



# Gateln Introduction

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22 Nov, 2011

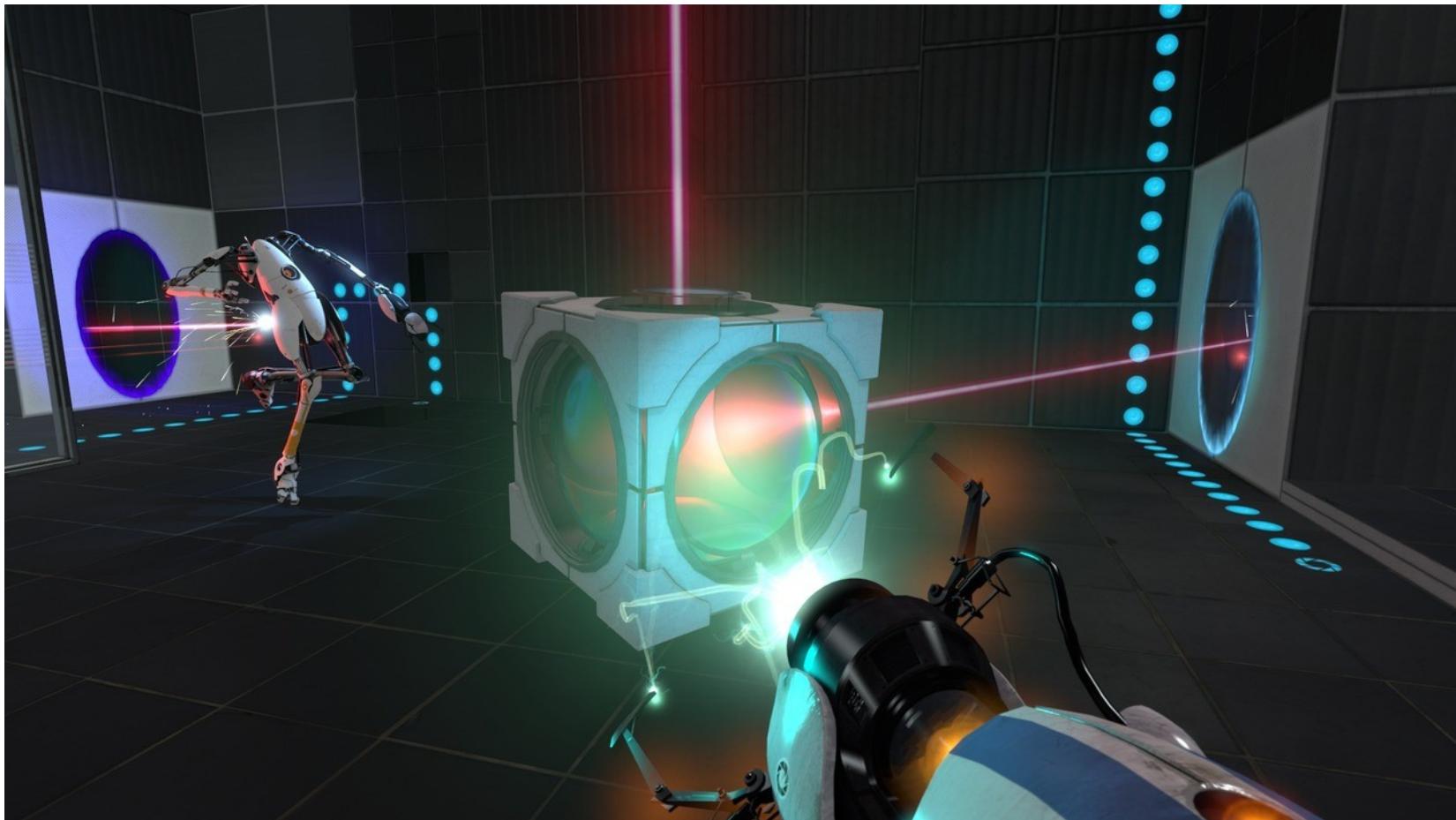
## *Abstract:*

*This presentation is an introduction to portal and portlets basics, features and UI of GateIn Portal. Workshop covers specification details for portlet development.*

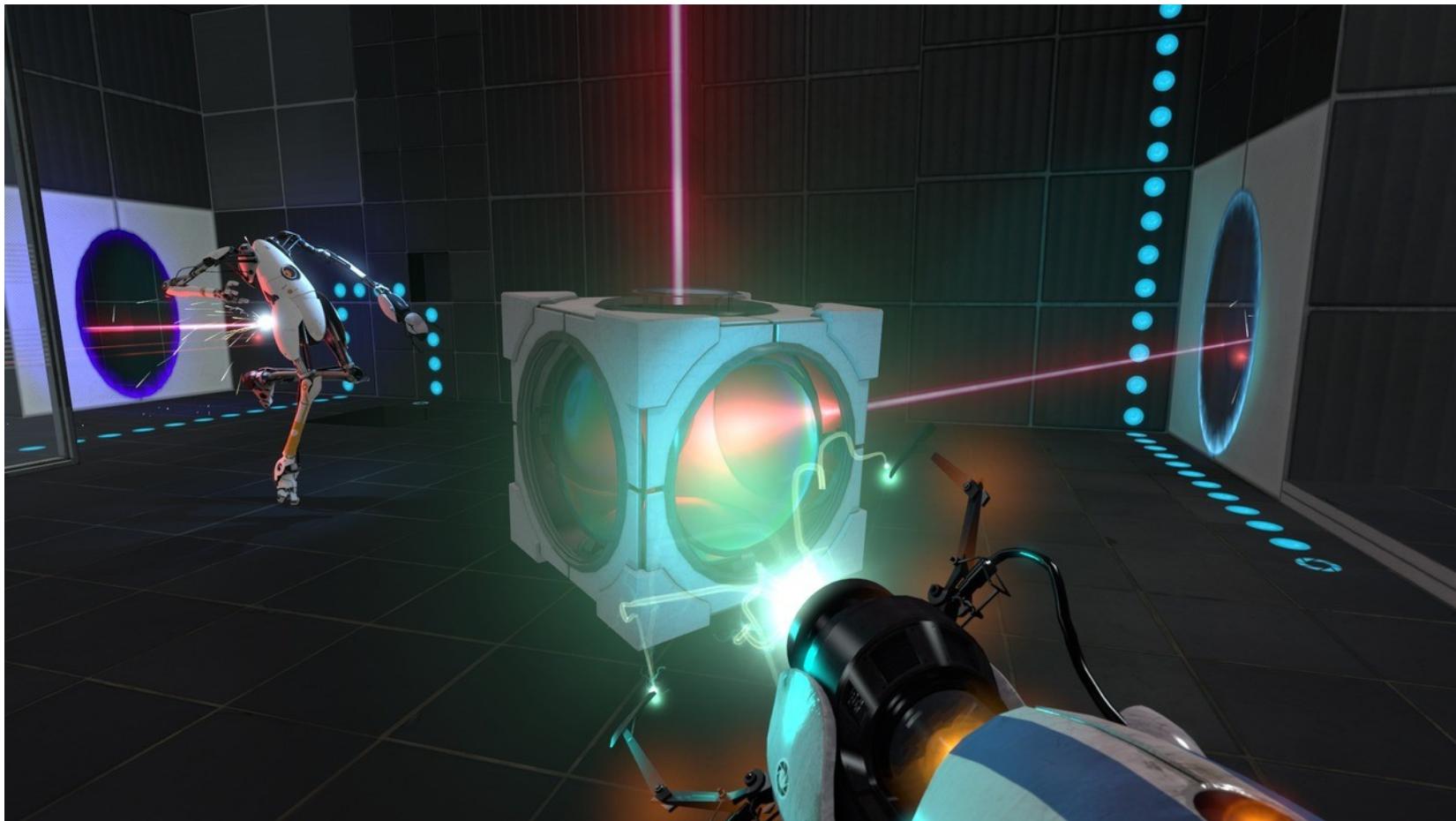
# Agenda

- Motivation for portals & portlets
- GateIn Overview (demo)
- JSR-168 / 286 Portlet development
  - Lifecycle, API
  - Tag library
  - IPC (inter-portlet communication), resources etc.
- Workshop

# What is portal?



# PORTAL™ 2



No! :)

## Dudlajdá!



1 2 3 4

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**Cihlový telefon**
**Samsung S5830  
Galaxy Ace - černý**

- S Internetem v mobilu ještě leVNĚJŠÍ
- Operativní systém Android 2.2
- 3,5" dotykový displej

**3.999 Kč  
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mobilní**
**Sony Ericsson  
Xperia Ray - černý**

- S Internetem v mobilu ještě leVNĚJŠÍ
- Ghiaia konstrukce, kvalitní materiály
- 5,1 Mpx fotoaparát s autofocusem

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- 2GB paměťová karta v balení

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**HD Voice v naší 3G sítí**

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Jméno

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???

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# Portal

- A portal is a web based application that provides personalization, single sign on, content aggregation from different sources in the form of portlets.
- Framework for integration of information, people and processes in an organization.
- Set of services/applications.
- Portal server.

# Types of portals

- General (yahoo.com)
- Community (MySpace.com)
- Business (Amazon.com)
- Information (BBC.co.uk, idnes.cz)
- Enterprise (GateIn, Liferay)
- Horizontal (Seznam.cz) vs. Vertical (CouchSurfing.org)
- B2B, B2C, B2E, G2C

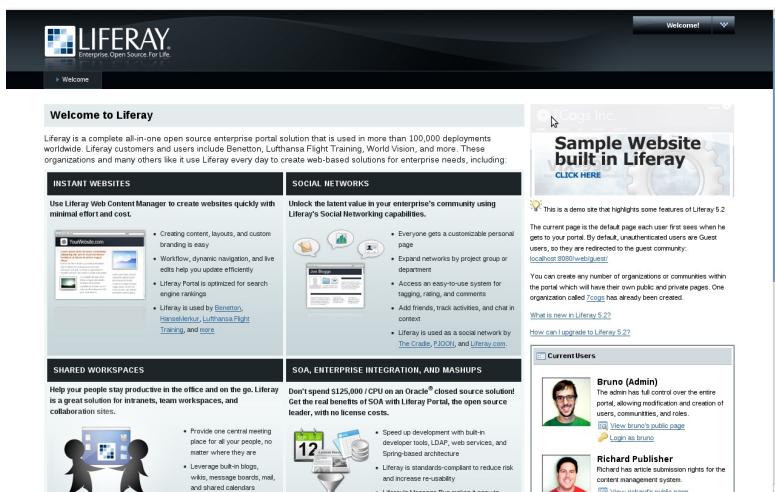
# Enterprise Portals



The screenshot shows the GateIn homepage. At the top, there's a navigation bar with links for Home, Register, Link, and SiteMap. Below the navigation is a large banner with the GateIn logo and the text "The Best of eXo and JBoss Portals". The banner features a globe graphic and a blue arrow pointing upwards. To the right of the banner is a text block about GateIn being the new generation of Open Source portal, co-led by Red Hat, JBoss, and eXo Platform. Below the banner, there's a section for trying GateIn 3.0 with user accounts: Administrator (root), Manager (john), User (marry), Demo (demo). Each account has a small icon next to it. A "For more information, please contact us." link is also present.



The screenshot shows the JBoss Portal homepage. At the top, there's a navigation bar with links for Accueil, Actualités, Météo, and Exemples. The main content area has a "Bienvenue !" header with three numbered icons: 1. Demo, 2. Download, and 3. Accessoire. To the right is a large banner with a road and trees, featuring a yellow sign that says "GO FASTER". Below the banner, there's a section titled "Enterprise Portal Platform" with a "Learn more about the supported platform" link. Another section titled "JBoss Portal project" has a "JBoss Portal as a project" link. A "COMMUNITY RELEASE" stamp is overlaid on the page. At the bottom, there's a "Utilisateur" section with links for Welcome and Register, and a note that you are currently not logged in.



The screenshot shows the Liferay homepage. At the top, there's a navigation bar with links for Welcome, Home, and Contact. The main content area has a "Welcome to Liferay" header. It features several sections: "INSTANT WEBSITES" showing how to create websites quickly with minimal effort and cost; "SOCIAL NETWORKS" showing how to unlock the latent value in your enterprise's community using Liferay's Social Networking capabilities; "SHARED WORKSPACES" showing how people stay productive in the office and on the go; and "SOA, ENTERPRISE INTEGRATION, AND MASHUPS" showing how to speed up development with built-in developer tools, LDAP, web services, and Spring-based architecture. There are also links for "What's new in Liferay 5.2?" and "How can I upgrade to Liferay 5.2?"



The screenshot shows the JBoss Enterprise Portal Platform homepage. At the top, there's a navigation bar with links for Login, Change language, and Register. The main content area has a "JBoss Enterprise Portal Platform Site Publisher (powered by eXo)" header. It features a "New to JBoss Site Publisher?" section with a "Start exploring some of the key features" link. Below that is a "Leverage your portal investment" section with a "With powerful WCM features delivered as part of JBoss Enterprise Portal Platform, your organization is designed to easily enable new applications and capabilities to be..." link. There are also sections for "Manage multiple websites, all in one place", "Easy, intuitive site authoring", "Evolve at your own pace", and "Contact Us" and "Resource Center" links. At the bottom, there are "Support" and "Training" links.

# Advantages

- integration
- single sign-on
- customization & personalisation
- authorization & authentication
- communication
- extensibility

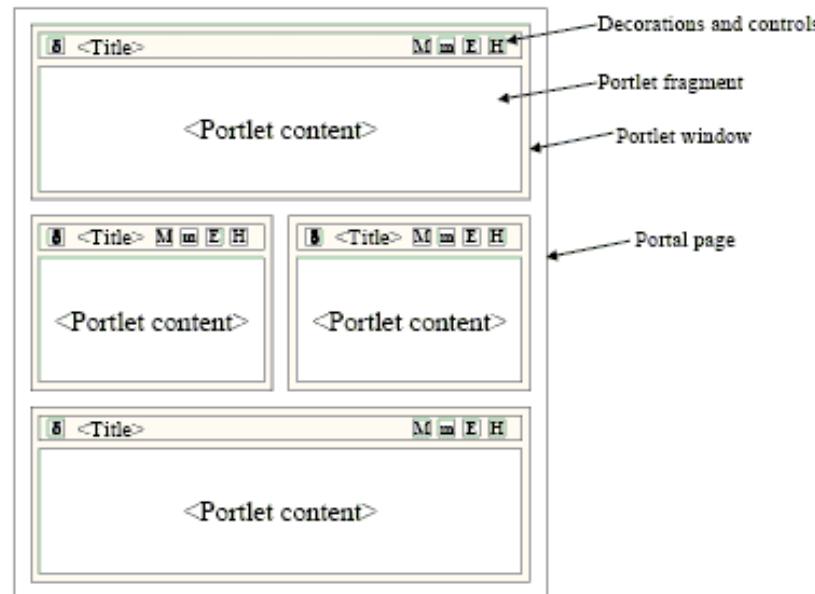


# What is that 'portlet' thing?



# Portlet

- Small web application designed to be deployed on portal server.
- Reusable web component generating dynamic content (markup fragment) based on requests. Portal aggregates portlet markup fragments into a complete portal page.



Site | Group | Dashboard | Site Editor

**GateIn**

Home SiteMap Group Navigation Sample-Ext Page Portal Test

Test

**My Tapestry Hello World Portlet**

September 2010  
Week 40  
**27**  
Monday

Edit | Help

Done

**Currency Converter**

From: US Dollar  
To: Euro

USD: 1  
EUR: 0.74

Data provided by Yahoo! Finance  
Conversion Rates accurate as of 24-Sep-2010

Done

**Google Map Portlet**

San Francisco, CA 94102  
maps.google.com  
Public transit: Market St & South Van Ness Ave

Done

**Netflix Portlet**

Movies and TV shows | Actors and directors

Search for movies, TV shows NETFLIX

Movie / TV show name:

Done

**jQuery Portlet**

Show me the magic

Done

**Lottery Portlet**

Hi root, Your Specially Picked

Winning Numbers

9 11 12 1 7

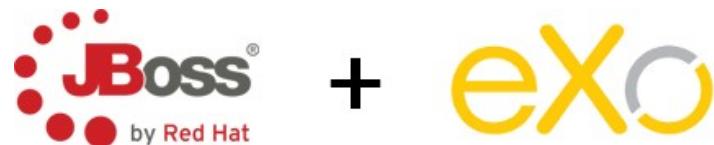
27 28 9 44 10 23

PLAY RESPONSIBLY GAMBLING PROBLEM REFERRAL LINE 1-888-277-3115

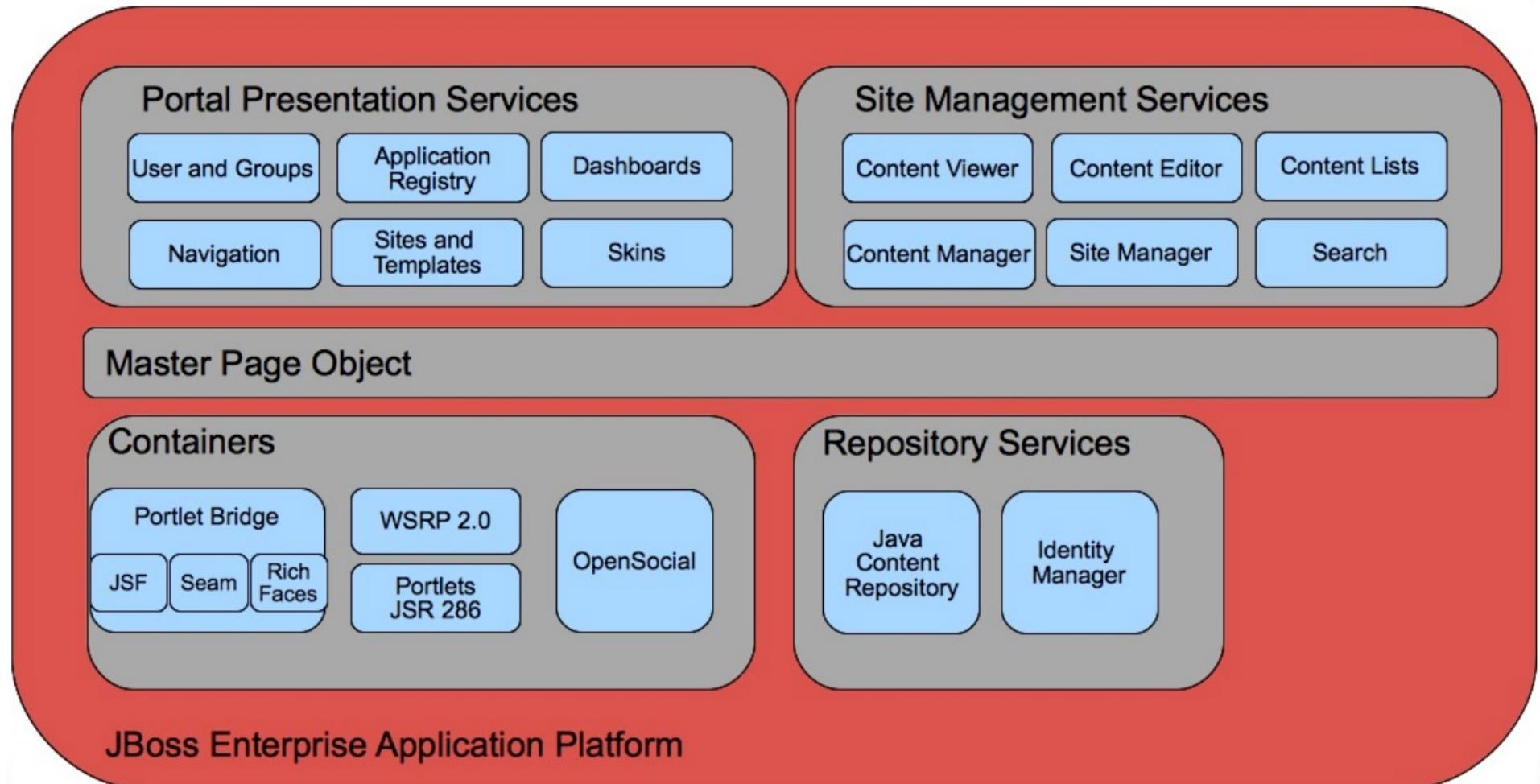
Done



- Open source portal server.
- GateIn Portal is a merge of two mature projects that have been around for a while, JBoss Portal (Red Hat) and eXo Portal (eXo).
- Based on standards, selected services.
- ...and it's awesome!



# Anatomy of GateIn portal



# Main features

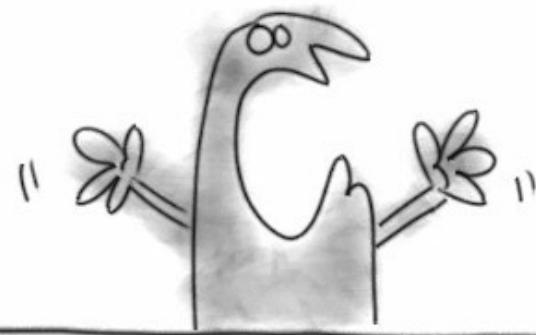


- rich user interface, internationalization
- dynamic navigations and page creation (DnD), intuitive administration
- support for portlet specifications, bridges
- dashboards, gadgets
- IDM
- SSO & LDAP support, OS-JVM & DB compatibility
- content stored in JCR, extensions
- WSRP.

# Imagine implementing these by yourself...



# Now What?!!



# GateIn live...



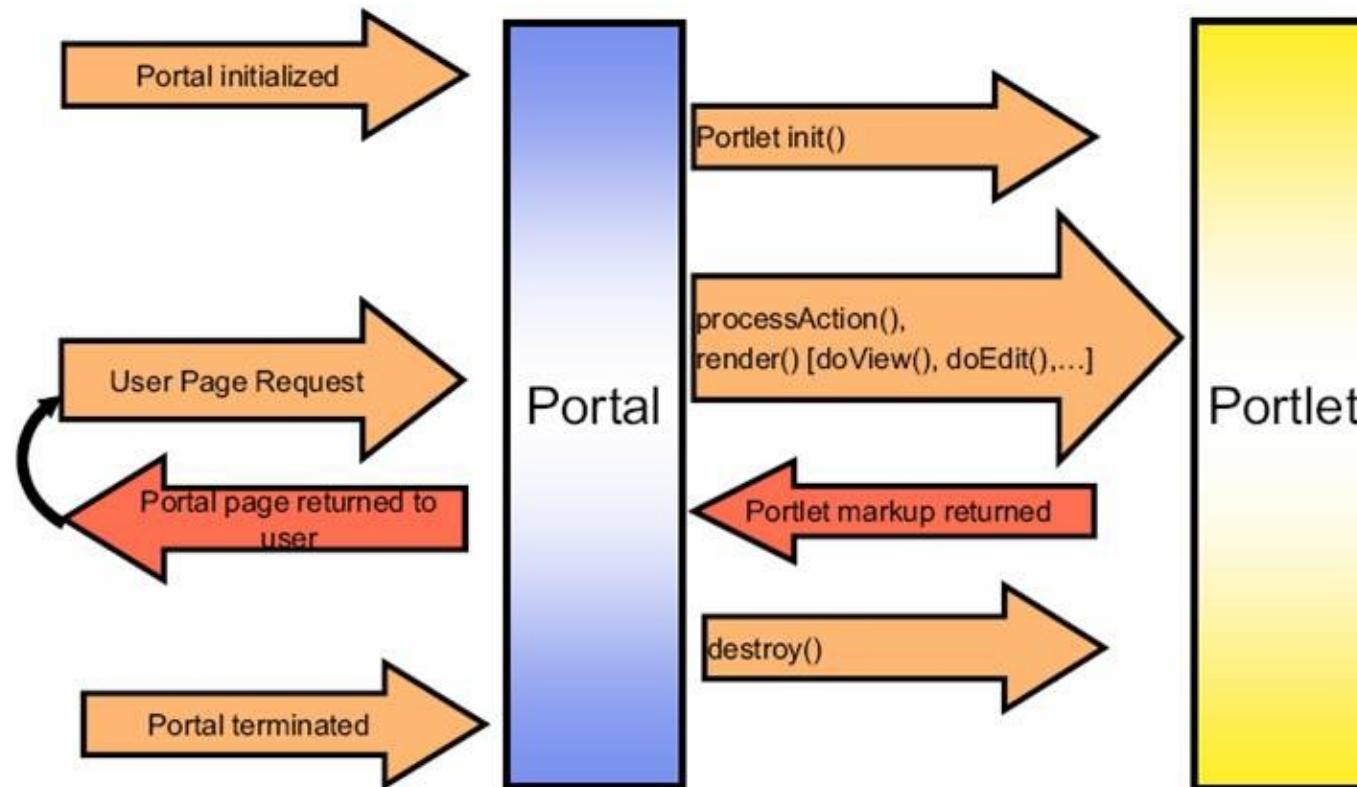
# Portlet development

# JSR-168

- Portlet vs. Servlet
  - common features:
    - generate dynamic content
    - components based on Java
    - lifecycle managed by container
    - request/response model
  - portlet specific features:
    - generate fragment of pages
    - not bound to URL
    - communication via portal
    - more complex request processing and behavior
    - multiple instances on page

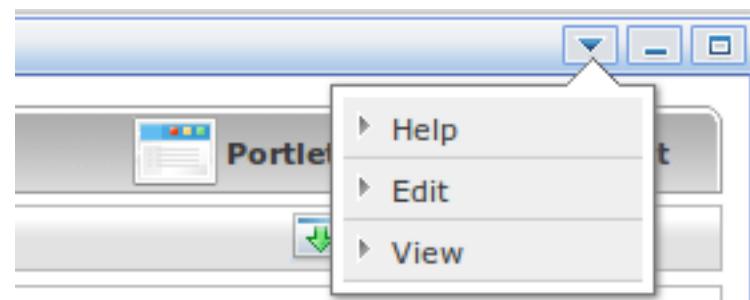
# Portlet container & lifecycle

- Manages lifecycle of portlets
- Distributes requests among portlets



# Portlet modes & window states

- Modes indicate current portlet function.
- 3 common modes: VIEW, EDIT, HELP.
- Window states determine the amount of space on the page available to the portlet.
- 3 common states: NORMAL, MAXIMIZED, MINIMIZED.
- Custom states & modes.



# PortletPreferences & PortletSession

- Session is temporary storage of data to share among portlets.
- Preferences are used to persist attributes (user-specific key-value pairs). Typically set in EDIT mode during processAction phase.

# JSR-286

- Extends JSR-168 (+ backwards compatible)
- Inter-portlet communication:
  - public render parameters
  - events
- Resource serving
- Filters, annotations support, advanced AJAX handling.

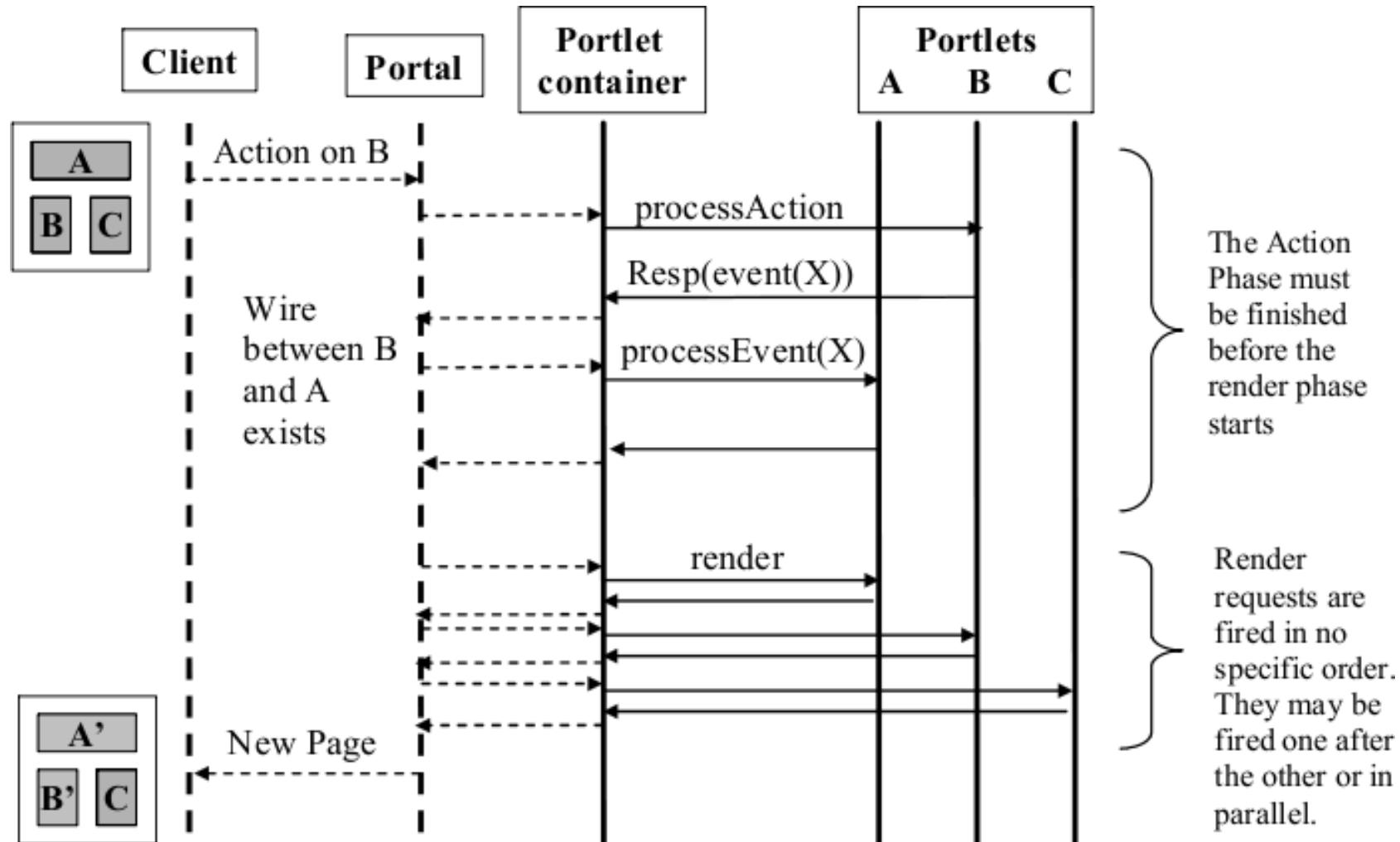
# Tag library

- Used in JSP pages
  - <% taglib uri="[http://java.sun.com/portlet\\_2\\_0](http://java.sun.com/portlet_2_0)" prefix="portlet" %>
- Allow access to portal specific request/response objects
  - <portlet:defineObjects />
- Is used in JSP pages to generate links (actionURL, renderURL, resourceURL)
- request/response objects can be accessed in scriptlet or EL expressions

```
<portlet:renderURL var="invoiceRenderUrl">
    <portlet:param name="view" value="invoice"/>
    <portlet:param name="id" value="42"/>
</portlet:renderURL>

<a href="${invoiceRenderUrl}">Show invoice 42</a>
```

# Request handling (with action & event)



# Portlet descriptors

- WEB-INF/web.xml
- WEB-INF/portlet.xml
  - Contains definitions of portlets, its parameters, modes, events, PRPs, etc.

```
<portlet-app ...>
  <portlet>
    <description>Simple Porlet Deccription</description>
    <portlet-name>SimplePortlet</portlet-name>
    <display-name>Simple Portlet</display-name>
    <portlet-class>org.jboss.vut.systemintegration.SimplePortlet</portlet-class>
    <supports>
      <mime-type>text/html</mime-type>
      <portlet-mode>VIEW</portlet-mode>
    </supports>
    <portlet-info>
      <title>Simple Portlet</title>
    </portlet-info>
  </portlet>
</portlet-app>
```



**Let's have some fun!**



# Workshop details

- Generate dynamic web project in JBDS with Portlet facet
- Generate simple portlet & deploy
- Update portlet to render content from JSP
- Create form in JSP & implement processAction
  - add another JSP which displays value from form + use renderURL to return
- Create help mode & display information about signed user
  - add link to switch back to view mode (using renderURL)
- Advanced: create edit mode & implement storing and display of PortletPreferences

# Important links

- <http://jcp.org/en/jsr/detail?id=286>
- <http://www.jboss.org/gatein/>  
(Download page, User & Reference Guides)
- <http://www.jboss.com/products/platforms/portals/>

## Contact

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[mcupak@redhat.com](mailto:mcupak@redhat.com)

Q & A  
TIME

**Thanks for your attention!**

**See you next week on advanced portlet development session.**