What comes next in the Portlet Specification V 2.0 with JSR 286

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Goal

Learn what might come next in the Java Portlet Specification in JSR 286 and provide feedback

Note: This presentation only represents the current thinking of the JSR 286 Expert Group and the final specification may differ from the content in this presentation.
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A little history: JSR 168 - Portlet Specification V 1.0
Overview JSR 286 – V 2.0
Major themes for V 2.0
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Overview Portal model

- Integration-at-the-glass – performed by the portal
- Components may or may not work on the same backends
Why have portlet standards at all?

Situation before JSR 168 (Java Portlet Specification V 1.0)

- Different Portal Vendors have defined different APIs
  - Different APIs for local "components"
    (simple JSPs / Portlets / Channels / Modules / ...)
- No interoperability
- Application and Content Providers must implement different portlets for different portals
- Customers developing significant numbers of portlets are quickly locked into a particular portal solution
- No standardized, easy way to plug-n-play content and applications into portals exists
Why have portlet standards at all?

**Situation now**

- Portlet standard for local Java portlets
  - Java Portlet Specification, first version defined as JSR 168
  - Finished Oct. 2003
  - Co-led by IBM and Sun
  - Reference implementation available at Apache, provided by IBM
    - [http://portal.apache.org/pluto](http://portal.apache.org/pluto)
  - Compliance test suite available from Sun
  - Wide market adoption: supported by many commercial and open source portals
Why have portlet standards at all?

Situation now – looking beyond the Java space

• Portlet standard for remote portlets
  • Web Service for Remote Portlets (WSRP), defined at OASIS, aligned with JSR 168
    • http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrp
  • Chaired by IBM
  • Sample implementation available at Apache, provided by IBM
    • http://ws.apache.org/wsrp4j
  • Conformance test suite available at alphaworks
    • http://alphaworks.ibm.com/tech/wsrptk
  • Wide market adoption: supported by many commercial and open source portals
What does JSR 168 define?

- Portlet API and portlet container
- Contract between the API and the container
- Deployment unit: portlet application
- Out of scope
  - Aggregation, layout management
  - Page personalization and configuration engines
  - Portal administration and configuration
Portlet request flow

User

Portal

Portlet container

Portlets
A  B  C

Action on B

Do action on B

processAction

render

render

render

These requests may be done in parallel

Change state
Why do we need a V2.0?

What's wrong with V 1.0?

• The goal of V 1.0 was to provide the basic portlet capabilities

• Should solve the simple 60% use cases

• People should get familiar with the basic programming model before introducing advanced features

• Now, more than 2 years later people are starting to create advanced portlet applications
  • V 1.0 feature are insufficient
  • V 1.0 does not provide any coordination means beyond the application session scope
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JSR 286 – Java Portlet Specification V 2.0

- Started 29\textsuperscript{th} Nov 2005
- Led by IBM
- Expert Group members:

- Reference implementation will be provided at Apache, the TCK will be available for free
Current proposed schedule

Note: may be subject to change

- Early public draft covering WSRP 2.0 features: July 06
- Early public draft covering all features: Oct 06
- Public draft: Dec 06
- Final public draft: Feb 07
- Submit spec+RI+TCK: Apr 07
- Finished: May 07
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**Major themes for V 2.0**

**Coordination**
- The #1 complaint about V 1.0 was the missing capability to send events between portlets
- V 1.0 only has the portlet application session scope for coordination
  - Only useable within the one portlet application, not across portlet applications
- V 2.0 will add additional coordination capabilities
  - Eventing
  - Sharing of session data beyond the current portlet application
  - Sharing of render parameters across portlets
Major themes for V 2.0

Coordination - Events

• JSR 286 will introduce a loosely coupled eventing paradigm
  • A portlet can declare events it wants to receive and events it wants to emit
  • The portal / portlet container will act as broker and distribute the events accordingly
  • Allows wiring of portlets at runtime

• Event handling will be an additional step in the overall action phase
  • State changes are allowed
  • Event handling must be finished before rendering starts
Major themes for V 2.0

Coordination – shared sessions
• Allow portlets to share session related data across web application boundaries
  • e.g. A shopping cart that can be filled by portlets from different applications
• Data are available in the scope of the current user session
Major themes for V 2.0

Coordination – shared render parameters

• Allow render parameters to be shared across portlets
  • e.g. The zip code of a selected city may be a shared render parameter that would allow different portlets (map, tourist information, weather) to display information for this city

• As render parameters can be encoded in the URL this allows for
  • Bookmarkability
  • Support of browser back/forward button
  • Caching
Major themes for V 2.0

WSRP V 2.0 alignment

- Align with Web Services for Remote Portlets V 2.0
  - Enables writing JSR 286 portlets and publish them as WSRP services
- New features in WSRP 2.0
  - Coordination
  - Resource serving
  - Portlet management
    - Import / export of portlets
  - Runtime Ids, like portlet instance ID
  - CC/PP support
Major themes for V 2.0
Better support of web frameworks

- Talk to lead developers of frameworks like JSF, Struts, Spring, WebWork in order to get feedback how to better integrate portlets with these web frameworks

- Goal: provide additional means in the Java Portlet Specification to make such an integration easy and portable across portals
Major themes for V 2.0

AJAX support
- Currently asynchronous rendering of portlets is not mentioned in the Java Portlet Specification
  - AJAX (Asynchronous JavaScript and XML) support is vendor specific
- Challenges when using AJAX for portlets
  - Difficult to get AJAX working for more than one portlet on a page
    - State is updated without server roundtrip and thus the state that may be encoded in other portlets may be stale
  - Bypasses standard browser paradigms, like back button and reload
    - Lot of extra effort is required to get these paradigms working again in an AJAX application
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Where do we stand?

• In the process of creating the 1st early public draft covering WSRP 2.0 features
  • Goal: July 06
  • Incl. coordination features previously mentioned
• Start RI based on this 1st draft under the Apache Pluto umbrella
• Create public mailing list in order to get feedback and discuss 1st draft
What comes next?

- Create 2\textsuperscript{nd} early public draft covering all features and feedback of 1\textsuperscript{st} draft
- Goal: Oct 06
- Create 1\textsuperscript{st} Public draft based on feedback of 2\textsuperscript{nd} early draft
- Goal: Dec 06
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How can you participate?

Get involved!

- The JSR 286 EG will create early public drafts allowing you to give feedback early on.
- There will be a public draft with a defined review period where you can give feedback.
- You can help working on the RI at the Apache Pluto project.
- Send feedback even after the JSR 286 is finished to the JSR 286 comment alias in order to provide input for the next version.
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- JSR 286 has started Nov 2005 and will provide V 2.0 of the Java Portlet Specification
- Major themes for V 2.0 are
  - Coordination between portlets
  - Alignment with WSRP 2.0
  - Better support of existing web frameworks
  - Support of AJAX style developments
- The JSR 286 EG will provide early drafts in order to give everyone the chance to give feedback and create early prototypes
For More Information

- Apache pluto project: http://portals.apache.org/pluto/
Q&A

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