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JSR344 (JSF 2.2) Status Update to JCP EC 11 September 2012

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The following is intended to outline our general product direction. It is intended for information purposes only, and may not be incorporated into any contract. It is not a commitment to deliver any material, code, or functionality, and should not be relied upon in making purchasing decisions. The development, release, and timing of any features or functionality described for Oracle's products remains at the sole discretion of Oracle.

My Plan For Your Time **Investment**

Technical

- JSR Summary and Scope
- Big Ticket Features
- Medium Sized Features
- Bug Fixes

My Plan For Your Time **Investment**

Transparency

- How I run JSRs
 - What works Well, Puzzlers
- How features are suggested
- Transparency Tools
- Roadmap

Technical Content



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What is JSF? Why is it Important?

JSR Summary: Abstractions Endure



SINCE 2004, JSF HAS BEEN THE
STANDARD WEB APP FRAMEWORK
FOR THE JAVA PLATFORM. JSF WAS
DESIGNED TO BE A **UI COMPONENT**
FRAMEWORK THAT **SEPARATES UI**
SEMANTICS FROM RENDERING.

Technical Content

JSR Scope

- “Bring the best ideas in web application development to the Java EE Platform”
 - Maximize Productivity
 - Minimize Complexity
- Categories listed on JSR
 - Ease of Development
 - New Features
 - Fixes

Technical Content

Six Big Ticket Features http://bit.ly/JCP_20120911_BIG_TICKET

- Faces Flows
- HTML5 Friendly Markup Support
 - Pass through attributes and elements
- Multi-Templating
- Cross Site Request Forgery Protection
- Loading Facelets via ResourceHandler
- File Upload Component

Technical Content

Faces Flows

- Lack of formal way to group pages leads to maintenance problems
 - Hard to understand navigation
 - Like a large program that is a single function with lots of goto statements
- Faces Flows goals
 - Allow grouping related views together
 - Allow building applications as composites of modules of functionality

Technical Content

Faces Flows

- JSF Navigation Story Recap
 - Defines a graph of VDL views
 - XML rule base defines relationship between views
 - Implicit rules added in JSF 2.0

```
<navigation-rule>
  <description>global navigation rules/description>
  <from-view-id>*</from-view-id>
  <navigation-case>
    <description>Go to Edit Project Page</description>
    <from-outcome>editProject</from-outcome>
    <to-view-id>/project/edit.jsf</to-view-id>
  </navigation-case>
</navigation-rule>
```

Technical Content

Faces Flows

- Faces Flows builds on the existing JSF navigation story and adds
 - Several node types in addition to VDL views
 - Well defined start and end-node concept
 - Scope concept
 - Ability to package a flow as a module and enclose it in a self-configuring jar
- Still described in XML

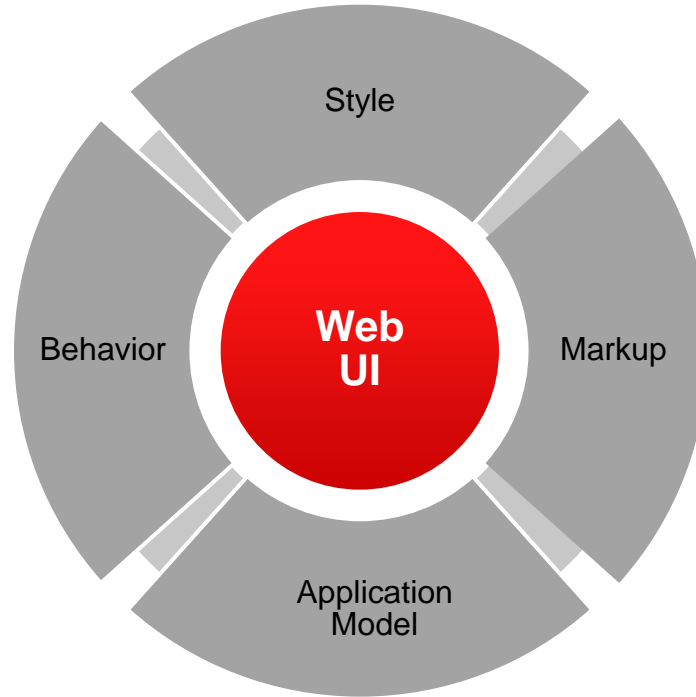
Technical Content

Faces Flows

- Two main varieties of flows
 - Unbounded (No specific start or end, not within a specific flow)
 - Bounded (with explicit start node and end node(s))

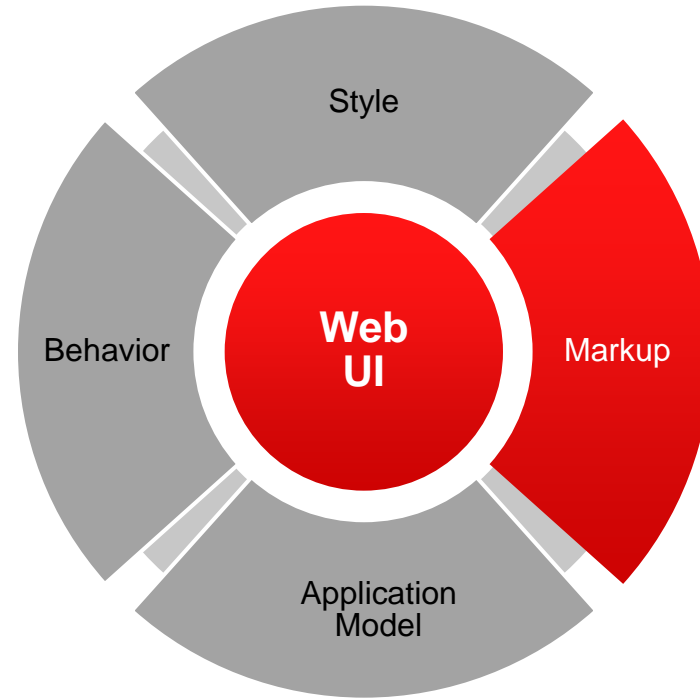
Technical Content

What's in an HTML5 UI?



Technical Content

What's in an HTML5 UI?



```
<html>  
  <input />  
  <button />  
  <audio controls />  
  <video />  
  <img />  
</html>
```

Technical Content

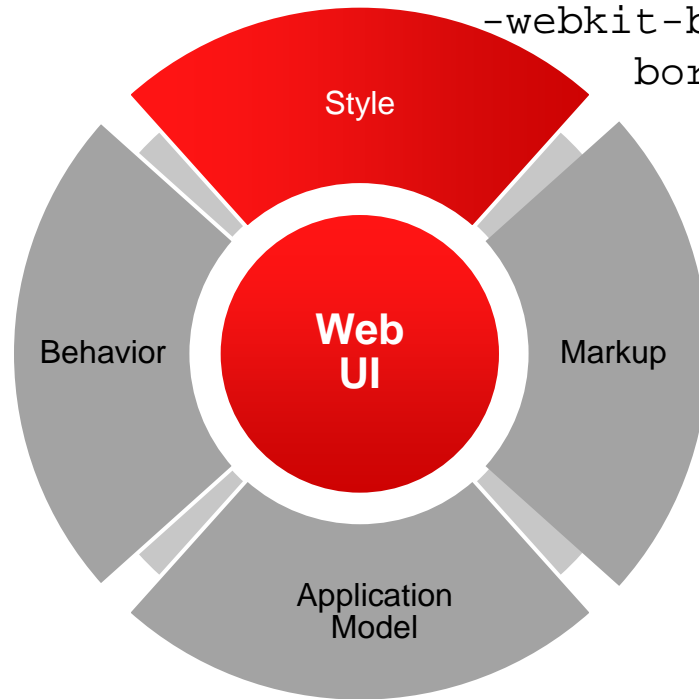
What's in an HTML5 UI?

```
border:groove 5px #000000;
```

```
-moz-border-radius: 34px;
```

```
-webkit-border-radius: 34px;
```

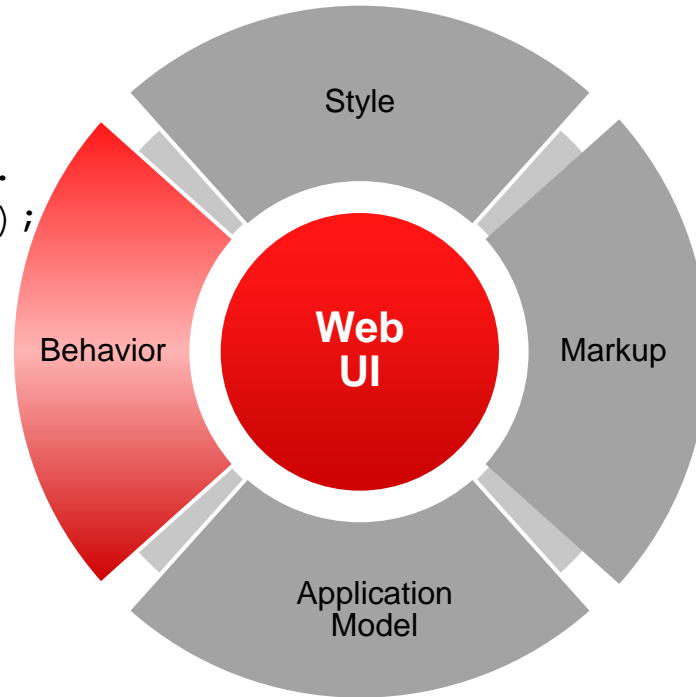
```
border-radius: 34px;
```



Technical Content

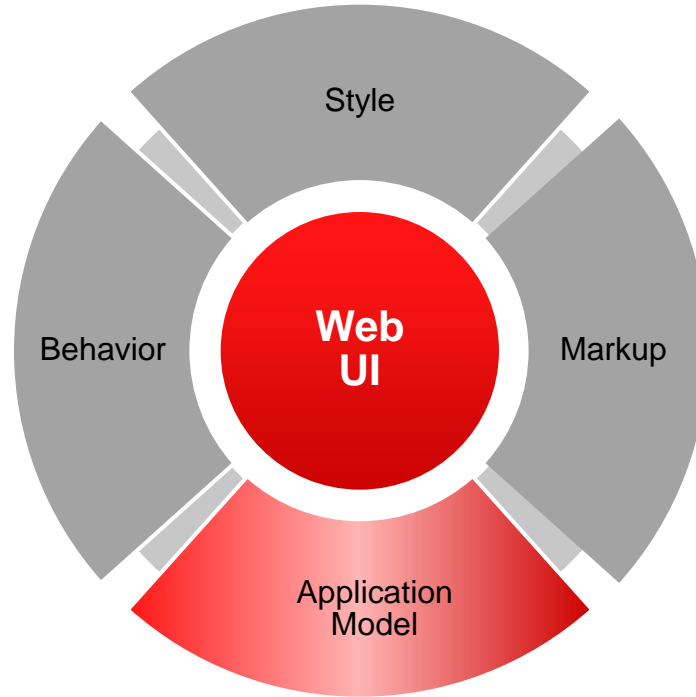
What's in an HTML5 UI?

```
navigator.geolocation.  
  getCurrentPosition();  
window.JSON;  
window.WebSocket;
```



Technical Content

What's in an HTML5 UI?

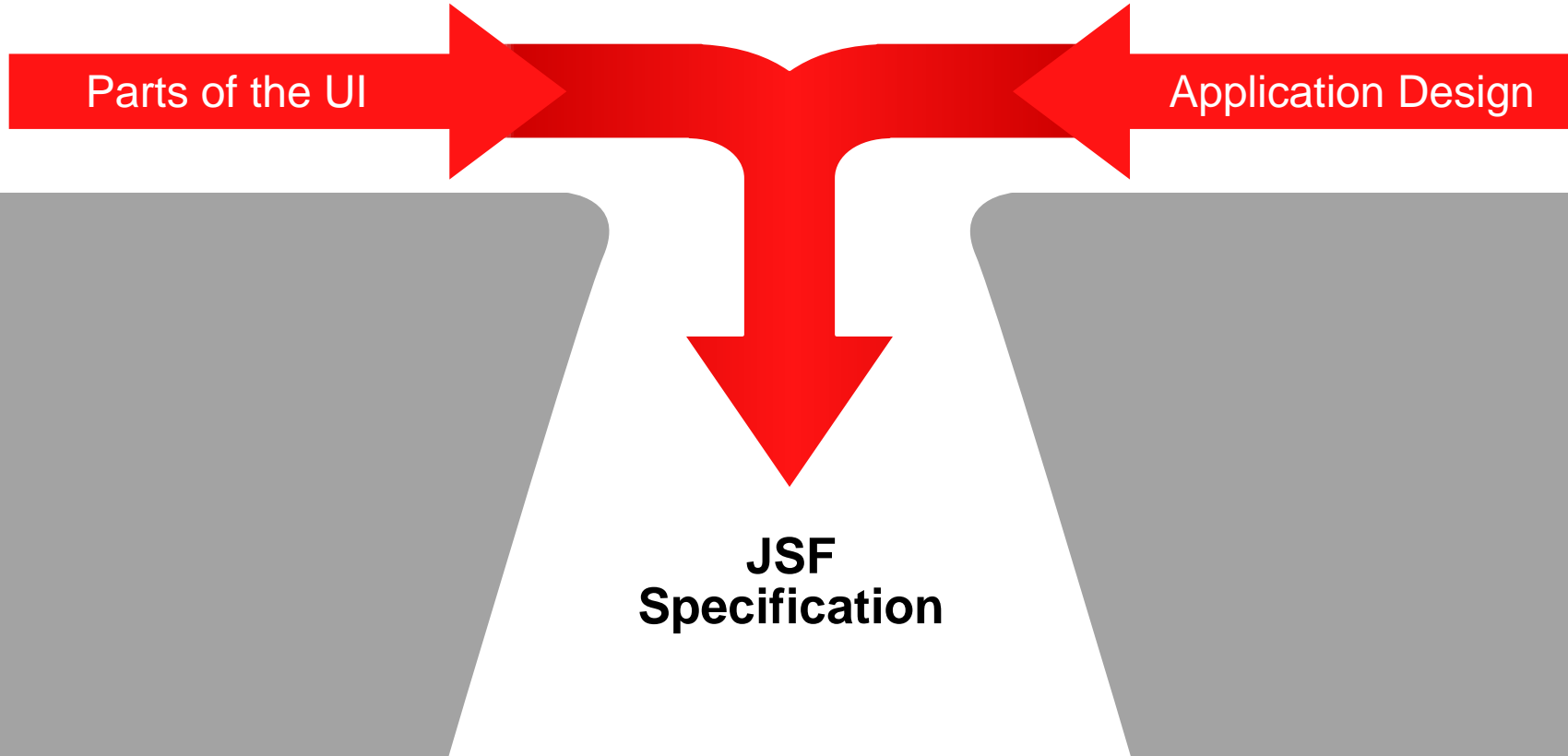


Significant Server Side Logic

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Technical Content

Defining what goes where



Technical Content

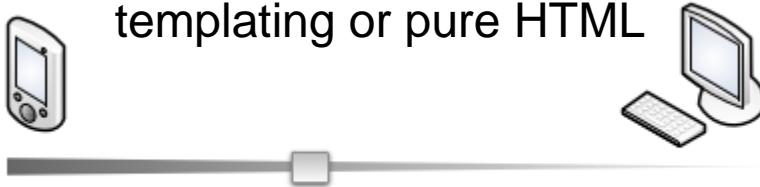
The power is in the developer's hands

- Markup
 - JSF View Declaration Language
- Style and Behavior
 - JSF Resource Handler
- Application Model
 - The strength of Java EE

Technical Content

View Declaration Language

- An HTML-like syntax for declaring a user interface
- The ability to mix pure HTML with JSF components in the same declaration
 - Some of the elements in the declaration have a server-side representation: a UIComponent + Renderer pairing
 - The rest of the elements in the declaration are either for server-side templating or pure HTML



All UI State in client

All UI State on server

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JSF 2.2 HTML5 Friendly Markup

Let the elegance of HTML shine through

```
<input type="tel" jsf:id="phone"
      jsf:value="#{bean.mobileNumber}" />
<input type="range" jsf:id="values"
      jsf:value="#{bean.value}" />
<button type="button" data-value="MyData"
      jsf:actionListener="#{bean.buttonClicked}" />
<progress><h:outputText id="progress"
      value="#{bean.progress}" /></progress>
<h:inputText value="#{bean.input}">
  <f:passThroughAttribute name="data-value"
    value="#{bean.dataValue}" /></h:inputText>
```

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JSF 2.2 HTML5 Friendly Markup

Let the elegance of HTML shine through

- Before JSF 2.2
 - JSF tags hide complexity of underlying HTML+script+css+images
 - JSF “Renderer”:
 - encode: markup to browser
 - decode: name=value from browser
- JSF 2.2
 - Pure HTML+script+css+images in the JSF page
 - JSF Renderer handles decode from browser
 - Leverage the strength of the JSF lifecycle
 - Leverage the expressiveness of HTML5

Style and Behavior

Leverage the JSF ResourceHandler

- To JSF, CSS and JavaScript are just another kind of resource delivered to the browser, along with the markup
- The JSF ResourceHandler lets you create libraries of localized resources and declare dependencies on them from your UI components.
- Want to use CSS3? Sure, go ahead!

Application Model

Where JSF has always shined

- Data Conversion
- Validation
- Database Integration (Persistence Layer)
- Security
- Expression Language
- Request Processing Lifecycle
- Event System



Technical Content

Other Big Ticket Features

- Multi-Templating
 - Multi Templating : Entire Application :: Facelets : Single Page
- Cross Site Request Forgery Protection
 - POST-back is a virtue. Add protection for GET-based requests
- Loading Facelets Via ResourceHandler
- File Upload Component
 - Because we can depend on Servlet 3.0!

Technical Content

28 Medium Sized Features http://bit.ly/JCP_20120911_MEDIUM

- Components/Renderers
 - Component Managed EL Context
 - WindowId
- Facelets
 - HTML5 DOCTYPE is the default
 - Programmatic Composite Component creation
 - FaceletFactory API
- Lifecycle
 - View Actions

Technical Content

28 Medium Sized Features http://bit.ly/JCP_20120911_MEDIUM

- Managed Beans
 - Everything is CDI injectable
 - CDI ViewScoped
- Resources
 - Relative ResourceHandler

Technical Content

44 Bug Fixes http://bit.ly/JCP_20120911_BUG_FIXES

- Components/Renderers
- Ajax
- Specification errors and clarifications
- EL
- Facelets
- Lifecycle
- Resources

Transparency Content



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JSR-344 IS NOW ON JCP 2.8



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My Plan For Your Time **Investment**

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My Plan For Your Time **Investment**

Transparency

- How I run JSRs
 - What works Well, Puzzlers
- How features are suggested
- Transparency Tools
- Roadmap

Transparency Content

How I run JSRs

- What works well
 - Spec lead drives all aspects of development, pulling expertise from EG for specific targeted questions.
 - Minimize time commitment from EG members by being very informal in what they put on the EG list.
 - Simple emails turn into formal feature requests
 - Discussion digressions generate new ideas
 - Public Issue Tracker
 - JSF has had one since 2004
 - Still a good idea

Transparency Content

How I run JSRs

- What works well
 - What worked well in iteration N may not work at all in N+1
 - Example, JSR 314, JSF 2.0
 - Ajax sub-group
 - Composite component sub-group
 - JSR-344 JSF 2.2
 - Hard to get traction even on single-thread development effort

Transparency Content

How I run JSRs

■ Puzzlers

- How to get more done by delegating to EG members?
 - Who has the time?
 - Does it really allow parallel work?
 - Things fall off a cliff.
- How to stay on schedule?
 - JSR schedule stated PFD in Q4CY2011
 - Managing the tension between stated JSR goals and what seems important to the EG at any given moment
- Inconsistently responsive EG
- Inconsistently available Spec Lead

Transparency Content

How New Features Are Suggested

- Held public vote at beginning of JSR
 - http://bit.ly/JCP-20120911_JSF_2_2_VOTES
- Public Issue Tracker
- Email from to EG List
- Need to fit into existing JSR charter
- Needs to fit into existing committed schedule

Transparency Content

Tools

- Public java.net projects
 - spec *<http://jsf-spec.java.net/>*
 - impl *<http://jsf.java.net/>* Open Source: GPL+Classpath Exception
- Mailing Lists
 - `jsr344-experts@javaserverfaces-spec-public.java.net`
 - Public readable archive, JSPA signed member read/write
 - `users@javaserverfaces-spec-public.java.net`
 - Public readable archive, any java.net member read/write
 - All mail sent to `jsr344-experts` is sent to `users`

Transparency Content

Tools

- Issue Tracker
 - spec *<http://jsf-spec.java.net/issues/>*
 - impl *<http://jsf.java.net/issues/>*
- Wiki: Used in 2.0, not using in 2.2.
- Public Gantt Chart
 - <http://jsf-spec.java.net/planning/>
- Nightly spec snapshot from Hudson
- Google+ Hangouts

Transparency Content

Tools <http://jsf-spec.java.net/planning/>

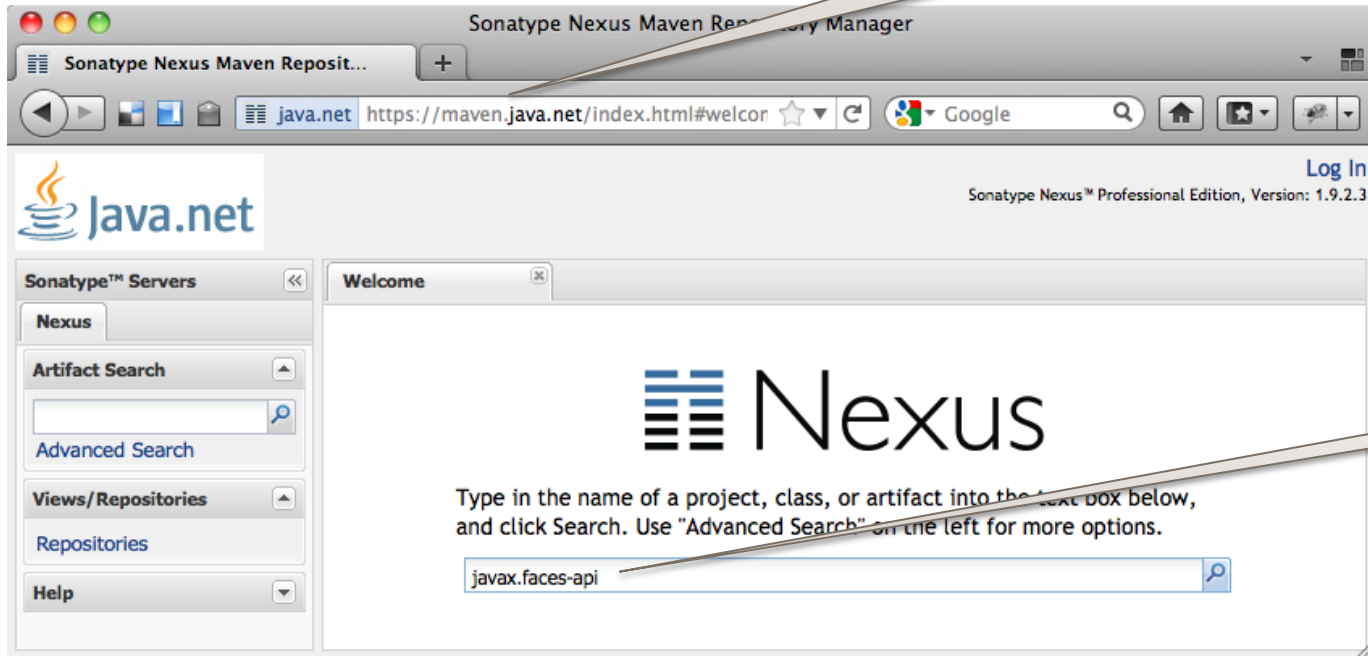
ID	Task Name	Start	Finish	Duration	Planned Deadline	W	T	F	S
41	2.2 Sprint 13 Faces Flows, HTML5	5/16/2012	7/27/2012	48 days?	NA				
42	730-Add elements to faces-config schema for in-	7/27/2012	7/27/2012	1 day	NA				
43	949-WindowId send cleanup request to EO	5/17/2012	5/17/2012	1 day?	NA				
44	971-MultiTemplating write proposal to EO	5/24/2012	5/24/2012	1 day	NA				
45	971-MultiTemplating prototype	5/24/2012	5/24/2012	1 day?	NA				
46	1009-Datavox Attributes	5/16/2012	5/17/2012	2 days	NA				
47	533-ConfigurationAdDOM	5/30/2012	5/30/2012	1 day	NA				
48	Deliver Expert Group Draft in lieu of PRD	7/27/2012	7/27/2012	0 days	NA				
49	Account for Java EE 7 Replan	7/27/2012	8/11/2012	33 days	NA				
50	Schedule adjustments	7/27/2012	8/23/2012	20 days	NA				
51	Prepare for JCP EC meeting	8/24/2012	9/11/2012	13 days	NA				
52	2.2 Sprint 14 HTML5 in shape for JavaOne	8/13/2012	8/13/2012	4 days	NA				
53	1111-Pass Through Elements: Merge Frank's prot.	8/13/2012	8/17/2012	4 days	NA				
54	1075-Metadata	8/13/2012	8/14/2012	3 days	NA				
55	991-Input HTML5 attributes	8/13/2012	8/13/2012	2 days	NA				
56	Sprint 15 Plan JavaOne EG Draft Release	8/18/2012	8/25/2012	6 days?	NA				
57	Incorporate work from EO on 1165-ClearInputValu	8/18/2012	8/20/2012	3 days	NA				
58	Collect completed issues	8/18/2012	8/18/2012	2 days	NA				
59	Update spec	8/20/2012	8/24/2012	3 days	NA				
60	Release on java.net spec area	9/05/2012	9/05/2012	1 day?	NA				
61	Sprint 16 Faces/Flows in shape for Public Review	10/8/2012	10/8/2012	2 days?	NA				
62	Faces Flow parameters	10/8/2012	10/8/2012	1 day?	NA				
63	Specification for Navigation Handler	10/9/2012	10/9/2012	1 day?	NA				
64	Sprint 17 Multi-Templating in shape for Public Re	10/18/2012	10/18/2012	1 day?	NA				
65	Reinvigorate EG discussion	10/18/2012	10/18/2012	1 day?	NA				
66	Sprint 18 HTML5 in shape for Public Review	10/11/2012	10/11/2012	1 day?	NA				
67	Clean up from JavaOne push	10/11/2012	10/11/2012	1 day?	NA				
68	Sprint 20 Public Review Release	10/12/2012	10/15/2012	2 days?	NA				
69	Collect completed issues	10/12/2012	10/12/2012	1 day?	NA				
70	Update spec	10/15/2012	10/15/2012	1 day?	NA				
71									
72	Back End JCP Tasks	4/18/2012	3/6/2013	213 days	NA				
73	Date Adjustment	4/18/2012	10/26/2012	120 days	NA				
74	Public Review First Draft to Expert Group	10/26/2012	10/26/2012	0 days	10/31/2012				
75	Expert Group Reviews PR Draft	10/29/2012	11/2/2012	5 days	11/6/2012				
76	Public Review Released to JCP	11/2/2012	11/2/2012	0 days	11/9/2012				
77	Public Review posted on JCP site	11/9/2012	11/9/2012	7 days	11/14/2012				
78	Public Review	11/14/2012	12/13/2012	30 days	1/3/2013				
79	Public Draft Specification Approval Ballot	12/14/2012	1/2/2013	14 days	1/4/2013				
80	Prepare Proposed Final Draft	1/3/2013	1/18/2013	12 days	1/23/2013				
81	Proposed Final Draft to EO	1/18/2013	1/18/2013	0 days	1/23/2013				
82	Expert Group Reviews PRD Draft	1/21/2013	2/6/2013	13 days	2/10/2013				
83	Final Draft Released to JCP	2/7/2013	2/11/2013	3 days	2/18/2013				
84	JCP Initiates Final Approval Ballot	2/13/2013	2/14/2013	3 days	2/21/2013				
85	Final Approval Ballot	2/15/2013	2/6/2013	14 days	3/27/2013				

Transparency Content

Tools

- Let's take a look at the API

<http://maven.java.net>



[javax.faces-api](#)

Transparency Content

Tools

- Let's take a look at the API

2.2-SNAPSHOT

Archive Browser

-javadoc.jar

index.html

The screenshot shows the Maven Archive Browser interface. At the top, a search bar contains 'javax.faces-api'. Below it, a table lists two artifacts: 'javax.faces-api' version '2.2-SNAPSHOT' and '2.1'. The '2.2-SNAPSHOT' version is selected, and its details are shown in the 'Archive Browser' tab. The left sidebar shows a tree view of the repository, with '2.2-SNAPSHOT' selected. The right pane shows the contents of the selected artifact, including 'javadocs', 'jsdocs', 'managed-bean-javadocs', 'renderkitdocs', 'vldocs', 'doclist.html', and 'index.html'. Callout boxes point to specific elements: '2.2-SNAPSHOT' points to the version in the table, 'Archive Browser' points to the tab, '-javadoc.jar' points to the 'javadocs' folder, and 'index.html' points to the 'index.html' file.

Group	Artifact	Version	Download
javax.faces	javax.faces-api	2.2-SNAPSHOT	pom, jar, javadoc.jar, sources.jar
javax.faces	javax.faces-api	2.1	pom, jar, sources.jar, javadoc.jar

Displaying Top 2 records Clear Results

Refresh Viewing Repository: Snapshots

- Snapshots
 - javax
 - faces
 - javax.faces-api
 - 2.2-SNAPSHOT
 - javax.faces-api-2.2-SNAPSHOT-javadoc.jar
 - javax.faces-api-2.2-SNAPSHOT-sources.jar
 - javax.faces-api-2.2-SNAPSHOT.jar

Maven Information Artifact Information Archive Browser Maven Dependency

Refresh

- javax.faces-api-2.2-SNAPSHOT-javadoc.jar (Expand to browse archive)
 - javadocs
 - jsdocs
 - managed-bean-javadocs
 - renderkitdocs
 - vldocs
 - doclist.html
 - index.html

Where is JSF in its Lifecycle?

JSR Timeline

- JSR 127
 - JSF 1.0 11 March 2004
 - JSF 1.1 27 May 2004
- JSR 252
 - JSF 1.2 11 May 2006
 - JSF 1.2 Maintenance Release 1 19 December 2006
 - JSF 1.2 Maintenance Release 2 13 June 2008
 - JSF 1.2 Maintenance Release 3 25 August 2008
- JSR 314
 - JSF 2.0 1 July 2009
 - JSF 2.1 16 July 2010
 - JSF 2.1 Maintenance Release 2 22 November 2010
- JSR 344
 - Started 14 April 2011
 - Early Draft Review released 8 December 2011
 - Working toward Public Review Draft

Where is JSF in its Lifecycle?

Achievements

- JSF 2.0 was the last BIG FEATURE release for JSF
- From now on, JSF will be maintained using smaller, more frequent releases.
 - JSF 2.1, released Q4 2010, JCP Minor Revision
 - JSF 2.2, slated for release in 2012, full JSR
 - Requires JavaEE 6, will release before JavaEE 7
 - JSF 2.3, will target JavaEE 7

Where is JSF in its Lifecycle?

Roadmap

- JSF 2.2
 - Public Review Draft by December 2012
 - No need for Renewal Ballot
 - Early Draft Review published on 8 December 2011!

Where is JSF in its Lifecycle?

Roadmap

- Java EE 7 Roadmap
 - https://blogs.oracle.com/theaquarium/entry/java_ee_7_roadmap
 - JavaEE 7 complete in *Spring 2013*
- JSF 2.2
 - Releasing on Java EE 7 schedule
 - Will still run on Java EE 6 containers
 - Any features that happen to depend on EE 7 will gracefully degrade.
Example: JSR-353 JSON parsing

Questions & Answers



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