

Roland Barcia: STSM – IBM Software Group

WebSphere Lab Services Lead for Mobile, Web 2.0, and Programming Models



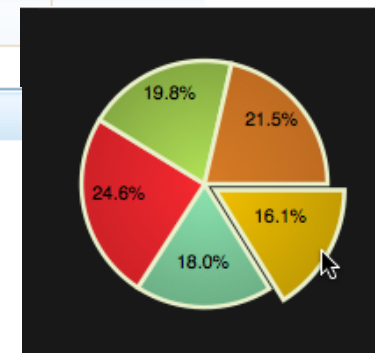
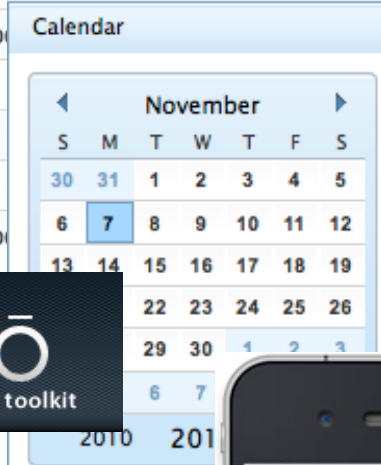
Dojo Mobile



The Dojo Toolkit – 1.7

- <http://dojotoolkit.org>
- [Base, Core, Dijit, Dojox, Util](#)
- [AMD Based](#)
- Open Source
- Powerful I/O (XHR)
- Data abstraction layer
- Event management
- Large widget collection (“dijits”)
- **Mobile Framework**
- Extensible modular architecture
- Declarative and programmatic

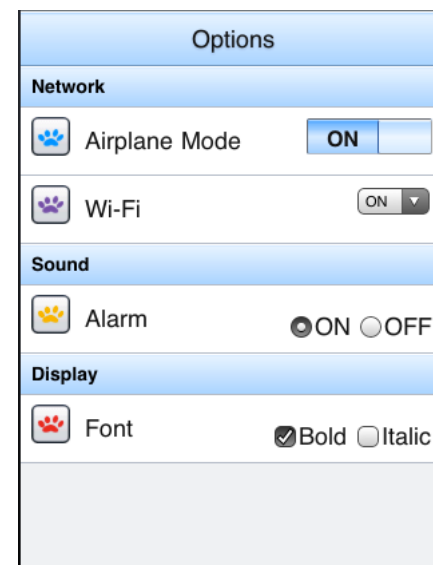
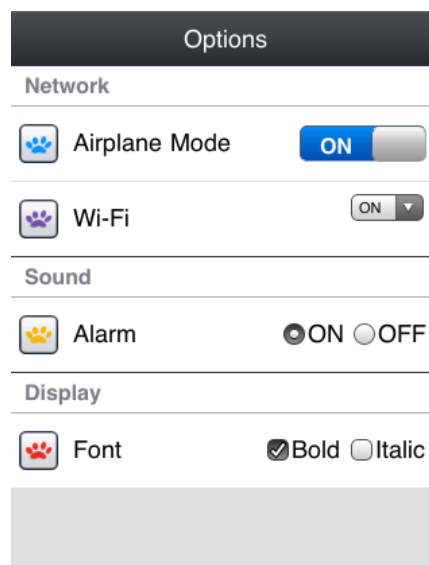
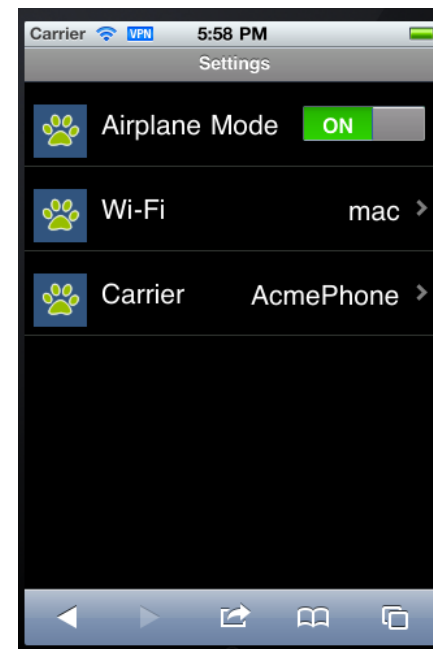
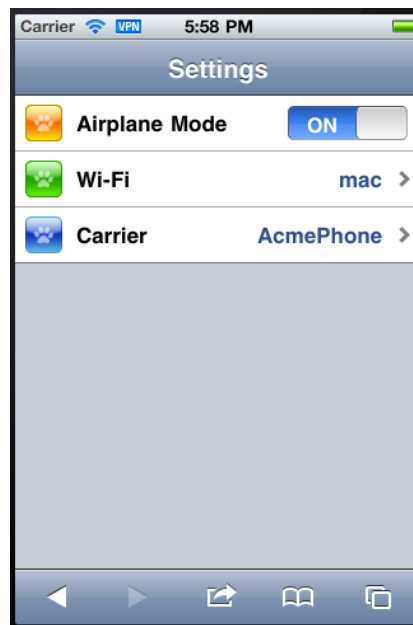
	Genre	Artist	Year
<input type="checkbox"/>	Easy Listening	Bette Midler	2003
<input type="checkbox"/>	Classic Rock	Jimi Hendrix	
<input type="checkbox"/>	Jazz	Andy Narell	
<input type="checkbox"/>	Progressive Ro		
<input type="checkbox"/>	Rock		
<input type="checkbox"/>	Jazz		
<input type="checkbox"/>	Easy Listening		
<input type="checkbox"/>	Prooressive Ro		



```
require(["dojo/query", "dojo/_base/xhr"],
function($, xhr){
    $("#myForm").onsubmit(function(e){
        xhr.post({
            form: "myForm",
            load: function(data){
                dojo.place("dom", render(data));
            }
        });
    });
});
```

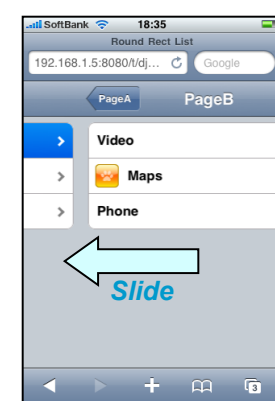
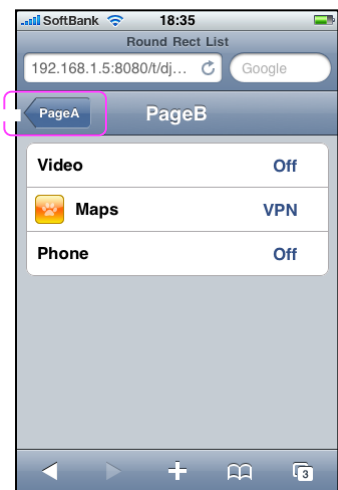
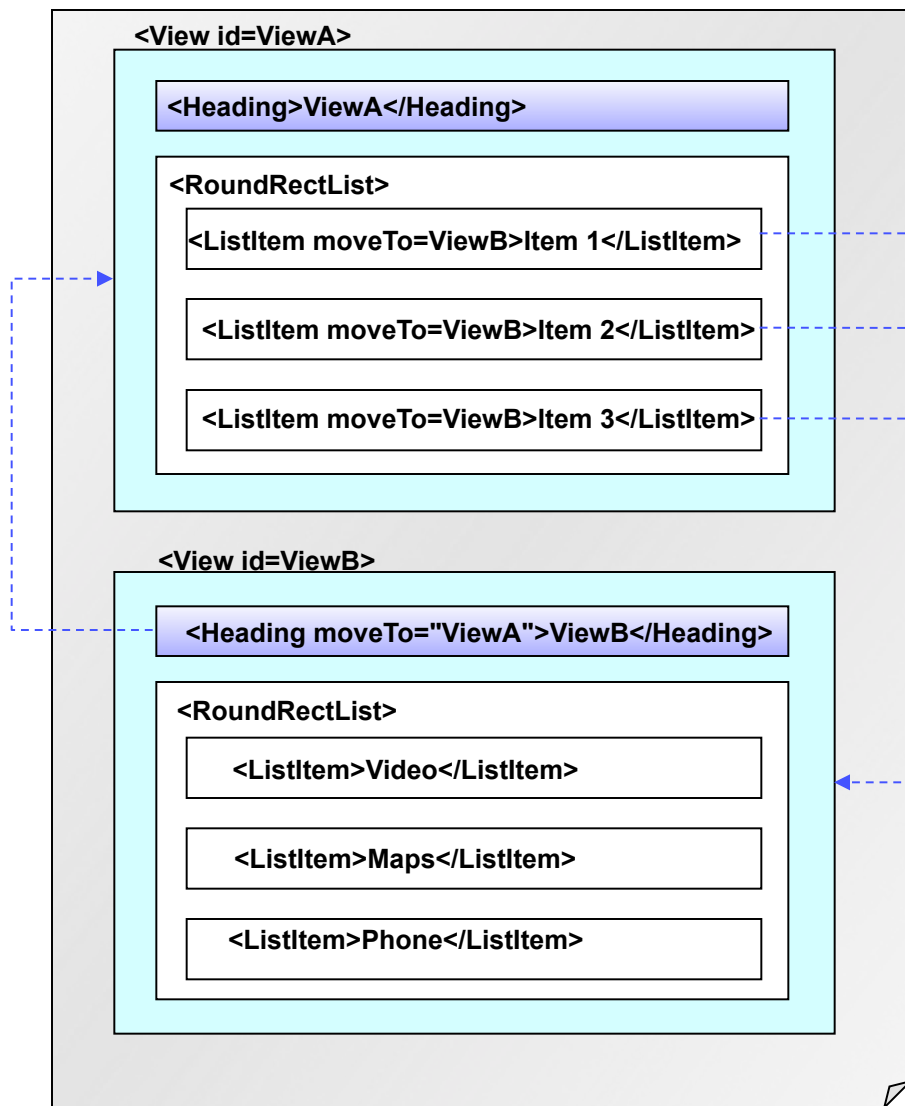
Dojo Mobile

- A dojo-based widget set for creating mobile web applications
- Aims to provide lightweight UI widgets
 - Mobile Web with Native Look and Feel
- Aims to allow you to develop device-specific or device-neutral look & feel applications via CSS 3 Themes
 - iPhone, Android, Blackberry, and Custom
- Compatibility layer for non webkit
 - Optional (allows browser rendering)
- Dojo Base Enhancements
 - Touch and Gesture Based Events



Demo
<http://tinyurl.com/dojoms>

View Navigation & Transition Effects



Integrated with dojox.app (new Application Controller package)

```

<div id="foo" data-dojo-type="dojox.mobile.View">
  <h1 data-dojo-type="dojox.mobile.Heading">View 1</h1>
  <ul data-dojo-type="dojox.mobile.RoundRectList">
    <li data-dojo-type="dojox.mobile.ListItem" moveTo="bar" label="Hello"
icon="dojox/mobile/tests/images/i-icon-1.png"></li>
  </ul>
</div>

<div id="bar" data-dojo-type="dojo
  <h1 data-dojo-type="dojox.mobile
  <ul data-dojo-type="dojox.mobile
    <li data-dojo-type="dojox.mobi
icon="dojox/mobile/tests/images/i
  </ul>
</div>

```

Declarative

Programming Model

Programmatic

```

function myAction4(li){
  if(!dijit.byId("view4")){
    var view4 = new dojox.mobile.View({
      id: "view4",
      selected: true
    }, dojo.create("DIV", null, dojo.body()));
    view4.startup();

    var heading1 = new dojox.mobile.Heading({
      label: "Dynamic View",
      back: "Home",
      moveTo: "home"
    });
    view4.addChild(heading1);

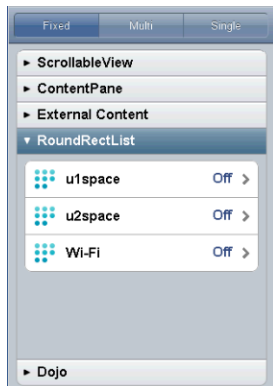
    var categ1 = new dojox.mobile.RoundRectCategory({
      label: "Documents"
    });
    view4.addChild(categ1);

    var list1 = new dojox.mobile.RoundRectList();
    view4.addChild(list1);

    var counter = 4;
    for(var i = 1; i <= 3; i++){
      var item1 = new dojox.mobile.ListItem({
        icon: "images/i-icon-"+i+".png",
        label: "Document 000"+counter
      });
      list1.addChild(item1);
      counter++;
    }
  }
  dijit.byNode(li).transitionTo("view4");
}

```

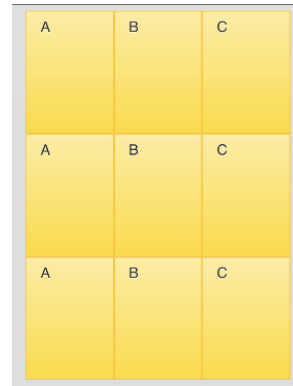
Dojo 1.8 Contributions Under Development



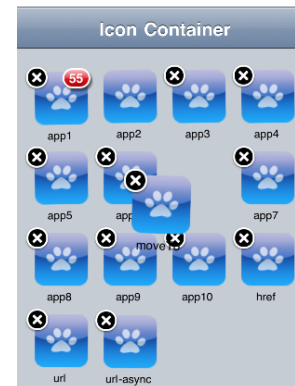
Accordion

Index	Name	Artist
1	Hey There	Bette Midler
2	Love Or Confusion	Jimi Hendrix
3	Sugar Street	Andy Narell
4	Tarkus	Emerson, Lake & Palmer
5	Somethin' Goin' On	Blood, Sweat & Tears
6	Armchair Psychology	Andy Narell
7	Luck Be A Lady	Frank Sinatra
8	Sleep	Dixie dregs
9	Don't Look Back	Andy Narell
10	What if	Dixie dregs
11	Hey There	Bette Midler
12	Love Or Confusion	Jimi Hendrix
13	Sugar Street	Andy Narell

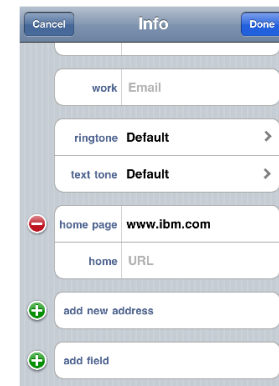
Grid



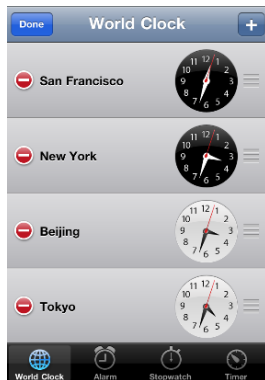
Grid Layout



Icon container and Badge



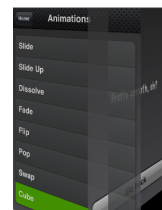
Form panel



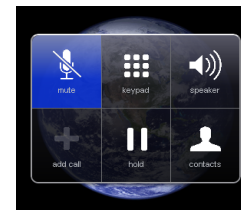
Editable List



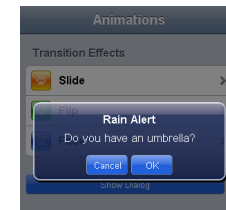
Tree map



Cube transition



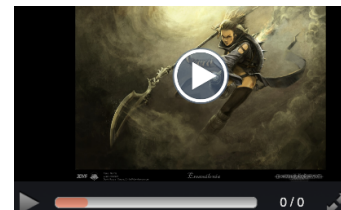
Menu



Dialog



Swap transition

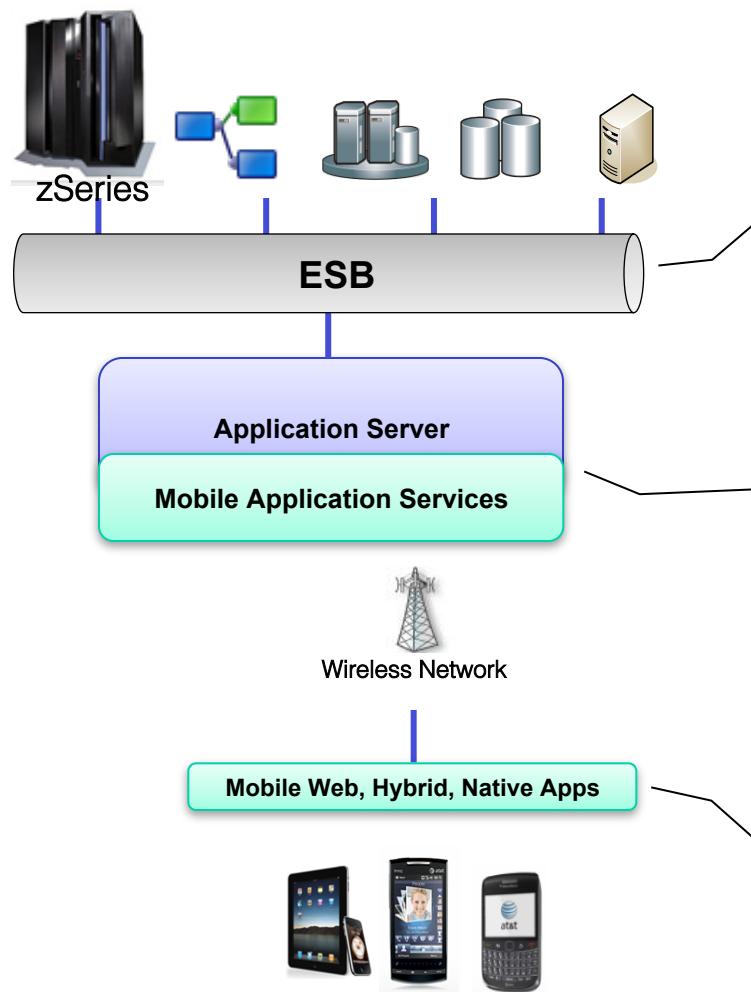


Video player



Audio player

Extend the Enterprise to Mobile



Mobile Targeted Applications

- Enterprise connectors expose legacy data via mobile channels
- Notifications and messaging are key to maintaining both real-time and asynchronous behaviors
- Server platform exposes data and application logic
- Applications must be distributed & managed to numerous devices
- New security requirements for encrypting and wiping data on device
- Optimizations can dramatically improve network performance
- Mobile hardware and user interfaces evolve much faster than the typical enterprise software cycle
- Applications are purpose-built
- Interactions are short, interruptions are common

WAS Feature Pack for Web 2.0 and Mobile

- First phase of a broader WebSphere Mobile Strategy
- Extend the reach of WAS applications from the Desktop to Mobile devices
- Satisfy end user demand for better “anytime, anywhere” access
- Speed time to value through cross device web browser support
- Support for popular Smart Phones and Tablets, including their respective look and feel
- Cross device support for desktop and mobile web applications
- Rapid delivery of outstanding user experiences through innovative user interface services.



Reuse existing infrastructure and developer skills to extend your applications and services to mobile users

IBM Mobile Technology Preview

The IBM mobile technology preview will provide customers with early access to IBM's mobile capabilities and demonstrate our approach to mobile application design, distribution, and management

Device and Server Infrastructure Capabilities



Mobile Server Capabilities on WAS v8.5 Alpha Liberty

SOA & Connectivity
Existing Back Ends

Server runtime

- Acts as central point for integration to back-ends
- Hosts key capabilities such as user registry and notifications
- Runs on IBM's Liberty runtime
 - *Customers will be able to integrate and extend existing applications and services to maximize existing investments*

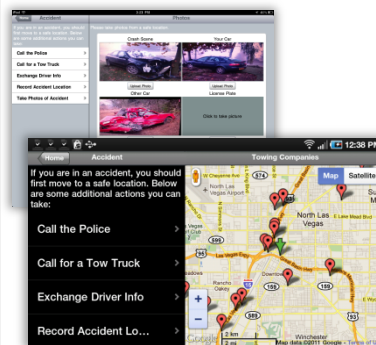
Notification capability

- Delivers notifications to users through maintained connection between client and server
 - *Customers will be able to engage users with notifications of time sensitive information or actions to take*

Client runtime

- Provides a container for developing hybrid applications, written in HTML and JavaScript, that deliver a compelling touch-based user experience and have full access to native device functions
- *Customers will be able to rapidly develop, package, and distribute mobile applications through internal and external app stores by leveraging existing skills and assets*

Demonstrations, Samples, & Documentation

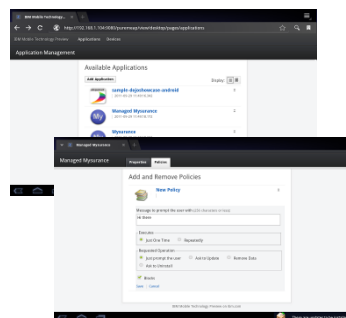


Demonstrations & Samples

- *Mysurance* – Provides a showcase hybrid application that demonstrates all capabilities in an end-to-end insurance scenario
- *Dojo Showcase* – Highlights the full breadth of Dojo capabilities
- *Hybrid Showcase* – Demonstrates integration with all available native device functions
- *Simple Notifications Client* – Illustrates notification functionality and development techniques

Management Concepts

To be demoed



Application Management

- Centralizes control over your mobile apps including policy-based access, versioning, updating, tracking, and wipe/remove
- *Customers will be able to distribute apps to employees and control access to those apps and their enterprise data*

<http://ibm.co/ibmmobile>

3

Like

0 tweets

retweet

0

+1

Welcome to IBM Mobile Technology Preview

CesarCantua | Sep 28 | Tags: [home](#) | Comments (0) | Visits (467)

As sales of smart phones, tablets, and other connected devices have eclipsed the sales of laptops and traditional PCs, mobile has become the primary method by which people access networks and computing. Just as it used to be that a business had to have a web site to be considered legitimate, now the requirement to reach and engage customers through mobile is just as necessary. Businesses are competing to differentiate themselves and enhance customer relationships through mobile, as well as increase business productivity and agility by empowering their mobile employees.

IBM recognizes that mobile has created a new wave of IT innovation. As part of

1

LINKS

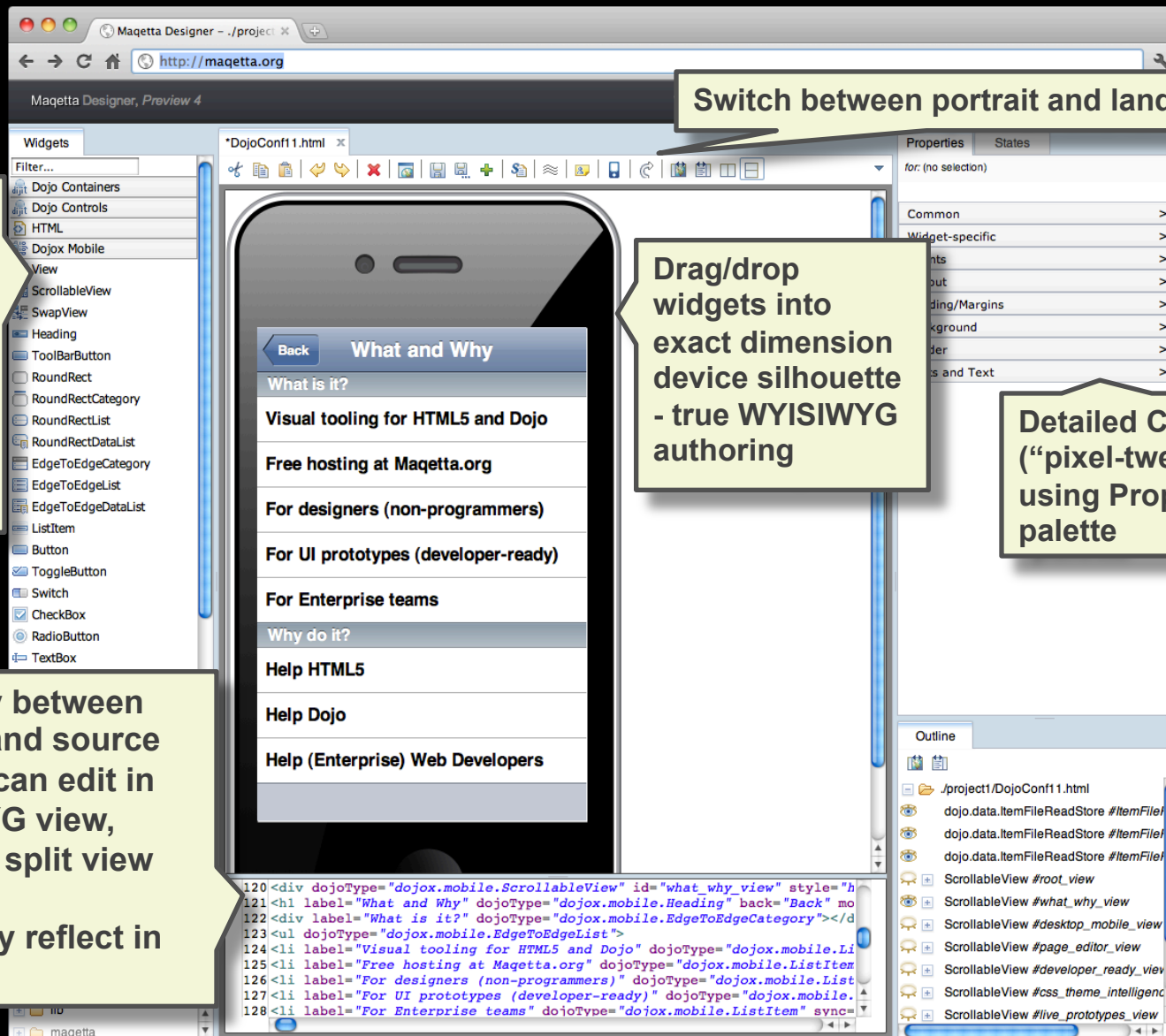


RECENT TWEETS

#Dojo testing, revisited >
<http://t.co/mpJq4oxe> #mobile
1 day ago

link layouts for nested graphs

Maqetta – Visual Authoring of HTML5 User Interfaces (<http://maqetta.org>)



Switch between portrait and landscape

Comes with a complete set of Dojo 1.7 mobile widgets
(Note: Maqetta architecture is toolkit-independent)

Drag/drop widgets into exact dimension device silhouette - true WYSIWYG authoring

Detailed CSS styling ("pixel-tweaking") using Properties palette

Bidirectionality between visual editing and source editing. Users can edit in either WYSIWYG view, source view or split view and changes instantaneously reflect in the other view.

APPENDIX

Dojo Base

- Dojo Base
- Using only dojo.js is enough sometimes.
 - dojo.xhr
 - dojo.query
 - dojo.place
 - dojo.create
 - dojo.style
 - dojo.replace
 - dojo.ready

```
function loadProducts(catId)
{
    if(!catId) { return ;}
    dojo.xhrGet(
    {
        url:"jaxrs/Product?categoryId="+catId,
        headers:{Accept:"application/json"},
        handleAs:"json",
        load:function(products)
        {
            dojo.forEach(products,function (product, index)
            {
                var productBox = dojo.create("div",null,"productMain");
                dojo.addClass(productBox,"productBox");
                dojo.create("img",{src:product.image},productBox);
                var productTemplate = "<div class='productText'>{name}</div>"+
                "<div class='productText'>{price}</div>"+
                "<div class='productText'>{description}</div>";
                var productInfo = dojo.replace(productTemplate,product);
                dojo.place(productInfo,productBox);
            });
        }
    });
}
```

```
dojo.ready(function () {
    dojo.query("div.thinger > [someAttr]")
        .addClass("thingerItems")
        .style({
            backgroundColor: "blue",
            opacity: 0.5
        }).attr({ tabIndex: 0 }).onclick(function(e) {
            dojo.anim(e.target, { opacity: 1 });
        });
});
```

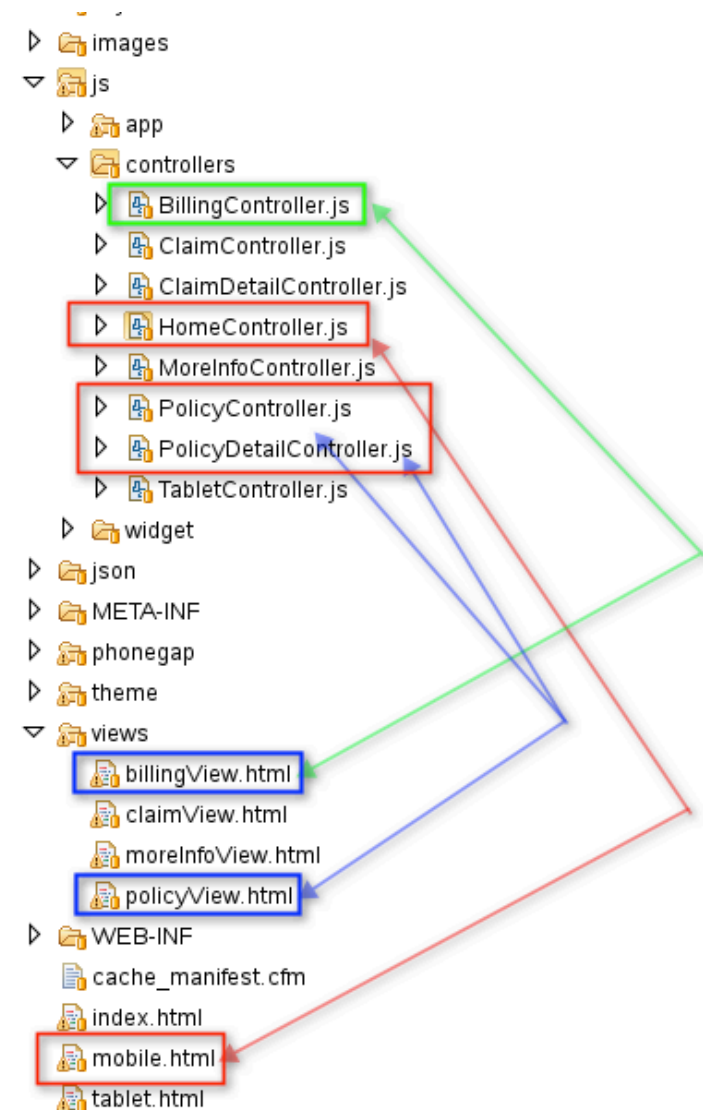
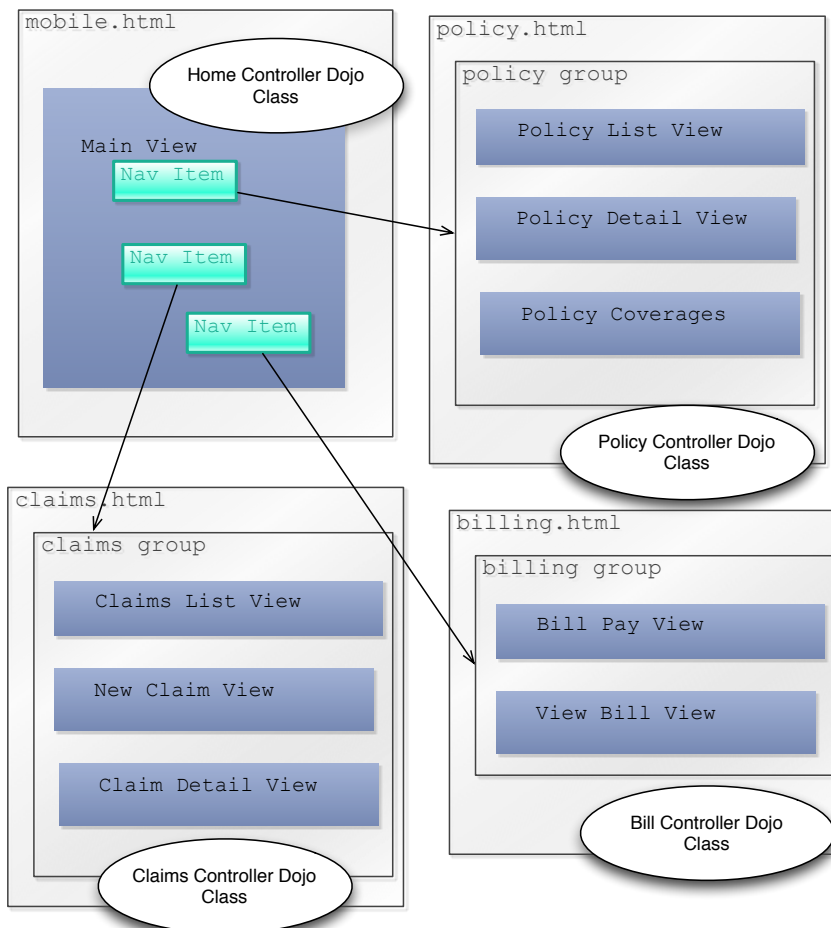
Object-orientation with Dojo

- Dojo layers on top of JavaScript an object-oriented framework, similar to that found in modern OO languages such as Java.
 - Inheritance is implemented between classes which contain constructors and attributes (more on this later).
 - The second argument in `dojo.declare()` is for extending classes.

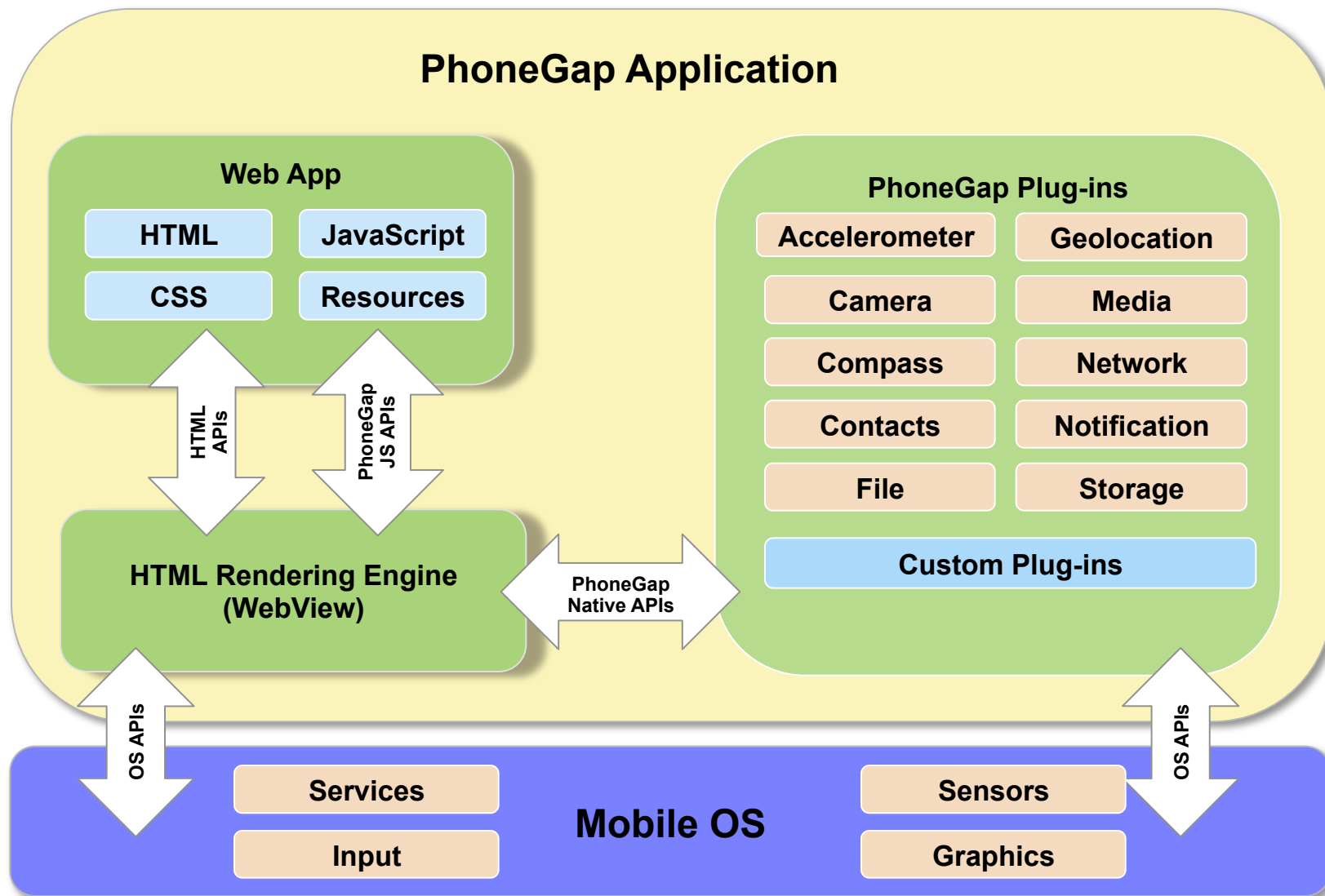
```
dojo.declare("com.ibm.Book", "com.ibm.Pub" , {  
    constructor: function(title, price) {  
        this.title=title;  
        this.price=price;  
    },  
    setPrice: function(price) {  
        this.price=price;  
    }  
});
```

Application Structure and Maintainability

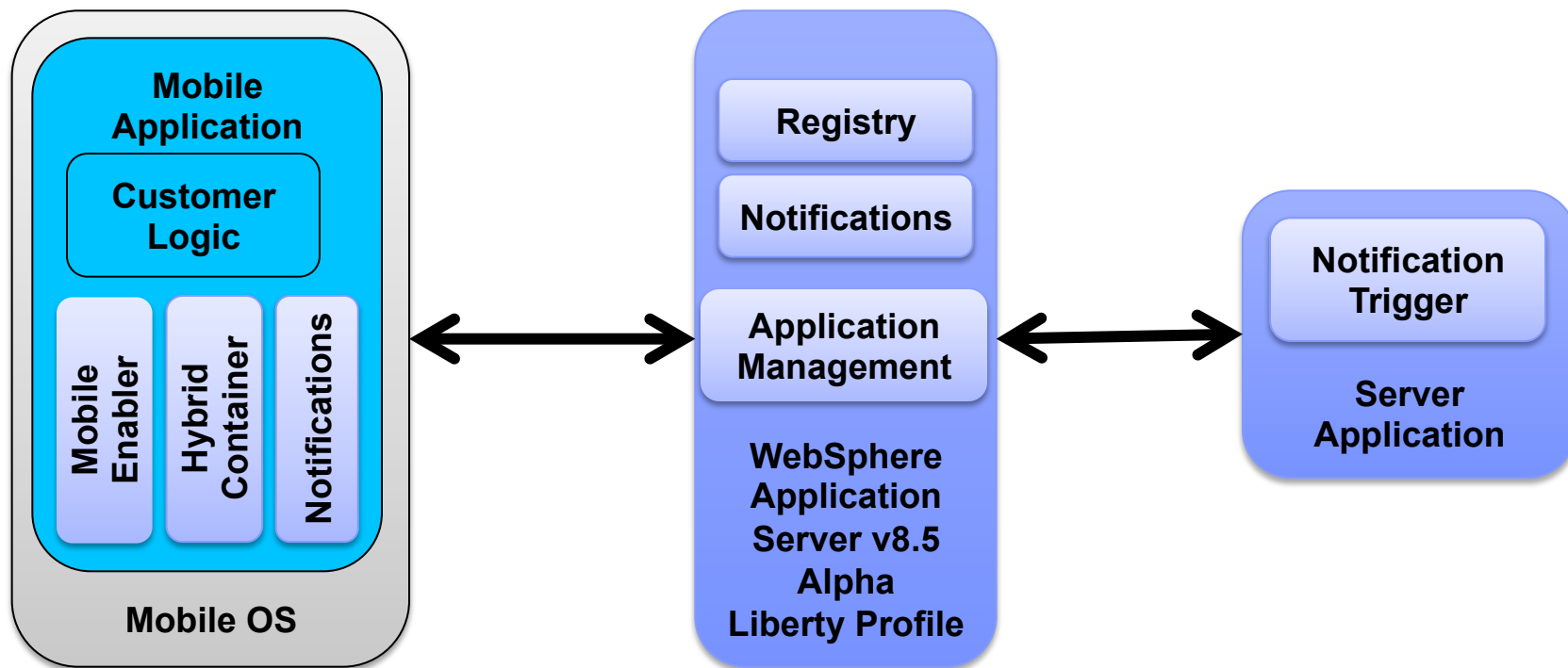
- Model View Controller pattern should be used to build the application.
- Controller Classes respond to Events.
- Controllers should be implemented as Dojo Classes.
- Can have one per Grouped View.



Hybrid Container Architecture



Mobile Technology Preview



Shipped Samples

- Notification
- Dojo Showcase
- Hybrid Container (i.e. PhoneGap) Showcase
- Mysurance
- Notified Mysurance



Documentation

Documentation Dojo Mobile

- Dojo 1.7 Mobile Documentation:
 - <http://docs.dojocampus.org/dojox/mobile>
- Test Case Examples
 - <http://download.dojotoolkit.org/release-1.7.0/dojo-release-1.7.0/dojox/mobile/tests/>
- Simple tutorials
 - <http://dojotoolkit.org/documentation/>
- Web 2.0 and Mobile Feature Pack
 - http://publib.boulder.ibm.com/infocenter/wasinfo/v8r0/index.jsp?topic=/com.ibm.websphere.web20fepmobile.multipatform.doc/info/ae/ae/welcome_fepweb.html

More Documentation

- Analytics Article
 - http://www.ibm.com/developerworks/websphere/techjournal/1106_dingsor/1106_dingsor.html
- Mobile Services Article
 - http://www.ibm.com/developerworks/websphere/techjournal/1106_rheinheimer/1106_rheinheimer.html
- Official **Dojo GA** Documentation
 - Reference Guide: <http://dojotoolkit.org/reference-guide/> (Current Release)
 - API - <http://dojotoolkit.org/api/> (Current Release)
- Documentation in Progress (Next Release)
 - <http://docs.dojocampus.org/manual/index>

More Documentation

- [WebSphere Web 2.0 and Mobile Community](#)
 - <https://www.ibm.com/developerworks/mydeveloperworks/groups/service/html/communityview?communityUuid=94e7fded-7162-445e-8ceb-97a2140866a9>
 - Blogs, Wikis, and Exmples

- Getting Started with Dojo Mobile 1.7
 - <http://www.ibm.com/developerworks/library/wa-getstarteddojo/index.html>



Hi there, I'm
@davidkaneda

...and I work for
@sencha



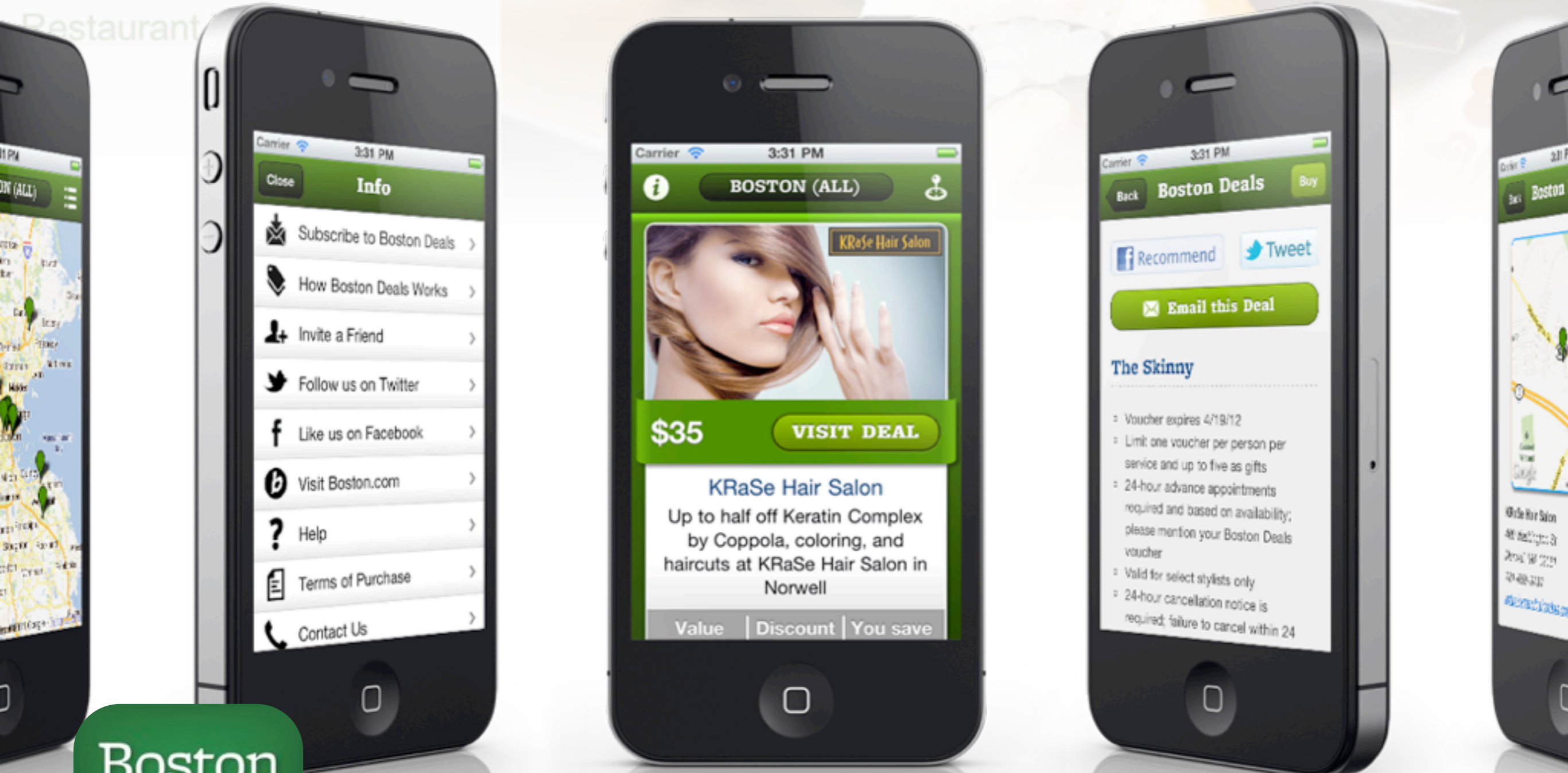
#SenchaTouch2



Demos



\$20 for \$40 worth of hibachi, Chinese cuisine, and sushi at Ruyi Restaurant



Carrier 3:31 PM

Close **Info**

- Subscribe to Boston Deals >
- How Boston Deals Works >
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Carrier 3:31 PM

BOSTON (ALL)

KRaSe Hair Salon

\$35 **VISIT DEAL**

KRaSe Hair Salon
Up to half off Keratin Complex by Coppola, coloring, and haircuts at KRaSe Hair Salon in Norwell

Value | Discount | You save

Carrier 3:31 PM

Back **Boston Deals** Buy

Recommend Tweet

Email this Deal

The Skinny

- Voucher expires 4/19/12
- Limit one voucher per person per service and up to five as gifts
- 24-hour advance appointments required and based on availability; please mention your Boston Deals voucher
- Valid for select stylists only
- 24-hour cancellation notice is required; failure to cancel within 24

Carrier 3:31 PM

Back Boston

KRaSe Hair Salon
481 Washington St
Norwell, MA 02061
781-488-3432
www.krasehair.com





ExtTop - Desktop Sample App
http://dev.sencha.com/deploy/ext-4.0.2a/examples/desktop/desktop.html
Hornblower Limited
Craig Walker Logout My Xero - Help -
xero

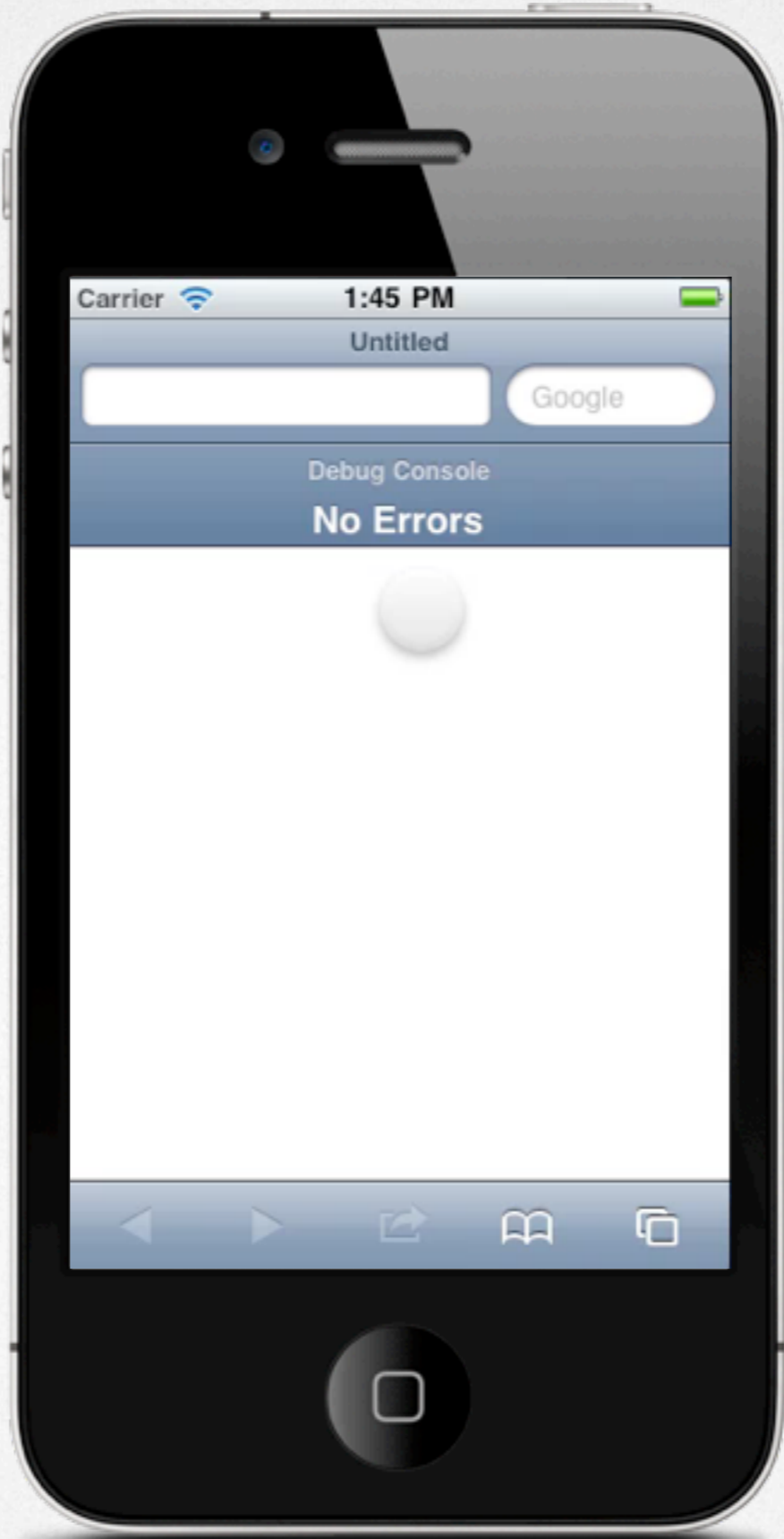
Carrier 1:23 PM
My Xero Dashboard
Foxglove Studios
Bank Balances
PayPal
4 May Unreconciled
BA Cheque
4 May
Invoices
2 Overdue
14 Unpaid
Expenses

Current Claim
Danny's Cab Co. 20.00
#4 17 May
Pravda 62.50
#3 16 May
Malthouse 34.00
#2 16 May
Embassy Theatre 28.00
#1 12 May
4 receipts, total 144.50

Money Coming In
Go to Accounts Receivable
Add Receivable Invoice
Draft invoices (0) 0.00
Overdue invoices (8) 30,145.50
Money Going Out
Go to Accounts Payable
Add Payable Invoice
Draft invoices (0) 0.00
Overdue invoices (5) 4,754.49
Awaiting Payment Paid









Carrier 3:10 PM

e-resistible

Quality Online Takeaways



Enter your postcode or town:

Go!

or hit 'Go' for a demo

Device Support











Features



Touch Events

Built on native events

Abstracted for performance

Additional events

Tap

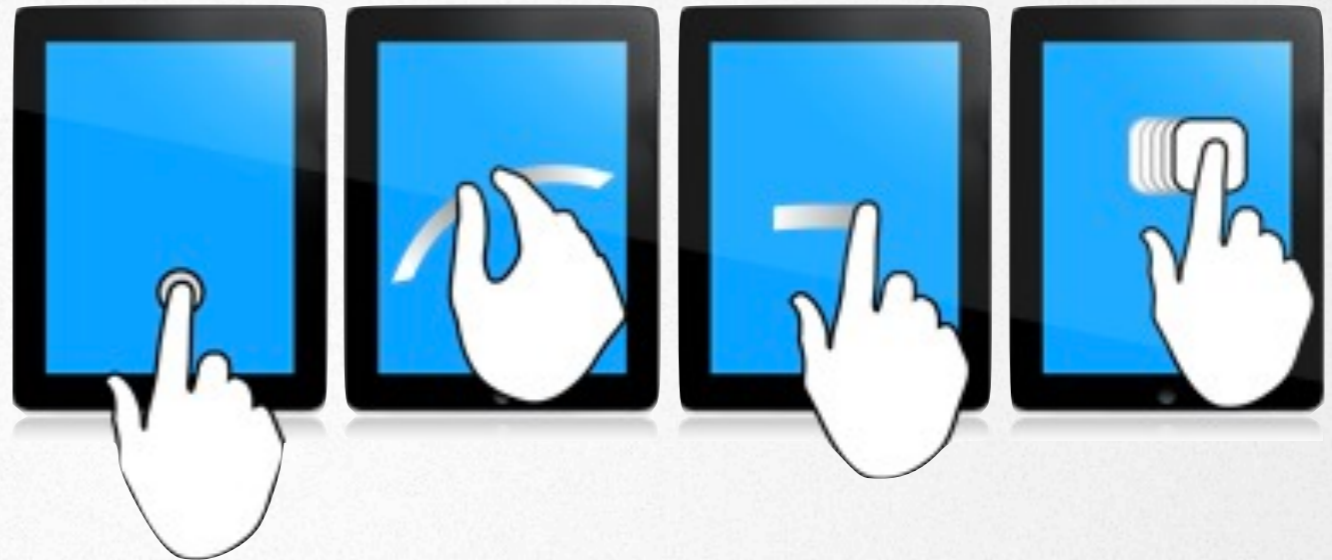
Double tap

Tap and hold

Swipe

Pinch

Drag & drop



Scrolling

Momentum/bounce physics

Hardware accelerated

Critical for tablets

Throughout components

Lists

Carousel

Pickers



Scrolling

Momentum/bounce physics

Hardware accelerated

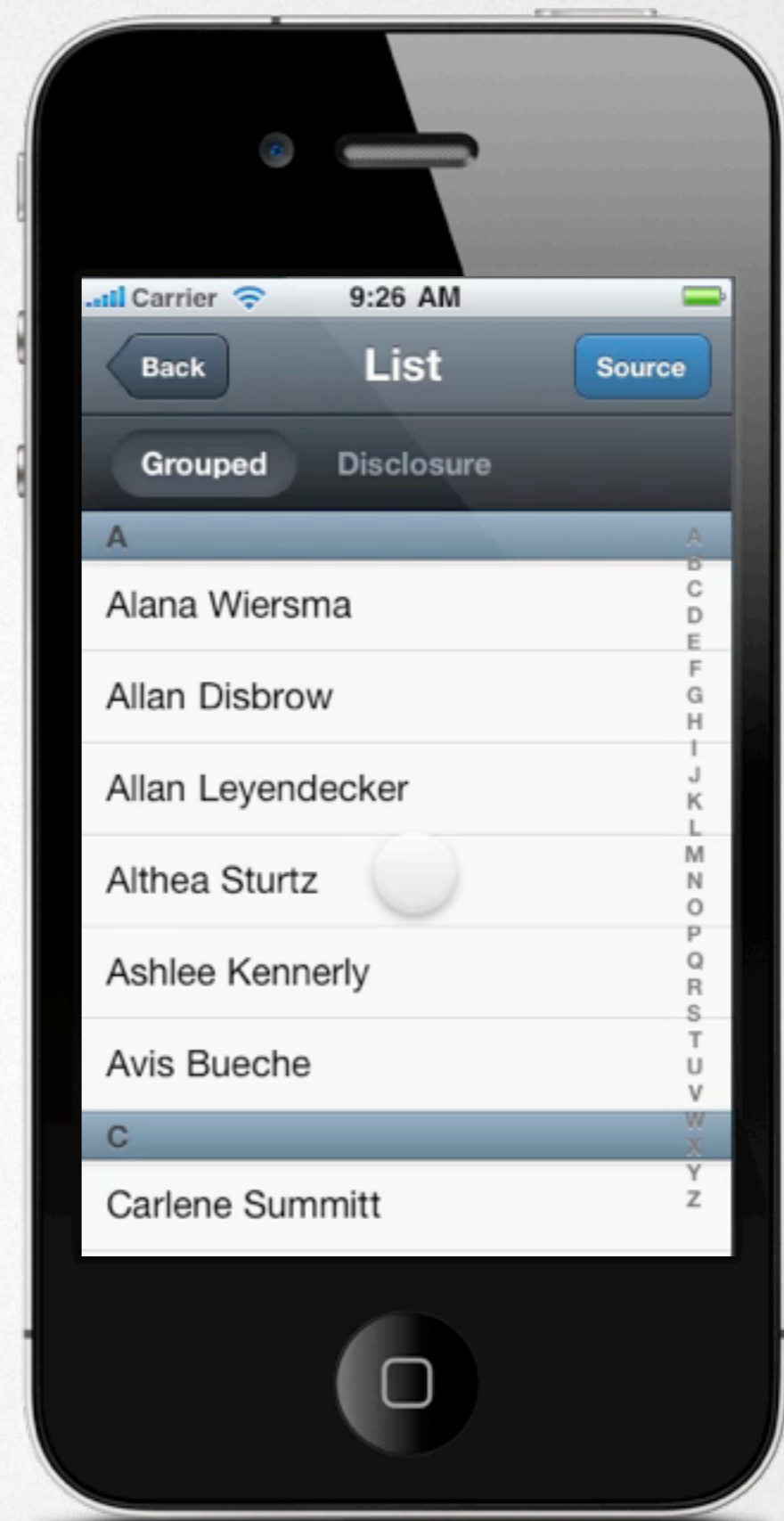
Critical for tablets

Throughout components

Lists

Carousel

Pickers



Components

Lists

Nested, Grouped, Sortable

Carousel

Picker

Overlay

Slider

Forms & Fields

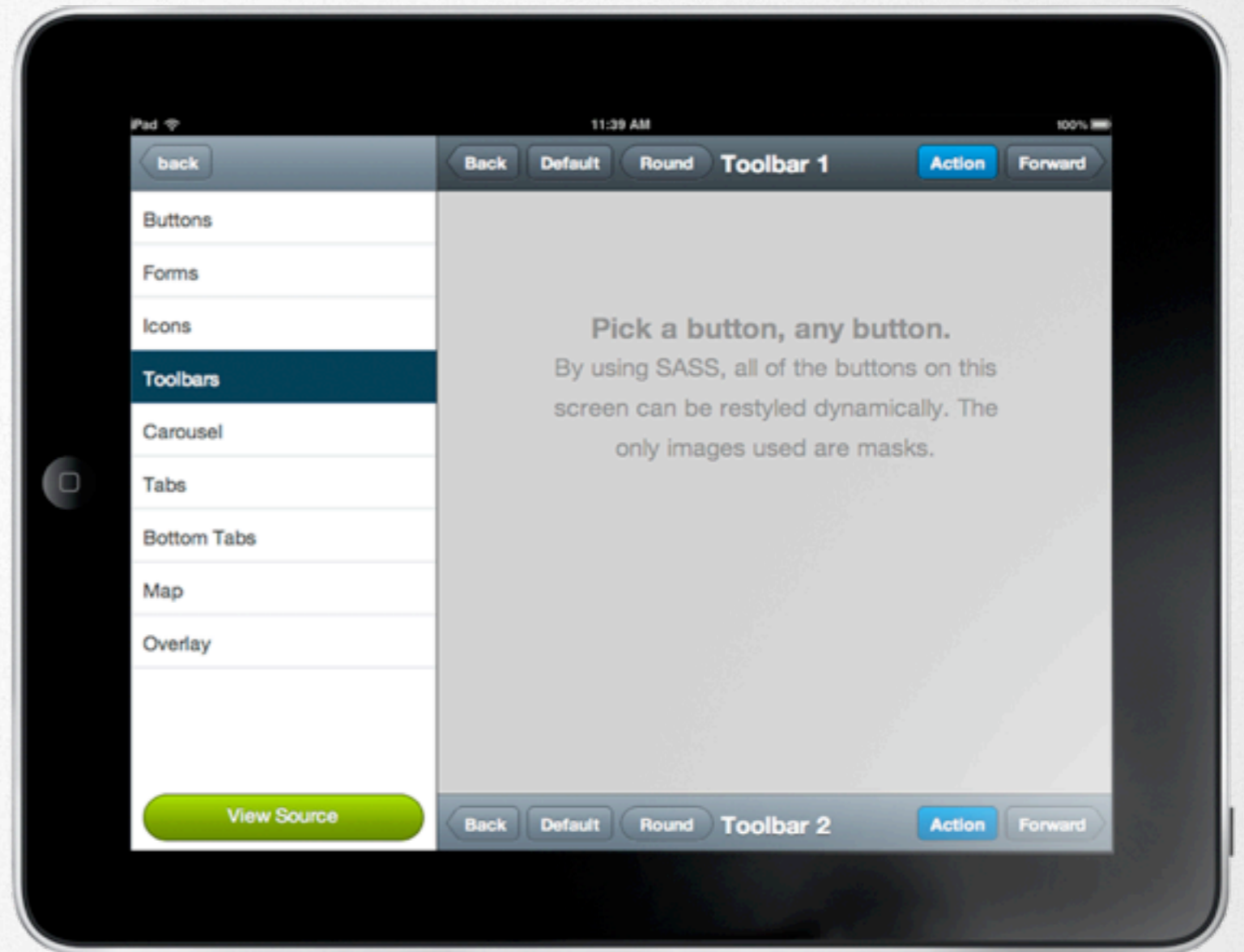
Toolbars & buttons

HTML5

Audio

Video

GeoLocation



<http://j.mp/touchsink>





A simple, object-oriented,
application architecture with MVC,
data, and layouts.



Data Package

Models, Stores, and Proxies

Associations

Validation

Easily consume web services

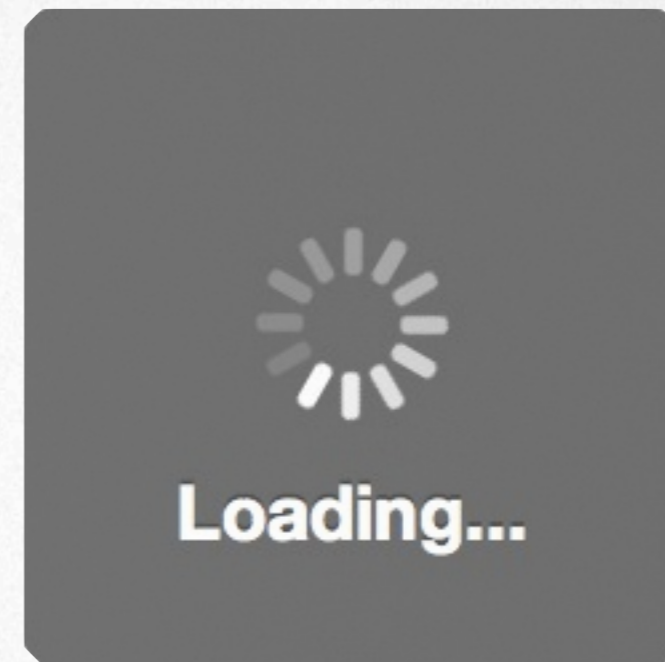
JSON/P

XML

YQL

Offline data

localStorage



Charting

Made with Canvas

Built-in gesture support

Easily customized

www.sencha.com/touch/charts/



Theming



Theming

CSS3

SASS & Compass

Flexible themes

Highly optimized

300+ Pre-included icons

Robust Animations

Resolution Independent

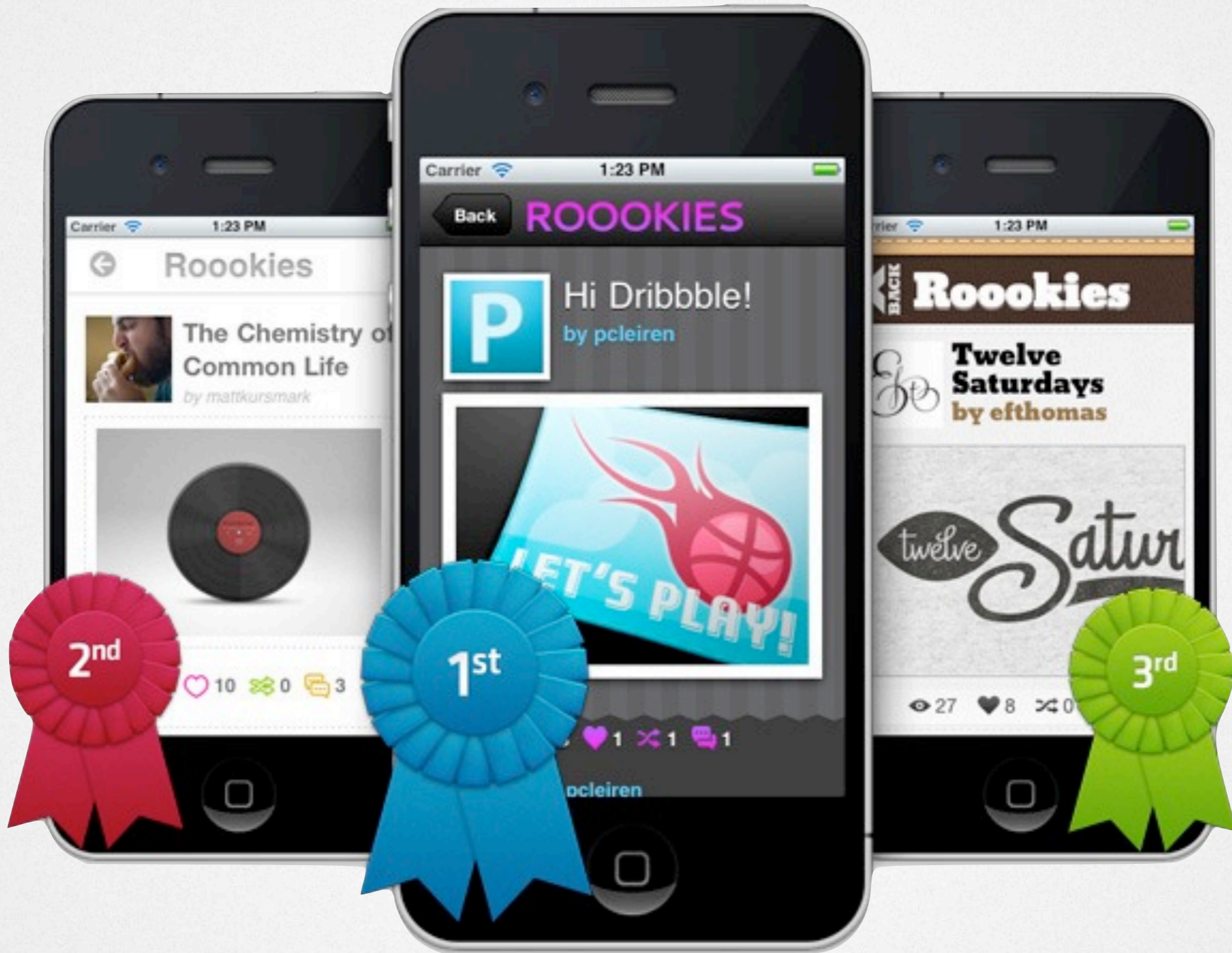
iPhone 4 1:38 PM

Back

Sink

Buttons

Forms



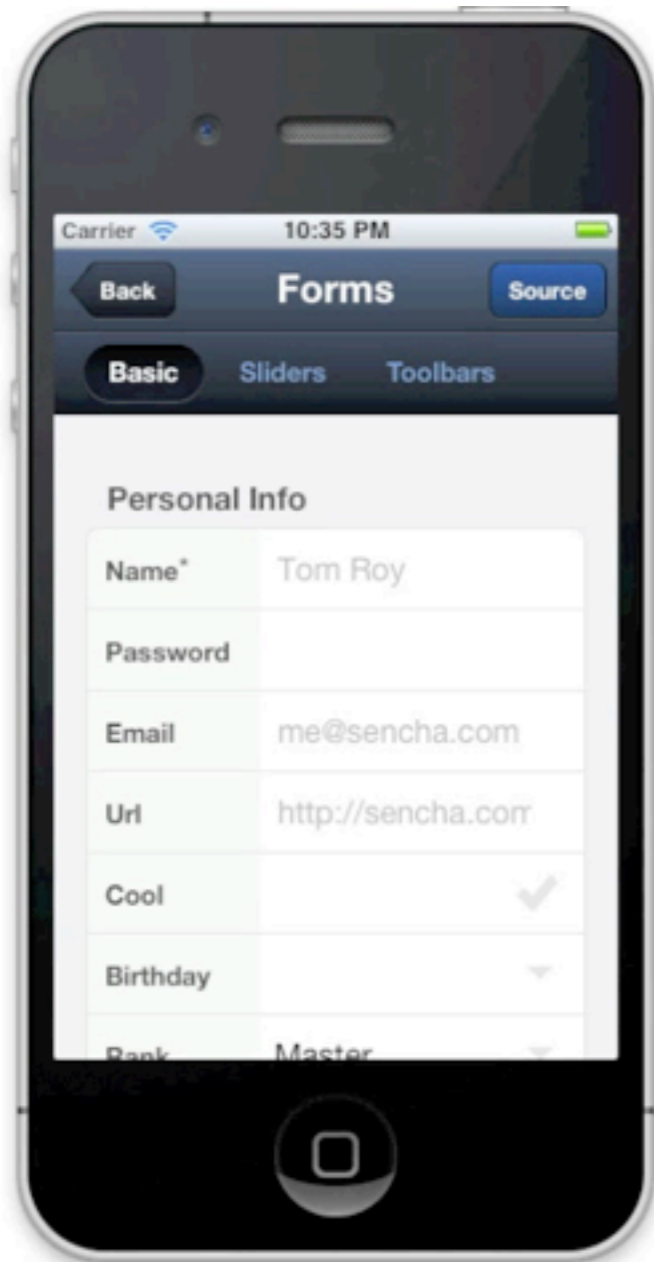
Performance



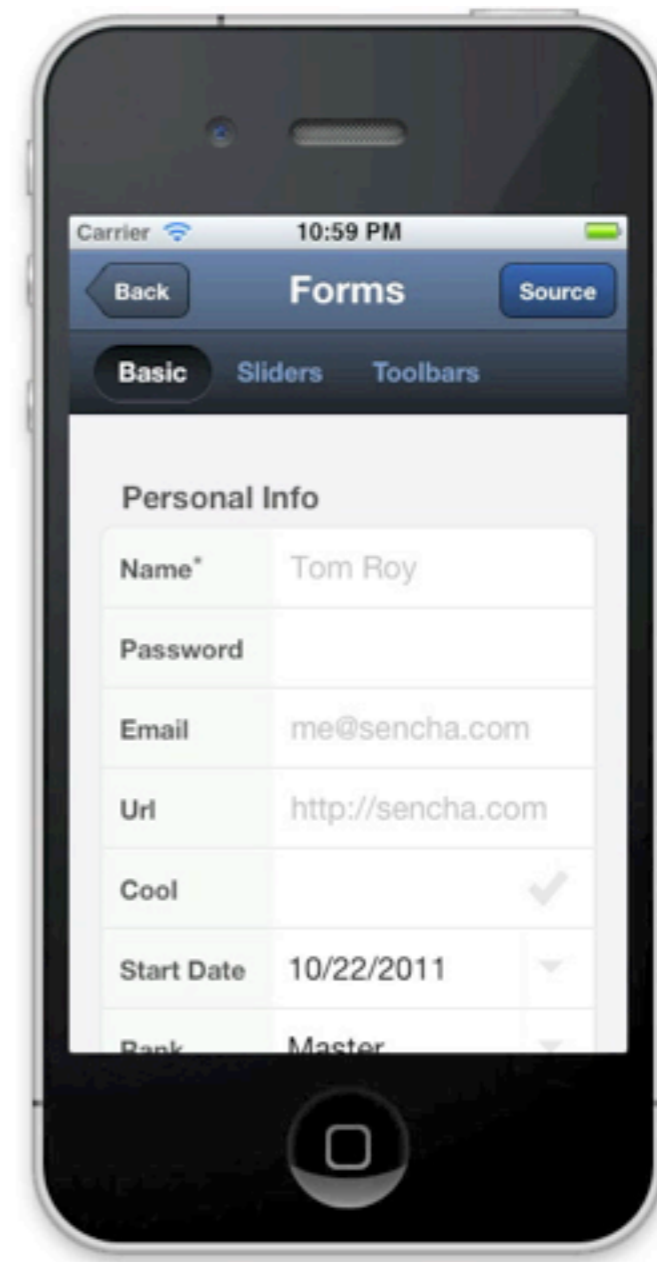
Touch 1.1 vs. Touch 2.0

Touch 1.1 vs. Touch 2.0

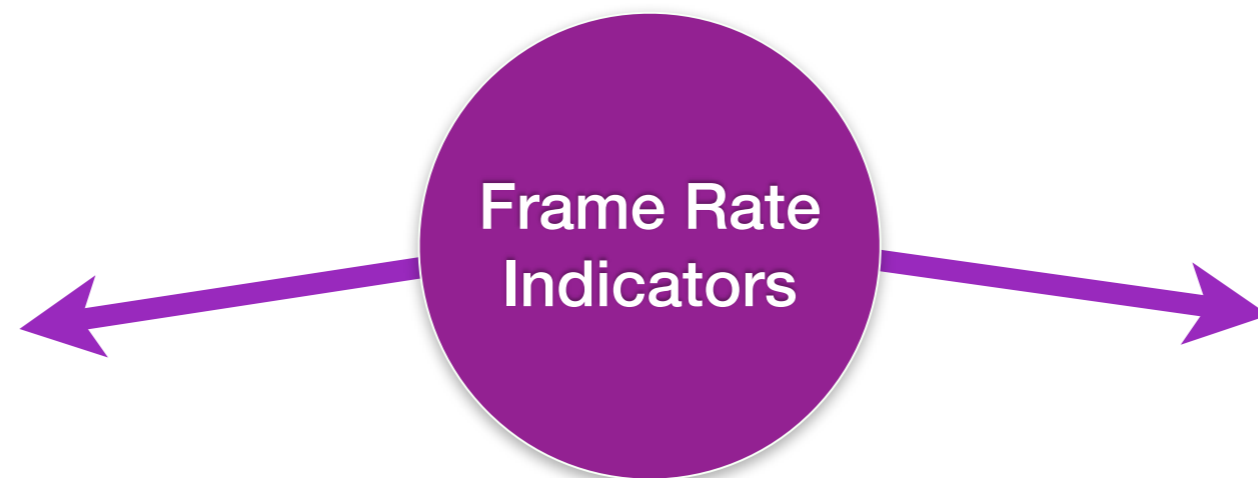
0.9s



0.3s



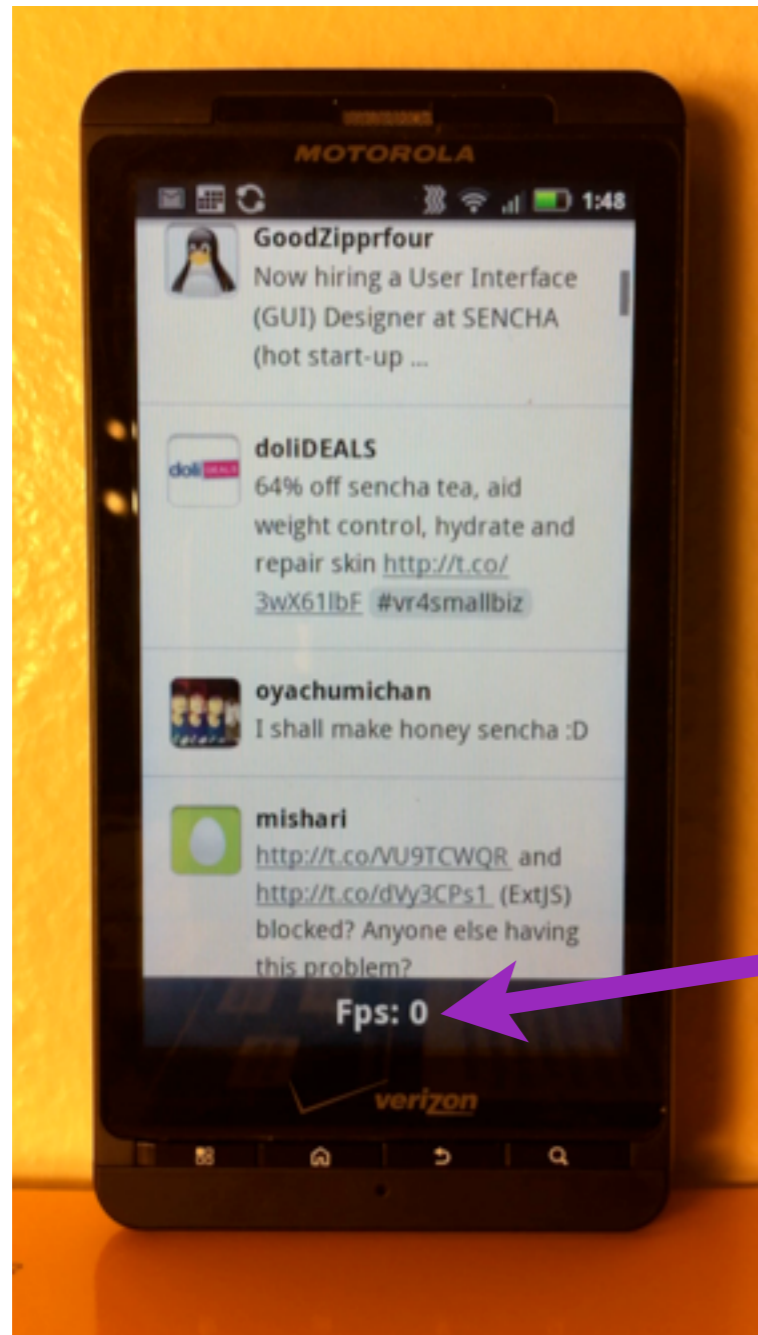
Touch 1.1 vs. Touch 2.0



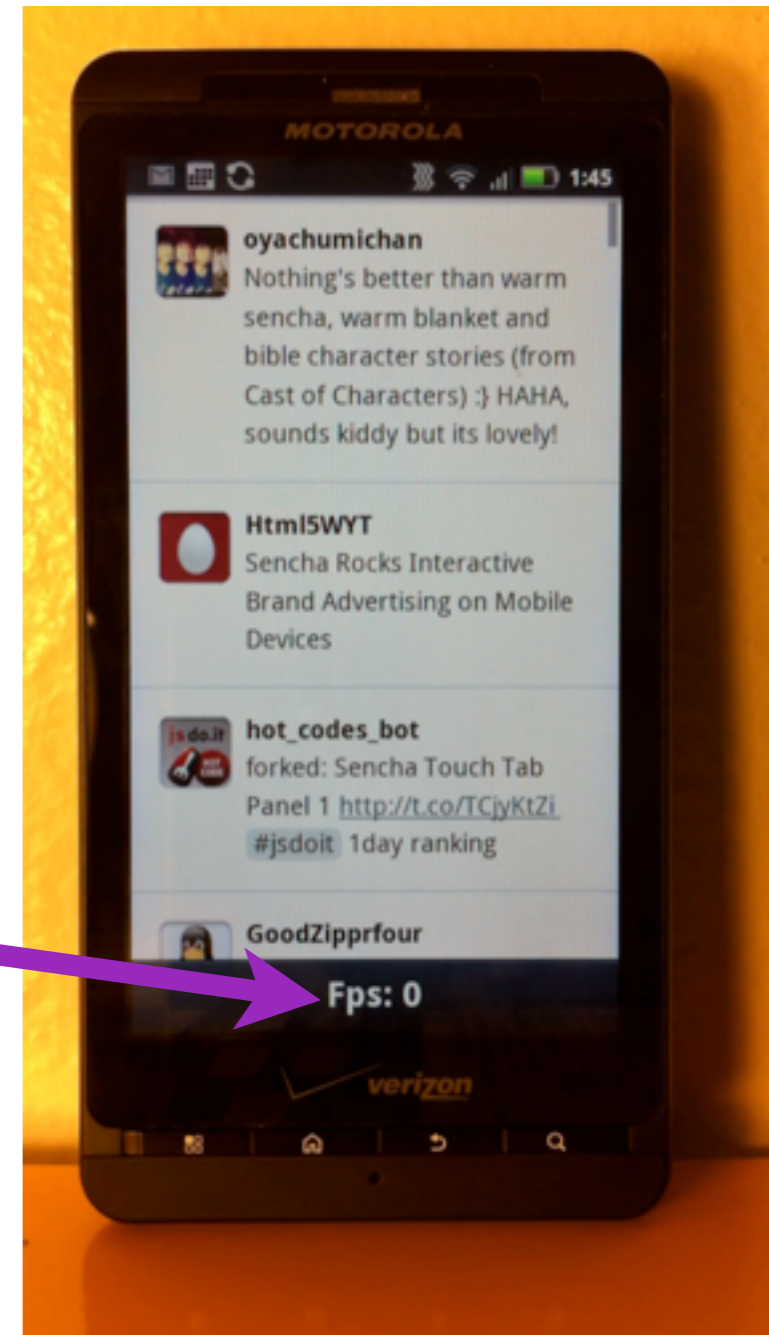
Touch 1.1 vs. Touch 2.0

12fps

41fps



Frame Rate Indicators



Tools





Sencha Designer

SDK Tools



SDK Tools

Native packaging and
automatic code optimization



Cloud





Sencha.io



Login



Login



Data



Login



Data



Messages



Login



Data



Messages



Deployment

Community





201

countries

33

time zones



201

countries

33

time zones







Sencha Touch Forums

http://www.sencha.com/forum/forumdisplay.php?56-Sencha-Touch-Forums

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Sub-Forums	Last Post
 Sencha Touch Premium Help Expedited help for Sencha Touch Premium Subscription members	Threads: 107 Posts: 299 LocalStorage Add Error by markwyner Today, 12:16 PM ▶
 Sencha Touch: Help & Discussion Community help and discussion with using Sencha Touch	Threads: 4,720 Posts: 17,920 How add 'x-item-selected'... by m_sassa Today, 11:48 AM ▶
 Sencha Touch: Bugs Report bugs in Sencha Touch	Threads: 847 Posts: 3,245 Pull refresh demo shows black... by mitchellsimoens Today, 7:18 AM ▶
 Sencha Touch: Feature Requests Request new features or modifications to existing ones	Threads: 228 Posts: 802 [OPEN-194] Set active item... by m_sassa Today, 8:49 AM ▶
 Sencha Touch: Examples and Showcases Post links to show what you have done with Sencha Touch	Threads: 166 Posts: 1,121 Another new Sencha App Launch... by Bucs Today, 12:14 PM ▶
 Sencha Touch: App Contest View the contest entries that made up our first ever Sencha Touch App Contest. Top 10 Finalists at sencha.com/contest .	Threads: 16 Posts: 85 Submitted and uploaded by linburgh 10 Mar 2011, 7:43 PM ▶



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sencha.com/forum



300,000

Community Members



34,000

threads

34,000

threads

128,000

posts

Resources



Ext.Button - Sencha Docs - Touch 2.0

http://docs.sencha.com/touch/2-0/#!/api/Ext.Button

Sencha Docs Touch 2.0 Sign in / Register

button

Panel Button

Ext.Button xtype: button

Configs 51 Properties 3 Methods 133 Events 11 Sub Classes 1

Filter class members Hide inherited

CSS Mixins

	Defined By
<p>sencha-button-ui(string \$ui-label, color \$color, string \$gradient)</p> <p>Creates a theme UI for buttons. Also automatically generates UIs for {ui-label}-round and {ui-label}-small.</p> <pre>// SCSS @include sencha-button-ui('secondary', #99A4AE, 'glossy'); // JS var btnCancel = new Ext.Button({text: 'Cancel', ui: 'secondary'});</pre> <ul style="list-style-type: none"> • \$ui-label : string The name of the UI being created. Can not included spaces or special punctuation (used in class names) • \$color : color Base color for the UI. • \$gradient : string Default gradient for the UI. <p>▶ No comments. Click to add</p>	Ext.Button view source
<p>▶ sencha-buttons()</p> <p>Includes default button styles. ...</p>	Ext.Button

By Package By Inheritance

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Note that our previous "Learn" wiki has been deprecated, but an [archived version](#) is still available.



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Mobile app framework aimed at modern touch-enabled devices like Android, BlackBerry and iOS.



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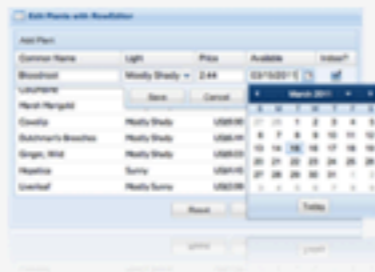
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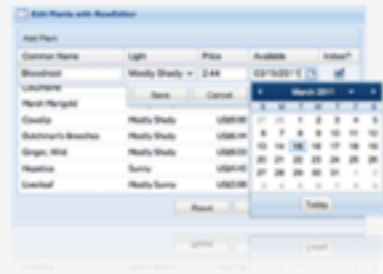


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