Cairngorm for Adobe AIR Applications

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Today's Agenda

- Examine a Basic Cairngorm AIR Application
- Examination of Current AIR + Cairngorm Tools
- Using **AIRCairngorm** and Example
- Using **CairngormPeak** and Example
- Questions and Input

About Me

- Web Developer at Georgia Tech Savannah
- Author and blogger at **InsideRIA.com**
- Author for the Adobe AIR Developer Center
- Blogger at **DavidTucker.net**
- Flex developer since Flex 2
- AIR Developer since Apollo Alpha

What is Cairngorm?

1. MVCS application micro-architecture for Flex applications

2. Created by Iteration:Two (which became Adobe Consulting)

3. Industry standard Flex framework

How Do I Learn It?

1. DavidTucker.net tutorials
   http://www.davidtucker.net/category/cairngorm/

2. Adobe Developer Center
   http://www.adobe.com/devnet/flex/articles/cairngorm_pt1.html

3. Jeffry Houser's Tutorials
   http://www.jeffryhouser.com/index.cfm/2007/2/15/How-do-you-learn-Cairngorm

4. CairngormDocs.org
   http://www.cairngormdocs.org/

Isn't Cairngorm fine for AIR

- Cairngorm will continue to let you do anything that you could do in Flex

- Cairngorm won't stop you from adding AIR API calls in your application (clipboard, file system, connection monitoring, SQLConnection)

- Adding these items in Cairngorm can lead to repetitive code and broken MVCS structure

Current AIR / Cairngorm Tools

- **AIR Cairngorm** (Eric Feminella)
  http://www.ericfeminella.com/blog/air-cairngorm/

- **Cairngorm Peak** (David Tucker)
  http://www.cairngormpeak.com

AIR Cairngorm

AIRCairngorm is an extension framework for Cairngorm that allows you to work with the local SQLite DB like a service. It is comprised of three classes and two interfaces

1. AIRServiceLocator

2. SQLService

3. SQLStatementHelper

4. ISQLResponder

5. ISQLStatementResource

AIRServiceLocator

- Extends standard Cairngorm ServiceLocator

- Adds support for working with the local relational database

- AIRCairngorm also contains IAIRServiceLocator for custom implementations

SQLService

- Wrapper for local relational database functionality *(specifically SQLConnection and SQLStatement)*

- Allows you to interact with database as if it were a service

SQLStatementHelper

- Utilizes the StringUtil.substitute() method to replace tokens in an SQL statement with specific values

- Designed to work in conjunction with queries defined in a class that implements the ISQLStatementResouce interface

ISQLResponder

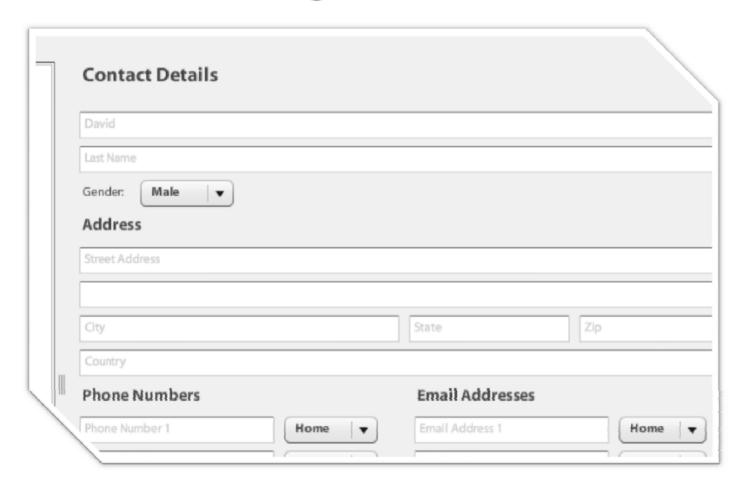Strongly typed version of IResponder specific to
SQLStatement calls

ISQLStatementResource

Marker interface (no methods defined) which
designates a class that contains a ResourceBundle
of SQL queries

AIR Cairngorm Example

Cairngorm Peak is a collection of classes that are meant to reside on top of a Cairngorm project to extend the Cairngorm architecture's capability to AIR-specific functionality. **Note:** *This is not an Adobe project.*

Targeted Release: April 2008

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CairngormPeak Focus

Some of the items on the CairngormPeak roadmap:

- **SQL Service interaction** (with both asynchronous and synchronous services)

- **Command line controller**

- **File I/O Services** (with both asynchronous and synchronous services)

- **AIRServiceLocator** (supporting new types of services)

Preview: InvokeController

The **InvokeController** adds the AIR **InvokeEvent** and **BrowserInvokeEvent** into the Cairngorm event workflow.

Adding a Command
```
addCommand( "addContact", AddContactCommand );
```

Adding an InvokeController
```
<control:InvokeController
    registerInvokeEvents="true"
    registerBrowserInvokeEvents="true" />
```

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InvokeController Example

```
import com.adobe.cairngorm.CairngormError;
import com.cairngormpeak.events.*;

import flash.desktop.NativeApplication;
import flash.events.BrowserInvokeEvent;
import flash.events.InvokeEvent;

public class InvokeController extends FrontController {

    public static const DEFAULT:String = "Default Command";

    public function InvokeController() {

        NativeApplication.nativeApplication.addEventListener( InvokeEvent.INVOKE, onInvoke );
        NativeApplication.nativeApplication.addEventListener( BrowserInvokeEvent.BROWSER_INVOKE,

    }

    protected function onInvoke( event:InvokeEvent ):void {
        executeCommand( new CairngormInvokeEvent( event ) );
    }

    protected function onBrowserInvoke( event:BrowserInvokeEvent ):void {
        executeCommand( new CairngormBrowserInvokeEvent( event ) );
    }
```

Highrise AIR AS3 API

I will be looking for Beta testers for the new **Highrise** ActionScript 3 API. Contact me if you are interested.

* This is API is currently only compatible with AIR applications.

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Wrapping Up

Email: david@davidtucker.net

Blog: http://www.davidtucker.net

Blog: http://www.insideria.com

All of the code examples for this presentation can also be retrieved at http://www.davidtucker.net/presentations/

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