

**Rapid** **Mobile** **development**  
**with Apache Cocoon3,**  
**Apache Cordova (Phonegap)**  
**and Jenkins CI**

Thorsten Scherler / Javier Puerto  
[thorsten@apache.org](mailto:thorsten@apache.org) / [javier@apache.org](mailto:javier@apache.org)

# Agenda

- **Original use case**
- Architecture – the big picture
- ApacheCon app in one week
- RapidMobile setup in 10 min



# Original use case

- Existing property letting application based on EJB and AWT
- Within 3 month deliver to multiple mobile platforms
- Distributed team (India, England, Spain) with design, development and setup teams in different physical locations



# Agenda

- Original use case
- **Architecture – the big picture**
- ApacheCon app in one week
- RapidMobile setup in 10 min

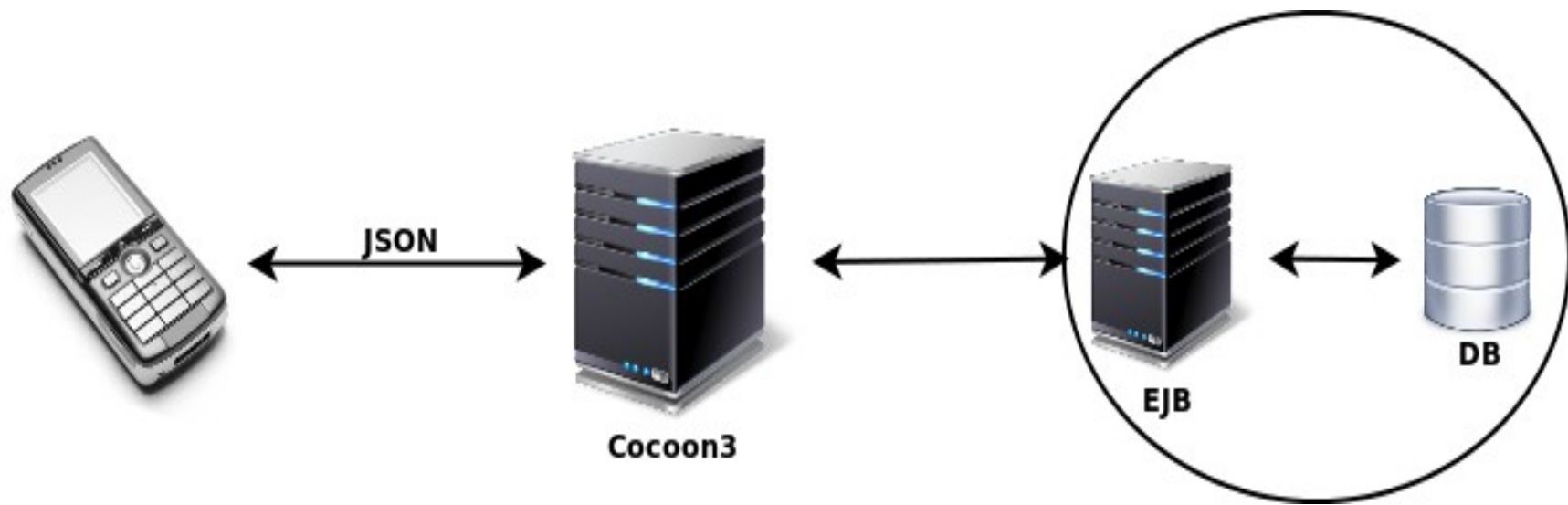


# Solution to the original use case

- Apache Cocoon v3 calling EJB then delivering js to the mobile client. Rapid REST service development thanks to RCL
- Evolus Pencil designs converted to basic html5
- Cordova for native clients.
- Jenkins CI – preview for client and managment

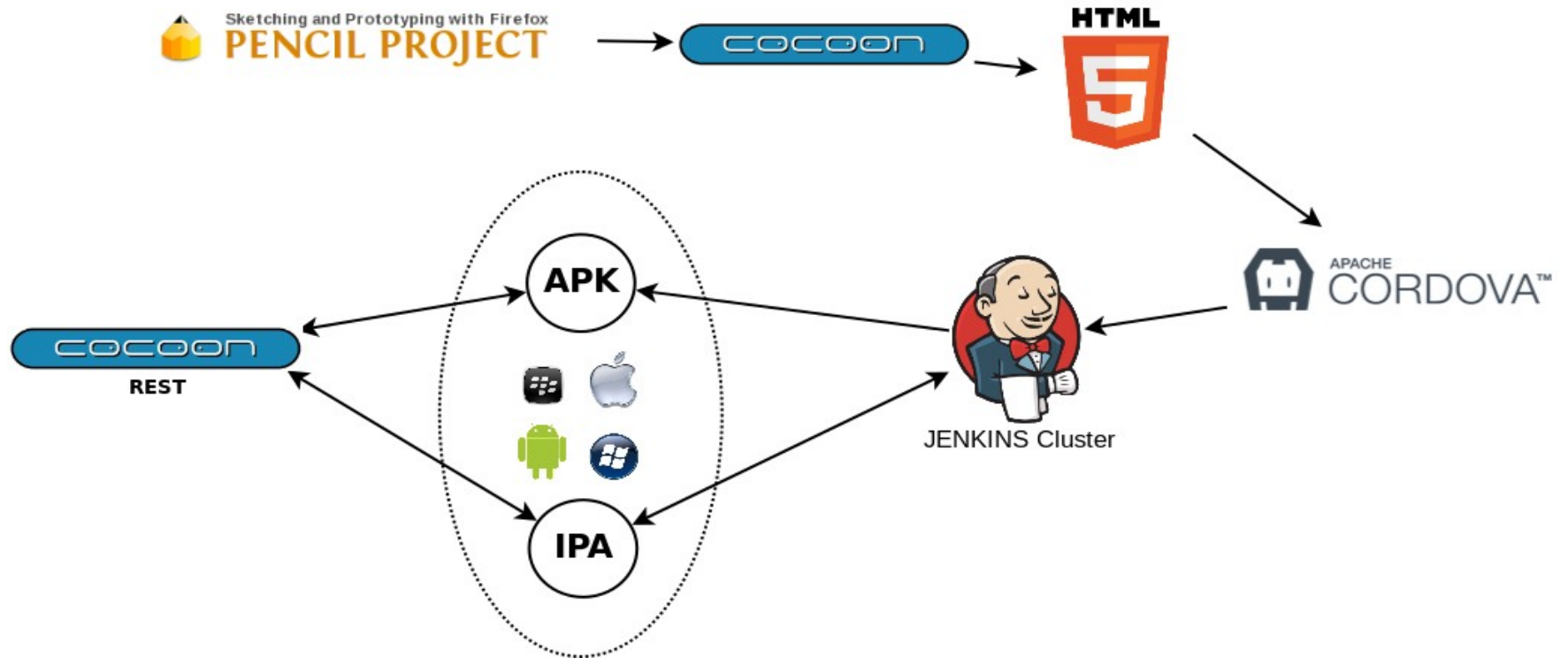


# Request flow original solution



Rapid >>> Mobile

# Workflow original solution



Rapid >>> Mobile

# Pencil Project

- Pencil is a standalone application and Firefox add-on do GUI prototyping and simple sketching. Very useful for forms views.
- Pencil Project - create GUI form and saves it in XML extension 'ep'.
- Work done by designer.





# Apache Cocoon v3

- As always: concept of pipelines and sitemaps. Cocoon v3 is a major rewrite of Cocoon 2.1/2.2.
- Takes form (ep) and transforms to raw html5.

```
<map:match pattern="tools/pencil/*">  
  <map:generate src="tools/pencil/xml/{map:1}" />  
  <map:transform src="tools/pencil/xsl/ep-to-html5.xsl" />  
  <map:serialize type="xhtml" />  
</map:match>
```



# Apache Cocoon REST

- Cocoon REST handling requests of forms.
- Can be used in two ways, as a Sitemap based RESTful web services or JAX-RS based controllers.
- Responds in JSON to the request mobile client.
- Using running service to develop the client and if working in c3 then pass to native mobile client



# Apache Cordova

- allows us to develop mobile applications with HTML5 technologies, javascripts and CSS.
- take the static html5 we developed with Apache Cocoon3 and use them with Apache Cordova on mobile devices.



# Agenda

- Original use case
- Architecture – the big picture
- **ApacheCon app in one week**
- RapidMobile setup in 10 min



# ApacheCon app

- 1 week to deliver working app
- views
  - news
  - talks
  - [HQ/codebusters.es/talk](http://HQ/codebusters.es/talk)



# ApacheCon news

- Based on barcampes app
- News from rss feed but apachcon has no rss
- Using #apachecon on twitter instead to get the news around the event
- Adding paginator and solving problems of refresh



# ApacheCon talks

- First version using c3 to parse the csv and deliver xml to be parsed via jquery
- Problem was that app got very slow.
- Second thought why not use c3 to produce the content of the page
- csv → xml → html5 (cordova ready)



# ApacheCon talks (extend)

- Adding detail view
- Adding favorite function base on html5 storage
- Integrating rating service from codeBusters





# ApacheCon HQ/codebusters

- Static html
- Problems with css reload
- Maybe to use an activity for each view fixes it



# Agenda

- Original use case
- Architecture – the big picture
- ApacheCon app in one week
- **RapidMobile setup in 10 min**



- Install Apache Cordova Android
- Create an Android Application Project in eclipse.
- In the root directory of your project, create two new directories:
  - ✓ /libs
  - ✓ asserts/www → this will be overridden from cocoon generated on



# Install Apache Cordova Android

- Copy cordova-2.0.0.js from your Cordova download earlier to assets/www
- Copy cordova-2.0.0.jar from your Cordova download earlier to /libs
- Copy xml folder from your Cordova download earlier to /res



# Install Apache Cordova Android

- Verify that cordova-2.0.0.jar is listed in the Build Path for your project. Right click on the /libs folder and go to Build Paths/ > Configure Build Path.... Then, in the Libraries tab, add cordova-2.0.0.jar to the project.
- Refresh (F5) the Eclipse project



# Install Apache Cocoon v3

```
mvn archetype:generate
```

```
-DarchetypeGroupId=org.apache.cocoon.archetype-block
```

```
-DarchetypeArtifactId=cocoon-archetype-block
```

```
-DarchetypeRepository=https://repository.apache.org/content/repositories/snapshots
```

```
-DarchetypeVersion=3.0.0-beta-1-SNAPSHOT
```

```
mvn clean install jetty:run
```



# Setup Jenkins

- Apt-get install jenkins
- Create new job
- Configure svn, ant and android sdk
- Configure cron





**Thanks for the attention!**

Thorsten Scherler / Javier Puerto  
[thorsten@apache.org](mailto:thorsten@apache.org) / [javier@apache.org](mailto:javier@apache.org)