



ColdBox LITE

Lightweight MVC

COLDBOX

Who am I?



- ✦ Luis Majano - Computer Engineer
- ✦ Born in El Salvador
- ✦ Architecture + Software Design
- ✦ CEO of Ortus Solutions
- ✦ Manager of the IECFUG (www.iecfug.com)
- ✦ Open CFML Foundation



Agenda

- ✦ Why ColdBox LITE
- ✦ What is ColdBox LITE
- ✦ Features
- ✦ How does it work
- ✦ Cool Demo



Why ColdBox LITE?



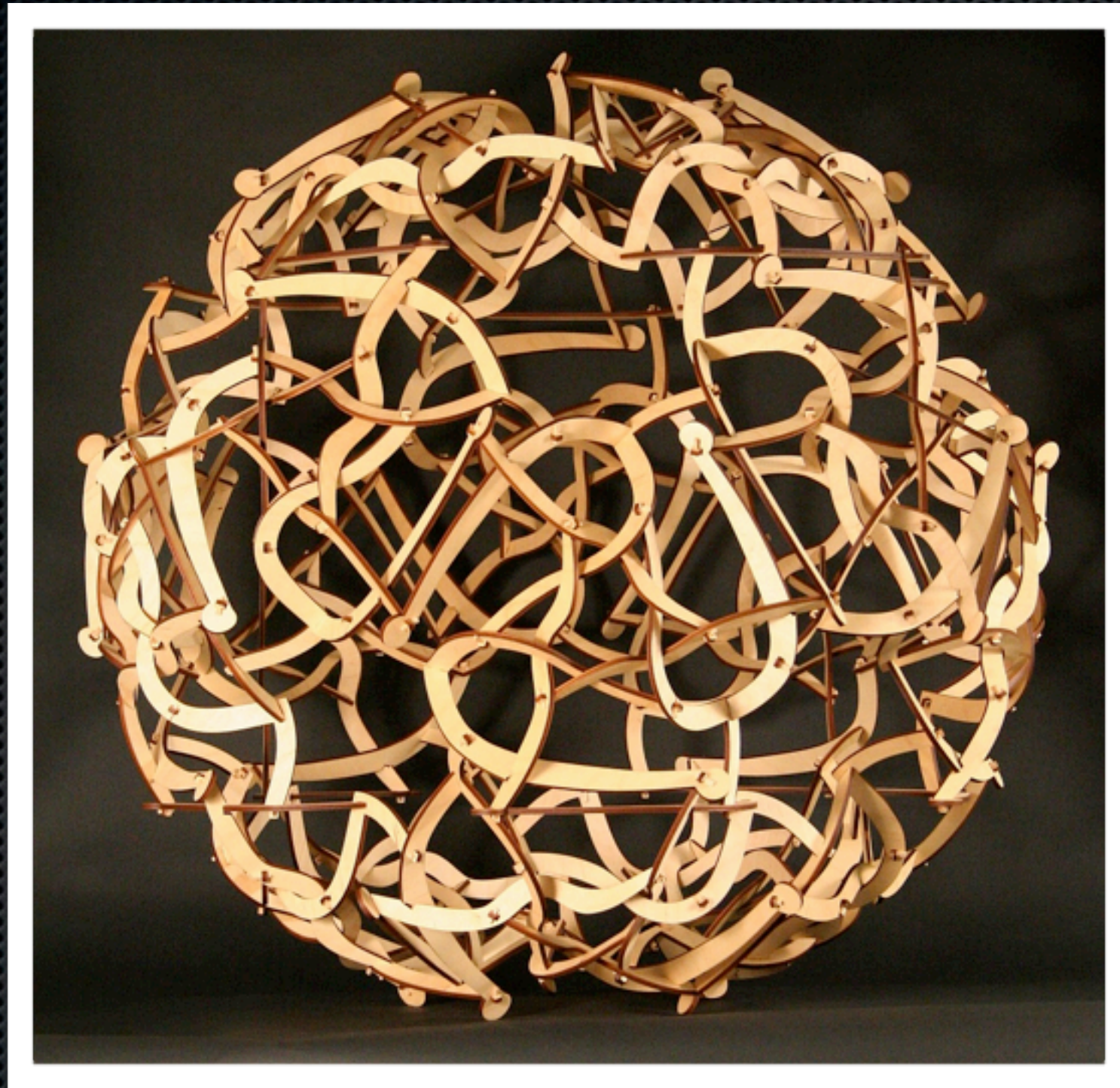
Cause it sounds cool?

The Why's

- ✦ MVC is our core
- ✦ Offer all parts as standalone
- ✦ MVC was the last piece
- ✦ Lower entry barrier
- ✦ Fully documented
- ✦ Training & Professionally Supported



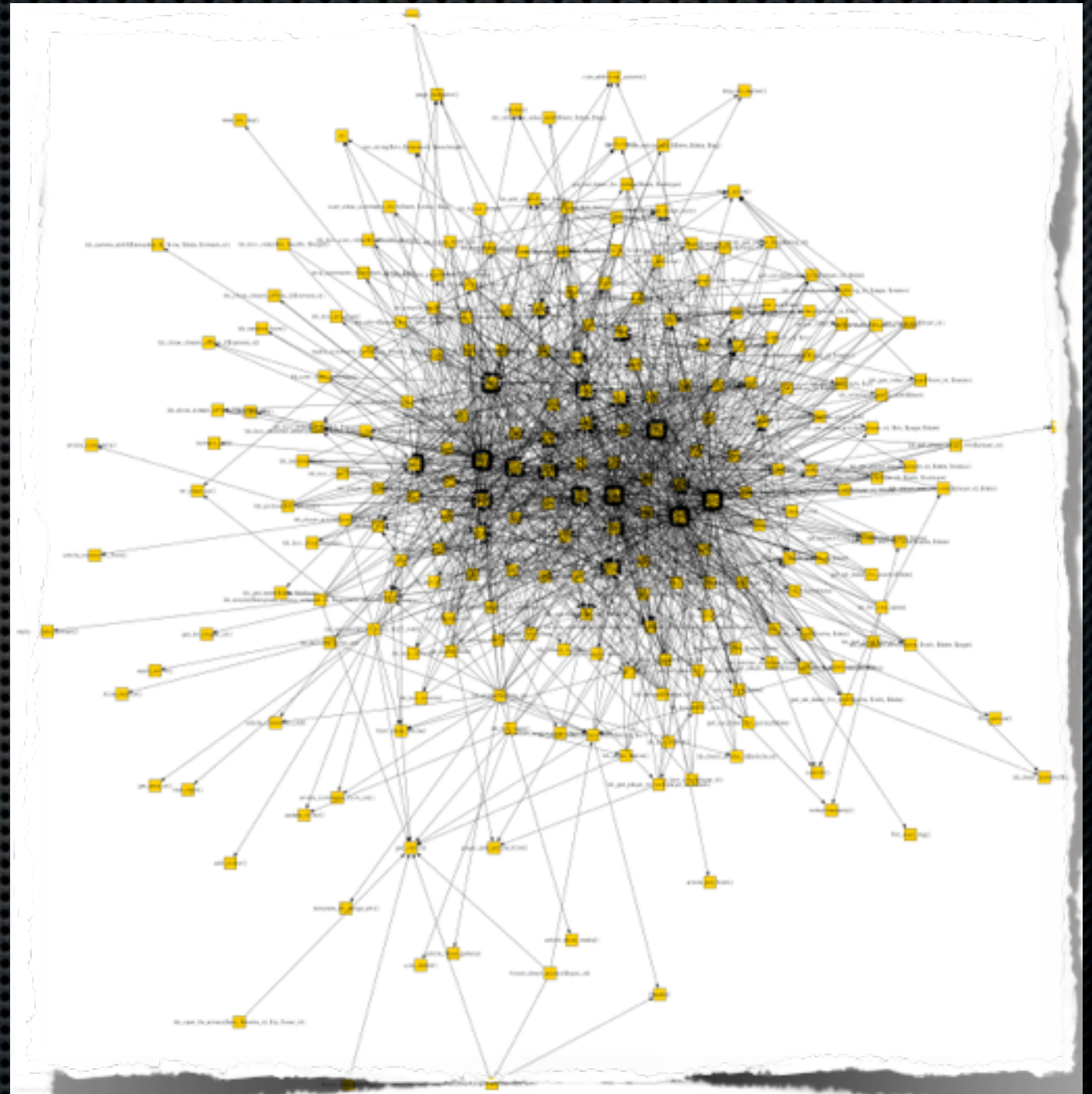
Why use a framework?



Spaghetti code is not flexible, no matter what they say!

What about my own framework?

- ✧ Is it documented?
- ✧ Follow best practices?
- ✧ Apply MVC methodology?
- ✧ Is it object oriented?
- ✧ Load tested?
- ✧ Security tested?
- ✧ Unit Tested?
- ✧ Does it scale?
- ✧ Is it modular?



Frameworks a silver bullet?

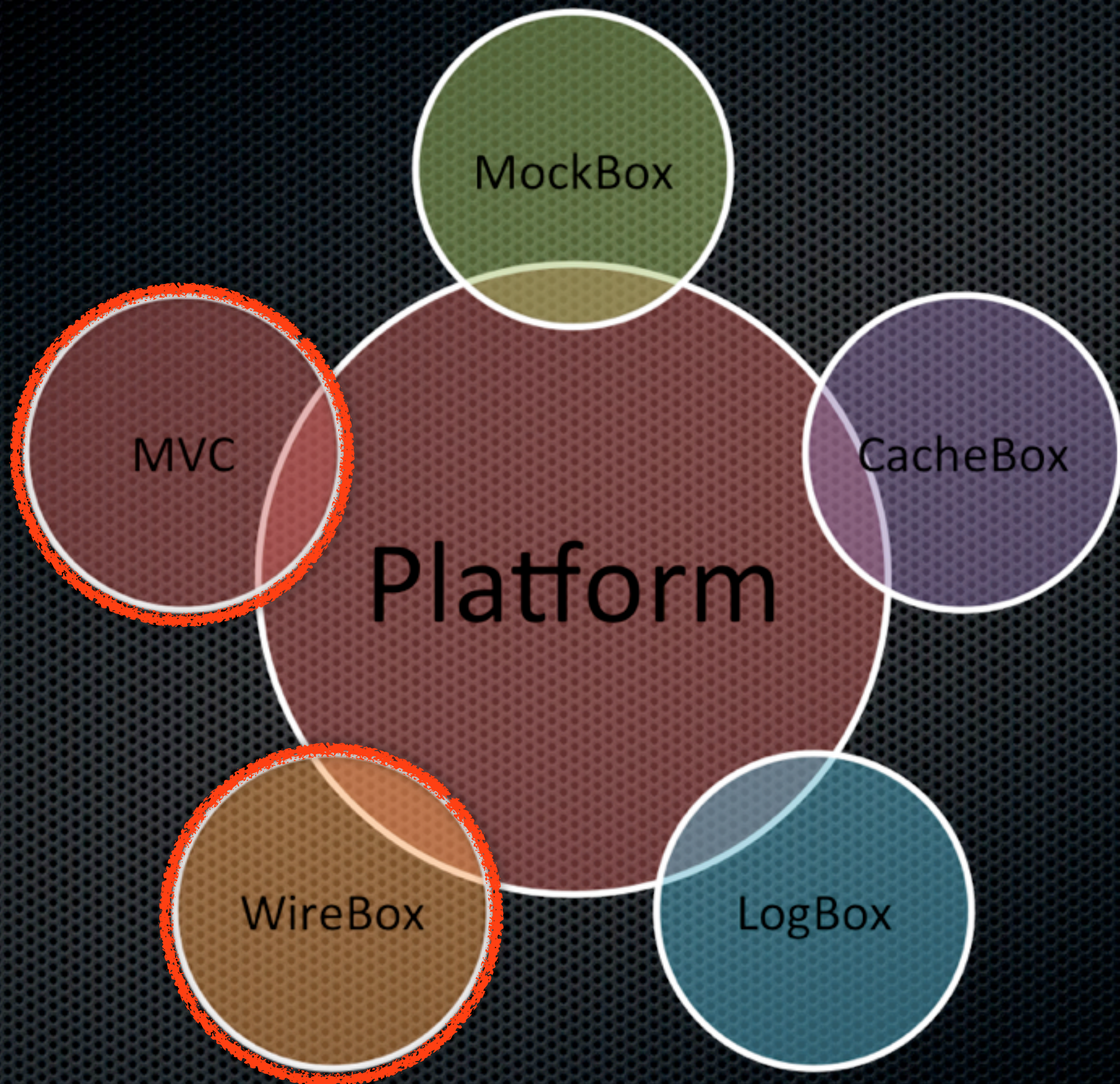
- **Of course not!**
- Libraries that help you accomplish tasks
- Any library is a framework!
- Important Aspects:
 - Tested
 - MVC
 - OO
 - Documented
 - Achieve Reusability
- Of course they introduce more complexity
- You choose to evolve or not!



What is ColdBox LITE?



A mini ColdBox?



ColdBox Platform Overview

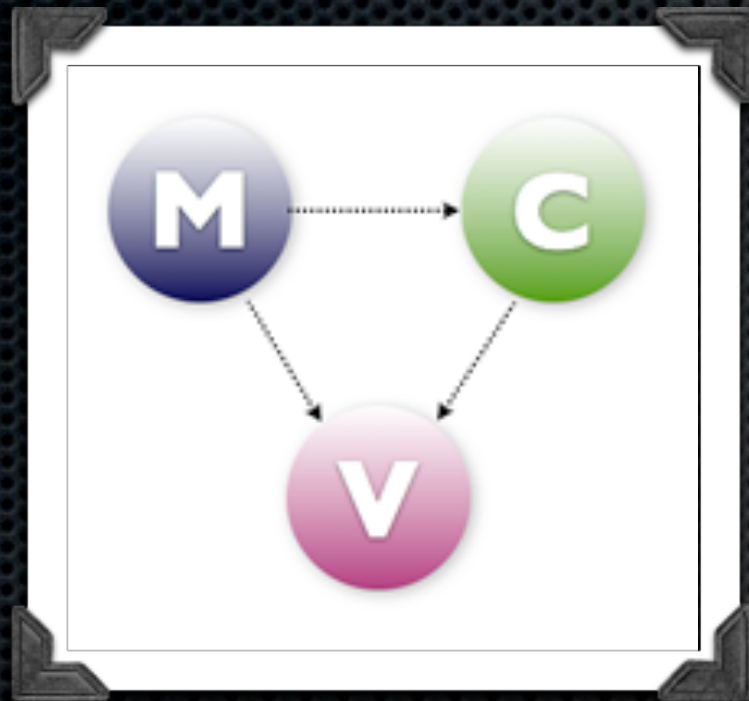
ColdBox LITE Flavors?



Strawberry and
Lime?

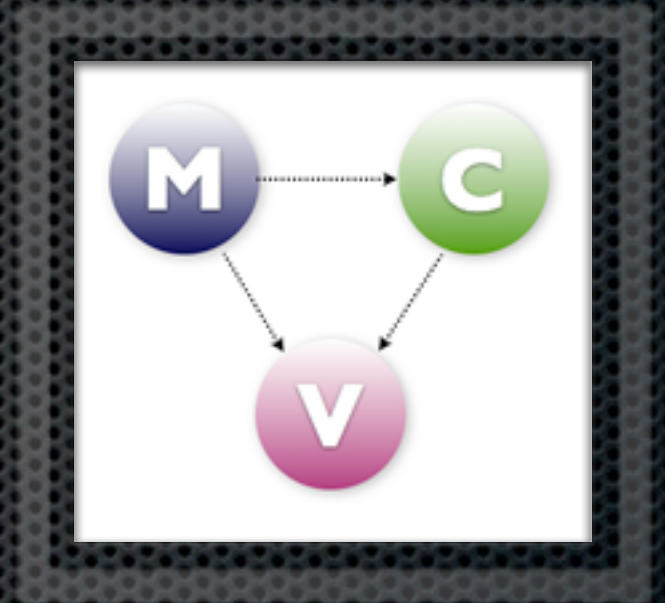
Standard

With ORM



Standard Features

- ✦ Lightweight MVC Conventions
- ✦ Basic Tier Control
- ✦ Skinning Layout Support
- ✦ RESTFul Data
- ✦ Dependency Injection
- ✦ Great for small or simple projects
- ✦ Lower entry barrier
- ✦ Easy upgrade path to ColdBox Platform





Base ORM Services

Virtual Entity Services

Active Entity

ORM Event Handlers

Criteria Builder

Detached Criteria

Entity Populators

Does not include...

- ✦ Plugins
- ✦ Interceptors
- ✦ Modules
- ✦ Validation
- ✦ RESTful Routing and Mapping
- ✦ Flash RAM
- ✦ CacheBox
- ✦ Testing Facilities
- ✦ MockBox
- ✦ AOP
- ✦ ColdBox Proxy
- ✦ i18n

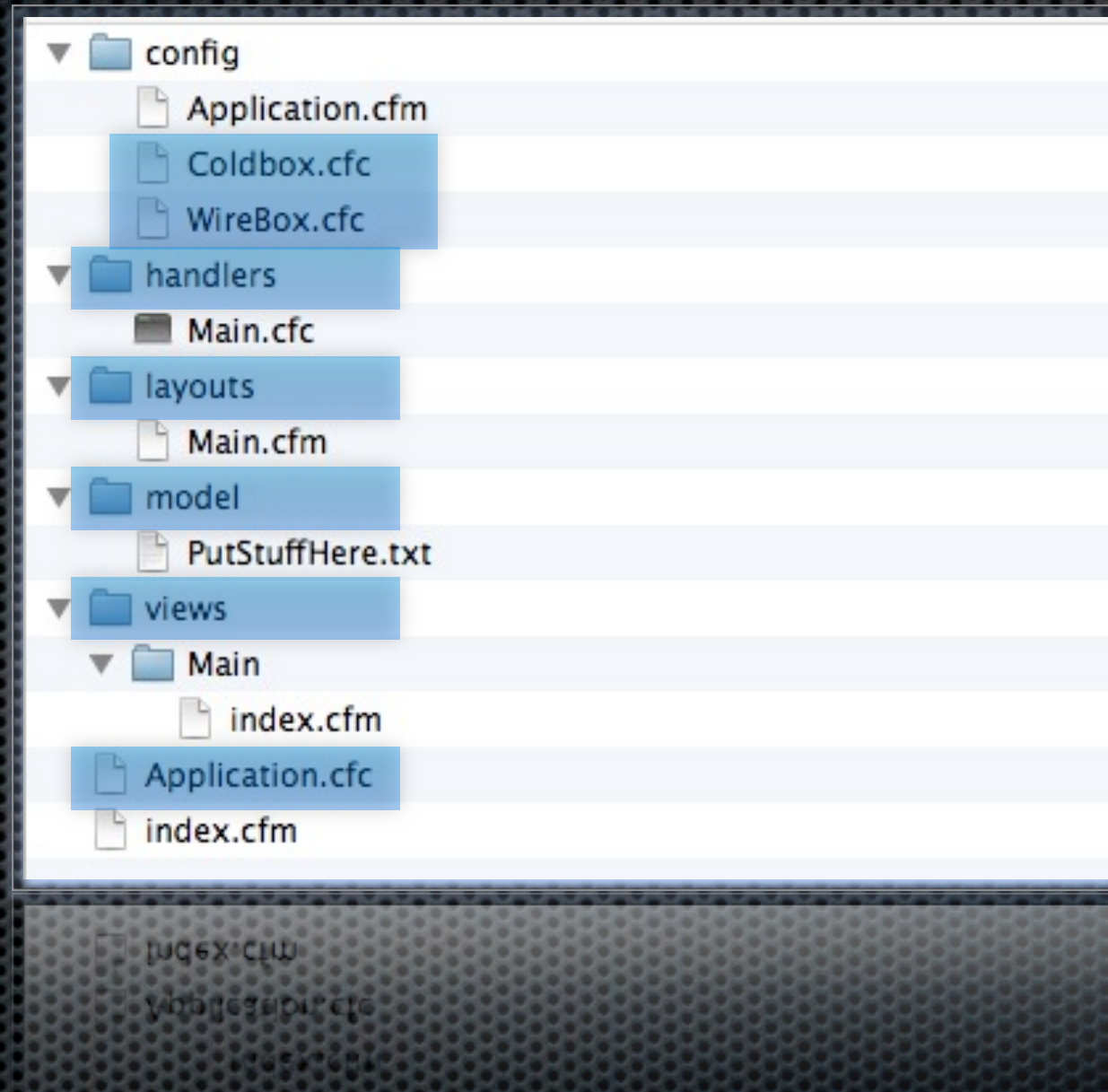


How does it work?

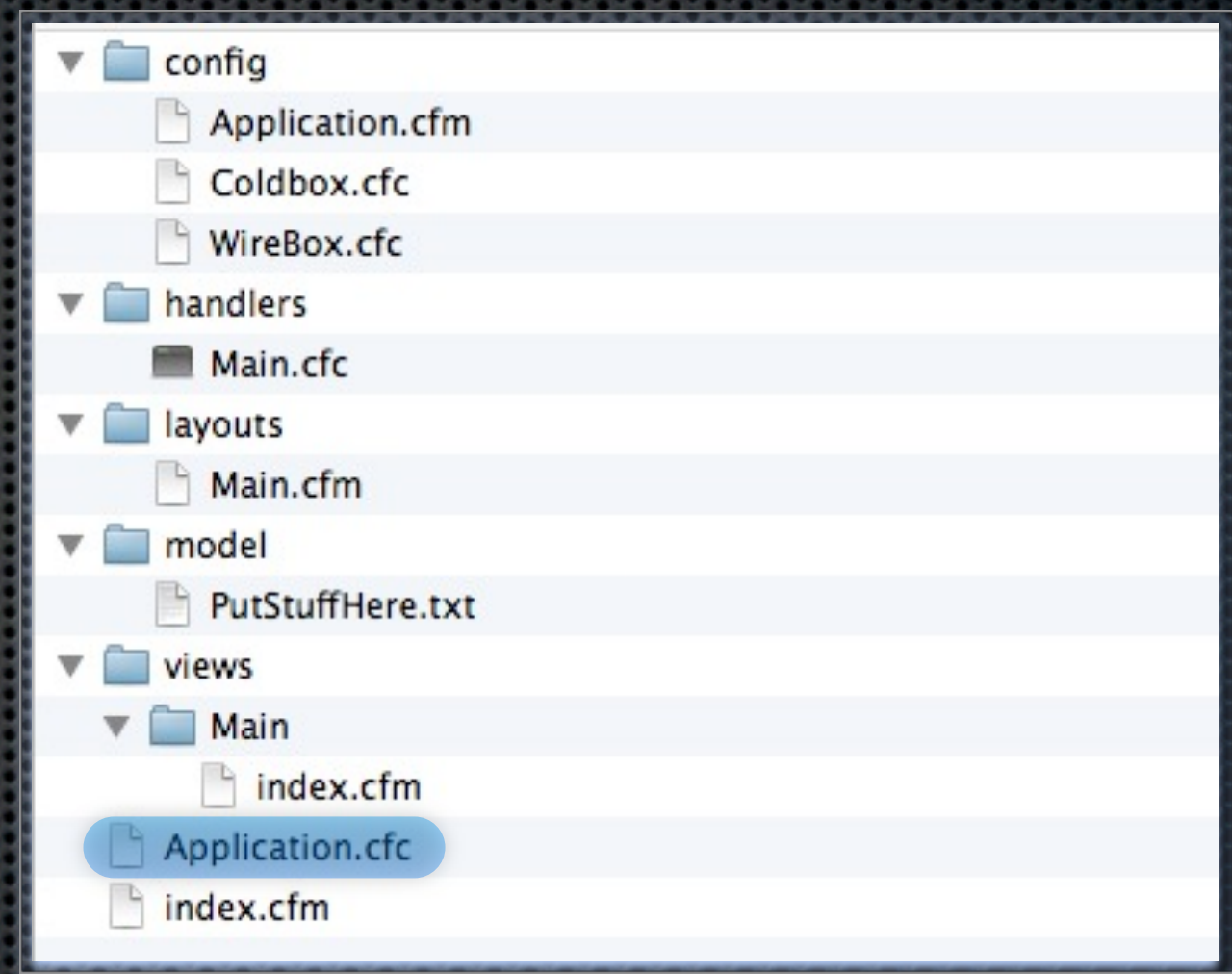
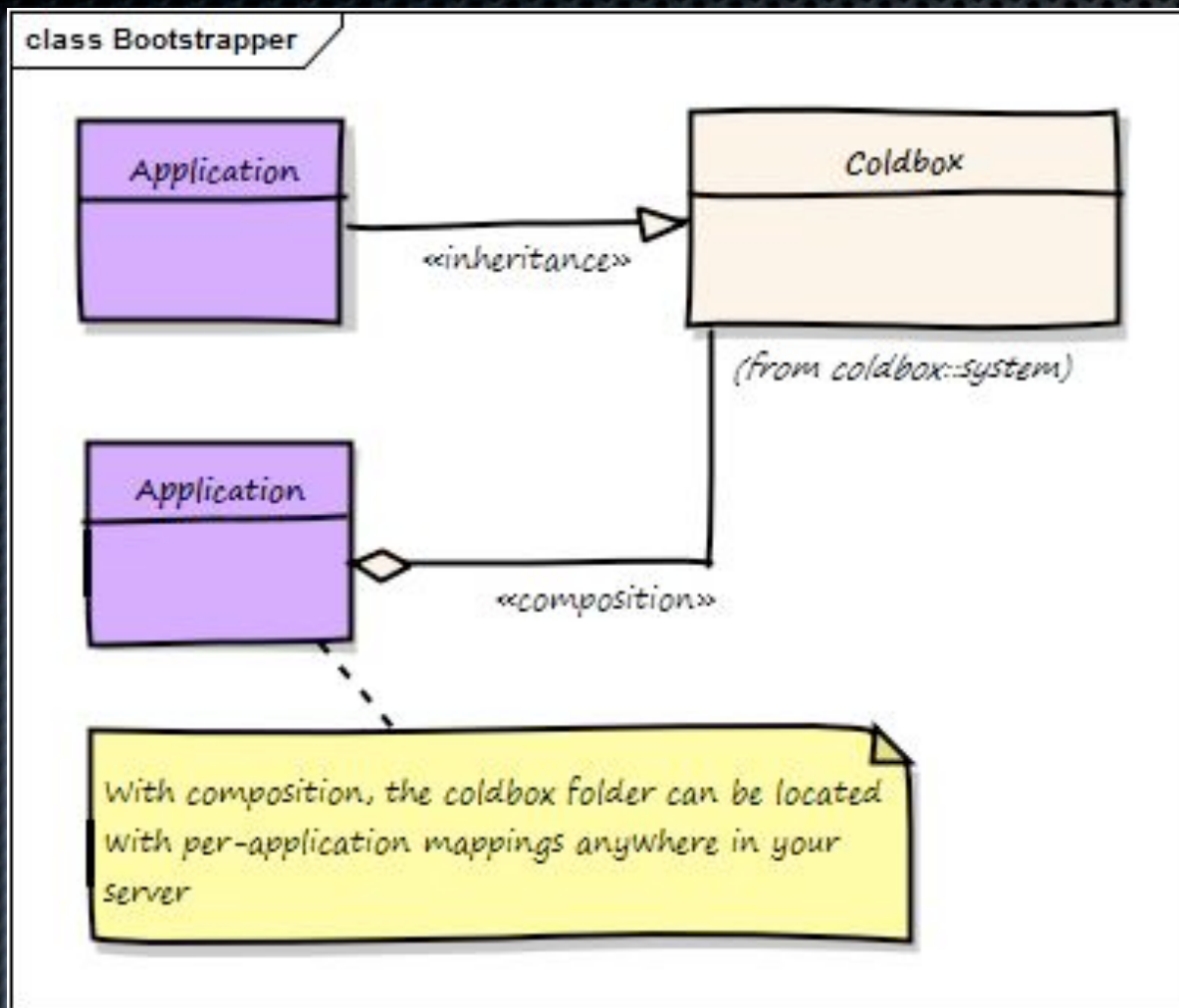


Mind control?

Folder Conventions



Bootstrap -> Application.cfc

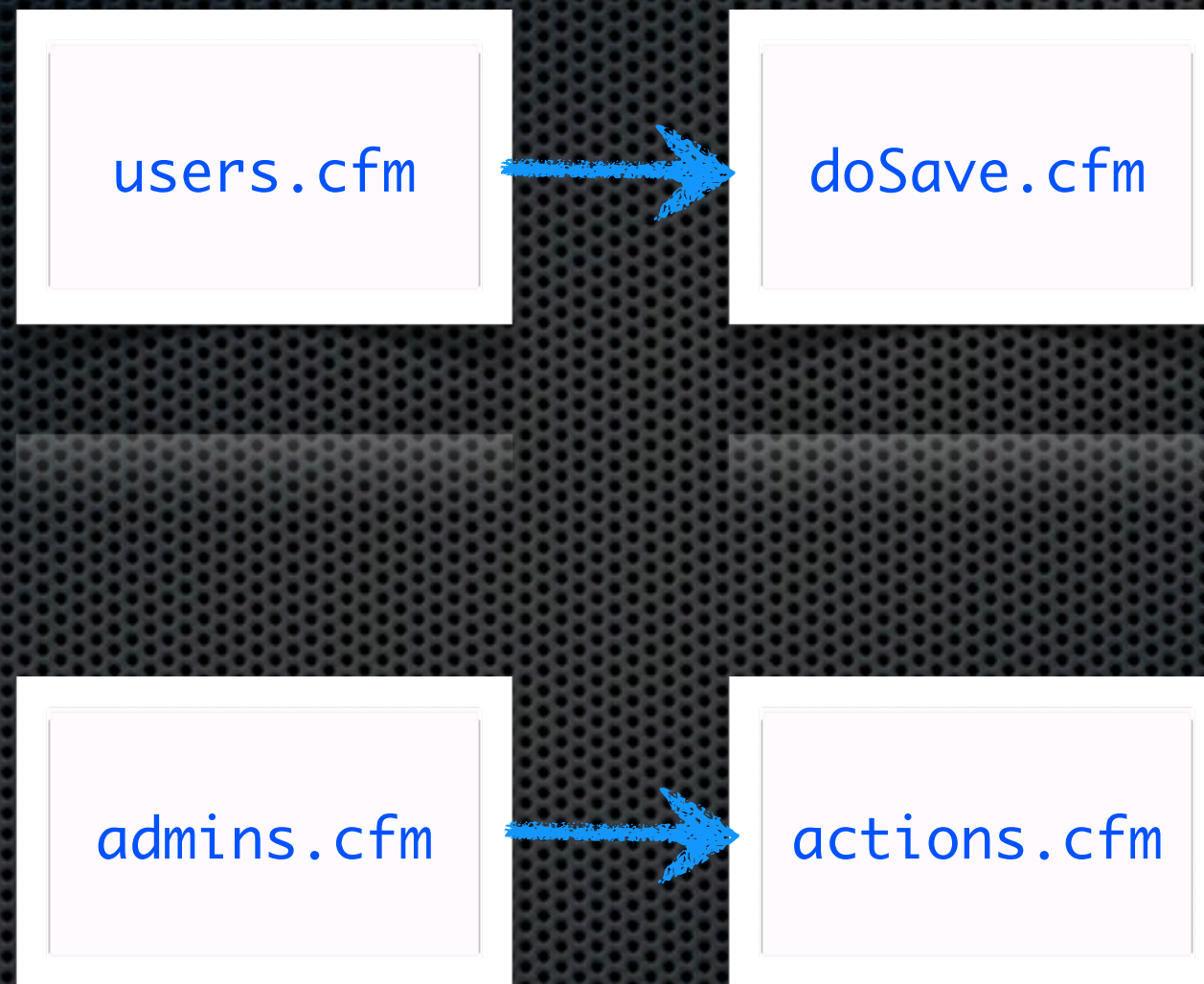


index.cfm
application.cfc
index.cfm

Simplest Application.cfc

```
component extends="coldbox.system.mvc.Bootstrap" {  
  
    // Application Properties  
    this.name = "My CBLite App";  
  
}
```


Procedural Templates



Procedural Templates

```
<cfparam ...  
<cfparam ...
```

```
<cfif varaction eq "submit">  
  ..Validation..  
  .. Call include/module/CFC  
  .. Query
```

```
<cfelseif varaction eq "">  
  .. Validation..  
  .. Get data ... Query  
</cfif>  
<html>  
<head></head>
```

```
<body>
```

```
</body>  
</html>
```

Business Logic (M)

Controller Logic (C)

View Logic (V)

MVC is all about separation

Front Controller



`index.cfm?event=users.list`

`handlers/users.cfc`



`list(event,rc,prc)`

`[package.]handler[action]`

Default Events / Actions



index.cfm

main.index or coldbox.defaultEvent

index.cfm?event=users

handlers/users.cfc -> index()

Event Conventions



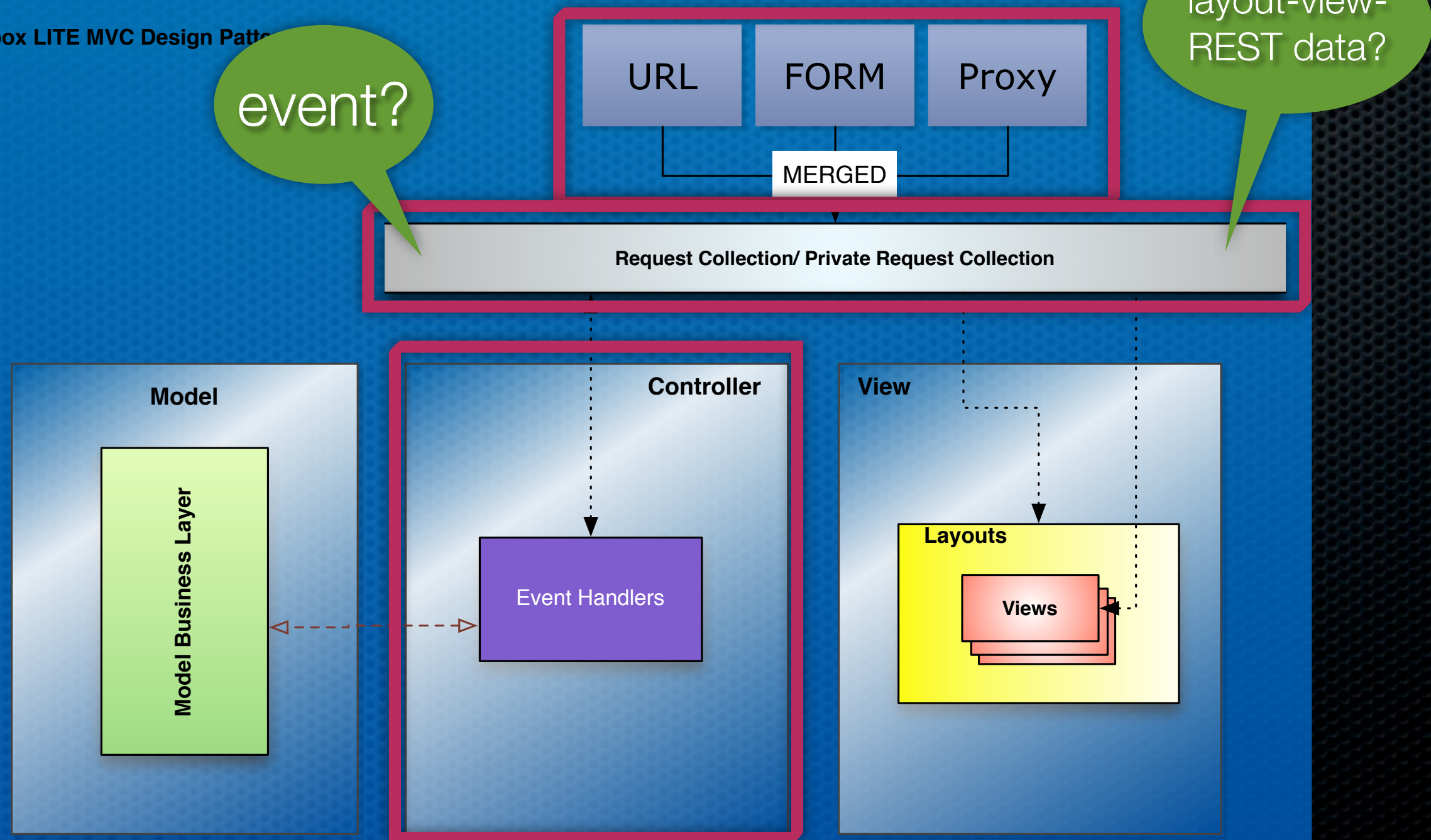
main.index -> Default Event

index() -> Default Action

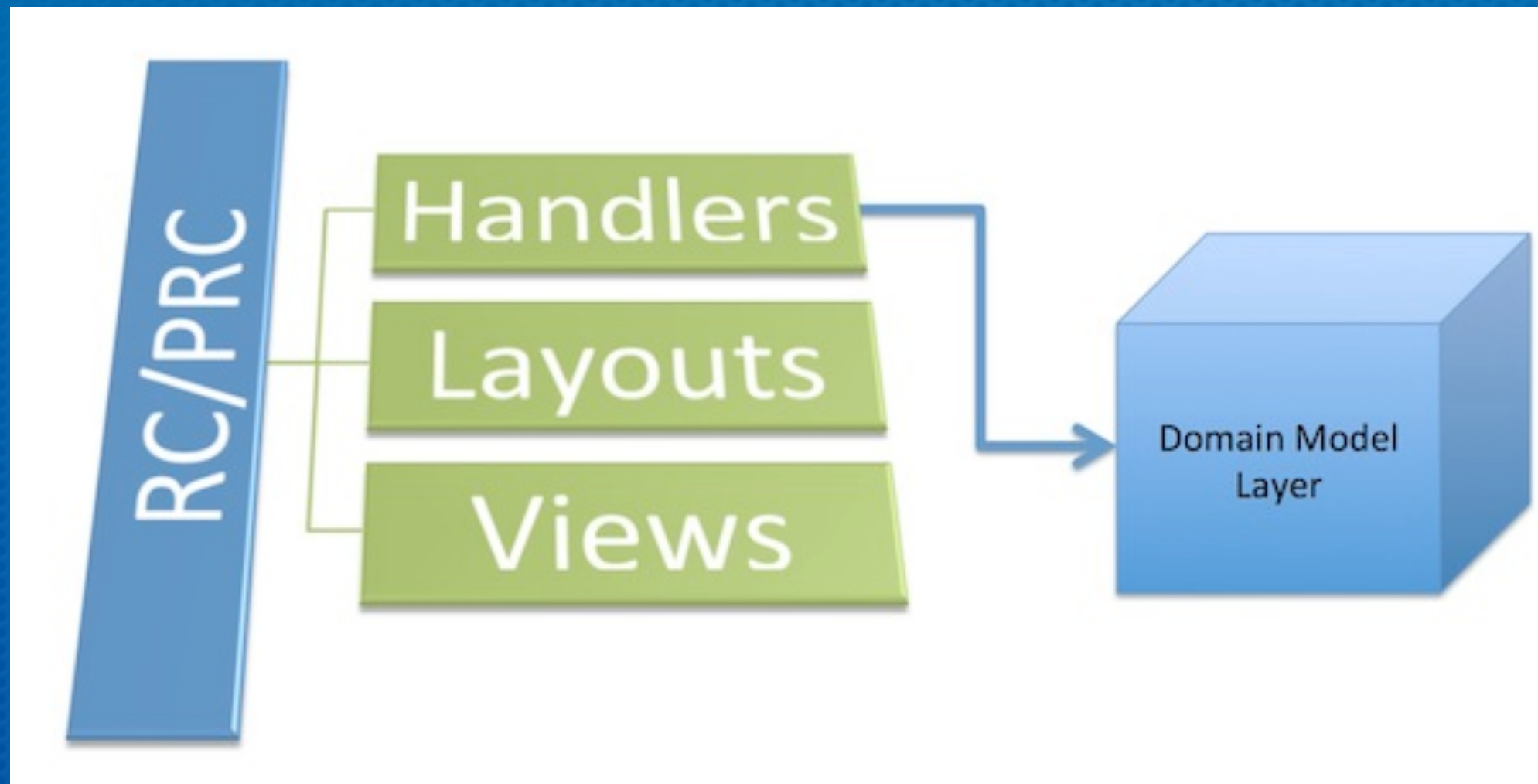
ColdBox Simple Request



The Coldbox LITE MVC Design Pattern



RC - PRC



Controllers

- ✦ Event Handlers
- ✦ */handlers*
- ✦ Written as CFCs
- ✦ Public methods = **actions**
- ✦ DI capable already



```
function action(event, rc, prc){}
```


Sample Handler



```
component name="users"{
```

```
  this.allowedMethods = { index = "GET", list = "GET", save = "POST,PUT" };
```

```
  function index(event,rc,prc){  
    return "<h1>howdy stranger!</h1>";  
  }
```

Where is the view?

```
  function list(event,rc,prc){  
    prc.users = getModel("UserService").list();  
  }
```

```
  function details(event,rc,prc){  
    prc.user = getModel("UserService").get( event.getValue("userID",0) );  
    event.setView(view="users/details", layout="contactCard");  
  }
```

```
  function save(event,rc,prc){  
    var service = getModel("UserService");  
    var user = populateModel( service.get( event.getValue("userID",0) );  
    us.save( user );  
    setNextEvent( "users" );  
  }
```

```
}
```


Sample Handler

```
component name="users" singleton{  
    property name="service" inject="UserService";  
  
    this.allowedMethods = { index = "GET", list = "GET", save = "POST,PUT" };  
  
    function index(event,rc,prc){  
        return "<h1>howdy stranger!</h1>";  
    }  
  
    function list(event,rc,prc){  
        prc.users = service.list();  
        event.setView("users/list");  
    }  
  
    function details(event,rc,prc){  
        prc.user = service.get( event.getValue("userID",0) );  
        event.setView(view="users/details", layout="contactCard");  
    }  
  
    function save(event,rc,prc){  
        var user = populateModel( service.get( event.getValue("userID",0) );  
        service.save( user );  
        setNextEvent( "users" );  
    }  
}
```


Actions by Convention

✦ **Handler Actions**

- ✦ `onError()`
- ✦ `pre/postHandler()`
- ✦ `pre/post{Action}()`
- ✦ `aroundHandler`
- ✦ `around{Action}`
- ✦ `onMissingAction()`



Handler HTTP Security

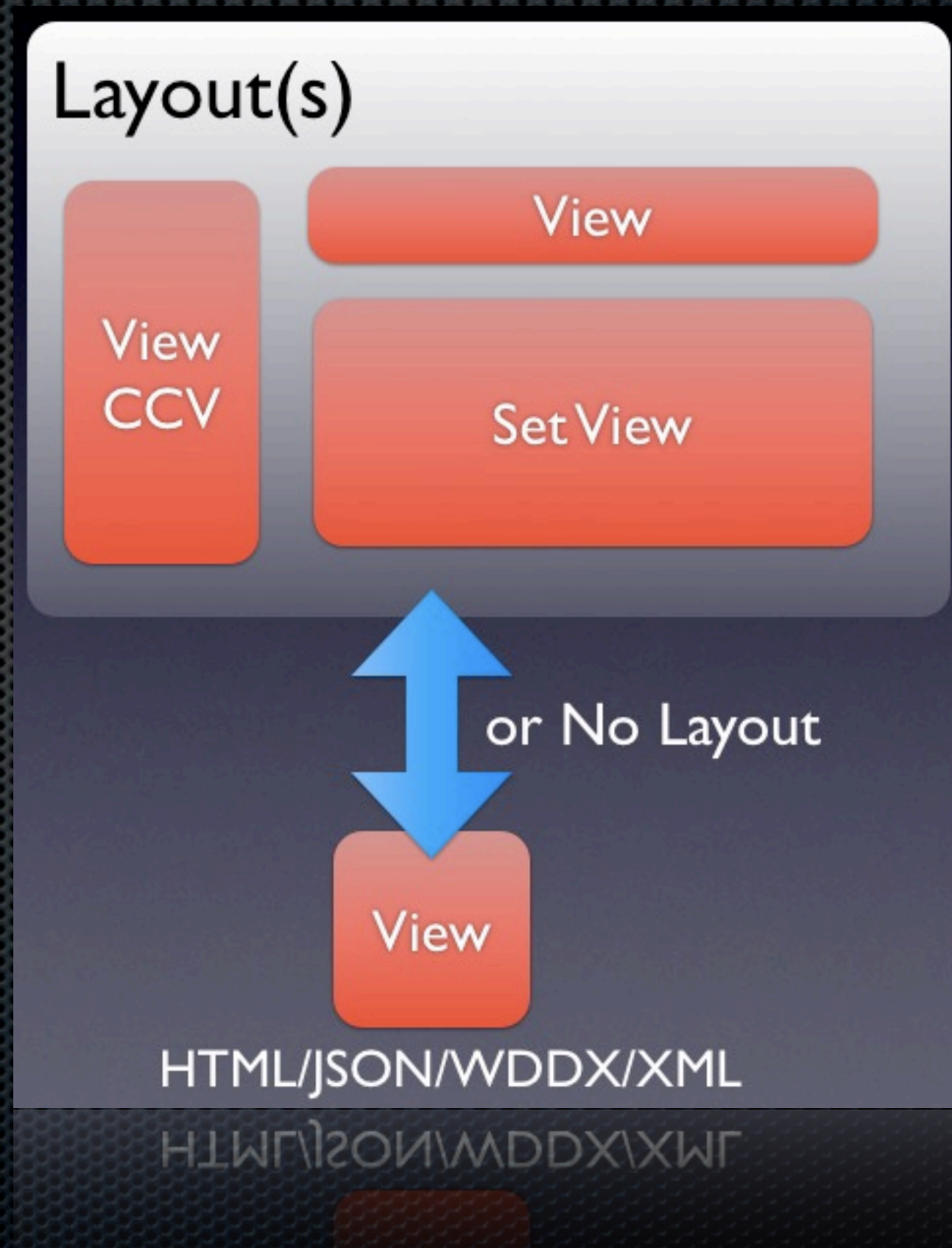


- ✦ **this.allowedMethods**
 - ✦ **Key** = action
 - ✦ **Value** = List HTTP verbs
- ✦ Invalid throws a 403 Security Exception
- ✦ onError(), onMissingAction()

```
component{  
  
    this.allowedMethods = {  
        delete = "POST,DELETE"  
        list    = "GET"  
    };  
  
    function list(event,rc,prc){  
        // list only  
    }  
  
    function delete(event,rc,prc){  
        // do delete here.  
    }  
  
    function onError(event,faultAction,exception){  
        // handle errors uniformly here  
    }  
  
    function onMissingAction(event,missingAction){  
        // handle missing actions  
    }  
  
}
```


Layouts & Views

- ✦ Layouts
 - ✦ */layouts*
 - ✦ Unlimited #
 - ✦ Descriptive HTML
 - ✦ Nested
- ✦ Views
 - ✦ */views*
 - ✦ Unlimited #
- ✦ Rendered on demand
- ✦ Multiple renderings



Sample Layout



```
<html>
<body>

  <div id="header">#renderView("tags/header")#</div>

  <div id="content">#renderView()#</div>

  <div id="footer">#renderView("tags/footer")#</div>

</body>
```


Implicit Views

index.cfm?event=users

```
component name="users"{  
    function index(event,rc,prc){  
        prc.message = "howdy stranger!";  
    }  
}
```

What is the name of layout+view rendered?

/views/users/index.cfm



Implicit Events

index.cfm?event=about.contact

**No about handler
No contact method
There is an about handler, but no
contact method**

views/about/contact.cfm

event.renderData()

✦ Anything To:

- ✦ XML
- ✦ JSON, JSONP
- ✦ WDDX
- ✦ TXT
- ✦ HTML
- ✦ PDF
- ✦ CUSTOM

```
// xml marshalling
function getUsersXML(event,rc,prc){
    var qUsers = getUserService().getUsers();
    event.renderData(type="XML",data=qUsers)
}

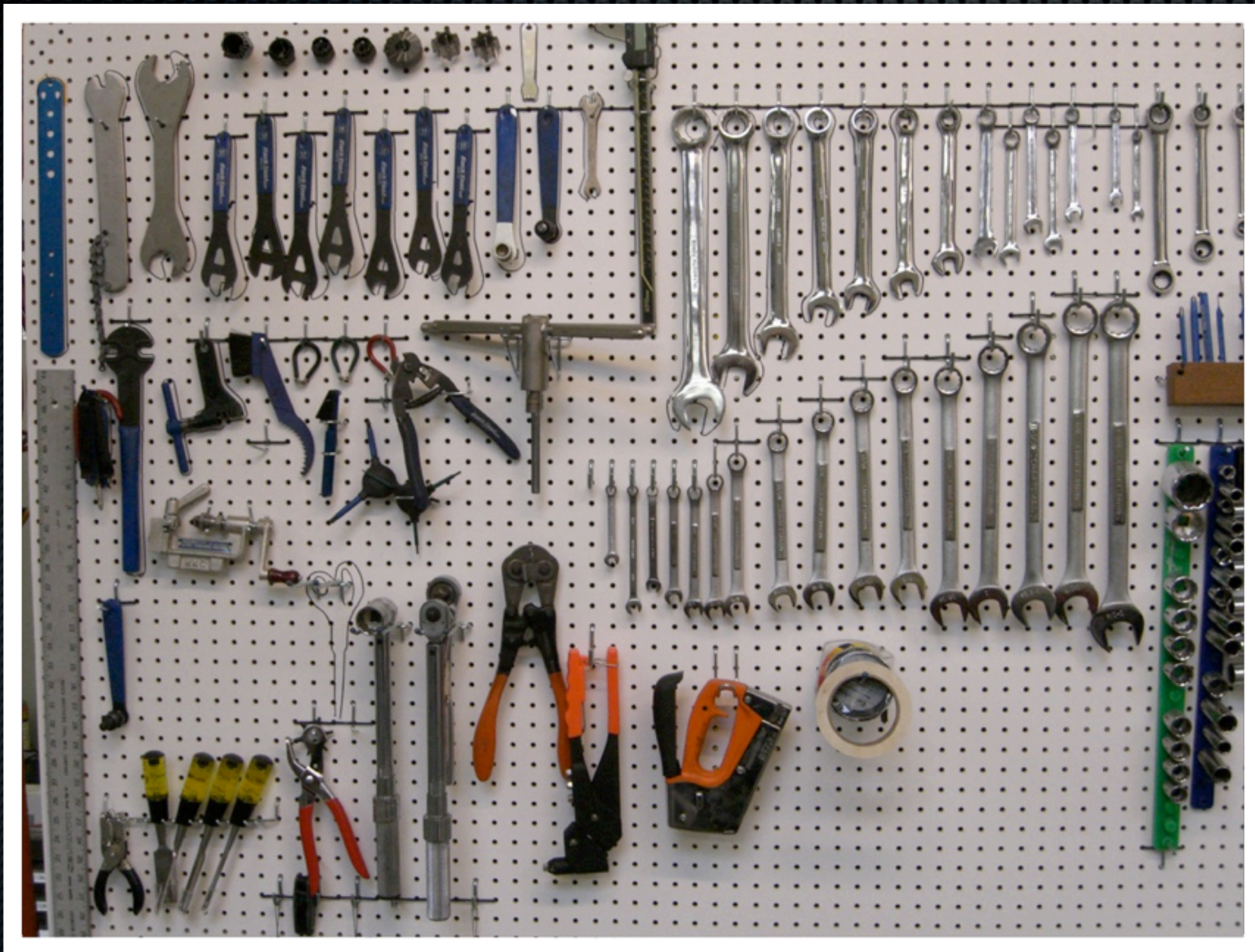
//json marshalling
function getUsersJSON(event,rc,prc){
    var qUsers = getUserService().getUsers();
    event.renderData(type="json",data=qUsers)
}

// restful handler
function list(event,rc,prc){
    event.paramValue("format","html");
    rc.data = userService.list();
    switch(rc.format){
        case "json": "jsont" : "xml" {
            event.renderData(type=rc.format,data=rc.data);
            break;
        }
        default: {
            event.setView("users/list");
        }
    }
}

// from binary
function pdf(event,rc,prc){
    var binary = fileReadAsBinary( file.path );
    event.renderData(data=binary,type="PDF");
}


// from content
function pdf(event,rc,prc){
    event.renderData(data=renderView("views/page"), type="PDF");
}
```


What about tools?



DevBox

DevBox Home DevBox Apps Administrators About



Welcome to your DevBox!

This is your ultimate Open Source ColdBox & CFML development server!

[Create New Application](#)

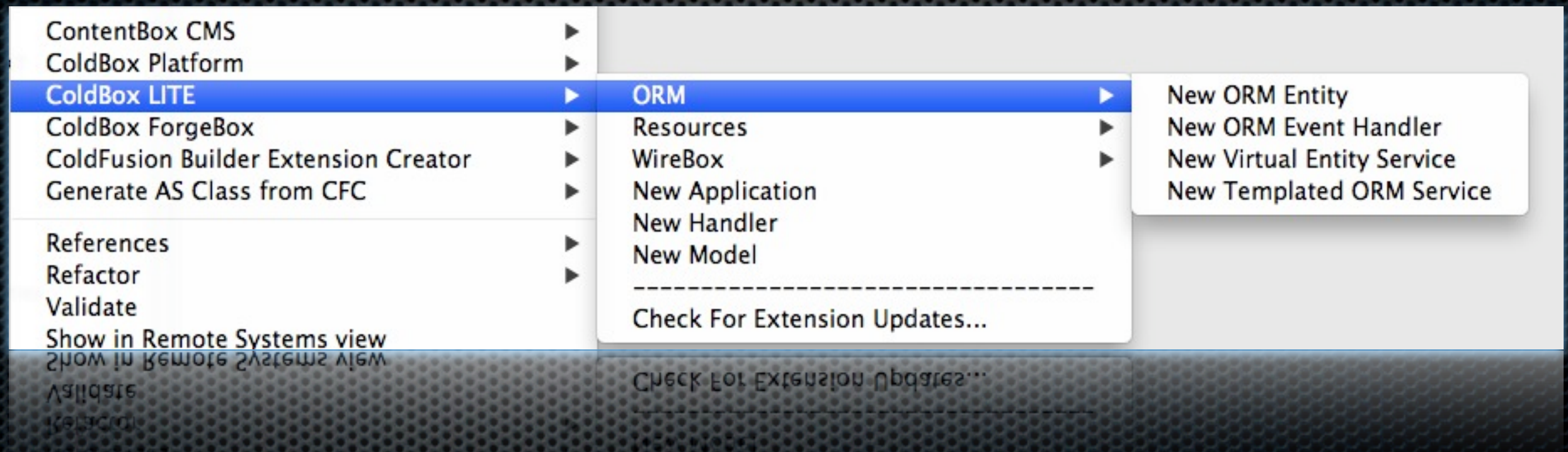
Below you will find a few applications deployed into your DevBox:

Application	Description	Actions
ColdBox Samples Gallery	A collection of over 20 sample applications to get you started with ColdBox development.	Open
ColdBox API Docs	All the API docs you will ever need.	Open
MXUnit	The best testing framework for ColdFusion.	Open
ColdBox Platform Utilities	This extension helps you when building ColdBox Platform applications using Adobe ColdFusion Builder IDE . It will help you get started with application skeletons, to configuring URL rewriting, security and so much more.	Download

`/Users/lmajano/Documents/MyDocs/OrtusSolutions/Products/DevBox/webapps/ROOT/coldbox-utilities`



ColdBox Platform Utilities



How do you upgrade?



Purchase it?

Application.cfc - Bootstrap



```
component extends="coldbox.system.Coldbox" {

    // Application Properties
    this.name = hash( getCurrentTemplatePath() );

    // COLDBOX STATIC PROPERTY, DO NOT CHANGE UNLESS THIS IS NOT THE ROOT OF YOUR COLDBOX APP
    COLDBOX_APP_ROOT_PATH = getDirectoryFromPath( getCurrentTemplatePath() );
    // The web server mapping to this application. Used for remote purposes or static purposes
    COLDBOX_APP_MAPPING = "";
    // COLDBOX PROPERTIES
    COLDBOX_CONFIG_FILE = "";
    // COLDBOX APPLICATION KEY OVERRIDE
    COLDBOX_APP_KEY = "";

    boolean function onRequestStart(required targetPage){
        // Process A ColdBox Request Only
        if( findNoCase('index.cfm', listLast(arguments.targetPage, '/')) ){
            // Reload Checks
            reloadChecks();
            // Process Request
            processColdBoxRequest();
        }
        // WHATEVER YOU WANT BELOW
        return true;
    }
}
```


Upgrade parts...

- ✦ Plug 'N Play
 - ✦ Validation
 - ✦ AOP
 - ✦ Testing
 - ✦ MockBox
 - ✦ CacheBox
- ✦ Or just use ColdBox Platform





Source Code & Docs

- ✦ If you are a source junky and want to help out:
- ✦ <https://github.com/ColdBox/coldbox-platform>
- ✦ <http://wiki.coldbox.org/wiki/cbl.cfm>



Issues & Mailing List

- ✦ Bugs, enhancements, ideas:
- ✦ <https://ortussolutions.atlassian.net/browse/CBOXLITE>
- ✦ <http://groups.google.com/group/coldbox>

Demo & Open Forum



coldbox