

# EXPLORING JSF 2.0 AND PRIMEFACES

Hasan TURKSOY\*

\* Based on PrimeFaces documentation

## Topics

- JSF Overview
- What's New in JSF 2.0?
- Go beyond with PrimeFaces



## JSF Overview

- Standard for Java EE
- Component Oriented
- Event Driven
- RenderKits (web, mobile ...)



## History

- Roots go back to 2001
- JSR-127 JSF 1.0, 2004
- JSR-127 JSF 1.1, 2004
- JSR- 252 JSF 1.2, 2006
- JSR-314 JSF 2.0, 2009

## JSF Ecosystem

- Apache Software Foundation (MyFaces, Trinidad, Tobago, Tomahawk, ExtVal...)
- Oracle (ADF Faces - Mojarra Implementation)
- IBM (IBM JSF Component)
- Prime Technology (PrimeFaces)
- VMware/SpringSource (Spring WebFlow)
- RedHat/JBoss (Seam, RichFaces)
- JAVA EE 6 (CDI, Bean Validation)
- Other \*Faces libs

## JSF 2.0 Highlights

- |                     |                           |
|---------------------|---------------------------|
| ▪ Facelets/VDL      | ▪ Navigations             |
| ▪ AJAX              | ▪ Resource Loading        |
| ▪ Custom Components | ▪ Bookmarking             |
| ▪ Behaviors         | ▪ New Event API           |
| ▪ Partial State     | ▪ Exception Handling      |
|                     | ▪ JSR-303 Bean Validation |

## Facelets / VDL

- XHTML based
- Optimized for JSF
- Templating
- New View Declaration Language API

## AJAX and JSF 2.0

- New APIs;
  - Server: PartialViewContext

```
<h:inputText value="#{bean.value}">
  <f:ajax render="display" execute="@this" event="blur" />
</h:inputText>
<h:outputText id="display" />
```

- Partial Processing (execute)
- Partial Rendering (render)
- Standard request parameters

## Dependencies with JSF 1.x

```
<managed-bean>
  <managed-bean-name>itemView</managed-bean-name>
  <managed-bean-class>com.prime.view.itemView</managed-bean-class>
  <managed-bean-scope>request</managed-bean-scope>
  <managed-property>
    <property-name>itemServices</property-name>
    <value>#{itemService}</value>
  </managed-property>
</managed-bean>

<managed-bean>
  <managed-bean-name>itemServices</managed-bean-name>
  <managed-bean-class>com.prime.service.ItemServiceImpl</managed-bean-class>
  <managed-bean-scope>application</managed-bean-scope>
</managed-bean>
```

```
package com.prime.view;
public class ItemView {
  private ItemService itemService;

  //getter&setter
}
```

## Dependencies with JSF 2.0

NO XML

```
@ManagedBean(name="itemService")
@ApplicationScoped
public class ItemServiceImpl implements ItemService {
}
```

```
@ManagedBean
public class ItemView {

  @ManagedProperty(value="itemService")
  private ItemService itemService;

  //getter&setter
}
```

## Scopes

- @RequestScoped
- @ViewScoped
- @SessionScoped
- @CustomScoped
- Flash scope

## Bean Validation (JSR-303)

- Reuse constraints

```
@NotNull  
@Size(min=5, max=10)  
private String title;
```

```
<h:inputText value="#{bean.item.title}" />
```

instead of

```
<h:inputText value="#{bean.item.title}" required="true">  
  <f:validateLength min="5" max="10" />  
</h:inputText/>
```

## PRIMEFACES

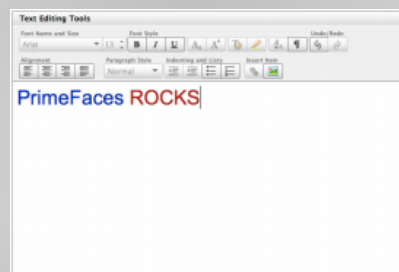
- Next Generation Component Suite
- Most Popular JSF 2.0 Library
- 100+ components (Everything you need)
- Lightweight: one jar, no dependencies, zero-config
- Skinning support with 25+ themes and theme creator
- Extensive documentation
- Huge and active community
- jQuery based
- Mobile UI Kit: TouchFaces
- Ajax Push support
- Open Source (Apache License)

## Setup

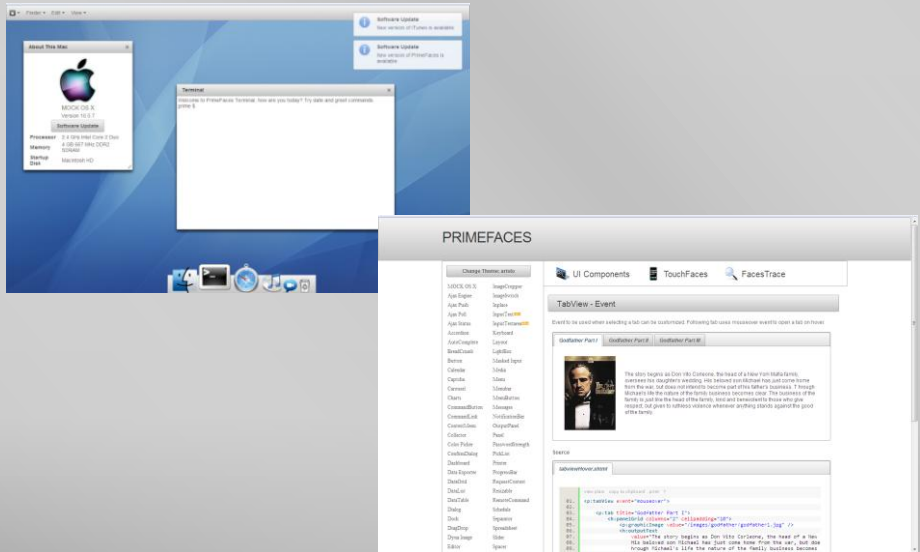
- No setup required, drop the jar and add the namespace;

```
xmlns:p="http://primefaces.prime.com.tr/ui"
```

```
<p:editor />
```



## PrimeFaces UI



## PrimeFaces Ajax

- Based on standard JSF 2.0 Ajax APIs
- Extensions;
  - p:ajax
  - callbacks
  - p:ajaxStatus
  - jquery based client side api implementation



## Ajax Callbacks

p:ajax

- onstart
- oncomplete
- onsuccess
- onerror

f:ajax

- onevent
- onerror

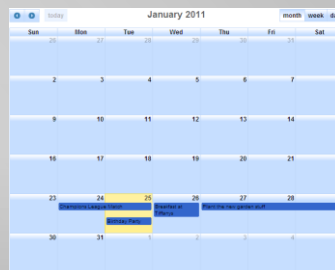
## Unobstrusive

JSF Page: `<p:schedule value="#{bean.mode}" editable="true"/>`

`<div id="_gen"></div>`

Renders: `<script type="text/javascript">  
new PrimeFaces.widget.Schedule('_gen', {editable:true});  
</script>`

You get:



## Themes

- Integrated with ThemeRoller
- 25+ Built-in Themes
- Online ThemeCreator to create your own easily



## Theme Gallery



## How to Create Your Own

- No need to know CSS
- Disable default skin

```
<context-param>
  <param-name>primefaces.skin</param-name>
  <param-value>none</param-value>
</context-param>
```

- See: <http://vimeo.com/14235640>



see it in action...



want more action ;)...

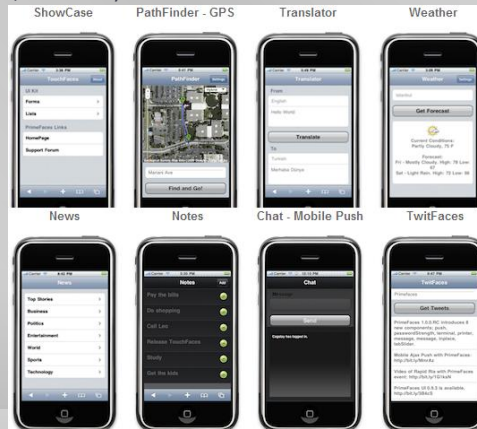


## Ajax Push

- Powered by Atmosphere Framework
- Currently Proof-of-Concept (http-streaming)
  - in PrimeFaces-3.0 roadmap (planned for the start of April/11)
- Future;
  - WebSockets, Long-Polling, Http-Streaming

## Prime Mobile (previously TouchFaces)

- Mobile UI components
- Optimized for webkit (eg iPhone, Android)
- Native looking webapps
- jqtouch based



## Cloud Support

- PrimeFaces and JSF 2.0 runs Google AppEngine
- Sample:  
<http://code.google.com/p/primefaces/source/browse/examples/trunk/appengine/>
- Demos;
  - <http://primefaces-gae-kickstart.appspot.com>
  - <http://primefaces-rocks.appspot.com>

## Integrations

### IDE Support



NetBeans



IntelliJ IDEA



Eclipse

+ Spring Core, Seam, CDI, Portlets...

### Spring Web Flow

- As of 2.2 release, JSF 2 samples featuring PrimeFaces components demonstrating effective use of Web Flow, JSF 2 and a first-class JSF 2 component library.



## Documentation

- PrimeFaces Book (Commercial with 2.2)
- 400+ pages (for now)
- Component reference, examples, tips



## Community Support

- Huge community, 500 posts every week

PrimeFaces Users

Post a new topic | Search this forum | Search

6209 topics • Page 1 of 424 • 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424

ANNOUNCEMENTS	REPLIES	VIEWS	LAST POST
PrimeFaces Form Controls by optimus_prime on Sun Jan 23, 2011 3:44 pm	10	152	by avelis on Tue Jan 25, 2011 4:05 pm
Two New Themes by optimus_prime on Mon Jan 17, 2011 1:54 pm	0	146	by optimus_prime on Mon Jan 17, 2011 1:54 pm
Con-Fess Conference by optimus_prime on Wed Jan 05, 2011 4:00 pm	2	201	by optimus_prime on Wed Jan 05, 2011 12:29 pm
Teaser Video of PrimeFaces 3 by optimus_prime on Wed Dec 22, 2010 10:05 am	14	700	by optimus_prime on Sun Jan 23, 2011 2:39 pm
New Support Works by optimus_prime on Sat Jun 26, 2010 8:14 pm	2	1838	by optimus_prime on Thu Sep 09, 2010 9:20 pm
!!!Forum Posting Guidelines (PLEASE READ BEFORE POSTING)!!! by optimus_prime on Thu Jan 26, 2010 10:09 am	0	6392	by optimus_prime on Thu Jan 26, 2010 10:09 am

TOPICS	REPLIES	VIEWS	LAST POST
Testimonials by optimus_prime on Wed Sep 23, 2009 8:57 am	99	7392	by optimus_prime on Sat Jan 22, 2011 10:06 am
DataTable not displaying .properties file values by WollDesign on Tue Jan 25, 2011 10:33 pm	0	2	by WollDesign on Tue Jan 25, 2011 10:33 pm
tabView: Attribute "activetabindex" bound to HIB buggy? by jmrado on Tue Jan 25, 2011 9:27 pm	1	3	by kornelencs on Tue Jan 25, 2011 10:07 pm
make appear a component with ajax by kornelencs on Tue Jan 25, 2011 9:18 pm	0	1	by kornelencs on Tue Jan 25, 2011 9:18 pm
LazyDataModel not initialized by jmrado on Mon Jan 24, 2011 8:41 pm	1	12	by asper on Tue Jan 25, 2011 9:43 pm
add dynamic pie charts to dashboard by gfrunze on Tue Jan 25, 2011 8:15 pm	0	1	by gfrunze on Tue Jan 25, 2011 8:15 pm
Multiple Dialogs on one page by redth on Tue Jan 25, 2011 8:06 pm	4	92	by redth on Tue Jan 25, 2011 8:06 pm
PrimeFaces in Liferay by kornelencs on Fri Jan 07, 2011 1:49 pm	5	79	by kornelencs on Tue Jan 25, 2011 7:37 pm
Dynamic loading of Panels in Dashboard by jmrado on Tue Sep 14, 2010 11:27 am	2	51	by gfrunze on Tue Jan 25, 2011 7:21 pm
gridlist not work with a p:commandButton by elery on Tue Jan 25, 2011 7:18 pm	0	5	by elery on Tue Jan 25, 2011 7:18 pm

## PrimeFaces RoadMap

- Maintenance of current codebase from performance PoV
- Rewritten Ajax Push via Atmosphere
- Prime Mobile enhancements
- Client Side Validation
- New Components (e.g. TimeLine)
- Enhanced Components (e.g. Tree, TreeTable, PickList)
- Portlet samples (e.g. Liferay)

## Final

- Reach to PrimeFaces
  - <http://www.primefaces.org>
  - [cagatay.civici@prime.com.tr](mailto:cagatay.civici@prime.com.tr)
- Reach to presenter
  - [hturksoy@gmail.com](mailto:hturksoy@gmail.com)