

BIRT Cross tabs - Simple

Introduction

A cross tab displays the relation between two or more variables in a matrix format. A cross tab report item is based on a multi dimensional data cube, which is a collection of dimensions (groups) and measures. A BIRT data cube is based on one or more BIRT datasets.

The goal of this tutorial is to describe at a high level the steps required to create a simple BIRT report design with cross tab report item (productSalesByRegion.rptdesign). The following features are covered

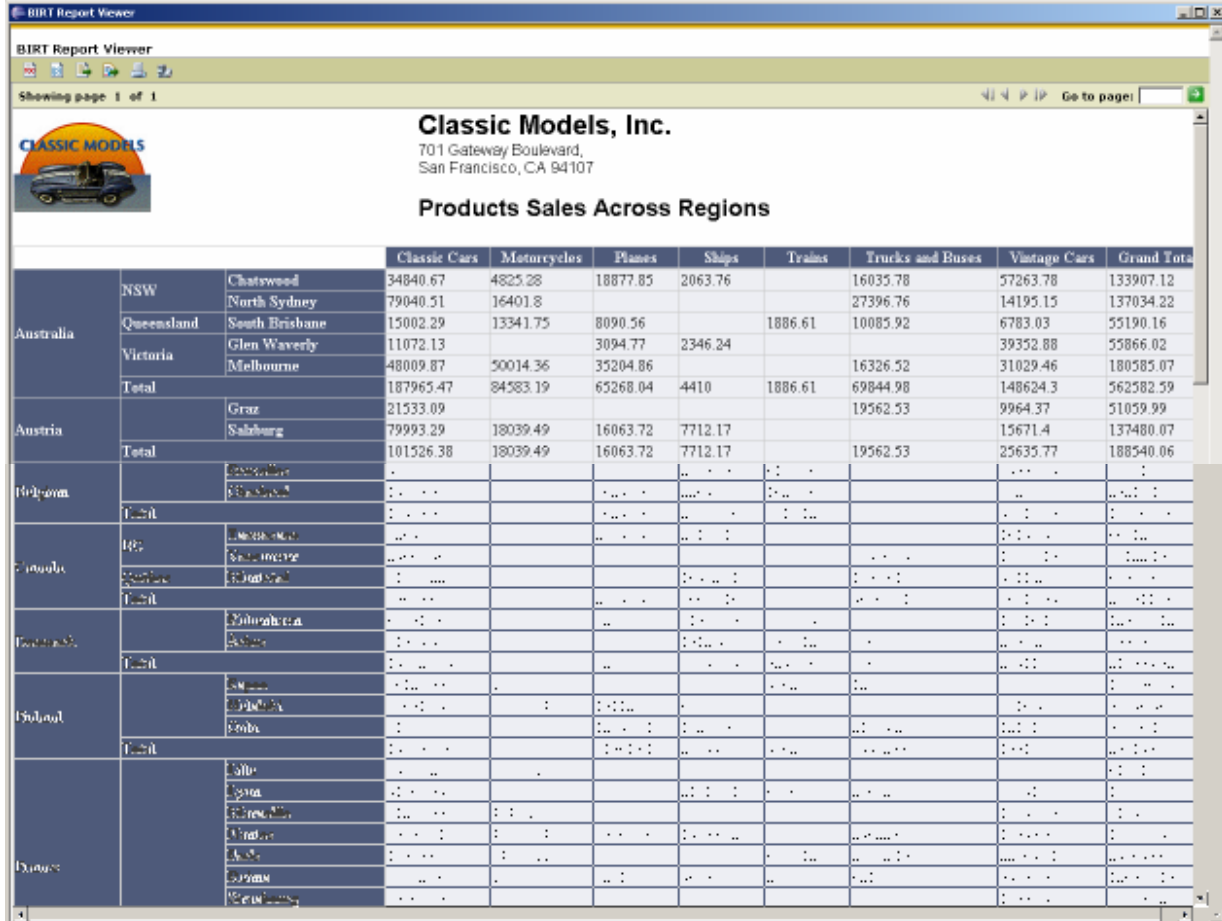
- BIRT Data Cube based on a single data set
- Cross tab based on a cube
- Filters in cross tab
- Sorting in cross tab
- Grand totals for rows/columns in cross tab

Business Scenario

For a fictitious company called Classic Models Inc you are asked to create the following report

- A report that displays sales of all products in different regions categorized by country, state and city of sale.

Below is the desired report output



BIRT Report Viewer

Showing page 1 of 1

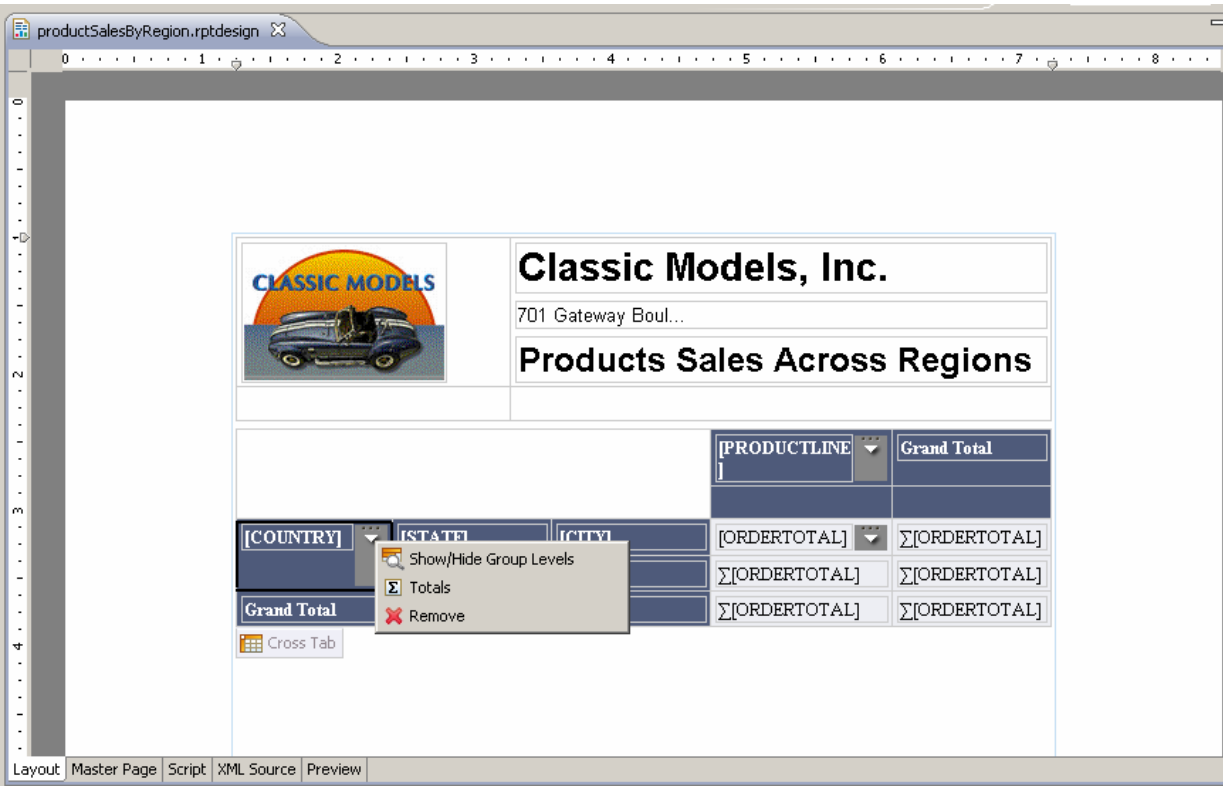
Classic Models, Inc.
701 Gateway Boulevard,
San Francisco, CA 94107

Products Sales Across Regions

			Classic Cars	Motorcycles	Planes	Ships	Trains	Trucks and Buses	Vintage Cars	Grand Total
Australia	NSW	Chatswood	34840.67	4825.28	18877.85	2063.76		16035.78	57263.78	133907.12
		North Sydney	79040.51	16401.8				27396.76	14195.15	137034.22
	Queensland	South Brisbane	15002.29	13341.75	8090.56		1886.61	10085.92	6783.03	55190.16
		Glen Waverly	11072.13		3094.77	2346.24			39352.88	55866.02
	Total	Melbourne	48009.87	50014.36	35204.86			16326.52	31029.46	180585.07
Austria			187965.47	84583.19	65268.04	4410	1886.61	69844.98	148624.3	562582.59
		Graz	21533.09					19562.53	9964.37	51059.99
	Total	Salzburg	79993.29	18039.49	16063.72	7712.17			15671.4	137480.07
			101526.38	18039.49	16063.72	7712.17		19562.53	25635.77	188540.06
Belgium		Brussels								
	Total									
Canada		Montreal								
	Total									
France		Paris								
	Total									
Germany		Berlin								
	Total									
Italy		Rome								
	Total									
Japan		Tokyo								
	Total									
United States		New York								
	Total									

The sample report design will use the “Classic models” sample database that is shipped along with the BIRT Report Designer

Steps to create the sample report design productSalesByRegion.rptdesign in BIRT Designer



- 1) Create a new report design file “productSalesByRegion.rptdesign”
- 2) Create a new data source based on ‘classic Model Sample Database’
- 3) Create a new dataset called ‘dsSales’
- 4) Create a cross tab report item by dragging and dropping to the layout editor
- 5) Create a new data cube by using ‘dsSales’ as the primary dataset and following cube structure

Dimension (Group Hierarchy)	Group Level Hierarchy	Description
CustomerRegion	Country -> State -> City -> CustomerNum	Geographical hierarchy
Product	ProductLine -> ProductName	Product hierarchy

Measure	Description
Order Total	Order Total

- 6) Add “product” group hierarchy to the cross tab column area, “customerRegion” hierarchy to the row area and “OrderTotal” to the detail area.
- 7) Use the ‘Show/Hide’ Group levels dialog to show all required levels.
- 8) Define the filter criteria to show all product line except “Classic Cars”. The filter condition can be defined using the filter tab in the cross tab property editor.
- 9) Define the sort criteria to show group level ‘Country’ in descending order. The sort definition can be defined using the cross tab property editor.
- 10) Show the column and row grand total by using the ‘Total’ dialog. The total dialog is available on the Group left click menu on the layout.
- 11) Modify the predefined style ‘crosstab-detail’ and ‘cross-header’ to the required font and background color.
- 12) Preview the report design.