

LotuspHERE[®] 2009



CREATED WITH LOTUS[®] SYMPHONY™

BP109

IBM Lotus Domino Web Development: How to Use the Wrong Design Elements to Do the Right Thing

Matt White | Fynn Consulting

Lotusphere[®] 2009

IBM[®]

Agenda

- ☒ Where are we with “classic” IBM Lotus Domino web development today?
- ☒ Advanced Web Development Tips and Tricks
 - ▶ Lots of demos, not so many slides
 - ▶ Some framework based but the theories will be transferable
 - ▶ Everything here will work back to ND6.x
- ☒ All available in a single NSF so no need for frantic copying of code.
- ☒ Q & A



About Me

- ☒ Independent Lotus Notes, Lotus Domino and Java developer
- ☒ 12 years of experience with Lotus Domino web development
- ☒ Worked on applications of all sizes, from 20 to 20,000 users.
- ☒ Lead developer for IdeaJam



What are we trying to achieve?

- ☒ Cool “Web 2.0” development using any version of Lotus Domino.
- ☒ Find when to “think laterally” about Lotus Domino web development
 - ▶ Bending the original intent of a design element can be the best thing to do
- ☒ KISS Principle is key
 - ▶ Keep It Simple Stupid !

Where are we with web development today?

- ❏ Not much change in Lotus Domino web development for the last ten years or so.
- ❏ Lotus Domino has a certain reputation, it's within our power to change that.
- ❏ Has inspired a certain amount of creativity.
 - ▶ Blogs
 - ▶ OpenNTF
 - ▶ Notes.net (or whatever it's called these days)

Our Sample App

- ☒ A list of my favorite movies and TV Shows
- ☒ I want to be able to change the order of preference of each movie and TV Show
- ☒ Obviously very important stuff!

- ☒ Can be downloaded from 11tmr.com/dotherightthing

View Customization

- ❗ The old View layout is bordering on the criminal these days.
 - ▶ Although the new “Enhanced HTML Generation” property in 8.5 is a big step forward on its own.
- ❗ A lot better in XPages, but there are still things we can do with “classic” Lotus Domino



Demo 1

Showing...

- ▶ The rubbish HTML generated by the standard view
- ▶ The difference of using the new 8.5 "Enhanced HTML Generation" flag (which can be set at database or server level)

```
<body text="#000000" bgcolor="#FFFFFF">
<table border="1" cellspacing="2" cellpadding="2" class="domino-actionbar">
<tr valign="middle" bgcolor="#C0C0C0"><td class="domino-action"><a href="/apps/dotherightthing.nsf/07b6769d53a50
</table>
<hr class="domino-actionbar-sep" /><div align="center" class="domino-view-nav">
<table cellspacing="2" cellpadding="2">
<tr valign="top"><td class="domino-view-nav-previous"><a href="/apps/dotherightthing.nsf/Movies?OpenView&St
</table>
</div><div class="domino-view-title" align="center"><h2>Movies</h2></div>
<table class="domino-view" border="0" cellpadding="2" cellspacing="0">
<tr class="domino-view-colhead"><th nowrap="nowrap" align="center"><b><font size="2">Ranking</font></b></th><th
<tr valign="top" class="domino-viewentry"><td align="center"><td align="center">
- ☒ Make use of the internet, a lot of smart people have been here before
- ☒ Why you might want to consider using a Page to store CSS
  - ▶ Computing graphics paths
  - ▶ Computing business / application logic

# Demo 2

## ☒ Showing...

- ▶ A nice looking simple view using divs and CSS to add structure and control look and feel
- ▶ How the YUI CSS was generated and used
- ▶ How the view / ViewTemplate were designed
- ▶ How the CSS Page was created

### My Movie Database

**Star Wars**  
Part IV in a George Lucas epic, Star Wars: A New Hope opens with a rebel ship being boarded by the tyrannical Darth Vader. The plot then follows the life of a simple farmboy, Luke Skywalker, as he and his newly met allies (Han Solo, Chewbacca, Ben Kenobi, C-3PO, R2-D2) attempt to rescue a rebel leader, Princess Leia, from the clutches of the Empire. The conclusion is culminated as the Rebels, including Skywalker and flying ace Wedge Antilles make an attack on the Empire's most powerful and ominous weapon, the Death Star.



**Training Day**  
In a city where streets are overrun by drug dealers, those who have sworn to uphold the law are breaking them to clean up the streets. Denzel Washington plays L.A.P.D. detective Alonzo Harris, a veteran narcotics officer whose methods of enforcing the law are questionable, if not corrupt. 'Training Day' follows Harris as he trains rookie Jake Hoyt (Ethan Hawk) over a period 24 hours. Ethical dilemmas arise for Hoyt as well as the audience as questions present themselves as to whether or not Harris' methodology for ridding the streets of South Central Los Angeles of drugs is right or wrong.



# Which framework to use?

- There are literally hundreds out there



- Pick one and include it in your app, they do all of the heavy lifting for you.



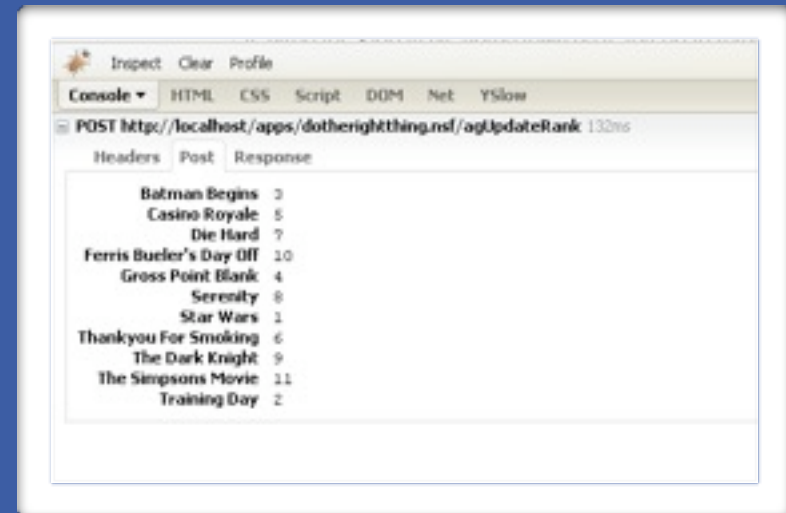
# Posting data to an agent

## ❏ Why would you want to do this?

- ▶ AJAX requests can then use agents to perform application logic
- ▶ Using AJAX Get requests can be limited by the length of the URL

## ❏ How can it be made easier?

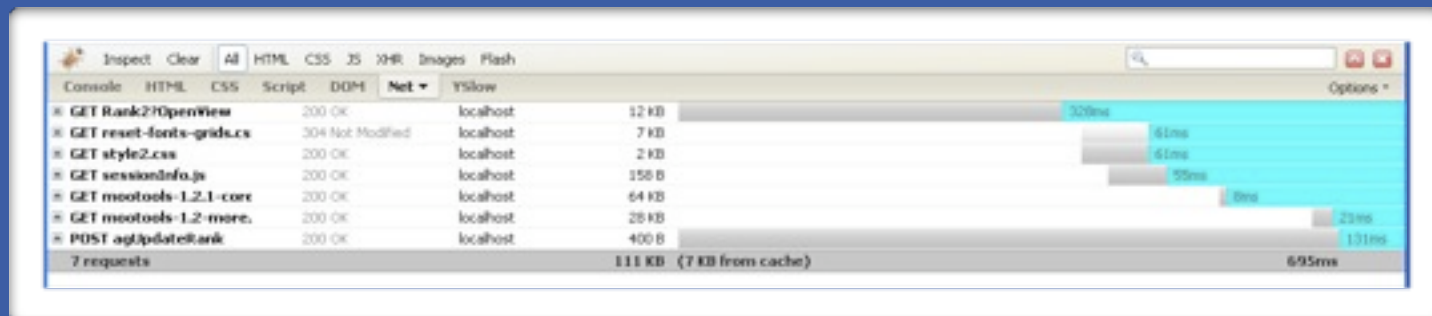
- ▶ The web app developers toolbox:
  - Firebug
  - Yslow
  - IE Developer Toolbar
  - Wireshark (formerly Ethereal).
- ▶ Pick and use a Javascript Framework.



# Demo 3

## Showing...

- ▶ How to download and customize MooTools
- ▶ How the Sortables plugin works
- ▶ How to post data to an agent
- ▶ How to watch the data be posted using Firebug
- ▶ How the agent handles the data



# Other ways of generating and using Javascript

## ☒ Using a Page as a Javascript file

- ▶ Session object for example
- ▶ Saves having to code lots of JS that Lotus Domino can do in a single @Formula

## ☒ Using a View as a Javascript file

- ▶ Access Reference data in the browser without a @DbLookup

## ☒ Using a Document as a Javascript file

- ▶ A Javascript document can control field labels in your application
- ▶ Or it's another way of implementing multi-lingual applications

# Demo 3a

## Showing...

- ▶ How to create a Page as a Javascript file
- ▶ How to use the Javascript in the page in conjunction with some computed CSS
- ▶ How to load a view as a Javascript file to save @DbLookups
- ▶ How to use a document to control field labels

```
sessionInfo.js - Page
function Session(){
 this.notesName = "<Computed Value>";
 this.commonName = "<Computed Value>";
 this.dbPath = "<Computed Value>";
}

var session = new Session();
```

# Views and JSON

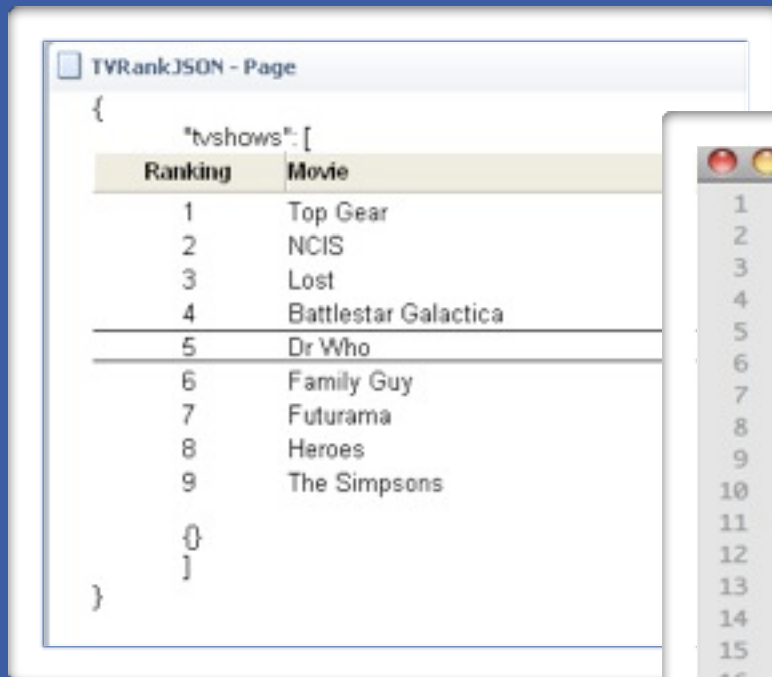
- Using a View as a Javascript / JSON file
- To allow multiple views on a page
- To get functionality that only came in later versions of the 7.0.x code stream.
- Or to simplify the JSON that the Lotus Domino view outputs

```
1 {
2 "@timestamp": "20081128T113043.18Z",
3 "@toplevelentries": "11",
4 "viewentry": [
5 {
6 "@position": "1",
7 "@unid": "5728491468E000588025742E0036758E",
8 "@noteid": "91E",
9 "@siblings": "11",
10 "entrydata": [
11 {
12 "@columnnumber": "0",
13 "@name": "Ranking",
14 "number": {
15 "0": "1"
16 }
17 },
18 {
19 "@columnnumber": "1",
20 "@name": "Movie",
21 "text": {
22 "0": "Star Wars"
23 }
24 },
25 {
26 "@columnnumber": "2",
27 "@name": "Abstract",
28 "text": {
29 "0": "Part IV in a George Lucas epic, Star Wars: A New Hope opens with a rebel star
30 farmboy, Luke Skywalker, as he and his newly met allies (Han Solo, Chewbacca, Ben
31 Empire. The conclusion is culminated as the Rebels, including Skywalker and Flye
32 Star."
33 }
34 }
35]
36 }
37]
38 }
```

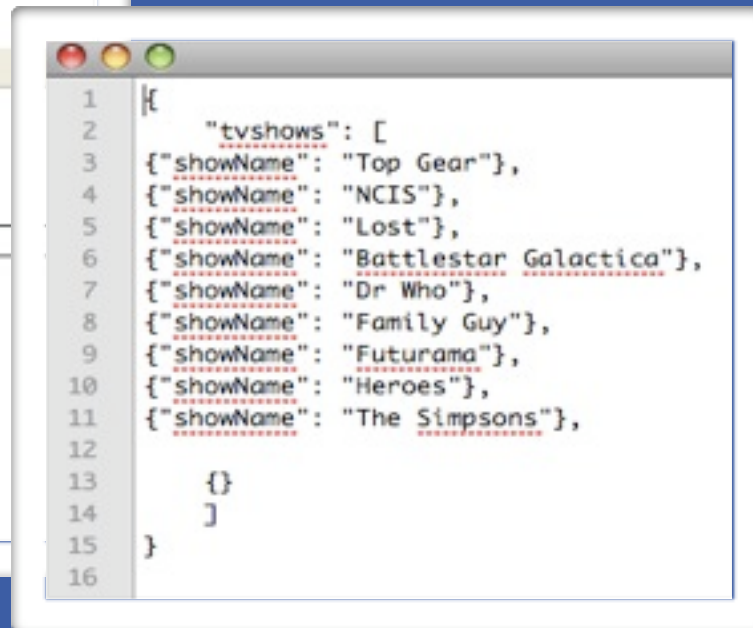
# Demo 4

## Showing...

- ▶ How to access the built-in JSON views
- ▶ How to build a similar view to the ones already seen using JSON
- ▶ How to add another “view” to the same webpage
- ▶ How to build your own JSON view for earlier versions or for simplicity



```
{
 "tvshows": [
 { "Ranking": 1, "Movie": "Top Gear" },
 { "Ranking": 2, "Movie": "NCIS" },
 { "Ranking": 3, "Movie": "Lost" },
 { "Ranking": 4, "Movie": "Battlestar Galactica" },
 { "Ranking": 5, "Movie": "Dr Who" },
 { "Ranking": 6, "Movie": "Family Guy" },
 { "Ranking": 7, "Movie": "Futurama" },
 { "Ranking": 8, "Movie": "Heroes" },
 { "Ranking": 9, "Movie": "The Simpsons" }
]
}
```



```
1 [
2 "tvshows": [
3 {"showName": "Top Gear"},
4 {"showName": "NCIS"},
5 {"showName": "Lost"},
6 {"showName": "Battlestar Galactica"},
7 {"showName": "Dr Who"},
8 {"showName": "Family Guy"},
9 {"showName": "Futurama"},
10 {"showName": "Heroes"},
11 {"showName": "The Simpsons"},
12]
13 }
14]
15 }
16 }
```

# Wrapping Things Up

- ❏ Domino is a very powerful development platform
- ❏ You just have to think a little “outside the box” to really make the most of it
- ❏ There are huge amounts of free resources on the internet, make use of them
- ❏ There's no reason even old versions of Lotus Domino can't run really impressive web apps.

# Related Sessions

- ❏ SHOW105 – 5 Dojo Widgets you can use today (in any Lotus Domino Version)
- ❏ SHOW107 – Five Ways to Cook and Consume JSON in Lotus Domino Applications
- ❏ BP103 - Battle of the IBM Lotus Domino Javascript Toolkits
- ❏ BP104 - Choosing and Using a JavaScript Toolkit
- ❏ BP215 - "The Great Code Giveaway": The Art of the Possible

# Resources

- ☒ PlanetLotus ([planetlotus.org](http://planetlotus.org))
- ☒ OpenNTF ([openntf.org](http://openntf.org))
- ☒ Domino Developer Wiki ([www.ibm.com/developerworks/wikis/display/dominoappdev/Home](http://www.ibm.com/developerworks/wikis/display/dominoappdev/Home))
- ☒ Yahoo User Interface Library ([developer.yahoo.com/yui](http://developer.yahoo.com/yui))
- ☒ MooTools ([mootools.net](http://mootools.net))
- ☒ Firebug ([getfirebug.com](http://getfirebug.com))

# Questions and Answers

☒ Please fill in your evaluations:

BP109 - IBM Lotus Domino Web Development: How to Use the Wrong Design Elements to Do the Right Thing

☒ Matt White  
matt.white@fclonline.com  
11tmr.com

☒ Download the sample app from: <http://11tmr.com/dotherightthing>

**Lotus** software



# Legal disclaimer

© IBM Corporation 2008. All Rights Reserved.

The information contained in this publication is provided for informational purposes only. While efforts were made to verify the completeness and accuracy of the information contained in this publication, it is provided AS IS without warranty of any kind, express or implied. In addition, this information is based on IBM's current product plans and strategy, which are subject to change by IBM without notice. IBM shall not be responsible for any damages arising out of the use of, or otherwise related to, this publication or any other materials. Nothing contained in this publication is intended to, nor shall have the effect of, creating any warranties or representations from IBM or its suppliers or licensors, or altering the terms and conditions of the applicable license agreement governing the use of IBM software. References in this presentation to IBM products, programs, or services do not imply that they will be available in all countries in which IBM operates. Product release dates and/or capabilities referenced in this presentation may change at any time at IBM's sole discretion based on market opportunities or other factors, and are not intended to be a commitment to future product or feature availability in any way. Nothing contained in these materials is intended to, nor shall have the effect of, stating or implying that any activities undertaken by you will result in any specific sales, revenue growth or other results.

All customer examples described are presented as illustrations of how those customers have used IBM products and the results they may have achieved. Actual environmental costs and performance characteristics may vary by customer.

IBM, the IBM logo, Lotus, Lotus Notes, Notes, Domino, Quickr, Sametime, WebSphere, UC2, PartnerWorld and Lotusphere are trademarks of International Business Machines Corporation in the United States, other countries, or both. Unyte is a trademark of WebDialogs, Inc., in the United States, other countries, or both.

Microsoft and Windows are trademarks of Microsoft Corporation in the United States, other countries, or both.