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Mobile Developments Choices

Native Apps vs. Web Apps

Max Katz

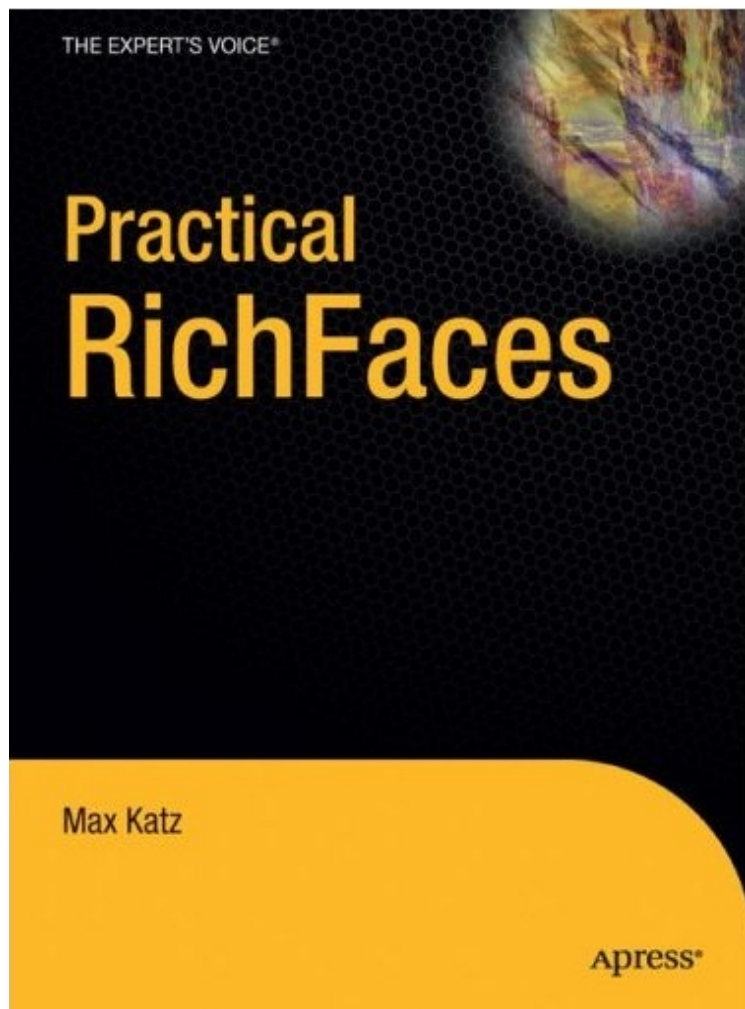
Mobile Development Choices: Native Apps vs. Web Apps

Herbstcampus
September 14th, 2010

Max Katz
Exadel

Who is this guy?

- Senior Systems Engineer, RIA strategist at Exadel
 - <http://mkblog.exadel.com>
 - <http://twitter.com/maxkatz>
- JSF/RichFaces consulting, training
- Leads a number of projects:
 - Exadel Tiggr
 - Exadel Flamingo
 - Exadel Fiji
 - Exadel JavaFX Plug-in for Eclipse



Author of
Practical RichFaces
(Apress)



Co-author of RichFaces
DZone Refcard

Exadel

- Products and services company
- Founded in 1998, headquarters in Concord, CA
- 350+ employees

City	Country	Year
Concord	California, USA	1998
Moscow	Russia	1999
Minsk	Belarus	2002
Vitebsk	Belarus	2005
Donetsk, Kharkov	Ukraine	2006

Products

- Open Source with JBoss
 - RichFaces
 - JBoss Tools/JBoss Developer Studio
- Tiggr – create and share mockups online
- Flamingo
- Fiji (JSF – JavaFX/Flex integration)
- jsf4birt (JSF – BIRT/Actuate integration)
- JavaFX Plug-in for Eclipse

Services

- Rich enterprise application development
- Eclipse development
- Custom rich component development
- Mobile development
- Training
- Most projects are done in Eastern Europe

The Plan

Discuss and review the pros and cons of
Native apps vs Web apps for mobile
devices

Questions are welcome any time

Would like to hear your about your
experience, thoughts

What is the motivation?



The number of smart phones
is growing at phenomenal
rate

How many of you have a
smart phone?

Over
4 Billion
phones in the world
(half the world population)

Forecast for total smart
phone sales in 2010:
250,000,000+

Mobile presence for business
is becoming as important as
standard web presence

First, what kind of
applications are we talking
about?

Not the once you buy for
\$0.99

Business or enterprise applications

[Store](#)[iPhone](#)[iPod + iTunes](#)[.Mac](#)[QuickTime](#)[Support](#)[Mac OS X](#)[Overview](#)[iPod](#)[Phone](#)[Internet](#)[Technology](#)[Tech Specs](#)[Keynote](#)[Sign-up](#)

iPhone



Introducing iPhone

iPhone combines three products — a revolutionary mobile phone, a widescreen iPod with touch controls, and a breakthrough Internet communications device with desktop-class email, web browsing, maps, and searching — into one small and lightweight handheld device. iPhone also introduces an entirely new user interface based on a large multi-touch display and pioneering new software, letting you control everything with just your fingers. So it ushers in an era of software power and sophistication never before seen in a mobile device, completely redefining what you can do on a mobile phone.



Widescreen iPod ↗



Revolutionary Phone ↗



Breakthrough Internet Device ↗



High Technology ↗

[Watch the Keynote](#) ▶

[Sign-up to Learn More](#) ▶

What happened since then?

Mobile phones are very
powerful today

Many high-end phones now
ship with 1 Ghz processor

Large displays



HTC EVO 4G

Apps

iPhone : 250,000

Android: 70,000+

BlackBerry: 10,000+

webOS: 1000+

Modern mobile phones have
powerful browsers

More powerful than on some
computers

HTML5 features support
(canvas, geo location, off-line
mode)



Slate or tablet-like market is expected to explode as well

iPad is the leader (for now the only player)

Samsung, HP, BlackBerry, Google and many more are planning to release slates

Your boss says:
I want people to access our
application(s) on mobile
devices. When can you do it?

Which mobile platform we
need to support?

Mobile platform choices:

iPhone

Android

Blackberry

webOS

Windows 7

Symbian

Two approaches to build
applications for mobile
devices:
Native App or Web App

Let's start



Number of platforms

1. iPhone
2. Android
3. Blackberry
4. webOS
5. Windows 7
6. Symbian

Plus, different builds/versions

Just one platform

Browser-based deployment
is simpler but every mobile
browser still has its own
differences

(does this sound like Ajax vs
Flash?)

Performance

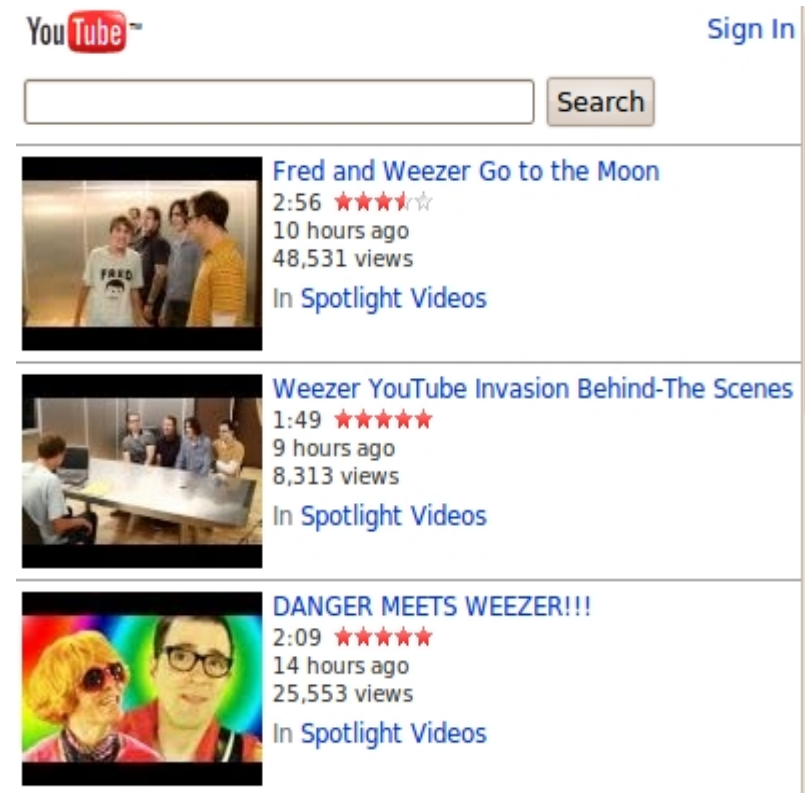
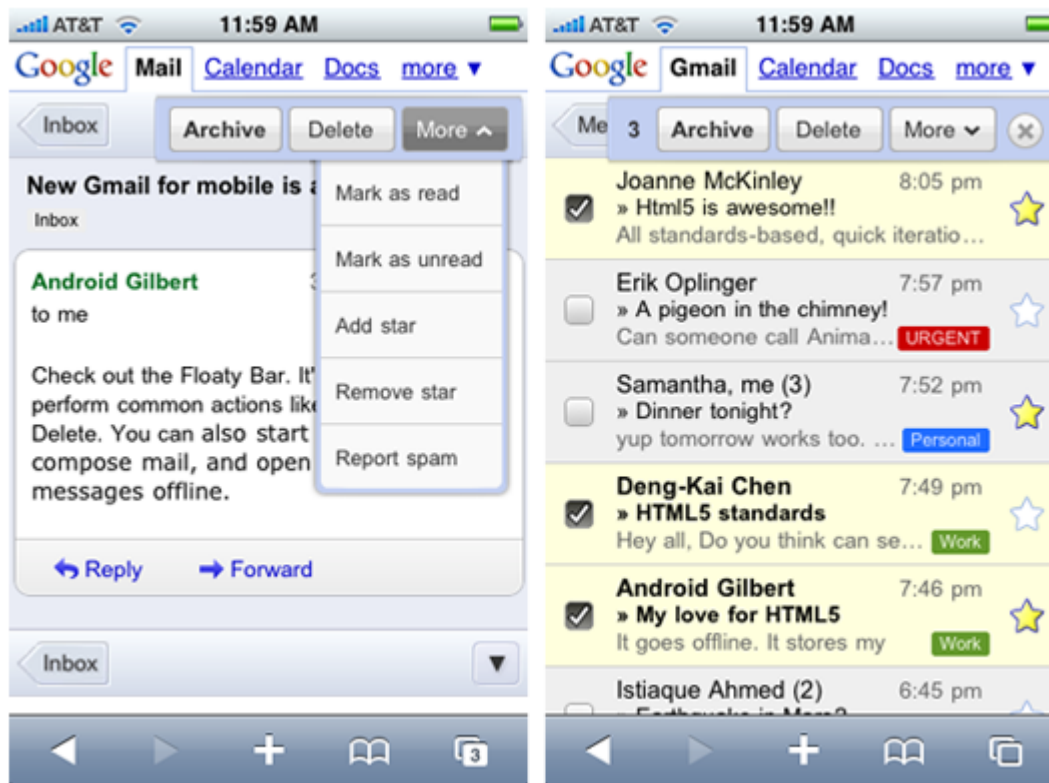


User experience

No doubt that native applications
usually offer better user experience

but...

Popular applications now have web-based versions:



UI running on the client,
server of mixed mode?

Adding or porting to new devices

iPhone – Objective C

Android - Java

Blackberry - Java

webOS - JavaScript

Windows 7 - .NET

Symbian - C++

Updating CSS or
application skin

Some application
changes might be
needed

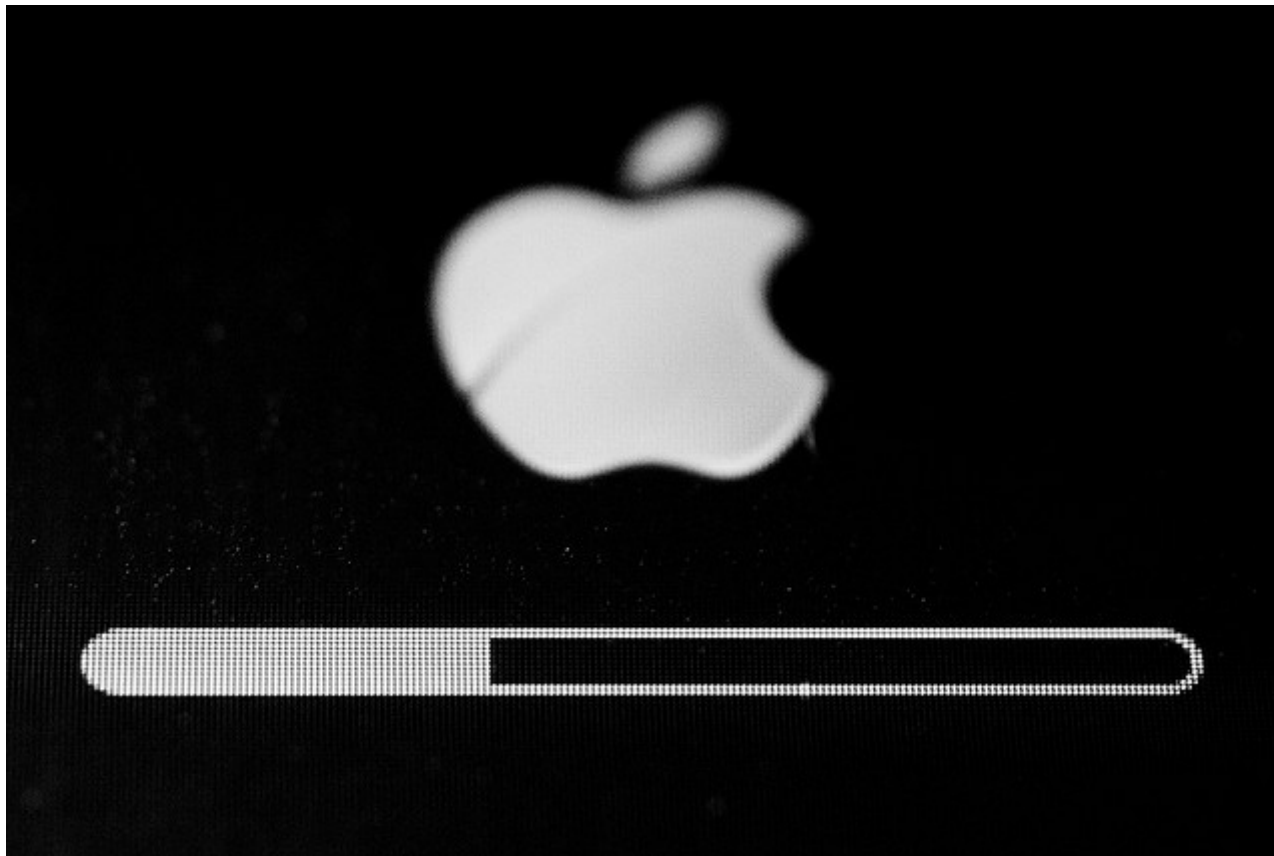
App market approval



Apple: 1-2
weeks

Web: instant

Updating apps



Users have to
click to update

What if you
find a critical
bug?

Web apps -
easy update

Access to phone applications
such as contacts and
calendar

Access to phone hardware
such as GPS, camera

Off-line mode



Possible with
HTML5

Enterprise integration

Just reuse existing
infrastructure

Native apps – some
work might be needed

Developer skills

iPhone – Objective C

Android - Java

Blackberry - Java

webOS - JavaScript

Windows 7 - .NET

Symbian - C++

Mostly just standard Web
tools

Anything I missed?



History repeats itself?



Flick photo by Arts Comments: <http://www.flickr.com/photos/artcomments/382732967/>

There is no right answer.



Exadel Tigr – create, share and
collobrate on application mockups

<http://tigr.exadel.com>

Exadel Tiggr

The screenshot displays the Exadel Tiggr web application interface, which is a web-based design tool. The interface is divided into several sections:

- Browser Window:** The top section shows a browser window with the address bar displaying `http://tiggr.exadel.com/tiggr/views/project/browse.seam`. The browser's address bar also shows the Google logo and search bar.
- Project Bar:** Below the browser window, there is a project bar with tabs for "Creation mockups", "Project", "Scene", and "Edit". The "Project" tab is selected. The project name is "Pr200" and the screen is "screen1".
- Controls Panel:** On the left side, there is a "Controls" panel with a list of UI elements: Text, Text input, Select, Text Area, Suggestion, Suggestion Box, Button, Link, Check Box, Radio Button, Table, Image, Upload File, Calendar, Separator, and Data Scroller. The "Text" element is selected.
- Main Canvas:** The central area is a canvas where a login form is being designed. The form includes a "Name tab", "Preferences tab", and "Help" tab. The "Name tab" is active, showing a form with the text "Enter your name:", a text input field, a "Submit" button, a "Remember me" checkbox, and a "Forgot password" link. Below the form is a table with the following structure:

Name	Email	Address	City	Other info

- Screen Properties Panel:** On the right side, there is a "Screen properties" panel. It has two tabs: "Common" and "Custom". The "Common" tab is active, showing properties for "screen1": Name, Size (w: 1024, h: 768), Padding (t: 2, r: 2, b: 2, l: 2), Background (Back color, Back opacity: 50%), and Custom (Grid, Show grid: checked, Grid step: 20, Layout: absolute).
- Outline Panel:** Below the "Screen properties" panel, there is an "Outline" panel showing a folder structure with "screen1".
- Chat Window:** At the bottom, there is a chat window titled "Chat :: Max Katz". It shows a list of messages: "[20:21:34] Max Katz : User joined chat" and "[20:21:37] Max Katz : Switch scene to screen1". There is a text input field for sending messages and buttons for "Send" and "Clear".
- Bottom Bar:** The bottom of the interface has a bar with buttons for "Show screens", "+ Add screen", and "Toggle Chat".

Controls

- Text
- Text input
- Combobox
- Text Area
- Suggestion
- Suggestion Box
- Button
- [Link](#)
- ☒ Check Box
- ☐ Radio Button
- Table
- Image
- Upload File
- Calendar
- Separator

Controls

Containers

- Panel
- Vertical Box
- Horizontal Box
- Flow Box
- Grid Panel
- Tab Panel

TabPanel properties

Name:

Size: w H

Location: X Y

Padding: t r b l

Margin: t r b l

TextFormat

Face:

Color/Size: px

Style:

Align:

Custom


Layout:

Outline


- screen1
 - tabpanel3
 - tabpanelchild8
 - tabpanelchild9
 - tabpanelchild10
 - richtable2

Upload your
own images
as assets

Image assets

 RichFaces


RichFaces.gif

 Using RichFace...

Upload file Used: 13.35 Kb / 5 Mb

Close

Asset properties

No Image

Name

Size N/A

Created on N/A

Created by N/A

Resolution N/A

Rename

Delete



Enter search term:

Search RichFaces Guide

I'm Feeling Rich

<http://tiggr.exadel.com>

Thank you!

- max@exadel.com
- <http://mkblog.exadel.com>
- <http://twitter.com/maxkatz>
- <http://exadel.org>