



Does Your Mobile Speak JavaFX?

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Agenda

- JavaFX Vision
- JavaFX Platform
- JavaFX Mobile
- JavaFX Script
- Java and JavaFX Scenegraphs
- Packaging
- Common and Mobile profiles
- Development Tools
- Q & A

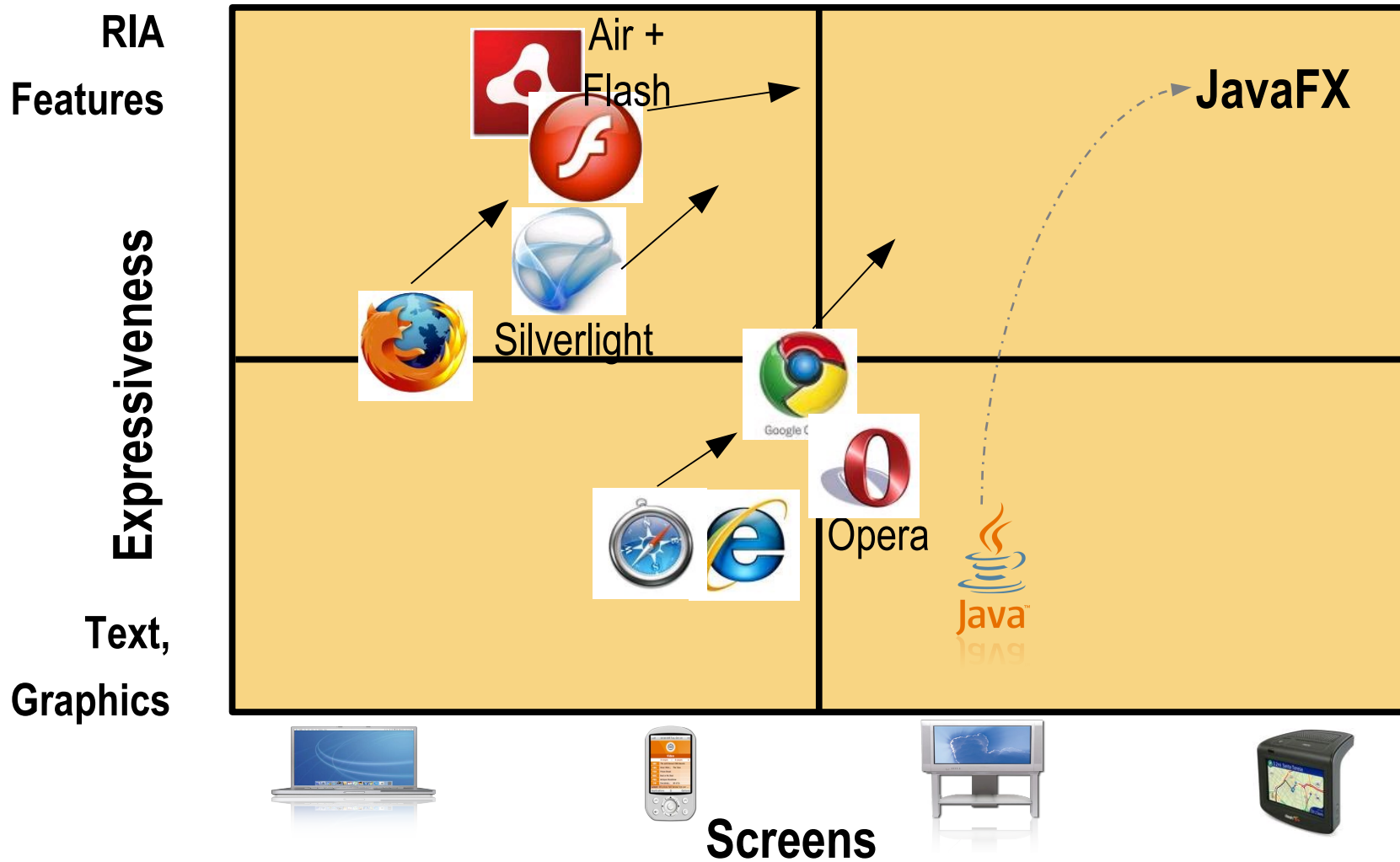
JavaFX Vision

JavaFX is the rich client **platform** for easy building cross-device RIA applications and content



JavaFX is Powered by Java

RIA Competitive Landscape (2009/2011)



JavaFX Mobile

- > Brings expressive, rich user interface to mobile world
- > Helps to solve the fragmentation issue
- > Easy:
 - Development of GUI thanks to the language and tools,
 - Access to phone features thanks to Java ME
- > Are today's phones powerful enough?
 - Yes, but there is never enough performance
 - HW acceleration is important

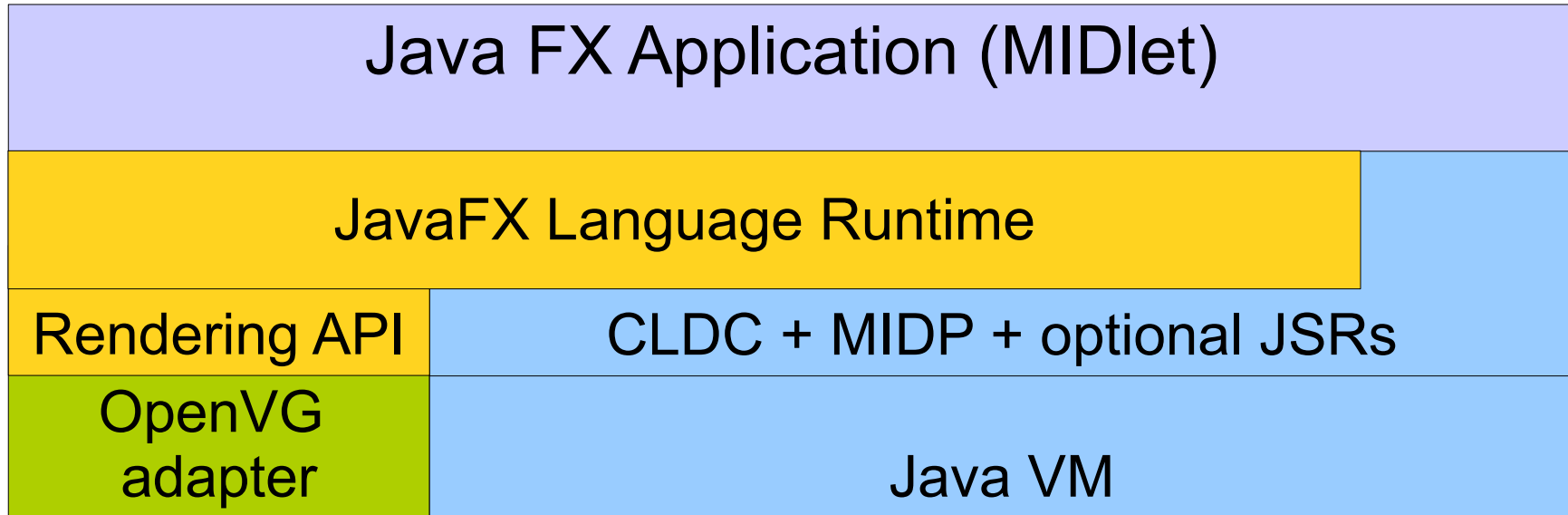
JavaFX APIs vs. Standard JSRs

- Java APIs are available from JavaFX
- Using Java reduces portability
- Common APIs for common functionality
- Platform specific APIs for specific functionality
- Mobile specific APIs
 - > Most frequent usecases possible in JavaFX
 - > SMS send & receive
 - > Embedded Camera access
 - > Persistent data storage
 - > Contact list access

JavaFX Platform

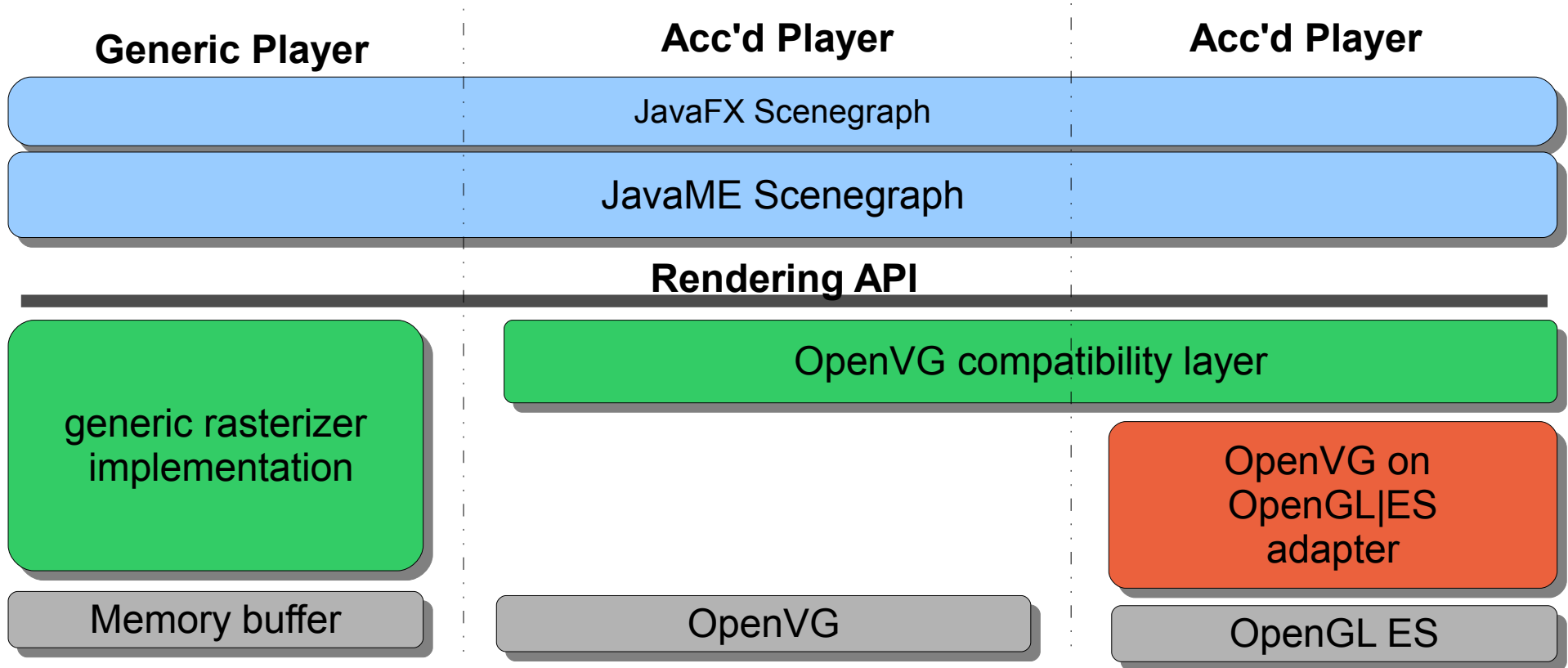
- JavaFX Script
 - > Bindings, Triggers, Sequences
 - > Tree-like declarative syntax
- JavaFX Desktop Runtime
 - > Deploy as Applets or Desktop applications
- JavaFX Mobile Runtime
 - > Deploy as MIDlets on MIDP devices
- JavaFX Tools
 - > IDE support
 - > Designer & Developer Work-flow
 - > JavaFX Packager

High level architecture



- Application deployed as MIDlet
- Full access to all FX and Java device APIs
- Rendering API – high performance graphical API
- OpenVG adapter – accelerated implementation

FX Mobile Players Architectures



JavaFX Script

- Declarative syntax
- Bindings, sequences, interpolation, animations

```
class HelloWorld {  
    var message : String;  
    function print() { println(message); }  
}  
var name = "Jan";  
var hello = HelloWorld {  
    message: bind "Hello {name}!"  
}  
hello.print(); // prints Hello Jan!  
name = "Brian";  
hello.print(); // prints Hello Brian!
```

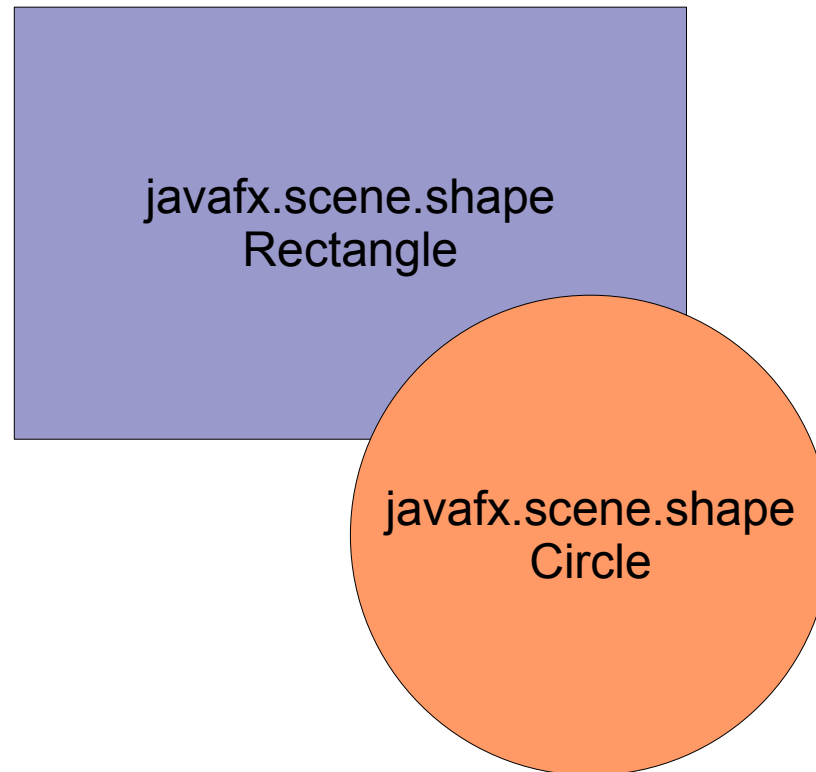
Java and JavaFX Scenegraphs

- > Layers between JavaFX Script and the renderer
- > Keeps track of the scene structure, both visually and logically. Tree graph of the scene.
- > JavaFX Scenegraph
 - Interfaces JavaFX and Java
 - Preserves scene hierarchy, remembers nodes
 - `javafx.scene.Scene` class
- > Java Scenegraph
 - Level of shapes, images, paths
 - Nodes, state, animation, effects

Scenegraph

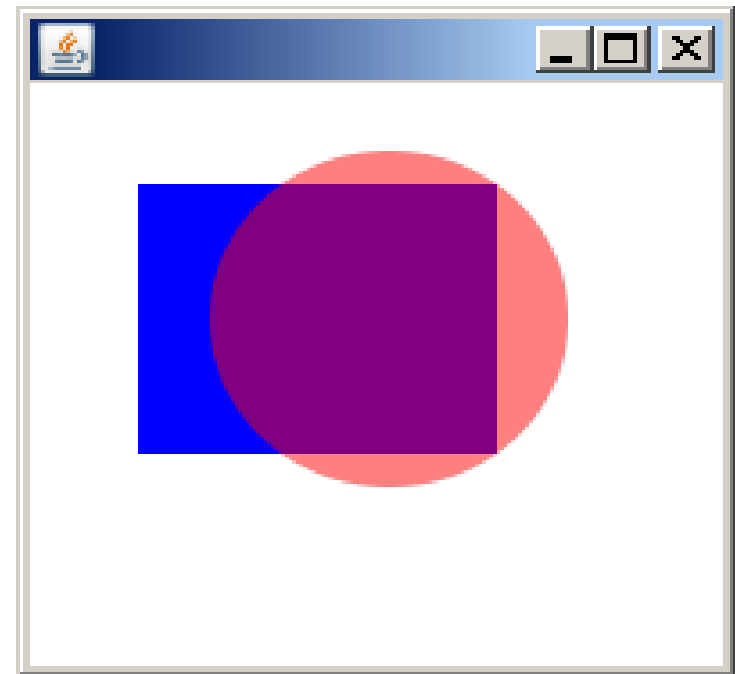
- Tree-like structure of graphical nodes
- Easy way of vector graphics representation

```
Scene {  
  Group {  
    Rectangle,  
    Circle  
  }  
}
```

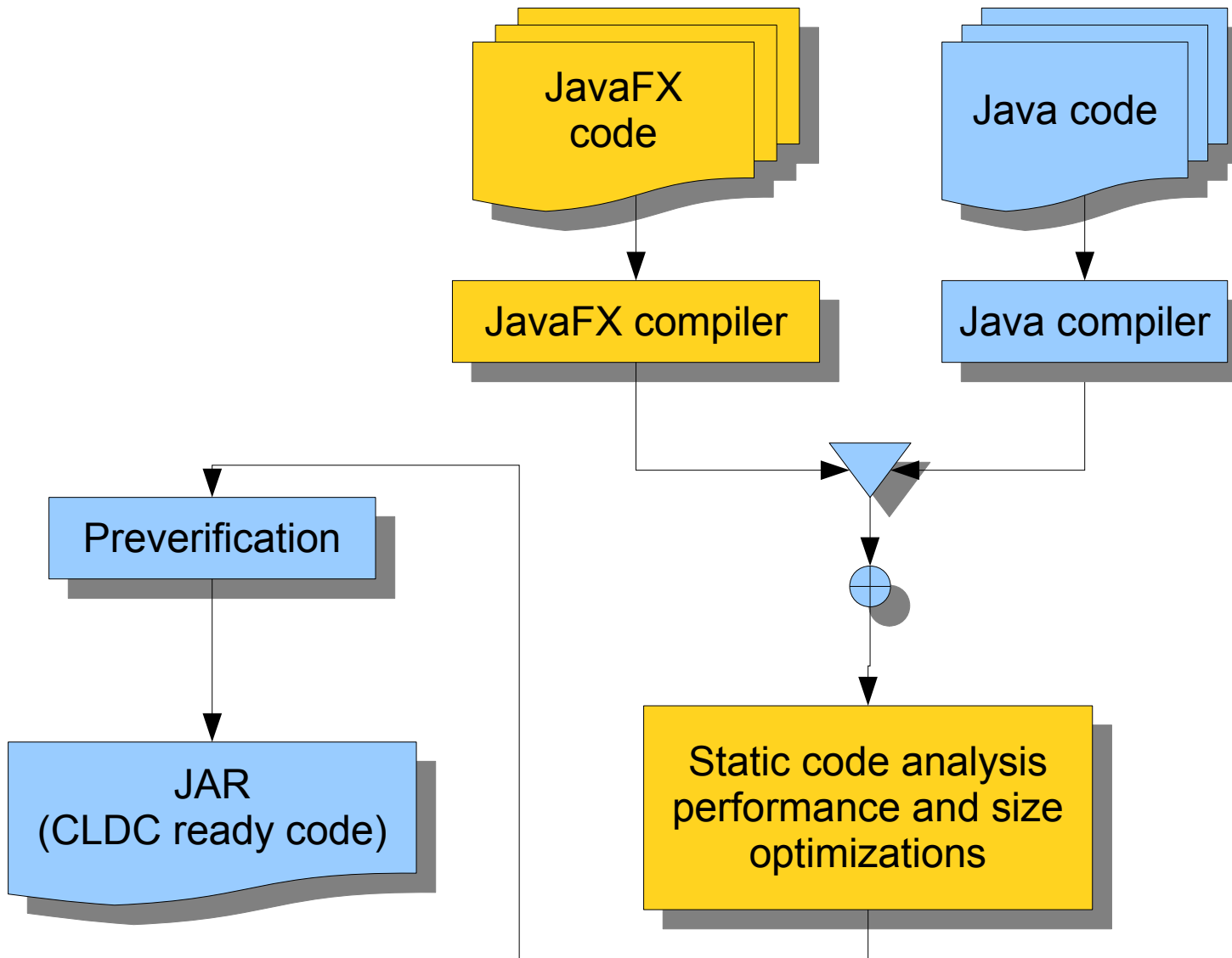


JavaFX Scenegraph

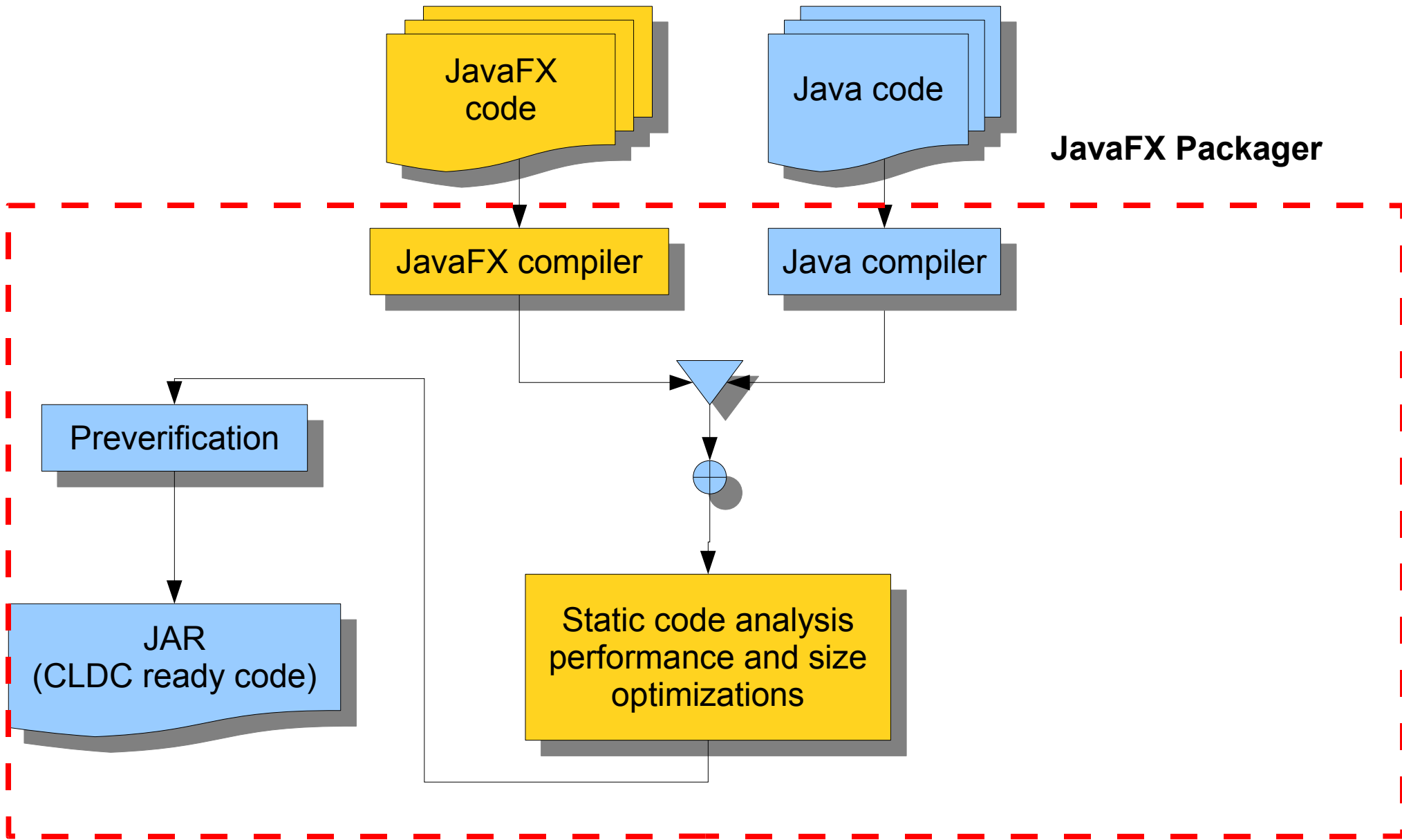
```
Scene {  
  content: [  
    Rectangle {  
      x: 30 y: 30  
      width: 100 height: 80 fill: Color.BLUE  
    },  
    Circle {  
      centerX: 100 centerY: 70  
      radius: 50 fill: Color.RED  
      opacity: 0.5  
    }  
  ]  
}
```



JavaFX Mobile - Packaging

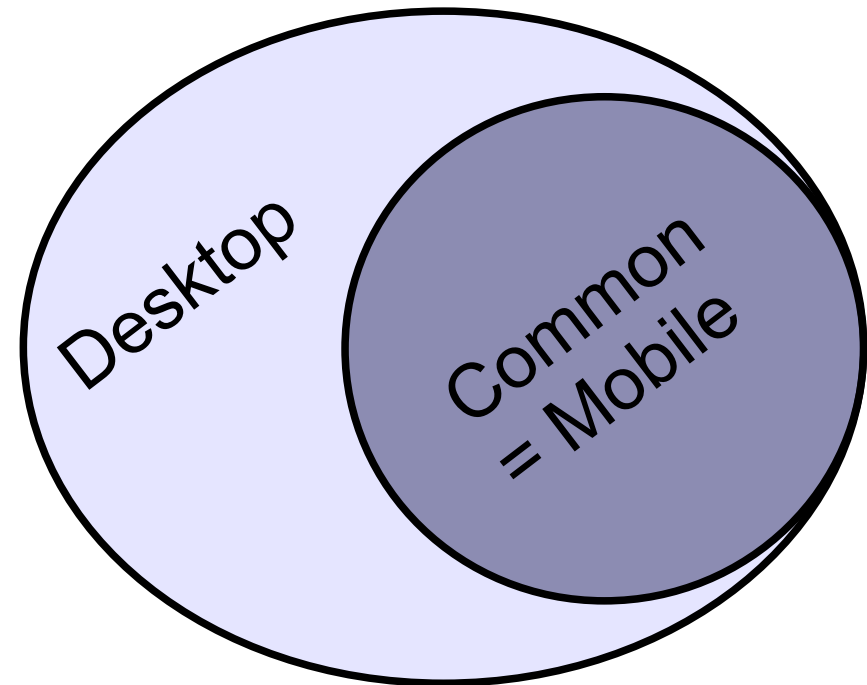


JavaFX Mobile - Packaging



Profiles - Mobile vs. Desktop

- Common profile
 - > Most of 1.2 is Common profile
 - > Available on all platforms
- Desktop profile
 - > Swing extensions
 - > Effects
 - > Browser integration
- Mobile profile
 - > Currently no mobile specific FX APIs



JavaFX Tools

- JavaFX SDK 1.2
 - > Minimální set nástrojů pro vývoj aplikací
 - > Mobilní emulátor, dokumentace
 - > Zdrojové soubory
 - > Sada ukázkových aplikací
 - > Command line tools

JavaFX Tools

- NetBeans IDE 6.8 for JavaFX
 - > Kompletní vývojové prostředí pro JavaFX
 - > Obsahuje JavaFX SDK 1.2
 - > Sada jednoduchých aplikací pro start
 - > Projektová podpora
 - Run, debug, profile, deployment
 - > Editor
 - Syntax highlighting, code completion, fix imports, code snippets ...
 - > Debugger a profiler
 - > Automatický deployment
 - Desktop, Web, Mobile

JavaFX Tools

- JavaFX 1.2 Production Suite
 - > Sada modulů pro grafické aplikace
 - Photoshop, Illustrator
 - > Export do FXD/FXZ souborů

Q&A

Thank You!

<http://javafx.com>

