



+



esri

=



1.



2.



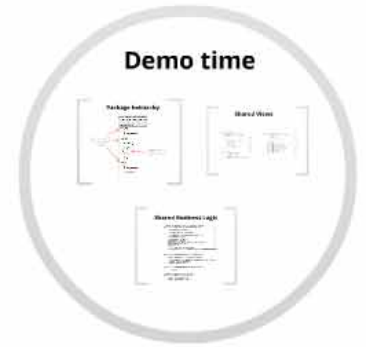
3.



4.



5.





+  **esri** =



1.



2.



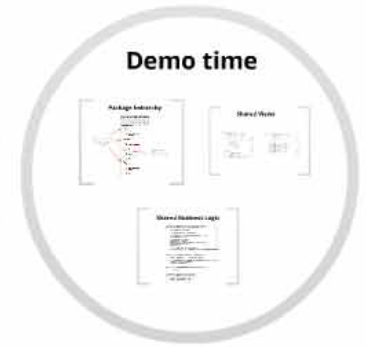
3.



4.



5.



Who am I?

Mike Haggerty

Employer



Turning Data into Insight
since 1991



Contact



@mike_haggerty



<http://github.com/ghoti143>



mhaggerty@gisinc.com

Background



BS in Comp Eng '05

Working as GIS
application developer
since 2006

Working as Flex
developer since 2010

Employer



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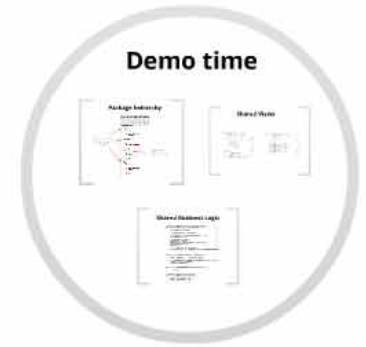
3.



4.



5.



Let's talk about



What kind of ♥ ?



Who's in ♥ ?



What's not to ♥ ?



What kind of ?

desktop love
AIR Desktop

mobile love
AIR Mobile

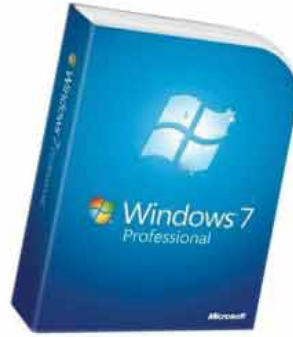


browser love
Flash Player plugin



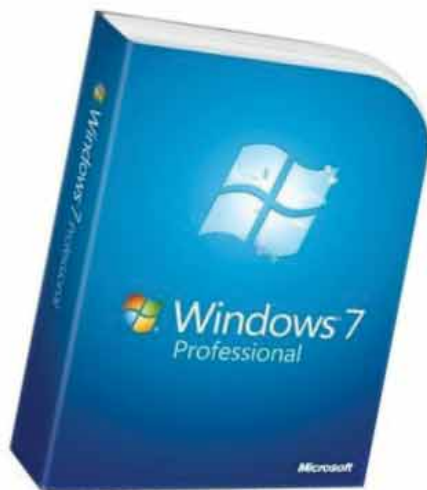
mobile love

AIR Mobile



desktop love

AIR Desktop



browser love

Flash Player plugin



Embedded in Chrome



What kind of ?

desktop love
AIR Desktop

mobile love
AIR Mobile

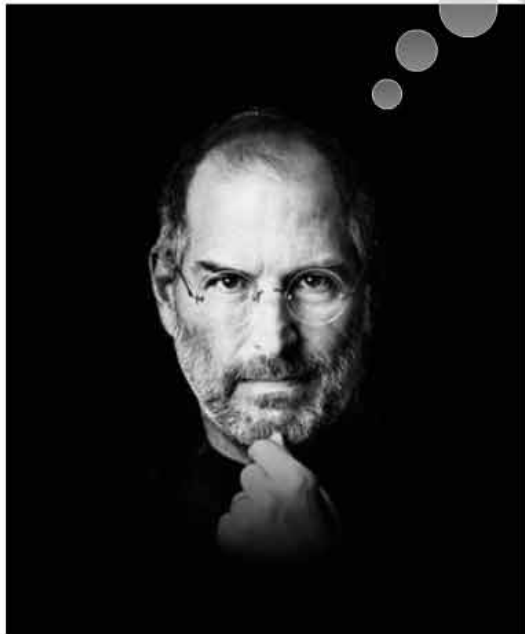


browser love
Flash Player plugin



What's not to ♥ ?





**Flash is old
school**

<http://www.apple.com/hotnews/thoughts-on-flash/>

April, 2010



Lots of drama

(fan boy flame wars)

rea
Pl

tnews

http
/art

orm



November, 2011

Worst PR blunder award 2011



Adobe

vs.



Adobe kills mobile Flash

BUT

reaffirmed commitment to Flash Platform: Mobile AIR, Desktop AIR, Desktop Flash plugin, donates Flex to Apache



<http://www.adobe.com/devnet/flashplatform/articles/recent-updates.html>



November, 2011

What's not to ♥ ?



Who's in  ?



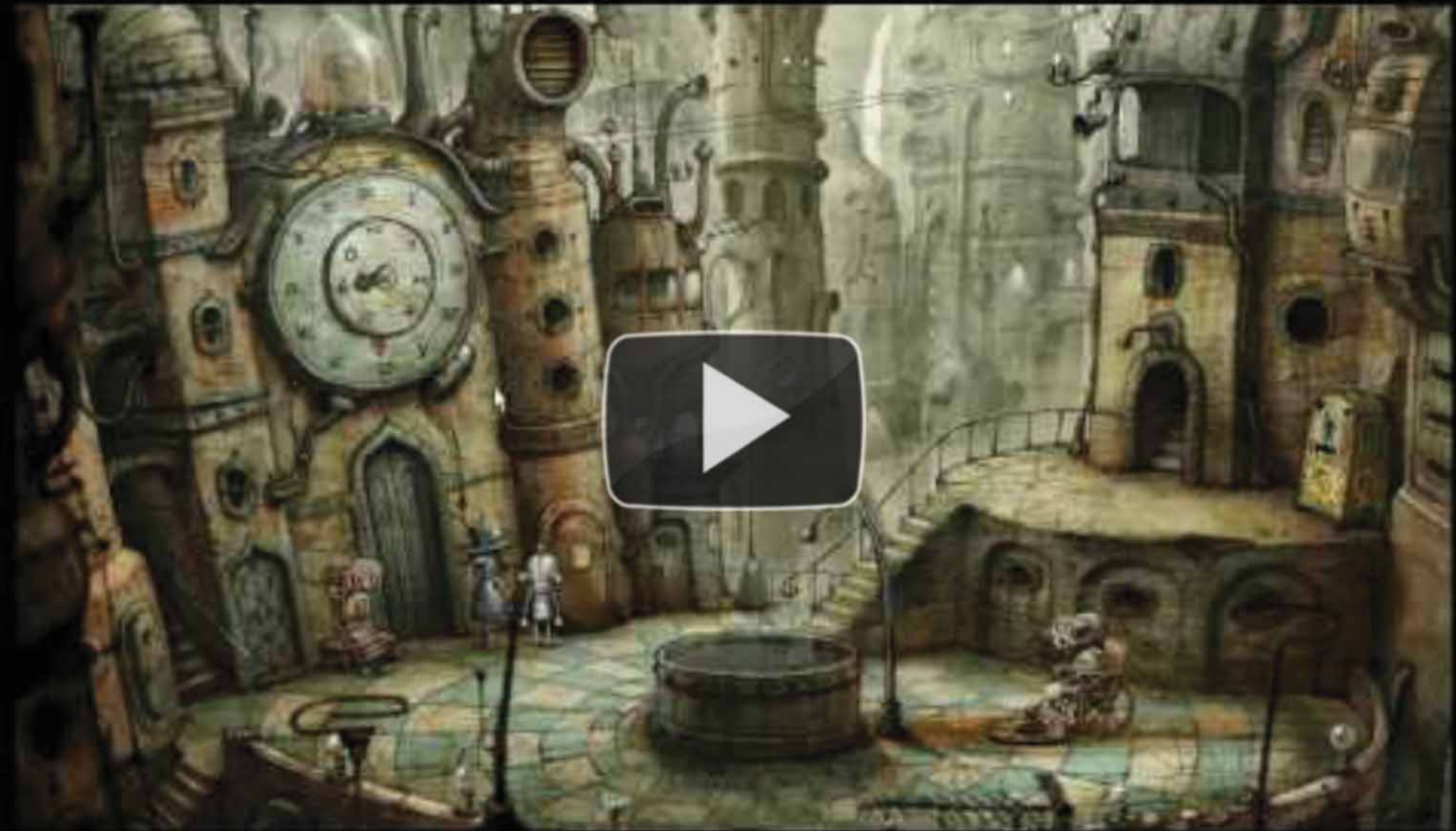
You 
Broadcast Yourself™

 PREZI

 **BlackBerry™**



- Topped Apple Store Paid Apps list
- 4/4 - USA TODAY
- 9/10 - Pocket Gamer
- "Absolutely Fantastic" - TouchArcade



YouTube



Broadcast Yourself™



Who's in  ?



You **Tube**
Broadcast Yourself™

 **PREZI**

 **BlackBerry™**

Let's talk about



What kind of ♥ ?



Who's in ♥ ?



What's not to ♥ ?





+  **esri** =



1.



2.



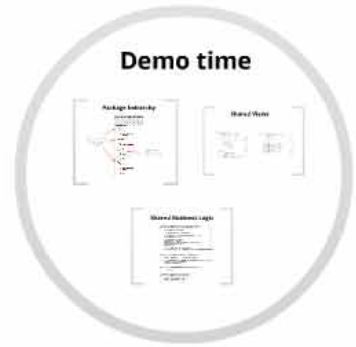
3.



4.



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What about esri

ArcGIS Server REST interface

Rearchitected at version 9.3

http://

Can the client platform make HTTP requests?
Then you can access your spatial data.

API targets the Flex Framework

Wherever a Flex application can be deployed, the ArcGIS for Flex API can join the fun and provide access to your spatial data

ArcGIS for Flex API

- supported since ArcGIS Server 9.3
- powerful API to interface with ArcGIS Server
- well supported and maintained library
- shout out to Bjorn Svensson and his team

version 2.5 released 12/2/2011

(fully sparkified for mobile)

ArcGIS Server REST interface

Rearchitected at version 9.3

The text 'http://' is rendered in a 3D, light blue font with a slight shadow, giving it a floating appearance.

Can the client platform make HTTP requests?
Then you can access your spatial data.

ArcGIS for Flex API

- supported since ArcGIS Server 9.3
- powerful API to interface with ArcGIS Server
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What about esri

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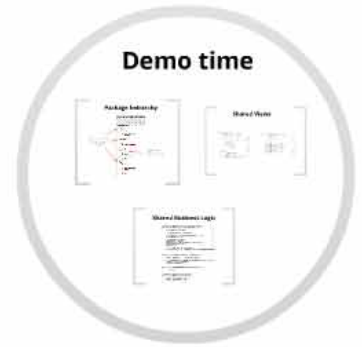
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4.



5.



So what?

Write once, deploy everywhere



The dream of Java is alive.

Option 2



Flex / ActionScript

ADOBE AIR

Option 1



HTML / JS / CSS



Java



C#



Objective C

Write once, deploy everywhere



The dream of Java is alive.

Option 1



HTML / JS / CSS



Java



C#



Objective C



HTML5 guy:

"Sure!"



Java guy:

"Sure!"



Etc...

Manager:

"Hey, can I get a new attribute field added to the info window?"

I see where this is going...

Option 1



HTML / JS / CSS



Java



C#



Objective C

Option 2



Flex / ActionScript



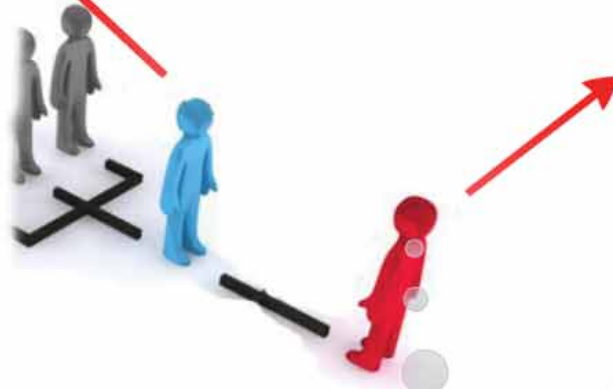
ADOBE AIR™



Flex guy:
No prob!

Manager:

**Hey, can you add an
attribute field to the
info window?**



Yowzers that
was cheap!
Christmas
bonuses for
all!

Option 2



Flex / ActionScript

ADOBE AIR™

So what?

Write once, deploy everywhere



The dream of Java is alive.

Option 2



Flex / ActionScript

ADOBE AIR

Option 1



HTML / JS / CSS



Java



C#



Objective C



+  **esri** =



1.



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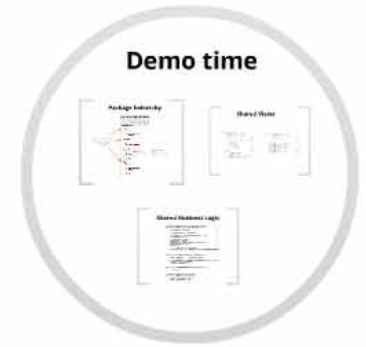
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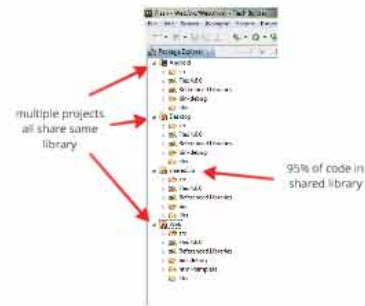


5.



Demo time

Package heirarchy



Shared Views

Two snippets of code representing shared views, each with a vertical label on its right side:

- The first snippet is labeled "MapViewScreen".
- The second snippet is labeled "FastActionBarScreen".

Shared Business Logic

A snippet of code representing shared business logic, with a vertical label on its right side:

- The snippet is labeled "MapController".

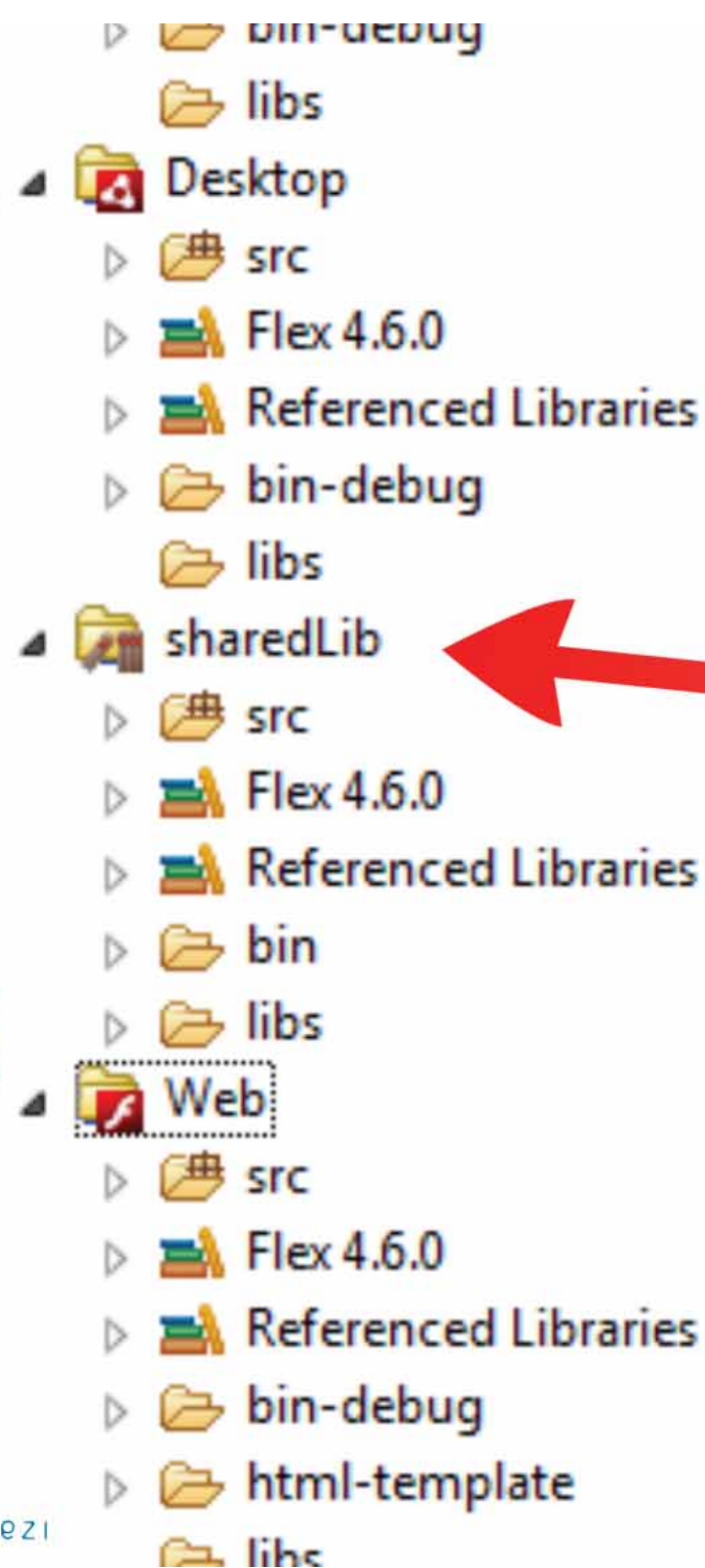
Package hierarchy

The screenshot shows the Package Explorer in Flash Builder with the following structure:


- Android
 - src
 - Flex 4.6.0
 - Referenced Libraries
 - bin-debug
 - libs
- Desktop
 - src
 - Flex 4.6.0
 - Referenced Libraries
 - bin-debug
 - libs
- sharedLib
 - src
 - Flex 4.6.0
 - Referenced Libraries
 - bin
 - libs
- Web
 - src
 - Flex 4.6.0
 - Referenced Libraries
 - bin-debug
 - html-template
 - libs

Annotations:

- Red arrows point from the text "multiple projects all share same library" to the 'libs' folder in the Android, Desktop, and sharedLib packages.
- A red arrow points from the text "95% of code in shared library" to the 'sharedLib' package.



95% of code in shared library



multiple projects
all share same
library



Package Explorer



- Android
 - src
 - Flex 4.6.0
 - Referenced Libraries
 - bin-debug
 - libs
- Desktop
 - src





- bin-debug
- libs
- Desktop
 - src
 - Flex 4.6.0
 - Referenced Libraries
 - bin-debug
 - libs
- sharedLib
 - src





- ▷ bin
- ▷ libs
- ▷ **Web**
- ▷ src
- ▷ Flex 4.6.0
- ▷ Referenced Libraries
- ▷ bin-debug
- ▷ html-template
- ▷ libs

Package hierarchy

The screenshot shows the Package Explorer in Flash Builder with the following structure:

- Android
 - src
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 - libs
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 - Flex 4.6.0
 - Referenced Libraries
 - bin-debug
 - html-template
 - libs

Annotations:

- Red arrows point from the text "multiple projects all share same library" to the 'libs' folder in the Android, Desktop, and sharedLib packages.
- A red arrow points from the text "95% of code in shared library" to the 'sharedLib' package.

Shared Business Logic

```
[EventHandler("MappingEvent.MAP_CLICK", properties="mapPoint")]
public function handleMapClick(event:MapMouseEvent):void
{
    removeCursorAndClickListener();

    var mapPoint:MapPoint = event.mapPoint;

    var qt:QueryTask = new QueryTask(parcelLayerUrl + "/" + event.mapPoint.x + "/" + event.mapPoint.y);
    qt.showBusyCursor = true;

    var query:Query = new Query();
    query.geometry = mapPoint;
    query.spatialRelationship = Query.SPATIAL_REL_INTERSECTS;
    query.returnGeometry = true;
    query.outFields = ["*"];

    var call:AsyncToken = qt.execute(query);
    sh.executeServiceCall(call, queryParcelsResultHdlr, queryParcelsFaultHdlr);
}

private function queryParcelsResultHdlr(fs:FeatureSet):void
{
    mapModel.currentParcel = fs.features[0] as Graphic;

    var e:MappingEvent = new MappingEvent(MappingEvent.PARCEL_DETAILS_LOADED);
    e.graphic = mapModel.currentParcel;
    dispatcher.dispatchEvent(e);
}

private function queryParcelsFaultHdlr(event:FaultEvent):void
{
    // do nothing
}

[EventHandler("MappingEvent.HIDE_INFO_WINDOW")]
public function handleHideInfoWindow():void
{
    mapModel.infoSymbolLayer.clear();
    mapModel.map.panEnabled = true;
}
```

MapController.as

Shared Business Logic

```
[EventHandler("MappingEvent.MAP_CLICK", properties="mapPoint")]
public function handleMapClick(event:MapMouseEvent):void
{
    removeCursorAndClickListener();

    var mapPoint:MapPoint = event.mapPoint;

    var qt:QueryTask = new QueryTask(parcelLayerUrl + "/0");
    qt.showBusyCursor = true;

    var query:Query = new Query();
    query.geometry = mapPoint;
    query.spatialRelationship = Query.SPATIAL_REL_INTERSECTS;
    query.returnGeometry = true;
    query.outFields = ["*"];

    var call:AsyncToken = qt.execute(query);
    sh.executeServiceCall(call, queryParcelsResultHdlr, queryParcelsFaultHdlr);
}

private function queryParcelsResultHdlr(fs:FeatureSet):void
{
    mapModel.currentParcel = fs.features[0] as Graphic;

    var e:MappingEvent = new MappingEvent(MappingEvent.PARCEL_DETAILS_LOADED);
    e.graphic = mapModel.currentParcel;
}
```

MapController.as

```
query.spatialRelationship = Query.SPATIAL_REL_INTERSECTS;  
query.returnGeometry = true;  
query.outFields = ["*"];
```

```
var call:AsyncToken = qt.execute(query);  
sh.executeServiceCall(call, queryParcelsResultHdlr, queryParcelsFaultHdlr);
```

```
}
```

```
private function queryParcelsResultHdlr(fs:FeatureSet):void
```

```
{
```

```
    mapModel.currentParcel = fs.features[0] as Graphic;
```

```
    var e:MappingEvent = new MappingEvent(MappingEvent.PARCEL_DETAILS_LOADED);  
    e.graphic = mapModel.currentParcel;  
    dispatcher.dispatchEvent(e);
```

```
}
```

```
private function queryParcelsFaultHdlr(event:FaultEvent):void
```

```
{
```

```
    // do nothing
```

```
}
```

```
[EventHandler("MappingEvent.HIDE_INFO_WINDOW")]
```

```
public function handleHideInfoWindow():void
```

```
{
```

```
    mapModel.infoSymbolLayer.clear();  
    mapModel.map.panEnabled = true;
```

```
}
```


Shared Views

```
<?xml version="1.0" encoding="utf-8"?>
<s:Group xmlns:fx="http://ns.adobe.com/mxml/2009"
  xmlns:s="library://ns.adobe.com/flex/spark"
  xmlns:esri="http://www.esri.com/2008/ags"
  xmlns:view="com.gisinc.showcase.multiscreen.view.*">
  <fx:Script>
    <![CDATA[
      import com.gisinc.showcase.multiscreen.pm.MapPM;

      [Inject][Bindable]
      public var pm:MapPM;

      [PostConstruct]
      public function init():void
      {
        pm.registerMap(map);
      }
    ]]>
  </fx:Script>
  <esri:Map id="map"
    height="100%" width="100%"
    extent="@{pm.extent}"
    layers="{pm.layers}"/>
  <s:Button top="5" right="5" label="Identify Parcel"
    click="pm.handleIdentifyParcelButtonClick(event)" />
</s:Group>
```

MapView.mxml

```
<?xml version="1.0" encoding="utf-8"?>
<s:VGroup xmlns:fx="http://ns.adobe.com/mxml/2009"
  xmlns:s="library://ns.adobe.com/flex/spark">
  <fx:Script>
    <![CDATA[
      [Bindable]
      public var data:Object
    ]]>
  </fx:Script>
  <s:Label text="Low Parcel ID Number: {data.LOWPARCELID}" />
  <s:Label text="Parcel ID Number: {data.PARCELID}" />
  <s:Label text="Building: {data.BUILDING}" />
  <s:Label text="Unit: {data.UNIT}" />
  <s:Label text="Tax District Code: {data.CVTTXCD}" />
  <s:Label text="Owner Name: {data.OWNERME1}" />
  <s:Label text="Address: {data.PSTLADDRESS}" />
  <s:Label text="City: {data.PSTLCITY}" />
  <s:Label text="State: {data.PSTLSTATE}" />
  <s:Label text="Zip: {data.PSTLZIPS}" />
  <s:Label text="ObjectID: {data.OBJECTID}" />
</s:VGroup>
```

ParcelDataView.mxml

MapView.mxml

```
<?xml version="1.0" encoding="utf-8"?>
<s:Group xmlns:fx="http://ns.adobe.com/mxml/2009"
         xmlns:s="library://ns.adobe.com/flex/spark"
         xmlns:esri="http://www.esri.com/2008/ags"
         xmlns:view="com.gisinc.showcase.multiscreen.view.*">

    <fx:Script>
        <![CDATA[
            import com.gisinc.showcase.multiscreen.pm.MapPM;

            [Inject][Bindable]
            public var pm:MapPM;

            [PostConstruct]
            public function init():void
            {
                pm.registerMap(map);
            }
        ]]>
    </fx:Script>

    <esri:Map id="map"
              height="100%" width="100%"
              extent="@{pm.extent}"
              layers="{pm.layers}"/>

    <s:Button top="5" right="5" label="Identify Parcel"
             click="pm.handleIdentifyParcelButtonClick(event)" />

</s:Group>
```

ParcelDataView.mxml

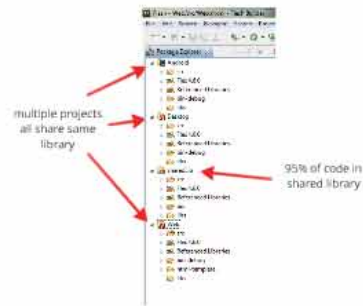
```
<?xml version="1.0" encoding="utf-8"?>
<s:VGroup xmlns:fx="http://ns.adobe.com/mxml/2009"
          xmlns:s="library://ns.adobe.com/flex/spark">
  <fx:Script>
    <![CDATA[
      [Bindable]
      public var data:Object
    ]]>
  </fx:Script>

  <s:Label text="Low Parcel ID Number: {data.LOWPARCELID}" />
  <s:Label text="Parcel ID Number: {data.PARCELID}" />
  <s:Label text="Building: {data.BUILDING}" />
  <s:Label text="Unit: {data.UNIT}" />
  <s:Label text="Tax District Code: {data.CVTTXCD}" />
  <s:Label text="Owner Name: {data.OWNERNAME1}" />
  <s:Label text="Address: {data.PSTLADDRESS}" />
  <s:Label text="City: {data.PSTLCITY}" />
  <s:Label text="State: {data.PSTLSTATE}" />
  <s:Label text="Zip: {data.PSTLZIP5}" />
  <s:Label text="ObjectID: {data.OBJECTID}" />

</s:VGroup>
```

Demo time

Package heirarchy



Shared Views

Two snippets of code, likely XML or HTML, representing shared views. The first snippet is labeled "MapViewScreen" and the second is labeled "FavoriteScreenViewScreen".

Shared Business Logic

A snippet of code representing shared business logic, likely in Java or Kotlin, showing a class with various methods and annotations.



Flex guy:

No prob!

Manager:

**Hey, can you add an
attribute field to the
info window?**



Yowzers that
was cheap!
Christmas
bonuses for
all!



+  **esri** =



1.



2.



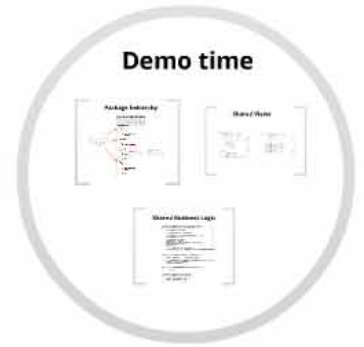
3.



4.



5.



Your moment of zen



YouTube



YouTube