# ASUG SAP BusinessObjects USER CONFERENCE

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## Business Intelligence for a PASSIONATE COMMUNITY

### Creating Dashboards using Web Intelligence

Session 8806 Alan Mayer – Solid Ground Technologies

### Agenda

Introduction

((((O)))) Sugar, Medern CC (

- Examining interactive features
- Graphing relationships
- Filtering using Input Controls
- Driving behavior using prompts
- Masking values using alerts
- Controlling other documents and blocks
- Using workspaces
- Calling reports from other programs
- Conclusion



## Introduction

### Alan Mayer

- Co-founded Integra Solutions in 1993
  - Used BusinessObjects since 1992 (Version 2.2)
  - Wrote the first BusinessObjects training manuals
  - Over 75 Fortune 1000 customers before company was sold in 2007
- Presented at every national conference
- Founded Solid Ground Technologies in 2009
  - Different company same principles
  - Specialize in BusinessObjects consulting and training





### Introduction

- The focus of this presentation ...
  - Use available features to build interactive reports
- Techniques will be shown using sample universes and data
  - Most will work in either XI 3.1 or BI 4.0/4.1
  - 4.0 specific techniques will be labeled as such
  - Everything seen today can be downloaded for at-home experimentation



### Disclaimer

- Not proposing to replace other dashboard tools
  - Not the focus of Web Intelligence
  - Other tools are much stronger at visualization
- With that said, the lines are beginning to blur ...
  - More web-based controls and graphics being added
  - Fast data sources could process data in near acceptable time (5 – 10 seconds)



### **Thinking Differently About Reports**

- Online reporting has changed
  - Staging and refreshing massive reports not the goal
  - Selecting information on an exception basis is
- Reports can satisfy this new goal
  - Previous reports or report pieces serve as the building blocks
  - Emphasis on guided discovery





### Report Content

- All queries and reports derived from e-Fashion universe
  - Initially installed with the software
  - Available for different databases
  - Rich enough to show most techniques





### **Key Expectations**

- Expectations from most dashboard users
  - Response time less than 5 10 seconds ideally
  - Some users will tolerate longer times for REALLY good output
  - The fewer mouse clicks, the better
  - Simplest way to show the desired analysis





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### **Examining Interactive Features**

- Focusing on features that report readers use most often
  - Filter
  - Fold
  - Drill
- The Tracking feature will not be discussed
  - Neat concept shows data changes before / after
  - BUT ... requires two microcubes (data providers)
  - Twice the resources

### **Interactive Features Report**

Show Regional Revenue by Year



Region	Year	State	Sales revenue
East	2004	DC	\$693,211
		Florida	\$405,985
		Massachusetts	\$238,819
		New York	\$1,667,696
	2004		\$3,005,710
	2005	DC	\$1,215,158
		Florida	\$661,250
		Massachusetts	\$157,719
		New York	\$2,763,503

Region variable created to group stores by geographic area (East / West).

Report breaks placed on Region and Year.

Revenue totaled.

### Interactive Controls

 Use the Interactive Toolbar (BI 4.x) to manipulate a report as a reader:





### **Interactive Filtering**

Use the Filter Bar control to activate online filters



Click the drop-down arrows to set the appropriate filter

Region	Year	State	Sales revenue
West	2004	California	\$1,704,211
		Colorado	\$448,302
		Texas	\$2,199,677
	2004		\$4,352,190
West			\$4,352,190



### **Interactive Folding**

Use the Outline control to display Outline mode and break bars



- Click the grey arrows or break numbers to fold / unfold
  - Currently works in XI 3.1
  - BI 4.x only in Design mode

*	Region	Year	State	Sales revenue
		2004		\$4,352,190
		2005		\$7,283,958
		2006		\$8,021,362
	West			\$19,657,509
			Total	\$19,657,509
T 1 2				

Must use breaks within the report for this feature to work.

Tabs may be vertical (shown) or horizontal.

### Interactive Drilling

Plan the depth to drill using the Query Panel

Query Panel			3 ×
Mod Query - Display III III	😵 😁 🗎	Run query	Close -
Master Perspective       ▼         Y       Type here to filt	Year State	Sales revenue	
	Scope of analysis           Year           Quarter	Scope level : custom	
Product     Promotions     Measures     Dynamic Objects	State City	Store name	Use the Scope of Analysis Panel to limit the drill depth.
5 Store Revenue	L		This can be done for every navigation path (hierarchy in XI 3.1)

### Interactive Drilling, cont'd

Track 🔹 🔽 Drill 🔹 🌾 Filter Bar 🏥 Outline

Use the Drill control to display hyperlinks used for Drilling

Region	Year	State	Sales revenue
East	2004	₽Ç	\$693,211
		FI Dril down to City	\$405,985
		Massachusetts	\$238,819
		New York	\$1,667,696

Use the column header to drill up

Region	Year	City 👨 Sales revenue
East	2004	Washingtor Drikup to State 93,211
	2004	\$693,211

If the Scope of Analysis Panel was not used, drilling would be determined by the navigation path programmed in the universe

### Interactive Drilling, cont'd

Skip to any level by right-clicking and choosing **Drill By** 

Region	Year	State	Sales revenue	
East	2004	DC	\$693.211	
		Florida 🗎 🗘	Copy Ctrl+C 35	
		Massach 😨 🛛	Drill 🕨 📮	Drill down to City
		New York	\$1,667,69 🖕	Drill up to
	2004		\$3,005,71	Drill by
	2005	DC	\$1,215,15	End doll
		Florida	\$661,25	
		Massachusetts	\$157,719	
		New York	\$2,763,503	

Any block can be drilled on – charts as well as tables

### Demonstration



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### Visualizing Relationships

Let's start with a simple report showing Revenue by Store



Year	Quarter	Region	State	Store name	Sales revenue
2004	Q1	East	DC	e-Fashion Washington Tolbooth	\$208,324
2004	Q1	East	Florida	e-Fashion Miami Sundance	\$137,530
2004	Q1	East	Massachusetts	e-Fashion Boston Newbury	\$92,596
2004	Q1	East	New York	e-Fashion New York 5th	\$222,625
2004	Q1	East	New York	e-Fashion New York Magnolia	\$333,358

### Column Charts

Use a Vertical column chart to show Revenue by Region



### Column Charts, cont'd

• Add Year to the graph to see the annual trend ...



### **Bar Charts**

Use a Horizontal bar chart to show Store revenues



### Bar Charts, cont'd

- The final result ...
  - Revenue was sorted to show highest revenues first



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Sort >

Ascending

Sales Revenue >

### Heat Maps

Heat maps can show variations in quarterly revenue



### Tree Maps

Tree maps can use size and color to show relationships

New York Magnolia	San Francisco		h New Y	/ork 5th	Sales revenue
	Houston Leighton		Colorado Spri	Dallas	<pre>[\$1,200,000;\$1,900,000[ [\$1,900,000;\$2,600,000[ [\$2,600,000;\$3,300,000[ [\$3,300,000;\$4,000,000[ [\$4,000,000;\$4,700,000] Size:</pre>
Los Angeles	Chicago 33rd	Houston	Miami Sundance	Boston Ne	Sales revenue

Only available in BI 4.x. No way to recreate in XI 3.1

### **Combined Charts**

- Combined charts allow for different types per data set
  - Look how a line is added to represent Average Revenue



### Demonstration



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### **Using Input Controls**

Input controls can filter any report

#### Single Value

#### **Entry Field**

Sales revenue	*
0	ОК

#### Spinner

opinio	
Sales revenue	*
1,000	A T

#### Radio Button

1

#### Slider

Sales revenue	*
120900	
0	1000000

#### Combo Box

State	*
All values	•

#### List

State	:
All values	
California	E
Colorado	
DC	
Florida	*

#### Multi Value

#### **Check Box**

Region	*
(Select All)	
East	
Midwest	
West	

#### List

State	*
All values	*
California	=
Colorado	ОК
DC	
Florida	<b>T</b>

### Creating an Input Control

- Move to a report page to be filtered
- Click on the Input Control Button
- Select New
- Choose a report object
  - Object from a query or report variable

Select the report object assigned to the input control
🖃 🚁 Dash 3 - Input Controls
State
💋 Year
🔺 Year/week
🚥 Sales revenue
🖃 🗁 Variables
Region
Store 🖉
💋 YearWeek



### Creating an Input Control, cont'd

#### Choose the type of input control

Select a control and its asso	ciated properties		
Simple Selection	Input Control Properties		
Entry field     Combo box     Radio buttons     List box	Combo box: Use the combo b default, the current value is combo box is clicked.	es. By hen the	
Spinner	Control type	Combo box	
Simple slider	Name	State	
📜 Tree list	Description		
	List of values	From report	
Multiple Selections	Use restricted List of Values	Yes	
Check box	Default value(s)		
Double slider	Filter operators	Equal to 👻	
Tree list			The control selected
			determines if one value is filtered (Simple Selection) of

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many (Multiple Selections)

### Creating an Input Control, cont'd

#### Select the block to be filtered

Select report elements to assign them to the input control		
Report object 🥖 State	Control 🖃 Combo box	
<ul> <li>□ Dash 3 - Input Controls</li> <li>□ □ Report 2</li> <li>□ □ Page Header</li> <li>□ □ Page Body</li> <li>□ □ Block 1</li> <li>□ Page Footer</li> </ul>		

More than one block can be filtered by a single input control

### Demonstration



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### **Using Prompts**

- Prompts can be used to drive how the Webi interface looks
- We'll use prompts to allow report users
  - Sort their data
  - Swap report breaks
  - Reveal layers of visualization
    - Change from tables to charts dynamically
- Each technique requires a little universe preparation
  - Additional objects will be required
# Dynamic Objects

- The secret to making prompts dynamic
- Must be added to the universe
- Created from metadata rather than tables
  - Cannot use them alone in a query
- All follow the same IF-Then-Else formula:

The conditional function used for IF-THEN-ELSE will vary by database.

### Sorting Dynamically

First - create the Dynamic Sort object:

Second – sort on that object



What is sorted can be programmed this way, but the **direction** of the sort cannot.

# Sorting Dynamically, cont'd

#### The results:

#### Dynamic Sort

State	City	Store name	Sales revenue
California	Los Angeles	e-Fashion Los Angeles	\$4,220,929
California	San Francisco	e-Fashion San Francisco	\$3,258,641
Colorado	Colorado Springs	e-Fashion Colorado Springs	\$2,060,275
DC	Washington	e-Fashion Washington Tolbooth	\$2,961,950
Florida	Miami	e-Fashion Miami Sundance	\$1,879,159



	State	City	Store name	Sales revenue
	Texas	Austin	e-Fashion Austin	\$2,699,673
>	Massachusetts	Boston	e-Fashion Boston Newbury	\$1,283,707
	Illinois	Chicago	e-Fashion Chicago 33rd	\$3,022,658
	Colorado	Colorado Springs	e-Fashion Colorado Springs	\$2,060,275
	Texas	Dallas	e-Fashion Dallas	\$1,970,034

### **Breaking Dynamically**

First - create the Dynamic Break object:

Second – break on that object





# Breaking Dynamically, cont'd

Now to break from the ordinary! 

#### Dynamic Break

Тур

City

Dynamic Break	Store name	Sales revenue
California	e-Fashion Los Angeles	\$4,220,929
	e-Fashion San Francisco	\$3,258,641
California		

Colorado	e-Fashion Colorado Springs	\$2,060,275
Colorado		



reak by	
Type values here	
State	
City	

Dynamic Break	Store name	Sales revenue
Austin	e-Fashion Austin	\$2,699,673
Austin		
Boston	e-Fashion Boston Newbury	\$1,283,707
Boston		

# **Display Blocks Dynamically**

- Even blocks can be displayed dynamically
  - Every block can be "hidden" based on a variable's value
  - That value can be the result of a prompt
- Blocks can be stacked on top of one another



### Dynamic Blocks, cont'd

- This technique is simpler
  - No additional variable needed
  - Universe object is all that's necessary

@Prompt('Display','A',{'Table','Graph'},,,)

Set the properties of each block (Format > General)





### Dynamic Blocks, cont'd

This single technique can add great depth to a dashboard

#### Dynamic Block



#### Demonstration



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# Alerters – The Conditional Formatter

- Alerters can be used to apply formatting based on a condition
  - Reference variables in that condition for even more power
- Remember that Heat Map input control?
- You can build your own using alerters!
  - With more control ...

	2006				
	Q1	Q2	Q3	Q4	
e-Fashion Austin	\$314,430	\$273,608	\$294,798	\$252,644	
e-Fashion Boston Newbury	\$220,301	\$220,528	\$237,464	\$208,877	2006
e-Fashion Chicago 33rd	\$255,6	54,724	\$273,186	\$250,517	Q1
e-Fashion Colorado Springs	\$21,,754	\$213,6	e-Fashion Austi	in	\$314,43
e-Fashion Dallas	\$2 5,874	\$194,6	e-Fashion Bost	on Newbury	\$220,30
		-	e-Fashion Chica	ago 33rd	\$255,65
			e-Fashion Colo	rado Springs	\$204,75
			e-Fashion Dalla	s	\$215,87

Conditional formatting must be applied in **Design** mode for BI4.x

2006			
Q1	Q2	Q3	Q4
\$314,430	\$273,608	\$294,798	\$252,644
\$220,301	\$220,528	\$237,464	\$208,877
\$255,658	\$354,724	\$273,186	\$250,517
\$204,754	\$213,663	\$232,889	\$192,279
\$215,874	\$194,689	\$204,066	\$188,791

## **Creating Conditional Variables**

- Variables are like steroids for alerters
  - The complex logic is inside the variable
  - Allows conditions that couldn't be accomplished otherwise

#### **Average Quarterly Revenue**

=Average([Sales revenue]) In([Year];[Quarter])



### **Creating Conditional Rules**

- Let's show which quarters are above or below the average
- Open the Conditional Alerter Editor
  - Analysis > Conditional > New Rule

Formatting Rule E	ditor			<b>?</b> ×
Name :	Conditional Format			
Description:				
🕂 Add Cond	tion 🔻			×
Filtered object or Cell contents	cell Opera	ator	Operands Type a value +	
If the above is tru Cell content	e, then display: S	Format		
Cell content	s	Format		

### Creating Conditional Rules, cont'd

#### Both conditions can be defined by one rule

Formatting Rule E	ditor				?	×
Name :	Average Revenu	ie per Quarter				1
Description:						1
🕂 Add Condi	ition 🔻				×	
Filtered object or	cell	Operator		Operands		
Sales revenue		Less	•	Average Quarterly Revenue	 ×	
					+	
If the above is tru	ie, then display:					
			Format.			
Cell content	S					
🕂 Add Condi	ition 🔻				×	
Filtered object or	cell	Operator		Operands	 . — [	
Sales revenue		Greater	•	Average Quarterly Revenue	 ×	Notice how the
					+	Average Quarterly
If the above is tru	ie, then display:					Revenue variable is
			Format.			used
Cell content	S		)			useu.

## The Final Alerter

#### The results are stunning and within your control

	2006			
	Q1	Q2	Q3	Q4
e-Fashion Austin	\$314,430	\$273,608	\$294,798	\$252,644
e-Fashion Boston Newbury	\$220,301	\$220,528	\$237,464	\$208,877
e-Fashion Chicago 33rd	\$255,658	\$354,724	\$273,186	\$250,517
e-Fashion Colorado Springs	\$204,754	\$213,663	\$232,889	\$192,279
e-Fashion Dallas	\$215,874	\$194,689	\$204,066	\$188,791
e-Fashion Houston 5th	\$233,375	\$245,516	\$220,757	\$210,803
e-Fashion Houston Leighton	\$338,801	\$374,408	\$313,009	\$309,529
e-Fashion Los Angeles	\$421,390	\$423,867	\$432,215	\$379,205
e-Fashion Miami Sundance	\$203,882	\$221,469	\$215,569	\$171,003
e-Fashion New York Magnolia	\$451,878	\$533,872	\$550,359	\$375,325
e-Fashion New York Sundance	\$295,283	\$321,744	\$363,888	\$258,673
e-Fashion San Francisco	\$308,356	\$365,531	\$343,552	\$318,565
e-Fashion Washington Tolbooth	\$279,008	\$263,098	\$271,645	\$239,831
Average:	\$287,922	\$308,209	\$304,107	\$258,157

Ranges for the Input Control heat map cannot be customized as easily.

### Demonstration



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### **Going Beyond One Document**

- Sometimes one document isn't enough
  - Only so much screen real estate
  - Users may need additional information at point
  - Makes the original dashboard more dynamic

# **Creating Links**

- Documents can be linked to others via prompts
  - Links are created in the source document
  - Those links answer prompts from a second document



# Creating Links, cont'd

- Start with the Origin document
  - Decide which area should be dynamic
  - Cells around that area become the "context"





# Creating Links, cont'd

- Create a Destination document
  - Add prompts based on the context previously described
  - Any additional detail can be added
    - Format can be graphical or tabular

Result Objects	Y	×	<b>X</b>	•	•
Argin Wargin Sales rev	/enue	•			
Query Filters	x	*		•	
✓ Year Equal to 🔹 Year 🔯 🗮					
AND Quarter Equal to 🔹 Quarter 🔯 🗮					
🔰 Store name Equal to 🔹 Store 🔀 😂					

# Creating Links, cont'd

- Link Source to Destination
  - Right-click on the selected area
    - Linking > Add Document Link

Link to web page	Link to document			
Name Dash 6 - Link Des	tination	Browse		Loooto tho
Hyperlink properties			_	
Use complete U	RL path to create hyperlink			document to link to
2 🗹 Refresh on oper	n 🧲			
Link to documen	nt instance	Refresh that document		
🗌 Target area wit	hin the document			
Document prompts:			_	
Year	=[Year]	•		
Quarter	=[Quarter]	· 2		Map prompts from
Store	=[Store name	]		that document to
				chiests in this and
Customize the look and behavior of the hyperlink:				objects in this one
Document format	Default	•		
Target window New window 🔹 🚺 🗲 🗕				
Tooltip Click for more details			Choose a new or	
			existing window to	
				display
				uspiay

### **Drill Between Documents**

- Highlighted cells become hyperlinks
  - Click on any cell to "drill" to the Destination document



### Demonstration



# **Drilling Between Blocks**

- Using Document Links has its drawbacks
  - The Destination document takes an entire window
  - Not easy to navigate back
  - Multiple queries are executed (at least two)
- In BI 4.x, there is another way ...
  - Called Element Links
  - One block can be linked to another
    - Regardless of formatting (table, graph, ...)
  - The first block filters the second
  - Many advantages
    - Fewer queries
    - More interactivity on the same report page

## **Creating Element Links**

- Blocks can be linked to others via objects or variables
  - Same concept as document links
  - Values from the first block control a second block
  - No prompts required



## Creating Element Links, cont'd

- Start by selecting a block
  - Block to link FROM
  - Right-click and choose Linking > Add Element Link ...
  - Choose the objects to filter the second block

Select Report Object
Select the report object assigned to the input control Select filtering objects : All objects Single object
<ul> <li>Dash 6 - Linked Blocks</li> <li>Quarter</li> <li>Store name</li> <li>Year</li> <li>Variables</li> </ul>



## Creating Element Links, cont'd

#### Define the input control

- Yes ... element links FILTER so are really input controls
- Add a name and description

Choose Control Type			
Select a control and its associated properties			
Input Control Properties			
Block as control: Select values in the block (table or chart) to filter dependent report elements			
Block as control: Select	values in the block (table or chart) to filter dependent report elements		
Block as control: Select	Block as control		
Block as control: Select Control type Name	Block as control		
Block as control: Select Control type Name Description	Block as control Source		



# Creating Element Links, cont'd

Choose the block that will be filtered

	Assign Report Elements			
1	Select report elements to assign them to the input control			
	Report object All objects Control 🔚 Block as control			
	🖃 🔊 Dash 6 - Linked Blocks			
	I I Heat Map			
	B Page Body Block 1			
	Block 2			
	Page Footer			



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# **Build the Framework First**

- BusinessObjects BI Workspaces arrange those report pieces
  - Formerly part of Dashboard Builder
  - Creates a frame from which report pieces can be mounted
- Links can be created between pieces
  - Content links
    - Different than element or document links covered earlier
  - Introduces interaction between reports / pieces
  - Different types of reports and dashboards can be linked
- What follows are the basics behind creating workspaces

# The Workspace Editor



# Adding Content

Home Documents New BI workspace 🔎 🗇	8
📑 🔄 🔚 🔻   🎁   Revert Changes   Co	ntent Linking
B New BI workspace - + Add a new tab	
▼ Module Library ×	
Search for content	
🔢 🧐 🔽 🌮 💷	
▼ Public Modules	
▼ ASUG 2013	
Jedi Webi	
<ul> <li>Webi Dashboards</li> </ul>	
Dash 1 - Interactive Dashboards	
👱 Dash 2 - Charts	
🕐 Dash 3 - Input Controls	
👷 Dash 4 - Dynamic Prompts	
🕐 Dash 5 - Alerts	
Pash 6 - Link Destination	
Dash 6 - Link Source	
Dash 6 - Linked Blocks	
Dash 8 - Component	
Dasrio - hyperiirk	

- Modules control content
  - Many options to choose from
  - We'll focus on Public reports



# Arranging Content

Layout: Freeform       ▼       Image: Snap to grid       Grid size         ▼       Dash 6 - Link Source       ✓       Image: Snap to grid       Grid size         ▼       Dash 6 - Link Source       ✓       Image: Snap to grid       Image: Snap to grid       Grid size         ▼       Dash 6 - Link Source       ✓       Image: Snap to grid       Image: Snap t	<ul> <li>Small ▼</li> <li>Dash 6 - Link Destination</li></ul>	
Document Summary   Print   Dash 6 - Link Source   Homemade Heat Map   Track changes: (	Document Summary   Print   Dash 6 - Link Destination   Homemade Heat Map	
	ASI	Documents are dragged to the workspace from the Module Library

### Selecting Report Pieces

#### Piece 1

	2006		
Right click to select this block as linked r	eport part	Q2	
e-Fashion Austin	\$314,430	\$273,608	
e-Fashion Boston Newbury	\$220,301	\$220,528	

#### Piece 2

Year/week	Sales revenue	Quantity sold	Discount
2006/01	\$24,709	144	\$8,046
2006/02 Right	t click to select this blo	ck as linked report par	t \$10,707
2006/03	\$22,916	148	\$10,654
2006/04	\$30,693	224	\$19,315

Resize each module and select only the pieces you need
# Link the Pieces

Use Content Linking to define how one module will drive the others



Parameter Mapping		2
Source Parameter	Target Parameter	Man narameters
Store name Type STRING	Click here to select the Target parameter.	(prompts) between modules
<b>Year</b> Type STRING	Click here to select the Target parameter.	
Quarter Type STRING	Click here to select the Target parameter.	

# **Other Workspace Notes**

- Menus can be created
  - Offers more screen real estate
- Content can be expanded beyond Webi documents
  - Crystal Reports
  - BI Dashboards (Xcelsius)
  - Web sites
  - Other included modules
    - Navigation Control
    - Viewers
  - Custom content



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### Launching Reports From Other Programs

- What about integrating Webi content from existing programs?
  - Other than BI Launch pad, Infoview, ...
- Common request for custom portals
  - "Custom" portal an HTML application developed by your company
  - The initial user interface is handled from that application
  - All prompt values for the report are gathered, then ...
  - Webi reports can be refreshed using OpenDocument
- A BusinessObjects session must be previously established
  - If not, a login window will appear asking for credentials

- The OpenDocument command looks like a hyperlink
  - What appears below is a sample
  - Argument values in red

http://boxi4win05:8080/BOE/OpenDocument/opendoc/openDocument.jsp? iDocID=AajYahfR9Z9Gh\_BSbOiqNZM &sIDType=CUID &sType=wid &sRefresh=Y &lsMYear=2006



#### Document arguments

- iDocID Uniquely identifies the document
  - Example: iDocD=AajYahfR9Z9Gh\_BSbOiqNZM
- sDocName Document Name (may not be unique)
  - Example: sDocName=2006+Sales
- sIDType The type of ID supplied (CUID, InfoObjectID)
  - Example: sIDType=CUID
- sType The type of document (wid = Webi)
  - Example: sType=wid
- sInstance Opens the latest instance (User, Last, Param)
  - Example: slnstance=Last
- sRefresh Refresh the document before viewing (Y, N)
  - Example: sRefresh=Y

#### Prompt arguments

- IsC Selects a Universe context
  - Example: IsC=Rentals
- IsS<prompt> Single value for a prompt
  - Example: lsSYear=2006
- IsM<prompt> One or more values for a prompt
  - Example: lsMCountries=USA;Germany
- IsR<prompt> Range of values for a prompt
  - Example: lsRDates=[Date(2013,07,01)..Date(2013,07,15)]

- Last words of advice ...
  - Use the plus sign to cover spaces in the URL
    - Example: sDocName=2006+Sales
  - Remove any trailing spaces in a prompt
    - Example:
      - Prompt is "Choose a year: "
      - IsSChoose+a+year:=
  - The length of the URL may be limited by the browser
    - Internet Explorer: 2083

### Demonstration



# Agenda

- Introduction
- Examining interactive features
- Graphing relationships
- Filtering using Input Controls
- Driving behavior using prompts
- Masking values using alerts
- Controlling documents and blocks
- Using workspaces
- Calling reports from other programs

# **Key Learnings**

- Online reporting is moving towards visualization
- Report trends or exceptions first
  - Back this up with detailed information when necessary
- Web Intelligence can satisfy both initiatives
  - Display graphs or summary tables to show the trend
  - Link to detailed graphs or reports to show details
- Techniques in this presentation showed you how
- Not a substitute for dedicated dashboard tools

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### Thank you for participating.

### Please provide feedback on this session by completing a short survey via the event mobile application.

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