

# The 90 Minute App

Ext JS 5 Workshop  
@ JSDC 2014

# About



Stefan Stölzle

Sr. Solutions Engineer, Asia Pacific  
Sencha, Inc.

✉ [stefan@sencha.com](mailto:stefan@sencha.com)

🏠 [stefan.stoelzle.me](http://stefan.stoelzle.me)

🐦 [@me\\_stoe](https://twitter.com/me_stoe)

🐙 [stoe](https://github.com/stoe)



“ <http://stoe.github.io/the90minuteapp/> ”

# What we'll need



## Ext JS 5

<http://www.sencha.com/products/ext>

## Sencha CMD 5

<http://www.sencha.com/products/sencha-cmd/download>

## IDE or TextEditor

Atom.io, SublimeText3, WebStorm, Eclipse, etc.

## Terminal

terminal, iTerm2, cmd.exe, etc.

## Web Browser

Safari, Firefox, Google Chrome, etc.

# What we'll use



a **Viewport**, using a border layout

- a **DataView** in the center

- a **Container** for the video preview on the right

- a **TreePanel** as country selector on the left

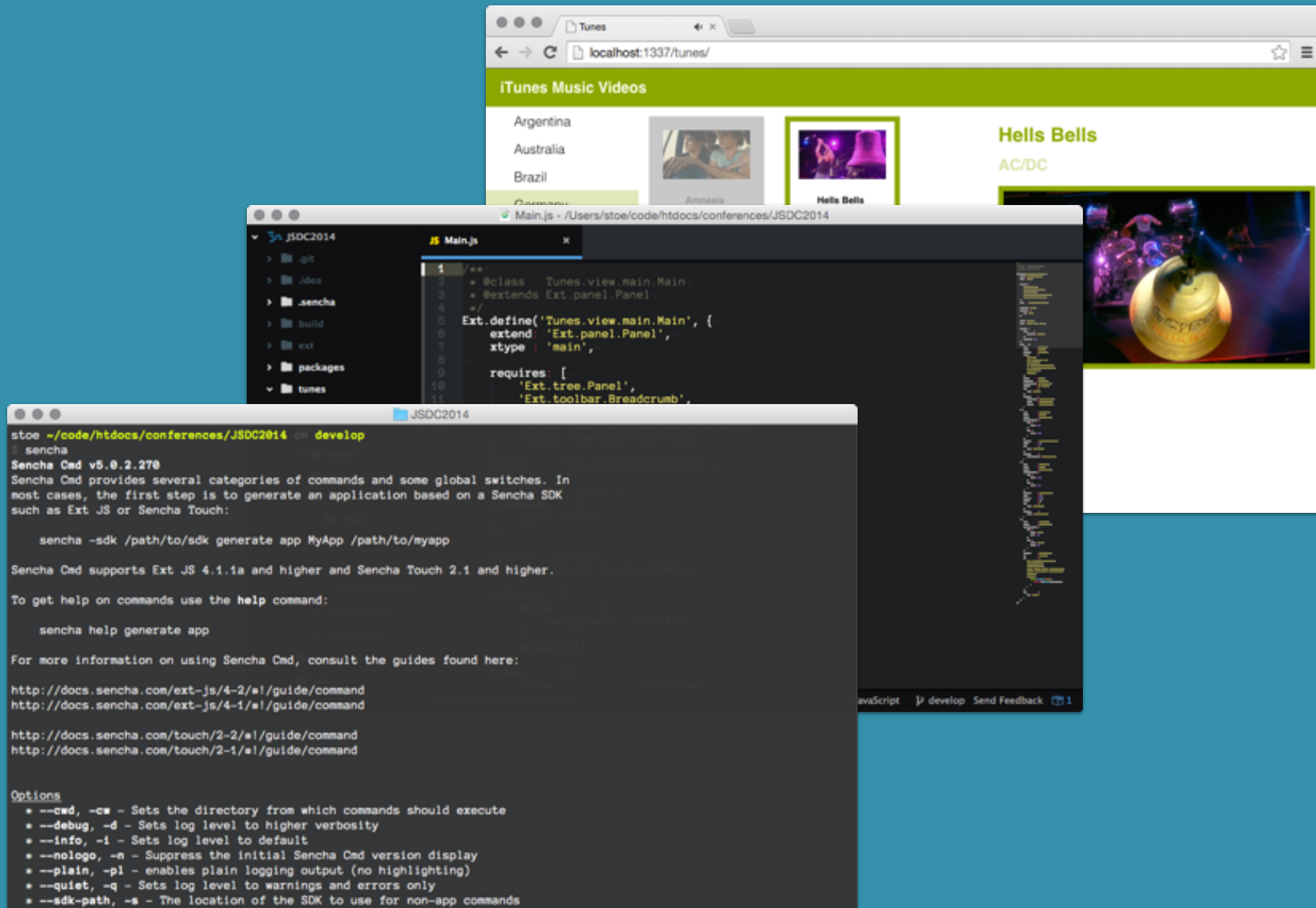
two **Models**

- a **Store**

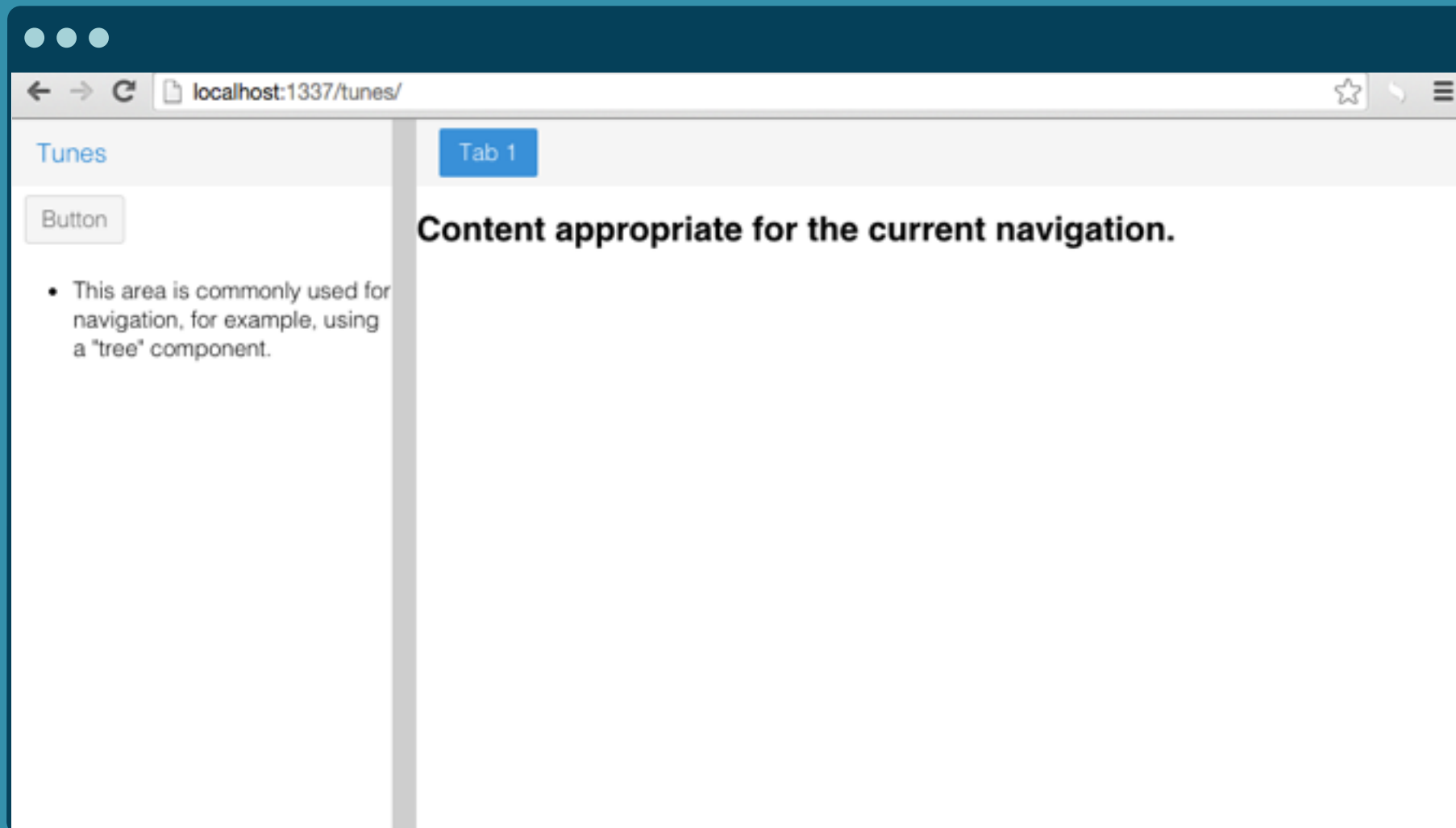
- a **TreeStore**

- a **Controller**

# Let's get started...



# Starter App



terminal



~

```
$ cd code/htdocs/
```

~/code/htdocs

```
$ sencha generate workspace -ext ./JSDC2014
```

Sencha Cmd v5.0.0.270

~/code/htdocs

```
$ _
```



# terminal



~/code/htdocs

```
$ cd JSDC2014/ext/
```

~/code/htdocs/JSDC2014/ext

```
$ sencha generate app -th ext-theme-crisp-touch Tunes ../tunes
```

Sencha Cmd v5.0.2.270

```
[INF] Processing Build Descriptor : default
```

```
[INF] Loading app json manifest...
```

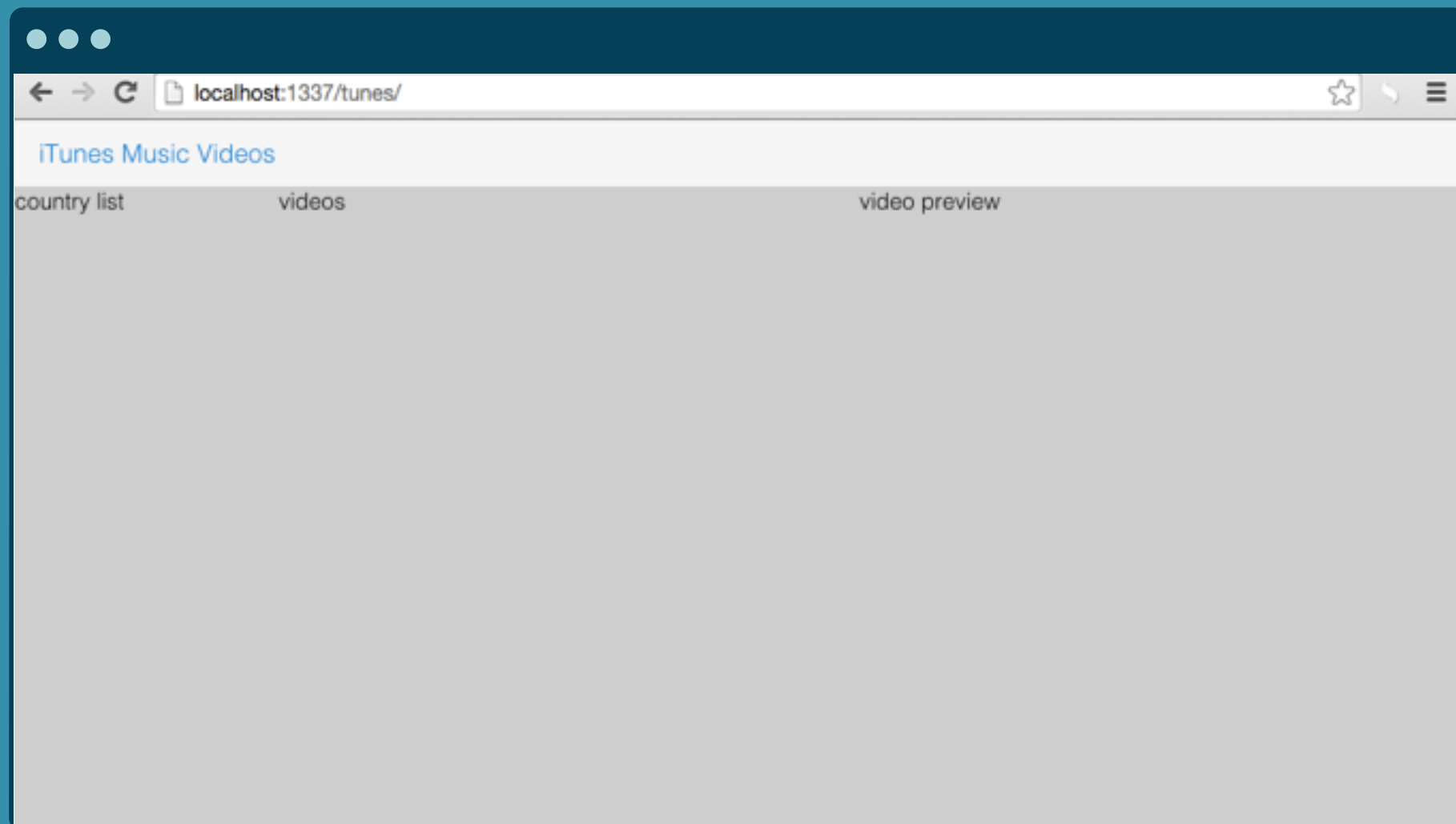
```
[INF] Writing content to /Users/stoe/code/htdocs/JSDC2014/tunes/bootstrap.js
```

```
[INF] Writing content to /Users/stoe/code/htdocs/JSDC2014/tunes/bootstrap.json
```

~/code/htdocs/JSDC2014/ext

```
$ _
```

# App Layout



<https://github.com/stoe/the90minuteapp/tree/initial-app-layout>

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./tunes/



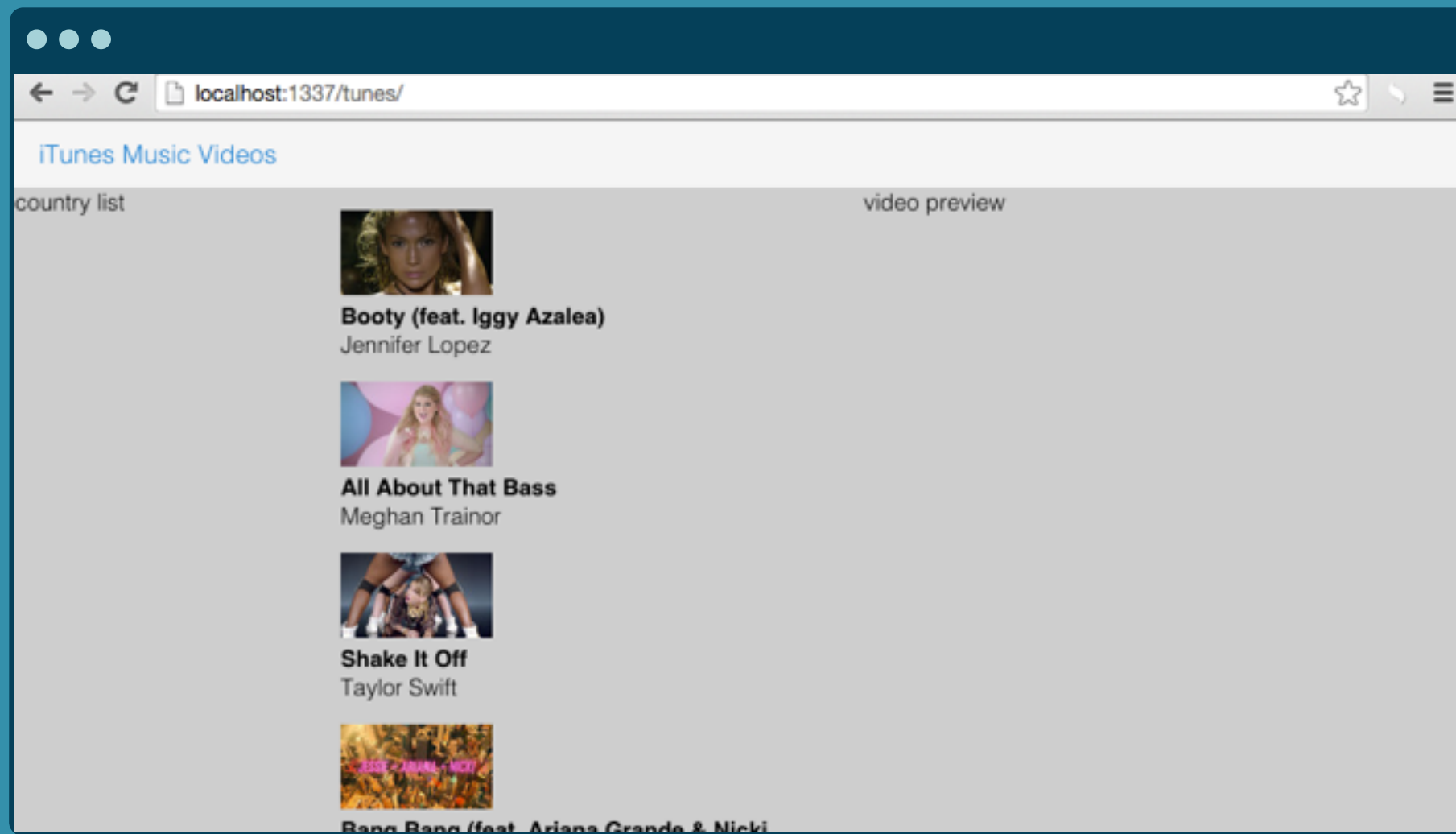
```
// ...  
layout: 'border',  
title : 'iTunes Music Videos',  
items : [{  
    region: 'west',          // left  
    width : 175,  
    html  : 'country list'  
}, {  
    region: 'center',       // middle  
    html  : 'videos'  
}, {  
    region: 'east',         // right  
    width : 400,  
    html  : 'video preview'  
}]  
// ...
```

./tunes/app/view/main/Main.js

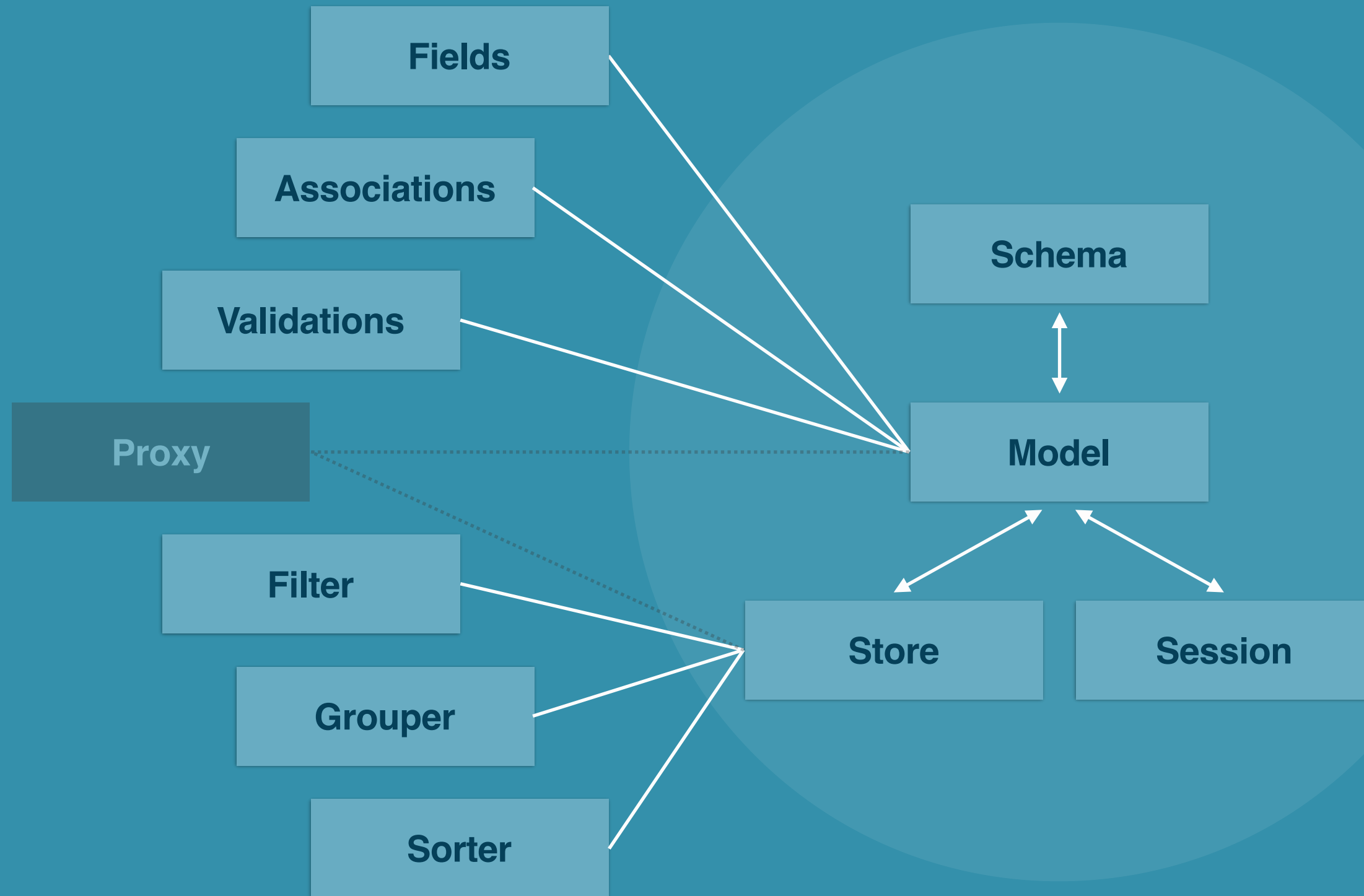


```
// ...
items: [{
  xtype      : 'dataview',
  region     : 'center',
  autoScroll : true,
  itemTpl    : [
    '<figure>',
    '  ',
    '  <figcaption>',
    '    <p class="title">{title}</p><p class="artist">{artist}</p>',
    '  </figcaption>',
    '</figure>'
  ],
  itemCls      : 'video',
  overItemCls  : 'overview',
  selectedItemCls: 'selectedvideo'
},
// ...
```

# Tunes Model & Store



# Data Package



terminal



```
~/code/htdocs/JSDC2014/tunes
```

```
$ sencha generate model Tune id,artist,title,image,link,preview,codex
```

```
Sencha Cmd v5.0.2.270
```

```
~/code/htdocs/JSDC2014/tunes
```

```
$ _
```

./tunes/app/model/Tune.js



```
Ext.define('Tunes.model.Tune', {
    extend: 'Ext.data.Model',

    requires: [ /* ... */ ],

    fields: [{
        name      : 'id',
        mapping: 'id.attributes["im:id"]',
        type      : 'auto'
    }, { /* ... */ }],

    proxy: {
        type  : 'jsonp',
        url   : 'https://itunes.apple.com/us/rss/topmusicvideos/limit=100/json',
        reader: {
            type          : 'json',
            rootProperty  : 'feed.entry',
            preserveRawData: true    // needed so feed gets read properly
        }
    }
});
```



./tunes/app/view/main/MainModel.js



```
Ext.define('Tunes.view.main.MainModel', {
    extend: 'Ext.app.ViewModel',
    alias : 'viewmodel.main',

    requires: [
        'Tunes.model.Tune'
    ],

    data: {},
    formulas: {},

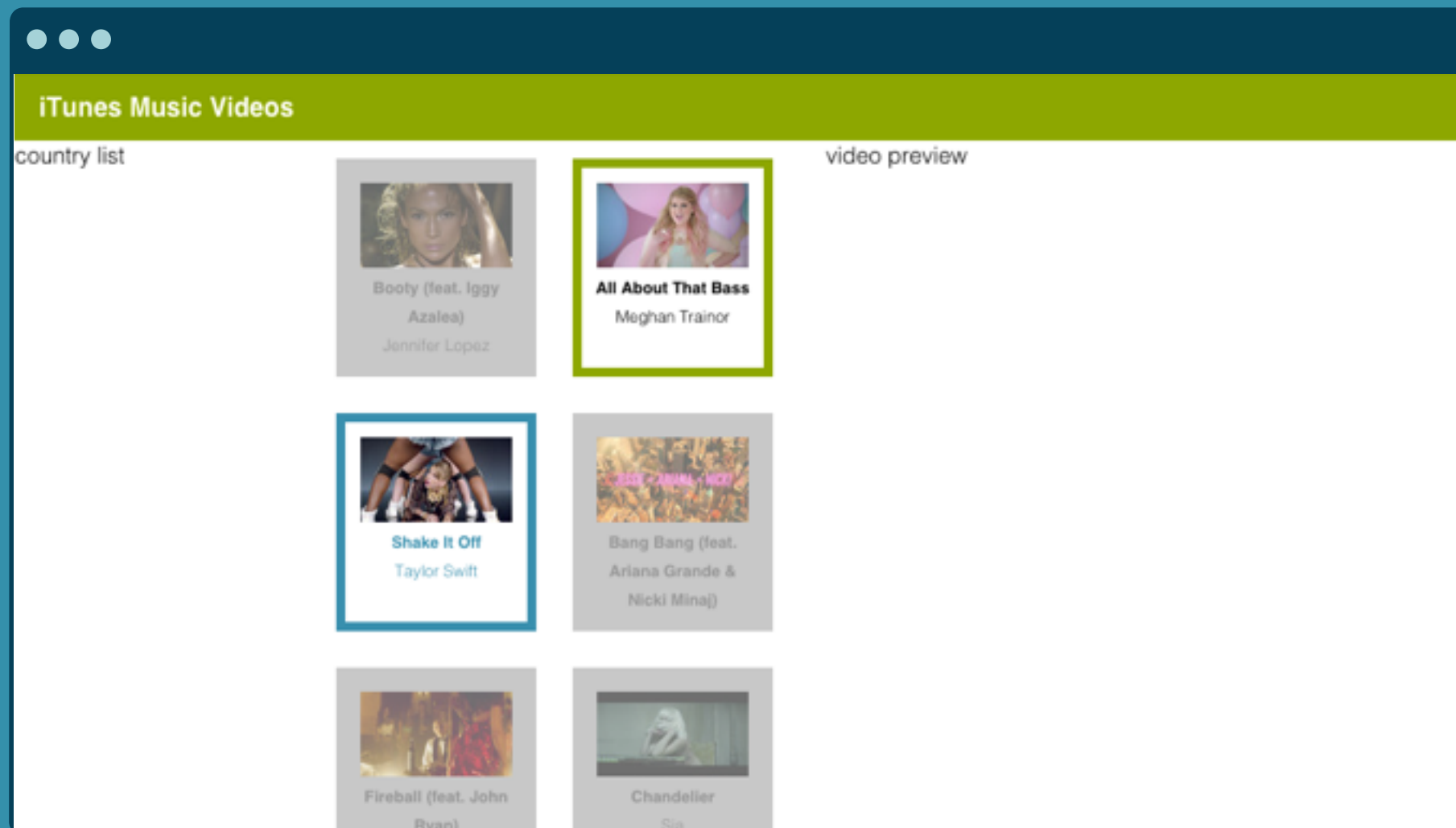
    stores: {
        tunes: {
            model      : 'Tunes.model.Tune',
            autoLoad: true
        }
    }
});
```

./tunes/app/view/main/Main.js



```
// ...
items: [{
  xtype      : 'dataview',
  reference  : 'tunesView',
  region     : 'center',
  autoScroll : true,
  itemTpl    : [
    '<figure>',
    '  ',
    '  <figcaption>',
    '    <p class="title">{title}</p><p class="artist">{artist}</p>',
    '  </figcaption>',
    '</figure>'
  ],
  itemCls    : 'video',
  overItemCls : 'overvideo',
  selectedItemCls: 'selectedvideo',
  bind       : { store: '{tunes}' }
},
// ...
```

# Tunes Theming



<https://github.com/stoe/the90minuteapp/tree/tunes-touch-theme>

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terminal



```
~/code/htdocs/JSDC2014/tunes
```

```
$ sencha generate theme -e ext-theme-crisp-touch tunes-theme-touch
```

```
Sencha Cmd v5.0.2.270
```

```
~/code/htdocs/JSDC2014/tunes
```

```
$ _
```

./packages/tunes-theme-touch/sass/var/Component.scss



```
// base theme overwrites
```

```
$base-color : #BADA55;
```

```
$panel-header-background-color : $base-color;
```

```
$panel-header-color : #FFFFFF;
```

```
$panel-header-font-weight : bold;
```

./packages/tunes-theme-touch/sass/src



```
// custom styling
$video-bg-color : #FFFFFF;
$video-font-color : invert($video-bg-color);
$video-over-color : #3490AB;

div.video {
  float      : left;
  text-align : center;
  height     : 144px;
  padding    : 2px 8px 8px 8px;
  width      : 132px;
  background : lighten($video-font-color, 64%);
  // ...
}
```

./tunes/app.js



```
{  
  // ...  
  
  /**  
   * The name of the theme for this application.  
   */  
  
  "theme": "tunes-theme-touch",  
  
  // ...  
}
```

terminal



```
~/code/htdocs/JSDC2014/tunes
```

```
$ sencha app build development
```

```
Sencha Cmd v5.0.2.270
```

```
[INF] Processing Build Descriptor : default
```

```
// ...
```

```
[INF] executing compass using system installed ruby runtime
```

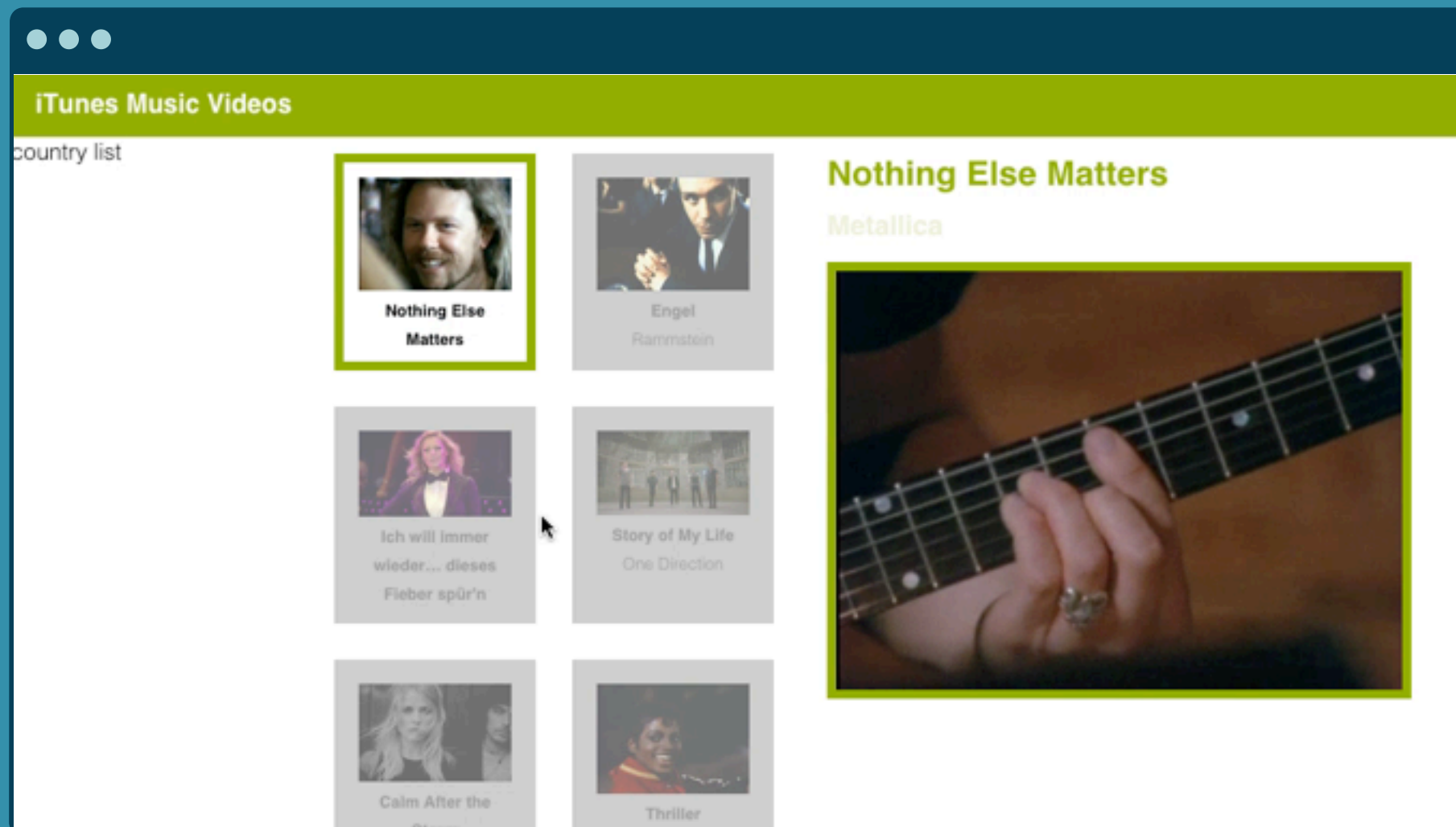
```
create bar-all.css
```

```
~/code/htdocs/JSDC2014/tunes
```

```
$ _
```



# Video Preview



<https://github.com/stoe/the90minuteapp/tree/video-preview>

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# MVVM

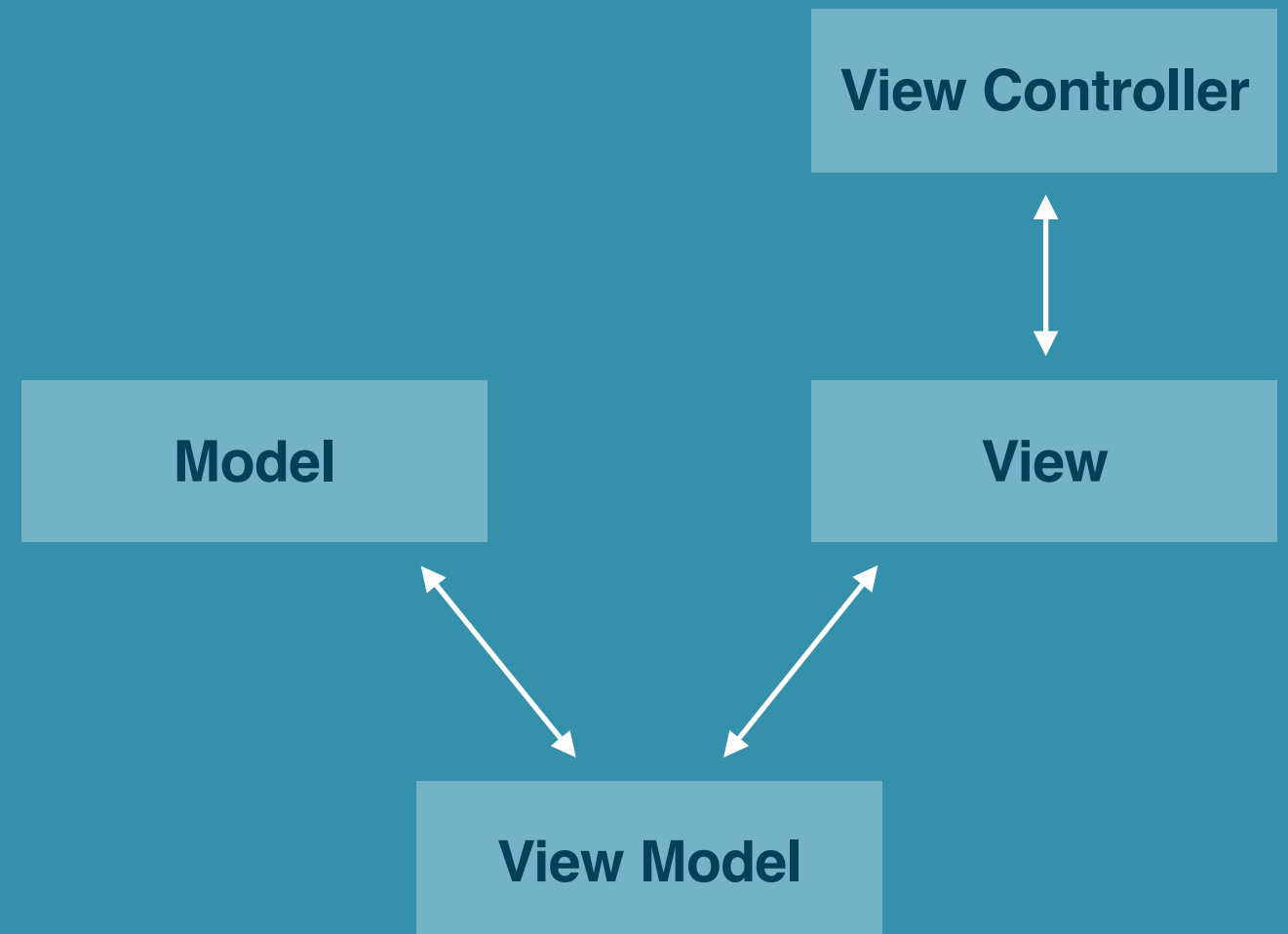


## MVVM

Enables two-way data binding

Separation of concerns

More scalable and modular  
app development



# Two-Way Data Binding

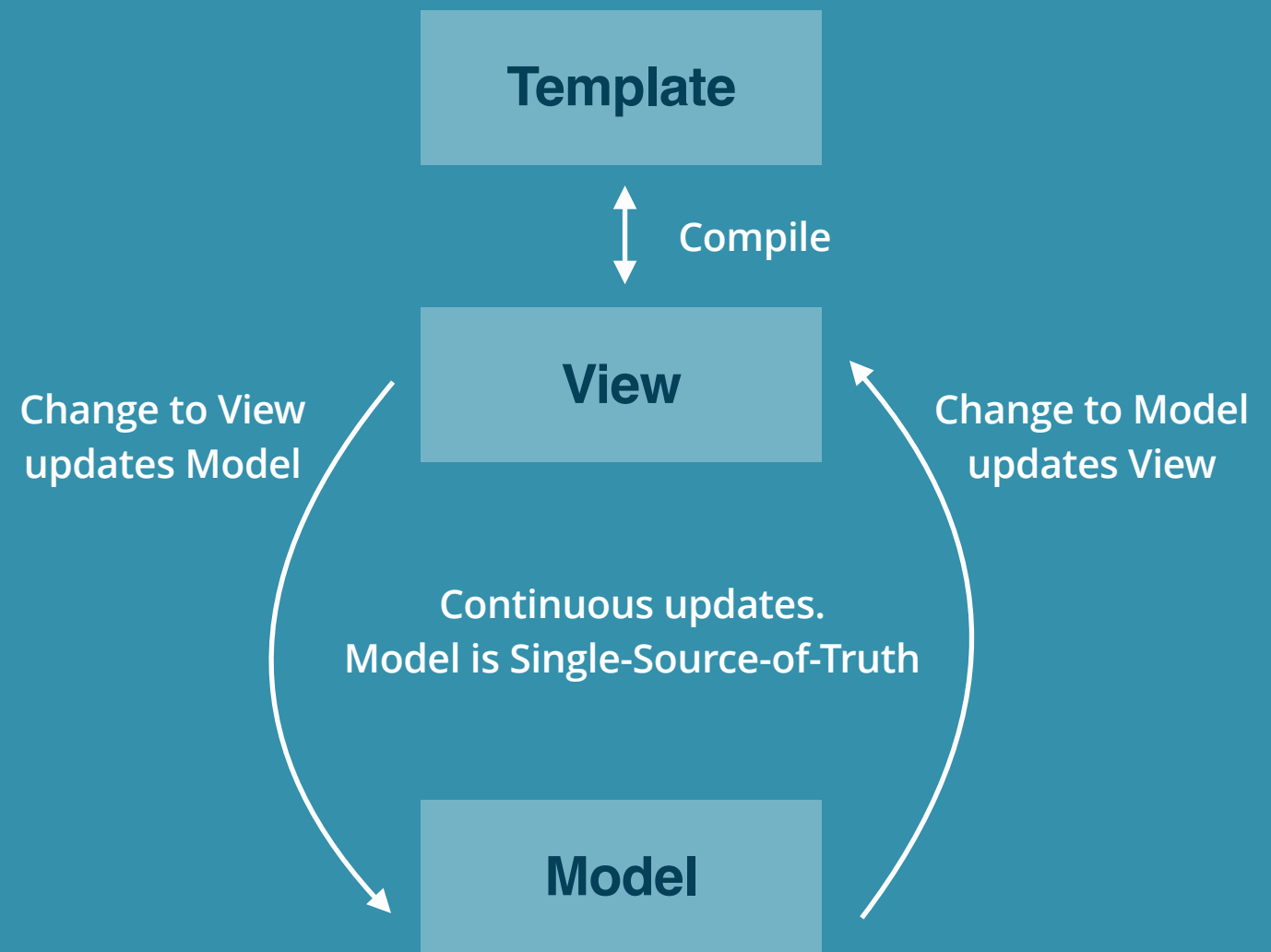


## Two-way Data Binding

Live synchronisation between Views and Models

Computed values and fields

Save time and reduce errors through less custom code





./tunes/app/view/main/Main.js

```
// ...
{
  region: 'east',
  width : 425,
  cls   : 'preview',
  tpl   : [
    '<tpl if="this.isData(values)">',
    '<h1>{title}</h1>',
    '<h2>{artist}</h2>',
    '<video autoplay controls muted preload="auto">',
    '  <source src="{preview}" type="{codex}">',
    '</video>',
    '</tpl>', {
      isData: function (data) { return !Ext.Object.isEmpty(data); }
    }
  ],
  bind : {
    data: '{tune}'
    // data: '{tunesView.selection}'
  },
  listeners: {
    select: 'onItemSelect',
    deselect: 'onItemDeselect'
  }
}]
// ...
```

<https://github.com/stoe/the90minuteapp/blob/master/tunes/app/view/main/Main.js>

./tunes/app/view/main/MainModel.js



```
Ext.define('Tunes.view.main.MainModel', {
    extend: 'Ext.app.ViewModel',
    alias : 'viewmodel.main',

    requires: ['Tunes.model.Tune'],

    data: {
        tune: null
    },

    formulas: {},

    stores: {
        tunes: {
            model      : 'Tunes.model.Tune',
            autoLoad: true
        }
    }
});
```

./tunes/app/view/main/MainController



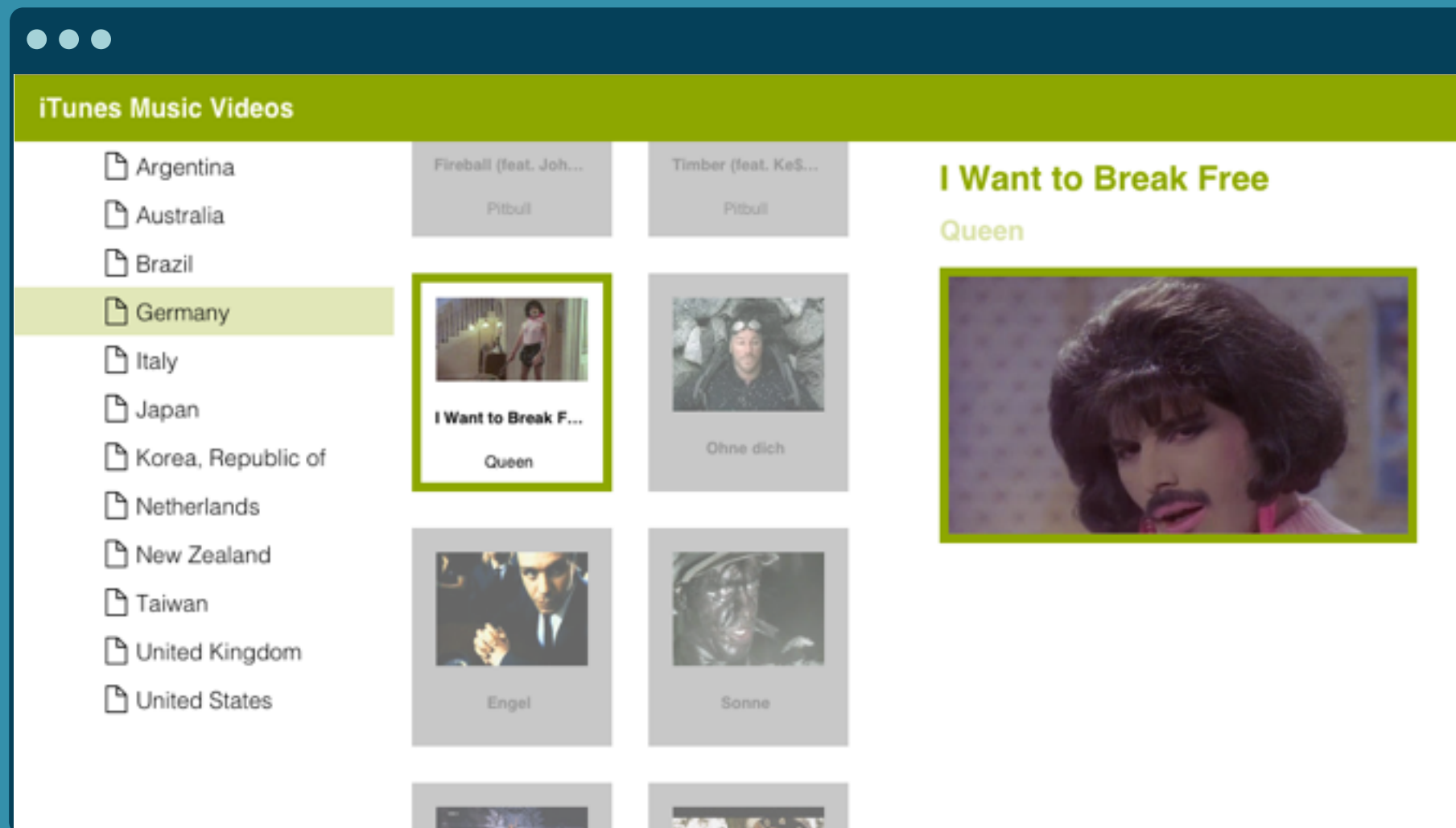
```
Ext.define('Tunes.view.main.MainController', {
    extend: 'Ext.app.ViewController',
    alias : 'controller.main',

    requires: [],

    onItemSelect: function (view, record, eOpts) {
        // additional business logic...
        this.getViewModel().set('tune', record);
    },

    onItemDeselect: function (view, record, eOpts) {
        // additional business logic...
        this.getViewModel().set('tune', null);
    }
});
```

# Country Selection



./tunes/app/model/Country.js



```
// sencha generate model Country id,text
```

```
Ext.define('Tunes.model.Country', {  
    extend: 'Ext.data.Model',  
  
    requires: [  
        'Ext.data.field.Field'  
    ],  
  
    fields: [{  
        name: 'id',  
        type: 'auto'  
    }, {  
        name: 'text',  
        type: 'auto'  
    }]  
});
```



./tunes/app/view/main/MainModel.js



```
Ext.define('Tunes.view.main.MainModel', {

    // ...

    stores: {
        tunes: { /* ... */ },
        countries: {
            type      : 'tree',
            model     : 'Tunes.model.Country',
            root      : {
                expanded: true,
                children: [{
                    id    : 'ar',
                    text  : 'Argentina',
                    leaf   : true
                }, {
                    // ...
                }]
            },
            sorters: ['text']
        }
    }
});
```

./tunes/app/view/main/Main.js



```
// ...  
{  
  xtype      : 'treepanel',  
  region     : 'west',  
  reference  : 'countriesTree',  
  width      : 250,  
  useArrows  : true,  
  bind       : {  
    store: '{countries}'  
  },  
  listeners: {  
    select: 'onCountrySelect'  
  }  
},  
// ...
```

./tunes/app/view/main/MainController



```
Ext.define('Tunes.view.main.MainController', {
    extend: 'Ext.app.ViewController',
    alias : 'controller.main',

    onItemSelect: function (view, record, eOpts) { /* ... */ },

    onItemDeselect: function (view, record, eOpts) { /* ... */ },

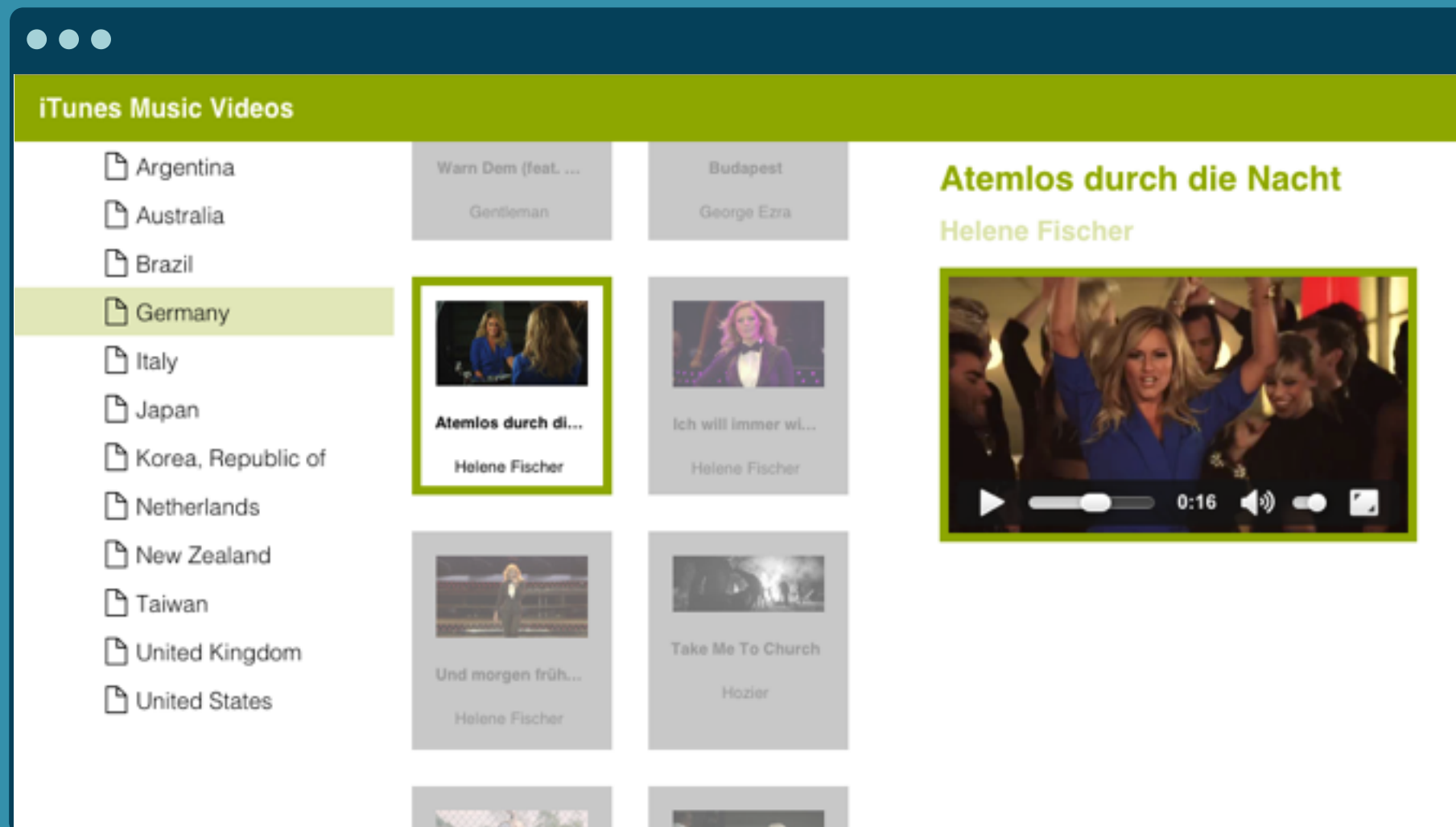
    onCountrySelect: function (selModel, record, index, eOpts) {
        var me = this,
            country = record.get('id'),
            tunesStore = me.getStore('tunes'),
            tunesProxy = tunesStore.getProxy();

        tunesProxy.setUrl(
            'https://itunes.apple.com/' + country +
            '/rss/topmusicvideos/limit=100/explicit=true/json'
        );

        tunesStore.load();
    }
});
```

<https://github.com/stoe/the90minuteapp/blob/master/tunes/app/view/main/MainController.js>

# Final App



# Can't touch this!



[http://1.bp.blogspot.com/-q20NhQKVNxk/T88T1y\\_rCqI/AAAAAAAAAPQ/760\\_Tip2bBM/s1600/MC\\_Hammer\\_gif.gif](http://1.bp.blogspot.com/-q20NhQKVNxk/T88T1y_rCqI/AAAAAAAAAPQ/760_Tip2bBM/s1600/MC_Hammer_gif.gif)

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**2014** **TAIPEI**  
OCTOBER 11-12  
The 3rd JavaScript Developer  
Annual Conference in Taiwan.

./tunes/app/view/main/Main.js



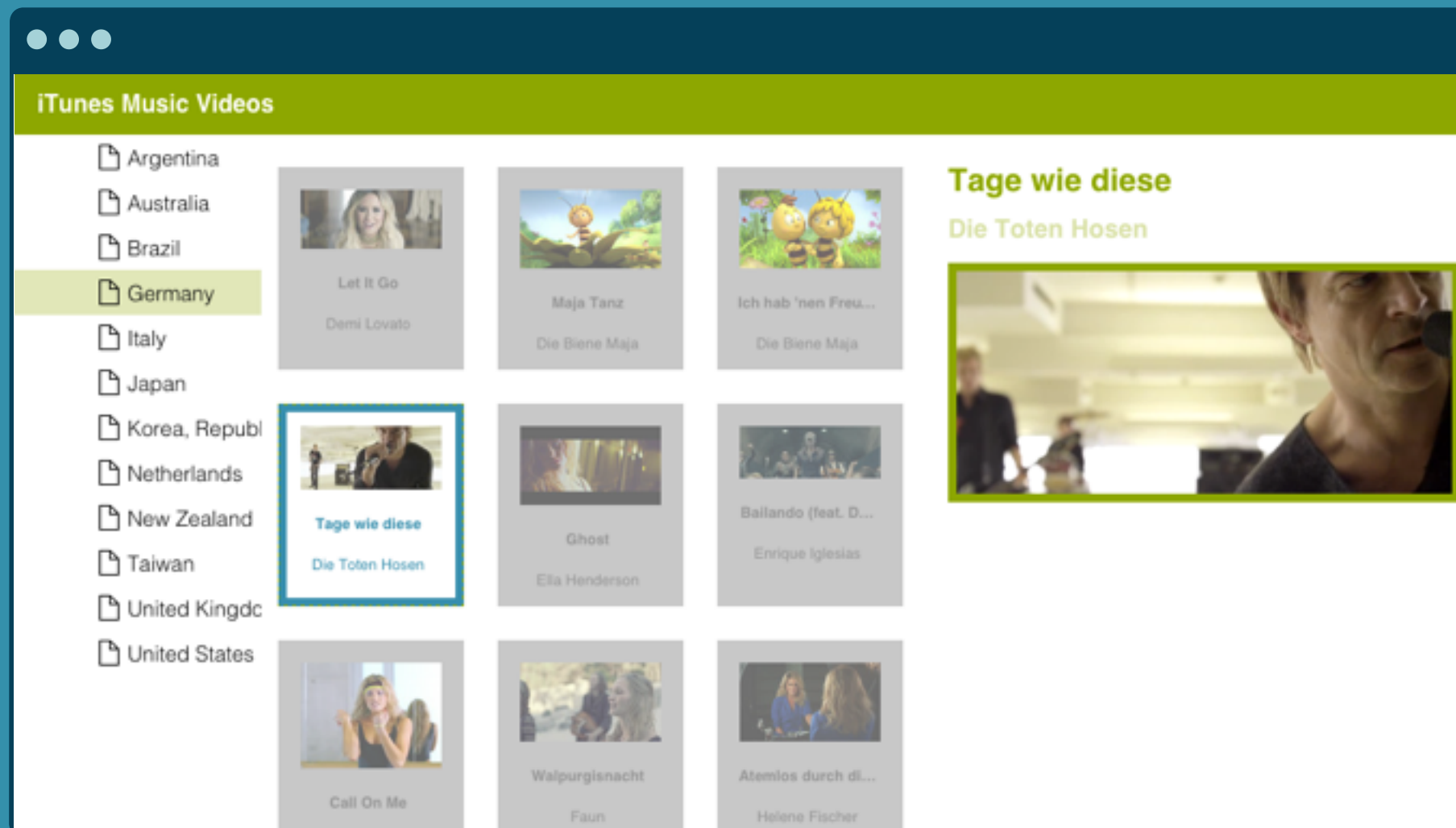
```
// ...  
mixin      : 'Ext.mixin.Responsive',  
// ...  
plugins    : ['responsive'],  
responsiveConfig: {  
    wide: {  
        // properties for "wide" mode, e.g. landscape  
    },  
    tall: {  
        // properties for "tall" mode, e.g. portrait  
    }  
},  
// ...
```

./tunes/app/view/main/Main.js



```
// ..
{
  xtype      : 'breadcrumb',
  region     : 'north',
  plugins    : ['responsive'],
  responsiveConfig: {
    wide: { hidden: true },
    tall: { hidden: false }
  },
  height     : 32,
  bind       : {
    store: '{countries}'
  },
  listeners  : {
    selectionchange: 'onCountrySelect'
  }
},
// ...
```

# Responsive Config

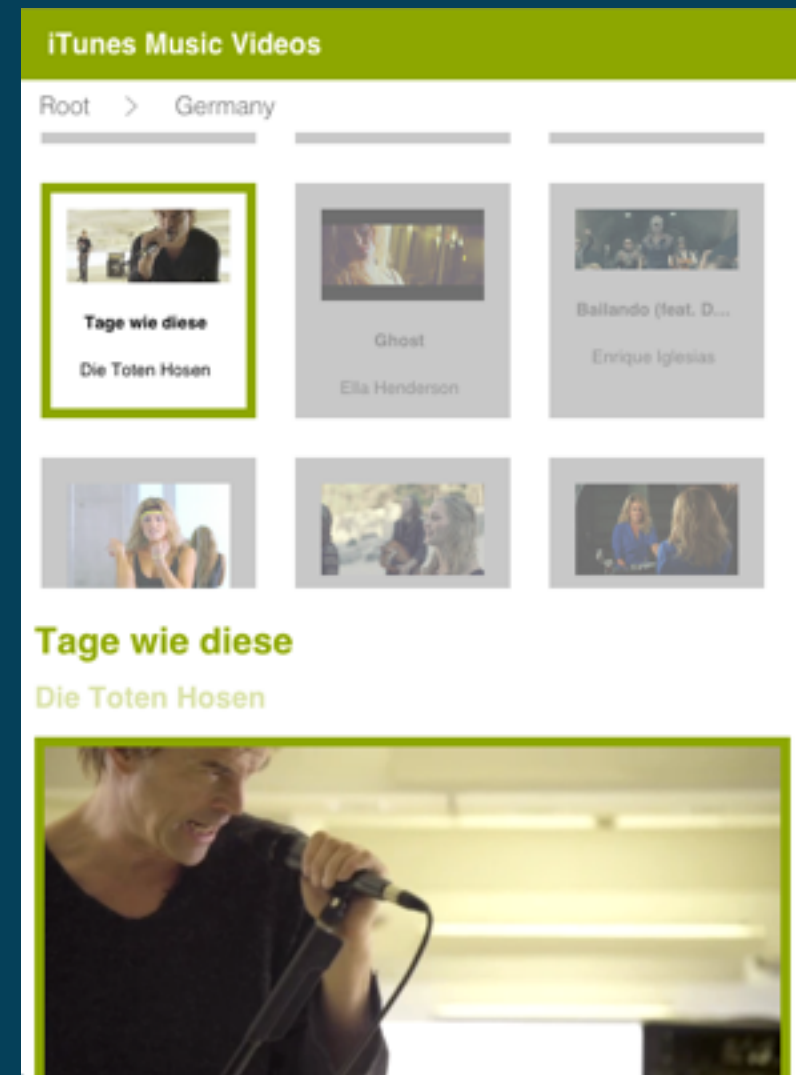
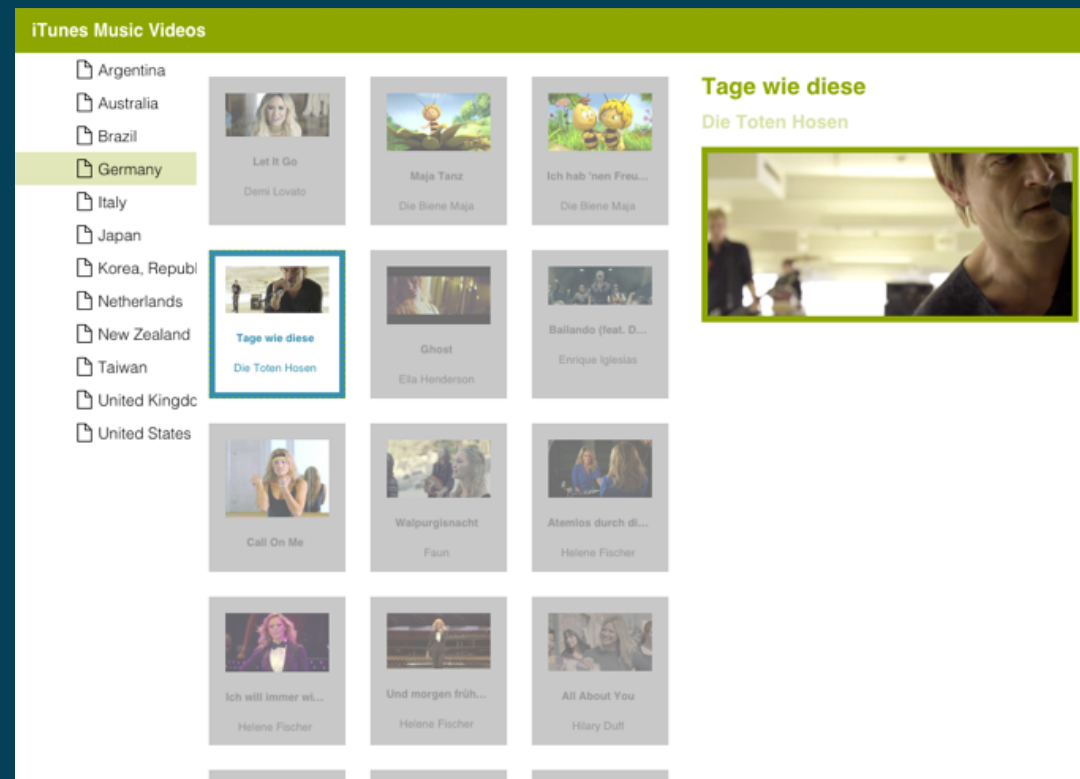


<https://github.com/stoe/the90minuteapp/tree/responsive-config>

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# Responsive Config



# Q&A

<http://stoe.github.io/the90minuteapp/>

# Thank YOU!

<http://stoe.github.io/the90minuteapp/>



Tools

**Sencha Cmd**



Design

**Sencha Architect**



Develop

**Sencha Ext JS  
Sencha Touch  
Sencha GXT**



Deploy

**Sencha Space**

**Professional Services**

**Training**

**Technical Support**



Support



**create amazing apps built on web standards**