

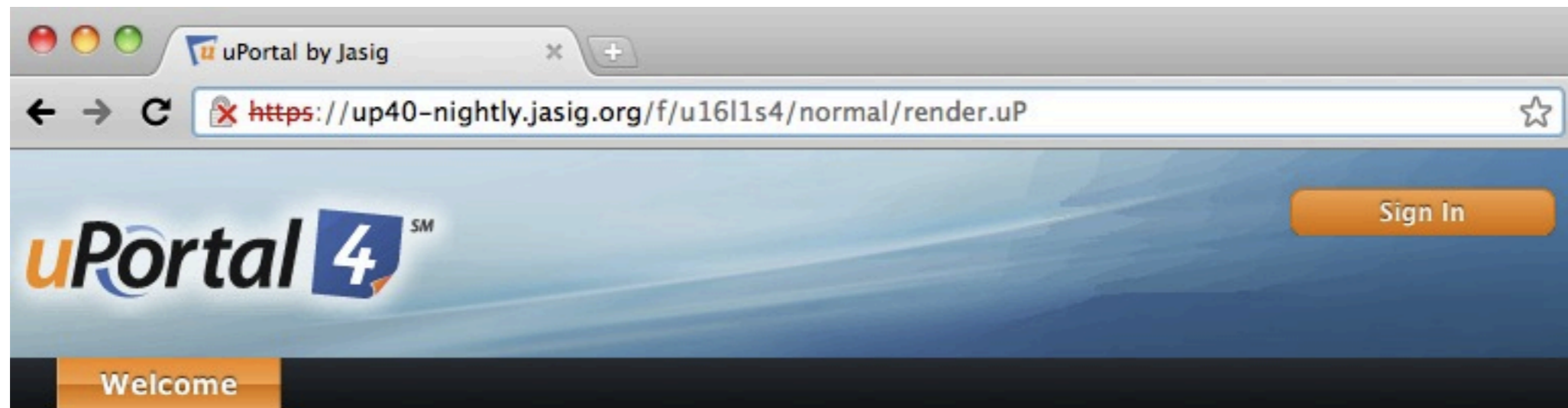


Introducing uPortal 4



Live Nightly Build

<https://up40-nightly.jasig.org>



WELCOME TO UPORTAL

What is uPortal?

[uPortal](#) is a free and open source Java-implemented web portal platform developed and maintained by participants drawn from across higher education under the coordination of [Jasig](#). uPortal can aggregate content, present self-service applications, personalize presentation and content on the basis of groups and user attributes, and allow advanced end-user-participatory customization of the portal experience. uPortal supports the JSR-168 Java portlet specification for including your custom applications within the portal.

Welcome to uPortal.

GOOGLE SEARCH

powered by

UPORTAL LINKS

uPortal Links

- [uPortal Home](#)
- [uPortal 3 Manual](#)
- [Download uPortal](#)





Framework

Image courtesy of http://www.flickr.com/photos/nocallerid_man/

JSR-286

- Resource URLs
 - AJAX Request handling
 - File downloads
- Inter-Portlet communication
 - Eventing
 - Public render parameters
- JS/CSS in <head>

JSR-286

- Caching Enhancements
 - ETags for resource responses
 - public/private scoping for shared data
 - Callbacks allow the portlet decide if it should re-render
- Portlet Update Plans
 - All Jasig portlets will be reviewed for 286 feature inclusion after uPortal 4.0 GA is released

Spring 3

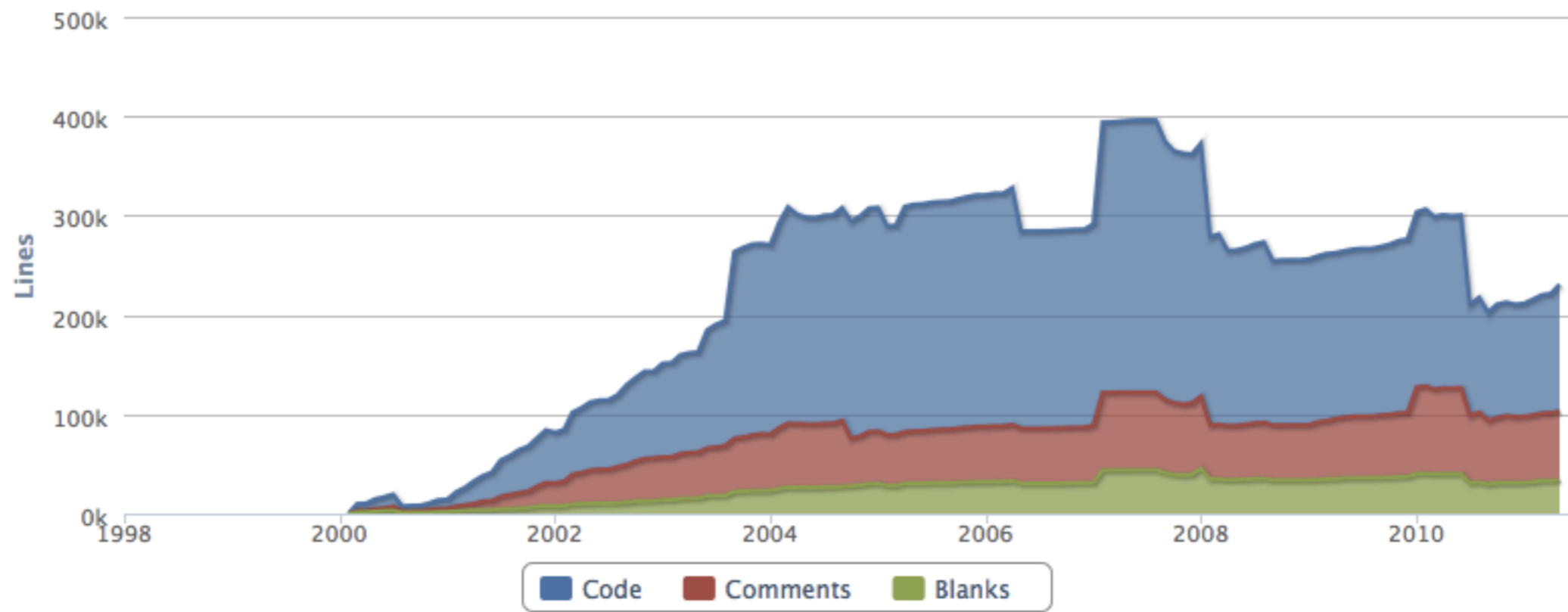
- Portlet 2.0 MVC Support
- REST client & server support
- Autowiring to reduce XML Configuration
 - Easier to override functionality
 - Significantly reduces the quantity of XML
 - Makes framework development faster and easier

Removing IChannels

- Simplify uPortal codebase
 - Removed 100,000 lines of IChannel specific code
- Clearly delineate portlet integration APIs
- Makes for a more resilient framework
- Easier to add features and make improvements
- There is support for converting old IChannels
 - Email the upotal-user or portlet-user email lists

Smaller Codebase

- Replaced custom code with standard libraries
 - StAX, JPA, Spring, Guava
- Using annotations to significantly reduce XML
- Removed IChannel and related code
 - There is likely more that can be removed



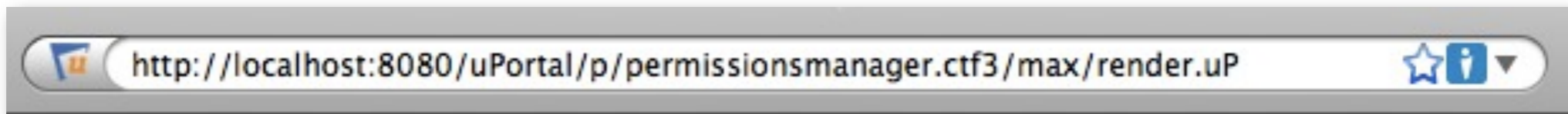
Codebase Size

Rendering Pipeline

- Refactored using standard JDK libraries
- Componentized and Spring-configured
- Advantages
 - Fewer dependencies
 - More configurable and modifiable
 - Improved performance
 - Improved test coverage

Rendering Pipeline

- Pull-Processor Style Eventing
 - Event types for XML (StAX) and String (custom) data
 - Each component can add, remove or replace events
 - Events are immutable data structures, easily cachable
- Cache awareness is part of the component API
 - Each component adds its state to the cache key
 - Layered key generation lends to shared data!



URL Schema

Consistent URLs

- Reflect navigation state in the URLs
 - Browser controls work as expected
 - Multiple windows work as well!
- Enforce canonical URLs
- Allow users to bookmark URLs
- Log based statistics tools will be much more useful

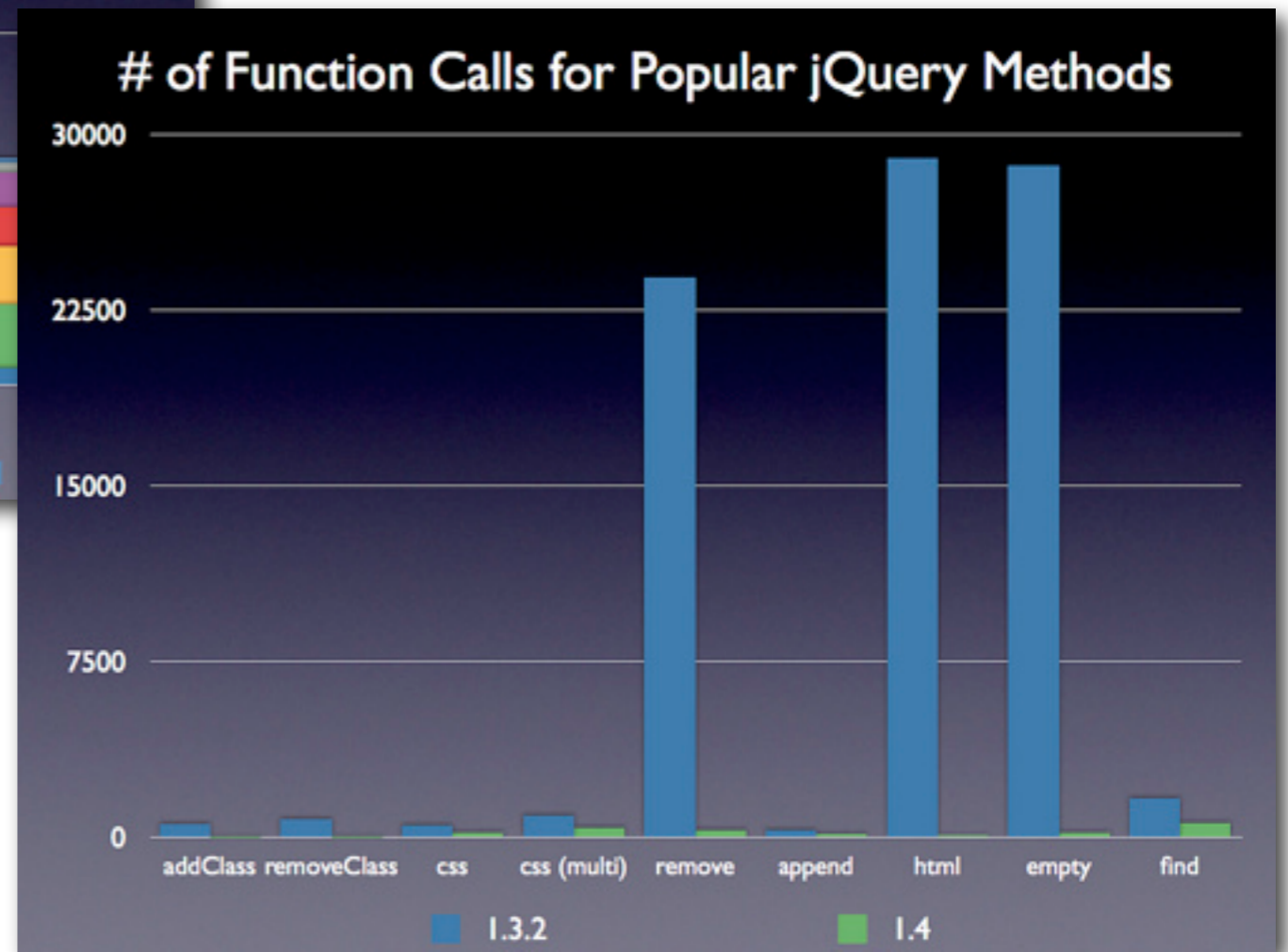
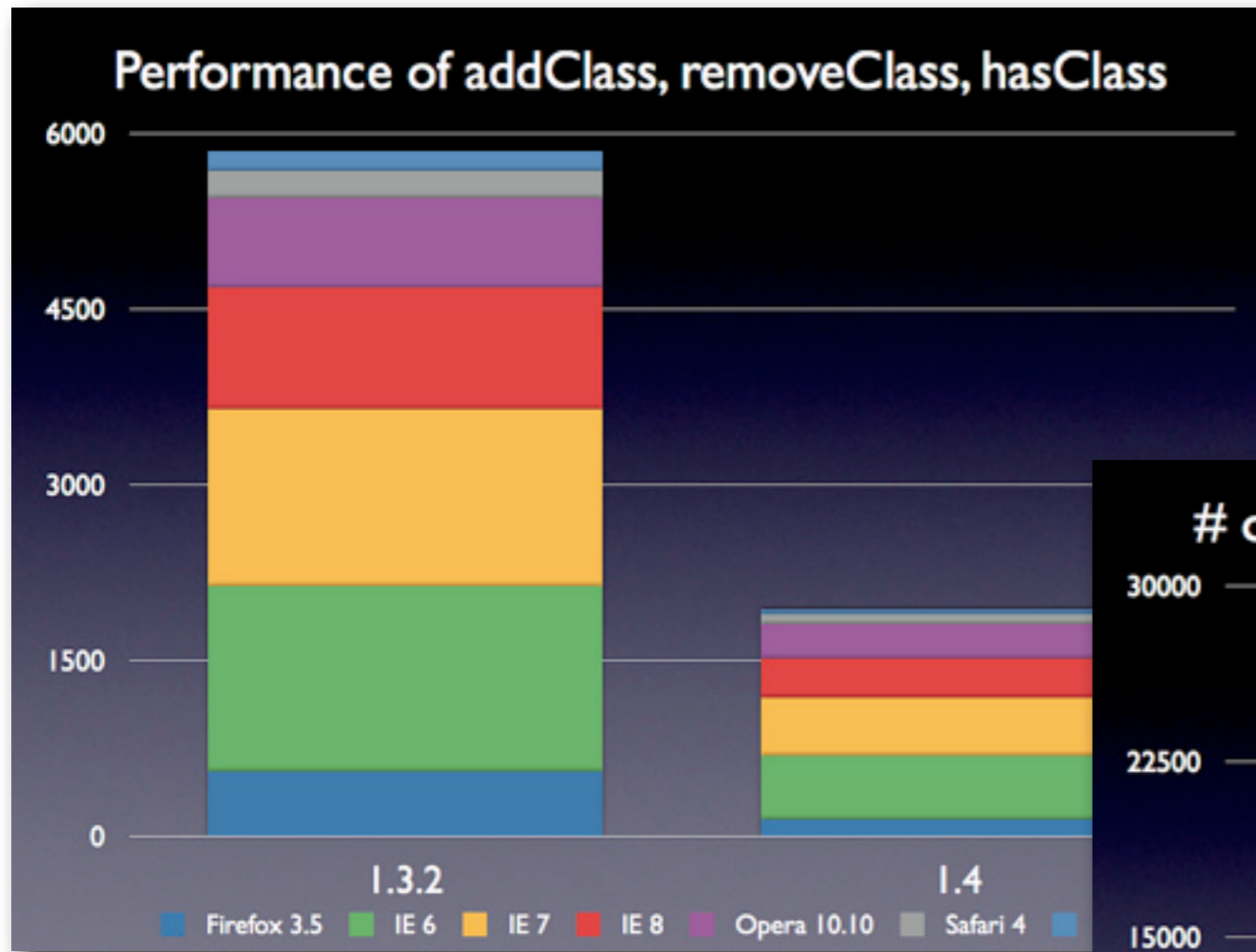


Performance

Image courtesy of <http://www.flickr.com/photos/lrargerich/>

JavaScript Performance

- jQuery 1.6 / jQuery UI 8
- Replacing XML with JSON
- ETag Support
 - Browser only downloads AJAX resources if they've changed
- Pluto 2.0
 - Eliminate 302 redirects in AJAX portlets



jQuery 1.4

URL	Status	Domain	Size	Timeline
▶ GET render.uP	200 OK	localhost:8080	24.6 KB	183ms
1 request			24.6 KB	183ms (onload: 1.3s)

URL	Status	Domain	Size	Timeline
▶ GET render.uP	200 OK	localhost:8080	24.6 KB	183ms
▶ POST layout	200 OK	localhost:8080	32 B	196ms
▶ GET channelList	304 Not Modified	localhost:8080	11.1 KB	526ms
3 requests			35.8 KB (11.1 KB from cache)	856ms (onload: 1.3s)

Caching and ETags

Permissions by Category



Error Channel

Permissions controlling the rendering of the uPortal error channel

[View](#)



Fragments

Permissions controlling uPortal DLM fragments

[Fragment Subscription](#)



Groups

Permissions controlling uPortal group and category viewing and management

[View a group](#), [Add and remove groups](#), [Select a group](#)



uPortal System

Permissions controlling the base uPortal system

[Superuser](#)



Portlet Publishing

Permissions controlling the publishing and editing of uPortal content

[Manage Expired](#), [Configure](#), [Manage Approved](#), [Manage Created](#), [Manage Published](#)



Portlet Subscribing

Permissions controlling the rendering of and subscription to uPortal content

[Subscribe Created](#), [Subscribe Approved](#), [Subscribe](#), [Subscribe Expired](#)



Users

Permissions controlling uPortal user account management

[Impersonate users](#)

Administrative Tools

Administration Overview

- Spring Webflow-based portlets
 - Standard user interfaces
 - Less code duplication
- Re-usable javascript components
- User experience redesign
- More intuitive workflows
- More administrative portlet integration

Select People and Groups

Who can add About.com College Life to their layout

✔ Your Selections

- ✔ [Students](#)
- ✔ [Faculty User](#)
- ✔ [Portal Developers](#)

Review

Cancel

🔍 Search

Enter a name

Go

🏠 Browse

Everyone >

✔ **Students**

De-select

Students includes:

People

- [Student User](#)
- [Student Layout Owner](#)

Re-usable Webflows


Register New Portlet


Show < previous 1 2 3 4 5 (last) [next](#) > 1-10 of 48 items per page


Name	Type	State	Edit	Delete
About.com College Life	RSS	Published	Edit	Delete
Admin Welcome	Image	Published	Edit	Delete
Attribute Swapper	Portlet	Published	Edit	Delete
Bookmarks	Bookmarks Portlet	Published	Edit	Delete
Cache Manager	Portlet	Published	Edit	Delete
Calendar	Portlet	Published	Edit	Delete
Daily Business Cartoon	Image	Published	Edit	Delete
Demo Welcome	Image	Published	Edit	Delete
Dictionary	Portlet			
E! Online	RSS			


Stuff **Packaged Stuff**

CATEGORIES
ALL, Administration, Demonstration, Development, Entertainment, Information, Instructors, News, Testing, uPortal

About.com College Life
 About.com College Life RSS feed

Admin Welcome
 Admin-targeted welcome screen

Cache Manager
 Provides a means to inspect the state of and flush EhCache instances configured for uPortal.

Calendar
 Small monthly calendar.

Re-usable JavaScript

Administration Overview

- Hibernate-backed JPA Persistence
 - Modern, widely-used technology
 - Enforce relational constraints
 - Provide better cross-database support
 - Better caching, locking, and performance
 - Easier to unit test
 - Smaller codebase

Everyone

All Users

Created by system

Edit

View Permissions

Delete

Create Member Group

Members

[Edit Members](#)

- [Faculty](#)
- [Staff](#)
- [Portal System](#)
- [Students](#)
- [Guests](#)
- [PAGS Root](#)

Groups Administration

Portal Administrators > Permissions

Assignments

Principal	Owner	Activity	Edit
Portal Administrators	Groups	Create group INHERITED	Edit
Portal Administrators	Groups	Edit group INHERITED	Edit
Portal Administrators	Groups	Remove groups INHERITED	Edit
Portal Administrators	Groups	View a group INHERITED	Edit
Portal Administrators	Users	Impersonate users INHERITED	Edit
Everyone	Users	View user INHERITED	Edit

Groups-Permissions Integration

Permissions by Category

Does have ?



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Permissions controlling the rendering of the uPortal error channel

[View](#)



Fragments

Permissions controlling uPortal DLM fragments

[Fragment Subscription](#)



Groups

Permissions controlling uPortal group and category viewing and management

[View a group](#), [Edit group](#), [Remove groups](#), [Create group](#)



uPortal Permissions

Permissions over the viewing and editing of permission owners, activities, and permission assignments

[Edit Permissions](#), [View Permissions](#)



uPortal System

Permissions controlling the base uPortal system

[Superuser](#)



Portlet Publishing

Permissions controlling the publishing and editing of uPortal content

[Manage Approved](#), [Manage Expired](#), [Configure](#), [Manage Created](#), [Manage Published](#)



Portlet Subscribing

Permissions controlling the rendering of and subscription to uPortal content

[Subscribe Approved](#), [Subscribe](#), [Subscribe Created](#), [Subscribe Expired](#)



Users

Permissions controlling uPortal user account management

[View user attribute](#), [View user](#), [Edit user attribute](#), [Delete users](#), [Edit users](#), [Impersonate users](#)

Permissions Administration

student

[Edit](#)[View Permissions](#)[Delete](#)[Impersonate](#)[Reset User Layout](#)

Attributes

[Edit User](#)

Net ID (uid)	student
Email (mail)	student.user@example.org
Net ID (Username)	student
Last Name (sn)	User
First Name (given)	Student
Net ID (user.login.id)	student
Display Name (displayName)	Student User

User Administration

YOU ARE SIGNED IN AS ADMIN USER. HOME | SITE MAP | HELP | SIGN OUT

uPortal SEARCH

Welcome | Development | Testing | News | Admin Tools | My Tab | + Add Tab

Add Stuff

Use It

Colors

Layouts

I'm Done

Stuff | Packaged Stuff

CATEGORIES

ALL, Administration, Demonstration, Development, Entertainment, Information, Instructors, News, Testing, uPortal

About.com College Life
About.com College Life RSS feed

Admin Welcome
Admin-targeted welcome screen

Attribute Swapper

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Small monthly calendar.

Daily Business Cartoon
Daily Business Cartoon by Ted Goff, www.tedgoff.com

Bookmarks
Bookmarks portlet

Demo Welcome
Demo-targeted welcome screen

▲

▼

CUSTOMIZE ▲

GOOGLE SEARCH PORTLET

×

powered by Google™

REGISTER PORTAL PORTLET

Register your portal

Registering this portal instance is easy and will only take a moment! Just fill out the short form below to send us some basic information about your portal environment. We appreciate knowing more about our users!

Organizational Information

User Interface

Skin Refresh

- Clean, modern new look and feel
- Potentially better starting point for custom skins

Layout “Gallery”

- Created by Unicon, sponsored by BYU
- Rewrote all custom javascript as Fluid components
- Unified interface for selecting content, layouts, and skins
- New tab interface including tab drag and drop and inline editing

YOU ARE SIGNED IN AS ADMIN USER. HOME | SITE MAP | HELP | SIGN OUT

uPortal SEARCH

Welcome | Development | Testing | News | Admin Tools | My Tab | + Add Tab

Add Stuff | **Use It** | **Colors** | **Layouts** | **I'm Done**

Stuff | Packaged Stuff

Search for stuff

CATEGORIES
 ALL, Administration, Demonstration, Development, Entertainment, Information, Instructors, News, Testing, uPortal

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 Demo-targeted welcome screen

CUSTOMIZE

GOOGLE SEARCH PORTLET

Search
 powered by Google™

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Organizational Information

Content Selection

YOU ARE SIGNED IN AS ADMIN USER. HOME | SITE MAP | HELP | SIGN OUT

uPortal SEARCH

Welcome | Development | Testing | News | Admin Tools | My Tab | + Add Tab

Add Stuff
Use It
Colors
Layouts
I'm Done

uPortal 3 **Ivy** **Coal** **High Contrast**

CUSTOMIZE ▲

GOOGLE SEARCH PORTLET Search
powered by Google™

REGISTER PORTAL PORTLET

Register your portal

Registering this portal instance is easy and will only take a moment! Just fill out the short form below to send us some basic information about your portal environment. We appreciate knowing more about our users!

Skin Selection

CUSTOMIZE ▲

Customize this page.

You can **Add Stuff**, change the page **Layout**, and pick your **Colors**.

Tab Editing

Tab Subscription

- Allow users to subscribe to pre-formatted, packaged tabs
- Define permissions for tab subscription

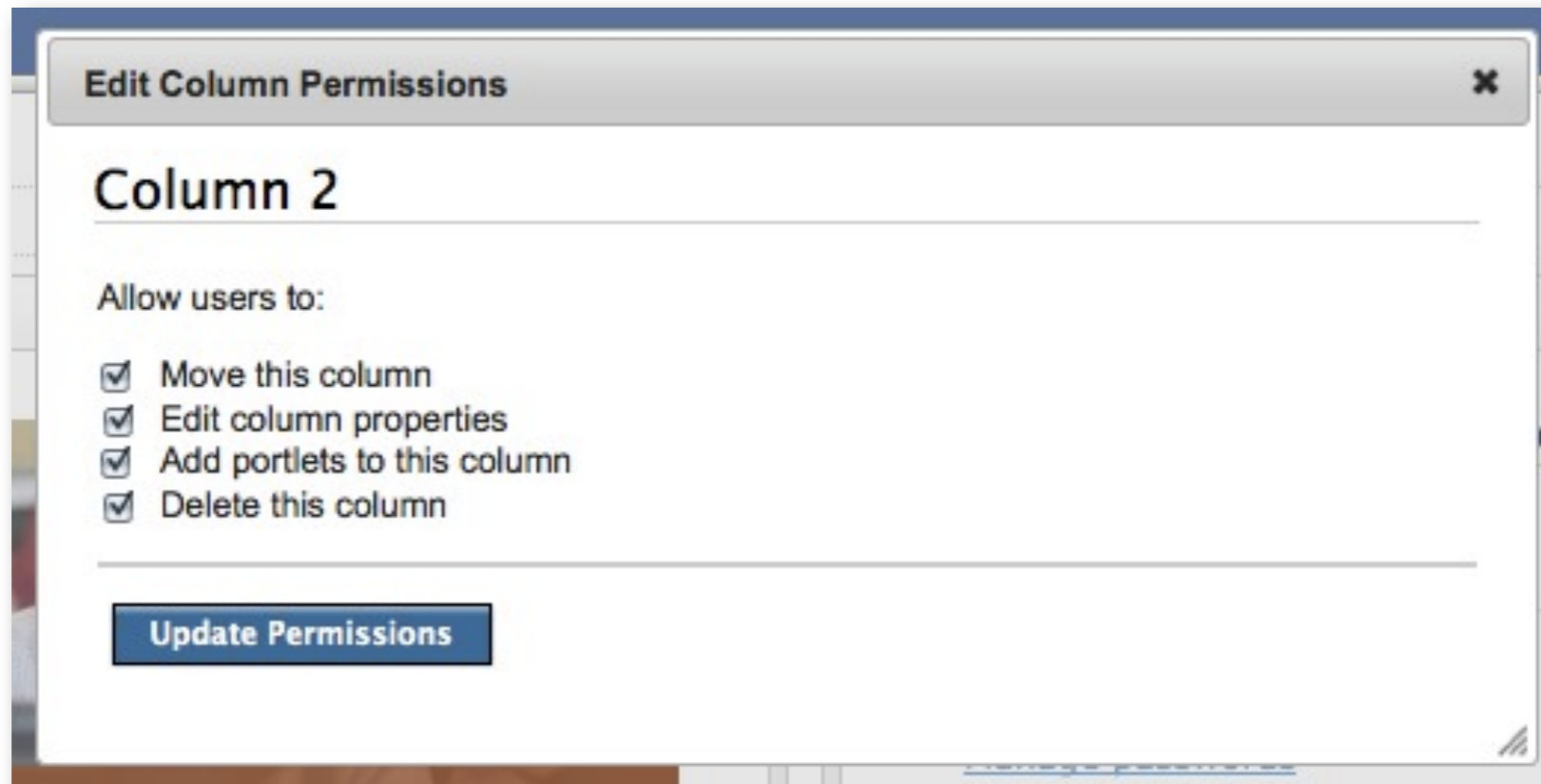
The screenshot shows a dark-themed web interface with a horizontal navigation bar. On the left, there are two tabs: 'Stuff' and 'Packaged Stuff'. The 'Packaged Stuff' tab is active and highlighted in orange. Below the tabs, a tooltip box contains the text: 'Adding a package creates a new tab and puts the packaged stuff on it'. To the right of the tooltip, the 'Packaged Stuff' content is displayed, featuring three columns: 'News' (Current world news resources) and 'Entertainment' (Games, humor, and entertainment news).

Stuff	Packaged Stuff	News	Entertainment
	Adding a package creates a new tab and puts the packaged stuff on it	Current world news resources	Games, humor, and entertainment news

Tab Subscription

DLM Fragment Management

- Administer fragment permissions through the user interface
 - Tabs
 - Columns
 - Portlets



Fragment Permissions

Internationalization

- Single unified messaging file used for all
 - Webflows
 - JSPs
 - XSLT
 - JavaScript
- Updated message codes for portlets and theme
- Automated translation of new messages

```
1|
2activity=Activity
3activities=Activities
4add=Add
5add.assignment=Add an Assignment
6add.assignment.to=Add an assignment to
7add.stuff=Add Stuff
8add.package.instruction=Adding a package creates a new tab and puts the packaged stuff on it
9assignment=Assignment
10assignments=Assignments
11assignments.for=Assignments for
12back=Back
13browse=Browse
14cancel=Cancel
15category=Category
16categories=Categories
17categories.membership.which=Which categories {0} belongs to
18choose.group=Choose a Group
19choose.portlet.or.category=Choose a Portlet or Category
20choose.principals=Choose Principals
21colors=Colors
22create.group=Create Group
23create.member.group=Create Member Group
24create.permission=Create Permission
25current.permissions=Current Permissions
26delete=Delete
27delete.group=Delete Group
28delete.group=Delete Group
29delete.group.name=Delete Portlet {0}
30delete.group.confirmation=You are about to remove the group "{0}" as well as its membership settings! /
31delete.portlet=Remove Portlet
32delete.portlet.name=Remove Portlet {0}
33delete.portlet.confirmation=You are about to remove the portlet "{0}" as well as its role and category
34description=Description
35delete.select
```

Unified Messages File



Mobile Support



Integration

Image courtesy of <http://www.flickr.com/photos/mykloventine/>

Groupier Integration

- Browse, search, and view Groupier groups from uPortal
- Assign uPortal permissions and distribute content using Groupier groups
- Administer Groupier groups from uPortal

CAS Clearpass

- CAS Clearpass module and sample configuration included in build
- Clearpass features commented out by default



Future Directions

Layout Refactoring

- Re-implement user and layout tables using JPA
- Better layout state modeling
 - Needed for the best data sharing in the new pipeline
- Support more than one layout per user
 - Allow layout customization from a mobile device

Search

- Integrate with Lucene or other search indexing tool
- Create ability to index uPortal content
- Integrated search portlet that can pull content from multiple sources

Groups and Permissions

- Refactor Groups and Permissions APIs
 - Reduce the use of static method calls
 - Introduce support for generics
 - Increase ability to unit test portal code
- Spring Security integration
 - Move to aspect based permissions enforcement

REST Services

- Create REST services for uPortal entities, permissions
- Allow richer integration with external tools
- Easy way for portlets to access portal specific data

Statistics

- Integrate aggregation into uPortal directly
- Build reporting portlets

Spring Security

- Replace custom uPortal authentication APIs
- Use Spring Security method-level annotations