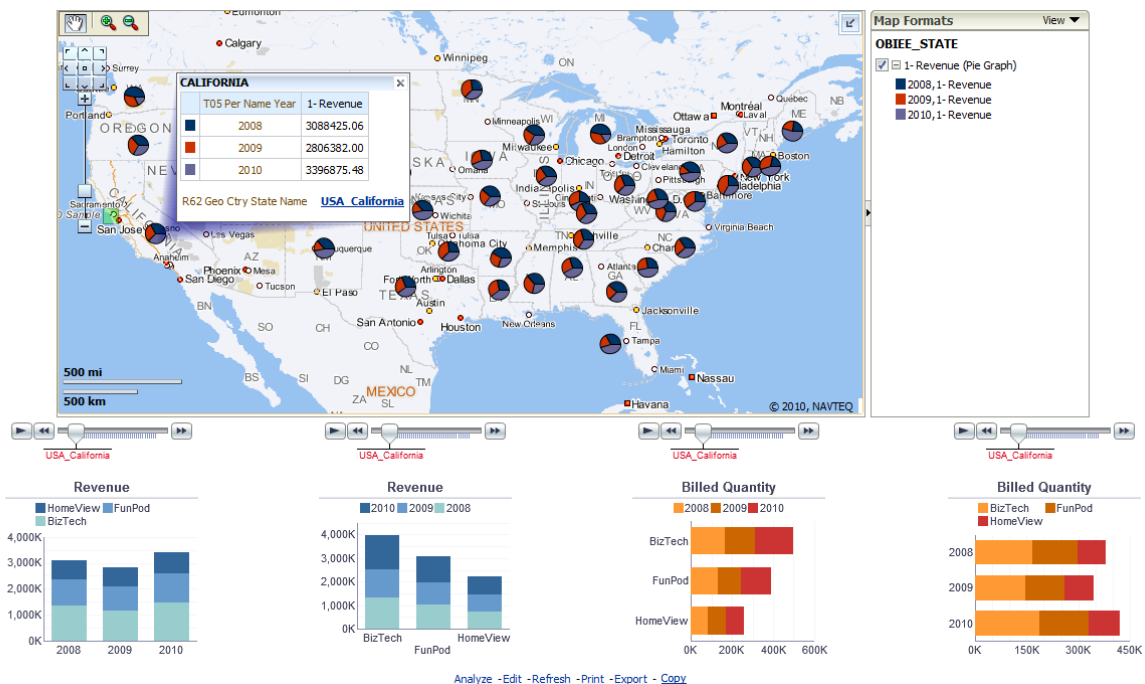# COLLABORATE 11

Building Map-based Dashboards

Participant Handbook

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Purpose

The following workshop material is designed to introduce the new Map View feature of Oracle Business Intelligence Suite Enterprise Edition Plus (OBIEE 11g) through a set of simple hands-on exercises.

Topics

This hands-on portion workshop will cover the following topics.

- Creating a simple map view

- Adding charts to a map view

- Master-detail linking via map views

- Action Links and Map Views

The presentation and demo portion will cover the following topics.

- Why Map Views

- Map metadata management

If time permits the demo portion may also include topics like importing map data, setting up maps and map layers, and using spatial queries in analyses.

Workshop Environment

Participants will need a laptop or desktop machine with internet connectivity and a web browser (either Firefox 3.x or Internet Explorer 7.x or IE8 but not IE9).

Each participant will be working in their own self-contained environment on Amazon cloud servers. Details of the URL, username, and password will be provided at the start of the workshop.

Creating a Map View

Objective

In this section participants will create interactive maps using the new OBIEE 11g "Map Views" feature. They will

- Create a simple Analysis that includes a geographic dimension

- Render it as a Map View

- Preview it and observe map drill behavior

Overview

Map views are a new view type in Oracle Business Intelligence Enterprise Edition (OBIEE) 11g for displaying analysis results. This provides a valuable, rich interactive visualization capability since most BI data already contains a geographic dimension such as store addresses, sales districts or regions. OBIEE 11g allows BI administrators to pre-associates the business model with mapping data so that analysis results are automatically map-ready. Any analysis that includes a column associated with a configured map feature is ready to be rendered in a Map View without any customization or coding whatsoever. In this lab we will create simple map views that demonstrate this capability.

Hands On:

1. First, sign in to your hosted instance using the specified workshop username and password.

2. Create a New Analysis using the Sample Sales subject area containing Customers →
    Cust Geo Codes → Geo Country Code, Base Facts → Revenue, and Base Facts→
    Billed Quantity as items. Note: The following and other images shown will contain
    relevant snippets from multiple screenshots of the steps involved in any portion of
    the hands-on exercise.
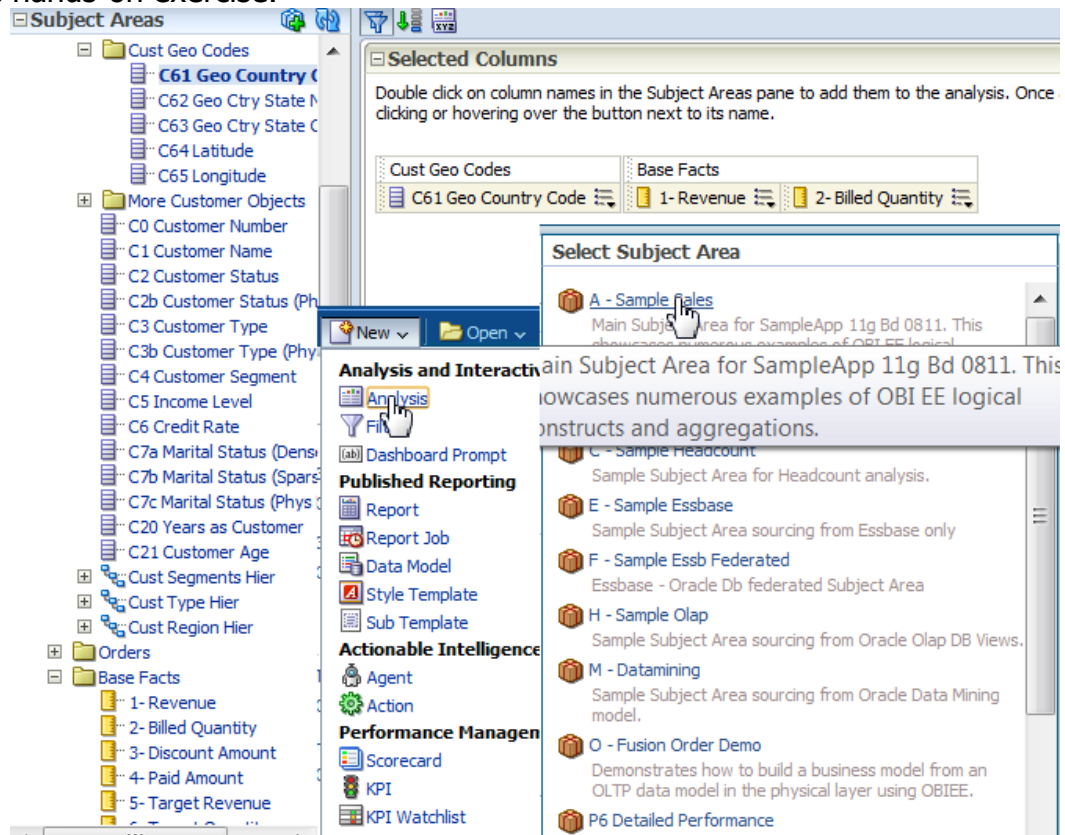
3. Click the Results tab to see a tabular view of the report. Next remove the Table View
    (click on the X) and click on the New View icon and select Map.

The default map view should look like the following. Click on the pencil icon to edit the map view.

4. Hover the mouse to the right of the OBIEE_COUNTRY label in the map formats pane and edit or remove it (click on the pencil icon or X). If you removed it then next click on Create a New Map Format and select Color Fill and then select the OBIEE_COUNTRY layer.
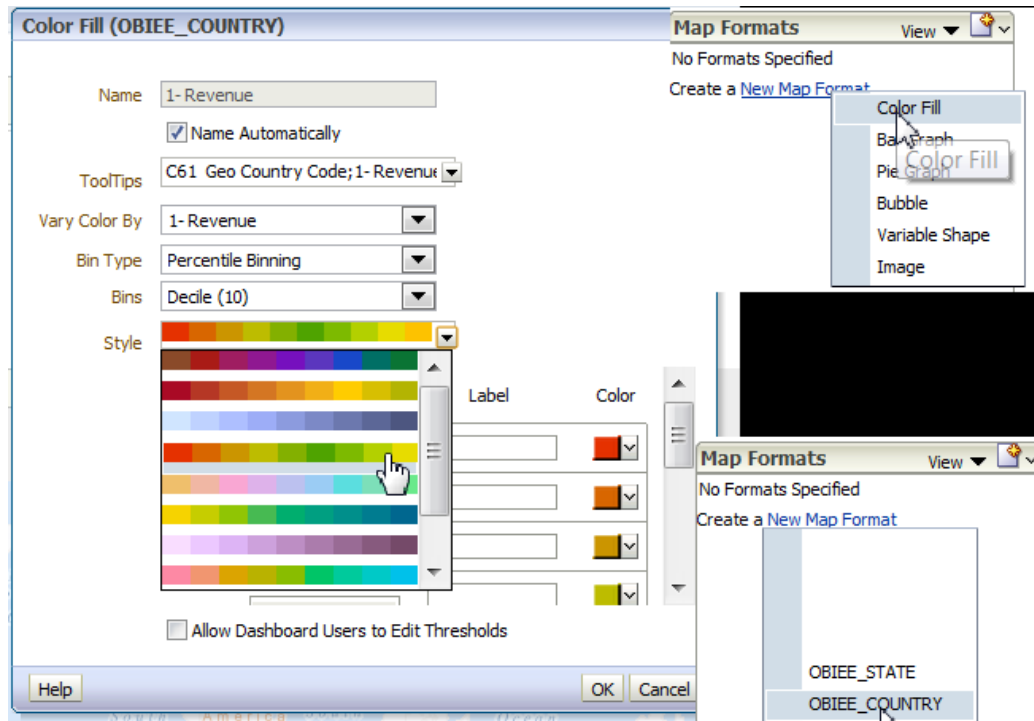
Select Percentile Binning, 10 colors, select a color ramp and click OK.

Optional: Click Edit again (but click on the edit icon next to the 1-Revenue layer) and then click "Allow Dashboard Users to edit thresholds" in the Color Fill (OBIEE_COUNTRY) dialog pane and click OK.

5. Next, click the "Preview" button in the Compound View toolbar to see how results would look on a Dashboard.
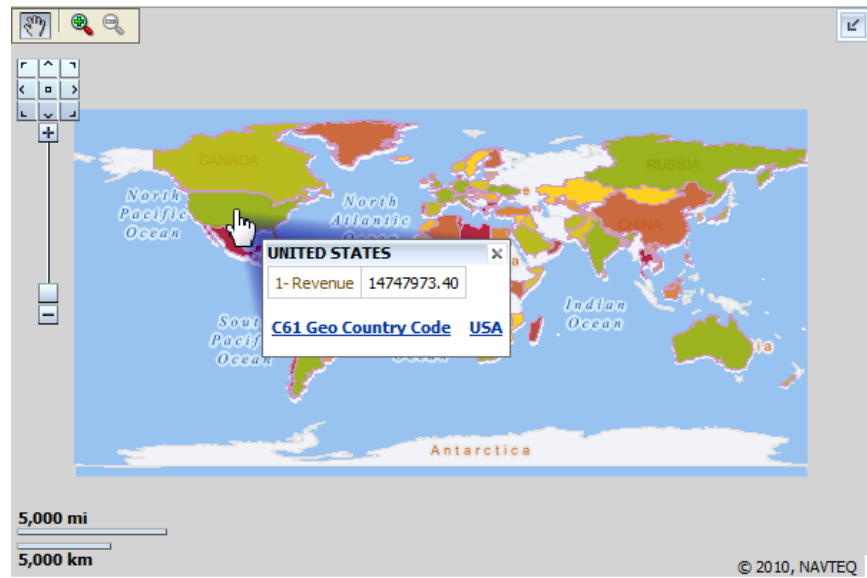
Hover over a Country, e.g. the USA, and you will see an info-window. Click on the country and then within the info-window click on the hyperlinked label USA to drill to the State level. Uncheck the box next to the map format for the OBIEE_COUNTRY layer and then either double-click someplace near the USA on the map or use the navigation panel on the map to zoom in one level and then pan over to the USA. You should see the states color-filled by Revenue.
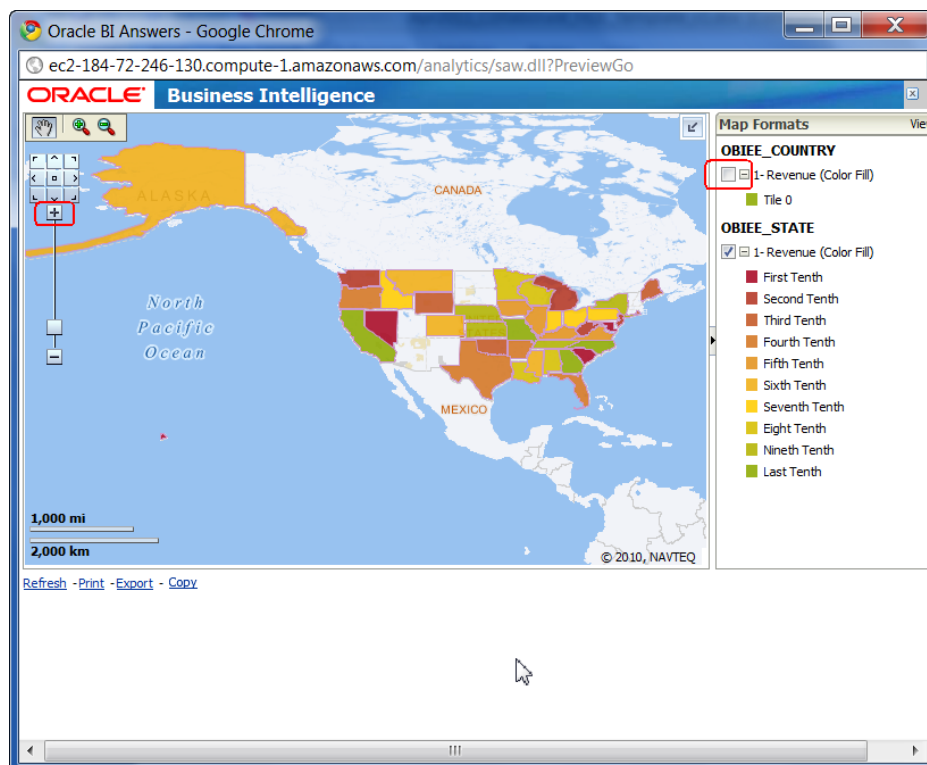
6. Close the preview and save the newly created analysis.
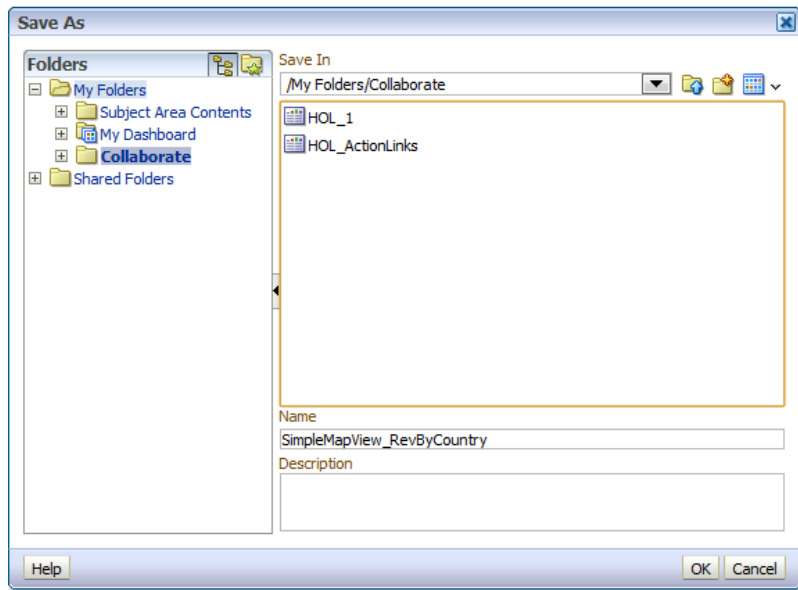
Click OK.
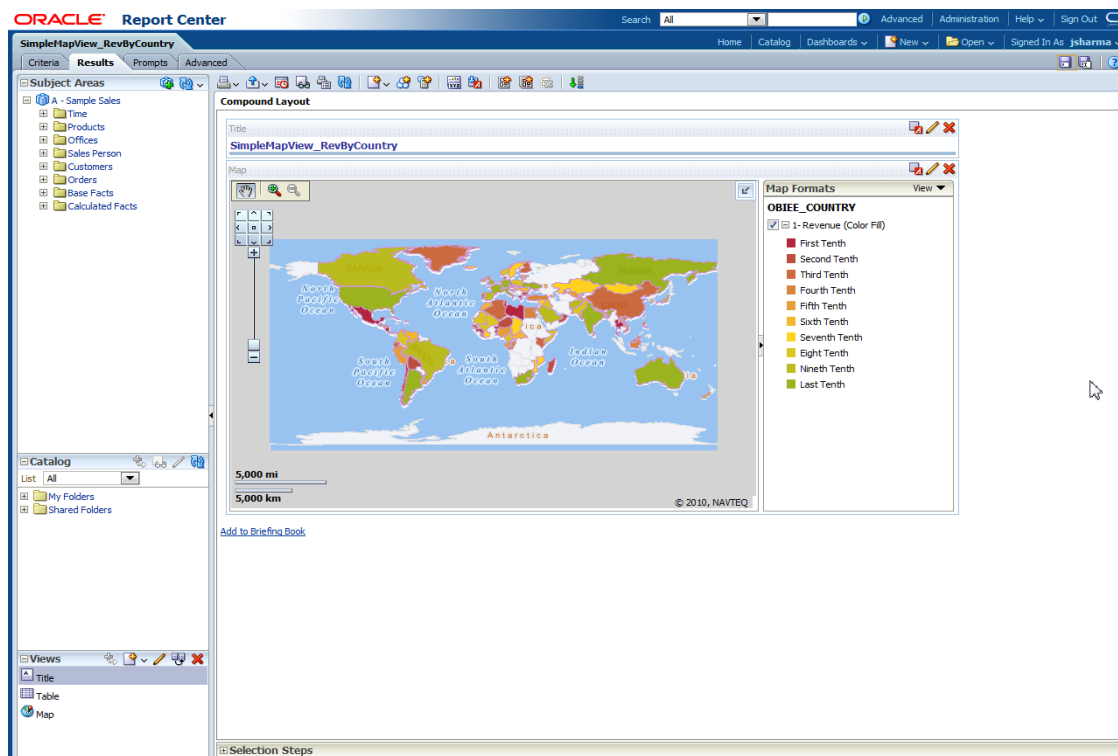
Adding a Bar Chart to the Map View

Now that we have a basic map view, let's add additional formats to it to display other measures. We'll add a bar chart that shows product revenue by brand by state when a user drills down from USA to US states. In order to do so we have to add Product Brand to the criteria (i.e. set of columns in the analysis), and create a new format associated with the OBIEE_STATES layer.

1. Click on the Criteria tab and add the Products → P4 Brand column to the set of selected columns for the analysis. The following image contains snippets from multiple screenshots.

2. Click the Results tab and edit the map view. Click on the Add a new map format icon and select Bar Graph. Then select OBIEE_STATE as the layer for this format, thereby specifying that the bar graphs will be displayed per state. Click OK when prompted that the required column (C62 Geo Ctry State Name) will be added to the analysis and finally select P4 Brand as the column for the Bars.

Pan over to the USA, zoom in once if you wish, and uncheck the OBIEE_COUNTRY layer to see the bars graphs for the states. Check the OBIEE_COUNTRY layer to turn it back on.

3. Click on Preview to see how it'll look on a dashboard. Click on USA, and then on the USA link in the info-window to drill down to the State level. Uncheck the OBIEE_COUNTRY layer, click on a bar chart for a state, and you should see something like the following screenshot.
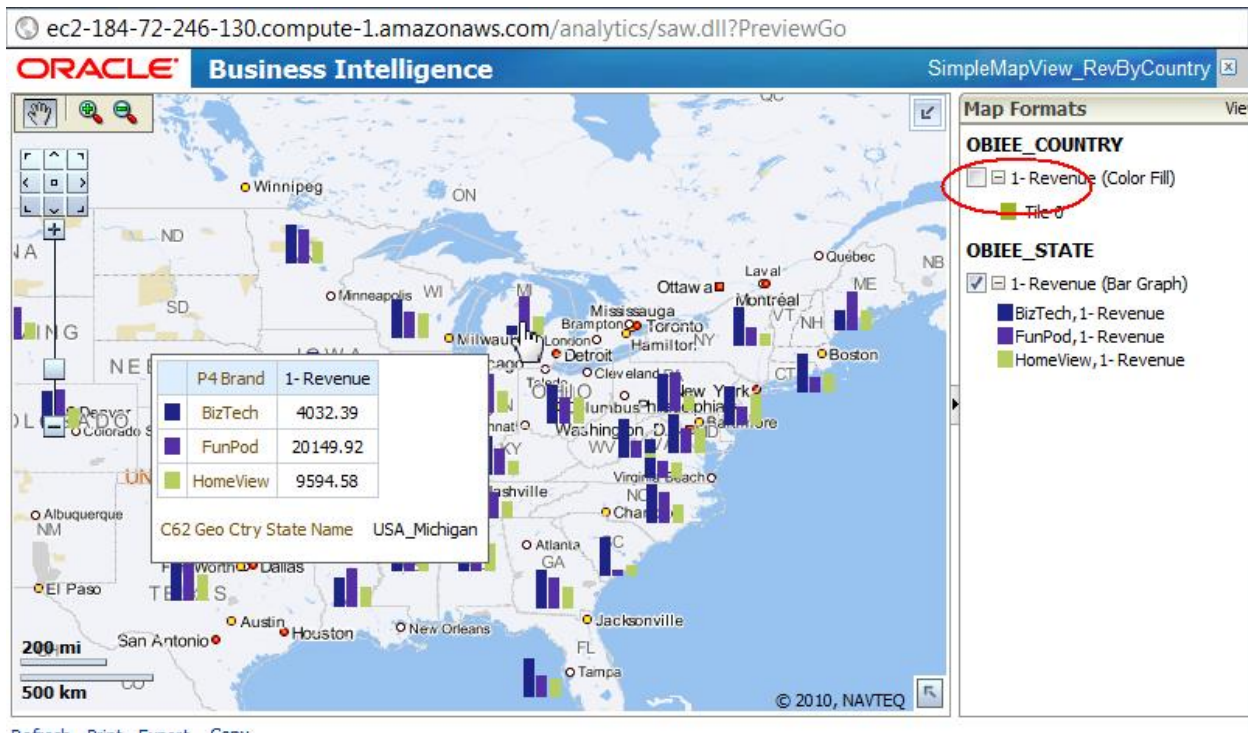
Exit the preview and save the modified analysis.

Master-Detail Linking via Map Views

This section describes simple master-detail linking with map views. We'll add some bar charts to the analysis created above and link them to the map. The map will act as the master and the bar charts will present details for the selected State in the map view. The resulting view, when previewed on a dashboard page, should look something like the screenshot below.
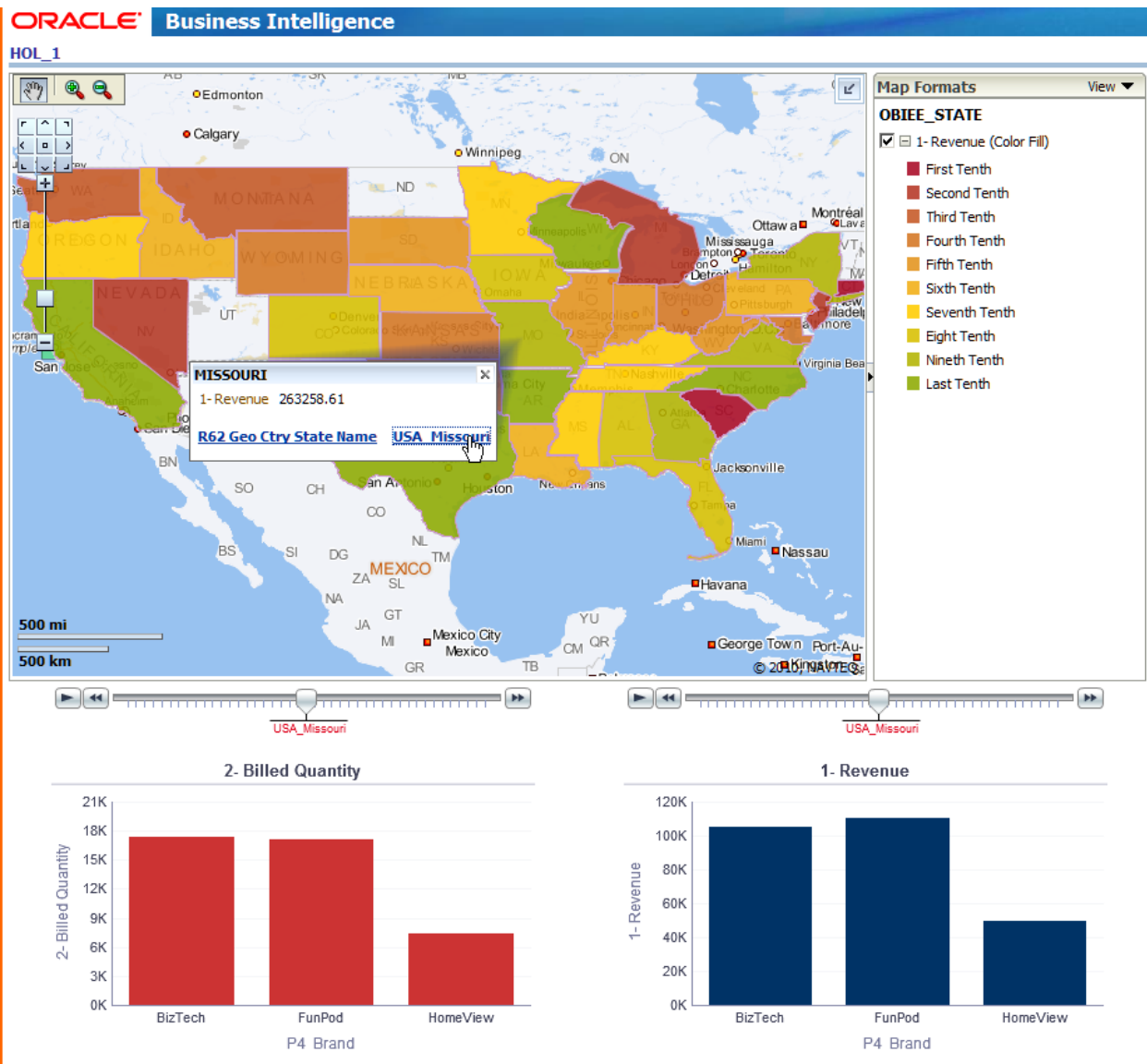
1. To get started open the previous analysis or create a new one with the C62 Geo Ctry State Name and 1-Revenue columns. Add a filter, C61 Geo Country Code is equal to/ is in USA, to the analysis. If you're creating a new analysis then add a map view and edit it to choose percentile binning (decile) and a preferred color ramp.
2. Click on Criteria again and then on the State Name column and modify the column properties. Click on the Interaction tab and select "Send Master Detail Events" for the Value property. Specify a name for the channel, e.g. M1, and click OK.
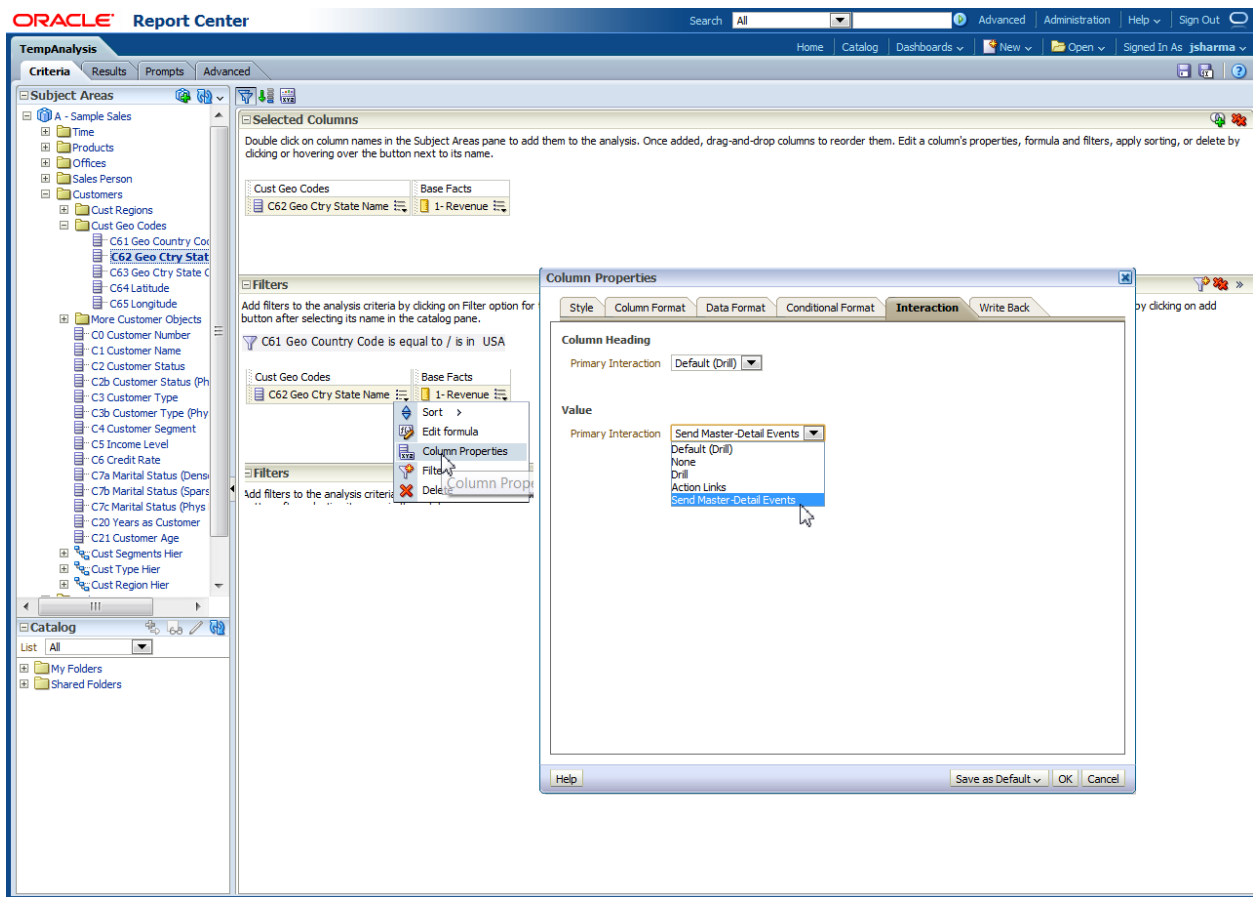
3. Next add a bar graph to the analysis (click on results, then new view → graph → bar → default (vertical)). It should add it below the map. Edit the Graph view.

    Move the State Ctry Name column to Sections area, check Display as slider, click on section properties and set the maximum number of section values to 50, and click OK.

4. Add P4 Brand to the Bars, Group By (Horizontal Axis) area. Then click on the Edit icon for the graph to change its size (to 400x300 pixels), and check the box "respond to master events" on channel M1. In the Style tab select "Rectangle" and click OK.
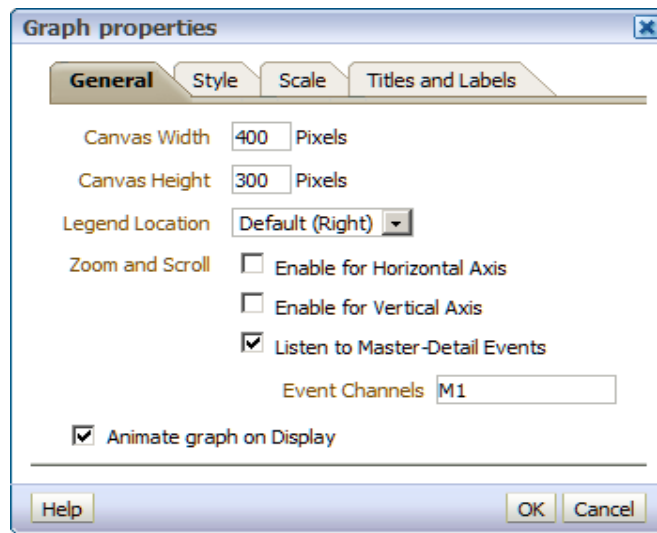
The graph should look like the one shown below.
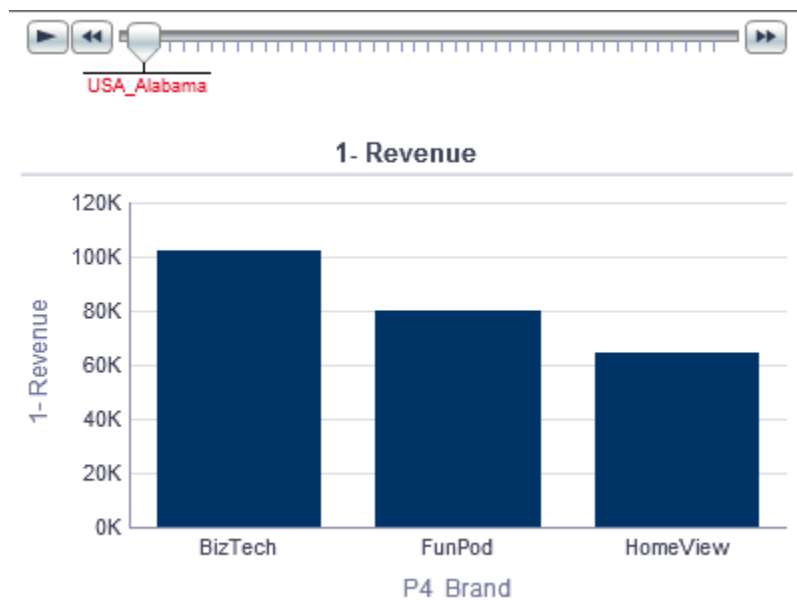
5. Now click duplicate view, and
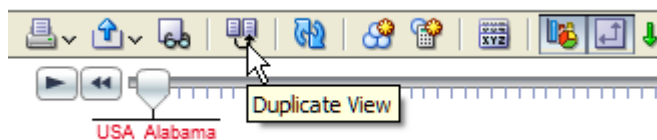
remove Revenue from the Measures and add Billed Quantity instead, and finally click Done.
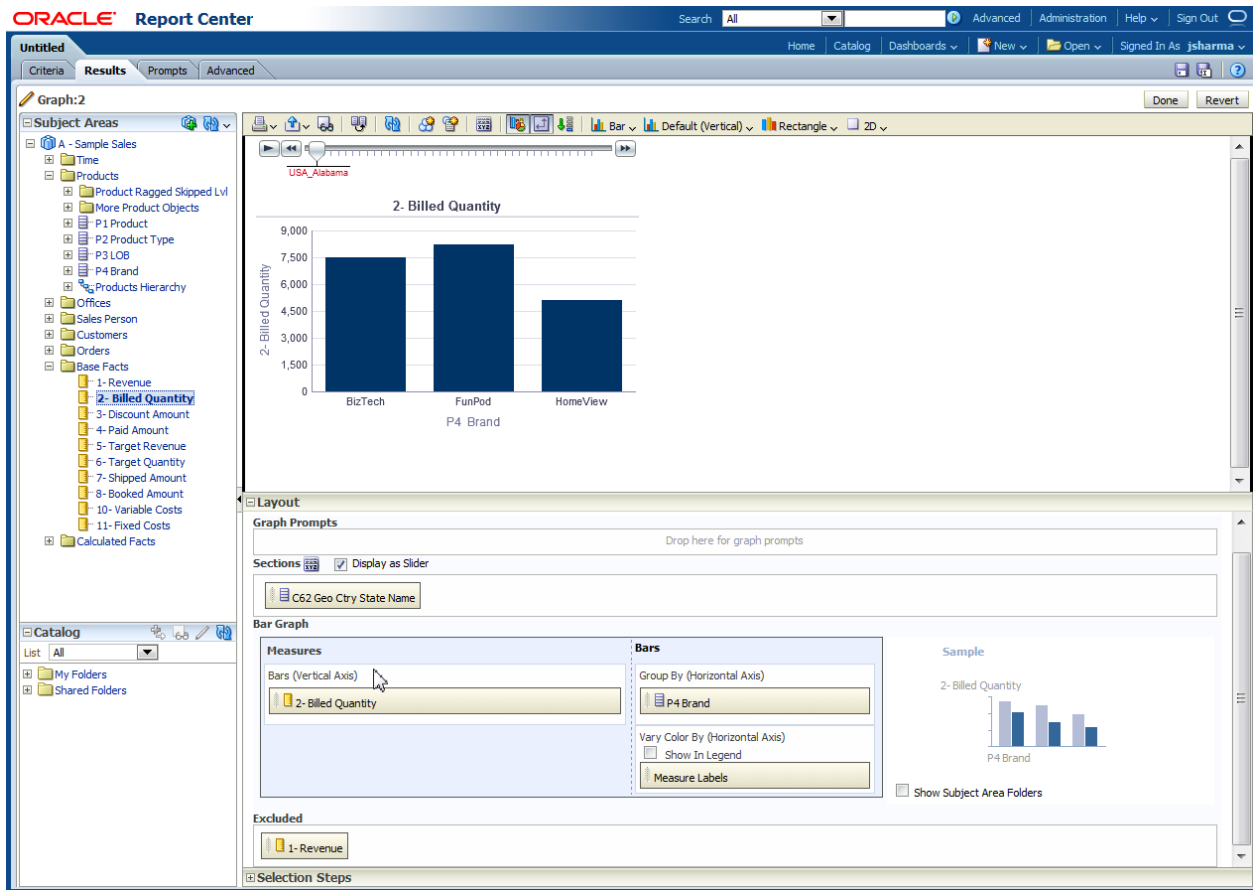
6. Add Graph 2 to compound view to the right of the first graph. That is drag the Graph:2 icon from the Views pane and drop it in the Compound Layout just to the right of the existing Graph view.
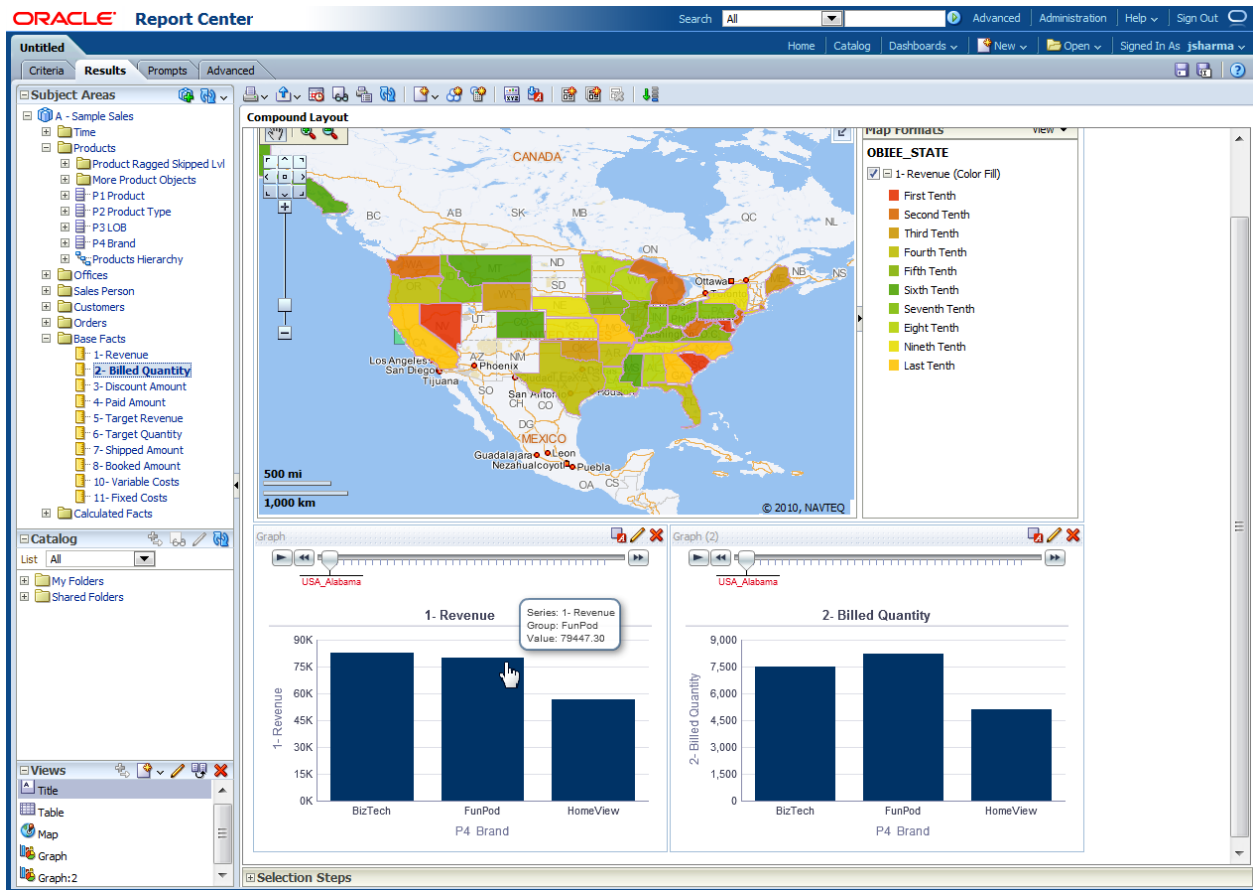
7. Click Preview and test Master Detail linking.
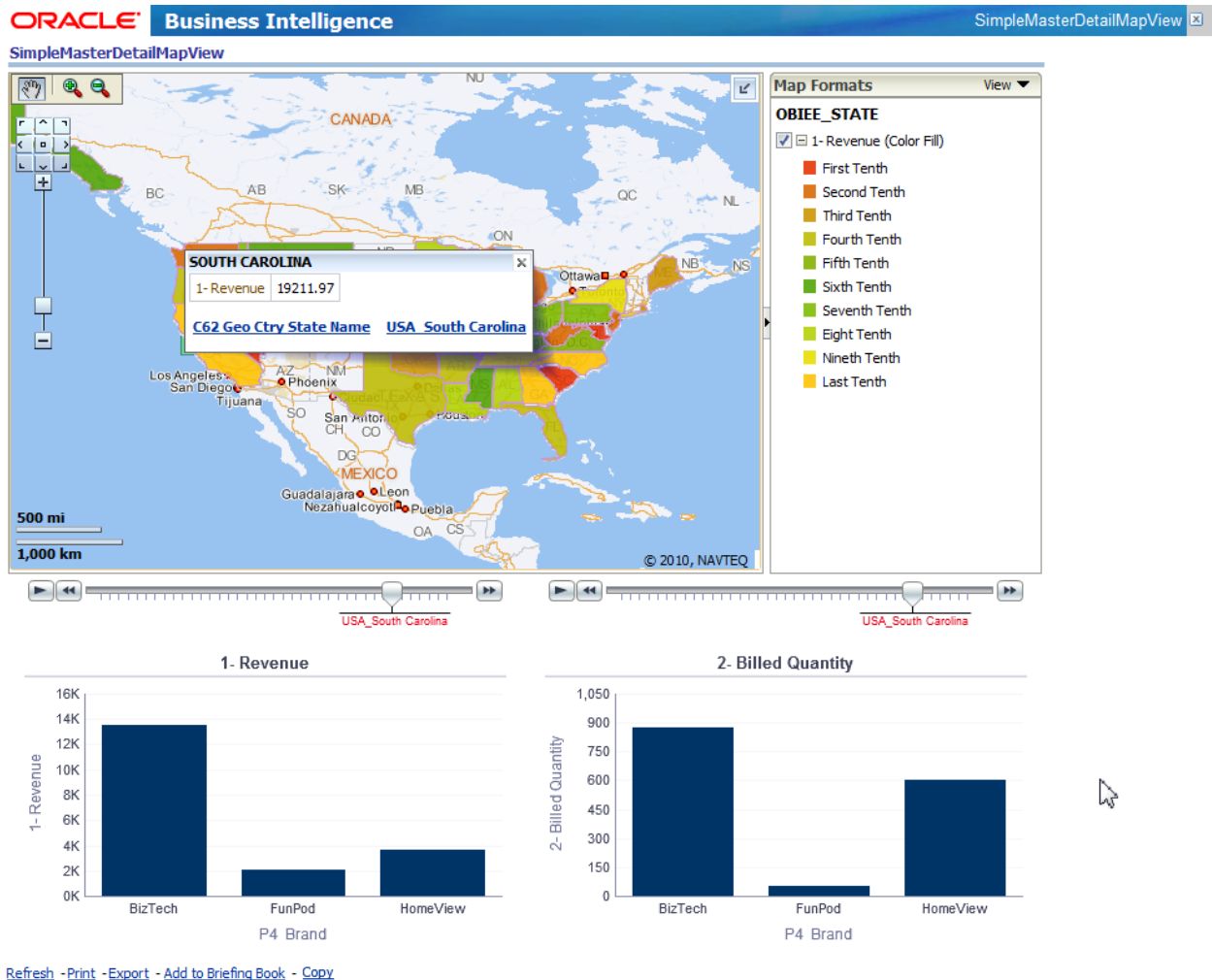
Action Links via Map Views

The last hands-on exercise uses action links as the Interaction mechanism instead of the master-detail events which were used above. Save the analysis with a different name, i.e. click on Save As and name it something else (e.g. SimpleActionLinkMapExample).

1. Now create a new analysis which will have details by state. Add the C62 Geo Ctry State Name column, add a filter for Country Code = USA AND C62 Geo Ctry State Name is prompted, and add other columns to the analysis. See the screenshot below for an example.

Criteria | Results | Prompts | Advanced

Selected Columns

Double click on column names in the Subject Areas pane to add them to the analysis. Once added, drag-and-drop columns to reorder them. Edit a column's properties, formula and filters, apply sorting, or delete by clicking or hovering over the button ne:

Cust Geo Codes
C62 Geo Ctry State Name

Products
P4 Brand | P3 LOB | P2 Product Type | P1 Product

Simple Calculations
46 Avg Order Process Time | 24 Avg # of Orders by Sales Rep | 23 Avg # of Orders by Customer | 25 Avg O

Base Facts
25 Avg Order Size | 11- Fixed Costs | 10- Variable Costs

Filters

Add filters to the analysis criteria by clicking on Filter option for the specific column in the Selected Columns pane, or by clicking on the filter button in the Filter pane header. Add a saved filter by clicking on add button after selecting its name in the catalog pane.

C61 Geo Country Code is equal to / is in USA
AND C62 Geo Ctry State Name is prompted

View the results and save the analysis (e.g. name it PromptedStateDetailAnalysis).

Title

PromptedStateDetailTable

Table

C62 Geo Ctry State Name	P4 Brand	P3 LOB	P2 Product Type	P1 Product	46 Avg Order Process Time	24 Avg # of Orders by Sales Rep	23 Avg # of Orders by Customer	25 Avg Order Size	11- Fixed Costs	10- Variable Costs
USA_Alabama	BizTech	Communication	Cell Phones	V5x Flip Phone	7.67	1.00	1.00	2332.65	1334.00	3655
				CompCell RX3	6.00	1.00	1.00	3575.27	1025.00	1884
			Smart Phones	Touch-Screen T5	10.43	1.40	1.75	2547.27	4247.00	8118
				KeyMax S-Phone	4.00	1.00	1.00	3443.68	899.00	3116
		Electronics	Accessories	Bluetooth Adaptor	10.33	1.50	1.00	1924.56	1299.00	3123
				MP3 Speakers System	9.33	1.00	1.50	3063.44	1129.00	4542
			Audio	SoundX Nano 4Gb	7.00	1.00	3.00	3299.09	1470.00	3841
				MicroPod 60Gb	7.71	1.17	2.33	3169.14	4088.00	10105
	FunPod	Digital	Camera	MPEG4 Camcorder	13.67	1.00	1.00	2893.69	1810.00	4887
				7 Megapixel Digital Camer	8.22	1.29	2.25	2633.15	3705.00	13929
		Games	Fixed	Game Station	8.85	1.44	2.60	2103.42	5919.00	12630
				HomeCoach 2000	6.67	1.00	1.00	2806.29	1821.00	3254
			Portable	PocketFun ES	7.00	1.00	1.00	2592.64	772.00	914
				MaxiFun 2000	8.25	1.00	1.33	2177.97	2098.00	5243
	HomeView	Services	Maintenance	Maintenance	1.00	1.00	1.00	3413.85	345.00	2300
		TV	LCD	LCD 36X Standard	13.50	1.20	1.50	3814.73	3450.00	14469
				LCD HD Television	10.50	1.00	2.00	2151.78	934.00	2335
			Plasma	Plasma HD Television	6.50	1.00	1.00	2229.15	1159.00	3093
				Tungsten E Plasma TV	6.11	1.29	2.25	2381.23	4243.00	11412
USA_Alaska	BizTech	Communication	Cell Phones	V5x Flip Phone	10.50	1.00	4.00	2011.19	1625.00	4902
				CompCell RX3	2.00	1.00	1.00	2343.24	598.00	993
			Smart Phones	Touch-Screen T5	5.00	1.00	2.00	1352.10	787.00	839
				KeyMax S-Phone	6.67	1.00	6.00	3139.13	3954.00	9482
		Electronics	Accessories	Bluetooth Adaptor	7.67	1.00	3.00	2051.91	1754.00	2086
				MP3 Speakers System	16.00	1.00	1.00	3155.83	882.00	2203

Rows 1 - 25

2. Next open the previously saved analysis (SimpleActionLinkMapExample), click on Results if necessary, and edit the Compound Layout. Remove the two graph views (Graph and Graph (2)).

Add a Table view below the map view (Not sure if it's a bug or a feature but a table view is needed for the action link to work in the map view).

3. Now click on Criteria and edit the column properties for the Ctry State Name column to change the Interaction from Send Master-Detail Events to Action Link. In the Action Links dialog click on add Action Link, select Navigate to BI Content, choose the saved detail analysis (PromptedStateDetailAnalysis), and click OK where prompted.

Create New Action

Navigate to BI Content
Select the BI Content from the Catalog that you want to navigate to.

BI Content   /My Folders/Collaborate/PromptedS   Browse...

Help   Options...   OK   Cancel

New Action Link ...

Link Text   Go to Analysis page

Action   PromptedStateDetailTable

Show Link   ● Always   ○ Conditionally

Help   OK   Cancel

Column Properties

| Style | Column Format | Data Format | Conditional Format | **Interaction** | Write Back |

Column Heading

Primary Interaction   Default (Drill) ▼

Value

Primary Interaction   Action Links ▼

Action Links

Link Text	Action	Show Link	
Go to Analysis page	PromptedStateDetailTable	Always Enabled	

☐ Do not display in a popup if only one action link is available at runtime

Help   Save as Default ∨   OK   Cancel

4. Preview the analysis (i.e. click on show how results will look on a dashboard) and test the action link.

ORACLE **Business Intelligence**   SimpleActionLinkMapExample ⊠

SimpleActionLinkMapExample

CANADA

Map Formats

OBIEE_STATE

☑ ⊟ 1- Revenue (Color Fill)

- First Tenth
- Second Tenth
- Third Tenth
- Fourth Tenth
- Fifth Tenth
- Sixth Tenth
- Seventh Tenth
- Eight Tenth
- Nineth Tenth
- Last Tenth

NEVADA   ✕

1- Revenue   28062.54

C62 Geo Ctry State Name   USA_Nevada   Ottawa

Go to Analysis page

Go to Analysis page

500 mi

1,000 km

© 2010, NAVTEQ

C62 Geo Ctry State Name	1- Revenue
USA_Alabama	218279.08
USA_Alaska	163948.23
USA_Arkansas	108629.25
USA_California	8688700.43
USA_Colorado	152440.63
USA_Florida	109262.51

ORACLE **Business Intelligence**   PromptedStateDetailTable ⊠

PromptedStateDetailTable

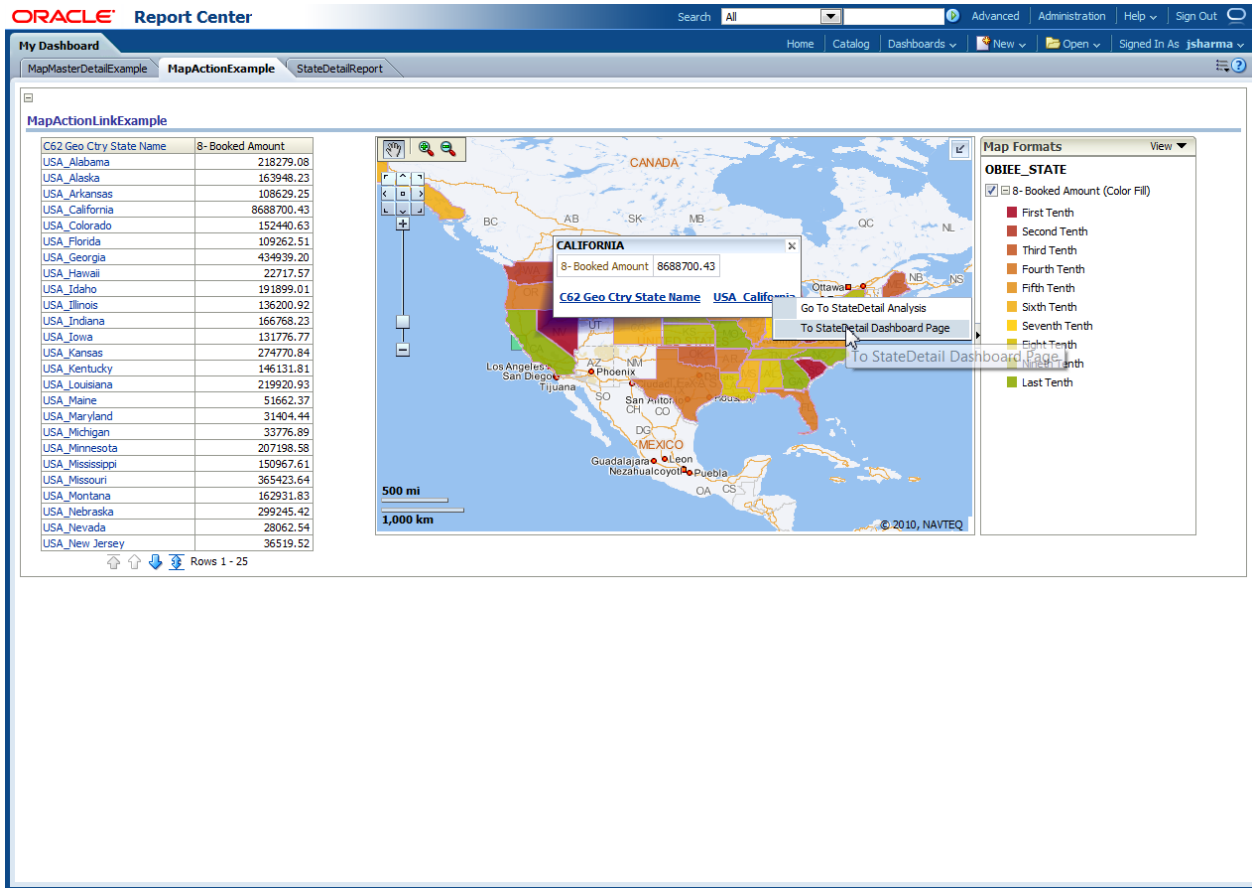| C62 Geo Ctry State Name	P4 Brand	P3 LOB	P2 Product Type	P1 Product	46 Avg Order Process Time	24 Avg # of Orders by Sales Rep	23 Avg # of Orders by Customer	25 Avg Order Size	11- Fixed Costs	10- Variable Costs
USA_Nevada	BizTech	Communication	Cell Phones	V5x Flip Phone	5.00	1.00	1.00	3535.21	591.00	1204
			Smart Phones	Touch-Screen T5	7.00	1.00	1.00	184.36	55.00	123
		Electronics	Accessories	Bluetooth Adaptor	13.00	1.00	1.00	3142.91	943.00	2177
			Audio	MicroPod 60Gb	6.00	1.00	2.00	2096.37	673.00	1668
	FunPod	Digital	Camera	MPEG4 Camcorder	11.00	1.00	2.00	1242.48	582.00	770
				7 Megapixel Digital Camer	9.00	1.00	2.00	1976.35	881.00	1425
		Games	Portable	PocketFun ES	8.00	1.00	1.00	1938.77	426.00	815
	HomeView	Services	Maintenance	Maintenance	3.00	1.00	1.00	3855.25	1082.00	1545
		TV	LCD	LCD 36X Standard	1.00	1.00	1.00	420.08	123.00	145
			Plasma	Tungsten E Plasma TV	16.00	1.00	1.00	4355.56	1301.00	3016

Refresh - Print - Export - Add to Briefing Book - Copy

Exercises

1. Publish your analyses containing maps to a dashboard page. Optionally create a dashboard with three pages. The first one containing the master-detail linking example, the second containing the action link example, and the third containing the prompted state detail analysis which is linked to from the action link map example.

2. Modify the simple map action link analysis to add a section action link to the C62 Geo Ctry State Name column value. This one should navigate to the third dashboard page (the one with the prompted state detail analysis) you created above.

PromptedStateDetailTable

C62 Geo Ctry State Name	P4 Brand	P3 LOB	P2 Product Type	P1 Product	46 Avg Order Process Time	24 Avg # of Orders by Sales Rep	23 Avg # of Orders by Customer	25 Avg Order Size	11- Fixed Costs	10- Variable Costs
USA_California	BizTech	Communication	Cell Phones	V5x Flip Phone	8.41	10.30	1.80	2505.21	118678.00	302374
				CompCell RX3	8.25	7.73	1.53	2478.29	81004.00	211008
			Smart Phones	Touch-Screen T5	7.94	7.87	1.66	2524.86	92338.00	222071
				KeyMax S-Phone	7.92	6.90	1.51	2436.27	69569.00	175065
		Electronics	Accessories	Bluetooth Adaptor	8.06	5.76	1.36	2505.79	58762.00	157351
				MP3 Speakers System	8.03	5.00	1.34	2423.79	43155.00	106003
			Audio	SoundX Nano 4Gb	8.15	8.48	1.63	2483.96	91095.00	224229
				MicroPod 60Gb	7.89	15.29	2.41	2506.30	182300.00	455021
	FunPod	Digital	Camera	MPEG4 Camcorder	7.98	11.82	1.90	2346.75	121148.00	306541
				7 Megapixel Digital Camer	8.33	12.22	2.18	2407.44	140148.00	339585
		Games	Fixed	Game Station	8.35	8.90	1.85	2598.54	97968.00	236020
				HomeCoach 2000	8.70	6.43	1.44	2438.76	66992.00	167476
			Portable	PocketFun ES	8.16	11.21	1.78	2530.84	106896.00	270218
				MaxiFun 2000	7.72	7.33	1.66	2482.00	76874.00	186806
	HomeView	Services	Install	Install	7.27	2.14	1.07	2978.41	17309.00	47519
				Maintenance	8.11	2.38	1.09	2949.85	23874.00	52603
		TV	LCD	LCD 36X Standard	7.80	10.42	1.85	2456.64	127257.00	306752
				LCD HD Television	8.38	5.48	1.39	2540.10	59156.00	146225
			Plasma	Plasma HD Television	8.61	3.68	1.25	2561.37	33025.00	89679
				Tungsten E Plasma TV	7.84	11.30	1.93	2576.86	135827.00	341175

3. Create a new analysis using the P6 Detailed Performance subject area. The columns which are linked to layers in the map metadata are Region, Country, and City in the Project→Location folder. Create a map view which looks like the following screenshot when previewed.
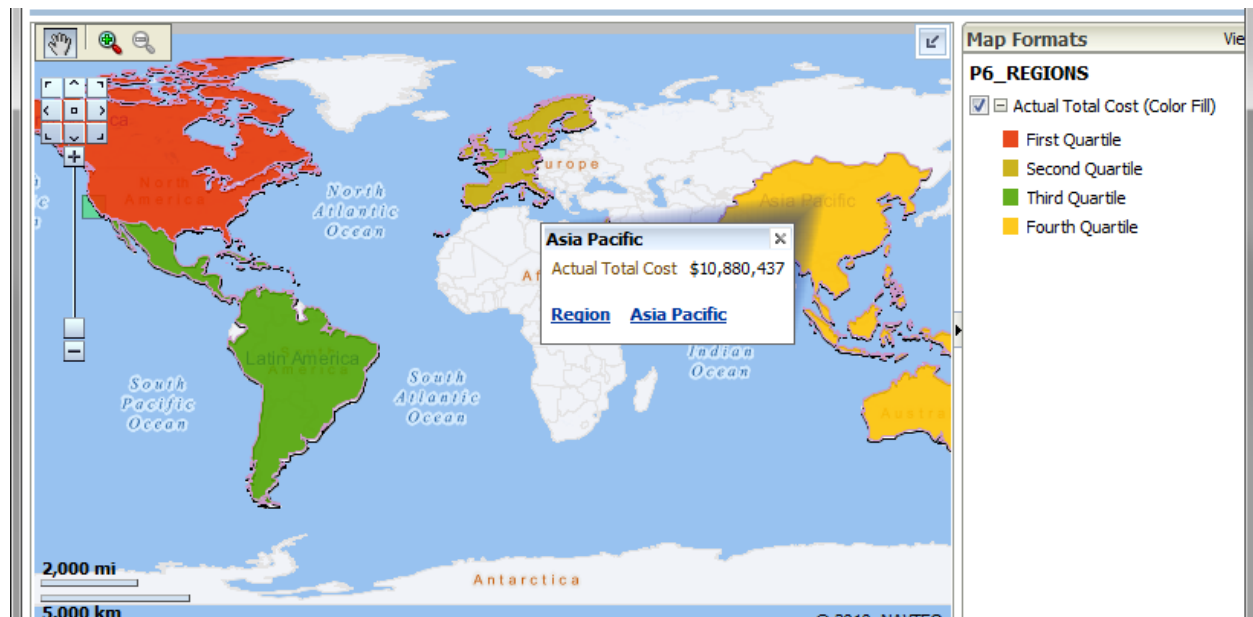
Then add Fact P6 Detailed Performance → Percent Complete → Cost % Complete to the analysis. Modify the map view to a different color ramp for quartile binning and allow users to edit the thresholds.
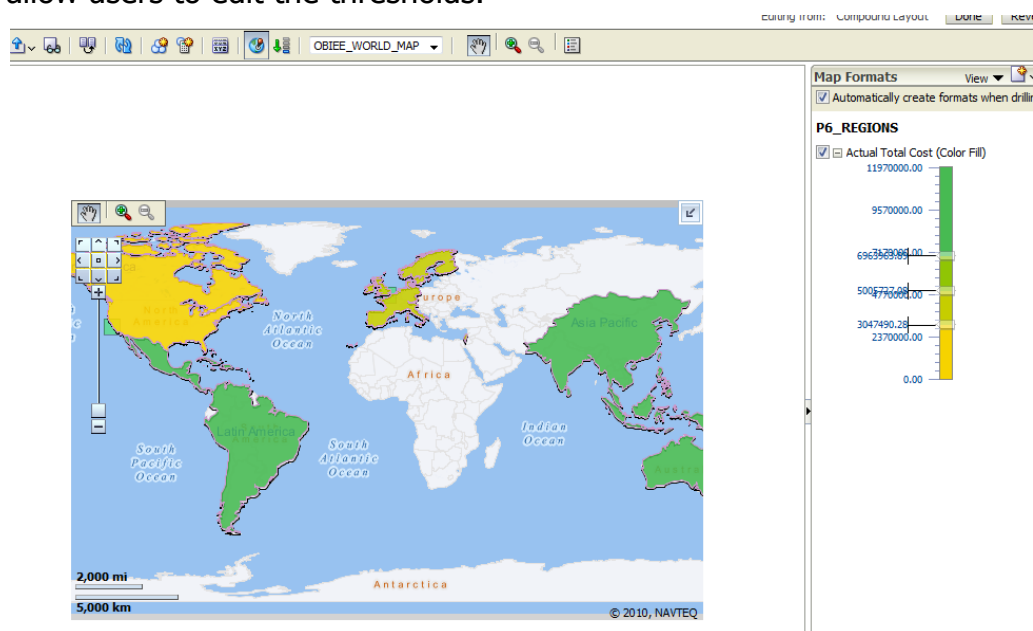
Next add a new map format for Cost % Complete column. Select Image as the map format for Regions, use quartile binning, and click on the first default image to bring up the Select Image dialog. Choose the gauges and see if your analysis looks like the screenshot below.