Eclipse
vs.
The Mobile World

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Holger Staudacher

EclipseSource

Cross Platform App Development can be a problem!

„*for the Developer*“

Languages

Tools

Target Platforms + Versions

OS Concepts

„for the Team“

Hardware (PC, Mac)

No Experience

„for the End-User“

Look&Feel Tradeoffs

Poor Performance

Feature Limitations

Cross Platform App Development should be…

„*for the Developer*“

One Language

One IDE

One API

One UI Concept

„for the Team“

Your Hardware

Your precious Experience

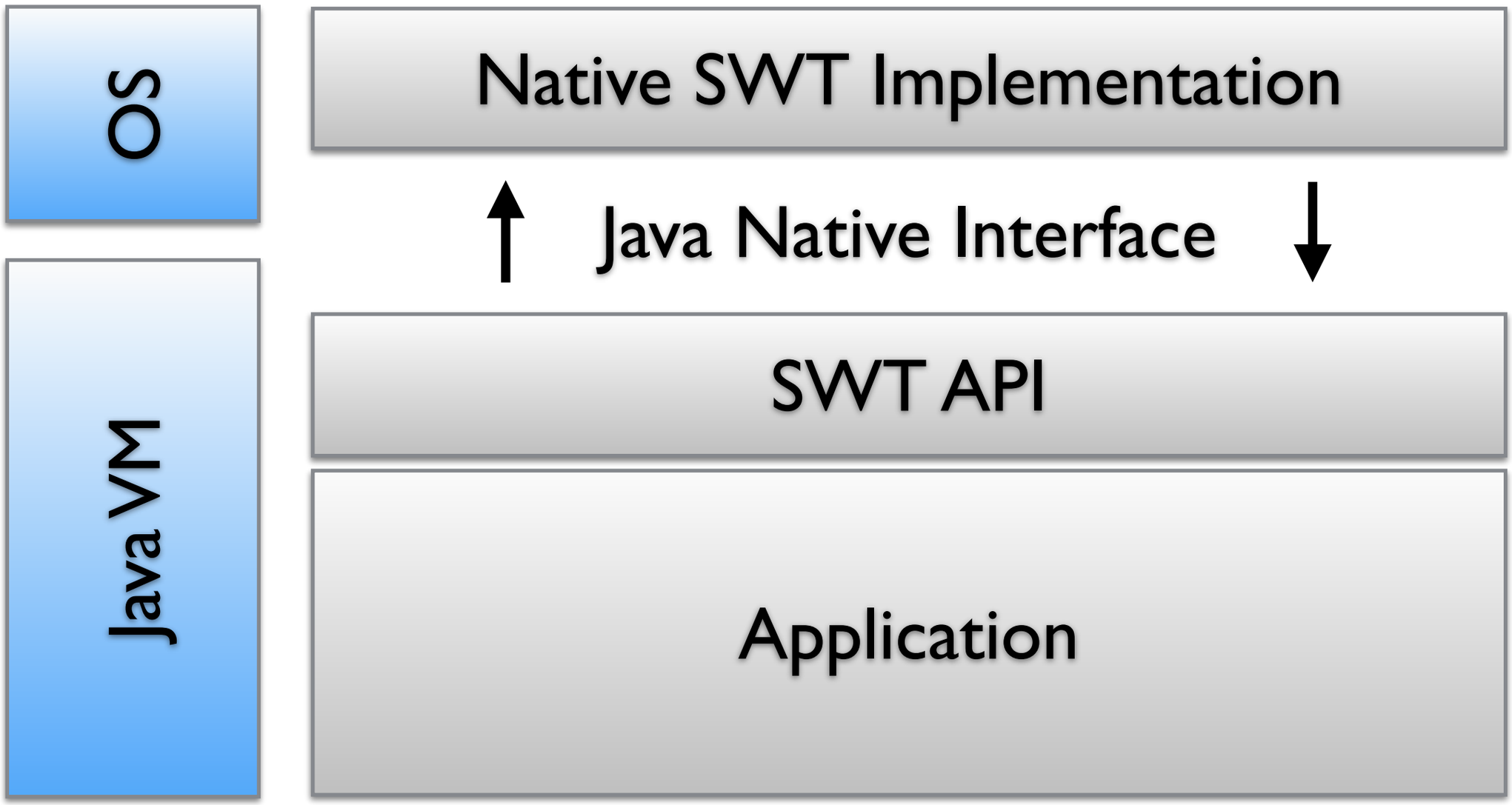
„for the End-User“

Native Look&Feel

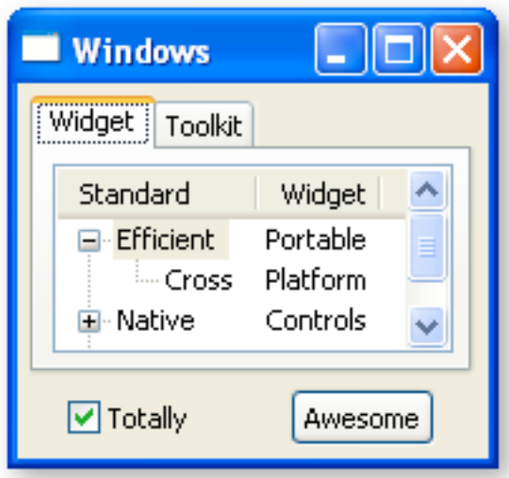
Native Performance

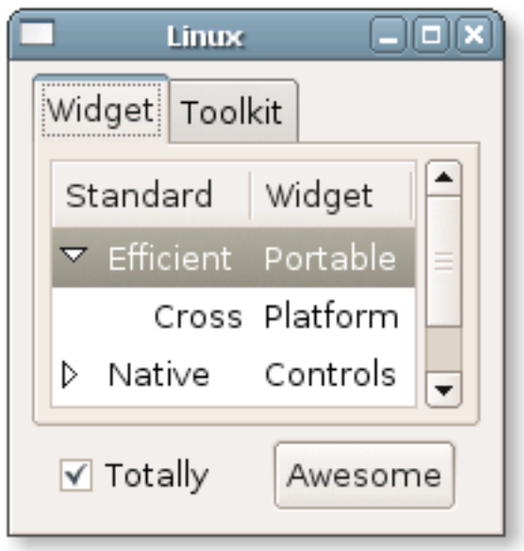
State-of-the-Art Features

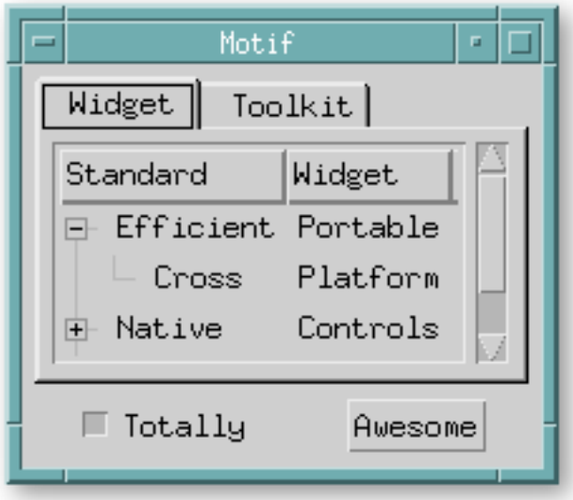
Standard Widget Toolkit



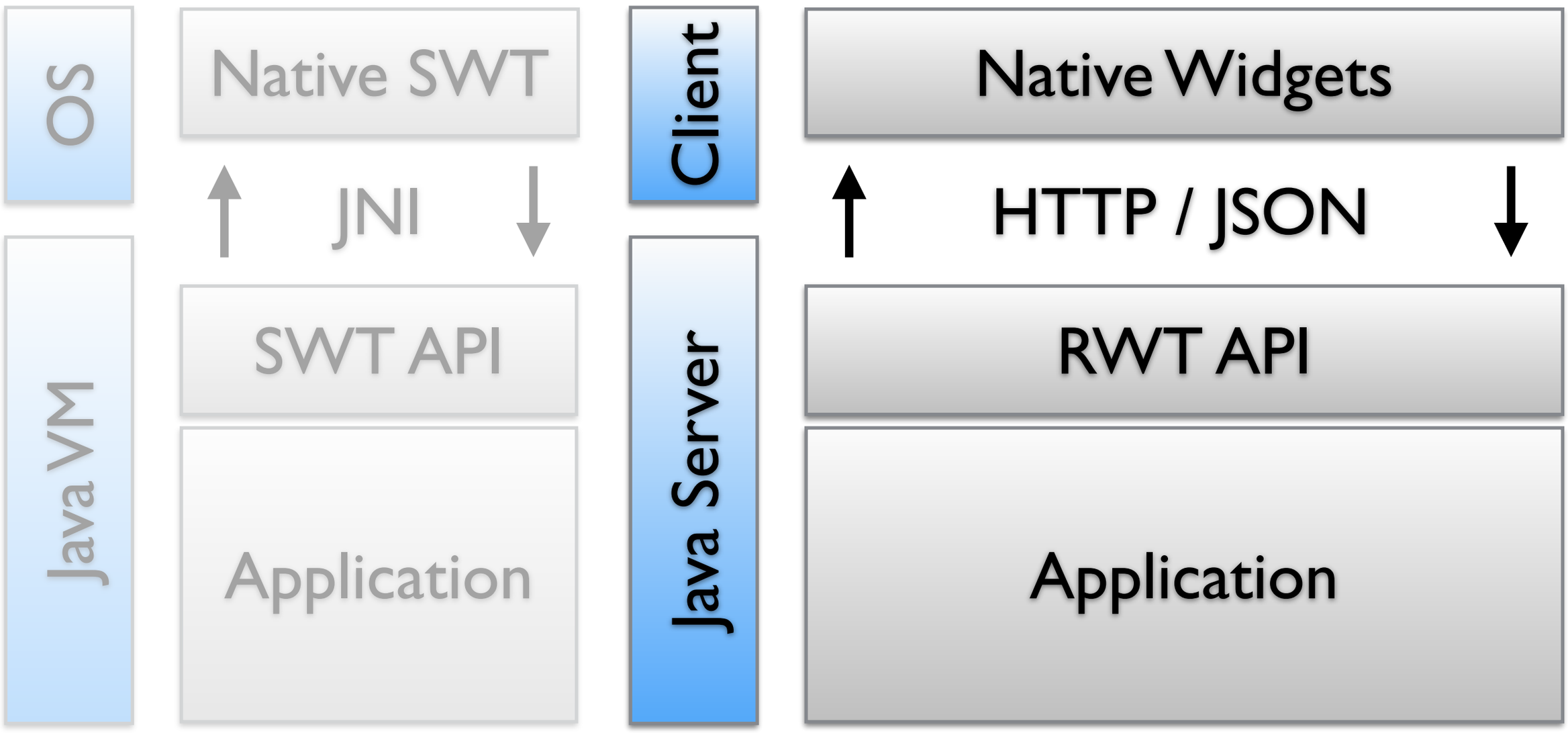
SWT is so 2001





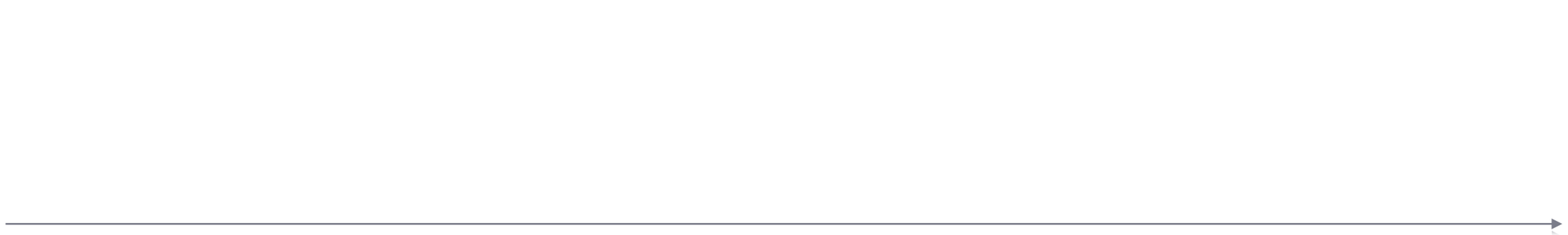


Remote Application Platform

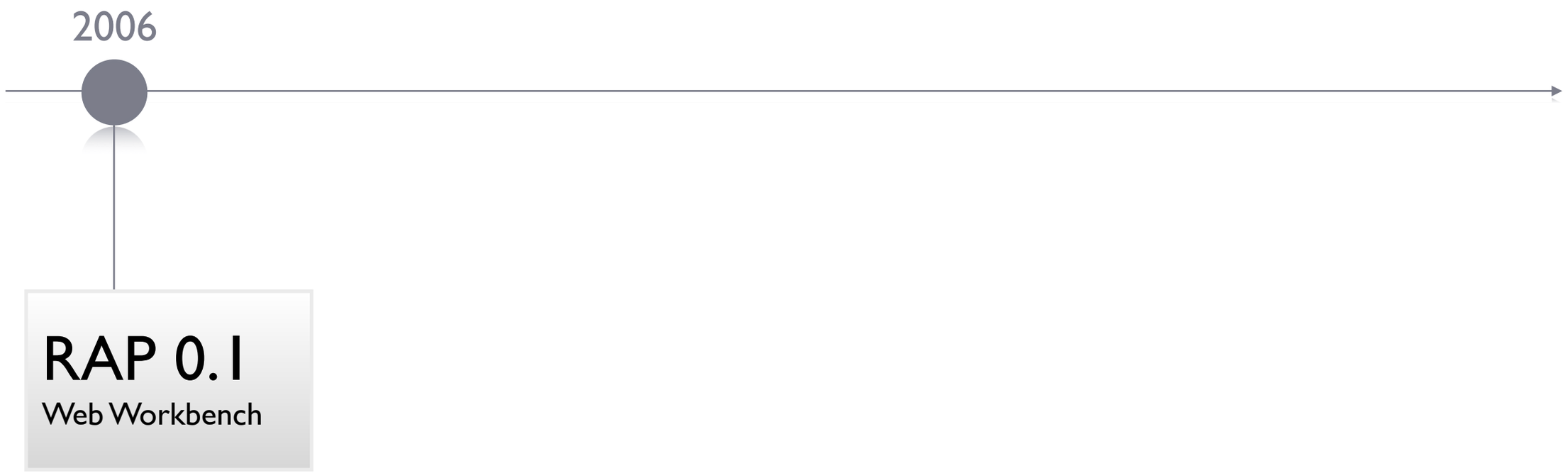


Remote Application Platform

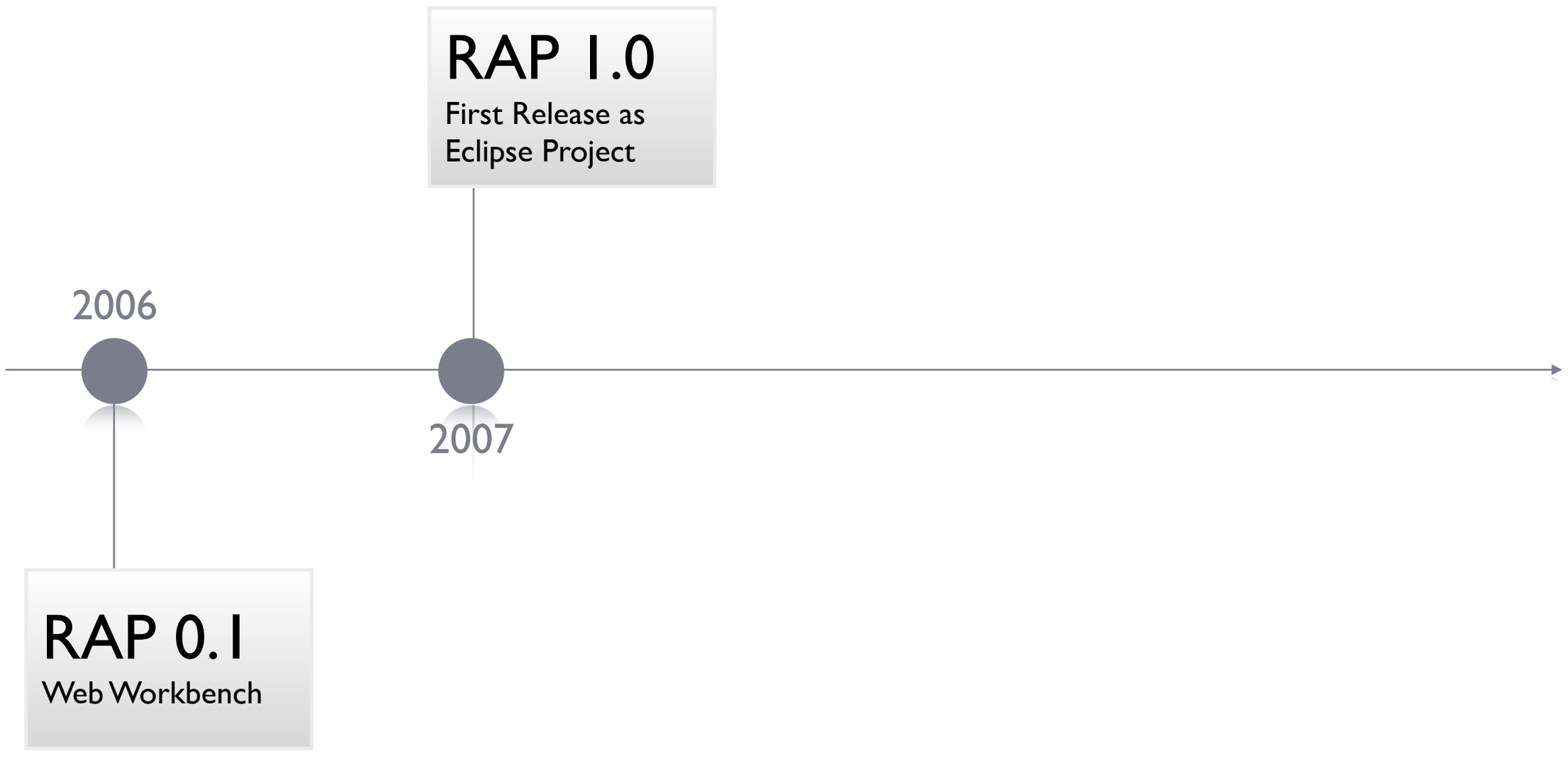
Remote Application Platform



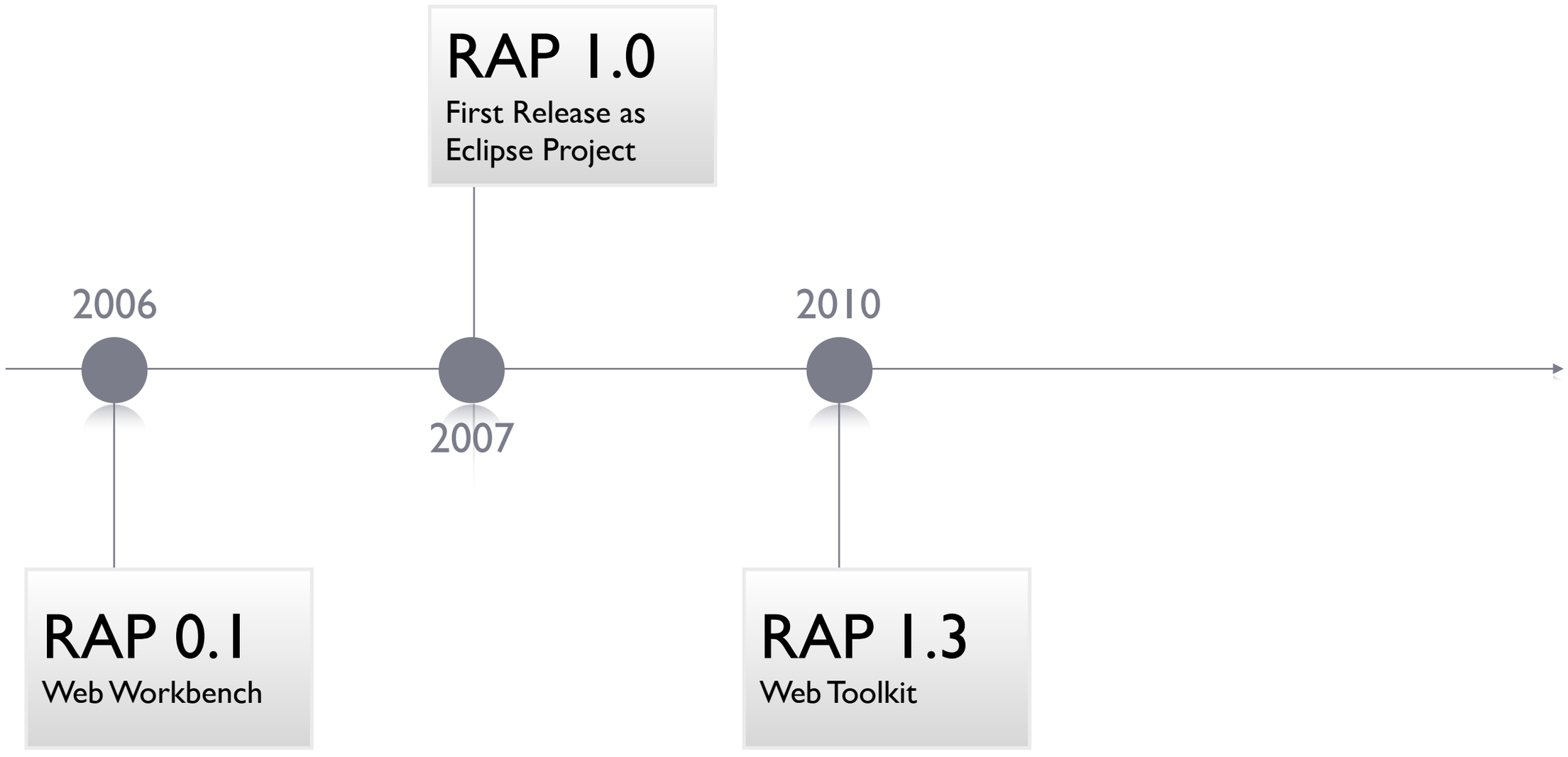
Remote Application Platform



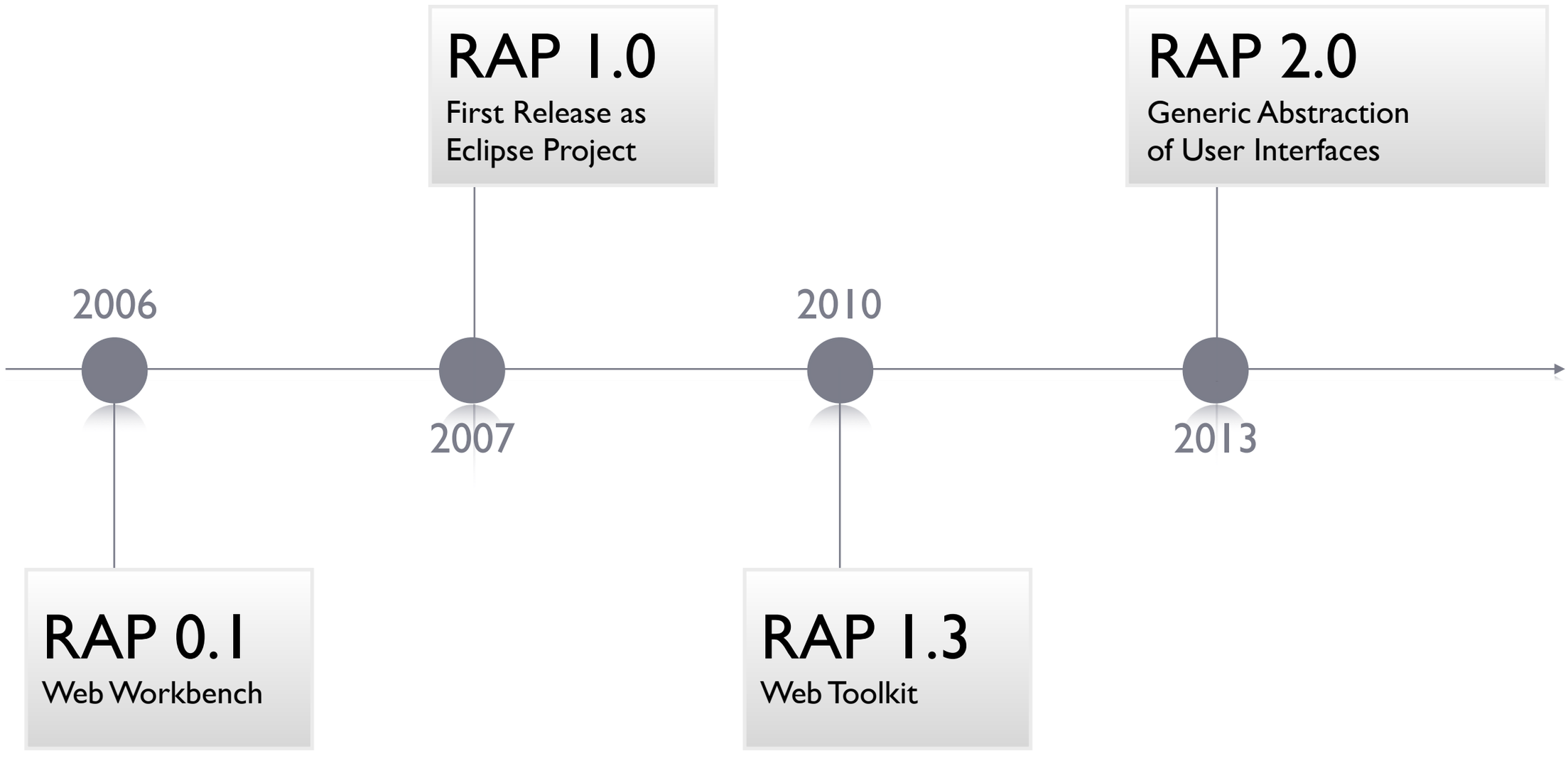
Remote Application Platform



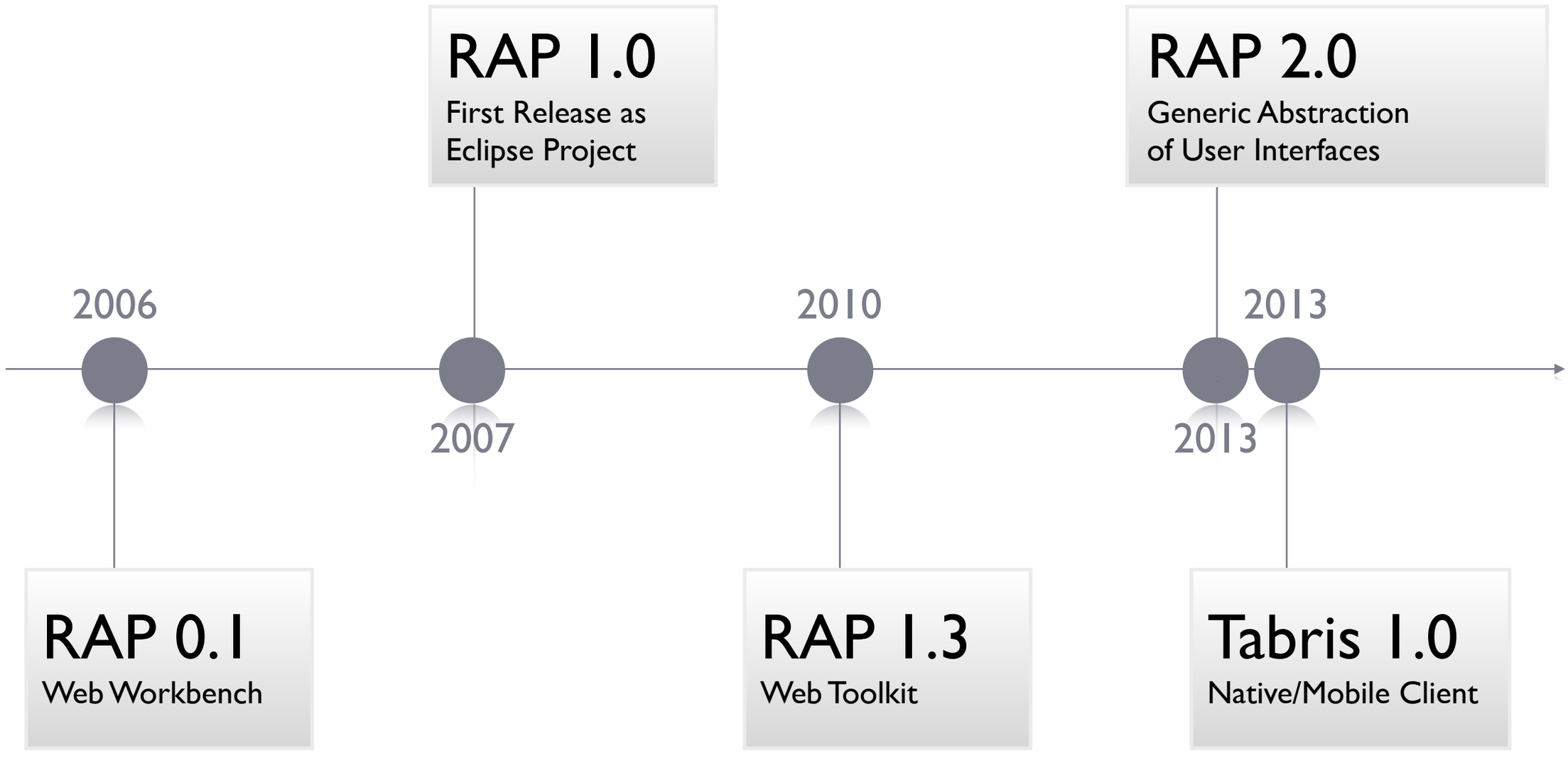
Remote Application Platform



Remote Application Platform



Remote Application Platform



RAP + Native Mobile = Tabris

Tabris is the first mobile framework that allows you to develop apps completely in Java while still leveraging the power of native UIs.

Server

Java

Business-Logic

UI-State

Client

Native

Native Widgets

UI-State

Server

Java

Business-Logic

UI-State

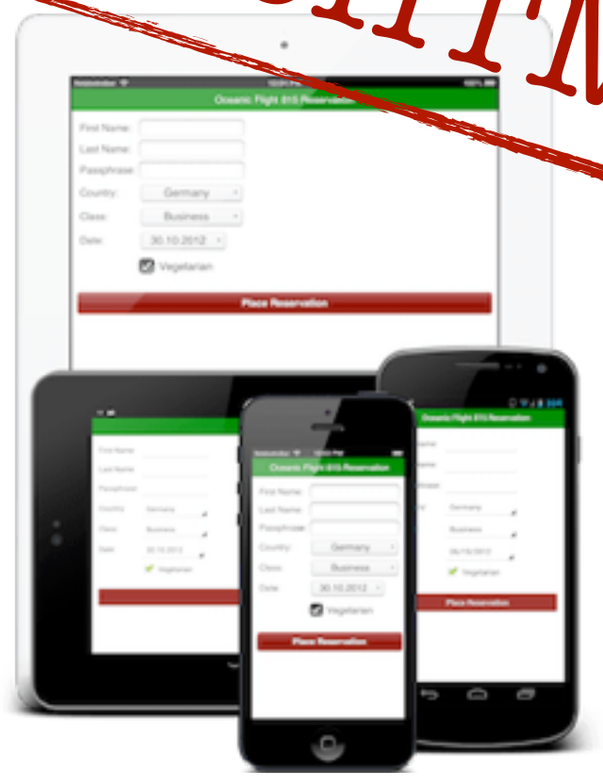
Client

Native

Native Widgets

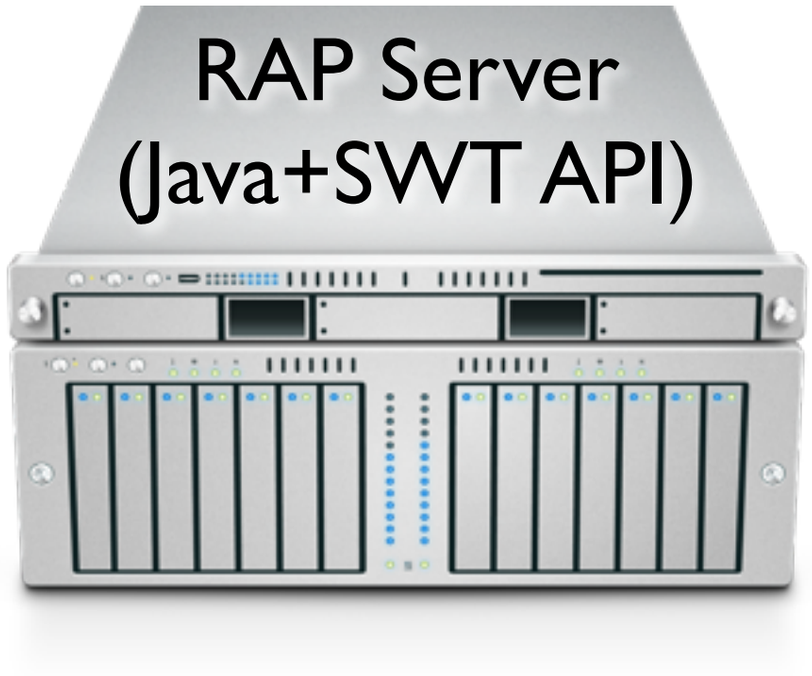
UI-State

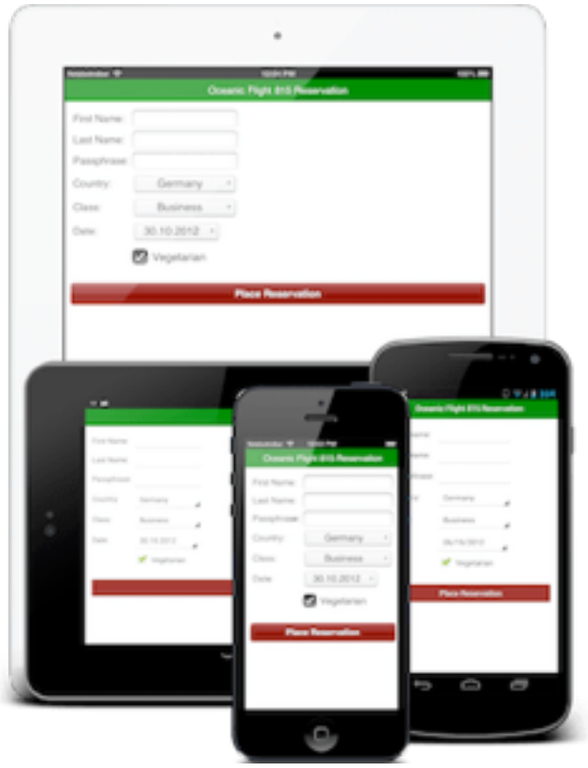
HTTP
JSON



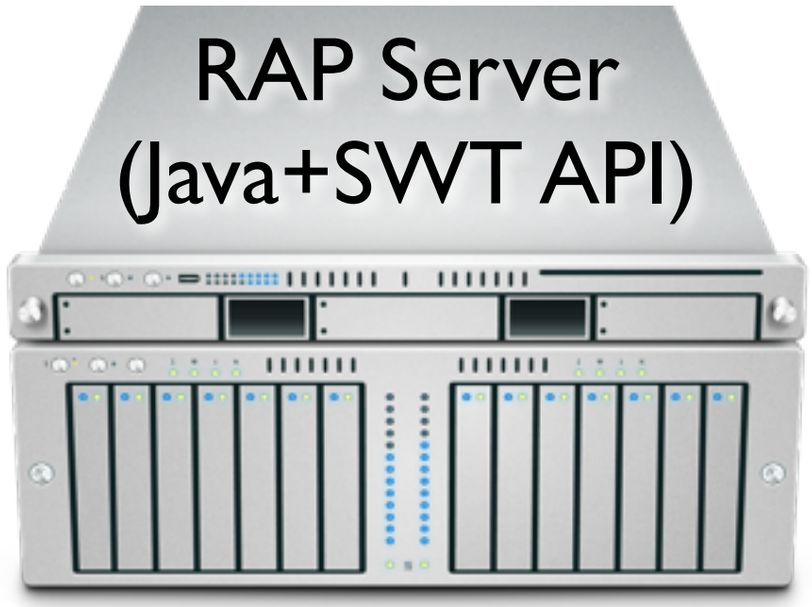
NoHTML

Server-Side Apps



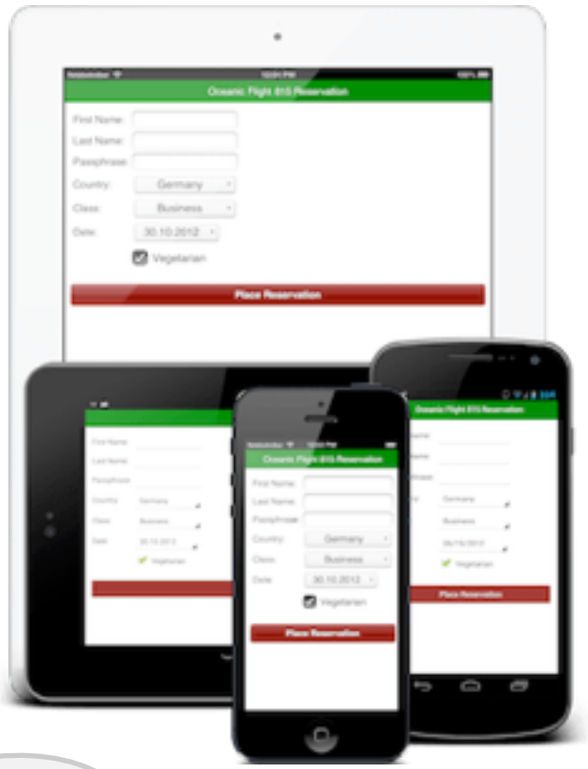


Server-Side Apps



HTTP
JSON

HTTP
JSON



HTTP
JSON

HTTP
JSON

	RAP	
Button	✔	✔
Canvas	✔	✔
Combo	✔	✔
Composite	✔	✔
TabFolder	✔	✔
DateTime	✔	✔
Group	✔	✔
Label	✔	✔
List	✔	✔
Menu	✔	✔
ProgressBar	✔	✔
Shell	✔	✔
Scale	✔	✔
TabFolder	✔	✔
Text	✔	✔
ToolBar	✔	✔

	RAP	
Tree	✔	✔
Browser Client	✔	✔
TabrisUI	✔	✔
Native Clients	✗	✔
Client Services	✗	✔
Widget Enhancements	✗	✔
Grouped Events	✔	✔
Scrolling	✔	✔
Responsive Design	✔	✔
List Styling	✗	✔
XCallbackUrl	✗	✔
ClientCanvas	✗	✔
Video	✗	✔
Swipe	✗	✔
PagingIndicator	✔	✔

Widgets are
not enough!

Plug-in Development - com.eclipsesource.tabris.demos/src/com/eclipsesource/tabris/demos/entrypoints/GalleryDemo.java - Eclipse Platform - TiOS

Quick Access

Package Explorer | Plug-ins

- com.eclipsesource.tabris
- com.eclipsesource.tabris.demos
  - JRE System Library [JavaSE-1.6]
  - Plug-in Dependencies
  - src
    - com.eclipsesource.tabris.demos
    - com.eclipsesource.tabris.demos.enron
    - com.eclipsesource.tabris.demos.entrypoints
      - AppEventsDemo.java
      - AppLauncherDemo.java
      - ButtonControlsDemo.java
      - CameraDemo.java
      - ClientDeviceDemo.java
      - DrawDemo.java
      - GalleryDemo.java
      - GeolocationDemo.java
      - InputControlsDemo.java
      - KeyboardDemo.java
      - ScrollDemo.java
      - SimpleTreeDemo.java
      - SwipeDemo.java
      - UiDemo.java
      - VideoDemo.java
      - VirtualTreeDemo.java
      - VisualGuideDemo.java
    - com.eclipsesource.tabris.demos.hal
    - com.eclipsesource.tabris.demos.swipe
    - com.eclipsesource.tabris.demos.ui
  - images
  - gallery
  - META-INF
  - build.properties
  - epl-v10.html
  - pom.xml
  - Tabris Demos.launch
  - tabris-rap-2.0.target
- com.eclipsesource.tabris.target
- com.eclipsesource.tios
- org.eclipse.rap.demo.controls
- org.eclipse.rap.jface
- org.eclipse.rap.rwt
- org.eclipse.rap.rwt.osgi

GalleryDemo.jav | GeolocationDemo | FocusTest.java | Display.java | »10

```
 2 Copyright (c) 2012 EclipseSource and others.
11 kage com.eclipsesource.tabris.demos.entrypoints;
12
13 ort static com.eclipsesource.tabris.widgets.enhancement.Widgets.onLabel;
46
47
48 lic class GalleryDemo implements EntryPoint {
49
50 rivate ScrolledComposite scrolledComposite;
51 rivate Label zoomImageLabel;
52 rivate Composite thumbnailsComposite;
53 rivate Shell thumbnailsArea;
54 rivate boolean thumbnailsVisible;
55 rivate ToolItem overviewItem;
56
57 ublic int createUI() {
58   Display display = new Display();
59   Shell shell = new Shell( display, SWT.NO_TRIM );
60   shell.setMaximized( true );
61   shell.setLayout( new FillLayout() );
62   shell.setBackground( display.getSystemColor( SWT.COLOR_BLACK ) );
63   createContent( shell );
64   shell.open();
65   thumbnailsArea.open();
66   showThumbnails();
67   shell.addControlListener( new ControlAdapter() {
68     @Override
69     public void controlResized( ControlEvent e ) {
70       if( thumbnailsVisible ) {
71         showThumbnails();
72       } else {
73         hideThumbnails();
74       }
75     }
76   } );
77   return 0;
78
```

Outline

- com.eclipsesource.tabris.demos.entryp
- GalleryDemo
  - overviewItem : ToolItem
  - scrolledComposite : ScrolledCompos
  - thumbnailsArea : Shell
  - thumbnailsComposite : Composite
  - thumbnailsVisible : boolean
  - zoomImageLabel : Label
  - computeScrollAreaSize(ScrolledCom
  - createContent(Shell) : void
  - createThumbnailsArea(Shell) : void
    - new ControlAdapter() {...}
  - createToolbar(Composite) : void
    - new SelectionAdapter() {...}
  - createUI() : int
    - new ControlAdapter() {...}
  - createZoomImageArea(Composite) :
    - new MouseAdapter() {...}
  - hideThumbnails() : void
  - populateWithImages() : void
    - new MouseAdapter() {...}
      - mouseUp(MouseEvent) : void
  - showThumbnails() : void
  - toggleThubnails() : void

Error Log | Tasks | Problems | Console

RAP Controls Demo [RAP Application] /System/Library/Java/JavaVirtualMachines/1.6.0.jdk/Contents/Home/bin/java (21.03.2013 15:46:51)

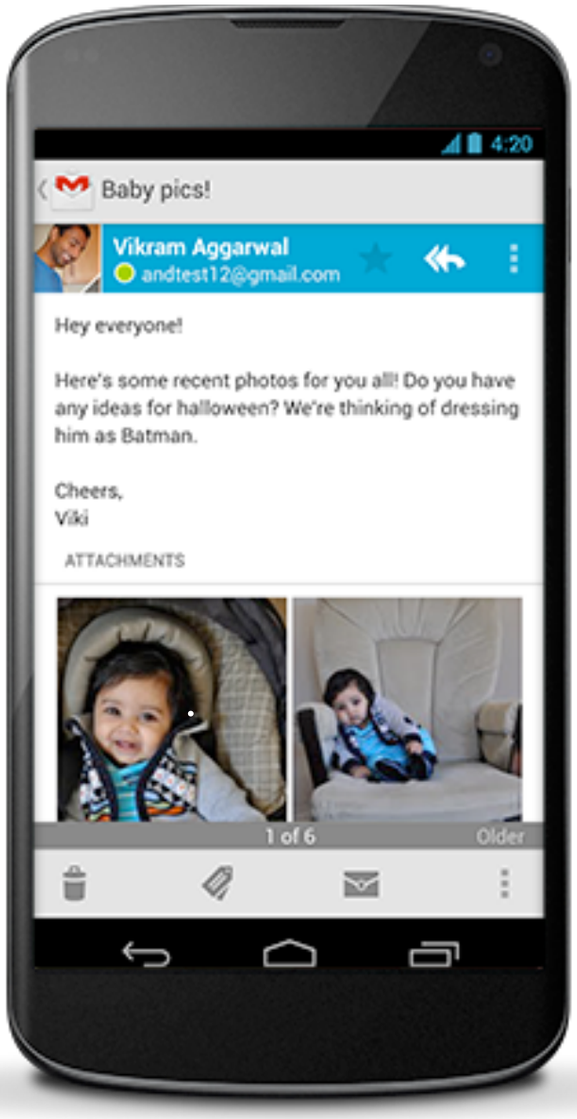
```
2013-03-21 15:46:52.406:INFO:oejs.Server:jetty-8.1.3.v20120522
osgi> 2013-03-21 15:46:53.114:INFO:oejs.AbstractConnector:Started SelectChannelConnector@0.0.0.0:9091
```

Writable | Smart Insert | 225 : 12

Netzbetreiber
12:54 PM
100%
Quick Access
GalleryDemo.jav
Copyright (c) 2012 EclipseSource and others
kage com.eclipsesource.tabris.demos.entrypo
ort static com.eclipsesource.tabris.widgets
lic class GalleryDemo implements EntryPoint
rivate ScrolledComposite scrolledComposite;
rivate Label zoomImageLabel;
rivate Composite thumbnailsComposite;
rivate Shell thumbnailsArea;
rivate boolean thumbnailsVisible;
rivate ToolItem overviewItem;
ublic int createUI() {
Display display = new Display();
Shell shell = new Shell(display, SWT.NO_T
shell.setMaximized(true);
shell.setLayout(new FillLayout());
shell.setBackground(display.getSys
createContent(shell);
com.eclipsesource.ta
JRE System Library
Plug-in Dependen
src
AppEventsD
AppLaunche
ButtonContr
CameraDem
ClientDevice
DrawDemo.j
GalleryDemo
Geolocationi
InputContro
KeyboardDe
Pack
Error Log
Writable
Smart Insert
3:04

Lightweight Abstraction

Lightweight Abstraction



Live Coding

Imagine

Imagine

Imagine

Imagine

**** COMMODORE 64 BASIC V2 ****
64K RAM SYSTEM 38911 BASIC BYTES FREE
READY.
LOAD "TABRIS",8,1

Imagine

Ouvert plus tôt. Ouvert plus tard.
Ouvert plus longtemps.
Please select a transaction.
Bill Payment
My Favourite Withdrawal
Transfer
Cash Withdrawal
Account Activity
Account Balances
Passbook Update
Deposit

Imagine

One more thing…

Tabris.js

Questions & Feedback

developer.eclipsesource.com/tabris

github.com/eclipsesource/tabris

eclipse.org/rap

@hstaudacher, @jordibohmelopez

30 Days Trial

Platform	Named Developer License	Enterprise License
iOS	$500 / 400€	$15,000 / 12.000€
Android	$500 / 400€	$15,000 / 12.000€
Combi-Package	$980 / 780€	$29,000 / 23.200€