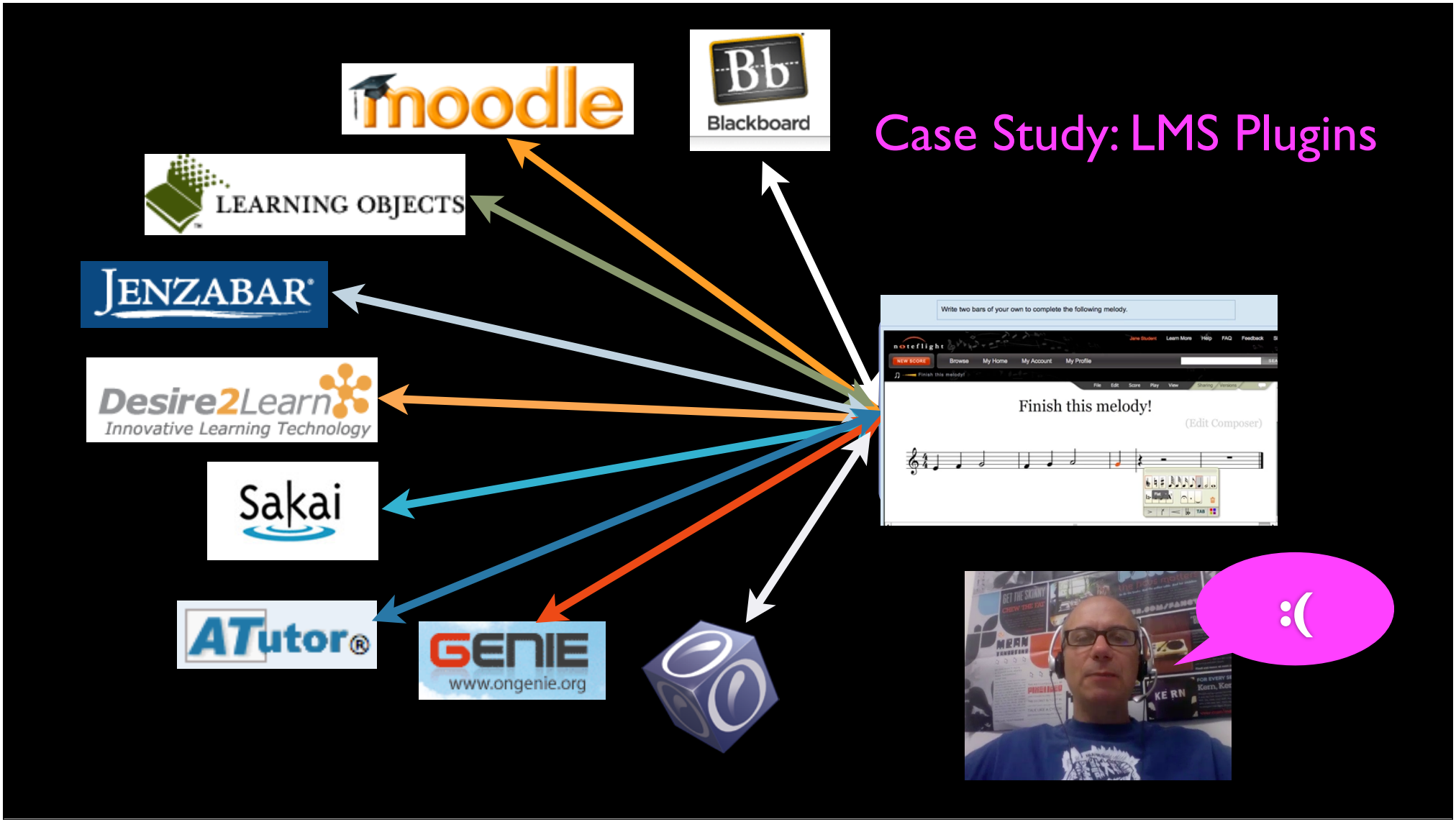
Case Study: Amanda Severance

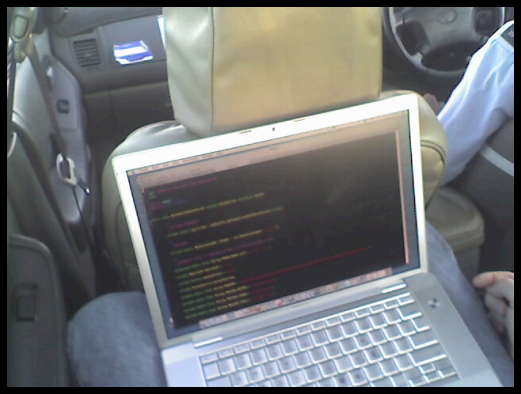


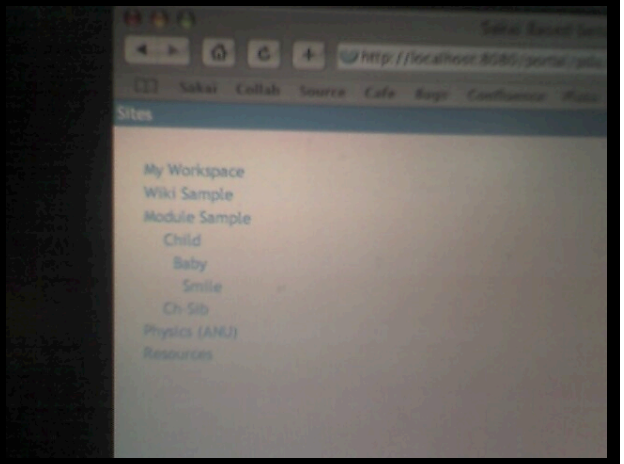
- Senior in Special Education
- Technology in the Classroom Curse
- Eleven different accounts
- Setup required technical support

2:35

Case Study: LMS Plugins

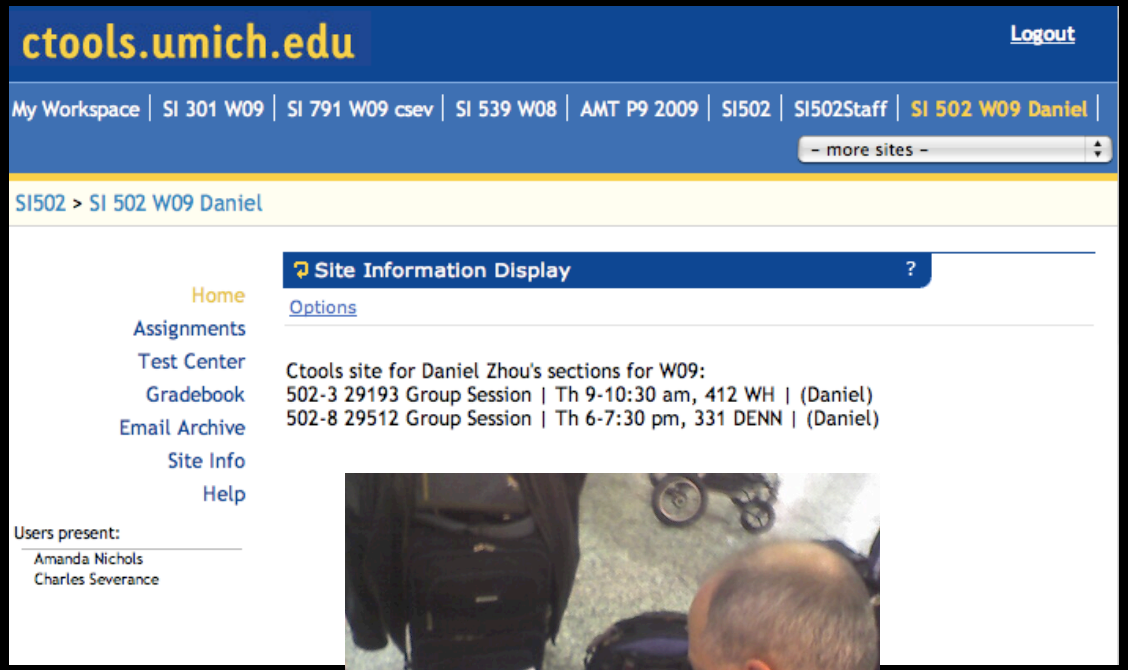


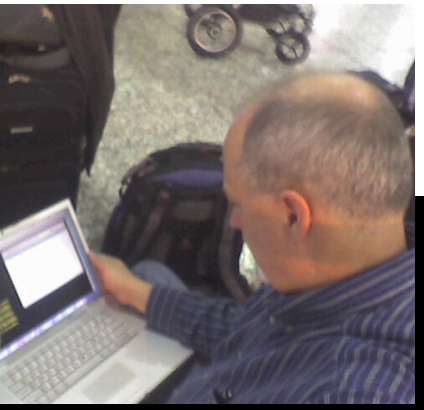




May 2007

Case Study: LMS Committer/Teacher


ctools.umich.edu
Logout
My Workspace | SI 301 W09 | SI 791 W09 csev | SI 539 W08 | AMT P9 2009 | SI502 | SI502Staff | SI 502 W09 Daniel |
- more sites -
SI502 > SI 502 W09 Daniel
Site Information Display
Options
Home
Assignments
Test Center
Gradebook
Email Archive
Site Info
Help
Users present:
Amanda Nichols
Charles Severance
Ctools site for Daniel Zhou's sections for W09:
502-3 29193 Group Session | Th 9-10:30 am, 412 WH | (Daniel)
502-8 29512 Group Session | Th 6-7:30 pm, 331 DENN | (Daniel)



August 2007

Commercial

Tools
Interoperability

Common
Cartridge

IMS

Publishers

LMS

Open Source

Standards

2008

www.imsglobal.org

IMS Standards

IMS
Innovation
Adoption
Learning

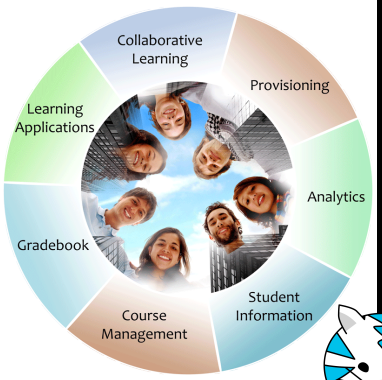
Free the content

IMS Common Cartridge

Seamlessly connect to learning

IMS Learning Tools Interoperability (LTI)

The information architecture for learning



IMS Learning Information Services (LIS)

IMS Learning Tools Interopability

- Started in 2004 as a way for Blackboard and Sakai to cooperate on a neutral ground
- Sakai/Samigo participated in the 2005 Alti-I-Lab demonstration in Sheffield, UK

Early Work on Standards

- IMS Learning Tools Interoperability
- Lots of convincing and cajoling (and beer)
- Sakai, Blackboard, Moodle, ...

2009 http://www.vimeo.com/7825070 1:47

Certified - LMS

- Desire2Learn Learning Environment v8.4.2 and v9.0
- Blackboard Learn v9.1 SP4 / coursesites.com
- Jenzabar JICS v7.2 and e-Racer v1.2
- Learning Objects Campus Pack v4.2
- Sakai v2.7
- OLAT 7.0
- Moodle 1.9/2.0 Module
- GeNIE, Open-Source LMS v1.0
- PowerLink for Blackboard WebCT
- Sakai 3 v0.4
- Atutor 2.0.2

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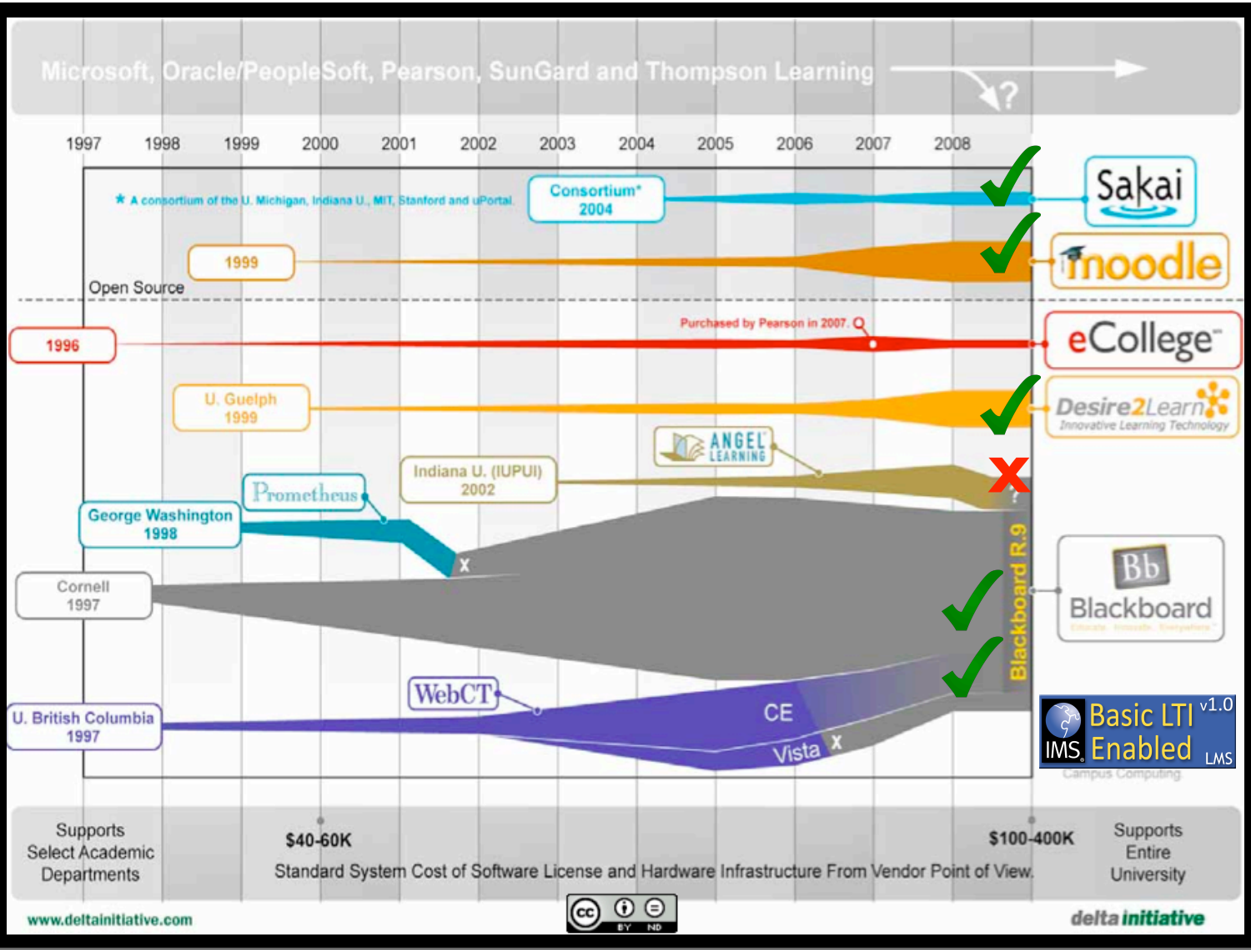
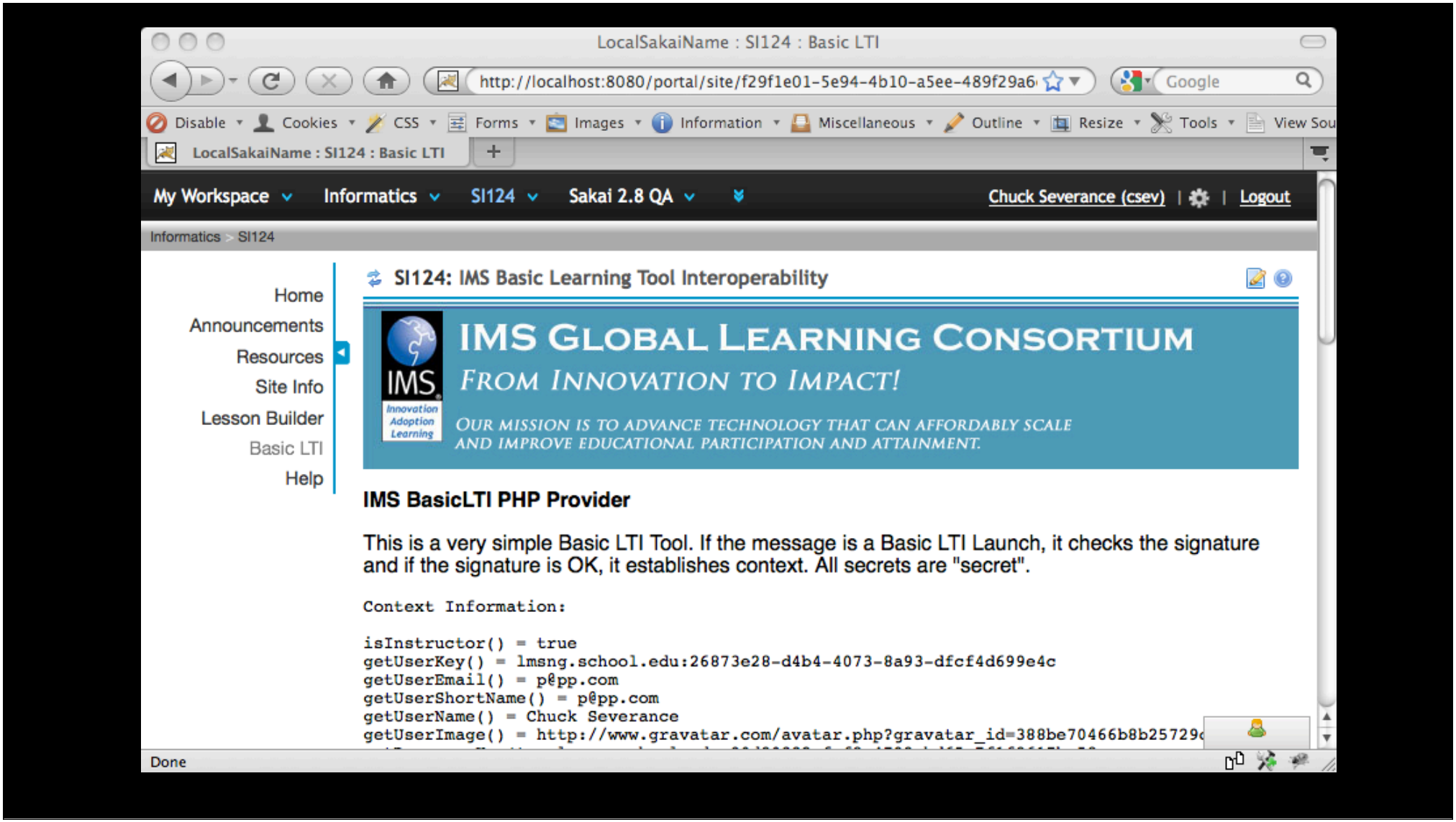
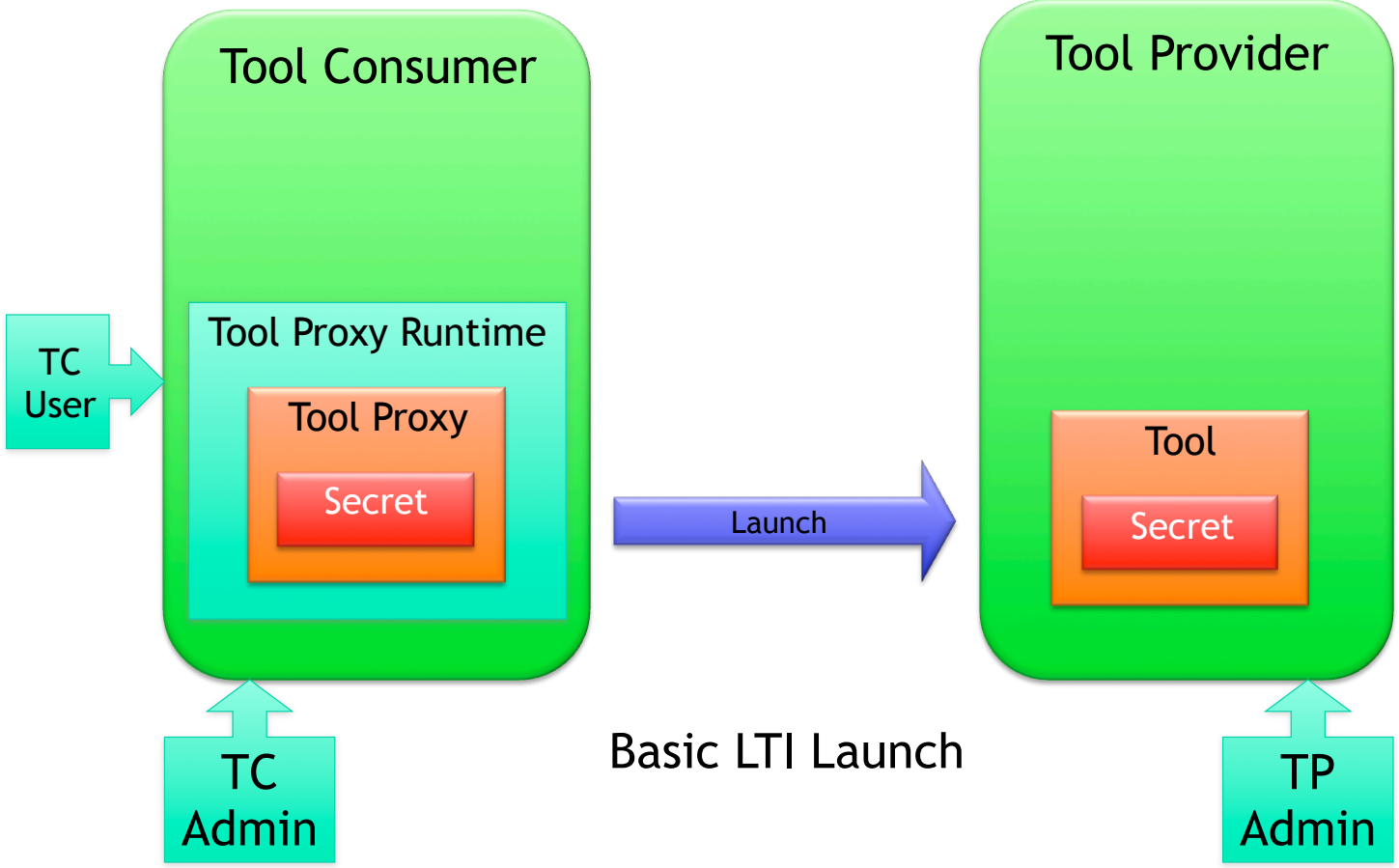
http://www.imsglobal.org/cc/statuschart.html

2011


Microsoft, Oracle/PeopleSoft, Pearson, SunGard and Thompson Learning
?
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
★ A consortium of the U. Michigan, Indiana U., MIT, Stanford and uPortal.
Consortium*
2004
Sakai
1999
moodle
Open Source
Purchased by Pearson in 2007.
1996
eCollege
U. Guelph
1999
Desire2Learn
Innovative Learning Technology
ANGEL LEARNING
Indiana U. (IUPUI)
2002
Prometheus
George Washington
1998
Cornell
1997
Blackboard R.9
Bb
Blackboard
WebCT
CE
Vista
U. British Columbia
1997
IMS
Basic LTI v1.0
Enabled
LMS
Supports
Select Academic
Departments
$40-60K
$100-400K
Supports
Entire
University
Standard System Cost of Software License and Hardware Infrastructure From Vendor Point of View.
www.deltainitiative.com
delta initiative


LocalSakaiName : SI124 : Basic LTI
http://localhost:8080/portal/site/f29f1e01-5e94-4b10-a5ee-489f29a6
Google
Disable
Cookies
CSS
Forms
Images
Information
Miscellaneous
Outline
Resize
Tools
View Sou
LocalSakaiName : SI124 : Basic LTI
My Workspace
Informatics
SI124
Sakai 2.8 QA
Chuck Severance (csev)
Logout
Informatics > SI124
Home
Announcements
Resources
Site Info
Lesson Builder
Basic LTI
Help
SI124: IMS Basic Learning Tool Interoperability
IMS GLOBAL LEARNING CONSORTIUM
FROM INNOVATION TO IMPACT!
OUR MISSION IS TO ADVANCE TECHNOLOGY THAT CAN AFFORDABLY SCALE AND IMPROVE EDUCATIONAL PARTICIPATION AND ATTAINMENT.
IMS BasicLTI PHP Provider
This is a very simple Basic LTI Tool. If the message is a Basic LTI Launch, it checks the signature and if the signature is OK, it establishes context. All secrets are "secret".
Context Information:
isInstructor() = true
getUserKey() = lmsng.school.edu:26873e28-d4b4-4073-8a93-dfcf4d699e4c
getUserEmail() = p@pp.com
getUserShortName() = p@pp.com
getUserName() = Chuck Severance
getUserImage() = http://www.gravatar.com/avatar.php?gravatar_id=388be70466b8b25729
Done



Basic LTI Launch

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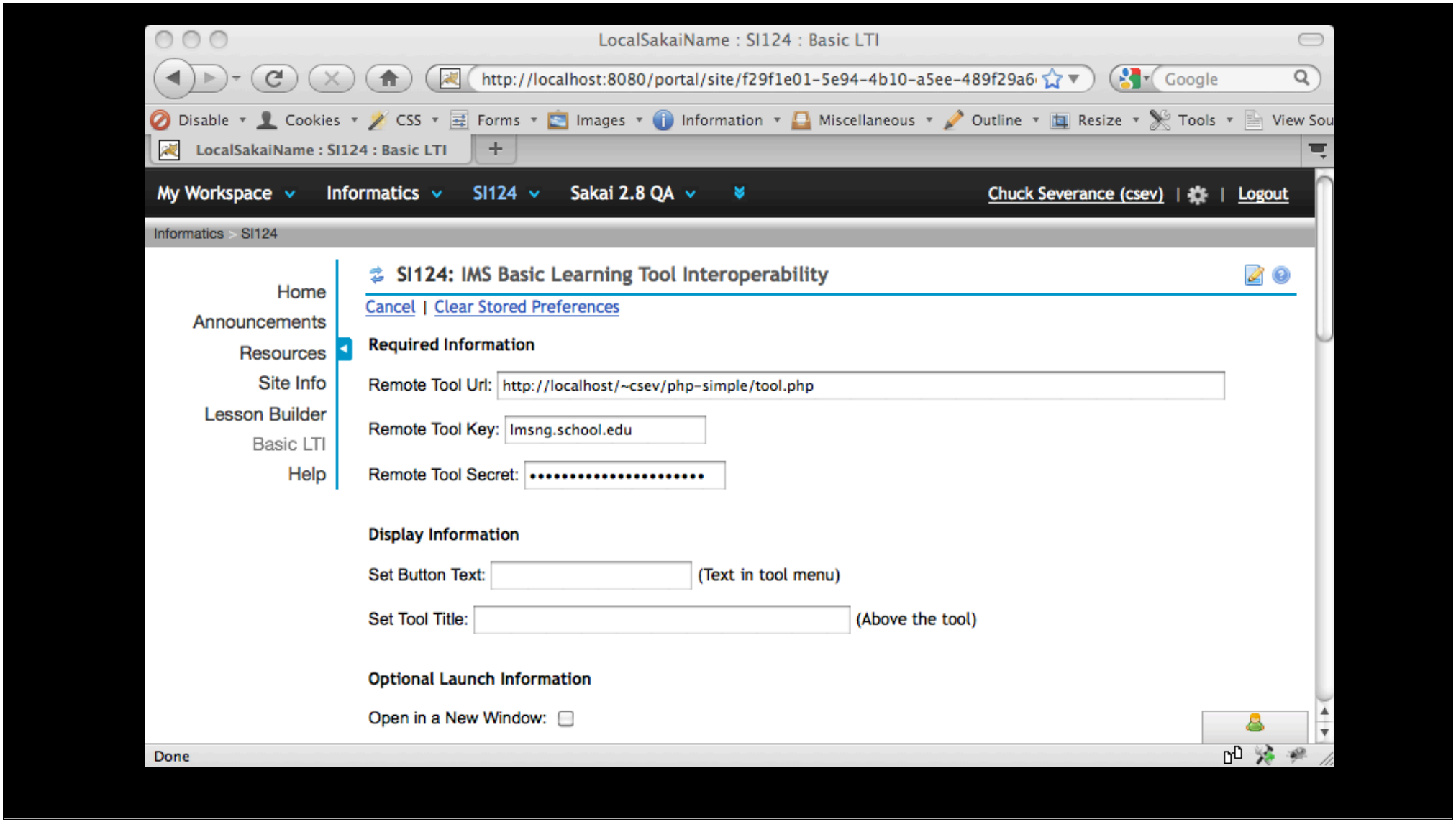
LocalSakaiName : SI124 : Basic LTI
http://localhost:8080/portal/site/f29f1e01-5e94-4b10-a5ee-489f29a6
Google
Disable
Cookies
CSS
Forms
Images
Information
Miscellaneous
Outline
Resize
Tools
View Sou
LocalSakaiName : SI124 : Basic LTI
My Workspace
Informatics
SI124
Sakai 2.8 QA
Chuck Severance (csev)
Logout
Informatics > SI124
Home
Announcements
Resources
Site Info
Lesson Builder
Basic LTI
Help
SI124: IMS Basic Learning Tool Interoperability
Cancel | Clear Stored Preferences
Required Information
Remote Tool Url: http://localhost/~csev/php-simple/tool.php
Remote Tool Key: lmsng.school.edu
Remote Tool Secret: ••••••••••••••••••••
Display Information
Set Button Text: (Text in tool menu)
Set Tool Title: (Above the tool)
Optional Launch Information
Open in a New Window:
Done

Basic LTI Sample Launch Data

lti_version=LTI-1p0
lti_message_type=basic-lti-launch-request
oauth_consumer_key=lmsng.school.edu
resource_link_id=120988f929-274612
user_id=292832126
roles=Instructor
lis_person_name_full=Charles R. Severance
lis_person_contact_email_primary = csev@umich.edu
context_id=456434513
context_title=SI301 - PHP
tool_consumer_instance_description=University of School

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OAUTH

About Advisories Documentation Code Blog Community

An **open protocol** to allow **secure API authorization** in a **simple** and **standard** method from desktop and web applications.

Read on »

For Consumer developers...

If you're building...

- desktop applications
- dashboard widgets or gadgets
- Javascript or browser-based apps
- webpage widgets

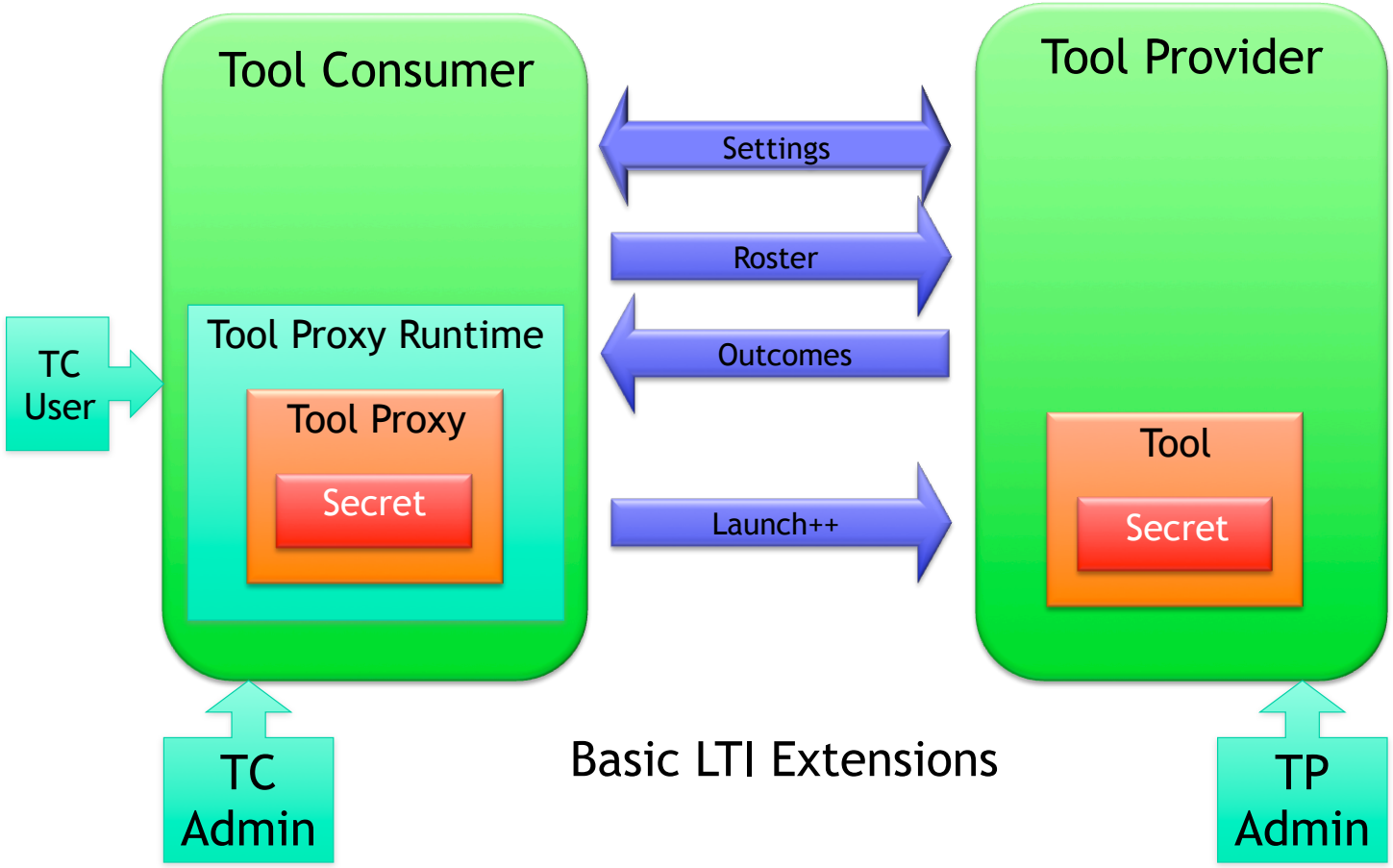
OAuth is a simple way to publish and interact with protected data. It's also a safer and more secure way for people to give you access. We've kept it simple to save you time.

For Service Provider developers...

If you're supporting...

- web applications
- server-side APIs
- mashups

If you're storing protected data on your users' behalf, they shouldn't be spreading their passwords around the web to get access to it. Use OAuth to give your users access to their data while protecting their account credentials.



Basic LTI Extensions

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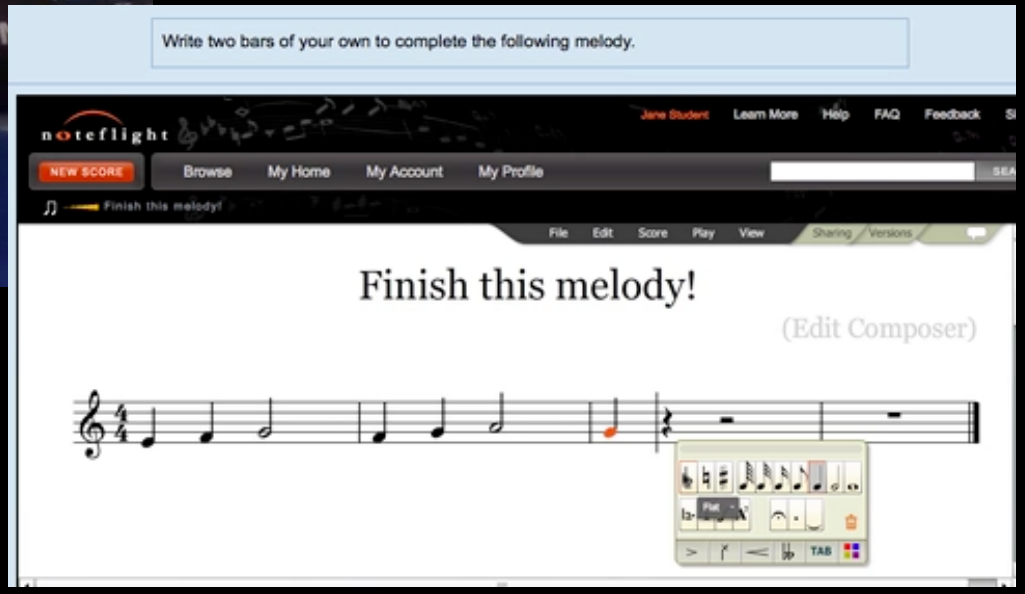
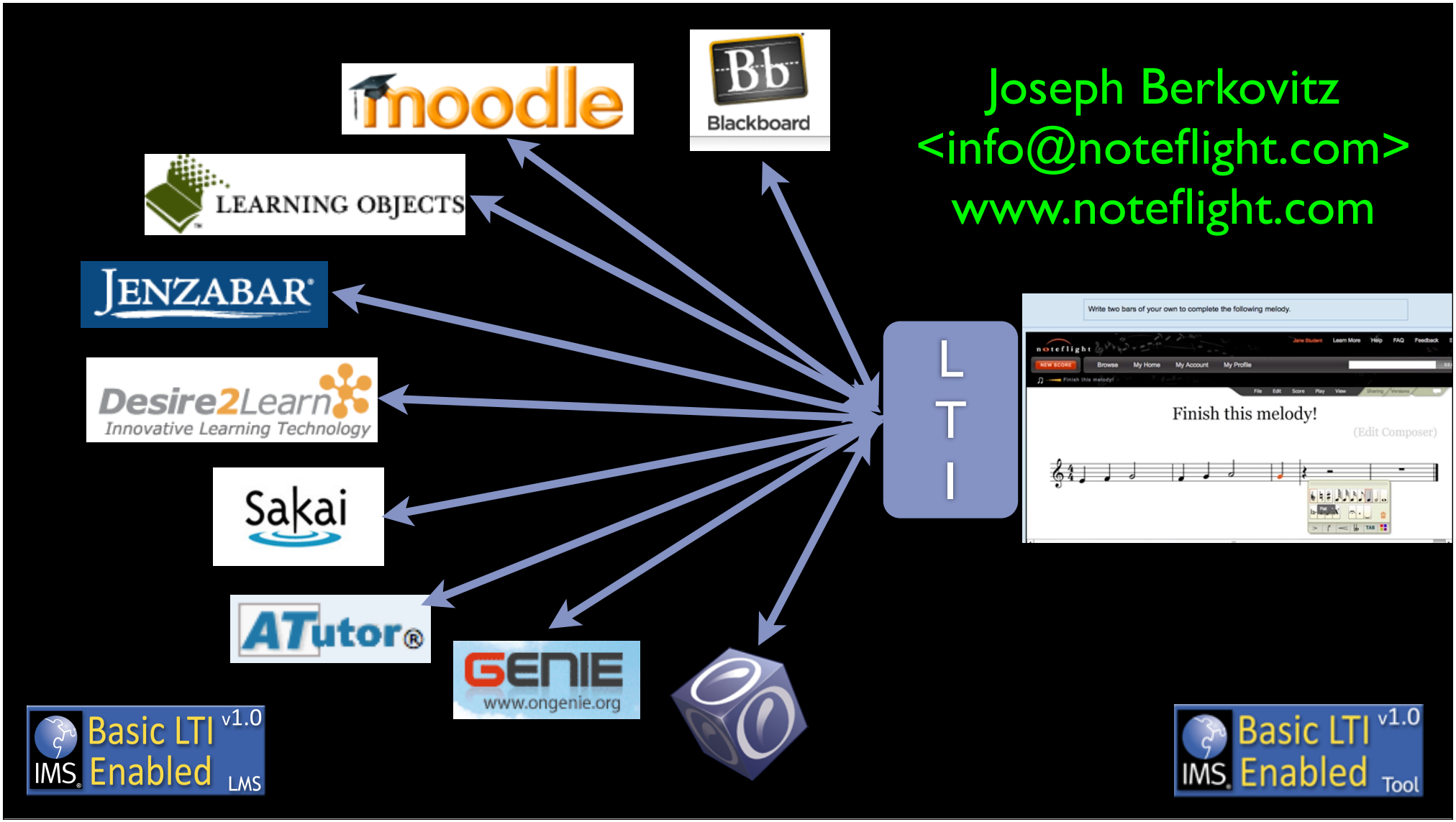
Joseph Berkovitz
<info@noteflight.com>
www.noteflight.com



Developer Freedom
Through Standards

4:38

http://videos.noteflight.com/MoodleBasicLTI.mov



Joseph Berkovitz
<info@noteflight.com>
www.noteflight.com

IMS Common Cartridge

- Meeting at Stanford April 27, 2005 between Sakai and 6 Publishers
- They wanted to stop paying Blackboard royalties to sell cartridges to schools, teachers, and students
- They wanted a Sakai-developed import format
- Instead: IMS Common Cartridge - started July 2005

IMS Common Cartridge

- Angel Learning (2008)
- Desire2Learn v8.4.2 (2009)
- Moodle 1.9 (2010)
- Jenzabar eRacer (2010)
- Blackboard 9.1SP4 - Import and Export (2011)

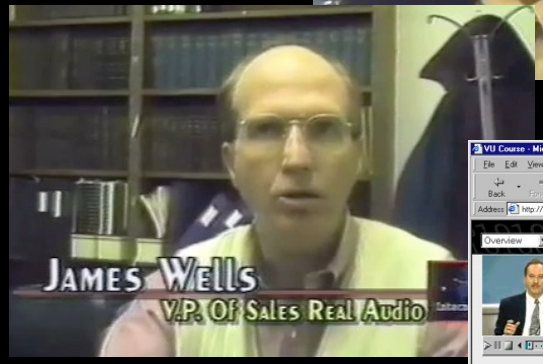
IMS Learning Information Service

- Sakai has the first open source reference implementation of IMS Learning Information Services (Sakora from Unicon)

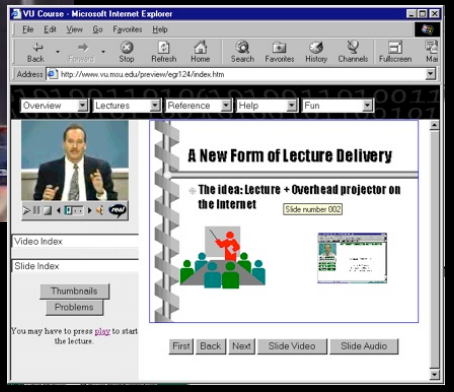
IMS
Innovation
Adoption
Learning

Teacher and Student freedom through 'escape hatches'

1995



1997



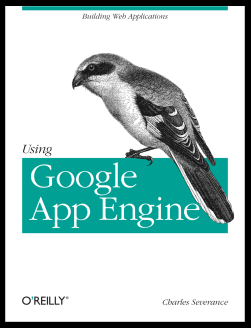
Sakai

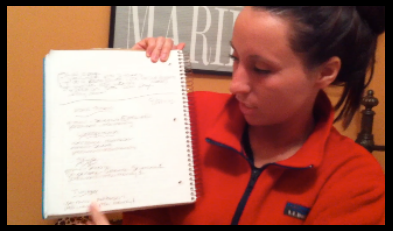
2004

IMS

2008

2009





2011

CourseSites: Charles Severance

CREATE COURSE HELP LOGOUT SHARE |

My CourseSites | si-os-sak | Resources

Hello: Charles Severance (Instructor) from si-os-sak

Thank you for your guess

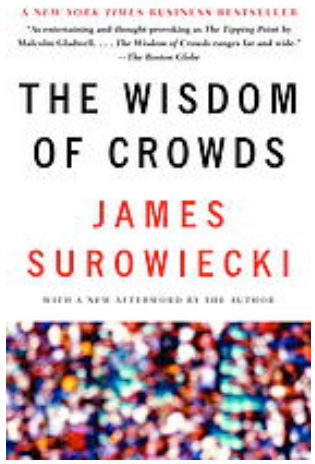
Enter Guess:

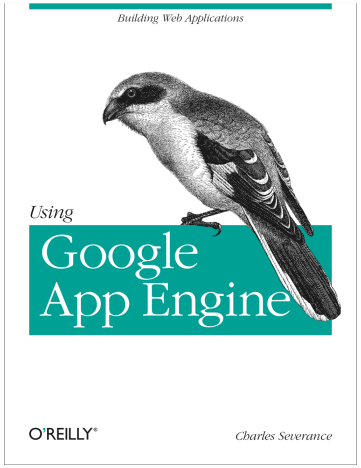
Enter Name (opt):

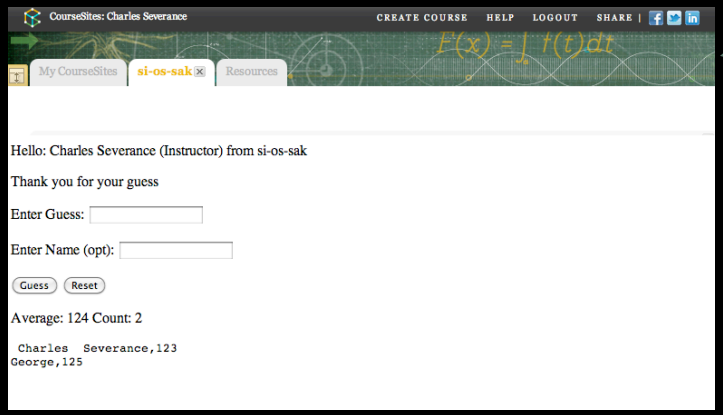
Guess Reset

Average: 124 Count: 2

```
 Charles  Severance,123
George,125
```







www.coursesites.com
Backboard 9.1SP4/Cloud
Free to any teacher
IMS Common Cartridge
Import and Export
IMS Basic Learning Tools
Interoperability

appengine.google.com
Python / Django
Free to anyone
IMS Basic Learning Tools
Interoperability

Sakai 2.9 Portal Roadmap

Charles Severance

www.dr-chuck.com

csev@umich.edu

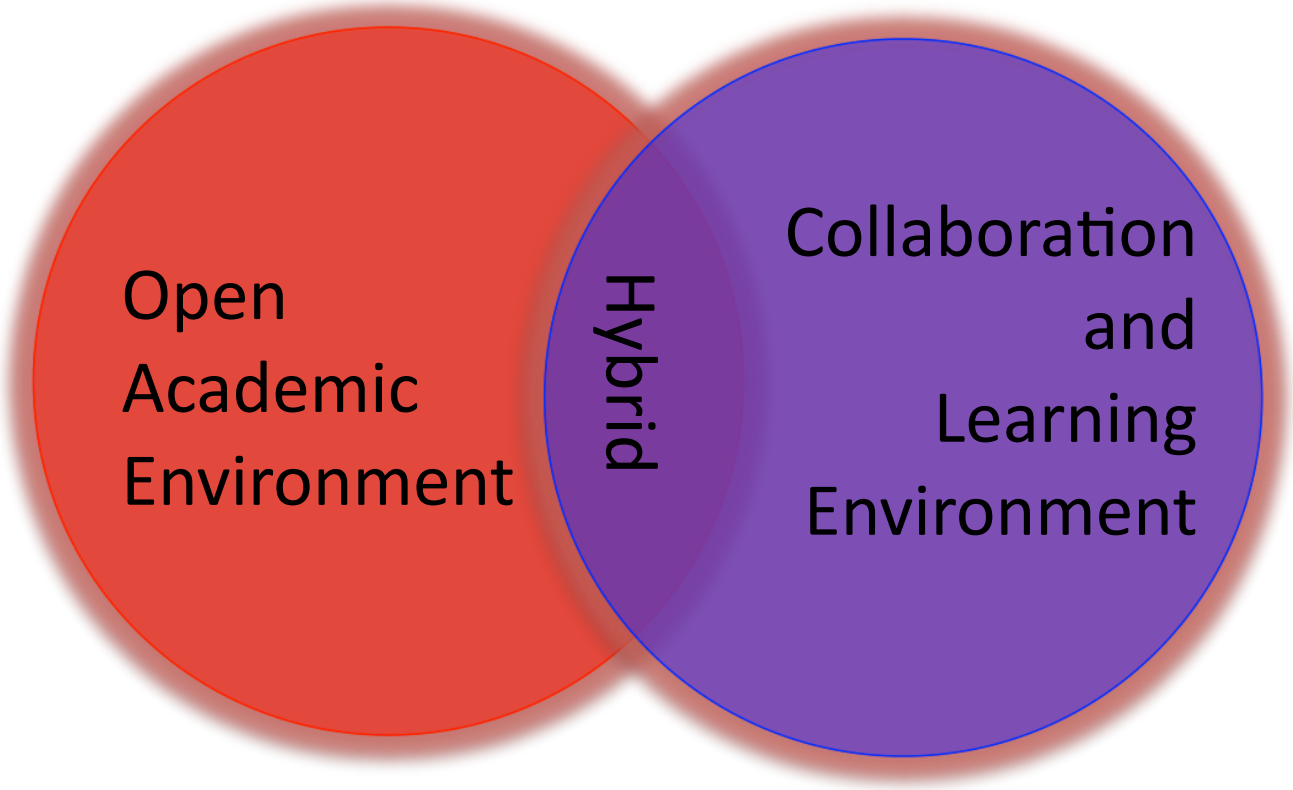
Sakai Portal 2.9 Goals

- Default CLE Nav to look *like* OAE Nav – not a clone – homage
- Course Navigation Prefereces will be in Portal
- Integrate parts of Profile2 into the portal
- Integrate Lesson Builder into the Portal Breadcrumbs
- New presence/chat (IM/Facebook/OAE style)

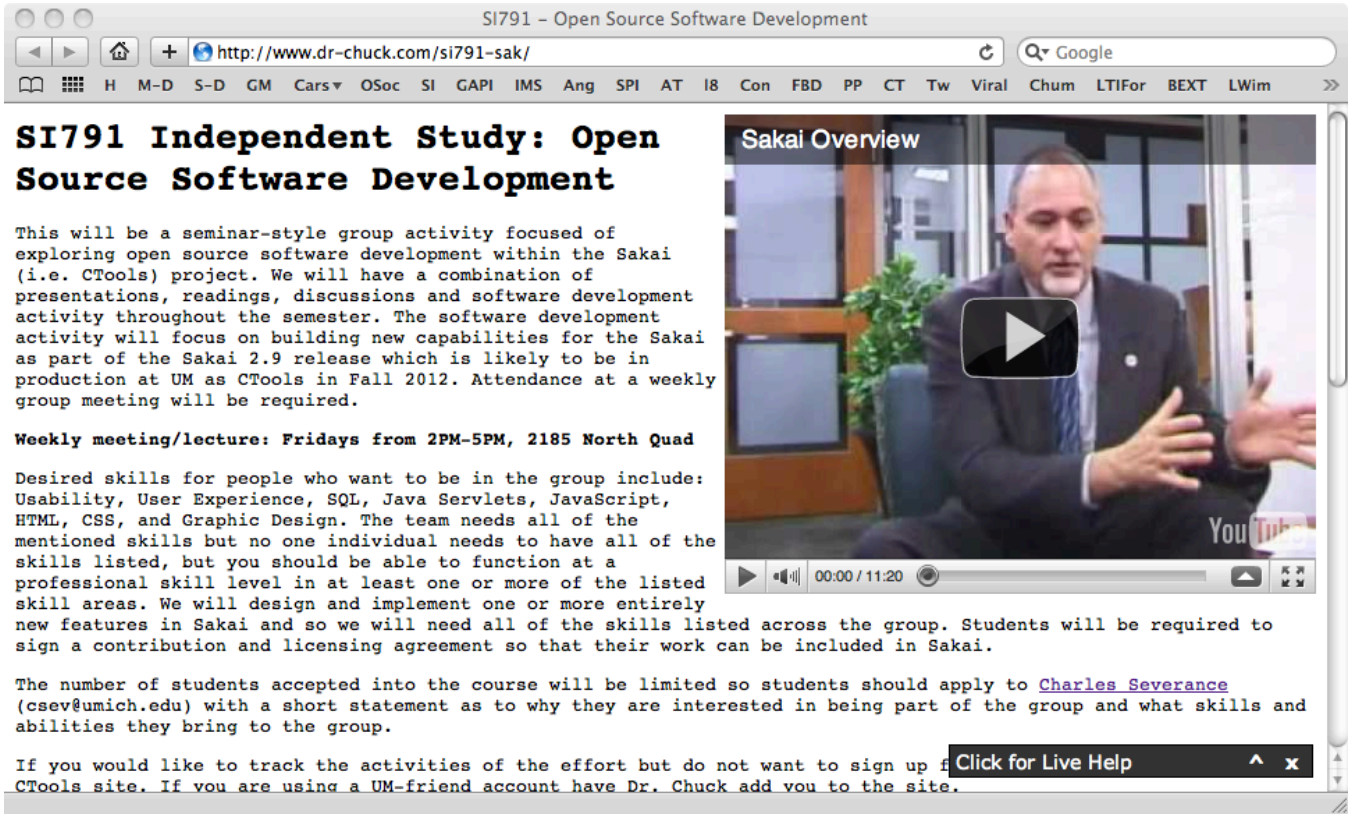
Why Now?

- Sakai 2.9 development cycle is the longest we have ever had (Jan-Sep 2011)
- Build a look-and-feel bridge to the well-thought-out OAE User Interface (and pretty)
- Sakai 2.5 – 2.8 were all pretty much bug fixes – that is nearly 4 years of non-progress on UI
- The rest of the market has made major UI revisions

OAE/CLE Long-Term Future



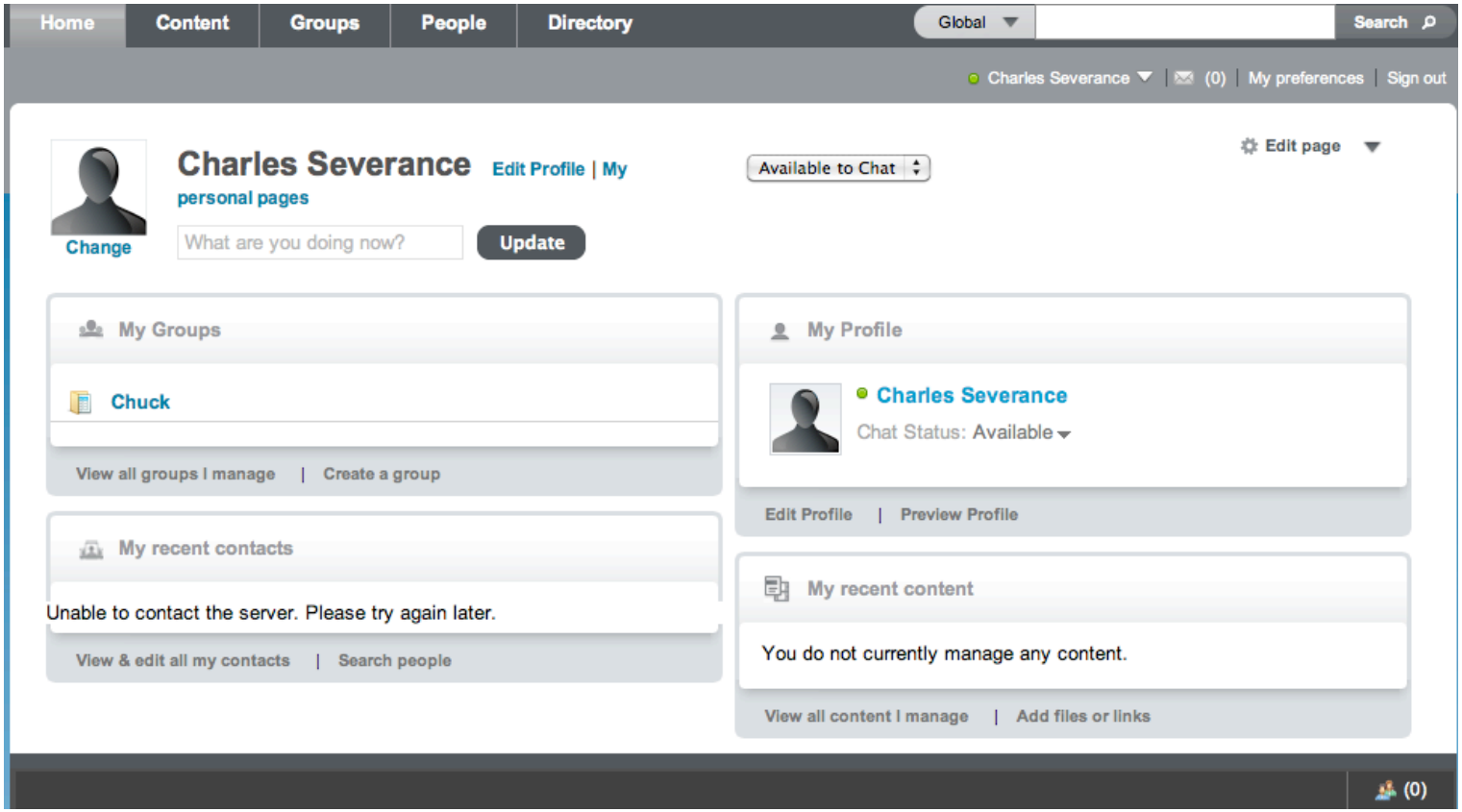
I expect we will likely see all three permutations in production at scale for years.



http://www.dr-chuck.com/si791-sak/

SI791 Plan

- All students will sign Sakai contribution agreements
- Design will be done in the open in the Sakai community
- Students will make regular reports to the community
- Hopefully have majority of design work done and code prototyped in trunk by mid-April


Home
Content
Groups
People
Directory
Global
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Charles Severance | (0) | My preferences | Sign out
Edit page
Charles Severance
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Available to Chat
Change
What are you doing now?
Update
My Groups
Chuck
View all groups I manage | Create a group
My Profile
Charles Severance
Chat Status: Available
Edit Profile | Preview Profile
My recent contacts
Unable to contact the server. Please try again later.
View & edit all my contacts | Search people
My recent content
You do not currently manage any content.
View all content I manage | Add files or links
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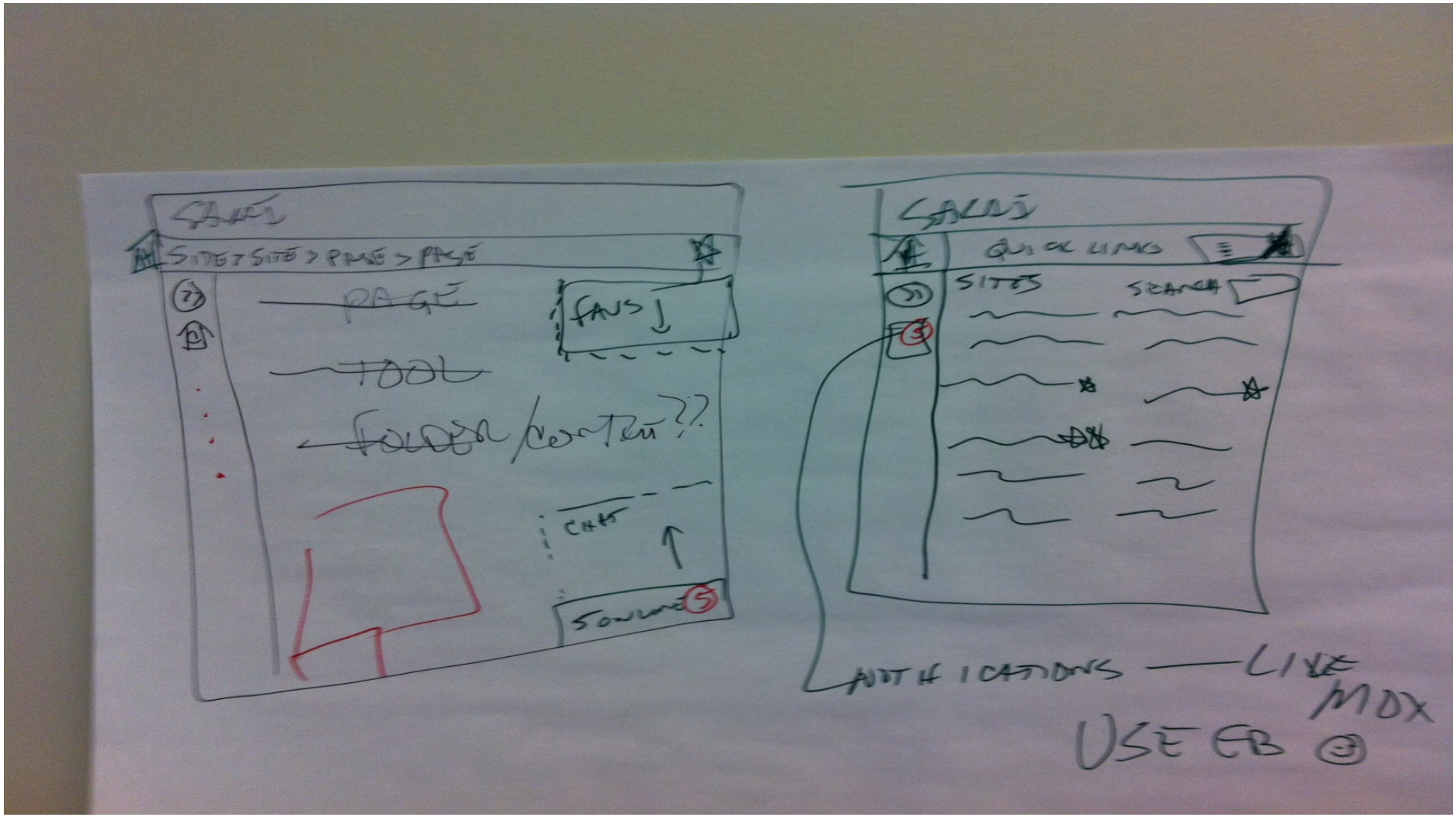
FANS
CHAT
QUICK LINKS
SITES
SEARCH
NOTIFICATIONS — LIKE
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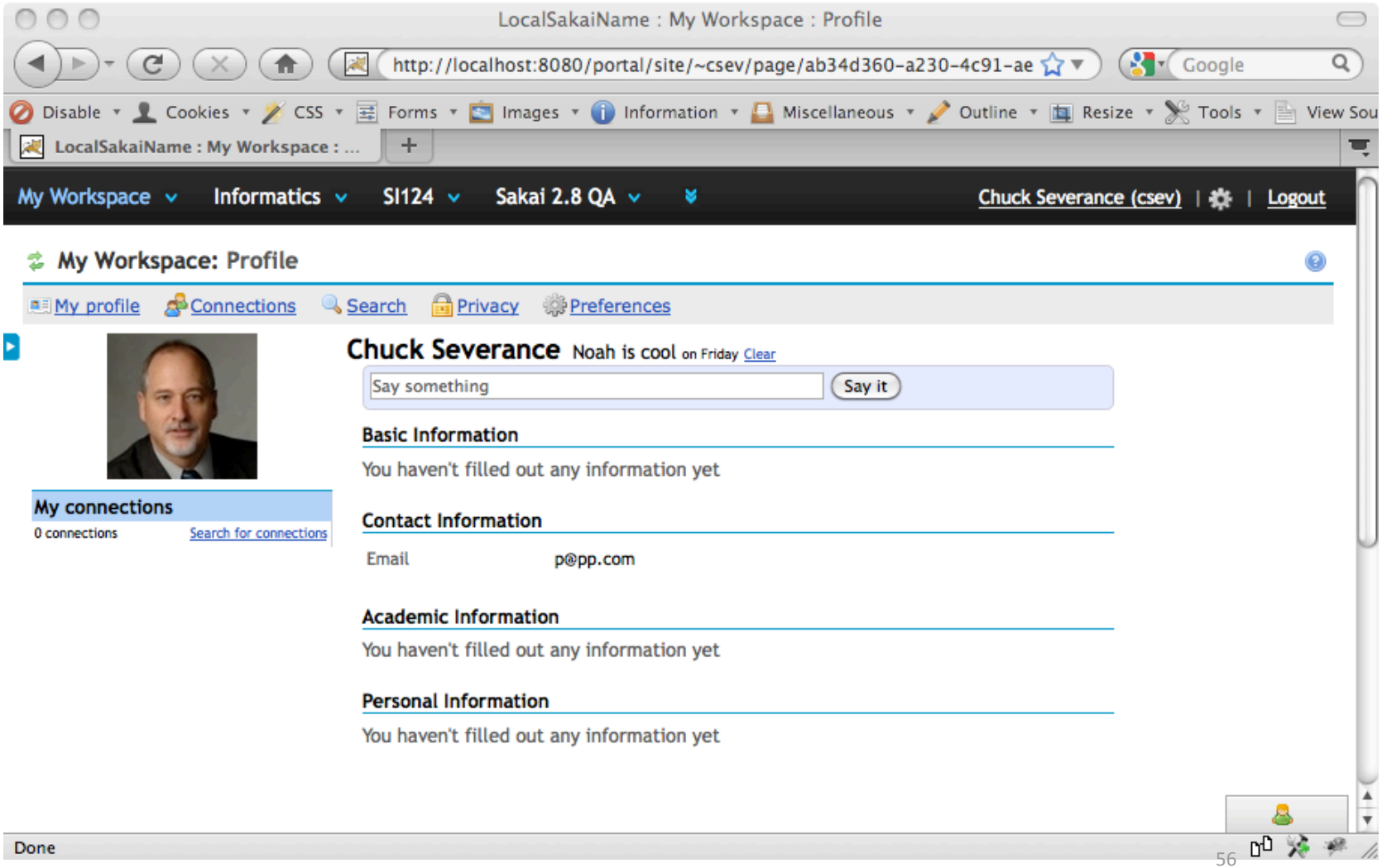
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Chuck Severance (csev)
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Say something
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Academic Information
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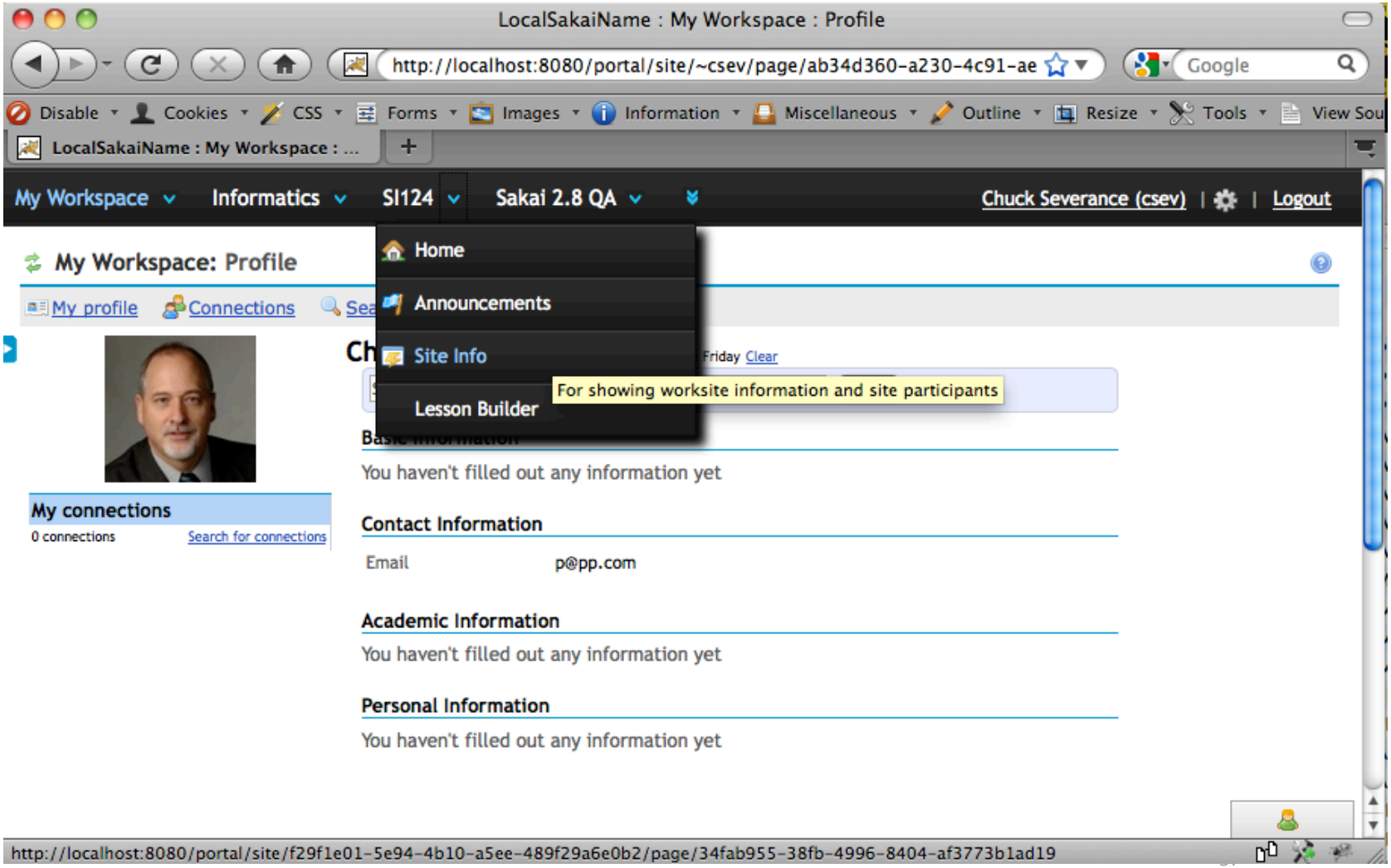
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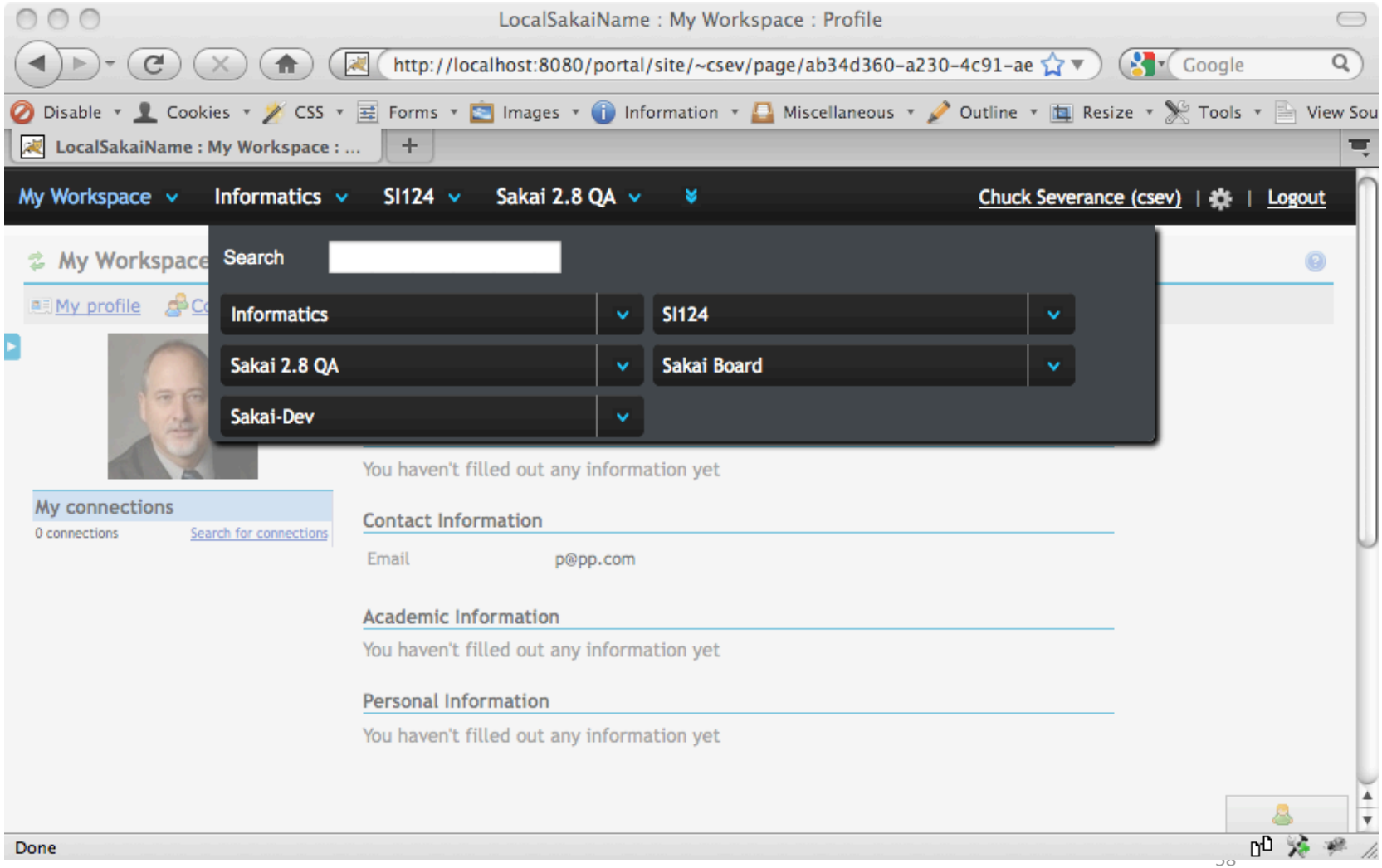
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p@pp.com
Academic Information
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Personal Information
You haven't filled out any information yet
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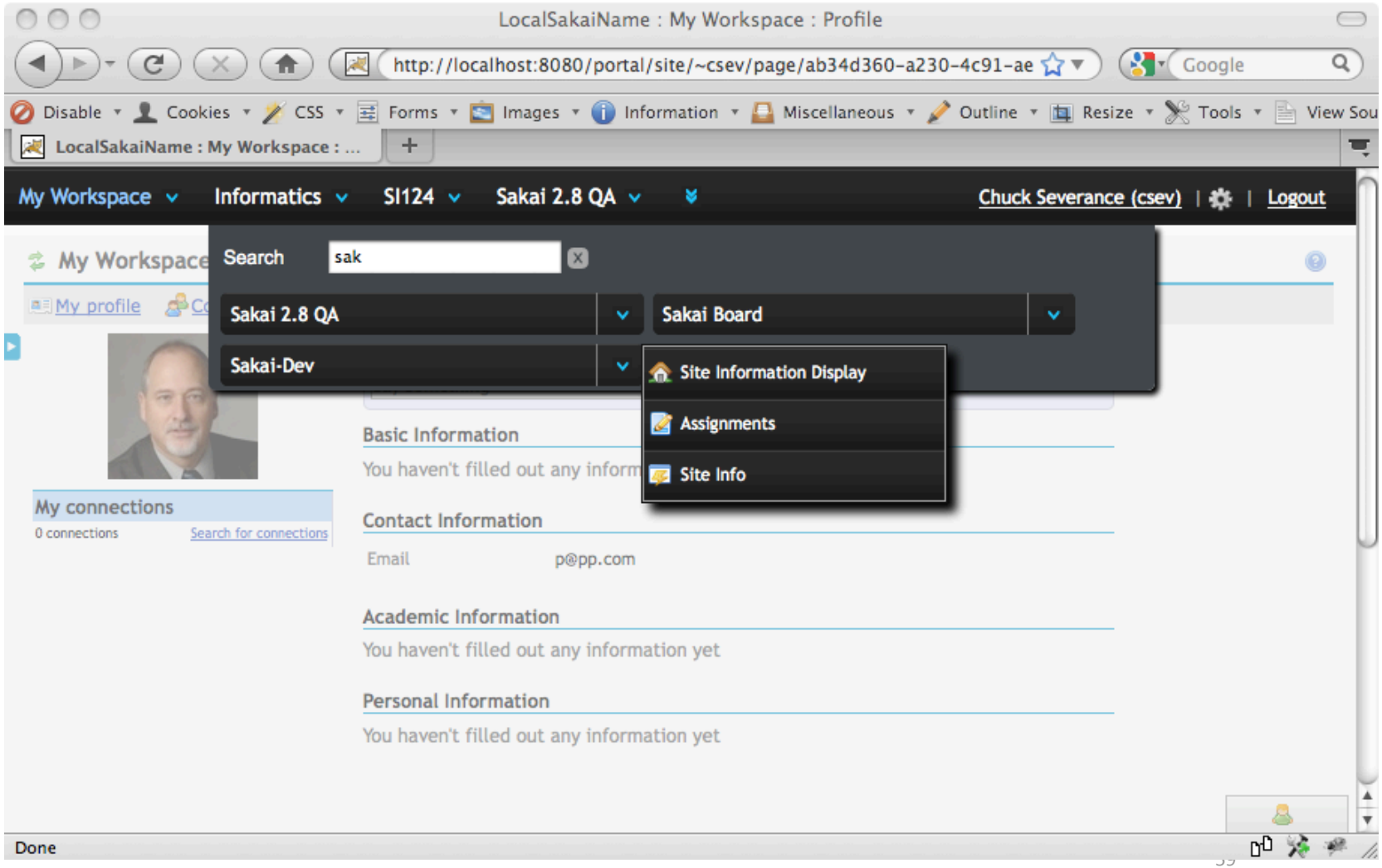
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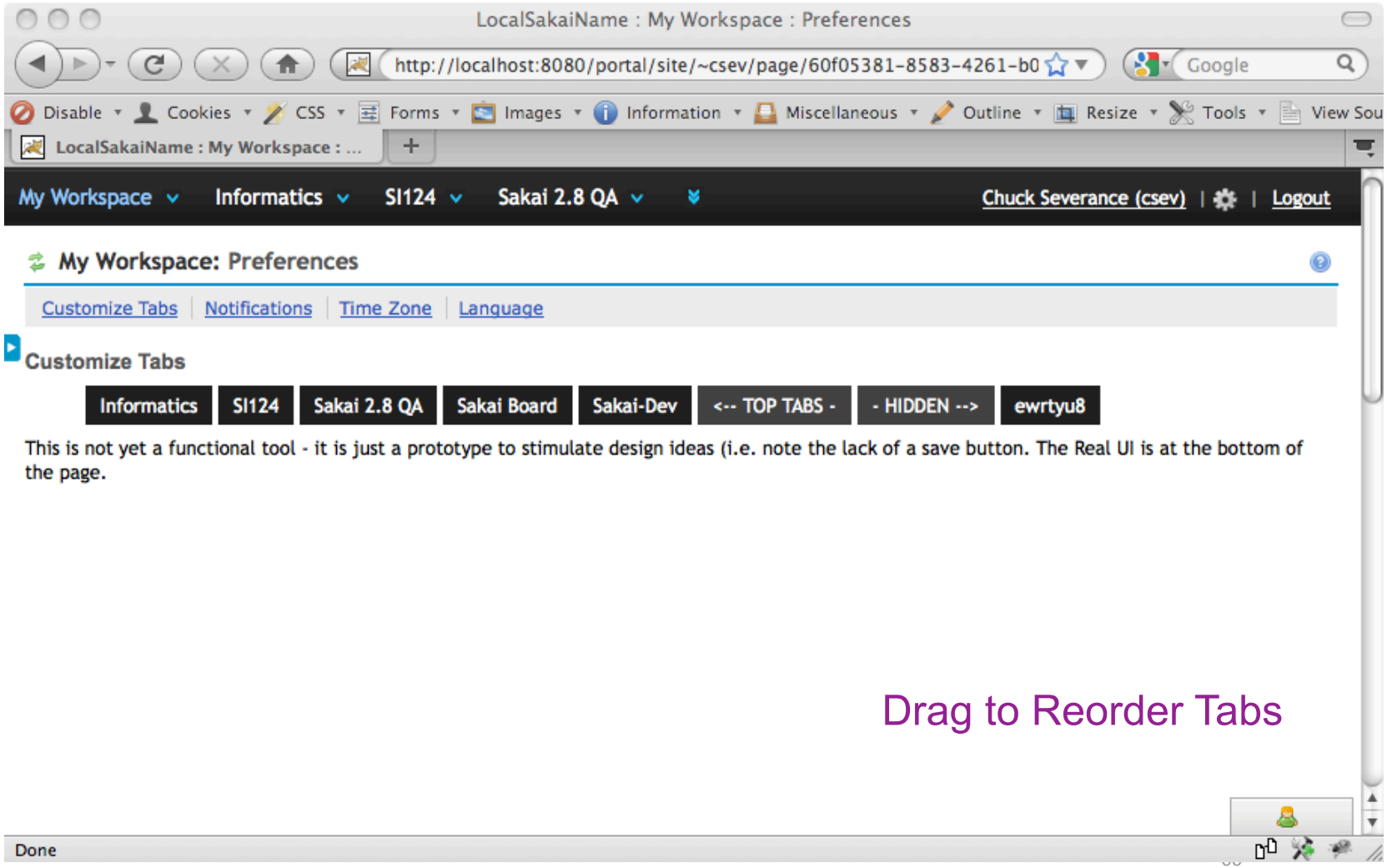
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Logout
My Workspace: Preferences
Customize Tabs
Notifications
Time Zone
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SI124
Sakai 2.8 QA
Sakai Board
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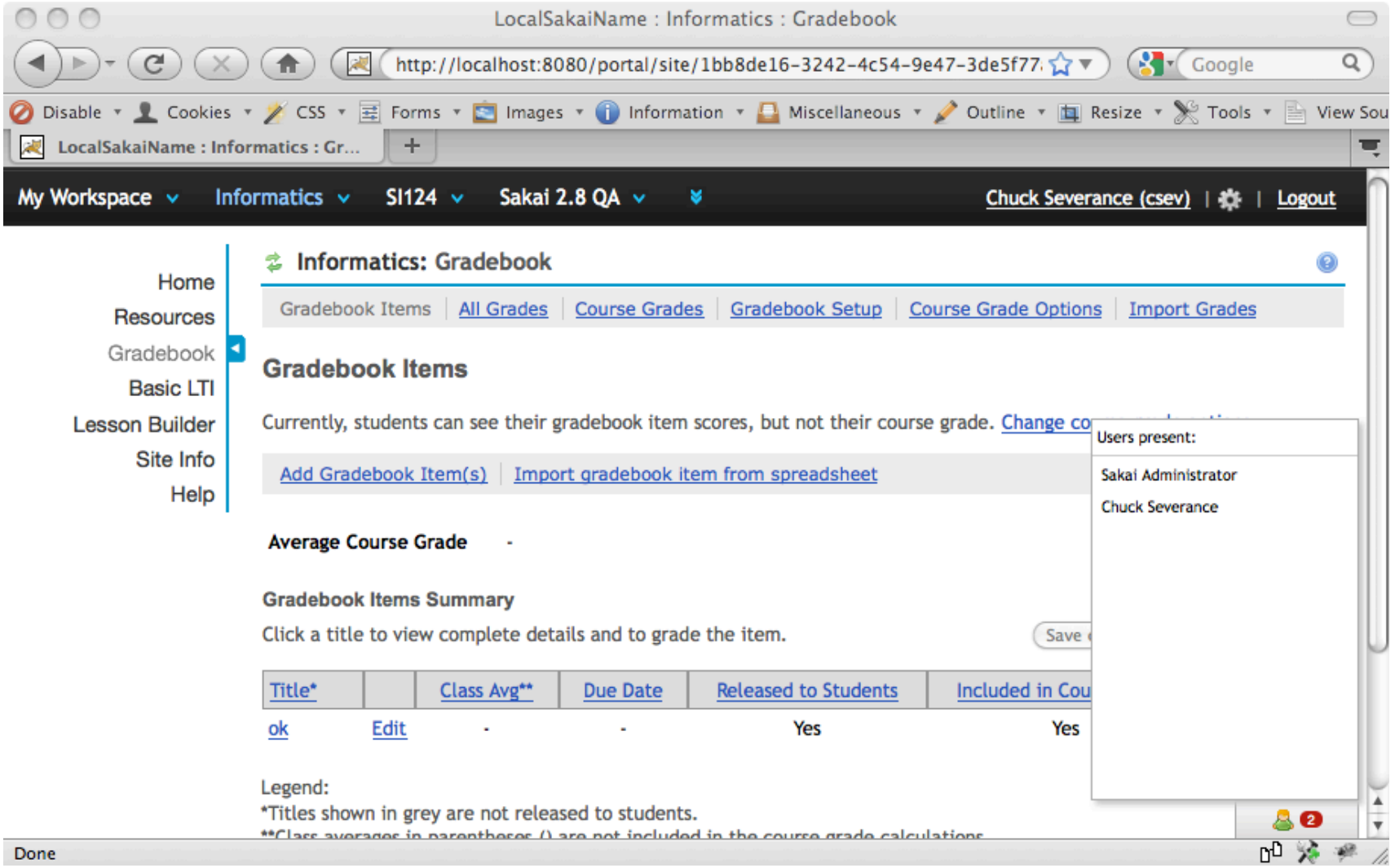
<-- TOP TABS -
- HIDDEN -->
ewrtyu8
This is not yet a functional tool - it is just a prototype to stimulate design ideas (i.e. note the lack of a save button. The Real UI is at the bottom of the page.
Drag to Reorder Tabs
Done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Lesson Builder
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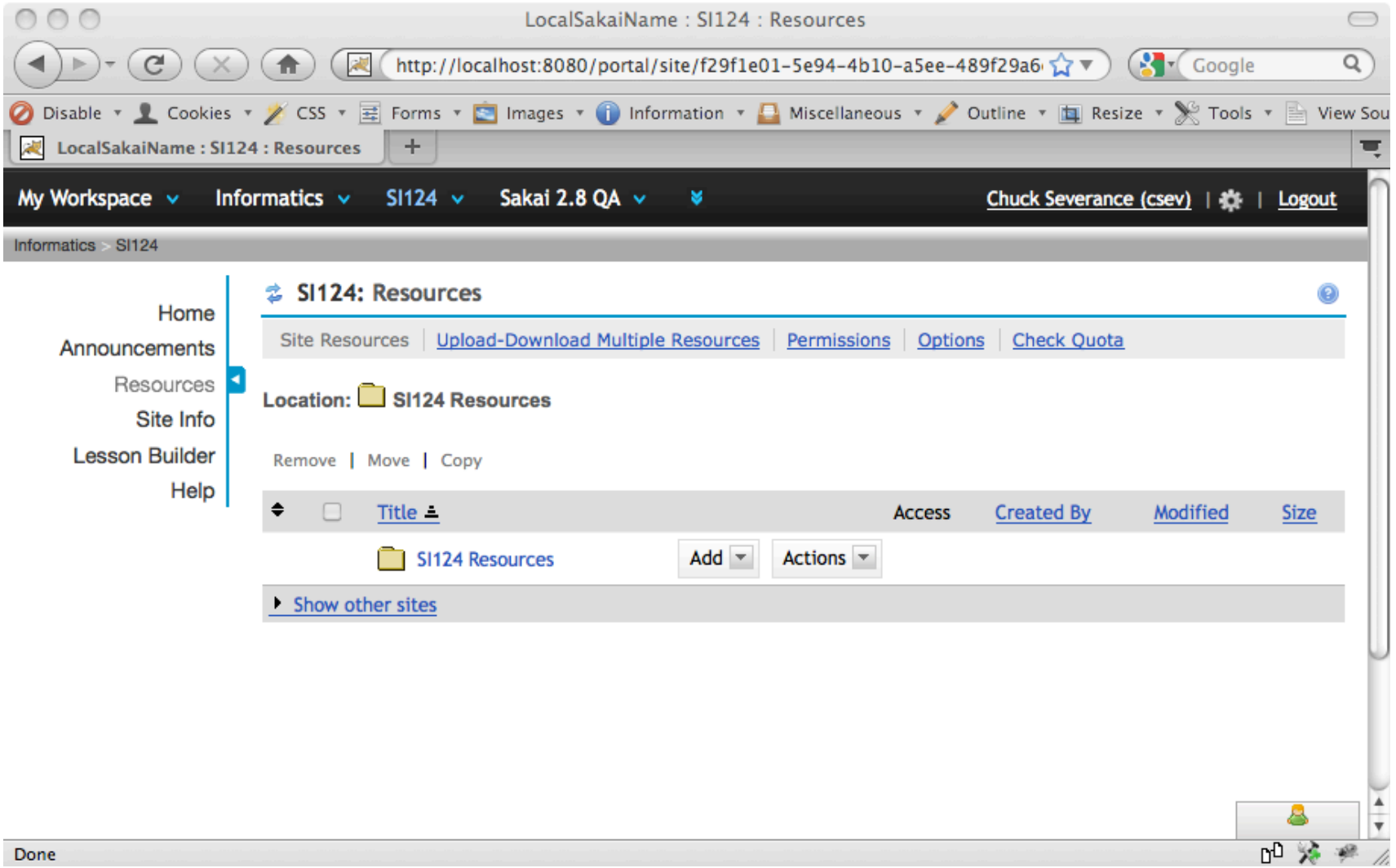
Help
Informatics: Gradebook
Gradebook Items
All Grades
Course Grades
Gradebook Setup
Course Grade Options
Import Grades
Gradebook Items
Currently, students can see their gradebook item scores, but not their course grade.
Users present:
Sakai Administrator
Chuck Severance
Add Gradebook Item(s)
Import gradebook item from spreadsheet
Average Course Grade -
Gradebook Items Summary
Click a title to view complete details and to grade the item.
Title*
Class Avg**
Due Date
Released to Students
Included in Cou
ok
Edit
-
-
Yes
Yes
Legend:
*Titles shown in grey are not released to students.
Done


LocalSakaiName : SI124 : Resources
http://localhost:8080/portal/site/f29f1e01-5e94-4b10-a5ee-489f29a6
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Chuck Severance (csev)
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Announcements
Resources
Site Info
Lesson Builder
Help
SI124: Resources
Site Resources
Upload-Download Multiple Resources
Permissions
Options
Check Quota
Location: SI124 Resources
Remove | Move | Copy
Title
Access
Created By
Modified
Size
SI124 Resources
Add
Actions
Show other sites
Done

Home | Sites | Social | ABC | Si502 | ry | Global

ABC > Zippy > Week 1 > Module 1

Charles Severance | (0) | My preferences | Sign out

Reorder | Add Text | Add Multimedia | Add Resource | Add Subpage | Add Assignment | Add Quiz | Add For

Edit

This is the first unit in our introduction to Rutgers. In this unit you will learn basic facts about Rutgers.

You will find some other basic information about Rutgers below.

When you have read it, please turn in the assignment and then do the quiz.

Edit Essay on Rutgers
(Due Nov 12, 2010 5:00 pm)

Edit Quiz about Rutgers

(0)

Lesson Builder Tasks

- Evaluate usability
- Rutgers production experience will be valuable
- Improve the UX (evolutionary suggestions)
- Make it a NEO-portlet so it can use breadcrumbs
- Add Common Cartridge Import and Export

Anticipated Schedule

- Design and Development feature complete June 2011
- Present at the Sakai Conference and get broader community input
- Tweaks / performance testing / code review Summer 2011
- Code freeze 2.9 September 2011

I consider it an honor and privilege to speak with you at JA-Sakai and that you have taken this time to listen to what I have to say.

Thank you.

Sakai奮闘記