

uPortal 3.0

Release Candidate 1

Eric Dalquist
eric.dalquist@doit.wisc.edu

John Lewis
jlewis@unicon.net

Peter Kharchenko
pkharchenko@unicon.net

uPortal 3.0.0-RC1 Released!

Release on November 28th!

- Pilot ready release
- Core feature set is complete
- Multiple paths to engagement
- Getting involved

Core Features

- **New Theme with Drag & Drop**
 - Light weight & clean
- **Groups and Permissions integration**
 - Clones of the uP2 channels
- **Simple Layout Management**
 - Template user support

Core Features

- **Bookmarkable tabs**
 - Back button support
 - Flexible URL syntax
- **Functional Portlets**
 - Web Proxy, XSLT, IFrame, Bookmarks
 - uPortal 2 IChannel adapter

Using RC1

- Try out the new features
 - Quickstart is ready to run
 - Try it out and provide feedback!
- Start a uP3 pilot project
 - Clone your existing portal
 - Start from scratch
- Play with your visions

Where do I go?

<http://uportal.org/release/allReleases.html>

- Quick Start

- Comes with Tomcat, HSQL, Ant
- Already configured, just need to run

- Source Package

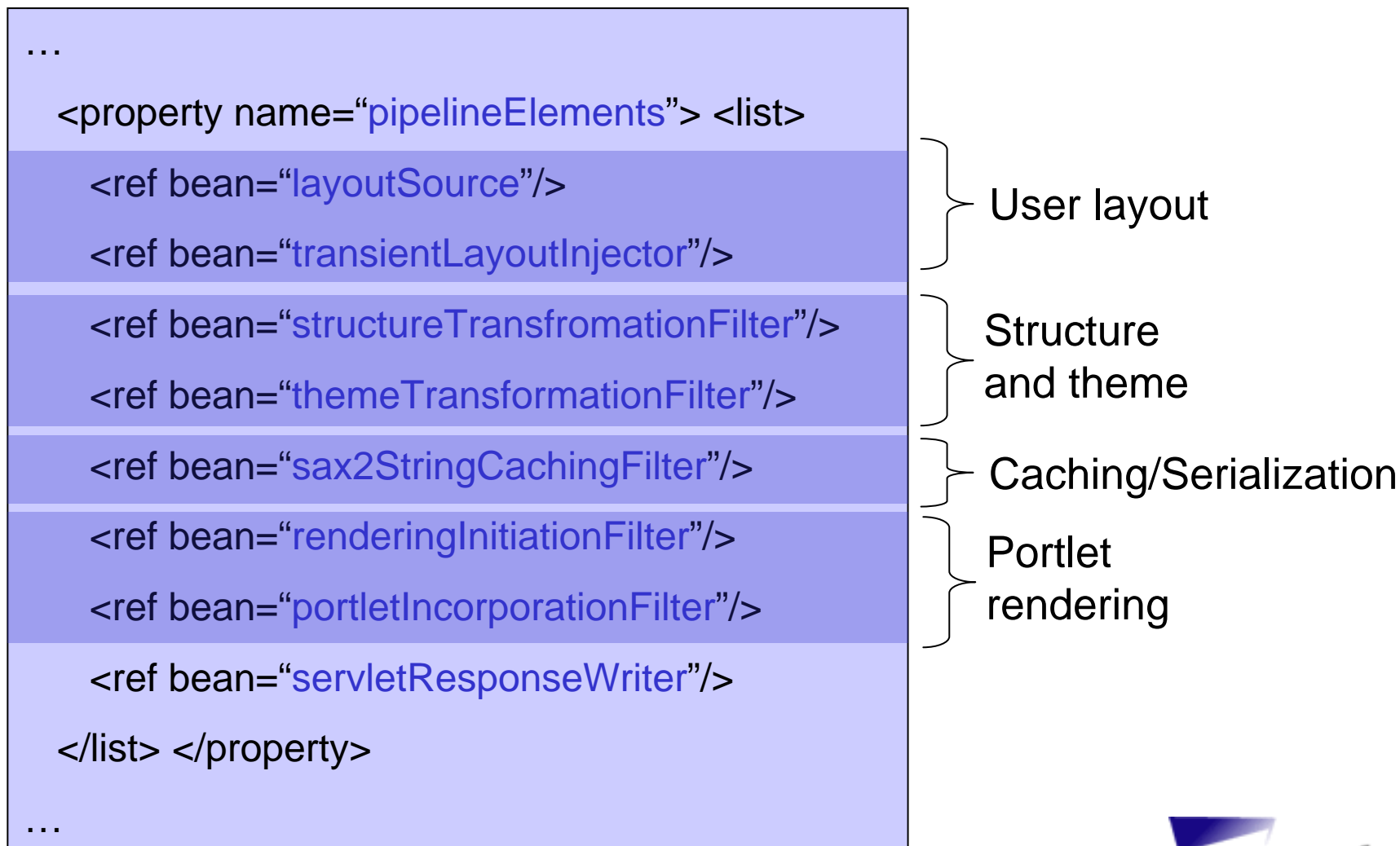
- Needs to be compiled, deployed, initialized
- Ready for framework tinkering

Architecture: Long-term goals

- **Configuration Flexibility**
 - Rendering mechanisms
 - HTTP parameter generation/processing mechanisms
 - Data layer implementations
- **Code Maintenance**
 - Isolated, individually configured groups of components
 - Transparent, sparse coupling
 - Leveraging existing frameworks

Architecture: Spring advantage

uPortal2 lookalike context rendering pipeline configuration



Architecture: Modularity

- URLs are generated by beans, not written by hand
- Modular URL constructors and processors
 - Extend, modify, remove individual functionality

```
<property name="urlConstructorProviders">
  <ref bean="transientLayoutUrlConstructor"/>
  <ref bean="portletErrorHandlerUrlConstructor"/>
</property>
<property name="processors">
  <ref bean="transientLayoutParameterProcessor"/>
  <ref bean="portletErrorHandlerParameterProcessor"/>
</property>
```

Constructors

Processors

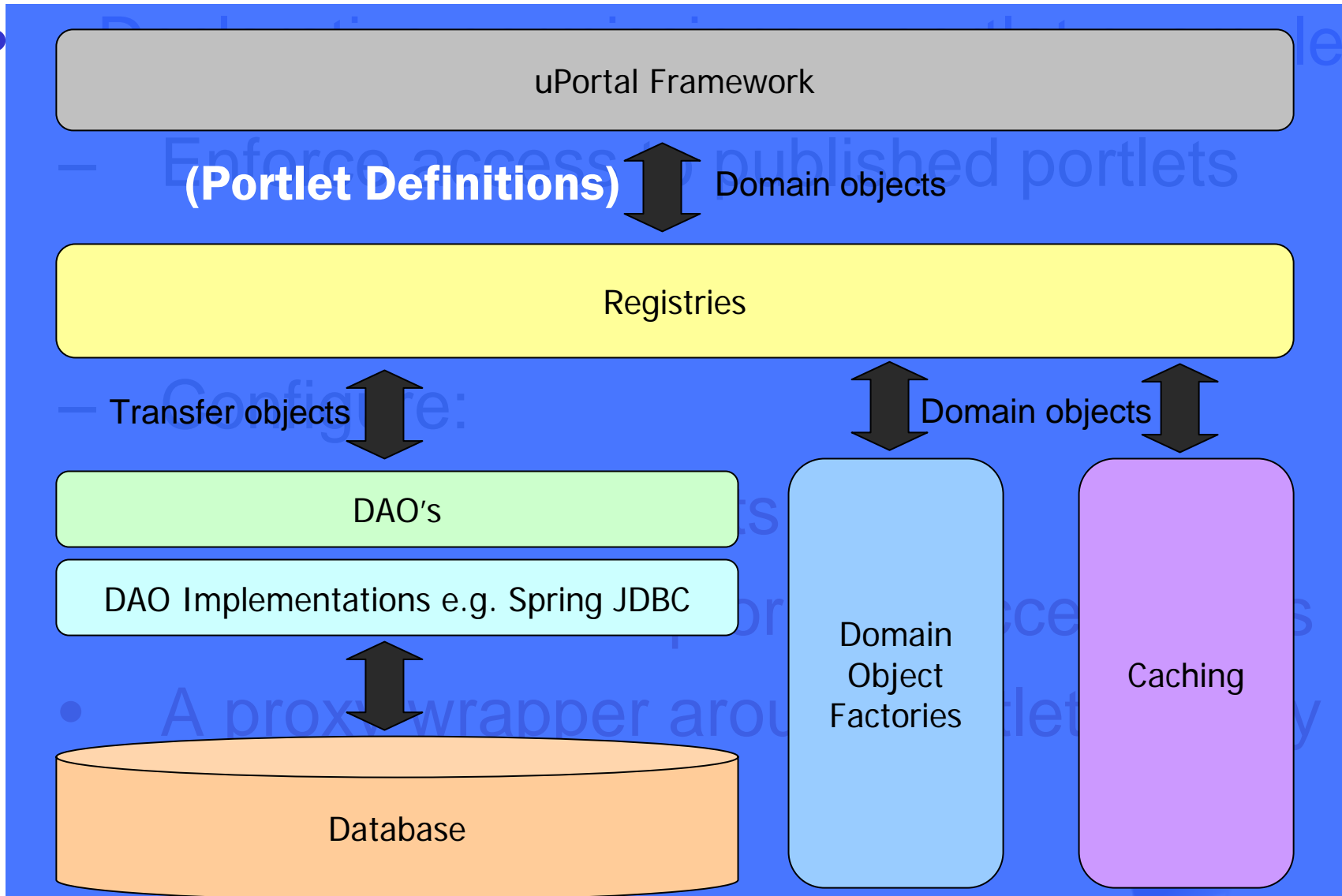
Architecture: Leverage existing frameworks

- Spring
 - Architecture and settings configuration
- Pluto
 - Core JSR168 portlet functionality
- ACEGI
 - Authentication and authorization
- Hibernate
 - Database layer implementation

Demonstration

- New theme, old theme
- DnD Layout management
- Tab addition
- Channel support
- Back button support
- Portlet manager
- Groups and Permission manager

Checking Permissions



Checking Permissions

- Declarative permissions – portlet example:

```
<bean class="PermissionVoter">
  <property name="permissionOwner" value="UP_FRAMEWORK"/>
  <property name="activityPrefix" value="ACTIVITY_"/>
</bean>

<bean class="MethodSecurityInterceptor">
  <property name="accessDecisionManager" ref="portletDefinitionAM"/>
  <property name="objectDefinitionSource">
    <value>
      IPortletDefinitionRegistry.update*=ACTIVITY_UPDATE,CHAN_ID.*
      IPortletDefinitionRegistry.remove*=ACTIVITY_DELETE,CHAN_ID.*
      IPortletDefinitionRegistry.create*=ACTIVITY_CREATE,CHAN_ID.*
      IPortletDefinitionRegistry.getPortletDefinition=ACTIVITY_SUBSCRIBE
    </value>
  </property>
</bean>
```

Checking Permissions

- Declarative permissions – portlet example:

```
<bean class="BeanNameAutoProxyCreator">
  <property name="beanNames">
    <value>portal.registries.portletDefinitionRegistry</value>
  </property>
  <property name="interceptorNames">
    <list>
      <value>portletDefinitionSecurityInterceptor</value>
    </list>
  </property>
</bean>
```

Checking Permissions

- Declarative permissions
 - Adjust permission logic in configuration files, not in the code
 - Easy to protect additional beans
 - Use any standard ACEGI decision managers or permission voters

Cache Configuration

- uPortal2 has no explicit caches
 - Caches are hidden in the framework
 - Difficult to configured
- uPortal3: simpler code, configuration
 - One cache per object type
 - Performance tuning for your environment
 - Fine grained controls provide flexibility
 - Selective, distributed caching

Cache Configuration

- Example: caching portlet definitions:


```
<bean id="portletDefinitionRegistry">
  <property name="cache">
    <ref bean="portletDefinitionCache"/>
  </property>
</bean>
```

```
<bean id="portletDefinitionCache" class="EhcacheAdapter">
  <property name="ehcache">
    <bean parent="baseEhCacheBean">
      <property name="maxElementsInMemory">
        <value>32</value>
      </property>
    </bean>
  </property>
</bean>
```

Generating URLs: framework stylesheets

- Adding a tab
 - Pre-initialize with two columns
 - Configure columns (width attributes)

```
<portal:url>  
  <layout:addFolder name="New Tab">  
    <layout:addFolder name="column1">  
      <layout:attribute provider="structure" name="width" value="30%"/>  
    </layout:addFolder>  
    <layout:addFolder name="column2">  
      <layout:attribute provider="structure" name="width" value="70%"/>  
      <layout:addPortlet fname="uP3.NavigationPortlet"/>  
    </layout:addFolder>  
  </layout:addFolder>  
</portal:url>
```



in the theme stylesheet

Portal Contexts: implementing AJAX

- Context controls request processing
 - Parameter Processing + Rendering
 - AJAX requests are processed differently

```
<bean id="ajax.context">  
  <property name="processors">  
    <list>  
      <ref bean="acegiUserController"/>  
      <ref bean="uPortal2LayoutParameterProcessor"/>  
    </list>  
  </property>  
  <property name="renderer" ref="stringConstantRenderer"/>  
</bean>
```

Development Roadmap

- Goals of the uPortal3 RC1
 - Testing
 - Feature set evaluation
- Community road map
 - Discussion of needed development
 - Estimation of efforts
 - Open, on JA-SIG Confluence
 - <http://www.ja-sig.org/wiki/x/KEM>

Development Roadmap

- **Short term (RC1)**
 - Initial release for pilot projects, testing
- **Medium term**
 - Layout management, improved user experience
- **Long term**
 - Better administrative portlets, tools

Development Roadmap: medium term

- **Distributed Layout Management**
 - Import from uPortal2 codebase
 - Hibernate persistence implementation
 - Translate to portlet-centric format
 - Permission-based fragment editing
 - File-based layout import/migration
 - External fragment sources (e.g. SAKAI)

Development Roadmap: medium term

- **Extending AJAX features**
 - Individual portlet rendering
 - Improved user experience
 - Reduced server load
 - Drag-and-drop subscription portlet
- **Integrated preferences fragment**
- **Sub-tab structure implementation**

Development Roadmap: medium term

- Preparing for large-scale production
 - Performance testing
 - Cache configuration tuning
 - Refactoring & fixes of bottlenecks
 - Clustering support
 - Session failover
 - Distributed caching

Development Roadmap: long term

- Accessibility
- Event tracking and reporting
- Improved administrative UIs
 - Group manager
 - Permission manager
 - Portlet manager
 - Monitoring and diagnostic portlets

Project Investments

- Project started with Grant Funding of \$250K from Mellon Foundation, through the University of Delaware
- Unicon has since contributed an additional \$250K of development time to get to uPortal 3.0 RC1
- Additional work from University of Wisconsin, University of Maryland, and Columbia University

uPortal 3.0 RC1 Contributors

- **Unicon, Inc.**

- Peter Kharchenko, Nick Bolton, Dan McCallum, Andrew Petro, Brad Szabo, Shawn Lonas, Gary Thompson, Nathan Pearson, Gary Gilbert, Cris Holdorph, Michael Ivanov, Doug Gouldin, Shelley McLaughlin, Charise Arrowood, John Lewis

- **University of Wisconsin**

- Eric Dalquist

- **University of Maryland**

- B. Collier Jones

- **Columbia University**

- Dan Ellentuck

Community Involvement

- **Time for the larger uPortal Community to get involved!**
 - Test, Deploy and Provide Feedback
 - Review & Improve Roadmap Details
 - Get Involved in the Development
 - Seek Grant Funding for further work
- **This is *your* project and (hopefully) *your* future**

Questions?



Eric Dalquist
eric.dalquist@doit.wisc.edu

John Lewis
jlewis@unicon.net

Peter Kharchenko
pkharchenko@unicon.net

<http://uportal.org>