JavaFX 8

Tom Schindl <tom.schindl@bestsolution.at>
About Me

› CTO BestSolution.at Systemhaus GmbH
› Eclipse Committer
   › e4
   › Platform
   › EMF
› Project lead
   › e(fx)clipse
› Twitter: @tomsontom
› Blog: tomsondev.bestsolution.at
› Cooperate: http://bestsolution.at
Agenda

• Short Intro to JavaFX

• News in JavaFX8

  • New APIs

  • New Platforms

• SceneBuilder 2.0

• The Ecosystem around JavaFX

• JavaFX8 on Mobile Devices (Android & iOS)
Basics about JavaFX

• JavaFX8 **IS**

  • part of OpenJDK

  • fully open sourced - e.g. font system has been rewritten to use native technologies to render fonts (DirectWrite, CoreText, Pango)

  • part of Oracle JDK8 and found on the extension class path
Basics about JavaFX

- JavaFX8 **IS NOT**
  - JSRed and hence not part of every Java8 compatible VM (e.g. ibm)
  - part of any OSGi-EE e.g. JavaSE-1.8 EE
  - on the `bootclasspath` but on the `extension` classpath hence not visible by default to some OSGi implementation (e.g. Equinox)
What is JavaFX

- JavaFX is a graphics toolkit
  - built around a SceneGraph in contrast to Direct Mode toolkits like Swing and SWT
  - uses hardware acceleration if possible
    - OpenGL on Mac OSX, Linux and Embedded (and mobile)
    - DirectX on Windows platform
  - including multimedia support to embed videos and audio
Milk glass demo
Image Rollover
What is JavaFX

• JavaFX has a pure Java API

• supports a declarative languages to

• construct applications named FXML

• theme applications names

```xml
<BorderPane xmlns:fx="http://javafx.com/fxml">
  <center>
    <Button fx:id="mybutton" text="Hello World">
    </Button>
  </center>
</BorderPane>
```

```css
.button {
  -fx-background-color: red;
  -fx-border-radius: 10px;
}
```
What is JavaFX

- JavaFX provides controls to write business applications
MyFond Application Demo
What is JavaFX

- JavaFX provides a charting library
Fancy Chart Demo
News in JavaFX8

• Make contributions more easy

  • Build system moved from ant to gradle
    user@host > hg clone http://hg.openjdk.java.net/openjfx/8u-dev/rt
    user@host > gradle sdk

  • Project layout for all major IDEs part of repo

• Make usage more easy

  • Provide JavaFX source code as part of the JDK download

• Support for all platforms is shipped on the same day (=today)
New APIs

- Control (some samples)
  - TabFolder - added support to cancel tab closing
  - TextFlow - layout (text) nodes in an HTML like model
  - TreeTable
- Collections
  - Filterable & Sortable collections
TabFolder & TextFlow in action
Full 3D support added

Demo Tux - [http://www.interactivemesh.org](http://www.interactivemesh.org)
Full 3D support added

Demo Autodesk importer by TesisDynaware

https://github.com/tesis-dynaware/fbx-importer
New platforms

- OpenJDK8 & OpenJFX8 are provided for ARM platforms
- Reference Platform Raspberry Pi

Raspberry Pi Demo
SceneBuilder 2.0

• Source code got released under BSD

• Provides an API to embed into own applications

• Has a new Dark Theme

• Supports custom components
SceneBuilder Demo
JavaFX ecosystem - JFXExtras

- Provides Extra Controls not available in JavaFX Core e.g. a spinner control
JavaFX ecosystem - ControlsFX

- Provides extra controls not yet part of JavaFX core like e.g. SpreadSheet
e(fx)clipse - OSGi and Eclipse support

• Provides Equinox OSGi integration

• Has an experimental (proof-of-concept) SWT on JavaFX port
JavaFX Mobile Devices

• JavaFX8 runs on iOS and Android Devices

• No VM provided by Oracle nor official support for JavaFX8 from Oracle

• iOS
  • Running with the help of RoboVM (http://robovm.org/)

  • Running on Android using Dalvik (https://bitbucket.org/javafxports/android/wiki/Home)
iOS Demo setup

- OSGi
  + e4
  + JavaFX application

- OSGi
  + CDO-Server

- OSGi
  + Jetty

- iOS
  + RoboVM
  + JavaFX

http

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Demo JavaFX on iOS
Acknowledgement

• Fancy Chart - Uwe Sander - http://ustesis.wordpress.com/

• TESISDynaware - http://tesis.de/

  • SIMChron Screenshots

  • Autodesk importer - https://github.com/tesis-dynaware/fbx-importer

• Milk Glass Effect - mihosoft.eu

• Image Rollover - Gerrit Grunwald - https://bitbucket.org/hansolo/imagerollover

• Tux Sample - http://www.interactivemesh.org
Thank You for your attention