



JASPERSERVER EVALUATION GUIDE

RELEASE 3.0

<http://www.jaspersoft.com>

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1 INTRODUCTION

Welcome to JasperSoft BI Suite Professional, our commercially-available business intelligence platform. JasperSoft Professional builds on JasperSoft's open source products, adding improved user interface, Ad Hoc reporting, and numerous platforms not supported in the open source products.

1.1 Overview of JasperSoft BI Suite Professional

JasperSoft builds on JasperReports as a comprehensive family of Business Intelligence (BI) products, providing robust static and interactive reporting, report server, and data analysis capabilities. These capabilities are available as either stand-alone products, or as part of an integrated end-to-end BI suite utilizing common metadata and providing shared services, such as security, a repository, and scheduling. JasperServer exposes comprehensive public integration interfaces enabling seamless integration with other applications and the capability to easily add custom functionality.

The heart of the JasperSoft BI Suite is JasperServer, which provides the ability to:

- ◆ Easily create new reports using an intuitive web-based drag and drop Ad Hoc Editor.
- ◆ Efficiently and securely manage many reports.
- ◆ Interact with reports, including entering parameters and drilling on data.
- ◆ Arrange reports and web content to create appealing, data-rich dashboards that quickly convey business trends.

For business intelligence users, JasperSoft offers JasperAnalysis, which runs on JasperServer and helps you:

- ◆ Make well-informed business decisions by identifying trends, anomalies, and correlations in your data.
- ◆ Quickly and easily access the OLAP (On Line Analytical Processing) data you need through an intuitive web interface.
- ◆ Explore data by drilling, pivoting, filtering, visualizing, and providing alerts based on your data.

1.2 Overview of This Document

This document steps you through the core JasperServer and JasperAnalysis Professional functionality to help you evaluate the application, and discusses these topics:

- ◆ [Introduction](#)
- ◆ [Installation](#)
- ◆ [Getting Started with Ad Hoc Reports](#)
- ◆ [Getting Started with Dashboards](#)
- ◆ [Getting Started with Analysis Views](#)

1.3 Installation

You can obtain an evaluation version of JasperServer Professional from this location:

http://www.jaspersoft.com/re_downloadpage.html

This web page provides Community and Professional editions of both JasperServer and JasperAnalysis for Windows or Linux. This document assumes you're evaluating the Professional edition of JasperServer and JasperAnalysis. Download the distribution you want to evaluate. Save the downloaded file to a location on the computer that will host your JasperServer evaluation.

Start the installer in a windowed environment by double-clicking it. The installer appears, and steps you through a series of windows that prompt you for information about how you want to install JasperServer. For an evaluation, you can accept all the default values; a few steps bear mentioning:

- ◆ Be sure to install the bundled versions of Tomcat and MySQL.
- ◆ When prompted to install sample data, click **Yes**. The sample data is referenced throughout this document.
- ◆ When prompted to opt into the Heartbeat program, JasperSoft recommends that you accept the default. The Heartbeat program reports specific information to JasperSoft about your implementation: the Operating System, JVM, application server, RDBMS (type, version), and JasperServer edition and version number. By tracking this information, JasperSoft can build better products that function optimally in your environment. No personal information is collected; for more information see <http://www.jaspersoft.com/heartbeat>.
- ◆ When prompted to start JasperServer, click **Yes**. JasperServer starts, and you are presented with a login page. In the **Username** field, enter `jasperadmin`; in the **Password** field, enter `jasperadmin`.

The Home page appears, offering four starting points:

- ◆ **view your reports** displays the sample reports JasperSoft provides.
- ◆ **create a report** launches the Ad Hoc Editor, which is described in [“Getting Started with Ad Hoc Reports” on page 7](#).
- ◆ **analyze your results** displays the sample analysis views JasperSoft provides. For more information, refer to [“Getting Started with Analysis Views” on page 21](#).
- ◆ **manage the app** displays administrative options, such as managing users and roles. This option is only available to users who have the `ROLE_ADMINISTER` role (see the *JasperServer Professional Administrator Guide*).

2 GETTING STARTED WITH AD HOC REPORTS

The Ad Hoc Editor allows end-users to create and refine reports on-the-fly. You can drag and drop columns and groups, select labels and styles, and select summaries and data formats for each column. Ad Hoc reports are created from Topics and Domains defined by a user with administrative permissions:

- ◆ The Topics that form the basis of Ad Hoc reports can be created in iReport. These JRXML files can only include a query and its parameters; all other report elements are ignored. Note that iReport can edit Ad Hoc reports, but the groups and sorting you defined in Ad Hoc will be lost.
- ◆ A Domain is an artificial data source created from one or more actual data sources in your JasperServer database. Domains are used in the Ad Hoc Editor to generate reports just as Topics are used. They are different from Topics in that they are much more flexible. A Domain can filter the data from your actual data sources so that you see only the data that you need for the current report, ignoring other data in the data source that you don't need. A Domain can combine data that couldn't be combined ordinarily, and it can use different, more meaningful names for the report's columns and rows to help users understand the data.

If you installed the sample data, your repository includes Topics and Domains you can use to explore the Ad Hoc Editor. For more information about Topics and Domains, see the *JasperServer Professional User Guide*.



When you run an Ad Hoc report, the entire result set is loaded into memory. You should ensure that each Topic's query returns a manageable amount of data, given your environment's load capacity.

2.1 Designing the Layout of Data in an Ad Hoc Report

2.1.1 Table, Chart, and Crosstab Reports

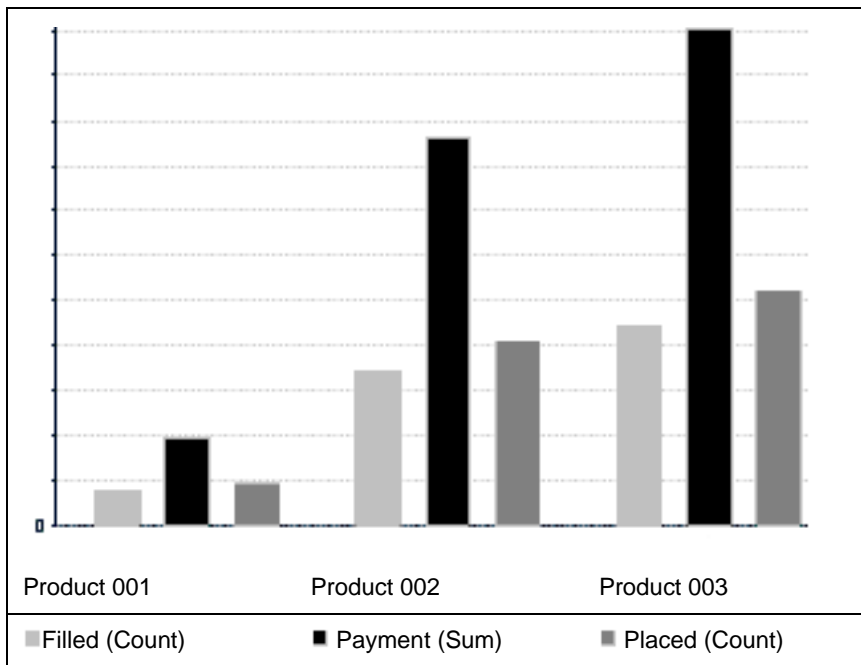
Once you have defined a Topic, you can use it to create Ad Hoc reports. There are three kinds of report—table, chart, and crosstab:

- ◆ **Table.** Use this report to view all the available data or to summarize the data across one set of related fields. Columns may include both properties and measurements; each row represents an object being measured. Rows can be grouped by their

properties. For instance, in a report on orders, each column might contain one measurement of the orders, and the rows could be grouped by sales region, city, and product, as in this table:

			Placed Orders	Filled Orders	Payment Received
Region 1					
	City A				
		Product 01			
		Product 02			
		Product 03			
	City B				
		Product 01			
		Product 02			
		Product 03			
Region 2 ...					

- ◆ **Chart.** Use this report to compare one or more measures across multiple sets of related fields. Charts summarize data in a graphical representation that can highlight your successes and challenges. Each type of chart compares values for a set of groups. For example, you could create a bar chart report similar to the table report above; this report could show the orders filled, orders placed, and payment received for each of the products:



Depending on your needs, you could configure the chart a in number of ways: you could group the bars by region or city, or use a completely different chart type, such as a pie chart in which each slice depicts the payment received grouped by sales manager.

- ◆ **Crosstab.** Use this report to summarize data across multiple sets of related fields. Crosstab reports are more compact representations than Table reports. Columns and rows specify properties; cells contain the summarized measurements. For instance, the Table example above could be displayed in a crosstab report with columns grouped by sales managers

and representatives, rows grouped by region, city and customer, and the three data measurements in each cell, as in this example:

Sales Managers & Representatives								
			Tom			Harriet		
			2005	2006	2007	2005	2006	2007
Region 1								
	City A							
		Product 01						
			Placed	Placed	Placed	Placed	Placed	Placed
			Filled	Filled	Filled	Filled	Filled	Filled
			Payment	Payment	Payment	Payment	Payment	Payment
		Product 02						
			Placed	Placed	Placed	Placed	Placed	Placed
			Filled	Filled	Filled	Filled	Filled	Filled
			Payment	Payment	Payment	Payment	Payment	Payment
		Product 03						
			Placed	Placed	Placed	Placed	Placed	Placed
			Filled	Filled	Filled	Filled	Filled	Filled
			Payment	Payment	Payment	Payment	Payment	Payment
Region 2								
...								

2.1.2 Designing a Table Report

In the following example, you'll create a table report that shows the ship date and shipping charge of orders; this report might be used to analyze whether shipments could be combined to save on shipping costs.

To design a table report in the Ad Hoc Editor:

1. After logging into JasperServer, click **Create > Ad Hoc Report**.

The Topics and Domains page appears.

2. On the **Saved Topics** tab, select the **demo for adhoc** Topic and **Table** report, and click **Start**.

The Ad Hoc Editor appears. The two fundamental areas in the editor are the **Available Fields** list and the report area. When you open a new table report, the report area is empty.

3. In the list of available fields, click ➔ next to the following fields to add them to the report:

Date ordered
Date shipped
Order ID
Name
Postal code


Shipped via
Shipping charge

As you add the columns to the report, the first 15 rows of data for each field appear.


4. Notice that the Shipped via column displays a list of numbers that seem irrelevant. Remove the column from the report by dragging the column heading out of the report.



You can also drag to add fields from the **Available Fields** list and rearrange columns and rows in the report.

5. In **Available Fields**, click the word **City** (instead of ) , and select **Add as Group** from the context menu. The report area refreshes and displays your selected data grouped by city.



6. In **Available Fields**, click **Country** and drag it to the Group Control icon:  . The report area refreshes and displays the data grouped by first by city, then by country. The order of the groups is determined by the order in which you added them to the report. However, you can change that order if it doesn't make sense.
7. Drag the top-most Country heading upwards above the City group and drop it. The report area refreshes and displays the rows grouped by country, then city. The data have changed, as well, because they are now grouped by country.
8. Review the data in the Buenos Aires group, and notice that the rows are mixed; some show data for Cactus Comidas por llevar, while others show data for Rancho grande, Océano Atlántico Ltda.
9. Drag the **Name** column out of the report to remove it from the table.
10. In **Available Fields**, click **Name** and select **Add as Group** from the context menu. The report area refreshes and displays the data grouped by country, city, and name.
11. Click the Shipping Charge column heading and select **Add Summary** from the context menu. The report area refreshes and displays totals for each name, city, and country.
12. Click **Save**.
13. In the **Report Name** field, enter *Ad Hoc Demo Report*.
14. Accept the default value for **Location Folder** (/reports), or click **Browse** to select a different location.
15. In the **Description** field, enter *This report was created by the Ad Hoc Editor*.

<i>Report Selector</i>				
Date ordered	Date shipped	Order ID	Postal code	Shipping charge
Country: Argentina				
City: Buenos Aires				
Name: Cactus Comidas para llevar				
Apr 28, 1997	May 1, 1997	10,521	1010	17.00
Dec 16, 1997	Dec 21, 1997	10,782	1010	1.00
Jan 6, 1998	Jan 15, 1998	10,819	1010	20.00
Feb 10, 1998	Feb 17, 1998	10,881	1010	3.00
Mar 9, 1998	Mar 12, 1998	10,937	1010	32.00
Apr 27, 1998	May 21, 2007	11,054	1010	0.00
Name: Cactus Comidas para llevar				73.00
Name: Océano Atlántico Ltda.				
Jan 8, 1997	Jan 13, 1997	10,409	1010	30.00
May 7, 1997	May 18, 1997	10,531	1010	8.00
Feb 19, 1998	Mar 5, 1998	10,898	1010	1.00
Mar 17, 1998	Mar 26, 1998	10,958	1010	50.00
Mar 29, 1998	Apr 20, 1998	10,986	1010	218.00
Name: Océano Atlántico Ltda.				307.00
Name: Rancho grande				
Feb 16, 1997	Feb 23, 1997	10,448	1010	39.00
Oct 23, 1997	Oct 26, 1997	10,716	1010	23.00
Jan 12, 1998	Feb 3, 1998	10,828	1010	91.00
Feb 26, 1998	Mar 8, 1998	10,916	1010	64.00
Name: Rancho grande				217.00
City: Buenos Aires				597.00
Country: Argentina				597.00
				597.00

Figure 1 Unformatted Report

16. Click **Save**.


The report is save to the repository.

You have created a basic report that shows the ship date and shipping charge of orders in the sample data. Next, you'll format the appearance of the report.

2.2 Formatting the Appearance of an Ad Hoc Report

Next you'll change the appearance of the report.

To format a report in the Ad Hoc Editor:

1. If you are not already working with the Ad Hoc Demo Report, click **View > Reports**.
2. Locate the Ad Hoc Demo Report in the list of available reports.
3. Click  to open the report in the Ad Hoc Editor. This icon only appears next to Ad Hoc reports.
The report created in [“Designing the Layout of Data in an Ad Hoc Report” on page 7](#) appears.
4. In the report, click the report's title bar and select **Add Title Text** from the context menu.
The title becomes editable.
5. Enter *Orders and Fees, by Customer*.
6. Click the title bar again and select **Choose Styles** from the context menu.
The Styles window appears.

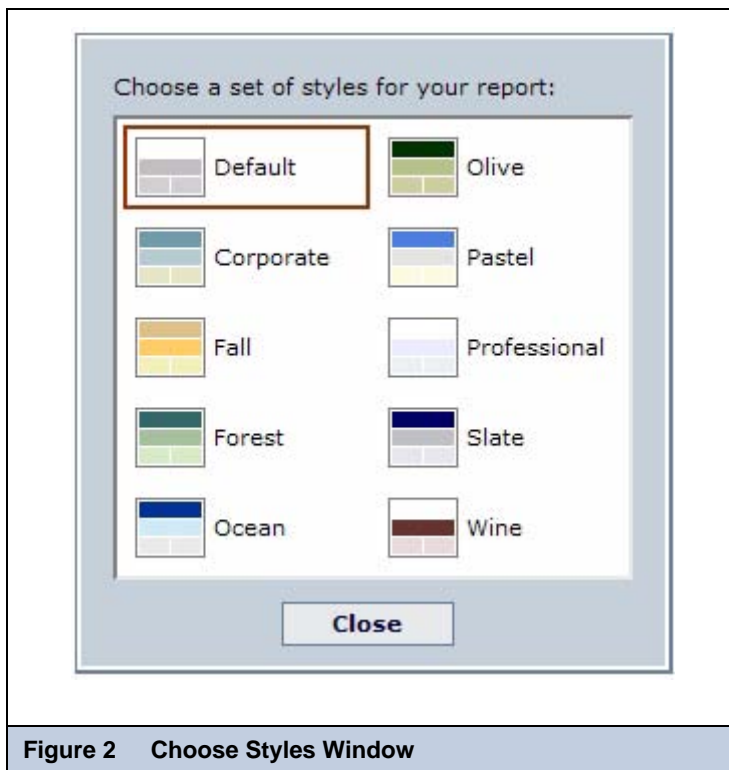








Figure 2 Choose Styles Window

7. Select the **Ocean** style and click **Close**.
8. Click the first **Name** group heading and select **Edit Label** from the context menu.
The group label becomes editable.
9. Enter *Customer* for the group label.
10. Click the **Date ordered** column heading and select **Edit Label** from the context menu.
The column label becomes editable.
11. Enter *Ordered on* for the column label.
12. Enter new labels for these additional columns:
Date shipped – *Shipped on*
Shipping charge – *Fee*

13. Click the Postal code column heading and hover the cursor over its right-hand side. When your cursor changes to the Slider icon , drag the column edge to the left until the heading is no wider than the data in the column cells.
14. Select the Postal code column heading and click **Delete Label** from the context menu.
If space is at a premium and a column label is wider than the data, you can remove the label from the report and make the column only as wide as its data. The background color and font of the column label change to indicate that the label isn't used in the report itself. The new name that appears is only displayed in the Ad Hoc Editor; it is the name of the column in the data source.
15. Select the ShipPostalCode column heading, and slide the column's right-hand side towards the left.
Notice that you can make the column only as narrow as its widest member displayed.
16. Shrink the **Fee** column.
The last few columns are now difficult to read because they are crowded together. Adding some space might help.
17. In **Available Fields**, drag  (*Spacer*) into the report between the ShipPostalCode column and the Order ID column.
18. In **Available Fields**, drag  (*Spacer*) into the report between the ShipPostalCode column and the Fee column.
For uniform spacing, make all columns as narrow as possible, then insert spacers between them.
19. Spacers can also be used to create margins. Drag  (*Spacer*) to the thick blue line at the left edge of the report.
The spacer appears in the left-most position. You can add any field as a column at the left edge of the report by dragging it to the blue line.
20. Drag  (*Spacer*) to the right edge of the report, as well.
A Spacer is added at the right edge of the report. You could also add the Spacer by clicking its .
21. Click the Fee column, select **Change Data Format**, and select the currency format from the context menu.
For example, if you use the U.S. English locale, click **Change Data Format > \$1,234.56**. The U.S. Dollars data format is applied throughout the Fee column.
A shorter menu appears if you click the summary cell.
22. Click the Ordered on column, then **Change Data Format**, and select the short date format. For example, 5/01/08.
The dates in the column update and appear in the short date format.
23. Apply the short date format to the Shipped on column, as well.
24. Click **Save**.

The report is saved to the repository.

You have now created and formatted an Ad Hoc report and saved it in the repository. You can also save a report by clicking the title bar and selecting a Save Report option from the context menu.

You can run the saved report from the Ad Hoc Editor by clicking **Run Report** in the context menu, or you can run the report directly from the repository, as described in “[Designing the Layout of Data in an Ad Hoc Report](#)” on page 7.

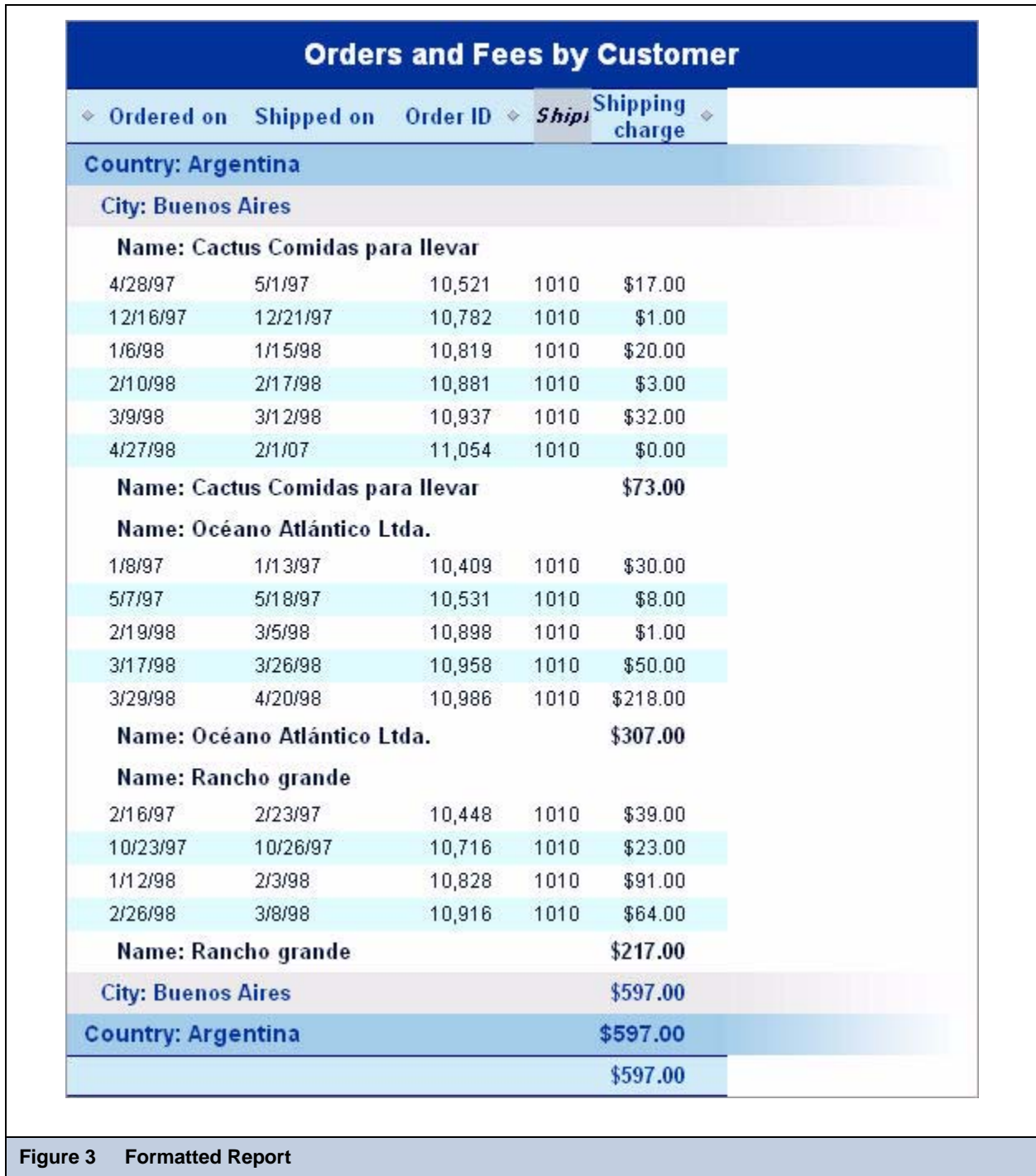


Figure 3 Formatted Report




Any unused space at the right of the report area is retained when you run the report.

2.3 Adding a Chart to a Table Report

Next, you'll add a chart to the table you created in the previous sections.

Any table report that includes at least one summarized column and a group field can also include a chart. The chart is displayed at the top of the report, before the table. In the case of example report, we'll add a bar chart that compares shipping charges across countries.

To add a chart to a table report:

1. If you are not already working with the Ad Hoc Demo Report, click **View > Reports**.
2. Locate the Ad Hoc Demo Report in the list of available reports.
3. Click  to open the report in the Ad Hoc Editor.

The report created in previous sections appears.

4. In the report, click the title bar and select **Add Chart** from the context menu.

A bar chart appears at the top of the page. It displays the shipping charges summed for each country.

5. If the chart is wider or narrower than the table, hover your cursor over the right-hand edge of the chart. When the resize arrow appears, click and drag the edge of the chart to increase or decrease its size.
6. Since the table provides context for the chart, removing some of the text detracts nothing and can enhance the chart's appearance. Click the chart and select **Legends and Labels > Hide Legend** or **Legends and Labels > Hide Group Label** to remove them from the chart.

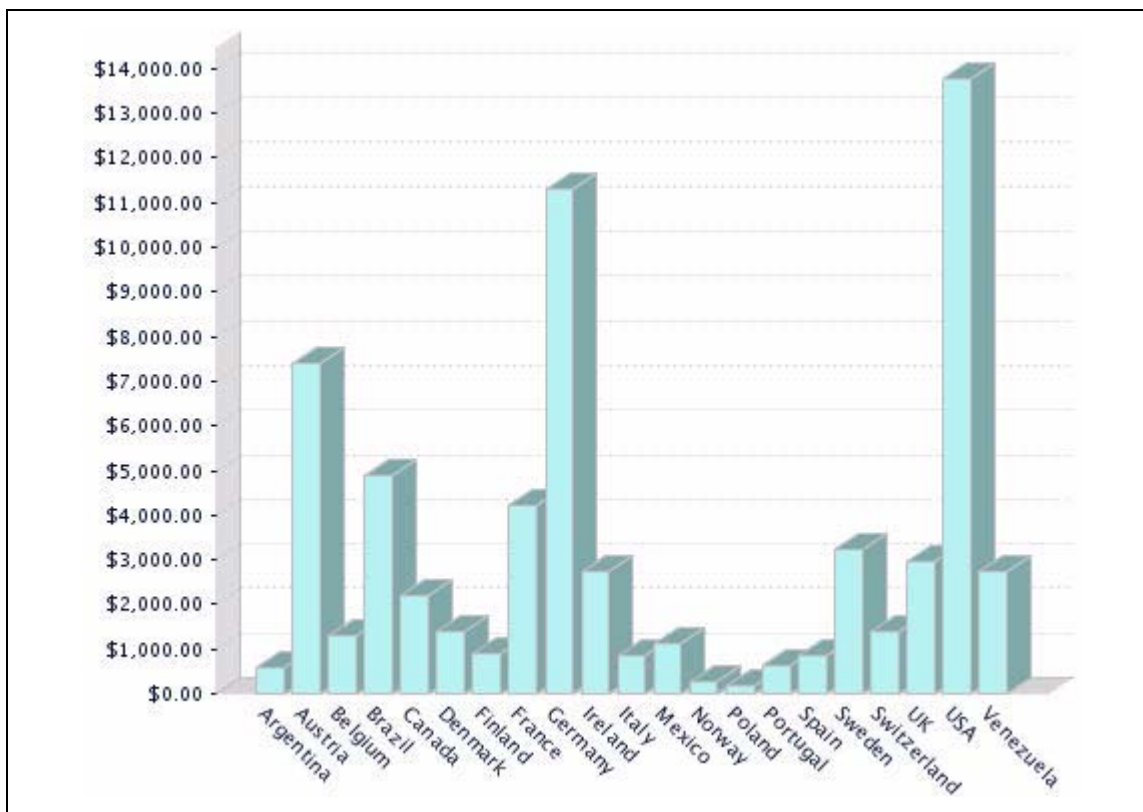


Figure 4 Chart for the table shown in [Formatted Report](#)

When working with a chart in a table report, you have all the same display, legend and label, and chart type options as when working with a standard Ad Hoc chart. For more information about these options, refer to the *JasperServer Professional User Guide*. Note that data options (such as custom fields, summary calculations, and data formats) update as you change the table; you can't edit them directly in the chart.


2.4 Running a Report from the Repository

Next you'll run the report you designed. You'll run it from the repository, not the Ad Hoc Editor.

To run a report from the repository:

1. After logging into JasperServer, click **View > Repository**.
2. Locate the report in the repository manager; if you saved it to the default location, it's in /reports.
You can navigate the browser by clicking folder display names.
3. Click the display name of the report (**Ad Hoc Demo Report**).
The new report appears.



4. To save the report output, click an export icon:
The output is exported to a file in Adobe Acrobat (PDF format), Microsoft Excel (XLS or CSV format), Microsoft Word (RTF format), or Flash (SWF format). You can view the file in its application and save it.
5. To return to the repository, click .

3 GETTING STARTED WITH DASHBOARDS

A dashboard displays several reports in a single, integrated view. A dashboard can also include input controls (that determine the data displayed in one or more reports), other dashboards, and URLs to any other content. By combining different types of related content, you can create appealing, data-rich dashboards that quickly convey business trends.

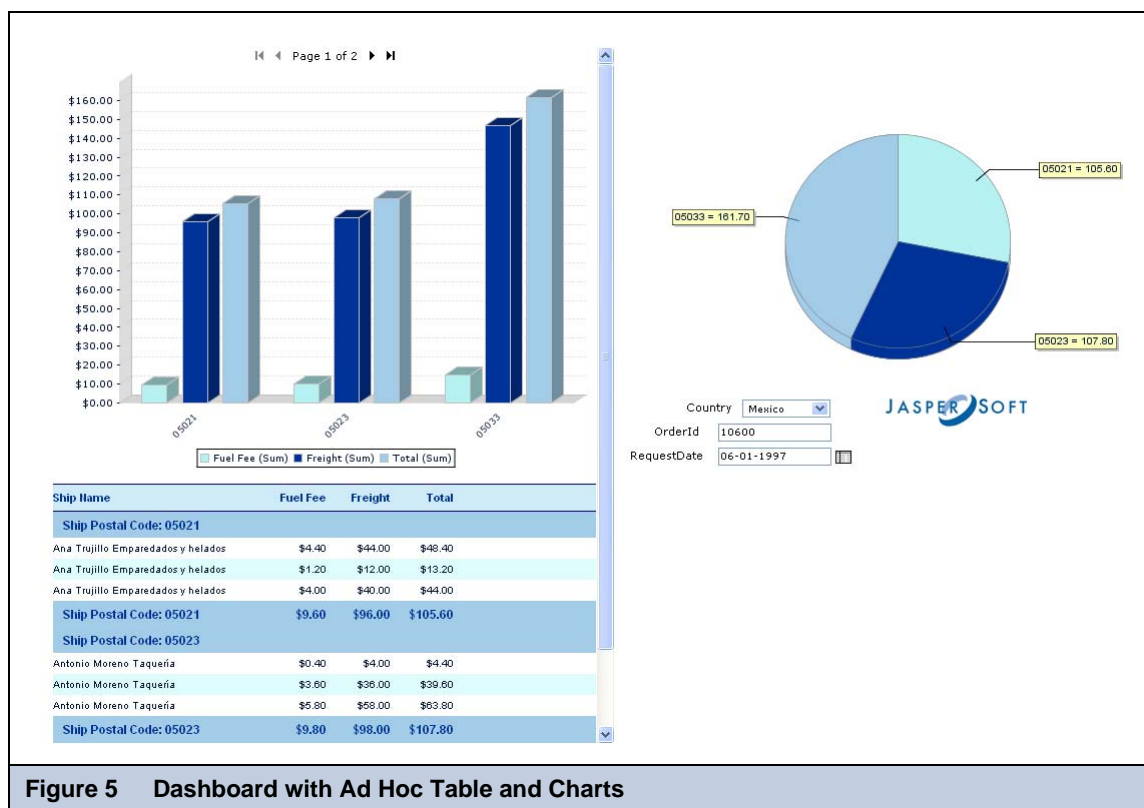




Figure 5 Dashboard with Ad Hoc Table and Charts

3.1 Viewing a Dashboard

You can view an existing dashboard if you have the proper permissions. By default, the repository includes the /Dashboards folder where dashboards may be saved.

To view a dashboard:

1. Click **View > Repository**.
The repository manager appears.
2. In the left-hand folder list, click the SuperMart Demo folder.
3. In the right-hand content list, click the name of the SuperMart Dashboard.
JasperServer displays the dashboard, which includes three reports. Icons appear when you hover your cursor over a frame.
4. Click  to refresh a frame's content.
5. Click  to open a frame's content in a new window.
6. Select new values from the **Start Month** and **End Month** drop-downs and click **Submit** to change the data displayed.
All three reports update to display data for the months you indicate.
7. Click **Reset** to set the input controls to the last values saved and return the dashboard to its initial view.
8. Use the menu bar at the top of the page to close the dashboard. For example, click **View > Reports** to see the reports in the repository.

Keep these points in mind when viewing a dashboard that has input controls:

- ◆ An input control may appear as a text field, a drop-down, a check box, or a calendar icon.
- ◆ If one of the frames in a dashboard does not refer to an input control, that frame does not update when you change that input control's value. Only reports that refer to that input control reflect the change.
- ◆ If the dashboard does not include a **Submit** button, the changes take effect immediately when you change the input control's value.



If a dashboard includes a **Print View** button, click it to display the dashboard without JasperServer's header and footer; depending on your browser, this also opens your browser's Print window.

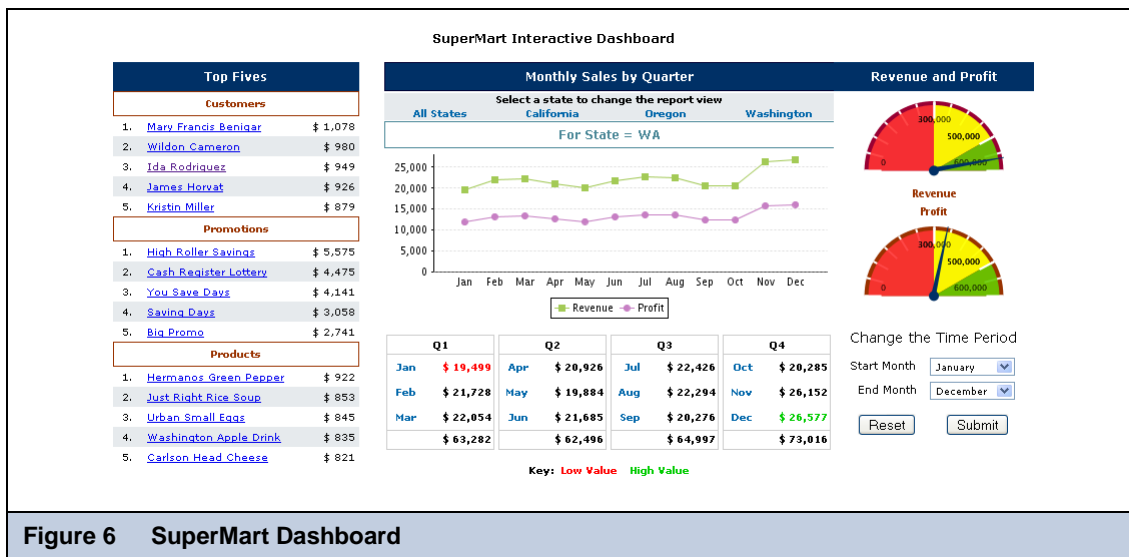


Figure 6 SuperMart Dashboard


3.2 Editing a Dashboard

You can edit a dashboard if you have the proper permissions.

To edit a dashboard:

1. Click **View > Repository**.
The Repository Manager appears.

2. In the left-hand folder list, select to the /SuperMart folder.

3. In the right-hand content list, click the name of the SuperMart Dashboard, and click .

The dashboard designer appears, displaying the list of available content and the dashboard area. The current content of the SuperMart dashboard appears in the dashboard area.

4. Click near the title of the dashboard and select **Save Dashboard As** from the context menu.

The Save window appears.

Enter a new name (such as SuperMart Copy 1) and click **Save**.

5. In the dashboard area, hover your cursor near the **Submit** button.

A margin appears around the **Submit** button.

6. Click the margin.

The frame context menu appears.

7. Click **Delete Frame**.

The **Submit** button is removed from the dashboard.

8. When you are satisfied with the dashboard, click **Save**.

9. In the **Available Content** list, click **Special Content > Standard Controls** to open the folder.

10. Drag the **Print View** button to the spot where the **Submit** button used to be.

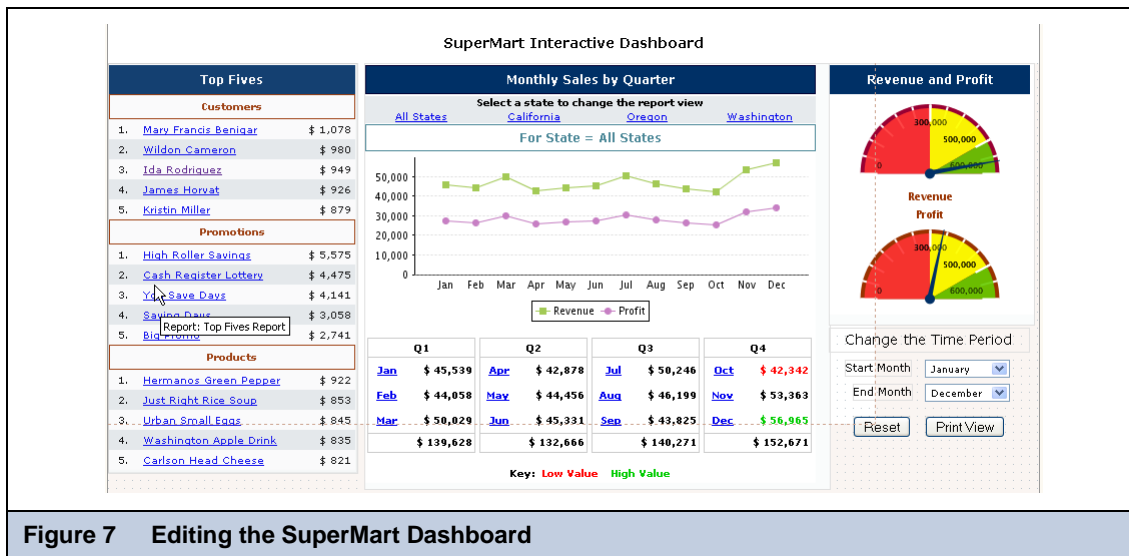


Figure 7 Editing the SuperMart Dashboard

11. Click **Preview**.

The dashboard appears.

12. Select a different month from the **Start Month** drop-down; note that the dashboard updates automatically (since it doesn't have a **Submit** button).

13. Click **Print View**.

JasperServer displays the dashboard the page's header and footer; your browser's Print window may also appear.

14. Return to the designer and click **Save**.

The dashboard is saved to the repository.

For more information about dashboards, see the *JasperServer Professional User Guide*.

4 GETTING STARTED WITH ANALYSIS VIEWS

JasperAnalysis is an OLAP (On Line Analytical Processing) application. OLAP applications help users analyze and understand complex data. JasperAnalysis uses JPivot for analytical processing while JasperAnalysis Professional provides an improved user interface to the processing.



The procedures in this document assume that you installed JasperServer with its sample data. The schemas and views described in this document are only available if the samples are installed.

4.1 Opening an Analysis View

An analysis view consists of a connection and an MDX query. A connection consists of a data source, a schema, and, optionally, an access control definition. JasperAnalysis contains a number of sample analysis views. Because the access control definition can provide different access to users with different roles, the view that you see depends on the permissions that apply to your roles. If you don't see something you expect to see, check with your system administrator to ensure that you have the right access control profile.

To open an analysis view:

1. On the Home page, click **View > Analysis**.

The Analysis Views page appears.

Analysis View Name	Description	Date	Parent Folder
Foodmart Sample Analysis View	Sample Analysis View: 2006 Q1 Foodmart Unit Sales	04-25-2008 09:32	/analysis/views
Foodmart Sample XMLA Analysis View	Sample XMLA Analysis View: 2006 Q1 Foodmart Unit Sales	04-25-2008 09:32	/analysis/views
SugarCRM Sample view	SugarCRM Sample Analysis View: Sales Performance by Industry/Account	04-25-2008 09:32	/analysis/views
SugarCRM Sample XMLA Analysis View	Sample SugarCRM Analysis View (XMLA): Sales Performance by Industry/Account	04-25-2008 09:32	/analysis/views
Profile view	Simple Profiling View	04-25-2008 09:33	/performance/views
Profit View	Sales gauge report links to this when parameter isJasperAnalysis = "true"	04-25-2008 09:33	/supermart/revenueAndProfit
Revenue By Store View	Revenue by store type: deluxe, supermarket, etc. Drillable pie charts.	04-25-2008 09:33	/supermart/revenueAndProfit
Revenue View	Sales gauge report links to this when parameter isJasperAnalysis = "true"	04-25-2008 09:33	/supermart/revenueAndProfit
Revenue View	Linked to by Sales By Month Report when parameter isJasperAnalysis = "true"	04-25-2008 09:33	/supermart/salesByMonth

Figure 8 Analysis Views Page

- To display an analysis, click its name in the Analysis View Name column. For example, click **Foodmart Sample Analysis View** to display the Foodmart sample.

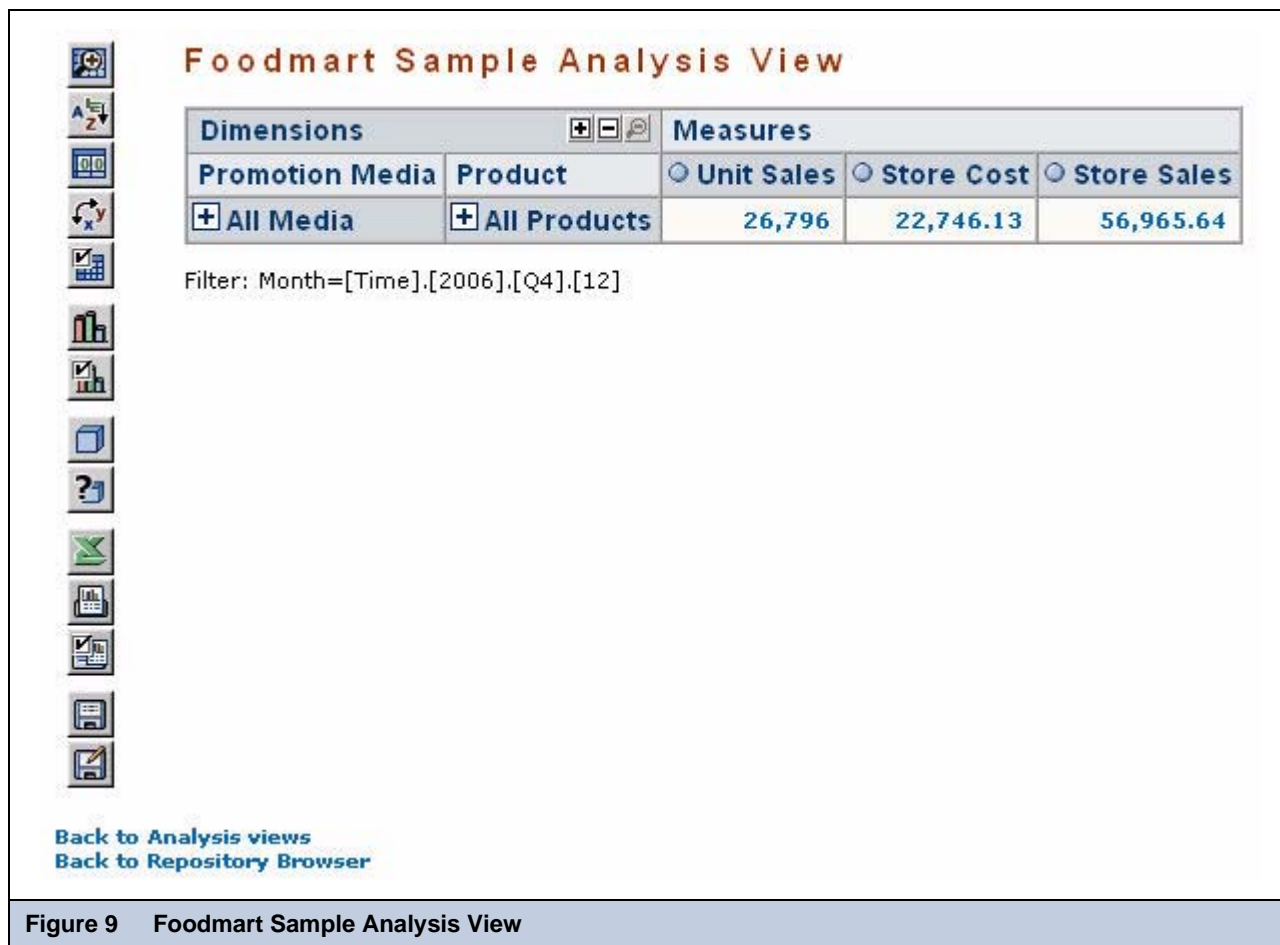



Figure 9 Foodmart Sample Analysis View


4.2 Tool Bar

JasperAnalysis utilizes an improved JPivot user interface. The tool bar on left side of the view ([Figure 9 on page 22](#)) provides access to many JasperAnalysis operations and features.


4.2.1 Drill into a Dimension Member

	Zoom on Drill	Toggles (that is, turns on or off) the zoom in/out hyperlinks for hierarchy members. In the following navigation table, Zoom on Drill is selected; All Media and All Products are hyperlinks; click them to view the members of their hierarchies.															
<table border="1"> <thead> <tr> <th colspan="2">Dimensions</th> <th colspan="3">Measures</th> </tr> <tr> <th>Promotion Media</th> <th>Product</th> <th>Unit Sales</th> <th>Store Cost</th> <th>Store Sales</th> </tr> </thead> <tbody> <tr> <td>All Media</td> <td>All Products</td> <td>26,796</td> <td>22,746.13</td> <td>56,965.64</td> </tr> </tbody> </table>			Dimensions		Measures			Promotion Media	Product	Unit Sales	Store Cost	Store Sales	All Media	All Products	26,796	22,746.13	56,965.64
Dimensions		Measures															
Promotion Media	Product	Unit Sales	Store Cost	Store Sales													
All Media	All Products	26,796	22,746.13	56,965.64													



4.2.2 Sort Across Hierarchy

	Sort Across Hierarchy	Toggles between sort across and sort within hierarchy. In the following example, Sort Across Hierarchy is selected and Unit Sales is sorted in descending order across the Product hierarchy.																														
<table border="1"> <thead> <tr> <th colspan="2">Dimensions</th> <th colspan="3">Measures</th> </tr> <tr> <th>Promotion Media</th> <th>Product</th> <th>Unit Sales</th> <th>Store Cost</th> <th>Store Sales</th> </tr> </thead> <tbody> <tr> <td>+ All Media</td> <td>- All Products</td> <td>26,796</td> <td>22,746.13</td> <td>56,965.64</td> </tr> <tr> <td></td> <td>+ Food</td> <td>19,356</td> <td>16,562.05</td> <td>41,484.40</td> </tr> <tr> <td></td> <td>+ Non-Consumable</td> <td>5,021</td> <td>4,258.77</td> <td>10,679.21</td> </tr> <tr> <td></td> <td>+ Drink</td> <td>2,419</td> <td>1,925.31</td> <td>4,802.03</td> </tr> </tbody> </table>			Dimensions		Measures			Promotion Media	Product	Unit Sales	Store Cost	Store Sales	+ All Media	- All Products	26,796	22,746.13	56,965.64		+ Food	19,356	16,562.05	41,484.40		+ Non-Consumable	5,021	4,258.77	10,679.21		+ Drink	2,419	1,925.31	4,802.03
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	+ Non-Consumable	5,021	4,258.77	10,679.21																												
	+ Drink	2,419	1,925.31	4,802.03																												


4.2.3 Natural Order

	Natural Order	Natural Order means numbers in measures columns are ordered according to the order of hierarchy members.
---	---------------	--

4.2.4 Hierarchical Ascending and Descending


	Ascending	The Hierarchy Ascending and Hierarchy Descending order operations arrange the rows according to their numeric value. Hierarchy Ascending sorts from smallest to largest, while Hierarchy Descending sorts from largest to smallest.
	Descending	

4.2.5 Show Empty Rows & Columns

	Show Empty Rows/Columns	Hides or reveals rows or columns that do not have relevant fact data. The following example includes empty rows for Promotion Media: Street Handout, Sunday Paper, Sunday Paper, Radio, TV, and TV.
---	-------------------------	---

Dimensions		Measures		
Promotion Media	Product	Unit Sales	Store Cost	Store Sales
[-] All Media	[+] All Products	26,796	22,746.13	56,965.64
No Media	[+] All Products	20,818	17,695.87	44,274.03
Cash Register Handout	[+] All Products	1,600	1,353.09	3,378.48
Daily Paper, Radio, TV	[+] All Products	1,490	1,261.18	3,159.52
Product Attachment	[+] All Products	1,261	1,054.75	2,688.41
Radio	[+] All Products	518	454.06	1,139.10
Daily Paper, Radio	[+] All Products	500	388.41	979.77
Daily Paper	[+] All Products	444	399.74	991.13
In-Store Coupon	[+] All Products	75	59.84	160.30
Sunday Paper, Radio	[+] All Products	60	50.60	120.51
Bulk Mail	[+] All Products	30	28.60	74.39
Street Handout	[+] All Products			
Sunday Paper	[+] All Products			
Sunday Paper, Radio, TV	[+] All Products			
TV	[+] All Products			


4.2.6 Swap Axes

	Swap Axes	Changes the orientation of the table by switching the columns with the rows. In the following example, axes for measure columns and dimension rows are switched.
---	-----------	--

Dimensions	Promotion Media
	All Media
	Product
Measure	All Products
Unit Sales	26,796
Store Cost	22,746.13
Store Sales	56,965.64

Slicer: [Month=12]

4.2.7 Edit Display Option

	Edit Display Options	Allows users to configure the cube (or navigation table) options, drill-through options, and sort options.
<div style="border: 1px solid gray; padding: 10px; width: fit-content; margin: auto;"> <p>Display Options ✕</p> <p>Cube Options:</p> <p><input checked="" type="checkbox"/> Show all parent columns</p> <p><input type="checkbox"/> Show individual parent cells</p> <p><input type="checkbox"/> Include member attributes</p> <p>Drill-through Options:</p> <p><input type="checkbox"/> Hide drill-through links</p> <p><input checked="" type="checkbox"/> Include only selected measure</p> <p>Sort Options:</p> <p><input type="checkbox"/> Sort across cube hierarchy</p> <p><input type="checkbox"/> Start sorting in descending order</p> <p><input type="checkbox"/> Display only the first N rows</p> <p>Number of rows: <input type="text" value="10"/></p> <p style="text-align: right;"><input type="button" value="OK"/> <input type="button" value="Cancel"/></p> </div>		

4.2.7.1 Cube Options

Show all parent columns	Displays the column headings of a given hierarchy. The following example shows Product and Product Family as parent column headings.																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Dimensions</th> <th colspan="4" style="text-align: left;">Measures</th> </tr> <tr> <th>Promotion Media</th> <th>Product</th> <th>Product Family</th> <th>Unit Sales</th> <th>Store Cost</th> <th>Store Sales</th> </tr> </thead> <tbody> <tr> <td>+ All Media</td> <td colspan="2">- All Products</td> <td>26,796</td> <td>22,746.13</td> <td>56,965.64</td> </tr> <tr> <td></td> <td rowspan="3">All Products</td> <td>+ Drink</td> <td>2,419</td> <td>1,925.31</td> <td>4,802.03</td> </tr> <tr> <td></td> <td>+ Food</td> <td>19,356</td> <td>16,562.05</td> <td>41,484.40</td> </tr> <tr> <td></td> <td>+ Non-Consumable</td> <td>5,021</td> <td>4,258.77</td> <td>10,679.21</td> </tr> </tbody> </table>		Dimensions		Measures				Promotion Media	Product	Product Family	Unit Sales	Store Cost	Store Sales	+ All Media	- All Products		26,796	22,746.13	56,965.64		All Products	+ Drink	2,419	1,925.31	4,802.03		+ Food	19,356	16,562.05	41,484.40		+ Non-Consumable	5,021	4,258.77	10,679.21		
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		+ Food	19,356	16,562.05	41,484.40																																
		+ Non-Consumable	5,021	4,258.77	10,679.21																																
Show individual parent cells	Displays each parent member of a given hierarchy. The following example displays all parent cells for Promotion Media and Product dimensions.																																				
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Dimensions</th> <th colspan="4" style="text-align: left;">Measures</th> </tr> <tr> <th>Promotion Media</th> <th>Product</th> <th>Product Family</th> <th>Unit Sales</th> <th>Store Cost</th> <th>Store Sales</th> </tr> </thead> <tbody> <tr> <td>+ All Media</td> <td colspan="2">- All Products</td> <td>26,796</td> <td>22,746.13</td> <td>56,965.64</td> </tr> <tr> <td>+ All Media</td> <td>All Products</td> <td>+ Drink</td> <td>2,419</td> <td>1,925.31</td> <td>4,802.03</td> </tr> <tr> <td>+ All Media</td> <td>All Products</td> <td>+ Food</td> <td>19,356</td> <td>16,562.05</td> <td>41,484.40</td> </tr> <tr> <td>+ All Media</td> <td>All Products</td> <td>+ Non-Consumable</td> <td>5,021</td> <td>4,258.77</td> <td>10,679.21</td> </tr> </tbody> </table>		Dimensions		Measures				Promotion Media	Product	Product Family	Unit Sales	Store Cost	Store Sales	+ All Media	- All Products		26,796	22,746.13	56,965.64	+ All Media	All Products	+ Drink	2,419	1,925.31	4,802.03	+ All Media	All Products	+ Food	19,356	16,562.05	41,484.40	+ All Media	All Products	+ Non-Consumable	5,021	4,258.77	10,679.21
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+ All Media	All Products	+ Non-Consumable	5,021	4,258.77	10,679.21																																
Include member attributes	Displays the member properties the displayed hierarchy members.																																				



4.2.7.2 Drill-through Operations

Show table below cube (on same page)	Displays a drill-through table below the navigation table. By default, the drill-through table appears in a separate browser window.
Hide drill-through links	Removes the hyperlinks from the fact data in measures.
Include only selected measure	Limits the display to only the selected measure in the drill-through table.


4.2.7.3 Sort Option

Sort across cube hierarchy	Changes the behavior of sorting across or within dimension hierarchies. See “Sort Across Hierarchy” on page 23.
Start sorting in descending order	Toggles the sort behavior between ascending and descending.
Display only the first N rows	Limits the number of rows displayed after sorting.



4.2.8 Show Chart

	Show Chart	Displays a chart of the navigation table data. The following example shows a pie chart that represents the columns in these measures: Unit Sales, Store Cost, and Store Sales.															
 <p>All Media.All Products.</p> <p>Filter: Month=[Time].[2006].[Q4].[12]</p> <p>● Unit Sales. ● Store Cost. ● Store Sales.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: left;">Dimensions</th> <th colspan="3" style="text-align: left;">Measures</th> </tr> <tr> <th>Promotion Media</th> <th>Product</th> <th>Unit Sales</th> <th>Store Cost</th> <th>Store Sales</th> </tr> </thead> <tbody> <tr> <td>+ All Media</td> <td>+ All Products</td> <td style="text-align: right;">26,796</td> <td style="text-align: right;">22,746.13</td> <td style="text-align: right;">56,965.64</td> </tr> </tbody> </table> <p>Filter: Month=[Time].[2006].[Q4].[12]</p>			Dimensions		Measures			Promotion Media	Product	Unit Sales	Store Cost	Store Sales	+ All Media	+ All Products	26,796	22,746.13	56,965.64
Dimensions		Measures															
Promotion Media	Product	Unit Sales	Store Cost	Store Sales													
+ All Media	+ All Products	26,796	22,746.13	56,965.64													


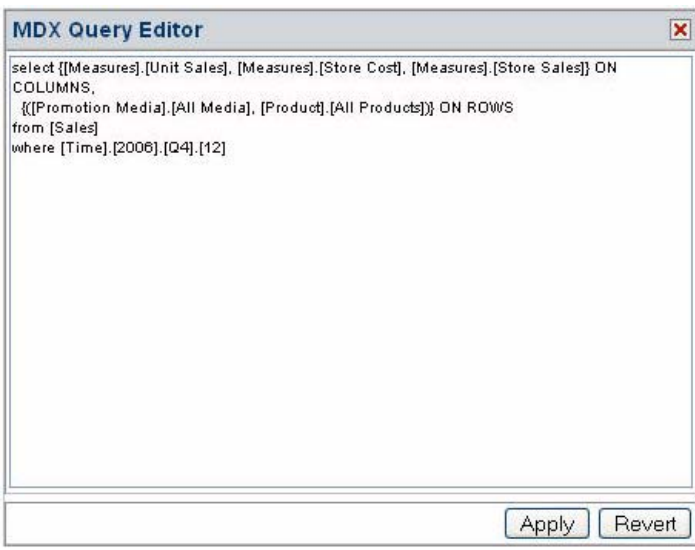
4.2.9 Edit Chart Options

	Edit Chart Operations	Allows a user to define various charting options.
<div data-bbox="506 310 1161 1050"> <p>Chart Options ✖</p> <p>Chart Type: Vertical Bar</p> <p>Chart Size: Height (cm): 300 Width (cm): 500</p> <p>Chart Title: <input type="text"/></p> <p>Horizontal Axis Label: <input type="text"/></p> <p>Vertical Axis Label: <input type="text"/></p> <p>Enable Drill-through: <input type="checkbox"/></p> <p>Show Legend: <input checked="" type="checkbox"/> Bottom</p> <p>Show Filter: <input checked="" type="checkbox"/> Bottom Left</p> <p>Chart Default Font: SansSerif Bold 12</p> <p>Chart Title: -----</p> <p>Axes Label: -----</p> <p>Axes Tick Label: ----- 30°</p> <p>Legend: -----</p> <p>Filter: -----</p> <p>Background (R, G, B): 255 255 255</p> <p style="text-align: right;">OK Cancel</p> </div>		


4.2.10 Change Data Cube

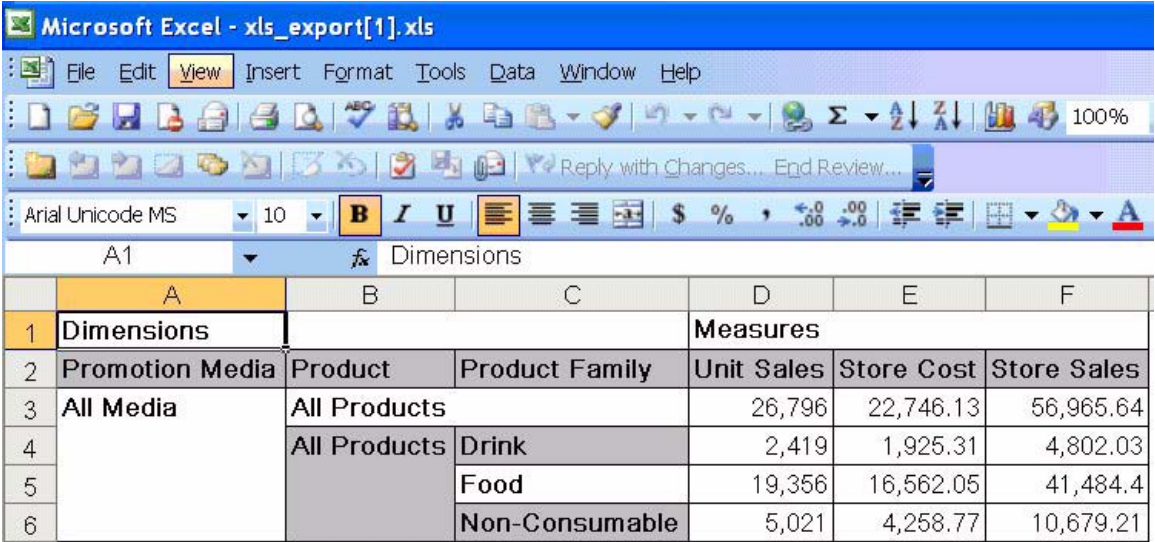
	Change Data Cube	Allows a user to change an analysis view and define dimension filters.
		
		Columns
		Rows
		Filter

4.2.11 Show MDX Query

	Show MDX Query	Allows a user to change the navigation table by editing the MDX query that generates the view. This is an advanced feature intended for technical users familiar with MDX.
		

4.2.12 Export to Excel


	Export to Excel	Prompts you to view or save the current navigation table in Microsoft Excel format.
---	-----------------	---

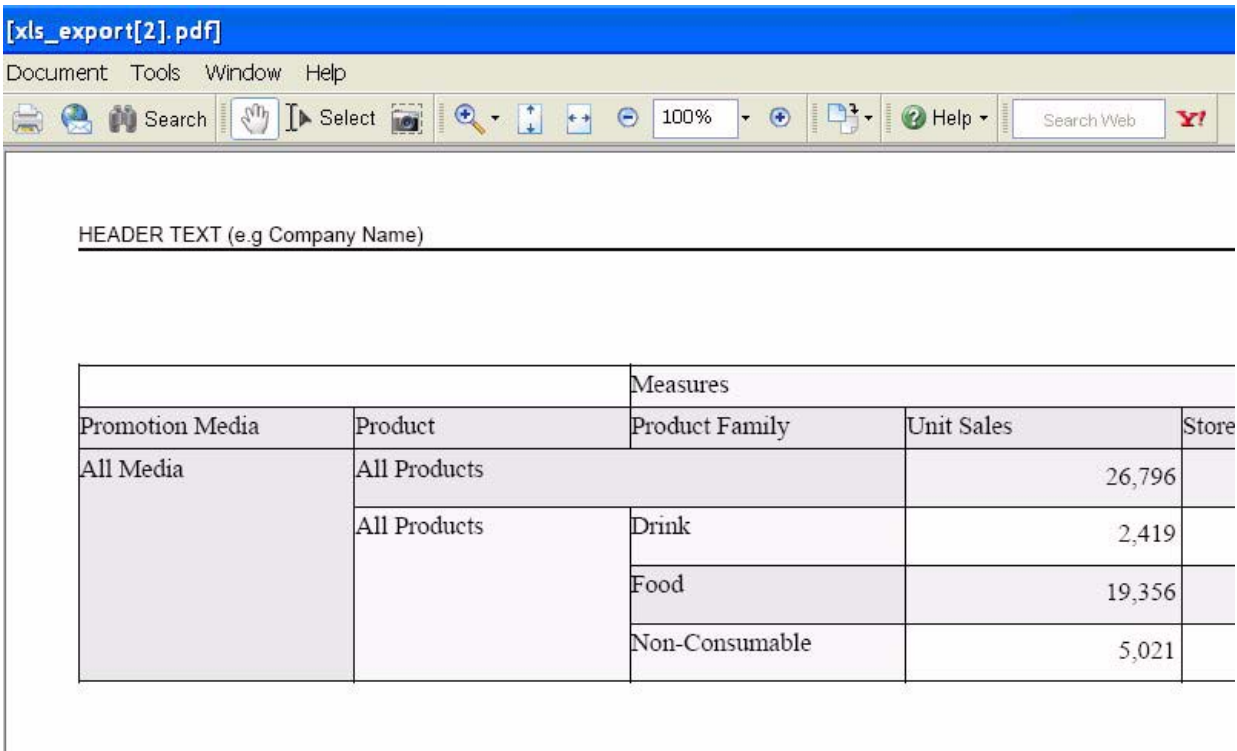


The screenshot shows a Microsoft Excel window titled "Microsoft Excel - xls_export[1].xls". The menu bar includes File, Edit, View, Insert, Format, Tools, Data, Window, and Help. The toolbar contains various icons for file operations and editing. The formula bar shows "A1" and "Dimensions". The data table is displayed as follows:

	A	B	C	D	E	F
1	Dimensions			Measures		
2	Promotion Media	Product	Product Family	Unit Sales	Store Cost	Store Sales
3	All Media	All Products		26,796	22,746.13	56,965.64
4		All Products	Drink	2,419	1,925.31	4,802.03
5			Food	19,356	16,562.05	41,484.4
6			Non-Consumable	5,021	4,258.77	10,679.21

4.2.13 Export to PDF

	Export to PDF	Prompts you to view or save the current navigation table in Adobe Acrobat PDF format.
--	---------------	---



The screenshot shows an Adobe Acrobat window titled "[xls_export[2].pdf]". The menu bar includes Document, Tools, Window, and Help. The toolbar contains various icons for document operations. The data table is displayed as follows:

HEADER TEXT (e.g Company Name)

			Measures	
Promotion Media	Product	Product Family	Unit Sales	Store
All Media	All Products		26,796	
	All Products	Drink	2,419	
		Food	19,356	
		Non-Consumable	5,021	

4.2.14 Edit Output Operations

	Edit Output Options	Allows a user to define various output options.
<div style="border: 1px solid gray; padding: 10px; width: fit-content; margin: auto;"> <p>Output Options ✖</p> <p>Report Options:</p> <p>Report Title: <input type="text"/></p> <p><input type="checkbox"/> Show chart on separate page in PDF output</p> <p>Set custom table width (cm): <input type="text" value="0.00"/></p> <p>Always include individual parent cells in: <input type="checkbox"/> Excel <input type="checkbox"/> PDF</p> <p>Always include all parent columns in: <input type="checkbox"/> Excel <input type="checkbox"/> PDF</p> <p>Page Layout:</p> <p>Orientation: <input checked="" type="radio"/> Portrait <input type="radio"/> Landscape</p> <p>Paper Size: <input checked="" type="radio"/> Standard: A4 <input type="radio"/> Custom: Height (cm): <input type="text" value="29.70"/> Width (cm): <input type="text" value="21.00"/></p> <p style="text-align: right;"><input type="button" value="OK"/> <input type="button" value="Cancel"/></p> </div>		

4.2.15 Save Buttons



	Save View	Save this analysis view. Changes you've made since you opened the view are saved to the repository. If you don't have permission to save the view in its current location, the Save View As dialog prompts you to select a new location.
	Save View As	Save this analysis view under a new name and location. Changes you've made since opening the view are saved to the repository in the location you select. Note that you cannot use the Save View As button to overwrite an existing view (assuming you have sufficient permissions).












For more information, refer to [“Saving an Analysis View” on page 34](#).

4.3 Navigation Table

The navigation table appears at the top of the analysis view (Figure 9 on page 22). It determines the data that is displayed, both in the main view and in drill-through tables.















4.3.1 Expand/Collapse Position

	Expand Position	Expands or collapses rows at a specific hierarchy member. In the following example, the All Media member is collapsed: it can be expanded; the All Products member is expanded and can be collapsed.
	Collapse Position	

Dimensions 		Measures		
Promotion Media	Product	Unit Sales	Store Cost	Store Sales
 All Media	 All Products	26,796	22,746.13	56,965.64
	 Drink	2,419	1,925.31	4,802.03
	 Food	19,356	16,562.05	41,484.40
	 Non-Consumable	5,021	4,258.77	10,679.21
	 Carousel	81	47.29	116.35
	 Checkout	169	150.34	373.50
	 Health and Hygiene	1,644	1,308.71	3,263.95
	 Household	2,767	2,446.02	6,162.34
	 Periodicals	360	306.41	763.07

4.3.2 Expand/Collapse Member

Expand/Collapse Member	Double-click to synchronize the expansion or contraction of rows across all hierarchy members. The following example shows the Product member expanded for the Promotion Media hierarchy member.
------------------------	--

Dimensions 		Measures		
Promotion Media	Product	Unit Sales	Store Cost	Store Sales
 All Media	 All Products	26,796	22,746.13	56,965.64
	 Drink	2,419	1,925.31	4,802.03
	 Food	19,356	16,562.05	41,484.40
	 Non-Consumable	5,021	4,258.77	10,679.21
Bulk Mail	 All Products	30	28.60	74.39
	 Drink	6	4.87	13.57
	 Food	22	22.34	57.50
	 Non-Consumable	2	1.39	3.32
Cash Register Handout	 All Products	1,600	1,353.09	3,378.48
	 Drink	162	144.85	361.74
	 Food	1,154	972.60	2,430.11
	 Non-Consumable	284	235.64	586.63

4.3.3 Zoom In/Out

Zoom In/Out	Click hyperlinked hierarchy members to replace the current table with a sub-table that depicts the selected member. The following example shows the table displayed when you zoom on the Drink product of All Products.
-------------	---

Dimensions				Measures	
Promotion Media	Product	Product Family	Product Department	Unit Sales	Store C
+ All Media	All Products	Drink	+ Alcoholic Beverages	681	579
			+ Beverages	1,299	1,054
			+ Dairy	439	291



4.3.4 Show Source Data (Drill-through)

Show Source Data	Click hyperlinked fact data to display additional columns from that specific fact data. The following example shows the drill-through of the Total Unit Sale for Alcoholic Beverages. For more information about the drill-through table's options, refer to "Drill-through Table" on page 33 .
------------------	--


Drill Through Table for [Unit Sales = 681]										
Store Country	Store State	Store City	Store Name	Store Sqft	Store Type	Year	Quarter	Month	Product Family	Product D
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E
USA	OR	Portland	Store 11	20319	Supermarket	2006	Q4	12	Drink	Alcoholic E

Page 10/23 Goto Page Rows/page

4.3.5 Expand All/Collapse All

	Expand All	Attempts to expand all of the hierarchy's members. However, this operation is limited by the memory available to the application server that hosts JasperAnalysis. JasperAnalysis stops expanding members when this limit is reached.
	Collapse All	Collapses the navigation table to its initial view.


4.3.6 Zoom Out All

	Zoom Out All	Restores the navigation table to its initial view after having zoomed.
---	--------------	--


4.4 Drill-through Table

The drill-through table displays the supporting details for the selected roll-up value in the navigation table. The drill-through table provides the options discussed in the following section.




4.4.1 Edit Properties


	Edit Properties	Allows you to select the columns to display or hide in the drill-through table. Use the up and down arrows to move the columns. You can also specify the number of rows to display per page.
---	-----------------	--

4.4.2 Output as CSV

	Output as CSV	Prompts you to view or save the current drill-through table in comma-separated values format.
---	---------------	---

4.4.3 Page Controls

	First, Previous, Next, Last	Click the arrows to navigate the pages of data.
Goto Page <input type="text" value="2"/> 	Goto Page	Enter the number of a page you want to view and press return to display the page.
Rows/page <input type="text" value="10"/> 	Rows/page	Set the number of rows that should be displayed on each page.

By default, the drill-through table opens in its own window. Edit the display options (by clicking ) to display the drill-through table on the same page as the navigation table. When the drill-through table is on the same page as the navigation table, click the small red X in the drill-through table's upper-right corner to close it.

4.5 Saving an Analysis View

After making changes to the navigation table to suit your needs, save the analysis view as described in **“Save Buttons” on page 30**. With sufficient permissions, you can either overwrite the existing view or save the view with a new name. When you save, you are prompted for a name, location, and an optional description. If a view with the same name exists in this location, you are prompted to overwrite the existing file. When you save a view with a new name, JasperAnalysis displays the new view, rather than the view you initially edited.



JasperAnalysis only saves the drill-through table if it is displayed on the same page as the navigation table. For more information, refer to **“Drill-through Operations” on page 26**.

GLOSSARY

Analysis Client Connection

A definition for retrieving an analysis view. An analysis client connection is either a direct Java connection (Mondrian connection) or an XML-based API connection (XMLA connection).

Analysis Schema

A metadata definition of a multidimensional database. In JasperAnalysis, schemas are stored in the repository as XML file resources.

Analysis View

A view of multidimensional data that is based on an analysis client connection and an MDX query. It is the entry point to analysis operations, such as slice and dice, drill down, and drill through.

Combinatorial Explosion

An effect of pairing the occurrence of any two objects, such as product sales, where the occurrences and the number of objects is large.

Content

The reports, custom URLs, and controls displayed in a dashboard.

Control

Buttons, text fields, date icons, and similar dashboard content that users interact with.

CrossJoin

An MDX function that combines two or more dimensions into a single axis (column or row).

Cube

The basis of most analysis applications, a cube is a data structure that contains three or more dimensions that categorize the cube's quantitative data. When you navigate the data displayed in an analysis view, you are exploring a cube.

CRM

Customer Relationship Management. A type of software application that helps businesses track and support their customers.

Dashboard

A collection of reports, input controls, other dashboards, and custom URLs displayed in a single, integrated view.

Data Source

A set of values that tells JasperServer where and how data is stored. Data sources are used for executing queries and obtaining datasets. JasperServer supports JDBC, JNDI, Bean, and Domain data sources; custom data sources can be added. Domains function as virtual data sources.

Dataset

A collection of data arranged in columns and rows. Datasets are equivalent to relational results sets and the `JRDataSource` type in JasperReports.

Datatype

In JasperServer, a datatype is a set of constraints on the value of an input control. It contains more information than a datatype in most programming languages (for example, it can include maximum and minimum values).

Denormalize

A process for creating table joins that speeds up data retrieval at the cost of having redundant rows in some columns.

Design

In Domains, the definition of the Domain structure. The design is saved as an object in the repository. It can be represented in an XML file and a design can be inferred from a properly constructed XML file, but the file is not the design itself.

Dice

An OLAP operation to select columns.

Dimension

A categorization of the data in a cube. For example, a cube that stores data about sales figures might include dimensions such as time, product, region, and customer's industry.

Domain

A virtual data source that enables data in the JasperServer repository to be presented in appropriate business views rather than the view of the actual data source. The Domain provides an interface that allows queries to be executed on the data source, subject to access grants. Being a virtual data source, data from the Domain can be represented by any text and any relationship, rather than by the text and relationships of the actual source.

A Domain's structure is defined by a schema that defines the virtual and actual data sources. The virtual data source can be termed the Presentation Layer; the actual data source, the Physical Layer.

Drill

To click on an element of an analysis view to change the data that is displayed:

- ◆ Drill down. An OLAP operation that exposes more detailed information down the hierarchy levels by delving deeper into the hierarchy and updating the contents of the navigation table.
- ◆ Drill through. An OLAP operation that displays detailed transactional data for a given aggregate measure. Click a fact to open a new table beneath the main navigation table; the new table displays the low-level data that constitutes the data that was clicked.
- ◆ Drill up. An OLAP operation for returning the parent hierarchy level to view to summary information.

Eclipse

An open source Integrated Development Environment (IDE) for Java and other major programming languages, such as C/C++.

ETL

Extract, Transform, Load. A process that retrieves data from transactional systems, and filters and aggregates the data to create a multidimensional database.

Fact

The specific value or aggregate value of a measure for a particular member of a dimension. Facts are typically numeric.

Field

A single piece of data, such as the fields in a record or table, generally represented as the columns of the table. For Domains, the term refers to data in the actual data sources (Physical Layer).

Frame

A dashboard element that displays reports or custom URLs. Frames can be mapped to input controls if their content can accept parameters.

Group

In Domains, a named collection of items; a key component of the Presentation Layer.

Hierarchy Level

A member of a dimension hierarchy containing a group of hierarchy members.

Hierarchy Member

A member in a hierarchy level.

Input Control

Graphical representations of the parameters defined in a report that has been added to the JasperServer repository. The way an input control is displayed is defined when it is created.

Item

In a Domain, a single piece of data in a virtual data source (Presentation Layer), corresponding to a field or calculated field in the actual data source.

Item Group

In Domains, a named collection of items; a key component of the Presentation Layer. Also referred to as a set or item set.

JavaBean

A reusable Java component that can be dropped into an application container to provide standard functionality.

JDBC

Java Database Connectivity. A standard interface that Java applications use to access databases.

JNDI

Java Naming and Directory Interface. A standard interface that Java applications use to access naming and directory services.

Join Tree

In Domains, a collection of joined tables from the actual data source. The join tree is the source for one or more item sets.

JPivot

An open source graphical user interface for OLAP operations. For more information, visit <http://jpivot.sourceforge.net/>.

MDX

Multidimensional Expression Language. A language for querying multidimensional objects, such as OLAP (On Line Analytical Processing) cubes, and returning cube data for analytical processing. An MDX query is the query that determines the data displayed in an analysis view.

Measure

A formula that is used to calculate the facts that constitute the quantitative data in a cube.

Mondrian

A Java-based, open source multidimensional database application.

Mondrian Connection

An analysis client connection that consists of an analysis schema and a data source used to populate an analysis view.

Mondrian Schema Editor

An open source Eclipse plugin for creating Mondrian analysis schemas.

Mondrian XMLA Source

A server-side XMLA source definition of a remote client-side XMLA connection used to populate an analysis view using the XMLA standard.

MySQL

An open source relational database management system. For information, visit <http://www.mysql.com/>.

Navigation Table

The main table in an analysis view that displays measures and dimensions as columns and rows.

Object

In JasperServer, anything residing in the repository, such as an image, file, folder, font, content file (created by running a report), or analysis view. Each repository object can grant access to users and roles.

OLAP

On Line Analytical Processing. Provides multidimensional views of data that help users analyze current and past performance and model future scenarios.

Outlier

A fact that seems incongruous when compared to other member's facts. For example, a very low sales figure or a very high number of helpdesk tickets. Such outliers may indicate a problem (or an important achievement) in your business. JasperAnalysis excels at revealing outliers.

Parameter

Named values that are passed to the engine at report-filling time to control the data returned or the appearance and formatting of the report. A report parameter is defined by its name and type. In JasperServer, parameters can be mapped to input controls that users can interact with.

Physical Layer

The part of a Domain design that references actual data source objects (tables and fields) and specifies their joins.

Pivot table

A table with two physical dimensions (for example, X and Y axis) for organizing information containing more than two logical dimensions (for example, PRODUCT, CUSTOMER, TIME, and LOCATION), such that each physical dimension is capable of representing one or more logical dimensions, where the values described by the dimensions are aggregated using a function such as SUM.

Presentation Layer

The part of a Domain design that describes the items visible to the end-user and the way the items should be grouped in sets. The Presentation Layer items refer back to objects in the Physical Layer.

Properties

Attributes of an object. In a Domain, the properties specify the visible features of items.

Repository

In JasperServer, the container that holds all the report units, analysis views, and resources. The web user interface is the main access point to the repository; it can also be accessed by iReport or programmatically (by using the Java and web services APIs).

Role

A collection of users with similar permissions in the repository. Roles are assigned specific privileges for the objects in the repository. They also determine the menu options displayed to those users.

Schema

A logical model that determines how data is stored. For example, the schema in a relational database is a description of the relationships between tables, views, and indexes. In JasperAnalysis, an OLAP schema is the logical model of the data that appears in an analysis view; they are uploaded to the repository as resources. For Domains, schema are represented in XML design files.

Set

A named collection of similar objects. In Domains, an item set is a collection of items sourced from the same join tree. Also referred to as an item group.

Slice

An OLAP operation for filtering data rows.

SQL

Structured Query Language. A language used to access and manipulate data and schemas in a relational database.

Transactional Data

Rows of data stored in a database for recording business transactions.

User

A login account created for a specific person. It defines such attributes as the user's name, login name, password, email address, and roles (which in turn determine access in the repository).

WCF

Web Component Framework. A low-level GUI component of JPivot. For more information, see <http://jpivot.sourceforge.net/wcf/index.html>.

XML

eXtensible Markup language. A standard for defining, transferring, and interpreting data for use across any number of XML-enabled applications.

XMLA

XML for Analysis. An XML standard that uses Simple Object Access protocol (SOAP) to access remote databases. For more information, see <http://www.xmla.org/>

XMLA Connection

A type of analysis client connection that consists of Simple Object Access Protocol (SOAP) definitions used to populate an analysis view.

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