

Tessitura



EUROPEAN
CONFERENCE 2015

5 & 6 NOVEMBER
NOTTINGHAM

ADVANCED REPORTING SERVICES SSRS

BEYOND THE TABLE

PRESENTER

Natalie Threlfall:
Tessitura Network



Covered

- SSRS 2012, 2014
- Tessitura 12.5
- Navigation and Interactive Design
- Charts and Graphs
- Maps
- Code, Referenced Assemblies



What's New in SSRS 2012/2014

- **SQL Server Data Tools** replaces Business Intelligence Development Studio
 - SQL 2012 includes a VS 2010 shell version
- **New Export formats**
 - Excel XLSX
 - Word DOCX
- **SSRS 2014**
 - Chrome browser support
 - No other significant features



Visual Studio with SSDT

- ~~Business Intelligence Development Studio~~
- SQL Server Data Tools
- Add-on for Visual Studio 2013/15
- To download:
<http://msdn.microsoft.com/en-us/hh297027.aspx>



Navigation and Interactive Design

General

Number

Alignment

Font

Action

Change action options.

Enable as an action:


None

Go to report

Go to bookmark

Go to URL

Specify a report:



Use these parameters to run the report:

Name	Value	Omit



Navigation and Interactive Design

- Link to another report
- Link to the same report
- Document Map to help navigate longer reports
- Toggle for detail
- Tooltips
- Provide export variation on same report



Linking to another Report

Product Calendar

[DayOfWeek]

[Performance]

[FullReportPath]

Product

Sun	Mon	Tue
30	31	1
6	7	8
13	14 Noah's Flood 8:00 PM	15 Noah's
20	21 AR Main Stage Default TR_PERF_TYPE	22
27	28	29

ProductCalendar

Text Box Properties

General
Number
Alignment
Font
Border
Fill
Visibility
Interactive Sorting
Action

Change action options.

Enable as an action:

- None
- Go to report
- Go to bookmark
- Go to URL

Specify a report:

PerformanceSeatMap

Use these parameters to run the report:

Add Delete

Name	Value	Omit
UserGroup	[@UserGroup]	<input type="checkbox"/>
UserId	[@UserId]	<input type="checkbox"/>
CompanyName	[@CompanyName]	<input type="checkbox"/>
RequestId	[@RequestId]	<input type="checkbox"/>
season	[SeasonId]	<input type="checkbox"/>
perf_no	[PerformanceId]	<input type="checkbox"/>

Help OK Cancel



Product Calendar

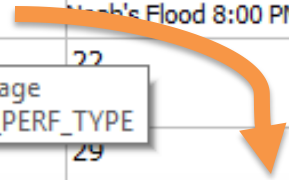
Tessitura

September 2015



Sun	Mon	Tue	Wed	Thu
30	31	1	2	3
6	7	8	9	10
13	14 Noah's Flood 8:00 PM	15 Noah's Flood 8:00 PM	16	17
20	21	22	23	24
27	28	29	30	1

AR Main Stage
Default TR_PERF_TYPE



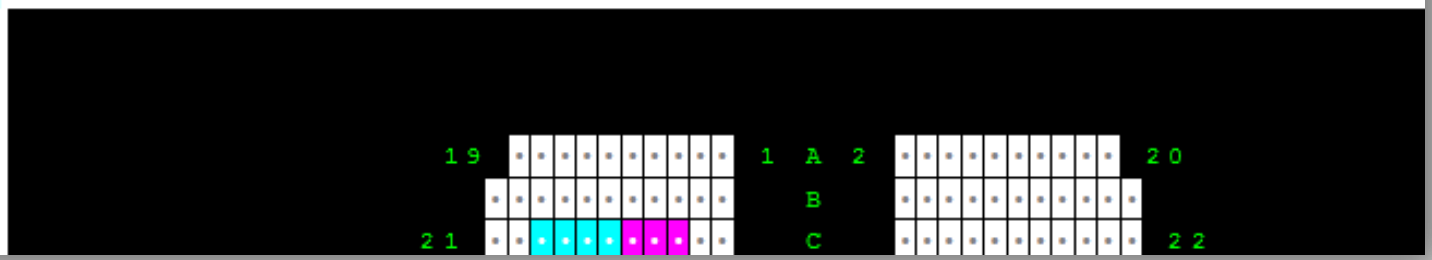
/Product

Tessitura

Performance Seat Map

Performance: **Noah's Flood**
 Date: **Monday, September 14, 2015** **8:00 PM**
 Season: **2015-2016 Main Stage**

Main Floor





Same Report Navigation

- Allow user to modify report parameters like a menu or navigate to different sections
- Product Calendar example calls the same report but with a different date

Product Calendar **Tessitura** Page 1 of 1

February 2011

Sun	Mon	Tue	Wed	Thu	Fri	Sat
30	31	1 Autumn Ridge Tours 9:00 AM	2 Autumn Ridge Tours 9:00 AM	3 Autumn Ridge Tours 9:00 AM Raffi 3:00 PM Raffi 8:00 PM	4 Autumn Ridge Tours 9:00 AM	5 Autumn Ridge Tours 9:00 AM

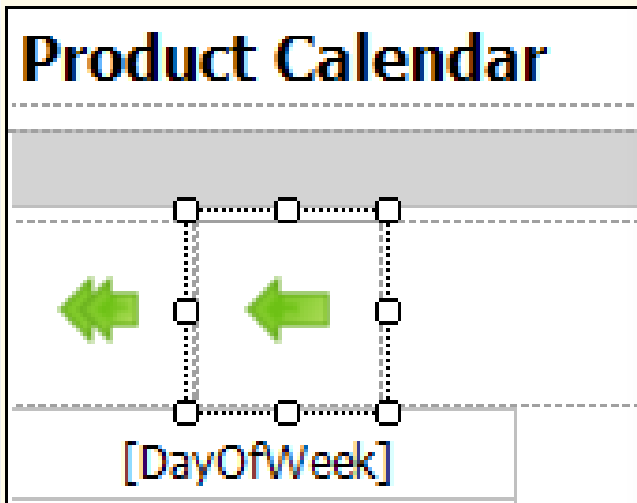


Image Properties

General

Size

Visibility

Action

Border

Change action options.

Enable as an action:

None

Go to report

Go to bookmark

Go to URL

Specify a report:

ProductCalendar fx

Use these parameters to run the report:

Add Delete

Name	Value			Omit
UserGroup	[@UserGroup]	fx		fx
UserId	[@UserId]	fx		fx
CompanyName	[@CompanyName]	fx		fx
RequestId	[@RequestId]	fx		fx
Seasons	[@Seasons]	fx		fx
CalendarDate	«Expr»	fx		fx

Help
OK
Cancel



Image Properties

Change action options.

Enable as an action:

- None
- Go to report
- Go to bookmark
- Go to URL

Specify a report:

ProductCalendar

Use these parameters to run the report:

Name	Value		Omit
CompanyName	[@CompanyName]	<input type="button" value="fx"/>	<input type="button" value="fx"/>
RequestId	[@RequestId]	<input type="button" value="fx"/>	<input type="button" value="fx"/>
Seasons	[@Seasons]	<input type="button" value="fx"/>	<input type="button" value="fx"/>
CalendarDate	«Expr»	<input type="button" value="fx"/>	<input type="button" value="fx"/>

Help



Calculating Previous Month

Image Properties

General Change action options.

Size

Visibility Enable as an action:

Action Expression

Set expression for: Value

```
=DateAdd("m", -1, Parameters!CalendarDate.Value)
```

Category: Constants

Item: <All>

No constants are available for this category.



Document Maps

1 of 2 100% Find | Next

Document Map

- [-] PerformanceSeatingBook
 - [-] B
 - Barthel/Remer
 - Bowman/Judy
 - [-] L
 - Lutringer/Gerel
 - [+] M
 - [-] P
 - Piel/Marla
 - Poret/Dolores
 - Powell/Gaddis
 - [-] S
 - Saunders/Skeets
 - Signa/Camelo
 - Spragens/Sushama
 - Spritzer/Blake

Autumn Ridge Performing Arts Center

Performance Seating Book Page 1

Parameters

Season: 2011-2012 Main Stage
 Performance: Nov 9 2011 8:00PM MF071109
 Section(s): (All)
 Include General Public seats?: Yes
 List: (None)

ID	Name	Order No	Section	Seat	Status	Category
B						
30	Ms. Remer Raymond Barthel	349	Orchestra Front	C-5	Seated, Paid	Subscription
30	Ms. Remer Raymond Barthel	349	Orchestra Front	C-7	Seated, Paid	Subscription
30	Ms. Remer Raymond Barthel	349	Orchestra Front	C-9	Seated, Paid	Subscription
30	Ms. Remer Raymond Barthel	107	Orchestra Front	D-20	Seated, Unpaid	Subscription
30	Ms. Remer Raymond Barthel	107	Orchestra Front	D-22	Seated, Unpaid	Subscription
32	Mr. Judy Helen Bowman	101	Orchestra Front	C-11	Seated, Unpaid	Subscription
32	Mr. Judy Helen Bowman	101	Orchestra Front	C-13	Seated, Unpaid	Subscription
32	Mr. Judy Helen Bowman	101	Orchestra Front	C-15	Seated, Unpaid	Subscription
32	Mr. Judy Helen Bowman	101	Orchestra Front	C-17	Seated, Unpaid	Subscription
32	Mr. Judy Helen Bowman	89	Orchestra Front	D-11	Seated, Unpaid	Subscription
32	Mr. Judy Helen Bowman	89	Orchestra Front	D-13	Seated, Unpaid	Subscription
32	Mr. Judy Helen Bowman	89	Orchestra Front	D-15	Seated, Unpaid	Subscription
L						
34	Mr. Gerel Eduardo Lutringer	108	Orchestra Front	E-1	Seated, Unpaid	Subscription
34	Mr. Gerel Eduardo Lutringer	108	Orchestra Front	E-3	Seated, Unpaid	Subscription
M						
36	Mr. Chase Crawford Mathes	100	Orchestra Front	F-11	Seated, Unpaid	Subscription



Document Maps

Design Preview

[@CompanyName]

Performance Seating Book

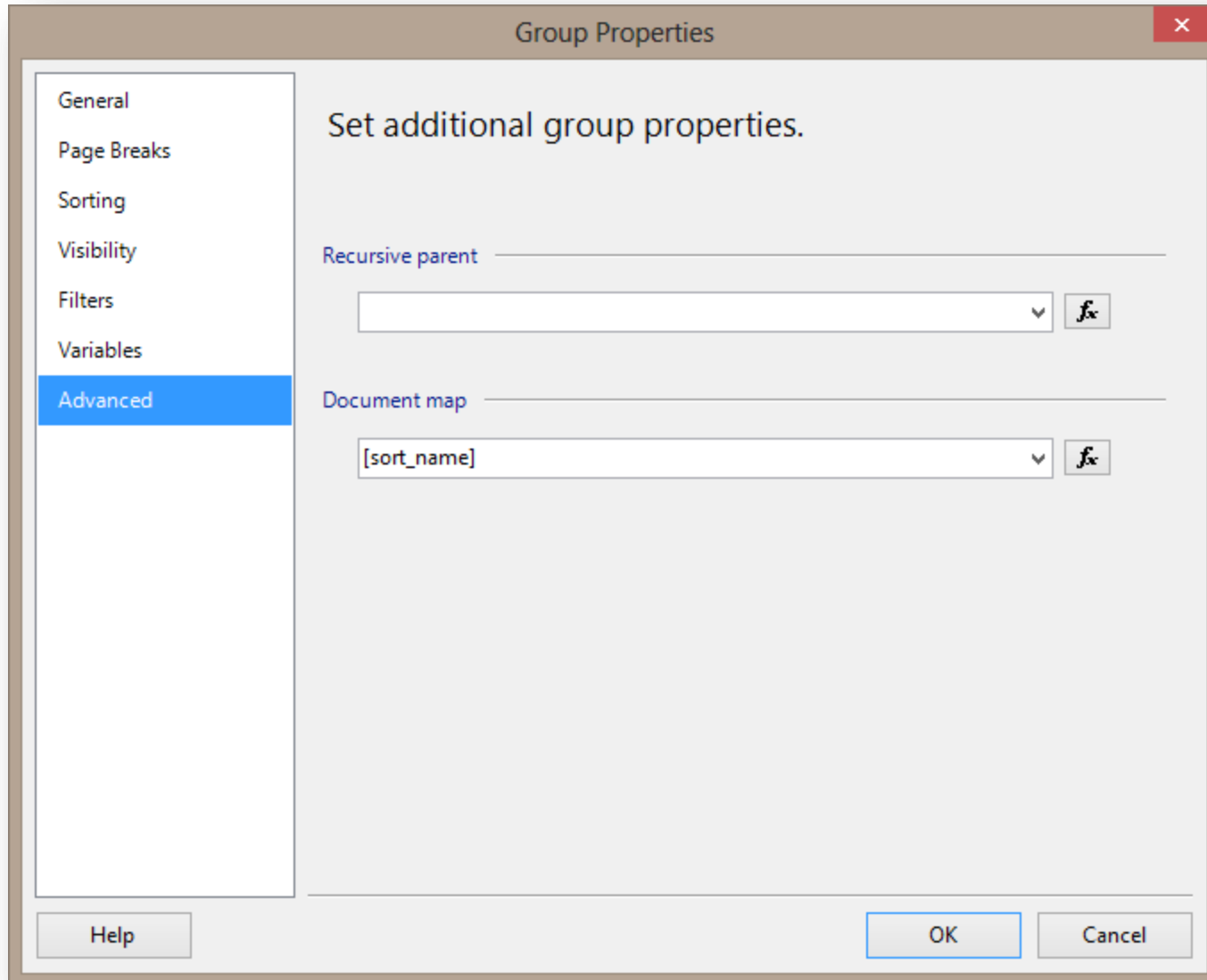
ID	Name	Order No	Section	Seat	Stat
[letter]					
[Constitute: [DisplayName]		[order_no]	[section]	[SeatDetail: [Sub	
	Seats: [Count(orde				
	Orders: [CountDistin				
	Constituents: [CountDistin				
[FullReportPath]					

Row Groups: (Static), (Detail), (Static), (Static)

Column Groups: (Static), (Static), (Static), (Static)



Document Maps





Toggle for Detail

The screenshot displays the SSRS Design View of a report. The main area shows a table with the following structure:

sort name	section	seat	sublineitem	pricetypecategory
[sort name]	[section]	«Expr»	[sublineitem]	[pricetypecategory]

The 'Row Groups' pane at the bottom left shows a hierarchy with '(table1_sort_name)' and '(table1_Details_Group)'. The 'Properties' pane on the right shows the 'Tablix Member' properties, with 'Keep Together' set to 'True' and 'ToggleItem' set to 'sort_name'.



Toggle for Detail

sort name	section	seat	sublineitem status	pricetypecategory
<input type="checkbox"/> (General Public)				
<input type="checkbox"/> Barthel/ Remer				
<input type="checkbox"/> Bowman/ Judy				
<input type="checkbox"/> Lutringer/ Gerel				
<input type="checkbox"/> Mathan/ Cheng				
<input type="checkbox"/> Osborn Family				
<input type="checkbox"/> Piel/ Marla				
<input type="checkbox"/> Poret/ Dolores				
<input type="checkbox"/> Powell/ Gaddis				
<input type="checkbox"/> Saunders/ Skeets				
<input type="checkbox"/> Signa/ Camelo				
<input type="checkbox"/> Spragens/ Sushama				
<input type="checkbox"/> Spritzer/ Blake				



Toggle for Detail

sort name	section	seat	sublineitem status	pricetypecategory
<input checked="" type="checkbox"/> (General Public)				
<input checked="" type="checkbox"/> Barthel/ Remer				
<input checked="" type="checkbox"/> Bowman/ Judy				
<input checked="" type="checkbox"/> Lutringer/ Gerel				
<input type="checkbox"/> Mathan/ Cheng				
	Orchestra Front	E-11	Seated, Unpaid	Subscription
	Orchestra Front	E-9	Seated, Unpaid	Subscription
	Orchestra Front	E-7	Seated, Unpaid	Subscription
	Orchestra Front	E-5	Seated, Unpaid	Subscription
<input checked="" type="checkbox"/> Osborn Family				
<input checked="" type="checkbox"/> Piel/ Marla				
<input checked="" type="checkbox"/> Poret/ Dolores				
<input checked="" type="checkbox"/> Powell/ Gaddis				
<input checked="" type="checkbox"/> Saunders/ Skeets				
<input checked="" type="checkbox"/> Signa/ Camelo				
<input checked="" type="checkbox"/> Spragens/ Sushama				
<input checked="" type="checkbox"/> Spritzer/ Blake				



Tooltips

section	seat
Orchestra Front	D-9
Orchestra Front	D-7

Orchestra Front

ToolTip =Fields!section.Value

sublineitem status	price
Seated, Paid	S
Seated, Paid	S

Status

ToolTip Status

seat
D-9
D-7

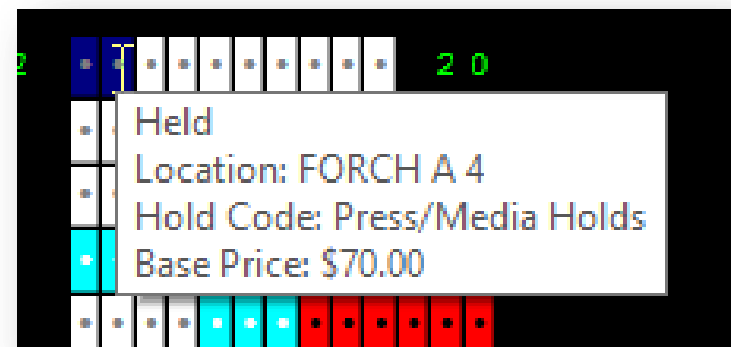
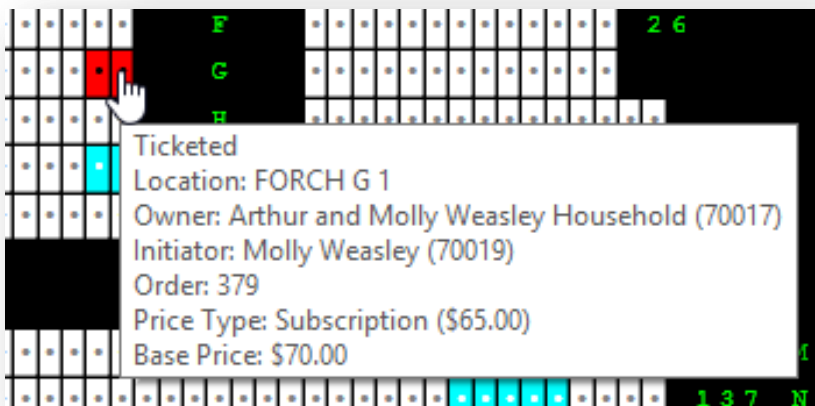
D-7

ToolTip =Fields!seat_row.Value & "-" &Fields!seat_num.Value



Conditional Tooltip

```
=First(Fields!seat_status_desc.Value) & VbCrLf &
String.Format("Location: {0} {1} {2}", First(Fields!section_desc.Value),
    RTrim(First(Fields!seat_row.Value)), RTrim(First(Fields!seat_num.Value)))
    & VbCrLf &
IIf(Fields!isActiveInOrder.Value,
    String.Format("Owner: {0} ({1})", First(Fields!display_name.Value), First(Fields!customer_no.Value))
    & VbCrLf &
    IIF(First(Fields!InitiatorId.Value) > 0,
        String.Format("Initiator: {0} ({1})", First(Fields!InitiatorDisplayName.Value),
            First(Fields!InitiatorId.Value)) & VbCrLf, String.Empty) &
    IIF(First(Fields!RecipientId.Value) > 0,
        String.Format("Recipient: {0} ({1})", First(Fields!RecipientDisplayName.Value),
            First(Fields!RecipientId.Value)) & VbCrLf, String.Empty) &
    "Order: " & First(Fields!order_no.Value) & VbCrLf
    & "Price Type: " & First(Fields!price_type_desc.Value)
    & " (" & FormatCurrency(First(Fields!sli_due_amt.Value), 2) & ") "
    ,
    "Hold Code: " & First(Fields!hold_code.Value)
    ) & VbCrLf
& "Base Price: " & FormatCurrency(First(Fields!base_price.Value), 2)
```





Provide export variation

- Data export format in SSRS is closely tied to the layout
- We have control over the output

CustomProperties	
DataElementName	
DataElementOutput	Auto
DataElementStyle	Auto
Direction	Default
DocumentMapLabe	



Providing data specific format

[@CompanyName]

Current Constituent Giving by List

../Common/ReportParameters

Const ID	Name		Membership	
	Date	Campaign	Gifts	Pledged
[customer_no]	[ConstituentName]		[memb_level]	[MemLevel] [MembAr
	[cont_dt]	[campaign_desc]	[gift_amt]	[pledge_amt]
	★ <i>[CreditorInfo]</i>			
		[No Contributions]	[GrecdGrpTotal]	[PledgedGrpTotal]
		Credited/Associated/Affiliated	[GrecdGrpTotal]	[PledgedGrpTotal]
		Contributions	[GrecdTotal]	[PledgedTotal]
		Credited/Associated/Affiliated	[GrecdTotal]	[PledgedTotal]

cu	co	co	co	co	co	rel	rel	rel	rel	pri	rel	rel	rel	m	m	rel	m	co	ca	ca	ple	cu	pri	gift
[cu	[co	[cc	[co	[co	[cc	[rel	[rel	[re	[rel	[pri	[re	[rel	[re	[m	[m	[re	[m	[co	[ca	[ca	[ple	[cu	[pri	[gif

[&ReportName]



Provide export variation

- DataElementOutput
- Main table(s) are set to NoOutput
- Hidden data table is set to Output

		Contributions				[G	
		Credited/Associated/Affiliated				[G	
customer no	constituent name	co	co	co	co	rel	rel
[customer_no]	[constituent_name]	[co	[cc	[cc	[co	[re	[re
[&ReportName]							

ComponentDescriptic	
ComponentID	
CustomProperties	
DataElementName	
DataElementOutput	Output
DataSetName	ConstituentGiving
DocumentMapLabel	
Filters	

DataElementOutput
Indicates whether and how the data element should appear when rendered.

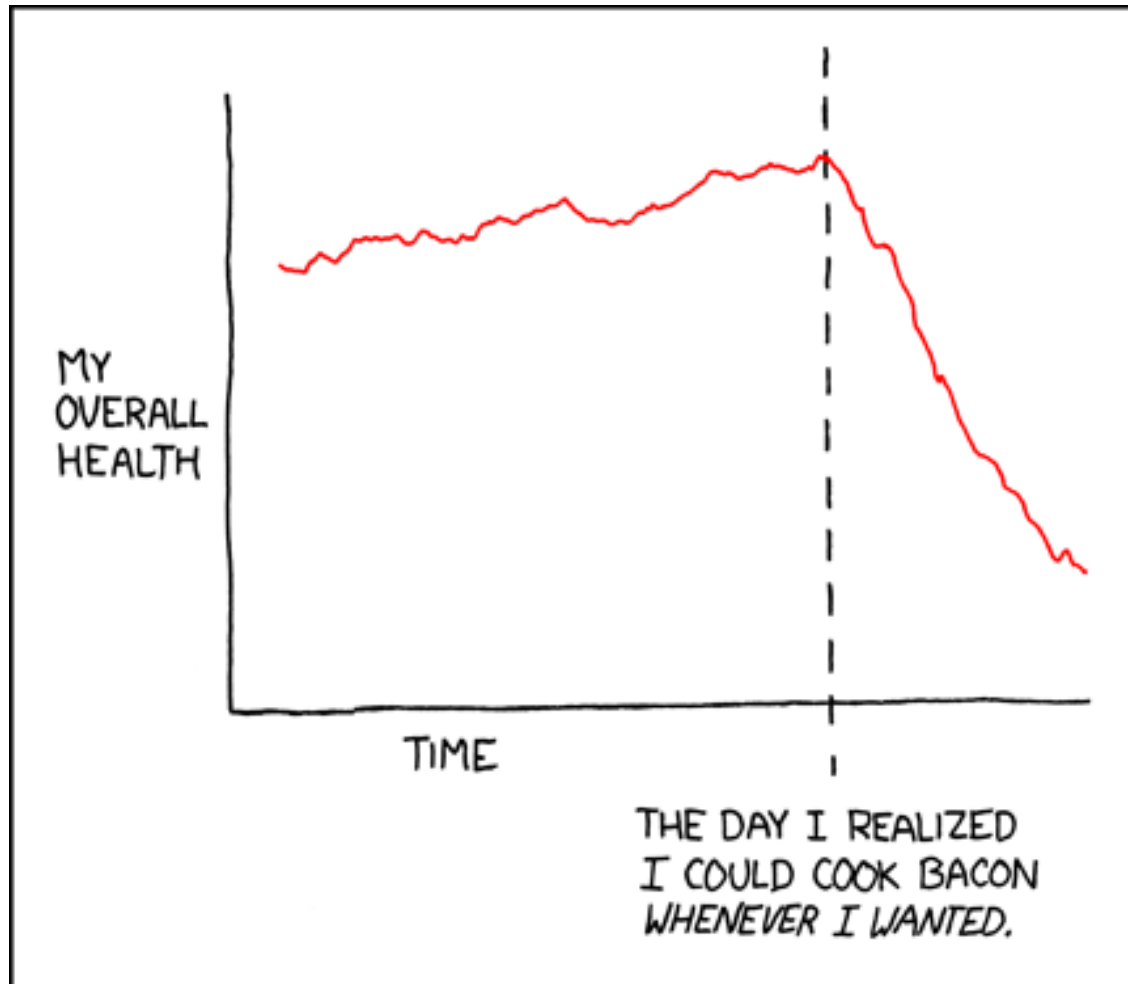


CHARTS AND GRAPHS





Visual Elements



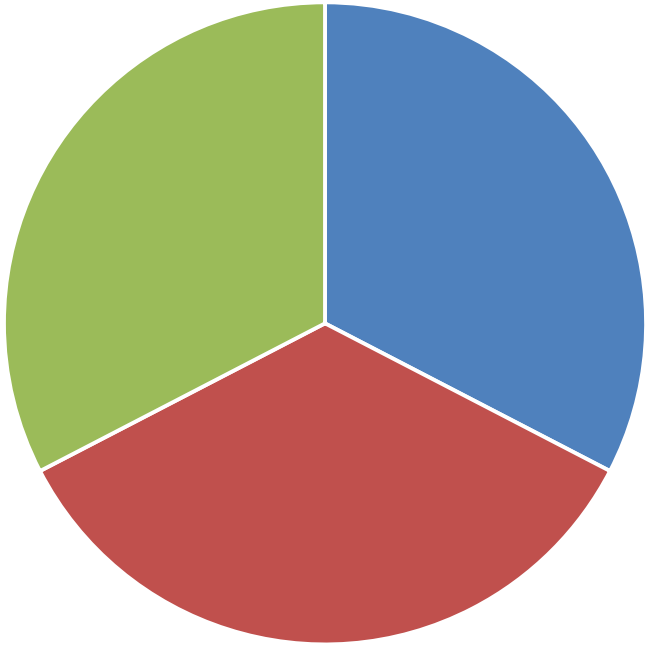


Visual Elements Use and Overuse

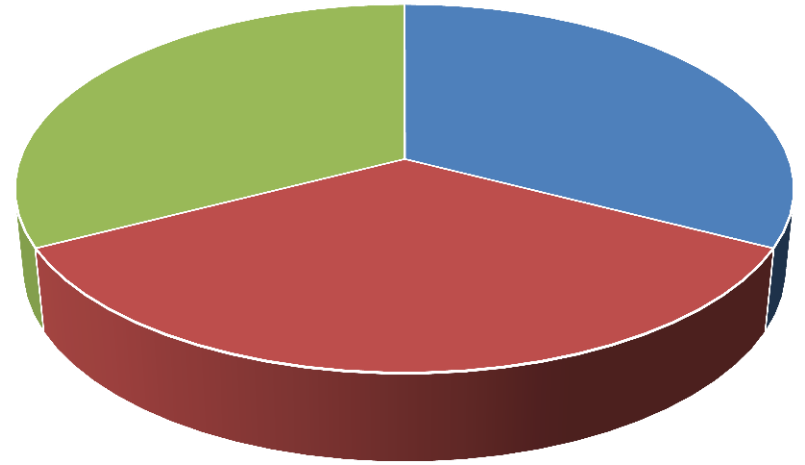
- Use charts, graphs, and other visual elements to reinforce the data
- Use visual tools to help discern important patterns
- Visual elements are easily overused
- Too many elements = clutter
- Use 3D when it makes sense



Beware Style over Substance



■ 1 ■ 2 ■ 3



■ 1 ■ 2 ■ 3



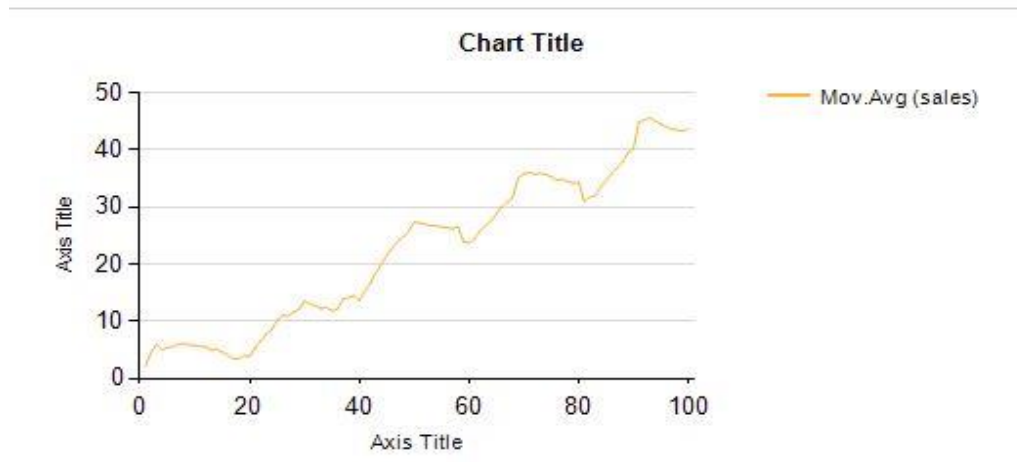
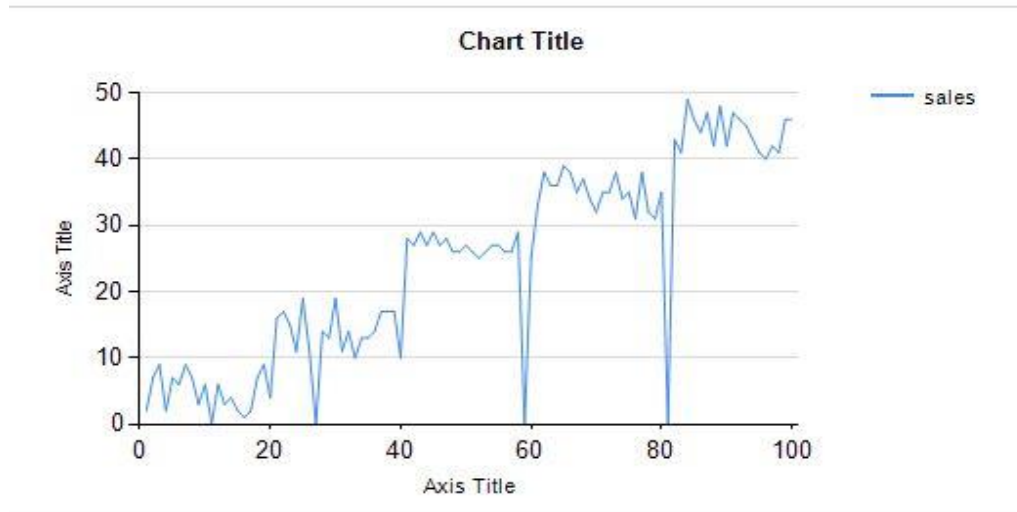
Charts and Empty Data Points

- Be aware of NULL and empty data points that can be misleading
- Use EmptyPoint properties to define/handle
- How does it display?
 - Trend over by averaging boundary data?
 - Show lapse, empty area



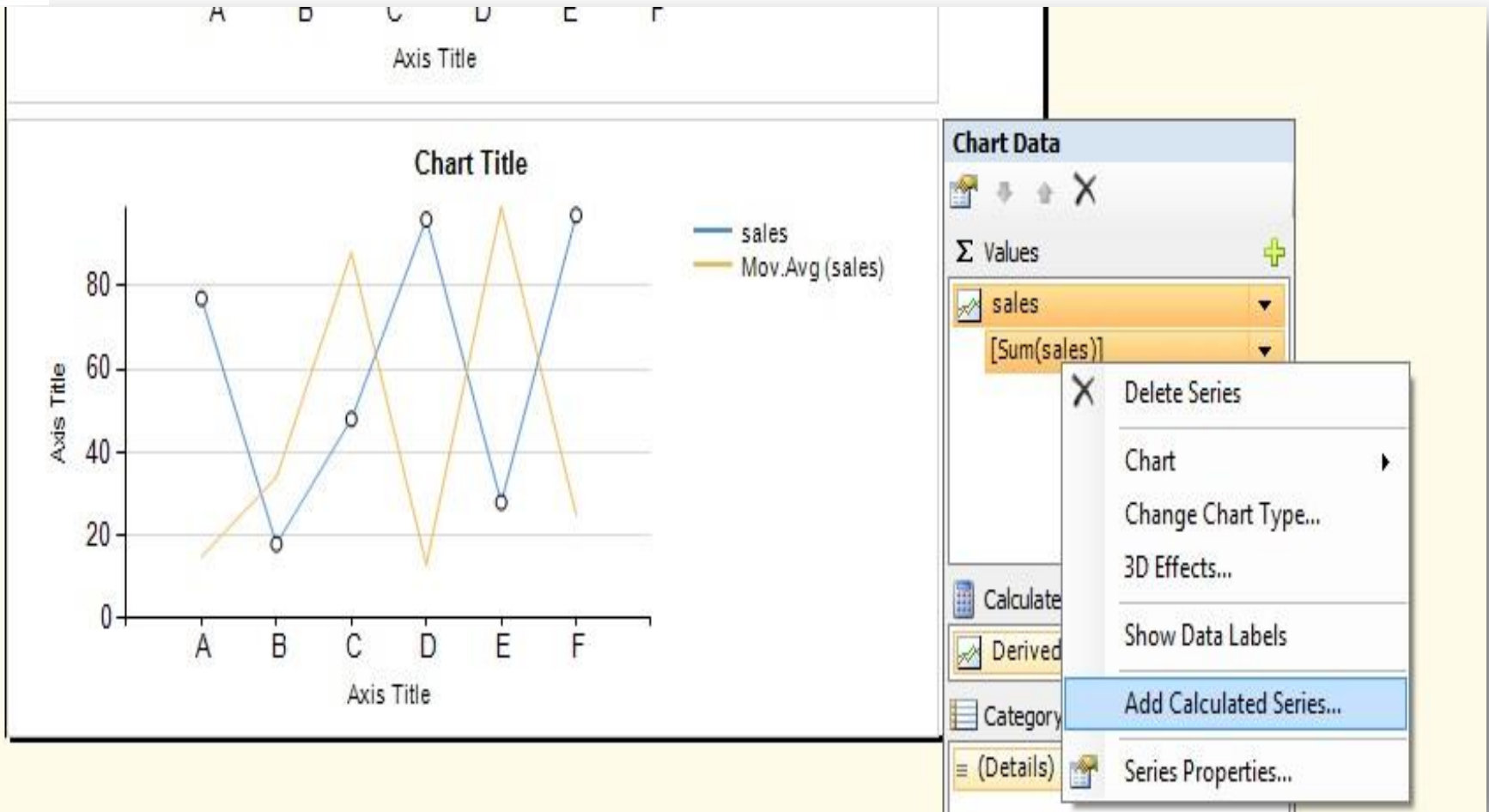
Charts and Empty Data Points

Charts



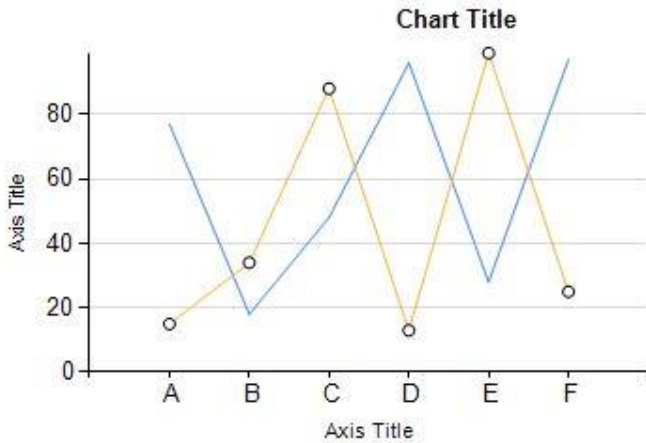
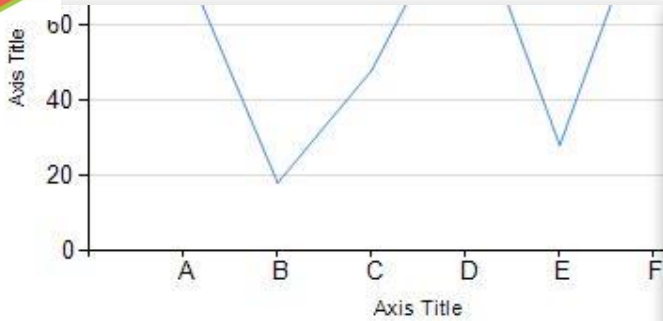


Charts and Empty Data Points





Charts and Empty Data Points



Calculated Series Properties

General

Set calculated series formula.

Formula: Moving average

Set formula parameters

Period: 10

Start from first point

Help OK Cancel



Sparklines

- Show trends for row or column data

Performance Sales Worksheet				Tessitura		
Parameters						
Performance Date	Code	Standard	Subscription		Sales Trend	
		Tkt	Amount	Tkt		Amount
Noah's Flood						
9/14/2011 8:00 PM	NF070914	14	\$965.00	6	\$390.00	
9/15/2011 8:00 PM	NF070915	45	\$3,025.00			
St Matthew Passion						
3/14/2012 8:00 PM	SMP080314	4	\$280.00			
3/14/2012 8:00 PM	SMP080315			6	\$390.00	
The Magic Flute						
11/9/2011 8:00 PM	MF071109	4	\$240.00	6	\$390.00	
11/10/2011 8:00 PM	MF071110	13	\$710.00			
Tosca						
5/2/2012 8:00 PM	TSC080502	3	\$210.00	6	\$390.00	
Autumn Ridge Tours						
2/1/2011 9:00 AM	TOUR0201	23	\$287.50			



Creating Sparklines

		[DisplayColumn]	Revenue	
Performance Date	Code	Tkt	Amount	Distribution
<<Expr>>		[Sum	[Sum(PaidAmc	
[PerfDay]	[PerformanceC	[Sum([Sum(PaidAmoun	
Totals		[Sum	[Sum(PaidAmc	
[FullReportPath]				

Chart Data

Σ Values +

- PaidAmount ▼
- [Sum(PaidAmount)] ▼
- [OrderDate] ▼

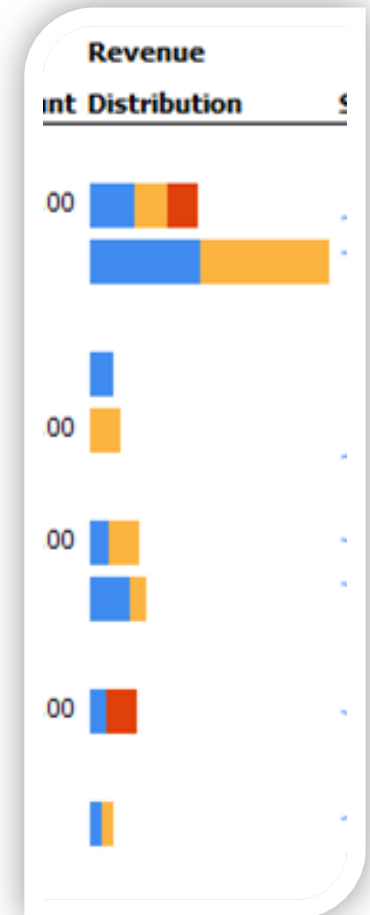
Category Groups +

- [OrderDate] ▼



Databars

- Useful for visualizing the aggregate data within a spreadsheet
- Can display grouped data within bars
- Allows easy discernment of outliers and strong/weak indicators





Indicators

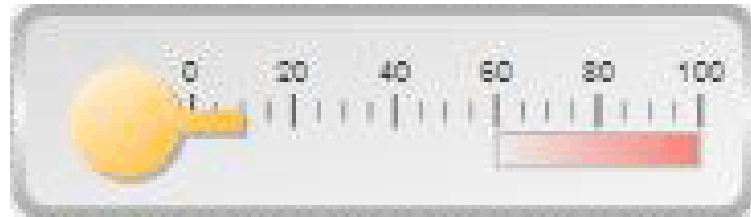
- Small Gauges for inline tablix placement
- Visual Element to quickly discern simple patterns
 - good, neutral, bad
 - Ratings (1-5)
 - Positive, Negative

Performance Date	Code	Tkt	Amount	Tkt	Am
Amahl and the Night Visitors					
▲ 12/8/2010 8:00 PM	VIS061208	19	\$785.00	18	\$1,0
▬ 12/9/2010 8:00 PM	VIS061209	13	\$529.00	18	\$1,0
Christmas Oratorio					
▬ 12/15/2010 8:00 PM	CHR061215			23	\$1,2
▲ 12/16/2010 8:00 PM	CHR061216	4	\$152.00	37	\$2,2
Faust					
▬ 2/9/2011 8:00 PM	FST070209	6	\$210.00	8	\$5
▼ 2/10/2011 8:00 PM	FST070210	17	\$655.00	6	\$3
Julius Caesar					
▲ 4/6/2011 8:00 PM	JC070406	12	\$420.00	19	\$1,2
▼ 4/7/2011 8:00 PM	JC070407			14	\$7
Manhattan Transfer					
▼ 1/27/2011 8:00 PM	MTR070127			25	\$1,1
New York Voices					
▲ 10/28/2010 8:00 PM	NYV061018	2	\$28.00	49	\$2,0



Gauges

- Useful but often overused
- Very useful in a dashboard approach
- Can easily clutter a frequently used report

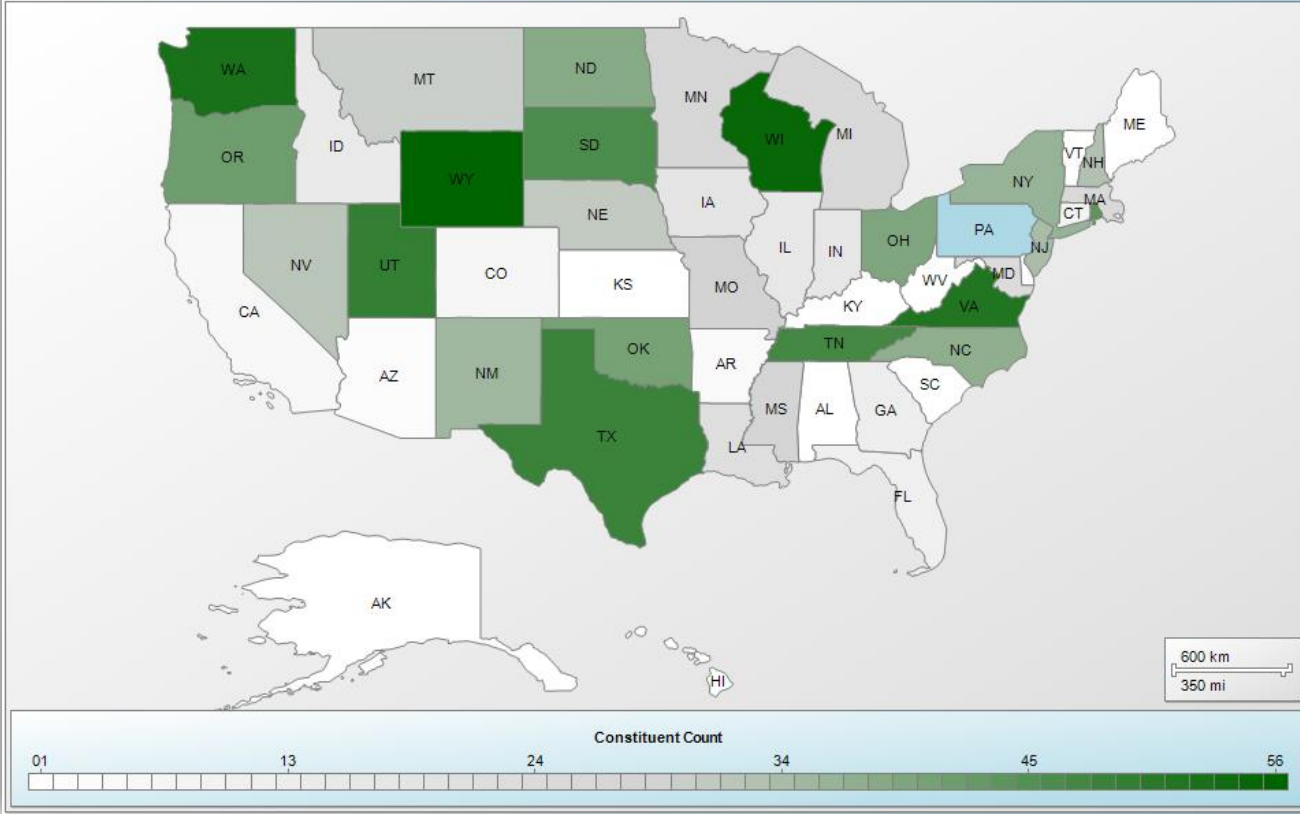




Autumn Ridge Performing Arts Center

List Donors With Household

US State Distribution For List



Maps



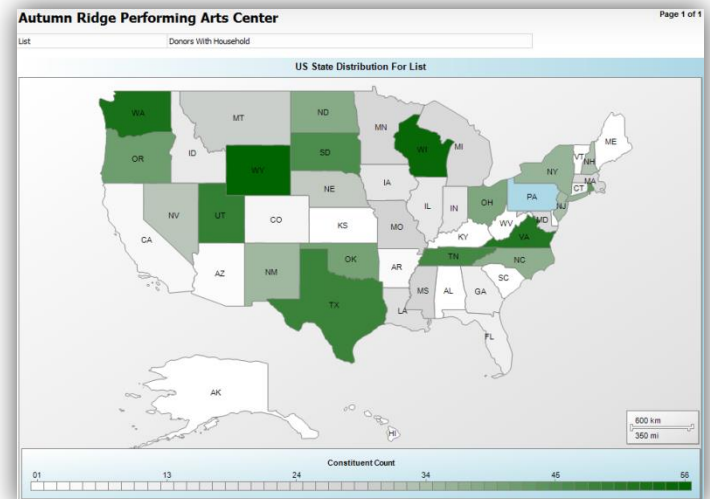
Map Source Data

- **Spatial Data**
 - Geographic – Longitude, Latitude
 - Spatial – X, Y
 - Associated – map data to shapes/regions
- **Analytical Data**
 - Values to be associated with the map
- **To visualize data on a map, a relationship must be provided between the data**



Spatial Map Data Sources

- Map Gallery Reports
- ESRI Shapefiles
- SQL Server spatial data
 - Geometry data type
 - Geography data type
- Custom
 - Manually added locations on a map





ESRI Spatial Data Files

- ESRI (Environmental Systems Research Institute) shapefile spatial data format
- Provided by commercial and public domain entities
- SSRS comes with some world and US maps



General ESRI Resources

- *Google search...*
- US Census Data
<http://www.census.gov/geo/maps-data/index.html>
- ArcGIS Online
<http://www.esri.com/software/arcgis/arcgisonline>
- UK public geodata
http://wiki.osgeo.org/wiki/Public_Geodata_for_the_UK
- Other resources available
<http://www.statsilk.com/maps/download-free-shapefile-maps>



Linking Data to a Location

- Link by coordinates (X,Y or Long/Lat)
- Place/Location data
 - Postal Code
 - City, State, Locale, Province...
 - Match on multiple properties to ensure uniqueness

Match Fields	Spatial Dataset Fields	Analytical Dataset Fields
<input type="checkbox"/>	STATEFP	
<input checked="" type="checkbox"/>	STUSPS	ConstituentCount
<input type="checkbox"/>	STATENAME	ConstituentCount
		StateAbbreviated
		State
		Country

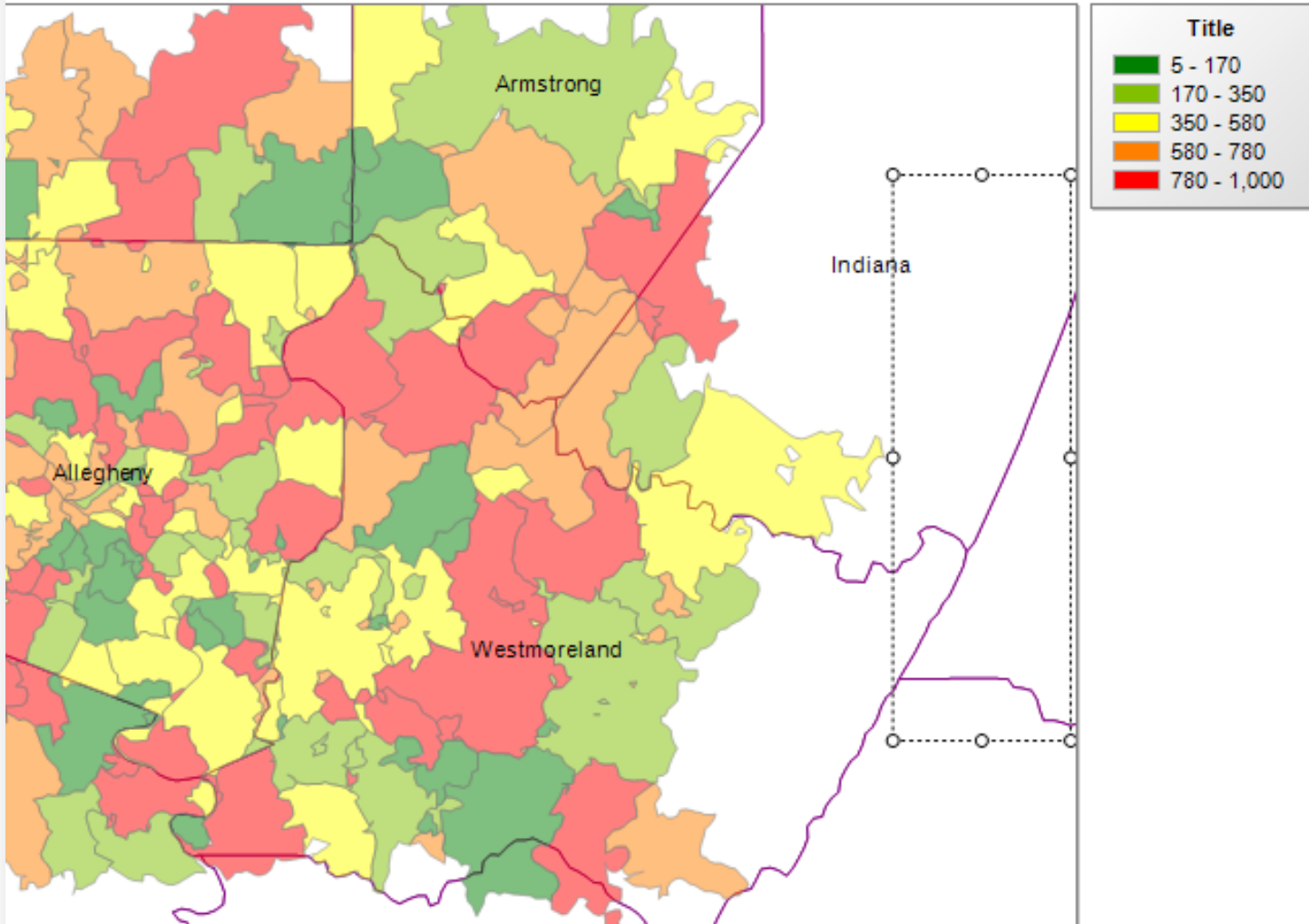
Spatial data:

STATEFP	STUSPS	STATENAME
25	MA	Massachusetts
31	NE	Nebraska
10	DE	Delaware
11	DC	District of Columbia
51	VA	Virginia



The Map Viewport

Constituent Count by Pittsburgh Postal Codes



Map Layers

The Map Layers panel shows two layers, both titled "PolygonL..." and set to "Embedded". Each layer has an eye icon to toggle visibility. The panel includes standard map interaction icons: a pencil for editing, a cross for deleting, a document for copying, an upward arrow for pasting, and a downward arrow for zooming.

Map view





The Map Viewport

- Container for the map and dependent elements
 - Map
 - Legends
 - Title
 - Scales
- Allows formatting, zoom, crop of maps and setting of map layers

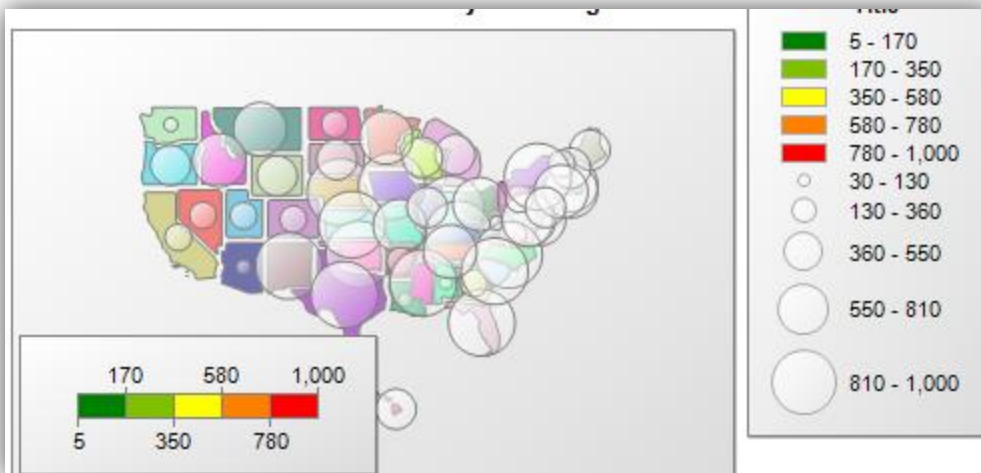
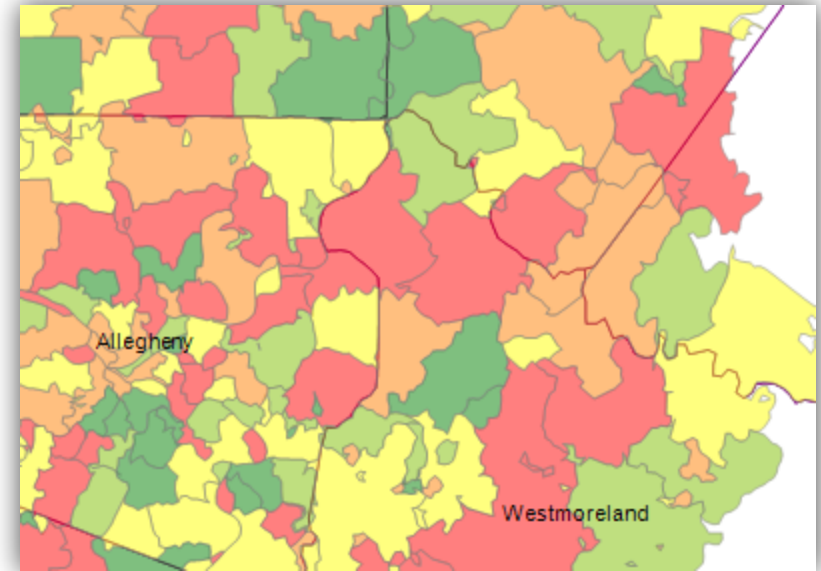


Map Layers

- A Map Viewport can hold multiple layers for a single map
- Polygon Layer - Outlines, shapes of areas
- Line Layer - Paths or routes
- Point Layer - Markers, points of interest
- Bing maps layer – Providing underlying layer using Microsoft Bing Maps service

Map Analytic Display Options

- Purely Visual
- Color Analytic
- Bubble Map





CODING A BETTER REPORT

```
<body style="margin: 0; background-color: #f0f0f0;">  
<div id="main_content">  
<h1 style="font-family: Arial, sans-serif; font-size: 24px; margin: 0; padding: 10px 0 0 0;">  
  <h2 style="font-size: 18px; margin: 0; padding: 0 0 0 20px;">
```

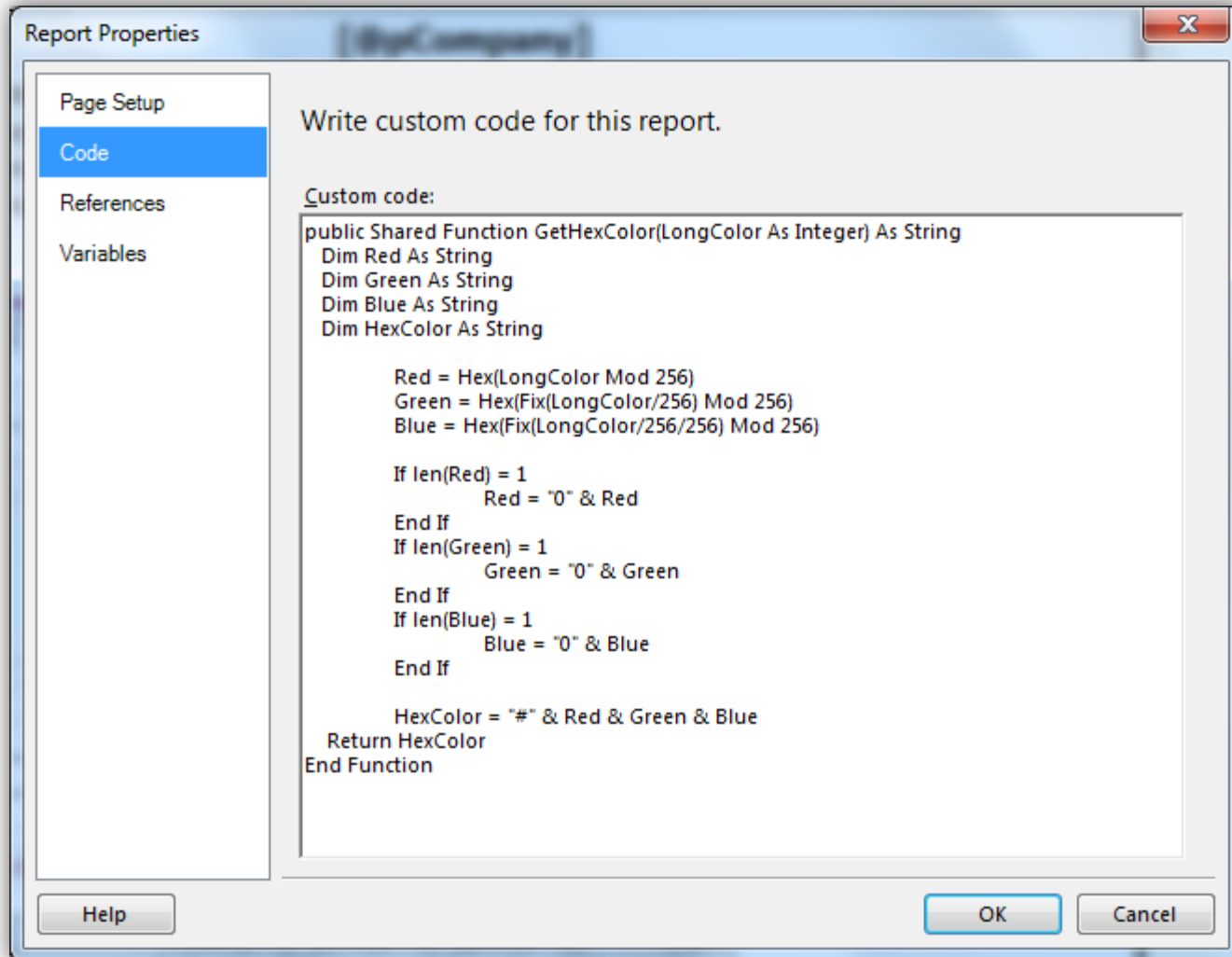


Coding and Extensibility

- SSRS provides a number of ways for extending and customizing reports
- Code Property
- Custom Assembly References
- Custom Extensions



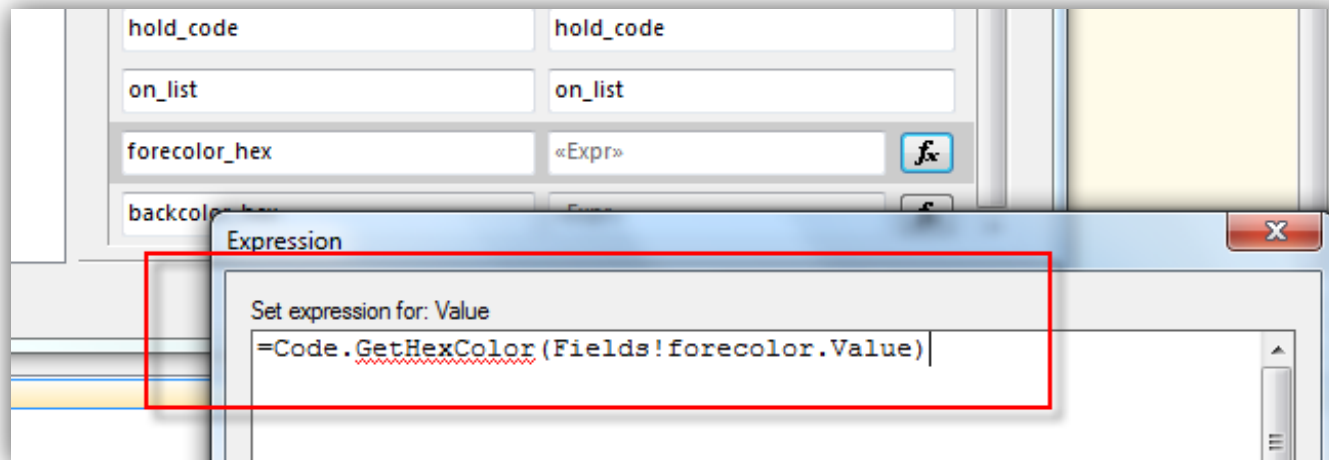
Custom Code





Custom Code

- VB.NET only
- Can reference functions/methods in Code property directly in report objects/expressions
- Reference in objects with class
 - Code.Method() or Code.Property





Divide by Zero

Divide by Zero

perf	sales	goal	% to Goal
1	45	75	60.00 %
2	45	0	Infinity

=Fields!sales.Value/Fields!goal.Value



Divide by Zero

Report Properties

Page Setup

Code

References

Variables

Write custom code for this report.

Custom code:

```
Function DBZ(ByVal x As Double, ByVal Y As Double) As Double
    If Y = 0 Then
        DBZ= 0
    Else
        DBZ= x / Y
    End If
    Return DBZ
End Function
```



Divide by Zero

perf	sales	goal	% to Goal
1	45	75	60.00 %
2	45	0	Infinity

=Fields!sales.Value/Fields!goal.Value

perf	sales	goal	% to Goal
1	45	75	60.00 %
2	45	0	0.00 %

=Code.DBZ(Fields!sales.Value, Fields!goal.Value)



GetTessituraLink

```
Function GetTessituraLink(resource as String, id as Long) As  
    String  
    If NOT Report.Globals!RenderFormat.IsInteractive Then  
        RETURN Nothing  
    End IF  
  
    If NOT (len(resource) > 0) OR id < 1 Then  
        RETURN Nothing  
    End If  
  
    RETURN Report.Globals!ReportServerUrl  
        & "?/Tessitura/Links/" & resource & "&Id=" & id  
End Function
```



GetTessituraLink() in use

Go to URL

Select URL:

«Expr»



Expression

Set expression for: Hyperlink

```
=Code.GetTessituraLink("Constituent", Fields!customer_no.Value)
```



Downsides to Code in Report

- No Intellisense or code completion
- Not compiled so no build verification
- Must repeat code for every report
- Does not facilitate code reuse



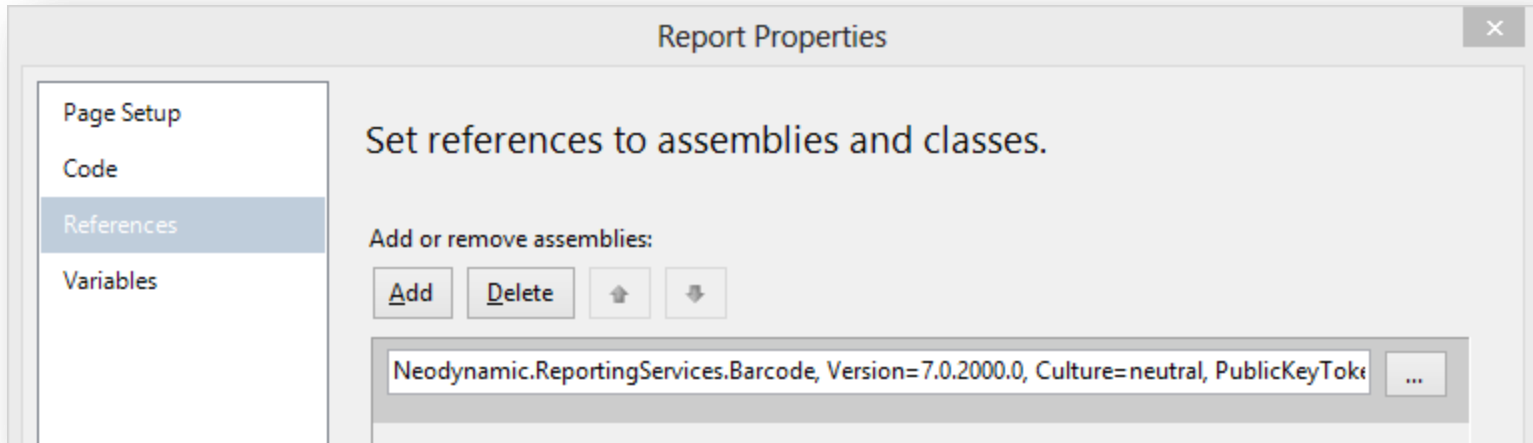
Custom Assembly

- Can include custom assembly references in a report definition
- Classes can be static or instance based
- Instance based classes are instantiated and referenced in global Code member
 - Referencing in an expression:
 - `=Code.myPrivateClass.DoSomething(var)`
- More information on MSDN

<http://msdn.microsoft.com/en-us/library/ms153561.aspx>



Assembly References





Class Instances

- References page of Report Properties
- A public class containing a parameter-less public constructor may be added as an instance

Add or remove classes:

Class Name	Instance Name
MyNameSpace.SomePublicClass	somePublicClass



Code

- Add function in Code block to build barcode image from a passed string value

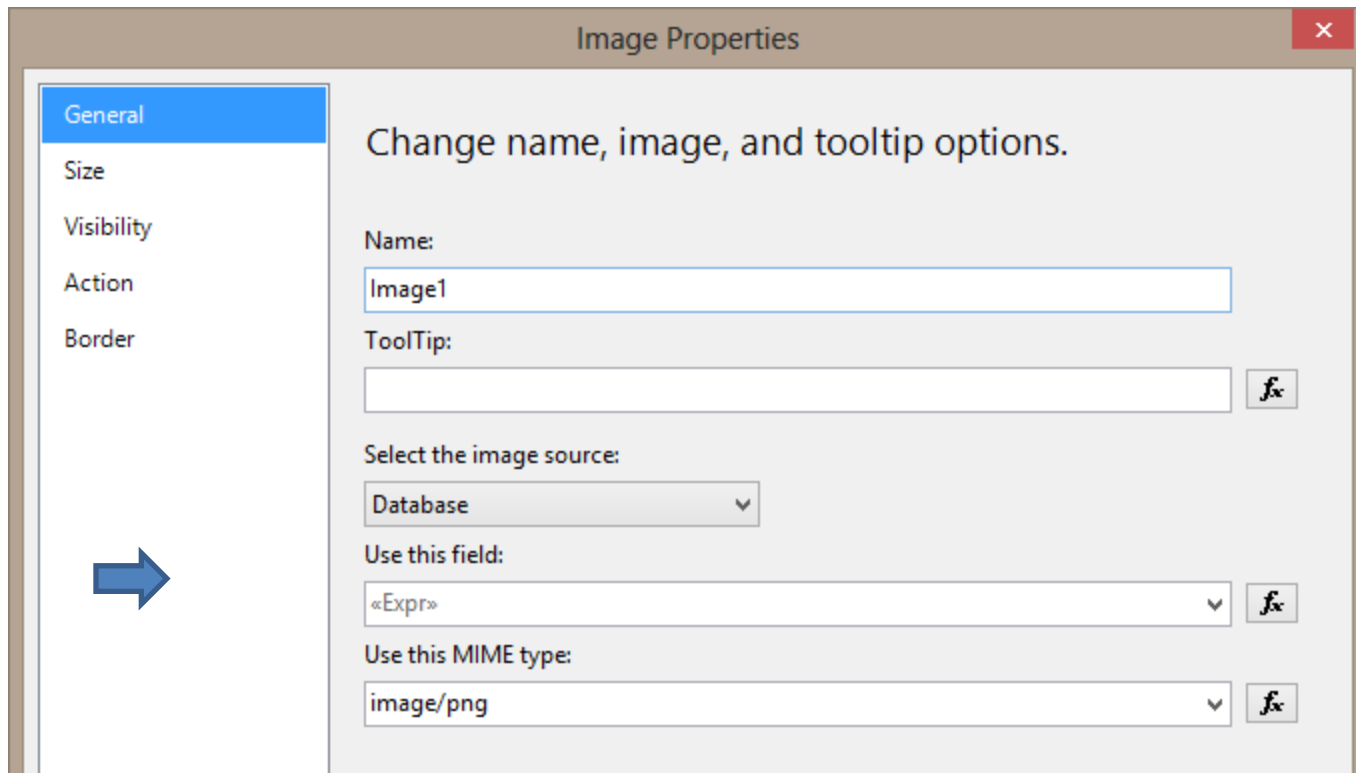
Report Properties

Write custom code for this report.

Custom code:

```
Public Function GetBarcode(ByVal valueToEncode As String) As Byte()  
  
    Using objBarcode As New Neodynamic.ReportingServices.Barcode  
        'Set the value to encode  
        objBarcode.Code = valueToEncode  
        'Set the Code 128 Barcode Symbology  
        objBarcode.Symbology = _  
            Neodynamic.ReportingServices.Symbology.QRCode  
        'Set the Bar's height to 0.5 in  
        objBarcode.BarHeight = 0.5F  
        'Enable AutoSize  
        objBarcode.AutoSize = True  
        'Generate the barcode image  
        Return objBarcode.GetBarcodeImagePng()  
    End Using  
  
End Function
```

Barcode Rendering








- Define barcode image value

```
Set expression for: Value  
=Code.GetBarcode(Fields!ticket_no.Value.ToString())
```



Barcode Rendered

- Showing QRCode
- Other Options
 - Code 39
 - Code 128
 - EAN
 - USPS
 - and more...

sli no	ticket no	
969	41	
970	40	
971	39	
972	37	
973	36	



Barcode/QR Code Rendered

- Free:

BarCode Render

<http://barcoderender.codeplex.com/>

- Paid:

Neodynamic Barcode Professional



Extensions

- Extension Options
 - Data Processing
 - Delivery
 - Rendering
 - Security
- More information on MSDN (and elsewhere)
 - <http://msdn.microsoft.com/en-us/library/ms152934.aspx>



Third Party Products

- **Barcodes**
- **Maps**
- **Charts and Visualizations**
- **Rendering Extensions**



Resources

- TLCC
- TessituraNetwork.com
 - Forums and Documentation
 - SSRS and Tessitura TCast Series
- MSDN
 - Official Documentation, White Papers and forums

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QUESTIONS?

- Tell us who you are and where you are from.....

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WHAT'S NEXT?

🎯 **BREAK 10.30AM – 11AM**
You will find drinks in or near all
conference rooms.

🎯 **NEXT SESSION : 11AM – 12 NOON**
KEYNOTE ADDRESS in the Auditorium at
the Royal Concert Hall