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**Apereo Europe**  
**2016**

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# Feedback on the deployment of uPortal 4.2+ responsive at UPMC

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## About us

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- ❖ Has been working on uPortal since 2005
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# Summary

- ❖ Recap of the context at UPMC
- ❖ Feedback on the migration strategy adopted
- ❖ Overview of a *homemade* development in the project (Off-canvas, sticky nav, fly-out menus)
- ❖ A quick presentation of dynamic skins
- ❖ Focus on how to adapt an existing portlet in Responsive Web Design through a POC based on Apereo Email-Preview
- ❖ Overview of Simple Content Management Portlets *Advanced CMS* with Bootstrap (Responsive Web Design )
- ❖ Information on the project Apereo uPortal 4.2, 4.3 and on the AngularJS front-office myUW (University of Wisconsin)



# Feedback on the deployment of uPortal 4.2+



## Context

# The UPMC Portal : monUPMC

➤ In production (uPortal 4.0 +) since september 2012

- ❖ 2 VMs and 1 fallback server dedicated to CAS
- ❖ 4 VMs dedicated to the portal (mon.upmc.fr)
  - \* Centos6, 4GB RAM, 2 CPU cores
  - \* Apache Httpd 2.2 with mod\_proxy\_ajp, Apache Tomcat 6.0
  - \* Load balancing and fallback : Big Iron F5

➤ Organization of monUPMC tabs and services

- \* 9 thematic tabs: 3 on guest page
- \* 20-30 "pushed" services depending on the user's profile
- \* ≈ 25 different portlets
- \* ≈ 130 portlet instances (with administration services)
- \* ≈ 50 Advanced CMS portlets

# monUPMC version 4.0.11+

## ➤ Desktop View (Universality)

The screenshot displays the monUPMC desktop interface. At the top, there is a navigation bar with tabs for 'Accueil', 'Campus', and 'Echanges'. A 'Se connecter' button is located in the top right corner. Below the navigation bar, a message states: 'Conseil n°4: De nouveaux services/portlets peuvent être ajoutés à vos onglets en cliquant sur 'Personnaliser'.'

The main content area is divided into two columns. The left column, titled 'Accueil monUPMC', contains a welcome message: 'Bienvenue sur l'espace numérique de travail de l'université Pierre et Marie Curie.' It also includes a link to 'Accéder à l'aide en ligne' and a description of monUPMC as a portal for services. The right column, titled 'Annonces', lists recent announcements with dates and titles, such as 'Application de la nouvelle politique de mot de passe sur CAS' and 'Nouvelle authentification de l'annuaire de l'UPMC'.

Below the announcements, there is a section for 'Nouvelles' (News) with tabs for 'Actualités de l'UPMC', 'Bibliothèques de l'UPMC', and 'Culture à l'UPMC'. It features a 'Flux RSS des actualités de l'Université Pierre et Marie Curie' and a list of news items with dates and titles.

The footer contains a navigation menu with links to 'Accueil', 'Campus', and 'Echanges', along with a 'Help' link. It also includes the UPMC logo and contact information.



# monUPMC version 4.0.11+

## ➤ Mobile View (mUniversality)



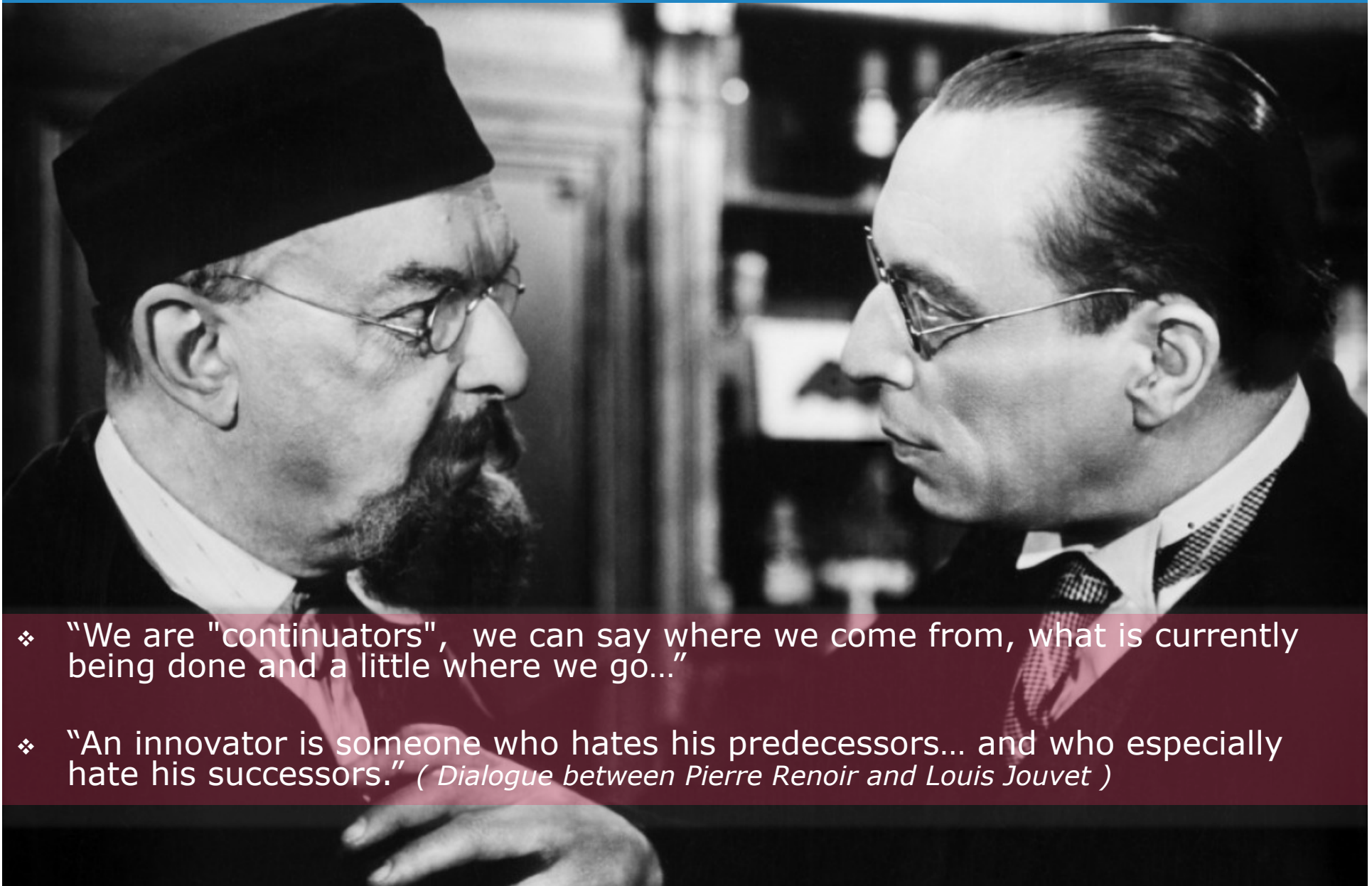
# The UPMC Portal monUPMC

## ➤ Deployment strategy

- ❖ In production since 2005
- ❖ Member of the ESUP-Portail Consortium since 2005
- ❖ Signed two Contributor License Agreements (CLA) for Apereo
- ❖ Product strategy: We closely stick to the basic product, any improvement is pushed to the source code.



## Continuators versus innovators



- ❖ "We are "continuators", we can say where we come from, what is currently being done and a little where we go..."
- ❖ "An innovator is someone who hates his predecessors... and who especially hate his successors." ( *Dialogue between Pierre Renoir and Louis Jouvet* )

## Feedback on the deployment of uPortal 4.2+



## Feedback on the migration strategy

## Two parallel, distinct and complementary projects

- Update the base and the portlets to uPortal 4.2+ - 4.3
  - ❖ All existing services need to migrate. (“Iso-functional” migration)
  - ❖ Skin proposal conformed to the dynamic skin layout Manager
  - ❖ Responsive Web Design everywhere, no more mobiles views.
- Switch to a multi-tenant architecture with uPortal 4.2+
  - ❖ More security, management flexibility and delegation of administrative rights to Tenant Admin
  - ❖ The sharing of a same technical platform increases the level of security, surveillance and paves the way for future pooling
  - ❖ Implies multi-authentication questions (CAS, Shibboleth...)



For now, we accumulate ammunition, pending a strategic green light.



- ❖ « Not whit, we defy augury; there is special providence in the fall of sparrowe. If it be now, 'tis not to come if it be not to come, it will be now. If it be not now, yet it will come; the readiness is all. » William Shakespeare - Hamlet A.V S.2

## Feedback on the deployment of uPortal 4.2+



**Homemade development:  
Off-canvas, sticky nav,  
fly-out menus**

# Off-canvas, sticky nav, fly-out menus

## ➤ A regression in the transition from UNIVERSALITY to RESPONDR

- ❖ The flyout menus (drop-down menus below the tabs) are not brought in the source code in 4.2 and we must be "iso-functional"
- ❖ Optional

## ➤ A small default of mobile usability due to Responsive Web Design

- ❖ On Mobile, a portal user has a tendency to scroll vertically too much.
  - \* Need for a development on the project:
    - A Main Nav in Off-Canvas (Optional)
    - A sticky nav with a small animation effect to change of tab (1<sup>st</sup> breakpoint) on an idea of Oakland University – Thanks Aaron Grant



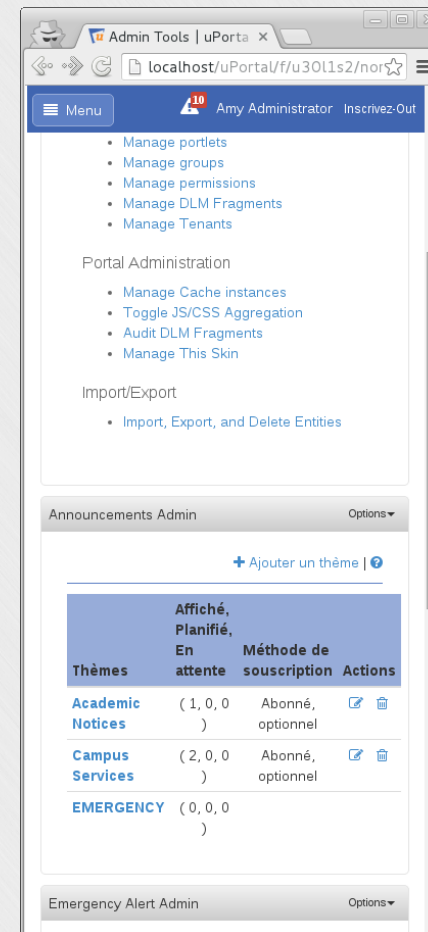
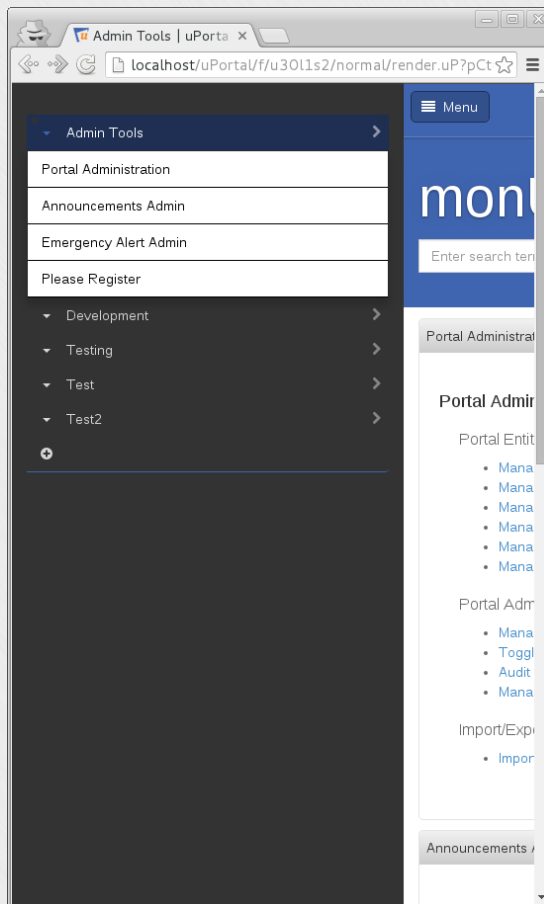
# Fix fly-out menus

The screenshot shows the monUPMC web application interface. The browser address bar displays the URL: `localhost/uPortal/f/u301s2/normal/render.uP?pCt=dynamic-respondr-skin.u301n3&pCm=view&pCs=normal`. The user is logged in as 'Amy Administrator'. The main navigation bar includes tabs for 'Admin Tools', 'Development', 'Testing', 'Test', and 'Test2'. A fly-out menu is open under 'Admin Tools', listing: 'Portal Administration', 'Announcements Admin', 'Emergency Alert Admin', and 'Please Register'. The 'Portal Administration Tools' section on the left includes 'Portal Entity Administration' (Manage Users, Manage portlets, Manage groups, Manage permissions, Manage DLM Fragments, Manage Tenants) and 'Portal Administration' (Manage Cache instances, Toggle JS/CSS Aggregation, Audit DLM Fragments, Manage This Skin). The 'Import/Export' section includes 'Import, Export, and Delete Entities'. The 'Announcements Admin' section shows a table of themes:

Thèmes	Affiché, Planifié, En attente	Méthode de souscription	Actions
Academic Notices	( 1, 0, 0 )	Abonné, optionnel	<a href="#">✎</a> <a href="#">🗑</a>
Campus Services	( 2, 0, 0 )	Abonné, optionnel	<a href="#">✎</a> <a href="#">🗑</a>
EMERGENCY	( 0, 0, 0 )		

The 'Emergency Alert Admin' section shows 'Emergency Alert Portlet Administration' with the status 'The Emergency Alert portlet is currently **DISABLED**' and a link to 'Enable Now'.

# Off-Canvas, sticky nav



- ❖ Jira UP-4622 : <https://issues.jasig.org/browse/UP-4622>
- ❖ Pull Request : Nojira add offcanvas stickynav flyout #598  
<https://github.com/Jasig/uPortal/pull/598>

## Feedback on the deployment of uPortal 4.2+

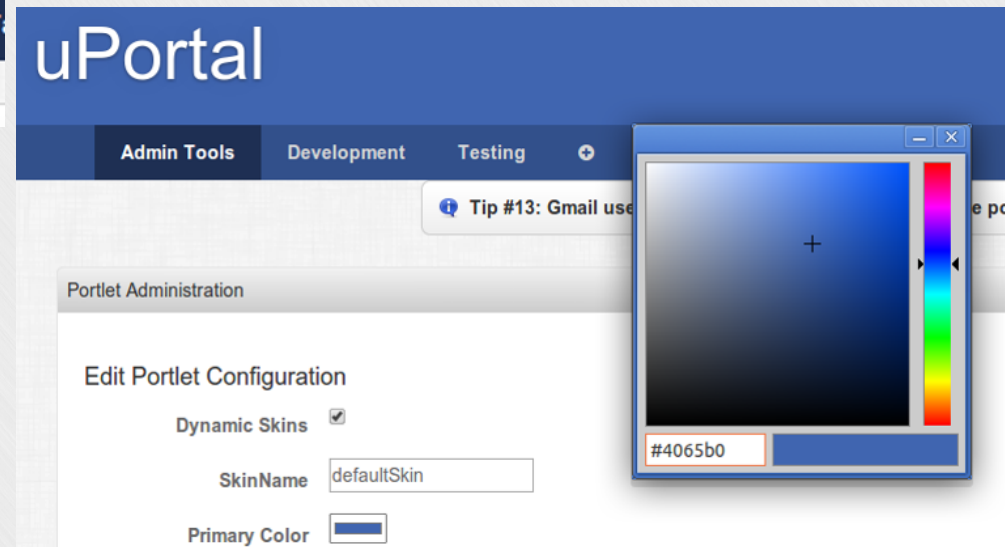
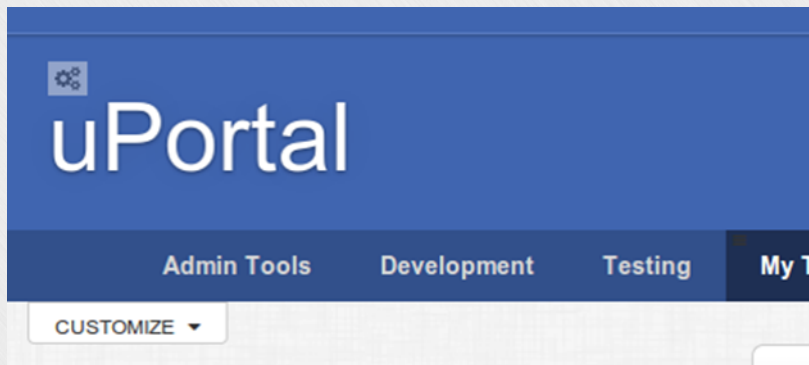


### Overview of dynamic skins



## Dynamic Skins – Everything is portlet

- ❖ If you have a Custom Skin, You need to change `uPortal/uportal-war/src/main/data/default_entities/portlet-definition/dynamic-respondr-skin.portlet-definition.xml`



## Experience feedback on the deployment of uPortal 4.2+



**Focus**  
**on how to adapt an existing portlet in**  
**Responsive Web Design**

**POC of Apereo Email-Preview**





# Steps for « responsiving » a Portlet

- Analysis of the existing
- Find an approach angle
- Market research (RWD)
- Carry out a static mockup
- Html5 Integration (jsp, jsf...)
- JavaScript Integration
- LESS, SASS, CSS Integration
- Performance testing, multi-devices, etc.

# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Analysis of the existing

### ❖ A Rollup with notifications



# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Analysis of the existing

### ❖ Preview of Email List

Email Preview Demo Options▼

✉ Boîte de réception 4
↻ Actualiser
🗑 Supprimer sélections
📊 Quota: 2.26% / 10.07GB

🔒 Fermer prévisualisation
⚙ Préférences
🔍 Aide

< préc.
1
suiv. >

Viewing page 1. Showing records 1 - 7 of 7 items. 10 par page

Dossier courant Important ▼

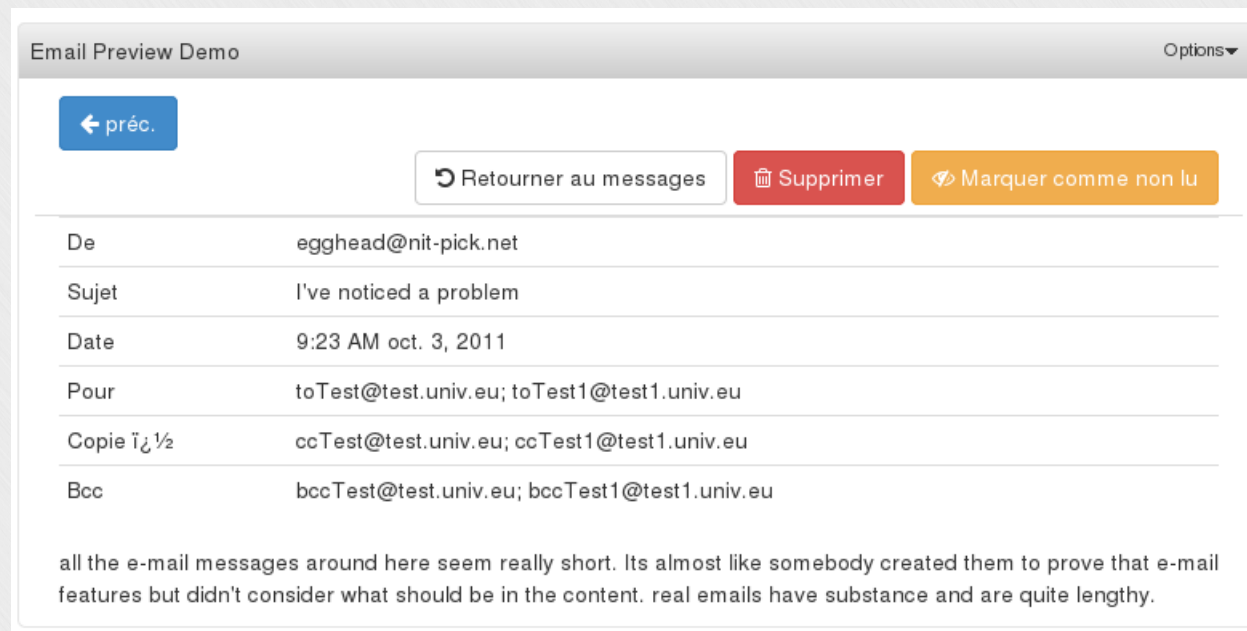
<input type="checkbox"/>	Sujet	Expéditeur	Date d'envoi
<input type="checkbox"/>	<a href="#">Waking up</a>	cthulhu@southPacific.net	9:27 AM oct. 3, 2011
<input type="checkbox"/>	<a href="#">uPortal 4</a>	Evan@testEmails.net	9:26 AM oct. 3, 2011
<input type="checkbox"/>	<a href="#">Cyclops</a>	nobody@nobody.net	9:24 AM oct. 3, 2011
<input type="checkbox"/>	<a href="#">party invitation</a>	hotshot@testEmail.com	9:24 AM oct. 3, 2011
<input type="checkbox"/>	<a href="#">Following up</a>	Bob@mainframe.com	9:24 AM oct. 3, 2011
<input type="checkbox"/>	<a href="#">Read this!</a>	Bob@mainframe.com	9:24 AM oct. 3, 2011
<input type="checkbox"/>	<a href="#">I've noticed a problem</a>	egghead@nit-pick.net	9:23 AM oct. 3, 2011



# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Analysis of the existing

### ❖ Preview of Email Message



# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Find an approach angle

- ❖ The “Page” change between the display of the list of messages and the display of the selected message is done by modifying the CSS property "display" from "block" to "none" via JavaScript, we stay on the same DOM ...
- ❖ Nothing can stop me to display both views at the same time.

```
var showEmailList = function(that) {  
  that.locate("loadingMessage").hide();  
  that.locate("emailMessage").hide();  
  that.locate("errorMessage").hide();  
  that.locate("emailList").show();  
};  
...  
var showEmailMessage = function(that) {  
  that.locate("loadingMessage").hide();  
  that.locate("emailList").hide();  
  that.locate("errorMessage").hide();  
  that.locate("emailMessage").show();  
};
```

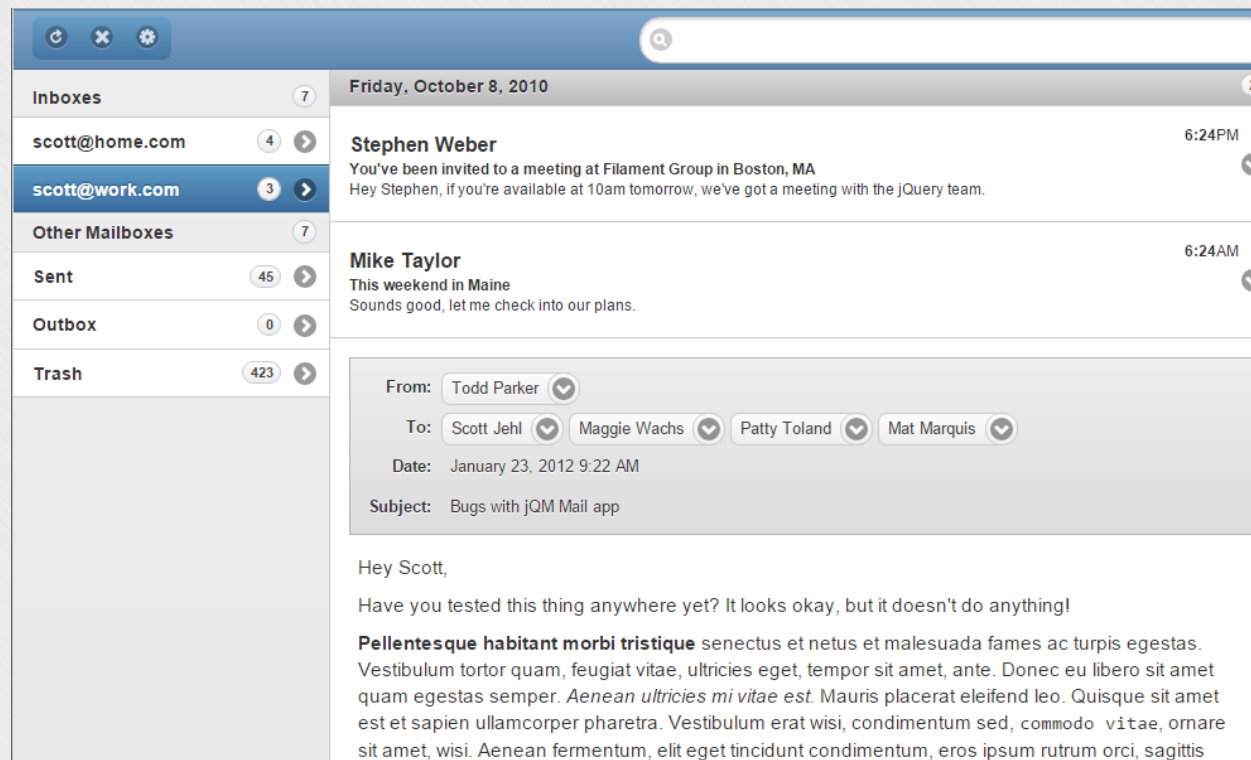


```
var showEmailList = function(that) {  
  that.locate("loadingMessage").hide();  
  that.locate("emailMessage").show();  
  that.locate("errorMessage").hide();  
  that.locate("emailList").show();  
};  
...  
var showEmailMessage = function(that) {  
  that.locate("loadingMessage").hide();  
  that.locate("emailList").show();  
  that.locate("errorMessage").hide();  
  that.locate("emailMessage").show();  
};
```

# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Market research (RWD)

### ❖ FilamentGroup



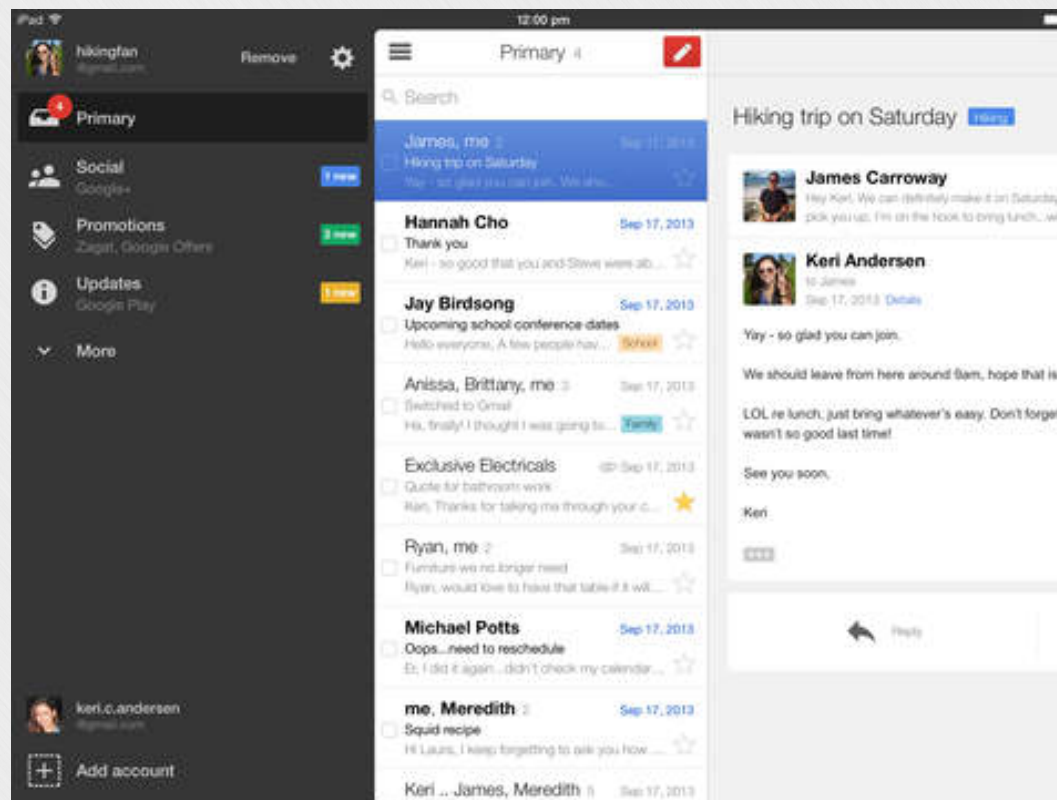
\* <https://github.com/filamentgroup/jqm-mail>



# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Market research (RWD)

### ❖ Google App Gmail



# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Market research (RWD)

### ❖ FilamentGroup jqm-mail

- \* Problem: use jQuery Mobile when it is removed from the project.
- \* But the idea of the withdrawal between records, the list of messages and the selected mail is interesting
- \* A little less interested in opening the selected mail in the list of mails
- \* Interesting principle

### ❖ Google App Gmail

- \* Native App, but this is not a problem
- \* Different behavior between iphone and ipad
- \* Triple Off-canvas (option Folders / list of mails / message display / write|reply to a message)
- \* It could be very interesting to combine it with Filament Group-jqm-mail

# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Carry out a static mockup

### ❖ 2 – 3 days of work

- \* HTML5, JavaScript, CSS3
- \* Build on Bootstrap / jQuery only
- \* No JavaScript / JS lib of the Portlet
- \* Lean on some portion of the existing code in jsp without script / css
- \* Do not remove features, reduce the code
- \* Have fun, have fun

### ❖ DEMONSTRATION



# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Carry out a static mockup – a few useful resources

### ❖ Device State Detection with CSS Media Queries and JavaScript to inject different behaviors according to the states

- \* Being able to detect device state at any given moment is important for any number of reasons and so it's important that web app CSS and JavaScript are in sync with each other.
  - Device State Detection with CSS Media Queries and JavaScript  
<https://davidwalsh.name/device-state-detection-css-media-queries-javascript>  
*David Walsh - Senior Web Developer and software engineer for Mozilla*
- \* A small improvement to avoid the blind people with a synthesis Speech not to read the device state
- \* A hundred times more effective than sniffing on Server-side the user-agent or to calculate in JavaScript the width, the outer-width, etc.  
A nightmare...

```
// Usage
subscribe('/device-state/change', function(state) {
  if(state == "mobile") {
    // Do whatever
  } else if(state == "tablet") {
    // Do whatever
  } else if(state == "desktop") {
    // Do whatever
  } ....
});
```

# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ Html5 Integration (jsp)

- ❖ One goal: to have a nearly identical DOM between static mock-up and the code generated by the portlet
  - \* If a JS component wants a particular element to run, put it its element, everything can be changed with CSS and ARIA attributes and roles
    - Example 1
    - Example 2

## ➤ JavaScript Integration

- ❖ Update the JavaScript libs
- ❖ Work with the existing code (Fluid...)
  - \* Example in email-browser.js (570 lines):
    - 10 occurrences of "this"
    - +150 occurrences of "that" !!!!!!!!!!!!!!!

```
that.locate("xxx").click( function(){ doThis(that, this); });
```

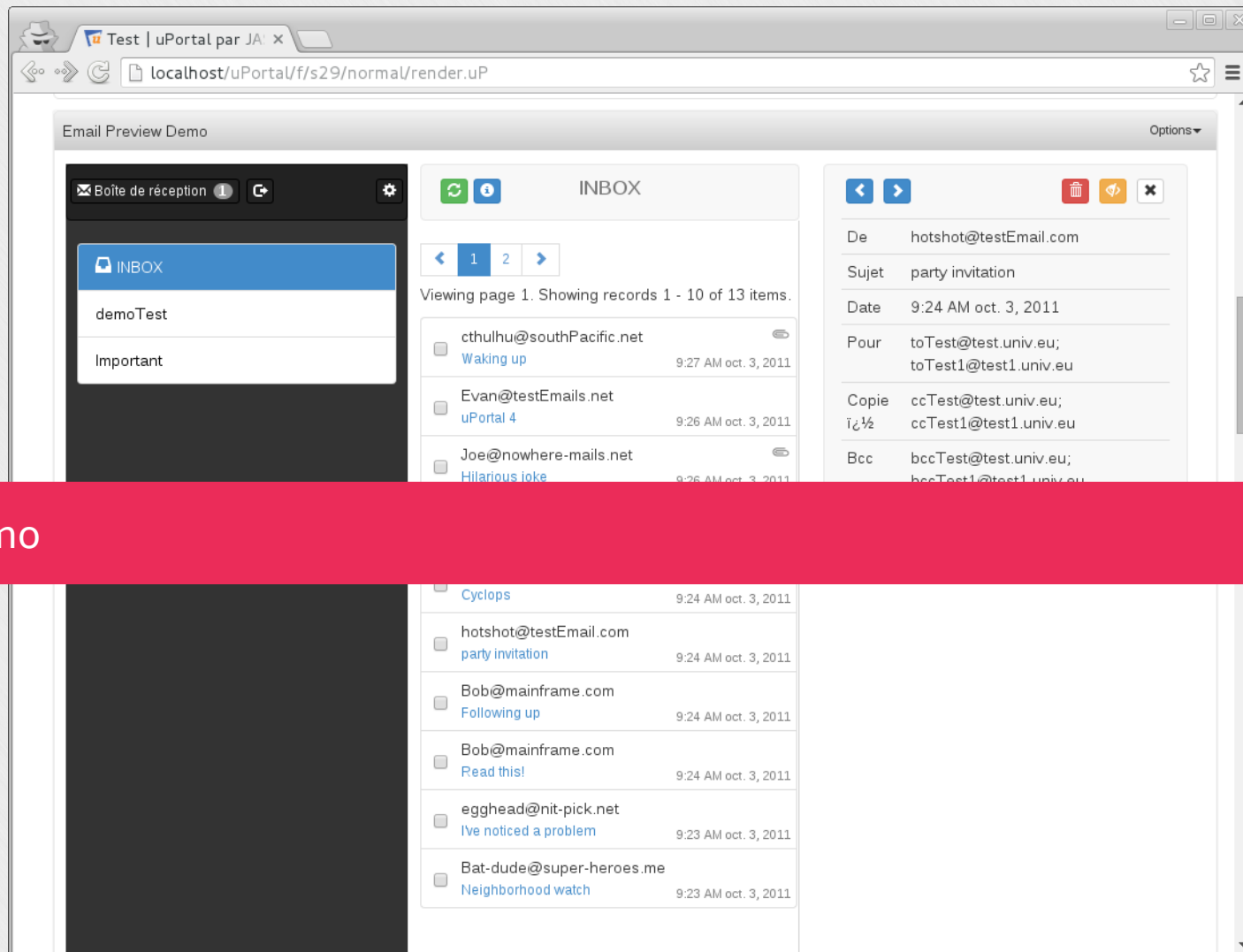
# Email-Preview 2.2.0-SNAPSHOT – Proof of concept

## ➤ LESS, SASS, CSS Integration

- ❖ Work for the smaller screen first
- ❖ Use the LESS mixins from the portal, not a LESS mixins with an improbable license ... It will simplify the migration to bootstrap 4
- ❖ When animating elements—any element, no matter how small—only animate properties that are GPU accelerated. In CSS, this means using the translate3d transform property, which is hardware accelerated, rather than modifying the top and left properties, which are not. Animating properties which don't have hardware accelerated counterparts — such as an element's height — should be avoided altogether.
  - ★ <http://blog.forecast.io/its-not-a-web-app-its-an-app-you-install-from-the-web/>



# Email-Preview 2.2.0-SNAPSHOT – Proof of concept



➤ Demo

**We just changed the client side. Nothing on the server side, not even the JavaScript libs on client-side (well, yes a little update of versions ...).**



❖ « O God, I could be bounded in a nutshell and count myself a king of infinite space... » William Shakespeare – Hamlet A.II S.2

## Feedback on the deployment of uPortal 4.2+



### **Simple Content Management Portlet** *Advanced CMS* **with** **Bootstrap**



## Feedback on the deployment of uPortal 4.2+

- Objective: Publish a hundred portlets in 3-4 days
  - ❖ Production of a dozen templates in html5 with Bootstrap to generate a hundred portlets quickly by copying and pasting.
  - ❖ Use data attributes of bootstrap
    - \* <http://getbootstrap.com/css/>
    - \* <http://getbootstrap.com/components/>
    - \* <http://getbootstrap.com/javascript/>

➤ Demo

## Feedback on the deployment of uPortal 4.2+



**Information on the Apereo uPortal projet (4.2, 4.3)  
and on the AngularJS front-office myUW  
(University of Wisconsin)**

## Information on the uPortal project (4.2, 4.3)

### ➤ Fix in 4.2.1 September 30, 2015

- ❖ Update portlet api to 2.1
- ❖ Fragment-admin-exit portlet is integrated with the ResponDR skinning process
- ❖ Add caching to two DB PAGES methods
- ❖ Add the search-launcher to the guest experience
- ❖ Fix on Poor SQL Performance for DB-based PAGES
- ❖ Improve performance of the Marketplace subsystem

### ➤ Fix in 4.3 In progress

- ❖ Fixes on tenants Manager
- ❖ Fixes on SmartLdapGroupStore
- ❖ Add Grab Handle to drag n drop Portlet
- ❖ Watch out Header is a little modified in 4.3 (for 4.2 Adopters)
- ❖ Many, many fixes ...



## Information on the uPortal project (4.2, 4.3)

- ❖ Dockerization of uPortal
  - \* <https://issues.jasig.org/browse/UP-4592>
- ❖ Documentation for a portlet which uses AngularJS
  - \* [https://github.com/Jasig/uPortal/blob/master/docs/USING\\_ANGULAR.md](https://github.com/Jasig/uPortal/blob/master/docs/USING_ANGULAR.md)
- ❖ A Story on a new Layout RWD
  - \* Angular-JS UI to replace portal-driven ResponDR theme
  - \* <https://issues.jasig.org/browse/UP-4517>

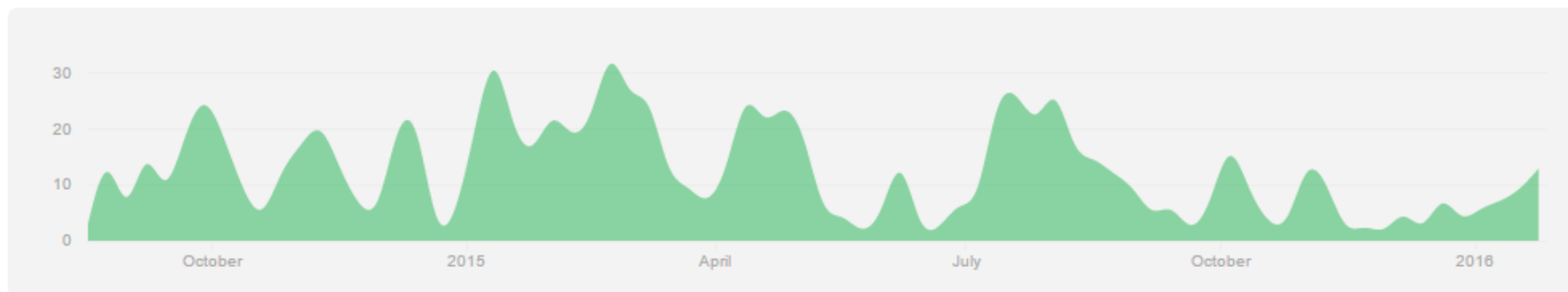
# The Bridges of Madison County: front-end in AngularJS

➤ <https://github.com/UW-Madison-DoIT/angularjs-portal>

Aug 17, 2014 – Jan 27, 2016

Contributions: **Commits** ▼

Contributions to master, excluding merge commits



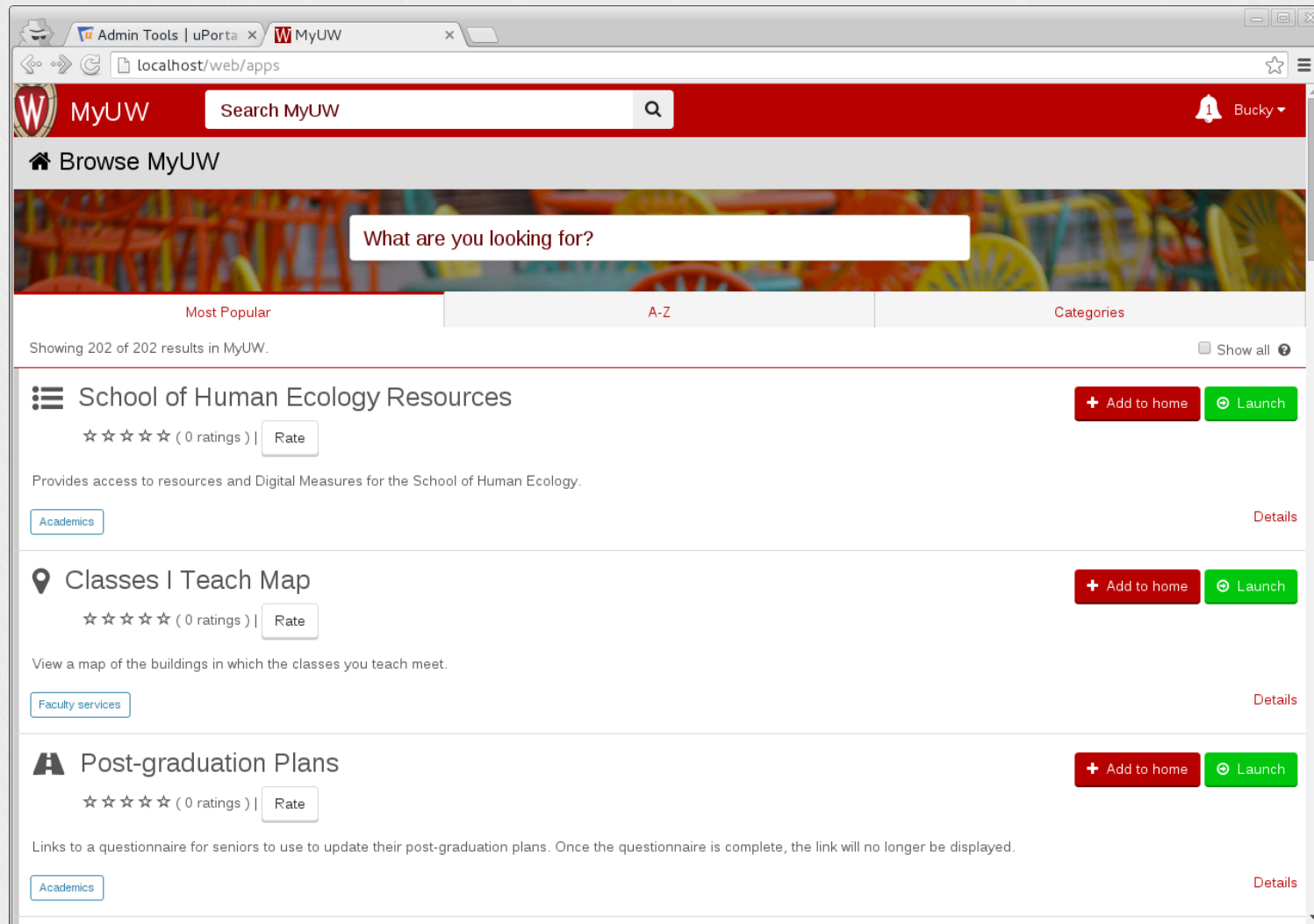
➤ Demo

# Angularjs-portal Home myUW

The screenshot displays the myUW AngularJS portal home page. The interface is organized into a grid of widgets. At the top, there is a red header bar containing the MyUW logo, a search bar, and a user profile 'Bucky'. Below the header, the 'Home' section features a grid of widgets. The widgets include: Search with the Bing (Interweb Search, Image Search), Weather (Madison, Wisconsin; Austin, Texas), Directory (Directory, Departmental Directory), Manager Time and Approval (Approve Time, Approve Absence), Course Services (Learn@UW, Classlist, Classroom Scheduling, Grading Policy), My Courses (Fourth Semester Arabic, Digital System Fundamentals, Calculus-Functions of Several Variables, Africa: An Introductory Survey), Payroll Information (08/06/2015 Statement, 07/23/2015 Statement, 06/25/2015 Statement), Email (first.last@wisc.edu), Course Guide (Search for courses), Course Guide Help (Requisites Not Met Error Message, College Scheduler, Demos of Features), Course Guide News (No active news articles at this time.), and My Professional Development (Search courses and events).



# Angularjs-portal MarketPlace myUW



## Experience feedback on the deployment of uPortal 4.2+



**Questions ?**

