

# Data Analysis and Reporting with Brio Intelligence 6.6

*Tables, Pivot Tables, Charts, and Reports*



4980 Great America Parkway  
Santa Clara, CA 95054 USA  
+1(408)496-7400

*Data Analysis and Reporting with Brio Intelligence 6.6 – Tables, Pivot Tables, Charts, and Reports*

Part Number 1209893

© Copyright 2002 Brio Software

All rights reserved. Printed in the USA.

This product and related products and documentation are protected by copyright and are distributed under licenses restricting their use, copying, distribution, and decompilation. No part of this product or related documentation may be reproduced in any form by any means without prior written permission of Brio Software and its licensors.

Brio Software  
4980 Great America Parkway  
Santa Clara, CA 95054  
+1(408)496-7400

support@Brio.com  
sales@Brio.com  
www.Brio.com

Refer to the Brio Software License Agreement in this package before installing or using the product.

If you find any errors or problems with this documentation, please notify Brio Software. Brio Software does not guarantee that this document is without error. The information in this document is subject to change without notice.

*Trademarks*

Brio®, Brio Inform™, Brio Intelligence™, Brio Performance Applications™, Brio Performance Builder™, Brio Performance Suite™, Brio Performance Platform™, Brio Portal™, Brio Reports™, Brio Software™, Personal SQR™, and SQR™ are trademarks or registered trademarks of Brio Software in the United States and other countries. All other marks are the trademarks or servicemarks of Brio's suppliers or partners and are the property of such third parties.

# Contents in Brief

**About This Book**

**CHAPTER 1 Introduction**

**CHAPTER 2 Working with Tables**

**CHAPTER 3 Analyzing Data with Pivot Tables**

**CHAPTER 4 Charting Data**

**CHAPTER 5 Designing Custom Reports**

**Glossary**

**Index**



# Contents

	<b>About This Book</b>	
	Audience . . . . .	1-xi
	In This Book . . . . .	1-xi
	Typographic Conventions . . . . .	1-xii
	Related Documents . . . . .	1-xiii
	Help . . . . .	1-xiii
<b>CHAPTER 1</b>	<b>Introduction</b>	
	Brio Intelligence's Approach to Data Analysis and Reporting . . . . .	1-2
	Brio Intelligence Reports . . . . .	1-3
<b>CHAPTER 2</b>	<b>Working with Tables</b>	
	Table Section . . . . .	2-2
	Creating a Table . . . . .	2-3
	Tables as a Data Staging Area . . . . .	2-3
	Manipulating Table Data . . . . .	2-4
	Limiting Data in a Table . . . . .	2-4
	Sorting a Table . . . . .	2-5
	Adding Computed Items . . . . .	2-6
	Adding Grouping Columns . . . . .	2-7
	Adding Date Groups . . . . .	2-9
	Applying Data Functions to Tables . . . . .	2-10
	Grand Total . . . . .	2-10
	Break Total . . . . .	2-11
	Working with Table Components . . . . .	2-12
	Selecting Columns and Rows . . . . .	2-12
	Deleting Columns . . . . .	2-12
	Formatting Commands . . . . .	2-12
	Table Menu Command Reference . . . . .	2-13

<b>CHAPTER 3</b>	<b>Analyzing Data with Pivot Tables</b>	
	Pivot Section	3-2
	Creating a Pivot Table	3-3
	Pivoting Data	3-3
	Charting a Pivot Table	3-4
	Working with Pivot Tables	3-4
	Selecting Pivot Table Elements	3-4
	Moving Pivot Table Elements	3-5
	Changing Label Nesting Levels	3-6
	Sorting Pivot Tables	3-6
	Using Data Calculations in Pivot Tables	3-7
	Adding Totals and Subtotals	3-7
	Adding Cumulative Totals	3-8
	Using Data Functions	3-9
	Using Surface Values in Data Functions	3-11
	Using Weighted Functions	3-12
	Adding Computed Items	3-14
	Pivot Menu Command Reference	3-15
<b>CHAPTER 4</b>	<b>Charting Data</b>	
	Chart Section	4-2
	Charting Basics	4-3
	Chart Terminology	4-3
	Understanding Chart Dimensions	4-4
	Creating Charts	4-5
	Determining What Chart Format to Use	4-6
	Working with Two-dimensional Charts	4-7
	Using Pie Charts to Analyze Data	4-7
	Positioning Pie Slices	4-8
	Showing Positive and Negative Values	4-8
	Showing Pie Percentages	4-9
	Adding Lines to Labels	4-9
	Rotating Pie Charts	4-9
	Using 2-D Bar Charts to Analyze Data	4-9
	Working with Multidimensional Charts	4-11
	About 3-D View	4-11
	Creating Three-dimensional Bar Charts	4-12
	Understanding Clustered Bar Charts	4-12

Understanding Stacked Bar Charts .....	4-13
Understanding Area Charts .....	4-14
Understanding Ribbon Charts .....	4-15
Understanding Line Charts .....	4-16
Understanding Combination Charts .....	4-16
Manipulating Chart Data .....	4-18
Using Different Scales to Compare Related Values .....	4-18
Using Data Functions in Charts .....	4-19
Adding Computed Items .....	4-20
Sorting Chart Items .....	4-21
Sort Items .....	4-22
Reference Items .....	4-22
Functions .....	4-23
Creating Pivot Tables from Charts .....	4-23
Drilling into Charts .....	4-24
Hiding and Focusing on Charted Data .....	4-25
Focus On Items .....	4-25
Hide Items .....	4-25
Working with Chart Elements .....	4-26
Selecting Chart Elements .....	4-26
Changing the View of a Chart .....	4-26
Zooming Charts .....	4-26
Rotating and Elevating Charts .....	4-27
Displaying Axis Grid Lines .....	4-27
Inserting Text .....	4-28
Changing Chart Legends .....	4-29
Customizing Chart Properties and Labels .....	4-30
Setting General Chart Properties .....	4-30
Setting Chart Label Axis Properties .....	4-32
Setting Chart Value Axis Properties .....	4-33
Setting Bar Chart Properties .....	4-34
Customizing Chart Patterns, Colors, and Labels .....	4-35
Changing Chart Color Schemes and Fill Patterns .....	4-35
Changing Chart Data Labels .....	4-36
Changing Color of Chart Elements, Lines, and Text .....	4-37
Chart Menu Command Reference .....	4-38

<b>CHAPTER 5</b>	<b>Designing Custom Reports</b>	
	Report Section	5-2
	Report Section Elements	5-3
	Report Section Toolbar	5-4
	Expression Line	5-5
	Report Components	5-7
	Creating a Custom Report	5-8
	Inserting Additional Tables in a Custom Report	5-10
	Adding Report Groups	5-10
	Inserting Report Headers and Footers	5-11
	Inserting Page Headers and Footers	5-11
	Adding Other Report Elements	5-12
	Working with Graphic Elements	5-12
	Working with Fields	5-13
	About Computed Fields	5-14
	Inserting Limit Values	5-15
	Inserting Page Breaks	5-16
	Working with a Report Page	5-17
	Displaying Rulers	5-17
	Using Grids	5-17
	Using Design Guides	5-17
	Setting Up a Report	5-18
	Specifying Page Size	5-18
	Specifying Page Margins	5-19
	Setting Up Page Columns	5-19
	Enhancing Report Data	5-20
	Sorting Report Items	5-20
	Adding Computed Items	5-21
	Applying Data Functions	5-22
	Applying Break Totals	5-23
	Hiding and Focusing on Reported Data	5-24
	Focus On Items	5-24
	Hide Items	5-24
	Using Multiple Data Sources in a Report	5-25
	Creating Smart Reports	5-27

Formatting Report Items .....	5-27
Converting Detail Reports from Versions Earlier than 6.0 .....	5-29
Display Differences .....	5-30
Conversion of Detail Report Categories .....	5-30
Conversion of Data Area .....	5-30
Conversion of Facts .....	5-31
Conversion of Smart Reports .....	5-31
Conversion of Graphic Objects .....	5-31
Report Menu Command Reference .....	5-32

## Glossary

## Index



# About This Book

Welcome to *Data Analysis and Reporting with Brio Intelligence 6.6 — Tables, Pivot Tables, Charts, and Reports*. This book is designed to help you learn the Brio Intelligence application, part of the Brio Intelligence integrated suite of powerful and easy-to-use business intelligence tools for query, OLAP analysis, and analytical reporting across the extended enterprise.

## Audience

*Data Analysis and Reporting with Brio Intelligence 6.6* is written for all levels of Brio Intelligence users, from those who need to simply retrieve and view data in a report format, to those who need to build queries and reports as well as analyze data.

## In This Book

*Data Analysis and Reporting with Brio Intelligence 6.6 – Tables, Pivot Tables, Charts, and Reports*, one of four books that explain how to use Brio Intelligence (see “Related Documents” on page xiii), shows you how to use Brio Intelligence to analyze database information and create a wide range of reports including tables, pivot tables, charts, and free-form, presentation-quality reports for broad-scale publishing across the organization.

- Chapter 1, “Introduction,” introduces the types of reports available in Brio Intelligence and provides an overview of reporting concepts. It also explains Brio Intelligence’s approach to analyzing and reporting data.
- Chapter 2, “Working with Tables,” explains how to use tables to organize your data.

- Chapter 3, “Analyzing Data with Pivot Tables,” explains how to use pivot tables to quickly summarize or cross-tabulate large amounts of data.
- Chapter 4, “Charting Data,” explains how to use Brio Intelligence’s charting features to perform interactive analysis of your data in a graphic format.
- Chapter 5, “Designing Custom Reports,” explains how to use the Report Designer, Brio Intelligence’s dynamic analytical report writer, to create free-form, presentation-quality reports.

In addition, a glossary and index provide definitions and easy access to information contained in the book.

## Typographic Conventions

This book uses the following type conventions:

- Options, buttons, or tabs that you need to choose and text that you need to type are indicated in **bold**.

Select **Typical Install**. Type **1234**.

- Key names are shown in square brackets.

Press [Down Arrow]

- Two key names joined with a plus sign (+) are consecutive keystrokes. Press and hold down the first key while pressing the second key.

Press [Ctrl+Z].

- Options in a menu command path are separated with an arrow. The example indicates that you are to open the **File** menu and choose the **Open** menu item.



Choose **File**→**Open**.

[Ctrl+O]

---

### ⇒ Note

When an instruction includes a menu command, the toolbar icon (if one exists) for the command appears in the left margin. The keyboard shortcut (if one exists) for the command is listed in brackets at the end of the line.

---

- Variables you replace with specific information are shown in *italics*.

`sp_adduser` *login\_id*

- Files, directories, and paths are shown in a monospace font.  
Sample1.bqy is located in the BrioQuery/Samples directory.
- A Note, Tip, or Caution is a brief side-note that deserves special attention or does not fit within the normal flow of text. These types of information are set off in the text by an icon in the margin.

★ Tip This is an example tip.

Caution! This is an example caution.

## Related Documents

Along with the *Data Analysis and Reporting with Brio Intelligence 6.6* book, there are three additional Brio Intelligence books:

- *Getting Started with Brio Intelligence 6.6 – Query and Results* provides an overview of Brio Intelligence and explains the user interface and basic commands. It includes how to retrieve data, how to query new data and change existing queries, and how to query a single database as well as multiple databases. It also covers how to work with query results.
- *Brio Intelligence 6.6 Administrator's Guide* explains data modeling, including how to modify existing data models, and create new data models. It also discusses metadata definitions, database connectivity, and document scheduling.
- *Brio Intelligence Object Model and Executive Information Systems* explains the Brio Intelligence Object Model and how to create custom EIS applications using JavaScript.

## Help

Brio Intelligence comes with a number of user manuals as well as an extensive online help system. If you need help with Brio Intelligence and cannot find the answers you need in the documentation, and you have a current Brio Technical Support agreement, call Brio Technical Support at +1(800)337-6324 (within North America) or +1(619)610-5769. You may also send an email message to [support@brio.com](mailto:support@brio.com).

Please be prepared to provide your valid customer number and company name. You also need to know the version of Brio Intelligence you are using.



# 1

## Introduction

Welcome to *Data Analysis and Reporting with Brio Intelligence 6.6 Tables, Pivot Tables, Charts, and Reports*. This book shows you how to use Brio Intelligence to analyze database information and create a wide range of reports including tables, pivot tables, charts, and free-form, presentation-quality reports for broad-scale publishing across the organization.

This book assumes that you are familiar with the terms and concepts covered in *Getting Started with Brio Intelligence 6.6*.

This chapter introduces the types of reports available in Brio Intelligence and provides an overview of reporting concepts. It also explains Brio Intelligence's approach to analyzing and reporting data. This chapter includes:

- Brio Intelligence's Approach to Data Analysis and Reporting
- Brio Intelligence Reports

# Brio Intelligence's Approach to Data Analysis and Reporting

Once a query is processed and data results are returned to the desktop, you can use Brio Intelligence's reporting and analysis tools to create custom views, cross-sections, and drill-downs to slice and dice data and view the multidimensional relationships it contains. You may create as many different views of the data as you wish, and display the information in any form and from any angle possible. You can also use Brio Intelligence to work autonomously with data. Even without a database connection, you can analyze data and produce reports.

Brio Intelligence's report features include:

- A point-and-click interface for intuitive custom report building.
- Easy, non-procedural navigation between reporting sections.
- A drag-and-drop Outliner tool for developing reports and analyzing data.
- Interactive pivot reporting that lets you perform unrestricted drill-down analysis of different data relationships.
- Extensive formatting tools for creating compelling data presentations.
- An easy-to-use, interactive charting utility for graphically displaying and drilling-down into data.

# Brio Intelligence Reports

Brio Intelligence enables you to create a wide variety of reports, including:

- **Tables** – Columnar arrangements of data. Tables are used as building blocks in other reporting sections. You can apply limits to tables, add computed items, include subtotals and grand totals, as well as summary totals such as sum, count or average.
- **Pivot tables** – Interactive tables that quickly summarize or cross-tabulate large amounts of data. You can rotate rows and columns to see different summaries of data or display the details for areas of interest. A pivot table summarized data by using a summary function that you specify, such as Sum, Count, or Average. You can include subtotals and grand totals automatically, or use your own formulas by adding computed items.
- **Charts** – A visual display of information; fully interactive, three-dimensional views of data. Brio Intelligence displays data from results sets as bars, lines, columns, pie slices, or other shapes in the chart. When you create a chart, the values from the worksheet are automatically represented in the chart. Charts are linked to the data they are created from and are updated when you change the data.
- **Custom reports** – Using Brio Intelligence’s Report Designer, you can create free-form presentation-quality reports with graphic objects, predefined fields, band-style report data from multiple data sources and computed fields, charts, and pivots; Smart reports allow you to embed charts and pivot tables and show only the data that is relevant to the section in which they are placed.



# 2

## Working with Tables

This chapter explains how to use tables to organize your data. It contains:

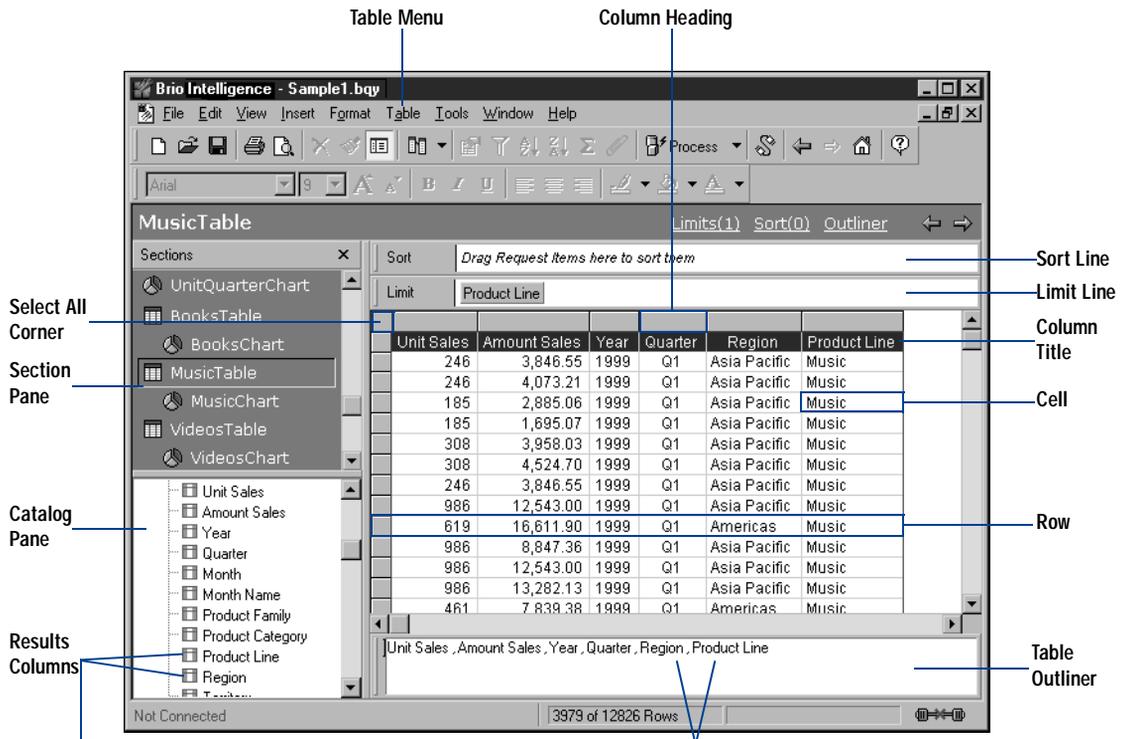
- Table Section
- Creating a Table
- Tables as a Data Staging Area
- Manipulating Table Data
- Working with Table Components
- Table Menu Command Reference

# Table Section

A table is a columnar arrangement of data. In Brio Intelligence, tables are used as building blocks in other reporting sections. Table sections function in much the same way as the Results section. All of the commands that are available on the Results menu are also available on the Table menu. However, you cannot apply complex limits or aggregate data in the Table section.

The data in a Table section is derived from the section that is active when you choose to insert a new table. When you insert a Table section from the Results section, the new Table Section is attached to the Results section. This means any changes to the results set are immediately propagated to the Table section.

You can also create additional tables, pivot tables, charts, and other reports form a Table section's dataset just as you would from the Results section. Limits, computed columns, grouping columns, and other actions that modify the active section's data set carry over to all tables and reporting sections built from that section.



## Creating a Table

Use the Table Outliner to construct, plot, and manage data.

To create a table based on the Results section data:

- 1 From the Results section, choose **Insert**→**New Table**.  
If the Table Outliner is not already displayed, click **Outliner** on the Section title bar.
- 2 Drag Results items from the Catalog pane to the Table Outliner.  
Brio Intelligence automatically populates the table columns.

## Tables as a Data Staging Area

Computed items in the Results section become mere data elements when added to a Table section. Thus, the Table section can become an intermediate calculation staging area. This ability comes in handy in applications where you wish to place limits on computed items.

For example, suppose you wanted a report of the top 10 producers in your organization. It is easy to add a computed item to your Results section that is based on the Rank function. (This function lets you find out each producer's rank relative to the others.) However, when you try to limit the results based on that ranking, Brio Intelligence informs you that limits cannot be placed on aggregate items.

To get the results you want, you need to insert a new Table section that is based on your Results section. Then add all the relevant Results items, including the computed Rank field. Once Rank is a column in the table, it is no longer a computed item. It is a regular number on which you can now place a limit. Since the Table section is based on the Results section, your Top 10 report will automatically be updated each time you run the query.

# Manipulating Table Data

The Table menu provides a number of commands that allow you to manipulate the data in the Table section.

## Limiting Data in a Table

Limiting data in a table filters the data displayed in the table columns. You can apply limits in the Table section in addition to any limits set in the originating section. Limits set in the Table section are automatically propagated to any other reports that inherit their data set from the table. You can apply only one limit per column.

To return data to the display and make it available for reporting, delete or suspend the limit.

To limit data in a table:



- 1 Select a column (click the column heading) and choose **Table→Limit**. [Ctrl+L]

The Limit dialog box appears.

- 2 Select an arithmetic or logical operator from the drop-down list.
- 3 Define the potential limit values by clicking one of the following options:
  - **Show Values** – Shows column values associated with the item.
  - **Custom Values** – Supplies an empty field for inputting custom values. Click the check mark to add a value to the list.

- 4 In the Values list, select the **values** to include in the limit definition.

Individually select values or click **Select All** and deselect the values you do not want to include.

- 5 When the values are highlighted in the values panel, click **OK**.

The limit is applied to the column and the column name is added to the Limit line.

To remove a limit in a table:

- ▶ Select the limit item that you want to remove and choose **Table→Remove**. [Del]

To remove all limits in a table:

- ▶ Click **Limit** on the Limit line and choose **Table→Remove**. [Del]

## Sorting a Table

The rows in a table can be sorted by one or more columns in ascending or descending order. You can also apply sequenced, nested sorts to columns in the Table section.

To sort a column:



- ▶ Select the column you want to sort and choose **Table→Sort Ascending** or **Sort Descending**.

To apply sort conditions using the Sort line:

- 1 Click **Sort** on the Section Title bar to display the Sort line.
- 2 Drag Results items from the Catalog pane to the Sort line.  
You can add items to the Sort line that are not in the Outliner.
- 3 Establish a final sort sequence by reordering sort items.  
Items are sorted left to right on the sort item. To reorder the sequence, drag each item to its new position.
- 4 Double-click specific sort items to toggle ascending and descending sort orders.  
Ascending is the default sort order.
- 5 Click **Sort Now** on the Sort line.

## Adding Computed Items

You can rank and provide statistics for the values represented in the totals or subtotals in your Table section. The Add Computed Item feature enables you to build equations to compute totals, or to apply functions to existing values. Computed items are like normal data items and can be included in reports or reused to compute other data.

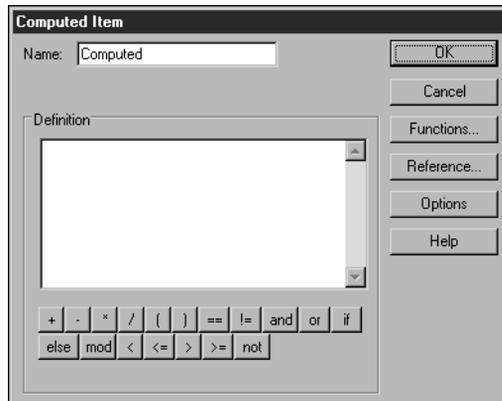
For example, you can modify an *Amount Sold* item by building an equation around it, multiplying by a *Unit Price* item, and renaming the resulting item *Revenue*. You can also apply a scalar function such as `Cume` to *Amount Sold* and return each individual value as a cumulative running total, or simply multiply *Amount Sold* by the local tax rate to find the tax owed on each sale.

The Computed Item dialog is used to build a computed item expression. The computed item expression is a value, variable, logic statement, or equation that instructs Brio Intelligence how to perform a computation.

To create a computed item:

- 1 Choose **Table**→**Add Computed Item**.

The Computed Item dialog box appears.



- 2 In the Name field, type a name that describes the computation.

The default name is *Computed*, which is numbered sequentially if there is more than one. If you assign a name to a computed item that is identical to an existing scalar function name, Brio Intelligence numbers the name starting with the number 2.

- 3 Define the new data item by building an expression in the Definition text box.  
Use the operator buttons to insert arithmetic and logical operators at the insertion point.
  - Click **Reference** to display the Reference dialog box, and select Request items to place in the equation.
  - Click **Functions** to apply scalar functions using the Functions dialog box.You also may type any portion of the equation or the entire equation directly into the Definition text box using JavaScript. The names are case sensitive, and you must replace spaces in item names with underscores ('\_').
- 4 If necessary, click the **Options** button to set a new data type for the item.
- 5 When the equation is complete, click **OK**.  
The computed item is added to the Outliner and appears as a column in the table.

## Adding Grouping Columns

Grouping columns, like computed items, is a way of creating new data in your results set by grouping data from an already existing column. You can use grouping columns to consolidate non-numeric data values into more general group values and map the group values to a new column in the data set.

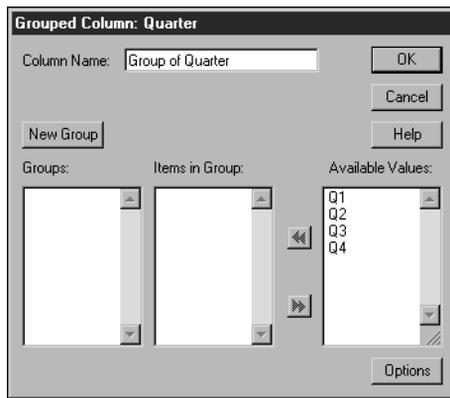
Grouping columns are new items added to the Table section and are available for use in report sections.

For example, your company sales database may contain the items: State, Sales Region, and Country, which allow you to aggregate data on different levels in reports. However, suppose you are looking to track sales by subregion, or want to see data for one state versus an average for all other states combined. You can do this by grouping states together to create a subregion item or other custom dimension.

To add a grouping column:

- 1 Select a column as a base for your grouping column.
- 2 Choose **Table**→**Add Grouping Column**.

The Grouped Column dialog box appears. Use the column values to build the grouping categories for the new item.



- 3 Type a name for the new column in the Column Name field.
- 4 Create custom group values and link them to values in the base column.
  - Click **New Groups** to create groups and add them to the Groups list.
  - Select a group, and then select items from the Available Values list and use the arrows to add them to the Items In Group list for the selected group.
  - Remove selected values from a group by using the arrow to move them back to the Available Items list.
  - Double-click a group name to modify it.
  - Specify options for ungrouped values as follows:
    - **Column Name** – Names the new grouping column in the table.
    - **New Groups** – Creates a custom group to be displayed as a value in the new grouping column.
    - **Options** – Indicates how to represent unassigned values within the grouping column, that is, as null values, as members of a default group (named in the adjacent edit field), or as their own individual groups.
    - **Groups** – Selects a custom group to define by adding or removing items.
    - **Items In Group** – Removes an item from a selected custom group.
    - **Available Values** – Adds items to a selected custom group.

- Select one of the following options to define the preferences for ungrouped columns:
  - **Null** – Leaves the values ungrouped and disaggregated.
  - **Default** – Allows you to specify a default name to assign to all ungrouped values.
  - **Individual Group** – Assigns each ungrouped values the name originally assigned to it.

5 When the grouping definitions are complete, click **OK**.

The new grouping column is added to the Outliner and to the table.

You can modify a grouping column to change the group structure.

To modify a grouping column:

- ▶ Select the grouping column and choose **Table→Modify Column**.

## Adding Date Groups

Use date breakout columns to separate date-typed columns into Year, Quarter, and Month items. The new items are automatically derived using date functions available to computed items.

For example, when you add date groups for an item *Order Date*, the item is broken into constituent date items. A new *Year* item is created as an integer, *Qtr* as a string, and *Month* as a new date.

To break out date items:

- 1 Select a **date-type column** in the Content pane.
- 2 Choose **Table→Add Date Group**.

---

⇒ **Note** This feature automatically sets the display format of the new Month item to *mmm* so that the data sorts correctly. Quarters are based on the calendar year beginning 1/1.

---

## Applying Data Functions to Tables

In the Tables section, data functions can be used only for totals and subtotals. Data functions return to the underlying values and recalculate the value according to the type of function specified.

You can apply a break (subtotal), grand, or custom total to any column. A grand total on a numeric column applies a default `sum` function. However, each column can have a number of grand totals, each with a different aggregate function applied to it. Table 2-1 lists the data functions that you can use with break totals and grand totals.

Table 2-1 Break Total and Grand Total Data Functions

Function	Description
Sum	Returns sum of underlying values.
Average	Returns average of underlying values.
Minimum	Returns lowest of underlying values.
Maximum	Returns highest of underlying values.
Count	Returns number of underlying values.
Other	Allows you to create a custom function using JavaScript.

To calculate a column total:

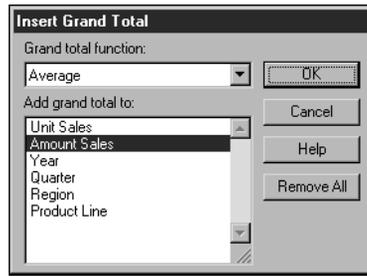
-  Select the column to be totaled and click the summation icon on the Standard toolbar.

Brio Intelligence adds a row labelled *Total* to the bottom of the table and displays the total as the last entry in the selected column.

### Grand Total

To apply a grand total to a column using a data function:

- 1 Select a column and choose **Table→Grand Total**.  
The Insert Grand Total dialog box appears.

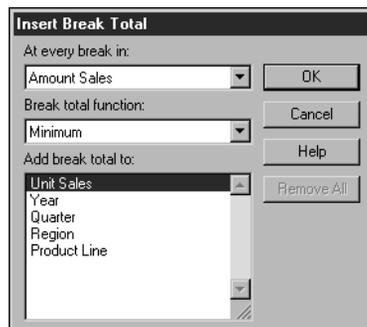


- 2 Select a **data function** from the Grand Total Function drop-down list.
- 3 Select one or more **columns to be totaled** from the Add Grand Total To list and click **OK**.  
The total and any subtotals in the column are computed to reflect the new data function.

## Break Total

To apply a break total (subtotal):

- 1 Select a column and choose **Table**→**Break Total**.  
The Insert Break Total dialog box appears.



- 2 Select a **break column** from the At Every Break drop-down list.
- 3 Select the **data function** you want to apply from the Break Total Function drop-down list.
- 4 Select one or more columns on which to display the break total and click **OK**.

## Working with Table Components

Brio Intelligence offers a number of options for working with table components (that is, columns and rows) in the Table section. These commands are found on the Format and Results menus. Many of these commands also have corresponding toolbar icons and shortcut menu items.

### Selecting Columns and Rows

To select a column:

- Click anywhere inside the column.

To select a row:

- Click the row header (row number).

### Deleting Columns

To delete a selected column from the Results table (and Outliner):

- Choose **Results**→**Remove**. [Del]

If an item is removed from the Content pane, it is completely removed from the Outliner and the data set.

**Caution!** Remove items with caution as computed items and other report sections may draw data values from the deleted item.

### Formatting Commands

You can use the commands available on the Format menu to change the appearance of fonts, backgrounds, borders, color, row heights, and column widths. For more information on formatting options, see *Getting Started with Brio Intelligence 6.6*.

# Table Menu Command Reference

Table 2-2 provides a quick reference to the commands available on the Table menu and lists any related shortcuts.

Table 2-2 Table Menu Commands

	Command	Description	Keyboard Shortcut	Shortcut Menu
	Limit	Opens the Limit dialog box.	[Ctrl+L]	✓
	Sort Ascending	Sorts the selected column values in ascending order (alphabetical or numeric).		✓
	Sort Descending	Sorts the selected column values in descending order (alphabetical or numeric).		✓
	Add Computed Item	Opens the Insert Computed Item dialog box.		✓
	Add Grouping Column	Opens the Grouped Column dialog box. Use to merge dimension labels into new groupings and aggregate the associated data.		✓
	Add Date Groups	Separates date-type items into year, quarter, and month items.		
	Modify Column	Use to modify a computed column or a group column.	[Ctrl+M]	
	Remove	Removes the selected column (or Outliner item).	[Del]	✓
	Break Total	Opens the Insert Break Total dialog box.		✓
	Grand Total	Opens the Insert Grand Total dialog box.		✓
	Hide Column	Hides the selected column from view.		✓
	Unhide Column	Opens the Unhide Column dialog box.		✓



# 3

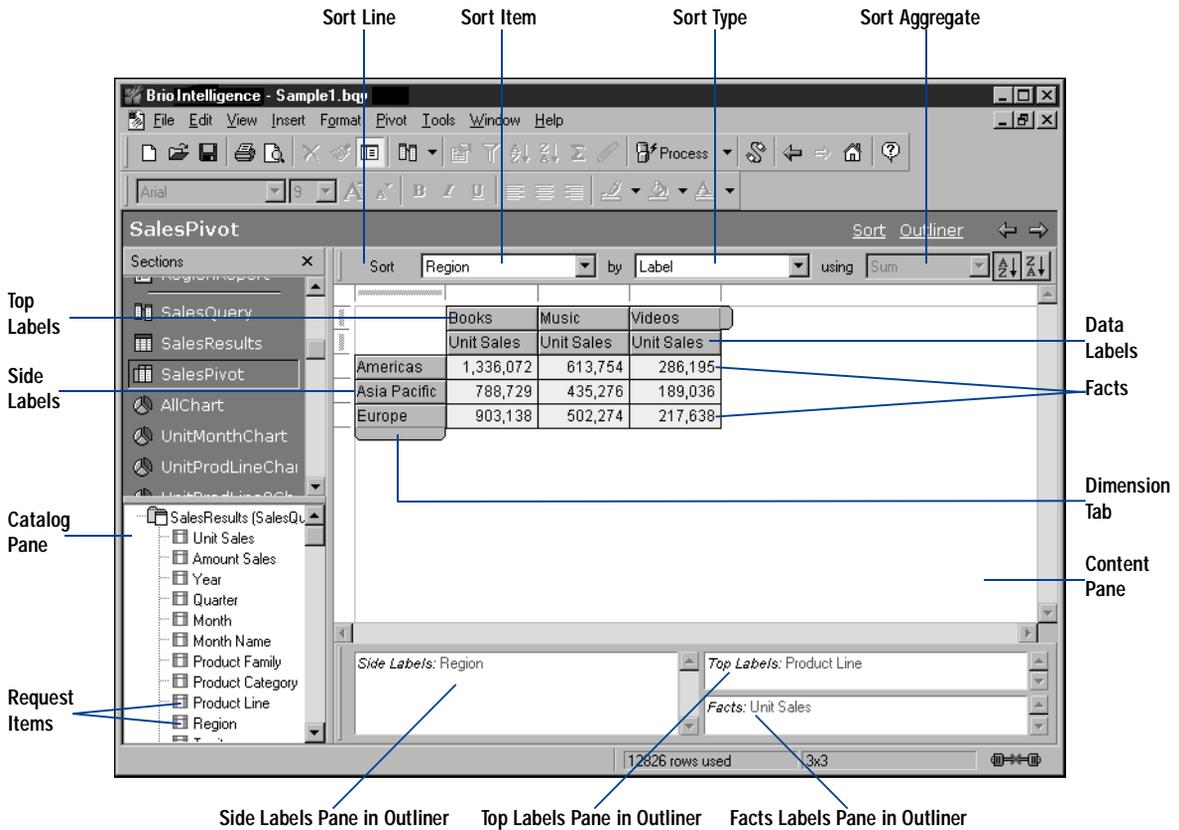
## Analyzing Data with Pivot Tables

This chapter explains how to use pivot tables to quickly summarize or cross-tabulate large amounts of data. It contains:

- Pivot Section
- Creating a Pivot Table
- Working with Pivot Tables
- Using Data Calculations in Pivot Tables
- Pivot Menu Command Reference

# Pivot Section

The Pivot section enables you to extract meaningful information from your query results. Pivot tables are interactive tools used to slice and dice data for ad-hoc, interactive, and multidimensional analysis. Pivot tables allow you to add, move, rename, focus on, and group dimensions to gain customized views of the data. You can rotate or *pivot* rows and columns to see different summaries of data or display the details for areas of interest. You also can automatically include subtotals and grand totals, or use your own formulas by adding computed items.



## Creating a Pivot Table

Pivot tables are made up of:

- **Facts** – Core numeric data that you slice and dice dimensionally in your analysis.
- **Dimensions** – Descriptive items that break aggregate data (facts) into logical categories. In the Pivot section, dimensions are either Top Labels or Side Labels.

For example, if you choose to analyze *Unit Sales* by region, the numbers are your data values or facts. *Region* is a dimension. Presented in aggregate, facts are subdivided by your chosen dimension labels.

To create a pivot table:

- 1 Choose **Insert**→**New Pivot**.
- 2 If the Outliner is not visible, click **Outliner** on the Section title bar.
- 3 In the Catalog pane, select one or more Request items and choose **Pivot**→**Add Selected Items**→**Outliner Pane**.
  - Add Request items such as *Unit Sales* or *Amount Sales* to the Facts pane in Outliner to create the data grid.
  - Add dimensions such as *Product Line* or *Region* to the Top and Side Labels panes in Outliner to create subdivisions.

Items are hierarchically ordered in the sequence in which they appear in the Outliner panes.

### Pivoting Data

Use the Pivot feature to reorient the axes of a pivot table and view your data in new ways. Pivoting a table allows you to more easily compare the new data to data in the originating table, which makes pivot tables more powerful than common spreadsheets.

To pivot data in a table:

- Select a dimension handle and drag it to any position on the same or opposite dimensional axis.

## Charting a Pivot Table

You can automatically generate charts from your current pivot table to view a graphic representation of your data.

To automatically chart your pivot table:

- ▶ Choose **Insert**→**Chart This Pivot**.

Brio Intelligence creates a new Chart section that displays a bar chart based on the data from the pivot table.

## Working with Pivot Tables

You can select pivot table elements and perform a wide range of tasks with data elements. Since report sections organize data hierarchically, if you alter a data value item, all instances of the item within the report are affected.

### Selecting Pivot Table Elements

To select a facts column for formatting, layout, or modification:

- ▶ Click anywhere on the column of data values. Do *not* click on the label.

To select a column of Side Labels or a row of Top Labels for formatting, layout, or analysis:

- ▶ Click the *dimension handle* at the end of the column or row of labels.

To select one complete row or column for formatting or analysis:

- ▶ Press the modifier key ([Alt] for Windows, [Option] for Macintosh, or [Ctrl+Alt] for Motif). Then, click the row or column label.

To select an individual Top Label or Side Label for formatting:

- ▶ Click the label itself.

## Moving Pivot Table Elements

To move a column to a new location in the Content pane:

- Select the column in the Content pane and drag it to a new position.

To remove Request items from the Outliner or columns from the Content pane:

- Select the element you want to remove and choose **Pivot**→**Remove Selected Item**.

---

⇒ **Note** When you delete a Request item from the Outliner or a column from the Content pane, you cannot use the Undo feature to reinsert the column or Request item.

---

To move a pivot element item using the Outliner:

- Click the item name in the Outliner pane to select it, then drag the item to a new position or to another Outliner pane.

The display updates to reflect the repositioning or reassignment of the item.

---

⇒ **Note** To move items between Top Labels or Side Labels panes and the Fact pane (or vice versa), you must first remove them from the Outliner, and then add them again to the chosen pane.

---

## Changing Label Nesting Levels

In pivot tables, labels from one dimension frequently are nested within another dimension. Nesting means that one set of labels appears as a subdivision of labels at a higher level of data. You can change the way labels nest to emphasize different relationships.

For example, you can show Year and Quarter as data items in the Top Labels pane in Outliner. The Quarter labels (Q1, Q2, Q3, and Q4) are nested within each year label (1998, 1999). If you move Year after Quarter, then each year is displayed as a subset of each quarter. In this case, Q1 values are broken down by labels 1998, 1999.

To change the nested level of labels:

- 1 With more than one data item in an Outliner pane, select a data item in the Outliner.
- 2 Drag that item to the other side of the second data item in the same pane in Outliner. The labels in those dimensions switch positions and the data is nested in a different manner.

## Sorting Pivot Tables

Sorting facts or dimensions enables you to display objects in ascending and descending order according to value.

To sort plotted values and labels:

- 1 If the Sort line is not visible, click **Sort** on the Section title bar.
  - 2 In the Sort list, select the item that you want to use as the basis of your sort.
  - 3 In the By drop-down list, click the sort type (either a label or value).
  - 4 In the Using drop-down list, select the method of calculation for a data value.
- By default, Brio Intelligence plots data in ascending order. To sort in descending order, click the descending icon.

# Using Data Calculations in Pivot Tables

The Pivot section provides a number of way to perform data calculations that can help you analyze business trends. These calculations range from simple totals and subtotals that are useful in most types of pivot tables to more complex data functions for specialized contexts.

## Adding Totals and Subtotals

You can calculate totals for both columns and rows in a pivot table. If you layered dimension items along the top or side of your pivot table, you can calculate totals for any level in the hierarchy. When you select inner dimensions for totaling, subtotals are created for each of the categories in the outer dimensions.

For example, suppose your pivot table has facts of Units and Amount Sold. These facts are further broken down by Region and Territory on the side, and by Year and Quarter on top. Calculating totals by Region produces a total row at the bottom of the pivot table, summing the data from all regions for each column. Calculating totals by Quarter produces one total column under each year label, summing the data for each set of four Quarter labels.

 **Tip** An intelligent aggregate is applied to the specified data when totaling unless you specify otherwise. For example, the total of a column of averages will calculate an average rather than a sum total.

To add totals to a pivot table:

- 1 Click a side or top dimension.
-  2 Choose **Pivot**→**Add Totals**.  
Brio Intelligence adds totals and breaks them according to the next higher dimension item.

To add subtotals to pivot tables:

- 1 Select an inner dimension.
-  2 Choose **Pivot**→**Add Totals**.  
Brio Intelligence adds subtotals to each one of the categories of the next higher dimension.

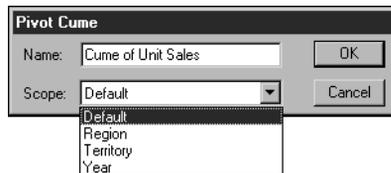
## Adding Cumulative Totals

Add cumulative totals to break totals by dimension and restart them at each dimensional grouping in a pivot table. Cumes work best when all dimensions are located at the top or side of the pivot table, and data label column heads are placed orthogonally.

To add a cumulative total:

- 1 Select a fact in the pivot table's data grid.
- 2 Choose **Pivot**→**Add Cume**.

The Pivot Cume dialog box appears.



- 3 If desired, type a new name for the pivot cume.
- 4 Select the scope of the pivot cume from the drop-down list.

The Scope drop-down list includes all of the dimensions in the pivot table. The default scope is the lowest level dimension that appears in the pivot table.

- 5 Click **OK**.

A new fact column is added that maintains a cumulative running total of the original fact by the dimension (scope) specified.

## Using Data Functions

Data functions enable you to change the nature of the values displayed in a pivot table and allow you to decide the kind of value represented in a pivot table. When you use a data function, Brio Intelligence recalculates the selected values according to the function applied to the underlying data values (which are originally from the Results section).

Data functions are particularly useful if you want to display different types of values side by side. If you add the same fact (such as *Amount Sales*) to the Outliner several times, you can apply a different data function to the very same dimension.

For example, you can show the *total* sale, *average* sale, and *maximum* sale of each product by quarter. Each of these computed items uses *Amount Sales* as its underlying value. They only differ in the data function used to calculate them.

---

⇒ **Note** When you add multiple instances of a Request item to the Facts pane in Outliner, Brio Intelligence appends number to the name (for example, Amount\_2, Amount\_3).

---

To apply a data function:

- 1 Select a fact in the pivot table's data grid.
- 2 Choose **Pivot**→**Data Function**→**Function**.

The data values are recalculated and populate the row or column of the pivot table.

★ **Tip** You can change the label of the new column or row if you wish.

Table 3-1 lists the data functions available in the Pivot section.

Table 3-1 Data Function Definitions

Function	Description
Sum	Returns sum of all values. This is the default setting.
Average	Returns average of all values.
Count	Returns number of values.

**Table 3-1** Data Function Definitions

<b>Function</b>	<b>Description</b>
Maximum	Returns highest value.
Minimum	Returns lowest value.
% of Column	Returns surface values as a percentage of their respective column item.
% of Row	Returns surface values as a percentage of their respective row item.
% of Grand	Returns surface values as a percentage of all like values in the pivot table.
Increase	Returns the incremental difference between the final two instances of a total column or row. Apply only at the innermost dimensional level of a pivot table.
% Increase	Returns the percent difference between the final two instances of a total column or total row. Apply only at the innermost dimensional level of a pivot table.
Non-Null Average	Returns average of values; null values excluded.
Null Count	Returns number of null values.
Non-Null Count	Returns number of values; null values excluded.

---

⇒ **Note** Null values are empty values for which no data exists. Null values are not equal to zero.

---

## Using Surface Values in Data Functions

Data functions, when applied to total rows or columns, can either apply calculations to *surface* values (the values displayed in the pivot table) or *underlying* values (the values from the original Results section).

When applied to surface values, data functions recalculate the values in the visible cells or surface of the pivot table. When applied to underlying values, data functions return to the unaggregated values beneath the pivot table and recalculate based on those values. When underlying values are used, the results often appear incongruous with the aggregate surface values of the chart element. In other words, a total of the underlying values does not match the total of the surface figures.

Consider a simple pivot table with two values of 20 and 30. Each of these is already a total of underlying values:

$$20 = 8 + 12$$

$$30 = 10 + 20$$

An average of the underlying values yields the result of:

$$12.5 = (8 + 12 + 10 + 20) \div 4$$

An average of the surface values yields a result of:

$$25 = (20 + 30) \div 2$$

To match surface-level values in your calculation, you can instead apply surface values to the totals derived from data functions. For example, if you use surface values for an average applied to a total, the total is converted to the average of the surface values in the corresponding element.

To use surface values:

- ▶ Choose **Pivot**→**Use Surface Values**.

## Using Weighted Functions

Weighted averages can be very useful for a variety of purposes, such as survey research or when you want to include demographic information in your pivot tables. For example, suppose you took a survey of 100 people, 75 male and 25 female. But according to census data in that geographic region you should have surveyed 50 males and 50 females. The data you have is skewed toward males.

To correct for this, you assign a weight or *weighting factor* to correct for the sampling error in your survey. To calculate a weight you take the expected amount and divide it by the actual amount.

In the example, the men would have a weighting factor of:

$$50 \div 75 = 0.6666$$

The women would have a weight of:

$$50 \div 25 = 2$$

Any calculation would calculate each man as 0.6666 and each woman as 2.

Weighted averages can also be used to apply different levels of importance to a given item. Take, for example, a survey, which has multiple questions. The responses can be rated on a scale of 1 to 5. By assigning a weight to each question based on the level of importance (the higher the number the more important), and using that weight in calculating a weighted average, you can arrive at averages that are more meaningful.

To use weighted averages, you must add a column of data to the database. This data indicates the relative weight of each corresponding value in another column. The statistical calculation for weighted averages depends on the following mathematical formula:

$$(c \times w) \div \text{sum}(w)$$

Table 3-2 Weighted Values Example

Customer ID	Units Sold	Type of Store	Weight
1435	80	Electronics	8

**Table 3-2** Weighted Values Example

Customer ID	Units Sold	Type of Store	Weight
1539	200	Computer	10
1634	60	Electronics	8
1213	900	Discount	2

To use weighted averages:

- 1 Ensure that a column of data with the weighted values exists in the database.
- 2 In the Query section, select the Topic item for which weighted values are needed.
- 3 Choose **Query**→**Data Functions**→**Weight**.  
The Reference dialog box appears.
- 4 Select the item that contains the weighted values and click **OK**.  
The item in the Request line is renamed to indicate it is a weighted value.
- 5 Process the query.  
The weighted values are returned in the Results section.
- 6 Go to the Pivot section and drag the Weighted item from the Catalog pane to the Outliner.  
You may now use all of the various data functions on the weighted values.

---

⇒ **Note** Weighting functions work only in the pivot section.

---

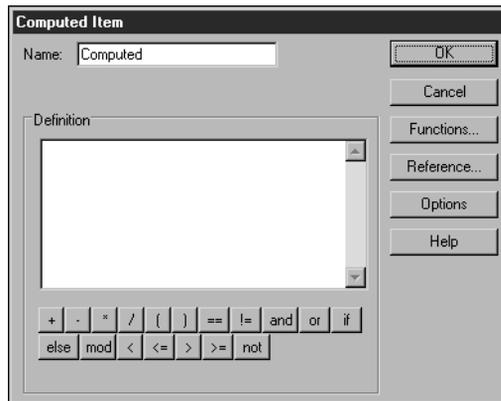
## Adding Computed Items

Use the Add Computed Items command to create new elements in the Pivot section. Computed items enable use to build equations or apply functions to existing data values. Computed items are like normal data items and can be included in pivot tables or reused to compute other data.

To add a computed item:

- 1 Choose **Pivot**→**Add Computed Item**.

The Computed Item dialog box appears.



- 2 In the Name field, type a name that describes the computation.

The default name is **Computed**, which is numbered sequentially if there is more than one. If you assign a name to a computed item that is identical to an existing scalar function name, Brio Intelligence numbers the name starting with the number 2.

- 3 Define the new data item by building an expression in the Definition text box.

Use the operator buttons to insert arithmetic and logical operators at the insertion point.

- Click **Reference** to display the Reference dialog box, and select Request items to place in the equation.
- Click **Functions** to apply scalar functions using the Functions dialog box.

You can also type any portion of the equation or the entire equation directly into the Definition text box using JavaScript. The names are case sensitive, and you must replace spaces in item names with underscores ('\_').

- 4 If necessary, click the **Options** button to set a new data type for the item.
- 5 When the equation is complete, click **OK**.

The computed item is added to the Outliner and appears as a column in the pivot table.

## Pivot Menu Command Reference

Table 3-3 provides a quick reference to the commands available on the Pivot menu and lists any related shortcuts.

Table 3-3 Pivot Menu Commands

Command	Description	Keyboard Shortcut	Shortcut Menu
Add Selected Items	Adds the selected item as a Top Label, Side Label, or Fact.		✓
Remove Selected Items	Removes the selected item.	[Del]	✓
Modify	Modifies the selected computed item.	[Ctrl+M]	✓
 Sort	Reorders the selected item by labels, by values, ascending, or descending.		
 Add Totals	Adds the selected item to the Measures pane.		✓
Add Computed Item	Allows you to add a new data item derived from calculations performed on an existing item.		✓
Add Cume	Adds cumulative totals to break totals by dimension and restarts them at each dimensional grouping.		✓
Data Function	Applies a prebuilt data function to the selected item.		✓
Use Surface Values	Allows data functions to recalculate the values in the visible cells or surface of the pivot table		✓
Drill Anywhere	Allows you to drill to any item.		✓
Drillup	Returns the original view of data that you drilled.		✓
Focus On Items	Updates the pivot table to include only the selected data.		✓

**Table 3-3** Pivot Menu Commands *(Continued)*

Command	Description	Keyboard Shortcut	Shortcut Menu
Hide Items	Hides the selected item.		✓
Show Hidden Items	Restores the selected hidden item.		✓
Show All Items	Updates the pivot table to include all items.		✓
 Group Items	Groups the selected dimensions.	[Ctrl+G]	
Ungroup Items	Ungroups the selected dimension.	[Ctrl+U]	
Restore Name	Restores the original name of a renamed item.		✓
Refresh Data	Updates the data according to the selected option. Choose between After Process, When Section Displayed, Manually, or Refresh Now.		

# 4

## Charting Data

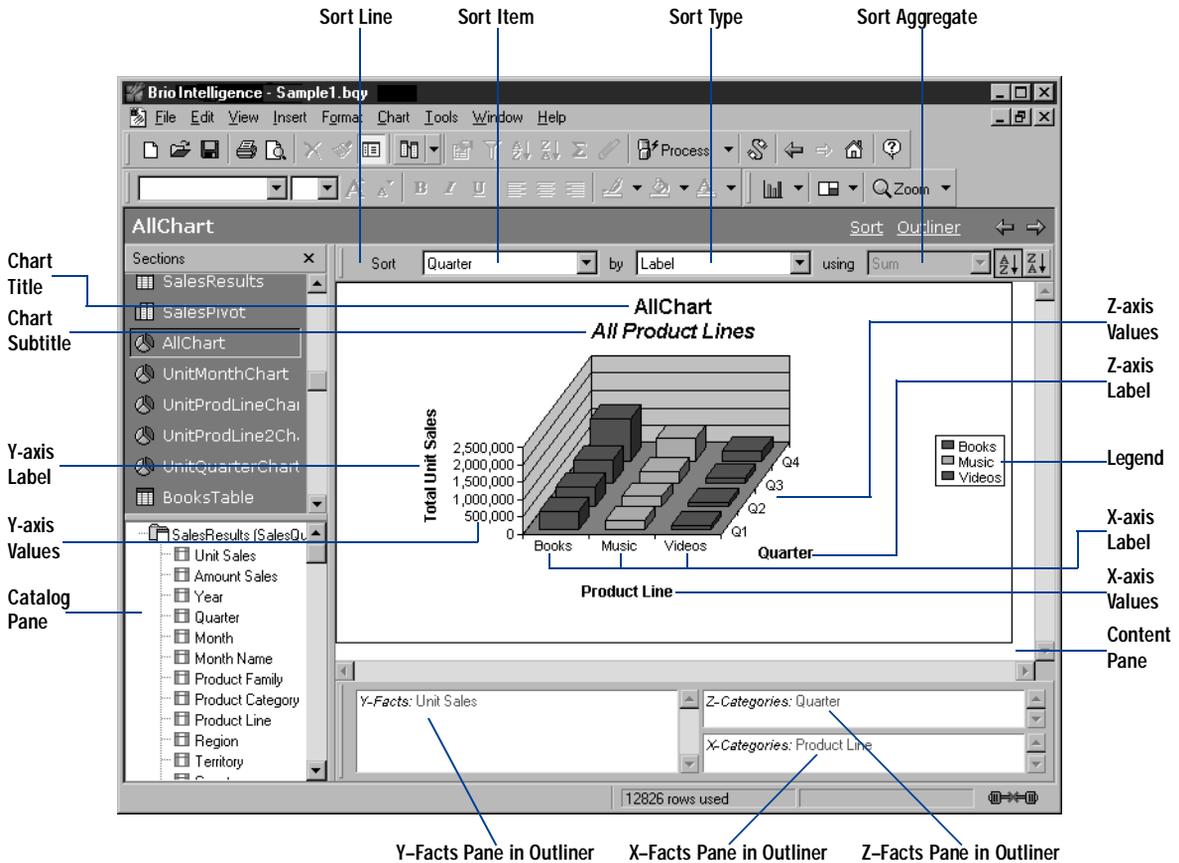
This chapter explains how to use Brio Intelligence's charting features to perform interactive analysis of your data in a graphic format. It includes:

- Chart Section
- Charting Basics
- Creating Charts
- Determining What Chart Format to Use
- Working with Two-dimensional Charts
- Working with Multidimensional Charts
- Manipulating Chart Data
- Working with Chart Elements
- Chart Menu Command Reference

# Chart Section

The Chart sections enables you to see meaningful summaries of your data. Graphic snapshots help you recognize patterns, trends, and other relationships that might not be apparent in columns and rows of tabular data.

The Chart section opens with an initial plot area for the chart. Because chart construction and manipulation is managed with the Outliner, plotting, viewing, and reviewing are easy and intuitive. Also, Brio Intelligence charts respond dynamically to your commands. When you make a change in a charted item, you see your chart instantly redrawn to reflect the change. Experimenting with different combinations of data can be surprisingly informative.



# Charting Basics

A chart is a graphic representation of data. Except for pie charts, all charts plot data with reference to a horizontal X-axis and a vertical Y-axis.

Multidimensional charts sometimes plot data on an additional Z-axis. A pie chart uses the metaphor of the pie as a whole to delineate the relative values of the parts or slices.

In Brio Intelligence, you construct a chart by dragging Request items from the Catalog pane to the Outliner. At least two items must populate the Outliner to plot a usable chart. Table 4-1 lists the appropriate uses for the Outliner panes.

Table 4-1 Outliner Pane Usage

Axis Pane	Usage
X-Categories	Label data (non-quantifiable data values) only. For example, product listings, periodic information (for example, day, month or year).
Y-Facts	Exclusively for facts or quantifiable values.
Z-Categories	Facts or label data depending on the chart type.

## Chart Terminology

Table 4-2 defines the chart terminology used in Brio Intelligence.

Table 4-2 Chart Terminology

Term	Definition
Axes	Straight lines on a chart that provide a framework for measurement and reference. Typically, the X-axis and Z-axis are used to display label items and the Y-axis shows values or facts (measurable items), such as units and amounts.
Values	Graphic indicators that represent data. Brio Intelligence bar charts display values in either vertical or horizontal bars. Pie charts use wedge-shaped slices to represent values.
Plot Area	The area bounded by the axes is called the plot area. In the case of the pie chart, the plot area is defined by a circle representing the totality of all data items.

Table 4-2 Chart Terminology (Continued)

Term	Definition
Planes	In all charts (except pie charts), planes provide background and graphed reference for charted values. Planes define horizontal, vertical, and background fields for a chart.
Legend	An information box containing color-keyed labels used to identify different data values represented on a chart.
Grid Lines	Straight horizontal and vertical lines arranged in scaled increments that provide calibrated guidelines for value interpretation.
Bar	A linear measure of a value used in bar charts.
Slice	A spacial measure of a value used in pie charts.

## Understanding Chart Dimensions

To understand the differences among charts, you have to distinguish between dimensions in space and dimensions of data. The two dimensions are distinct.

Space can be represented as three dimensions along the X, Y and Z axes as shown in Figure 4-1.

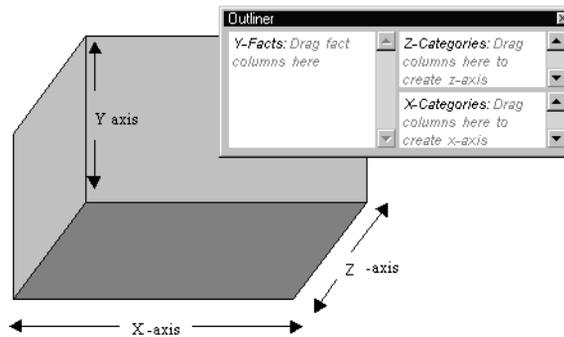


Figure 4-1 Outliner Panes Corresponding to The X, Y, And Z Axes in the Chart Area

Data can either be represented in two- or in three-dimensional (2-D or 3-D) space. In two dimensions, data is represented along the X-axis and Y-axis only. In three dimensions, data is projected back along the Z-axis also.

Two dimensions of data must be represented in 2-D space. At least three dimensions of data are necessary to use the third spatial dimension (Z-axis). But three or more dimensions of data can be represented in 2-D space. For example, cluster and stack represent data categories in two spatial dimensions (X-axis and Y-axis only).

## Creating Charts

Interactive charts consists of two layout elements: graphical elements (for example, chart bars or pie slices) and axis labels. When you assign Request items to panes in the Outliner, they become values or labels in your chart.

The instructions below are a starting point for building charts. As you use and become familiar with the Chart section, you will learn ways to create the exact type of chart that fits your needs.

To create a chart using the Chart outliner:

- 1 Choose **Insert**→**New Chart** to create a new Chart section.
- 2 If the Outliner is not visible, click **Outliner** on the Section title bar to display the Outliner.
- 3 Drag each line item to be included in the chart from the Catalog pane to an Outliner pane:
  - Drag values or facts (such as Units or Amount) in to the Y-Facts pane in Outliner to create bar charts, pie charts or ribbon charts.
  - Drag a label item (such as Name, Product, or State) into the X-Categories pane in Outliner to create a 2-D chart.
  - Drag a label item to the Z-Categories pane in Outliner to add a third dimension to your chart.
- 4 Select a chart type from the Chart drop-down list.

---

⇒ **Note** You can select and drag multiple items to the same Outliner pane to add multiple values or labels for analysis. Items are hierarchically ordered in the sequence in which they appear in the Outliner panes.

---

# Determining What Chart Format to Use

The chart you want to use usually depends on the data you want to analyze. Once you place Request items in the Outliner, you select how you want to display and analyze this data by selecting a chart format.

Brio Intelligence supports 11 chart formats that graphically represent data, all of which can be viewed as 2-D or 3-D objects. Charts are also categorized by type, which is defined by how they plot values and labels along the X, Y, and Z axes. Chart types include:

- **Type A** – Values or facts default to Y-Facts pane.
- **Type B** – Values or facts default to Z-Categories pane.
- **Type C** – Values or facts can be placed in either Y-Facts or Z-Categories panes.

Table 4-3 lists the chart formats available in Brio Intelligence and explains how to place values and labels in the Outliner panes to generate the various chart types.

Table 4-3 Chart Formats and Types

Chart Format	Chart Type	X-Categories Pane	Y-Facts Pane	Z-Categories Pane
 Vertical Bar	A	Labels	Values	Labels
 Horizontal Bar	A	Labels	Values	Labels
 Area	A	Labels	Values	Labels
 Stacked with Numeric Categories	A	Labels	Values	Labels or Values
 Vertical Stacked Bar	B	Labels	Labels	Values
 Horizontal Stacked Bar	B	Labels	Labels	Values
 Stacked Area	B	Labels	Labels	Values
 Cluster Bar	C	Labels	Labels or Values	Labels or Values

Table 4-3 Chart Formats and Types (Continued)

Chart Format	Chart Type	X-Categories Pane	Y-Facts Pane	Z-Categories Pane
Line	C	Labels	Labels or Values	Labels or Values
Bar-Line Combination	C	Labels	Label or Two Values	Label or Two Values
Pie	Not Applicable			



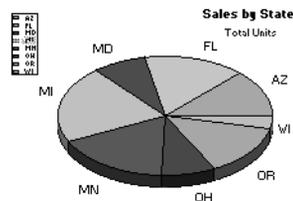
## Working with Two-dimensional Charts

Pie and bar charts (of the non-stacked variety) lend themselves well to representing two dimensions of data. For example, imagine charting the amount of sales by product type. In pie charts, the two dimensions are represented by slices of a pie. In bar charts, the data is represented by bars along the X and Y axes.

### Using Pie Charts to Analyze Data

Of all charts, the pie chart is the easiest to understand. Pieces (slices) of the pie are drawn to represent the relative value of a measurable item category to the whole. Pie charts represent additional dimensions of data by further subdividing the pie.

In a pie chart, Request items placed in the X-Categories pane represent itemized slices of the pie. Request items placed in the Y-Facts pane define the quantitative whole of the pie.



To create a pie chart:

- 1 From the Chart drop-down list, select **Pie**.
- 2 Drag a value from the Catalog pane to the Y-Facts pane in Outliner.  
An pie chart without slices appears.
- 3 Drag one or more label items from the Catalog pane to the X-Categories pane in Outliner.  
The pie charts is differentiated to reflect subcategories. A legend depicting details of the selection appears.

---

⇒ **Note** Since pie charts plot data using only two axes, Brio Intelligence disables the Z-Categories pane in Outliner when creating a pie chart.

---

### Positioning Pie Slices

You can pull individual pie slices out of the pie chart.

To toggle the position of a pie slice:

- Select a slice of the pie and choose **Pull Out Slice** on the shortcut menu.

A check mark appears on the shortcut menu next to **Pull Out Slice** to indicate that this feature is active. Choose this option again to clear the check mark and restore the pie slice to its original position.

### Showing Positive and Negative Values

Pie slices show positive values by default.

To toggle the display of negative and positive values:

- Select a slice of the pie and choose **Show Negative Values** on the shortcut menu.

A check mark appears next to **Show Negative Values** to indicate that negative values are shown. Choose this option again to clear the check mark and show positive values.

## Showing Pie Percentages

To toggle the display of each pie slice value as a percentage:

- Select a slice of the pie and choose **Show Pie Percentages** on the shortcut menu.

A check mark appears next to **Show Pie Percentages** to indicate that percentages are displayed on the chart (in parentheses next to the pie chart label). Choose this option again to clear the check mark and remove the percentages from view.

## Adding Lines to Labels

To add a pointer line between an individual pie slice and its label:

- Select the pie slice to which you want to add a pointer and choose **Format**→**Line To Label**.

## Rotating Pie Charts

To rotate the perspective angle or elevation of a pie chart:

- 1 Click **Rotate** on the Shortcut menu.

The rotate icon appears on the pie chart.



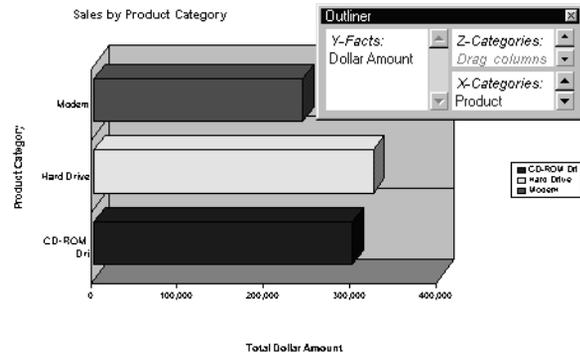
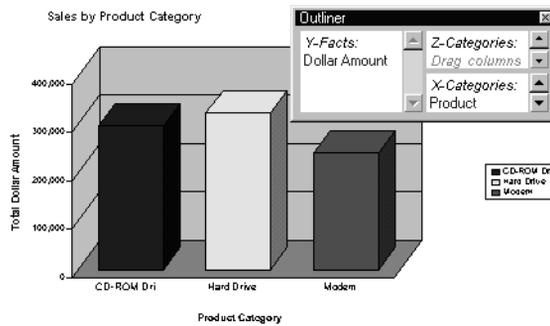
- 2 Click the rotate icon and move the dotted line to a new location.

When you release the mouse button, the chart is redrawn to reflect the adjusted perspective. If you cannot drag the rotate icon in a certain direction, the chart has reached its farthest possible rotation in that direction.

## Using 2-D Bar Charts to Analyze Data

Bar charts are the most common type of business chart and are especially useful for comparative analysis when you want to focus on comparing values and place less emphasis on time. Use a bar chart to illustrate comparisons among individual items.

Two-dimensional bar charts are plotted using a single item in each of the X-Categories and Y-Facts panes in Outliner. The Z-Categories pane is not populated in 2-D bar charts.



To create a 2-D bar chart:

- 1 Select a bar chart format from the Chart drop-down list.  
The default chart format is Vertical Bar.
- 2 Drag a label item from the Catalog pane to the X-Categories pane in Outliner.  
Data labels appear on the horizontal axis in the Chart area.
- 3 Drag a value from the Catalog pane to the Y-Facts pane in Outliner.

A chart is plotted that summarizes the selected value (Y-Facts pane) as it relates to the subcategories of the label item (X-Categories pane).

Brio Intelligence automatically scales the data represented on the Y-axis and adds appropriate labels. The Legend provides an index of label information with a coordinated color scheme.

To use a different 2-D chart format, select another 2-D chart from the Chart drop-down list.

## Working with Multidimensional Charts

Frequently, you want to represent more than two dimensions of data at a time. For example, you may want to see how the sales of product types break down by years or quarter. There are numerous ways to chart three or more dimensions of data. You can project data into the third dimension of space. You can also represent the data in two spatial dimensions.

### About 3-D View

By default, Brio Intelligence imparts a 3-D look to your chart objects. These objects appear in the chart space as 3-D objects with depth. That does not mean that you are plotting three dimensions of data or using three dimensions of space to represent data. It is simply a visual effect that can be turned off.

---

⇒ **Note** If you turn off 3-D View, you cannot view charts that use a third dimension in space.

---

To toggle 3-D View:

- Choose **Format**→**3-D View**.

A check mark appears next to the 3-D View option to indicate it is active. Choose this option again to clear the check mark and turn off 3-D view.

---

⇒ **Note** You can also select to view objects in 3-D using the Properties dialog box. For more information, see “Customizing Chart Properties and Labels” on page 4-30.

---

## Creating Three-dimensional Bar Charts

You can add more information your bar chart by adding an additional item or items to the Z-Categories pane in Outliner. Using multidimensional charts, you can show various relationships between three or more items in easy-to-understand bar chart formats.

Brio Intelligence plots the added data in rows that extend back along the chart's Z-axis.

To create a multidimensional bar chart:

- 1 Select a bar chart format from the Chart drop-down list.  
The default chart format is Vertical Bar.
- 2 Drag a label item from the Catalog pane to the X-Categories pane in Outliner.
- 3 Drag a label item from the Catalog pane to the Z-Categories pane in Outliner.
- 4 Drag a value from the Catalog pane to the Y-Facts pane in Outliner.

A chart is plotted that summarizes the selected value (Y-Facts pane) as it relates to the subcategories of the label items (X-Categories and Z-Categories panes).

## Understanding Clustered Bar Charts

You can change your chart perspective so that the Z-axis data extended in the third dimension is shown as clusters displayed in the foreground. This charting option is useful when Z-axis bars are hard to distinguish in standard bar formats.

Cluster charts can be used to juxtapose categories in one label item. For example, use clustered bars to compare stores of different types. Alternatively, cluster bars can also be used to compare two different value items, such as Amount of Sales and Units Sold.

---

⇒ **Note** You can only display cluster bar charts in vertical format.

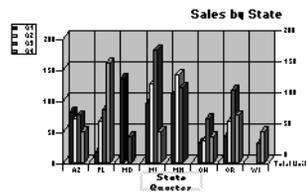
---

To cluster bars representing divisions in label items (Z-Categories pane for values):

- 1 Select **Vertical Cluster Bar** from the Chart drop-down list.
- 2 Drag a fact item from the Catalog pane to the Z-Categories pane and label items to the X-Categories and Y-Facts panes in Outliner.

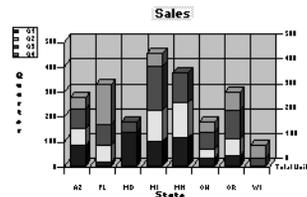
To cluster bars representing two different value items (Y-Facts pane for values):

- 1 Select **Vertical Cluster Bar** from the Chart drop-down list.
- 2 Drag two fact items to the Y-Facts pane and a label item to the X-Categories pane.



## Understanding Stacked Bar Charts

Another way to represent the third dimension of data is through stacking. In this way, a single bar on the chart can show data for more than one category of data. For example, a single bar can represent the amount of sales for CD-ROM drives in one year on top of a bar representing sales for other years. Stacked bar charts can stack data vertically or horizontally.



Stacked bar charts show the relationship of parts to the whole. Stacking techniques differ depending on whether you are representing divisions within data categories or stacking two separate numeric categories.

Stacked bar charts offer similar complexity to clustered charts by adding together component value items within chart bars or areas. By stacking items and assigning a different color to each item, you can effectively display trends among comparable or related items, or visually emphasize a sum of several indicators.

To create a Stacked bar chart, you need more than one Request item in the Y-Facts pane in Outliner. Each value item adds a segment to the length of the bar.

## Understanding Area Charts

Area charts are essentially bar charts with the discontinuous breaks removed along the horizontal axis. Data is not broken into discrete bars but appears in a continuous ebb and flow as defined against the Y-axis. Consequently, area charts are particularly useful for emphasizing the magnitude of change over time. In addition, area charts can be used for the same purposes as bar charts.

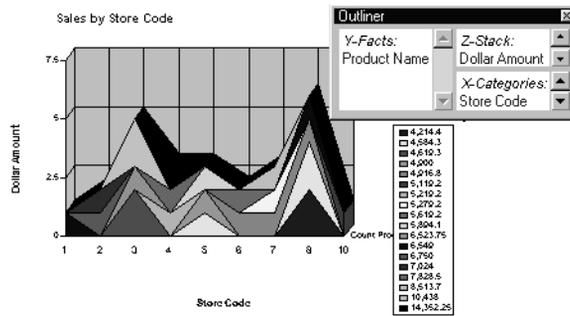
Because area charts do not break data along the horizontal axis, they are most useful for charting three dimensions of data. The Z-Categories pane should be used to either project data into a third spatial dimension, or to stack two categories of data in a stacked area chart.

To create an area chart:

- 1 Select **Area** from the Chart drop-down list.
- 2 Drag a value item from the Catalog pane to the Y-Facts pane in Outliner.
- 3 Drag a label item from the Catalog pane to the X-Categories and Z-Categories panes in Outliner.
- 4 Select **Legend On Z** from the Legend drop-down list.  
Setting the legend on the Z-axis properly distributes color.

To create a stacked area chart:

- 1 Select **Stacked Area** from the Chart drop-down list.
- 2 Drag a value from the Catalog pane to the Z-Categories pane in Outliner.



## Understanding Ribbon Charts

A ribbon chart is very similar to a line chart, but with a few visual differences. In a ribbon chart, items in the Y-Facts pane determine the height of the line, and items in the X-Categories pane itemize the line sections. You can create multiple lines by adding items to the Z-Categories pane.

To create a ribbon chart:

- 1 Select **Ribbon** from the Chart drop-down list.
- 2 Drag a value item from the Catalog pane to the Y-Facts pane in Outliner.
- 3 Drag a label item from the Catalog pane to the X-Categories pane and one or more label items to the Z-Categories pane in Outliner.



## Understanding Line Charts

Line charts show trends in data at equal intervals and are effective for comparing highs and lows in a continuum. In a line chart, items in the Y-Facts pane determine the height of the line, and items in the X-Categories pane itemize the line sections. You can create multiple lines by adding items to the Z-Categories pane.

Line charts have one advantage over bar charts. They do not allow one set of data to obstruct the representation of another. Since lines are *thin* compared to bars, the data displayed in the front does not block out the data behind.

As a result, data that is not easily represented in bar or area charts work well in line charts. Many more dimensions of data can be superimposed without impairing the chart's effectiveness.

To create a standard line chart (Y-Facts for values):

- 1 Select **Line** from the Chart drop-down list.
- 2 Drag a value item from the Catalog pane to the Y-Facts pane in Outliner.
- 3 Drag label items from the Catalog pane to the X-Categories and Z-Categories panes in Outliner.
- 4 Select **Legend On Z** from the Legend drop-down list to distribute colors along the Z-axis.



## Understanding Combination Charts

Combination charts combine some of the strengths of bar charts with the advantages of line charts. Solid bars can be used for the most important data against which other dimensions are represented in lines. In this way, emphasis is given to a portion of data based on its importance. A combination chart is especially useful for comparing two numeric values, such as amount and units of sales.

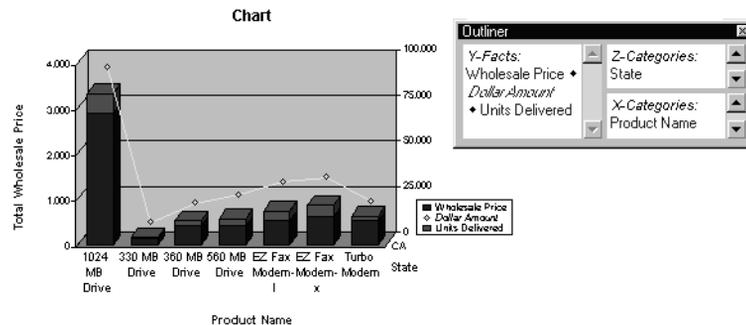
To create a combination chart that compares values:

- 1 Select Bar-Line from the Chart drop-down list.
- 2 Drag two values from the Catalog pane to the Y-Facts pane in Outliner.
- 3 Drag label items from the Catalog pane to the X-Categories and Z-Categories panes in Outliner.



To create a combination chart that compares categories within a label:

- 1 Select Bar-Line from the Chart drop-down list.
- 2 Drag a value item from the Catalog pane to the Z-Categories pane in Outliner.
- 3 Drag one or more value items from the Catalog pane to the Y-Facts pane in Outliner.
- 4 Drag a label to the X-Categories pane in Outliner.



⇒ **Note** A combination chart is most effective when the Y-Facts pane contains only two value items. It represents one value as bars and the other value as a line. When more than two values are present, the chart alternates between bars and lines in depicting the values (1<sup>st</sup>, 3<sup>rd</sup>, 5<sup>th</sup> ... items are bars; 2<sup>nd</sup>, 4<sup>th</sup>, 6<sup>th</sup> ... items are lines).

# Manipulating Chart Data

Brio Intelligence offers a number of ways to manipulate the data in your chart for better analysis. Review the following sections for information on:

- Using Different Scales to Compare Related Values
- Using Data Functions in Charts
- Adding Computed Items
- Sorting Chart Items
- Creating Pivot Tables from Charts
- Drilling into Charts
- Hiding and Focusing on Charted Data

## Using Different Scales to Compare Related Values

To chart comparison values or to combine two related indicators on the same chart, you may need to compensate for different numeric scales. For line, clustered bar, and combination charts, you can use a second Y-axis to represent values on a scale that differs from the scale of the first Y-axis.

For example, you might like to chart the sales of your two fastest growing product lines together to get an idea of how business is growing. However, while the growth rates are similar, the two product lines may sell at entirely different volumes. If this is the case, the chart will not provide much comparative information because each line needs to be charted at a different scale.

By using different scales for the two Y axes, you can correctly scale each value for the most effective presentation of the data.

To use a different scale for a value on the second Y-axis:

- ▶ Double-click the one of the two values in the Y-Facts pane in Outliner.

Brio Intelligence automatically changes the scale of the Y-axis for the value you selected, and the italicizes the value name in Outliner. Double-click the item again to return the scale to its default setting.

For information on manually setting scales for left and right Y-axis values, see “Setting Chart Value Axis Properties” on page 4-33.

## Using Data Functions in Charts

In a chart, you may want to display average sales instead of total sales. You can use data functions to recalculate these values. Table XX lists the data functions available in the Chart section.

Table 4-4 Chart Section Data Functions

Data Function	Description
Sum	Returns sum of all values. This is the default setting.
Average	Returns average of all values.
Count	Returns number of values.
Maximum	Returns highest value.
Minimum	Returns lowest value.
% of Grand	Returns values as a percentage of all like values in the chart.
Non-Null Average	Returns average of values; null values excluded.
Null Count	Returns number of null values.
Non-Null Count	Returns number of values; null values excluded.

---

⇒ **Note** Null values are empty values for which no data exists. Null values are not equal to zero.

---

To apply a data function:

- 1 Select a label in the Chart area.
- 2 Choose **Chart**→**Data Function**→**Function**.

## Adding Computed Items

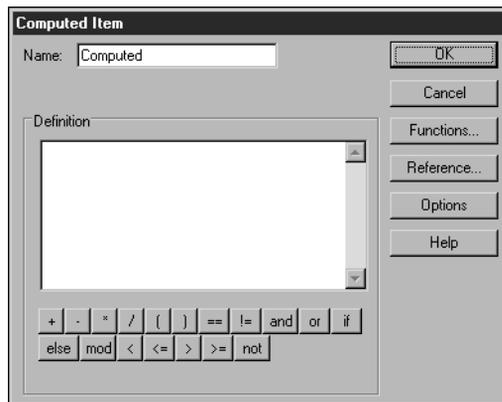
You can create new chart elements by building equations to compute data items, or by applying functions to existing data items. Computed items are like normal data items, and can be included in charts or re-used to compute other data.

For example, you can modify the *Amount Sold* item by building an equation around it, multiplying it by the *Unit Price* item and renaming the resulting item *Revenue*. You can also apply a scalar function such as `Cume` to *Amount Sold* and return each individual value as a cumulative running total, or simply multiply *Amount Sold* by the local tax rate to find the tax owed on each sale.

To create a computed item:

- 1 Choose **Add Computed Item** from a Section menu (for example, Query, Results, and so on).

The Computed Item dialog box appears.



- 2 In the Name field, type a name that describes the computation.

The default name is *Computed*, which is numbered sequentially if there is more than one. If you assign a name to a computed item that is identical to an existing scalar function name, Brio Intelligence numbers the name starting with the number 2.

- 3 Define the new data item by building an expression in the Definition text box.  
Use the operator buttons to insert arithmetic and logical operators at the insertion point.
  - Click **Reference** to display the Reference dialog box, and select Request items to place in the equation.
  - Click **Functions** to apply scalar functions using the Functions dialog box.You also may type any portion of the equation or the entire equation directly into the Definition text box using JavaScript. The names are case sensitive, and you must replace spaces in item names with underscores ('\_').
- 4 If necessary, click the **Options** button to set a new data type for the item.
- 5 When the equation is complete, click **OK**.  
The computed item is listed in the Outliner and is added to your chart.

## Sorting Chart Items

Data in charts is sorted alphabetically by default. You can use the sort buttons on the Standard toolbar to perform simple sorts on selected items and reverse the sort order. In charts, however, you generally want to override the default alphabetical setting and sort dimensional data with reference to other data.

For example, if a chart lists each type of widget your company sells and the total amount sold of each, initially the widget types are ordered alphabetically. But this data becomes more meaningful when you instead sort the widget types with reference to the total produced by each. This approach allows you to rank each widget from the highest to lowest total sales.

You can use the Sort line in the Chart section to impose a sort condition for each dimensional data item in your chart. The Sort line includes three drop-down menus used to define the sort conditions. The contents of the menus vary depending on the data items in your chart.

To specify a sort using the Sort line:

- 1 If the Sort line is not already displayed, click **Sort** on the Section title bar.
- 2 Select an item to sort from the Sort drop-down list.

- 3 Select a **value** from the By drop-down list as a sort reference, or select **Label** to sort the item alphabetically.
- 4 If desired, select an aggregate function from the Using drop-down list when sorting by values.  
The Using drop-down menu is not available when you sort by labels.
- 5 If desired, click the ascending or descending Sort button on the Sort line.  
The Sort line stores a sort condition for each dimensional item included in the chart.

## Sort Items

The Sort drop-down menu lists the data items that can be sorted. Each dimensional item included in the chart (name and date) is listed in this menu. Dimensional items can include Pivot top and side labels.

## Reference Items

The By drop-down menu lists items used as a basis for a complex sort condition (for example, sorting Cities by the revenue generated in each).

- **Label** – By default, Brio sorts dimensional data items alphabetically by name when you create your chart: this is equivalent to sorting by label. When selected, labels indicates that the item chosen from the Sort list is sorted by label or name, rather than by reference to corresponding numeric data values in the chart
- **Value** – Sorting by a numeric data item orders each value of the target item chosen from the Sort list by its corresponding numeric value in the Value list.

Sorting by values produces an entirely different sort order. For example, your chart may list each state in which your company has made sales revenue and the total cost-of-sales for each. The states are initially listed in alphabetical order. When you sort by cost-of-goods, the states are ranked in order by each corresponding cost-of-sales figure.

## Functions

The Using drop-down menu contains aggregate statistical functions that are available when you sort by values. The sort aggregate functions are usually the same as the data functions available in a section. (See Table 4-4 for a list of the data functions available in the Chart section.)

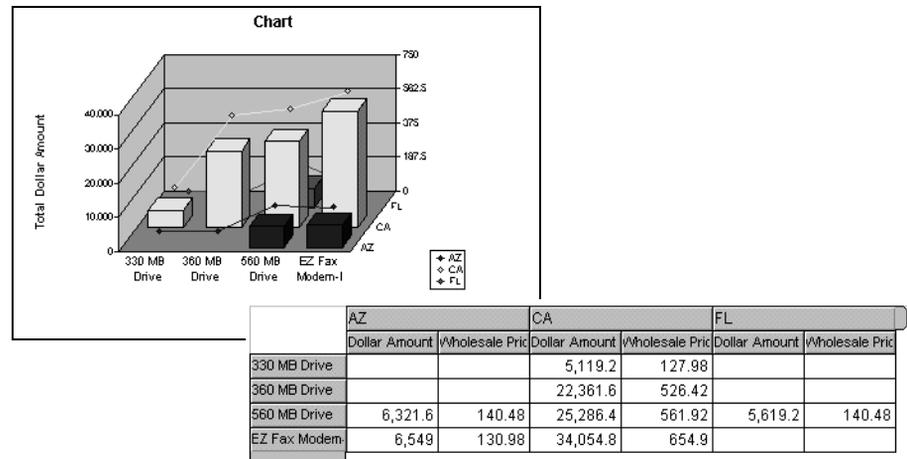
When you sort by values, Brio Intelligence initially sorts labels by the corresponding numeric values of the referenced item (for example, sorting states by the sum total of the cost of goods sold in each state).

## Creating Pivot Tables from Charts

Once you have a final version of your chart, use the automatic pivot table-generator to create a pivot table based on the layout of your chart.

To create a pivot table based on your chart:

- In the Chart section, choose **Insert**→**Pivot This Chart**.



A pivot table created using the Pivot This Chart feature.

The Brio Intelligence workspace switches to a new Pivot section that displays the pivot table created using the data from the chart.

## Drilling into Charts

The Drill Anywhere feature allows you to drill into items in the Chart section that are resident in the Results section without having to return to reprocess your query or locate the item in the Catalog pane. Drill anywhere items are automatically added as new label items.

The advantage of this feature is that it instantly allows you to add items to the data set to reflect temporary or hypothetical situations. You can always suspend or delete the item to return to the original chart display.

The extent to which you can drill into your data depends on how the original query was built, since Drill Anywhere retrieves data from the Results section. This feature does not allow you to interactively query the database.

To drill anywhere into a chart:

- 1 Select one or more items for analysis and choose **Chart**→**Drill Anywhere**→*Item*.  
Brio Intelligence redraws the chart drilled to the selected item. In the Outliner, an item selected for drill-down is identified with a drill-bit icon.
- 2 Choose **Chart**→**Drillup** to return to the original view of your chart.

 **Tip** If no options are available in the Drill Anywhere menu, all Request items have been used in the Chart section's Outliner.

---

 **Note** Drill Anywhere is enabled on the General page of Data Model Options. To display the General tab, choose **DataModel**→**Data Model Options**.

---

## Hiding and Focusing on Charted Data

A straightforward way to refresh your view of a chart is to single out items for closer focus or remove some of the charted elements. This allows you to concentrate on particular items of interest.

### Focus On Items

To focus on a chart item:

- 1 Select one or more objects on which you want to concentrate.  
Brio Intelligence displays the item(s) with a dotted outline.

- 2 Choose **Chart**→**Focus On Items**.

The chart is redrawn to display only the chart object(s) selected. A drillbit icon  appears in the Outliner next to the item(s) on which you focused.

To return to the original chart display:

- Choose **Chart**→**Show All Items**.

### Hide Items

To hide charted data:

- 1 In the chart, select the objects you want to hide.  
Brio Intelligence displays the item(s) with a dotted outline.

- 2 Choose **Chart**→**Hide Items**.

Brio Intelligence redraws the chart with the selected objects removed. A drillbit icon  appears in the Outliner next to the item(s) you hid.

To restore hidden chart items:

- Choose **Chart**→**Show Hidden Items**.

## Working with Chart Elements

In the Chart section, you can easily reorganize or reposition data to reconfigure your charts and highlight different relationships between the same items. You can drag items to a different order within an Outliner pane, drag label items between Outliner panes designated for labels, or delete items from the Outliner. Brio Intelligence automatically redraws your chart to reflect your changes.

You can also work directly with elements in the Chart area. Most elements are selected by clicking the element in the chart or the element's label in the legend. For axis labels, a change to one axis label changes all labels along that axis.

### Selecting Chart Elements

To select chart elements as graphic objects in the Chart area:

- 1 Place the cursor over the edge of an item in the Chart area.

The cursor changes to a move cursor .

- 2 Click to select the object.

A gray outline appears around the item. You can move the selected chart item anywhere in the Chart area or resize it using the handles. Also, check the shortcut menu for additional options.

### Changing the View of a Chart

You may want to enlarge your chart to better work with chart details, or change the perspective or angle from which a chart is viewed.

#### Zooming Charts

You can resize charts to fit the Content pane or the printed page.

To resize a chart:

- 1 Choose **View**→**Zoom**→**Size**.

100% is the default size, which prints to fit on 8½-by-11-inch paper (216 mm × 279 mm). *Best fit* changes the size of the chart to fit within the Content pane.

## Rotating and Elevating Charts

By default, charts are displayed in 3-D foreshortened perspective from above and to the right. You can alter the perspective from which a chart is viewed by rotating it.

★ **Tip** Before you can rotate the chart, the background plane must be visible and the chart must be in *Best Fit* view.

To rotate the angle of vision or change the elevation of a bar, line, or area chart:

- 1 Choose **View**→**Zoom**→**Best Fit**.
- 2 Choose **Chart**→**Properties**.  
The Chart Properties dialog box appears.
- 3 Click the **General** tab to view the General properties page.
- 4 In the Planes area, select the **Show Back Plane** check box and click OK.
- 5 Place your cursor at the top right corner of the chart.  
The cursor changes to indicate that you can rotate the chart.
- 6 Hold down the left mouse button and drag the chart to rotate it.

When you release the mouse button, the chart is redrawn to reflect the adjusted perspective. If you cannot rotate in a certain direction, the chart has reached its farthest possible rotation in that direction.

## Displaying Axis Grid Lines

Axis grid lines are straight lines on a chart that provide a framework for measurement and reference. Typically, the X and Z axes are used for label items and the Y-axis shows values or facts (measurable items), such as units and amounts.

In Brio Intelligence, you can view or hide these axis gridlines depending on the chart you are designing.

To toggle the display of axis grid lines:

- 1 Click anywhere within the main plot area of the chart.
- 2 Choose **Show X Axis Grid Lines** (or **Show Y Axis Grid Lines**) on the shortcut menu.

A check mark appears next to the selected option to indicate that the grid lines are visible. Choose this option again to clear the check mark and remove the gridlines from the Chart area display.

## Inserting Text

You can insert text anywhere around or within the chart to further explain or emphasize a chart component.

To insert text:

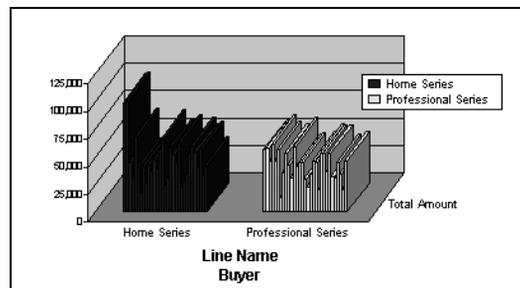
- 1 Select **Insert Text** on the shortcut menu.  
The Set Inserted Text dialog box appears.
- 2 Type the text you want to display in the text box and click **OK**.

The text appears in the location where you initially invoked the Insert Text command.

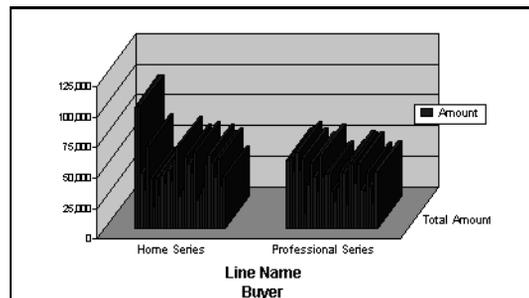
## Changing Chart Legends

Brio Intelligence allows you to choose the axis along which you want to distinguish your data by setting the chart legend on that axis. This is a great way to view values on the selected axis without rearranging the values in the Outliner. A chart legend can be set on either the X-, Y-, or Z-axis. You can also reposition or resize a legend to take advantage of either the horizontal or vertical space within the chart area.

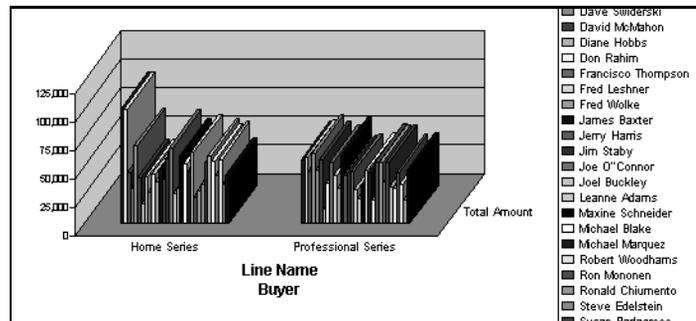
⇒ **Note** Brio Intelligence preserves chart legend color settings when the chart type, chart legend axis, and number of chart axis label values are changed.



Legend on X-Axis



Legend on Y-Axis



Legend on Z-Axis

To set the axis used for a chart legend:



- 1 Choose **Format**→**Set Legend On**.

The Set Legend On dialog box appears.

- 2 Select the axis on which you want to set the legend and click **OK**.

Brio Intelligence redistributes colors to highlight the data associated with the selected item and color coordinates corresponding labels in the Legend.

To resize a chart legend:

- 1 Click a border on the legend.

Sizing handles appear on each corner of the selected legend.

- 2 Drag a sizing handle until the legend is the desired size that you want.

## Customizing Chart Properties and Labels

Use the Properties command on the Chart menu to customize general chart, labels axis, and values axis properties, as well as general bar chart attributes.

### Setting General Chart Properties

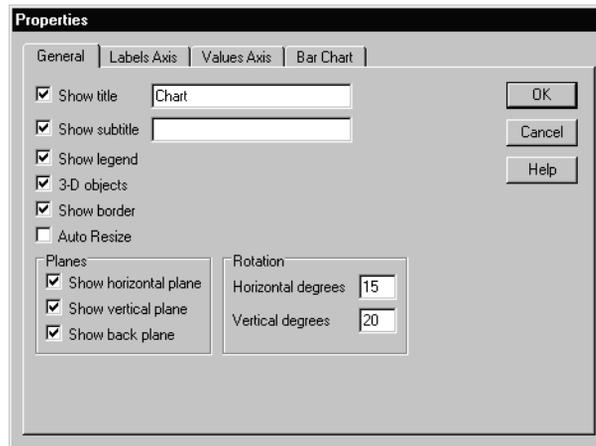
General chart properties control the display of various objects, such as titles, legends, and borders, in the Chart area. They are also used to specify default plane and rotation settings.

To adjust general chart properties:

- 1 Choose **Chart**→**Properties**.

The Properties dialog box appears.

- 2 Click the **General** tab to display the General properties page.



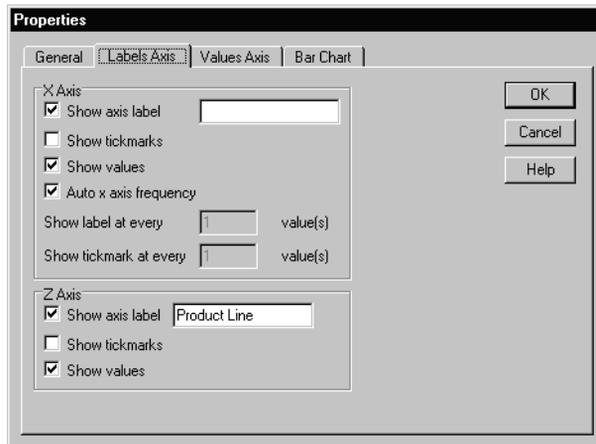
- 3 Change any of the following properties:
  - **Show Title** – Toggles the display of the chart title as entered in the text field.
  - **Show Subtitle** – Toggles the display of a subtitle as entered in the text field.
  - **Show Legend** – Toggles the display of color-coded chart legends in the Chart area.
  - **3-D Objects** – Toggles the 3-D display of chart objects, including pie slices, chart bars, side planes, and perspective view.
  - **Show Border** – Toggles the display of the Chart area border in the Content pane.
  - **Auto Resize** – Toggles the automatic resizing of a chart within the Content pane whenever the Brio Intelligence workspace is resized.
  - **Planes** – Toggles the display of horizontal, vertical, and back planes of a chart.
  - **Horizontal\ Vertical rotation degrees** – Shift the perspective angle or elevation (–60 to 60 degrees) for all types except the pie chart, which has its own rotation (see below)
  - **Rotation** – For pie charts, rotates the pie the specified number of degrees (between -90 and 90), and changes the pie height the specified number of degrees (0 to 90). For all other charts except line charts, shifts the horizontal and/or vertical angle or elevation a specified number of degrees (between -60 and 60).
- 4 Click OK to apply your changes.

## Setting Chart Label Axis Properties

Chart label axis properties control the display of the X-axis and Z-axis labels, tickmarks, and values for items in the X-Categories and Z-Categories panes in Outliner.

To adjust chart label axis properties:

- 1 Choose **Chart**→**Properties**.  
The Properties dialog box appears.
- 2 Click the Labels Axis tab to display the Labels Axis properties page.



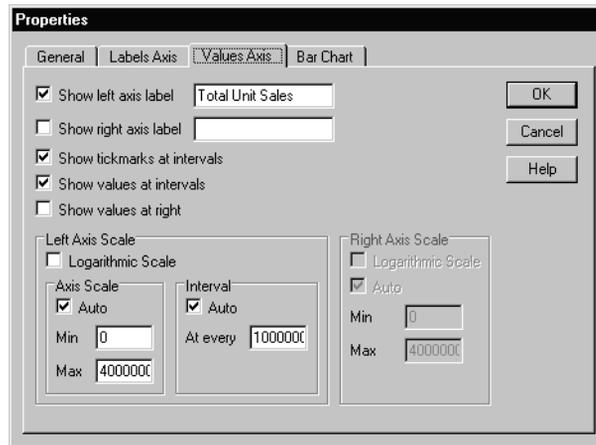
- 3 Modify the properties shown as desired and click **OK** to apply your changes.  
Choose whether to display X-axis and Z-axis labels, tickmarks, and values, and whether the intervals at which X-axis labels and tickmarks appear is automatically determined by Brio Intelligence or manually set to the specified value.

## Setting Chart Value Axis Properties

Chart value axis properties control the display of axis labels, tickmarks, values, and position for items in the Y-Facts pane in Outliner.

To adjust chart value axis properties:

- 1 Choose **Chart**→**Properties**, or right-click the chart and select **Properties**. The Properties dialog box appears.
- 2 Click the Values Axis tab to display the Values Axis properties page.



- 3 Modify the properties shown as desired and click **OK** to apply your changes.

Choose whether to display labels, tickmarks at intervals, and values at intervals for primary and secondary value axes.

You may also choose whether to set the left axis and right axis scales using a logarithmic scale, which plots line charts with logarithmic (base 10) values; and whether the values displayed on the scale are automatically set by Brio Intelligence, or set by manually specifying minimum and maximum values. For the left axis scale, you may specify the interval at which to separate axis values or have Brio Intelligence automatically assign the interval.

---

⇒ **Note** If you choose to plot a line chart with a logarithmic (base 10) value axis, any chart values less than one (1) are represented as zero (0) on the logarithmic scale and an information message appears on the Windows status bar.

---

## Setting Bar Chart Properties

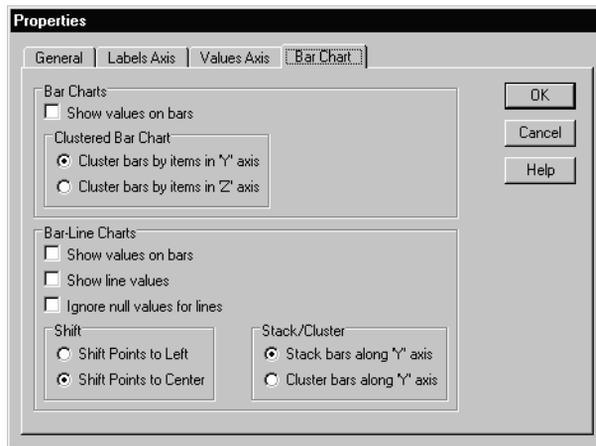
Bar chart properties control the general attributes for the various bar chart formats available in Brio Intelligence.

To adjust bar chart properties:

- 1 Choose **Chart**→**Properties**.

The Properties dialog box appears.

- 2 Click the Bar Chart tab to display the Bar Chart properties page.



- 3 Modify the properties shown as desired and click **OK** to apply your changes.

- **All Bar Charts** – Toggles the display of values on each bar in the chart.
- **Clustered Bar Charts** – Choose to cluster bars by items on the Y-axis or X-axis. For example, if you have *Quarter* on the Y-axis, each cluster consists of four bars, one for each quarter.
- **Bar-Line Charts** – Toggles the display of values on bars and for lines, and the inclusion of null values (which disrupt the line, area, or ribbon). Zero' (0) values are included.

You may also choose whether to place line chart plot points to the left of or centered on bars, and whether to stack or cluster bars on the Y-axis.

## Customizing Chart Patterns, Colors, and Labels

In addition to the generic label axis properties that apply to all charts, you can change properties of individual charts, such as patterns, colors, and data labels. You can also

### Changing Chart Color Schemes and Fill Patterns

Brio Intelligence allows you to redistribute chart colors to emphasize specific charted items listed in the Outliner and change chart focus. Colors are differentiated along a specific axis.

To change the pattern or color scheme of a chart:

- 1 Double-click a chart element in the legend, or select an element in the chart (such as a bar or a pie slice) and choose **Chart**→**Properties**.

A Properties dialog box appears that may contain one or more tabs (Patterns, Axis, Data Labels), depending on the format of the active chart.

- 2 Click the **Patterns** tab to display the Patterns page.
- 3 Select the fill pattern and color for the chart segment, line, or marker.
  - **Automatic** – Automatically sets the fill pattern and color to the default setting. The default setting for fill pattern is *Solid*. The default setting for color varies between chart formats.
  - **None** – Sets a transparent fill pattern and color for the selected element.
  - **Custom** – Allows you to select a foreground color and fill pattern for the chart. Choices include Solid, Hollow, Horizontal, Vertical, Cross, Diagonally Up, Diagonally Down, Diagonally Cross.  
For line charts, you can also select the width, style and color of lines, and the size, style, border colors, and fill colors of markers.

- 4 Click **OK**.

## Changing Chart Data Labels

You can change the type of data used in the labels in your chart. The choices available depend on the chart format.

To change a chart's data labels:

- 1 Double-click a chart element in the legend, or select an element in the chart (such as a bar or a pie slice) and choose **Chart**→**Properties**.
- 2 Click the **Data Labels** tab to display the **Data Labels** page.
- 3 Select the fill pattern and color for the chart segment, line, or marker.
  - **Pie Charts** – Select whether to show pie slice labels, values, percentages, negative values, and lines that connect a data label to its pie slice.
  - **Bar Charts** – Select whether to show individual bar values and the placement of the values inside the bar.
  - **Line Charts** – Select whether to show values and ignore null values, and select the placement of the values relative to the line.

For line charts, you can also use the **Axis** page to specify whether to plot values on the primary (left) axis or secondary (right) axis.

## Changing Color of Chart Elements, Lines, and Text

Use the Format toolbar to change the line, fill, and text color of a chart element or text and add emphasis to your chart.

---

⇒ **Note** If the Format toolbar is not visible, choose **View**→**Toolbars**→**Formatting**.

---

To change line color:

1 Select a plot point in the line whose color you want to change.



2 On the Format toolbar, open the **Line Color** list and select a color from the palette.

To change the fill color of a chart element:

1 Select the chart element whose fill color you want to change.



2 On the Format toolbar, open the **Fill Color** list and select a color from the palette.

To change the color of text:

1 Select the label or other text element whose text color you want to change.



2 On the Format toolbar, open the **Text Color** list and select a color from the palette.

# Chart Menu Command Reference

Table 4-5 provides a quick reference to the commands available on the Chart menu and lists any related shortcuts.

Table 4-5 Chart Menu Commands



Command	Description	Keyboard Shortcut	Shortcut Menu
Sort	Sorts the selected column values in ascending order (alphabetical or numeric).		✓
Data Function	Applies a prebuilt data function to the selected item.		
Add Computed Item	Enables you to add a new data item derived from calculations performed on an existing item.		✓
Modify Computed Item	Enables you to modify a computed item.		✓
Remove Selected Items	Removes the selected items.	[Del]	✓
Drill Anywhere	Allows you to drill to any item.		✓
Drillup	Returns the original view of the data you drilled.		✓
Focus On Items	Updates the chart to include only the selected items.		✓
Hide Item	Hides the selected item from view.		✓
Show Hidden Items	Restores the selected hidden item.		✓
Show All Items	Updates the chart to include all items removed by focusing.		✓
Group Items	Groups the selected items.	[Ctrl+G]	✓
Ungroup Items	Ungroups the selected grouped item.	[Ctrl+U]	✓
Restore Name	Restores the original name of a renamed item.		✓
Refresh Data	Updates the data according to the selected option. Choose between After Process, When Section Displayed, Manually, or Refresh Now.		
Properties	Opens the Properties dialog box for the chart or selected chart element.		✓

# 5

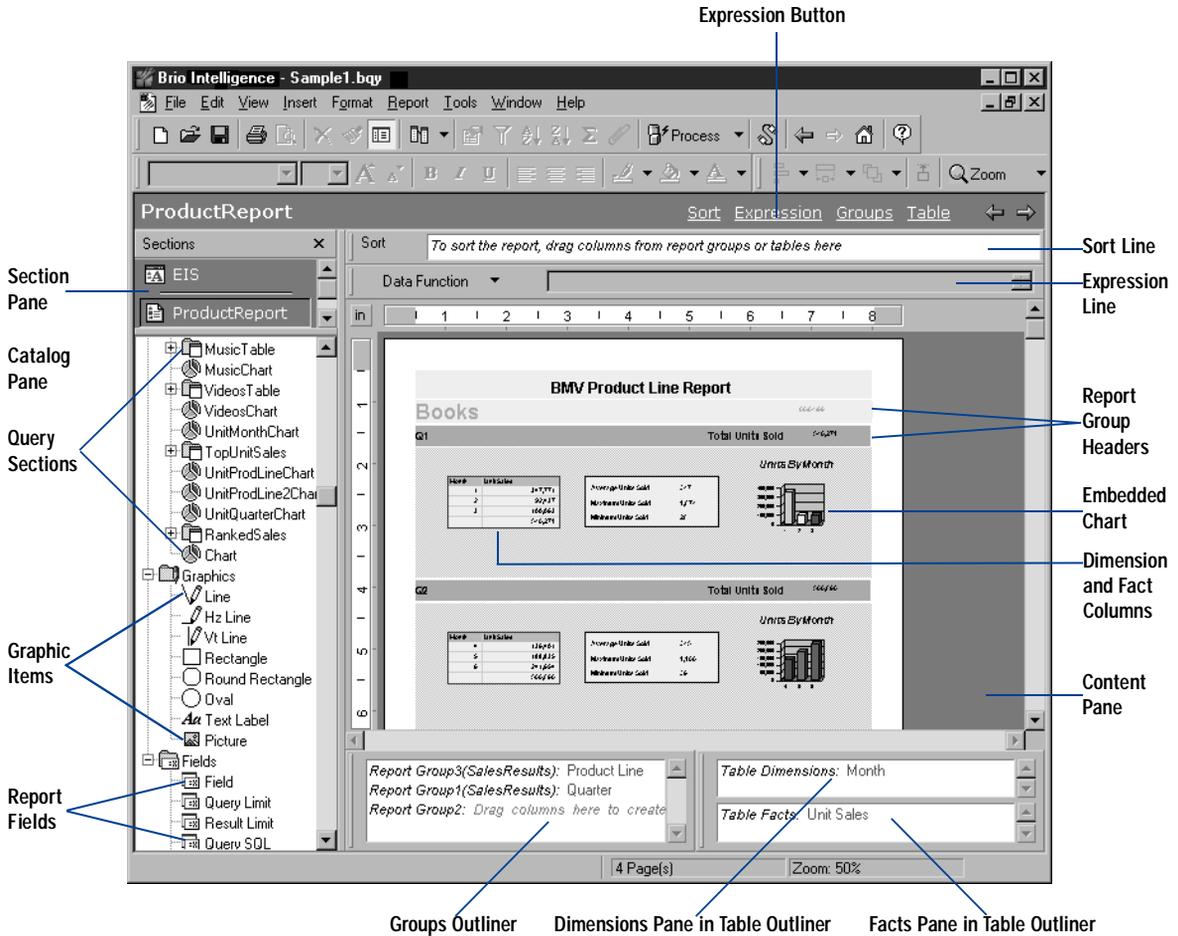
## Designing Custom Reports

This chapter explains how to use the Report Designer, Brio Intelligence's dynamic analytical report writer, to create free-form, presentation-quality reports. It includes:

- Report Section
- Creating a Custom Report
- Working with a Report Page
- Setting Up a Report
- Enhancing Report Data
- Using Multiple Data Sources in a Report
- Creating Smart Reports
- Formatting Report Items
- Converting Detail Reports from Brio Intelligence Versions Earlier than 6.0
- Report Menu Command Reference

# Report Section

The Report Designer in the Report section helps you to easily develop a complete range of reports, from small ad-hoc reports to mission-critical operational reports. After you create your database query, you can use this section's visual layout capabilities to drag and drop columns, expressions, charts, pivot tables, logos, bitmaps and other objects to quickly design and customize your reports.



## Report Section Elements

The Report section differs slightly from other Brio Intelligence sections in order to provide you with as robust a report designer as possible. Key differences include:

- **Expression Line** – Accessed via the Expression button on the Section title bar, the Expression line enables you to build common computed expressions using JavaScript.
- **Catalog Pane** – Contains all of the of drag-and-drop elements you use to create a custom report, including:
  - **Query** – Contains all the sections associated with a selected query, including Results, Pivot, and Chart sections. You can drag individual Results columns from the Results and Table sections to a report page, as well as entire Pivot and Chart sections to create *Smart Reports*.
  - **Graphics** – Contains standard vector graphics text labels, and pictures (bitmaps only).
  - **Fields** – Contains predefined fields that can be dragged to various areas of the report to enhance the look and feel of the report.

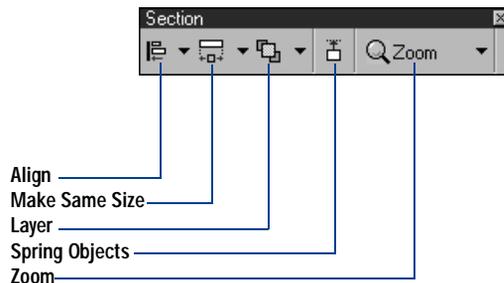
To use any of these elements, simply drag them to the desired report component band.

- **Outliner** – Consists of the Groups Outliner and Table Outliner. The Table Outliner is divided into the Dimension and Fact panes.
  - **Groups Outliner** – Defines the overall or highest levels used to group data in a report. When you designate an item to serve as a group header (also known as a break value), you are instructing Brio Intelligence to organize the rest of the data in repeating collections of records according to the group header.
  - **Dimensions Pane in Table Outliner** – Includes the descriptive information as a column in a table that is included in the body of the report.
  - **Facts Pane in Table Outliner** – Includes the measurable or quantifiable data as a column in a table included in the body of the report. Brio Intelligence automatically calculates and inserts subtotals for each fact column.

Brio Intelligence quantifies values by group header and dimension. If you have a descriptive numeric value that should not be calculated, such as Retail Price or Target Sales, use it as a group header or table dimension instead of a fact.

## Report Section Toolbar

The Report Section toolbar provides icons that enable you to quickly maneuver multiple report objects.



- **Align** – Aligns several objects at the same time. Objects are aligned to the first object you select. Select the first object, then hold down the Control key and select the remaining objects. Click the arrow on the Align icon and choose an alignment option: left, center, right, top, middle, or bottom.
- **Make Same Size** – Resizes the selected objects to the same size. Objects are resized to match the first object you select. Select the first object, then hold down the Control key and select the remaining objects. Click the arrow on the Make Same Size icon and choose a resizing option: width, height, or both.
- **Layer** – Stacks a single object in relative position to other objects. Layer include four rearrangement options: Send To Front, Send To Back, Bring Forward, and Send Backward. Use this feature to layer multiple objects so that only the sections of the objects you want visible are shown.
- **Spring Objects** – Maintains relative vertical spacing between dynamic objects. That is, you can *spring* one object to another so that if the first object is moved, increased or diminished, the second object moves in the same flow.

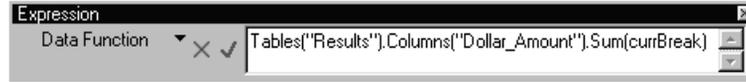
Select an object, then hold down the Control key and select the remaining objects. Click the Spring Objects icon to spring the objects.

To remove spring from objects, select the objects click the Spring Objects icon again.

- **Zoom** – Sets the magnification level of the report. Options include whole page, page width, or a percentage of magnification based on 100%.

## Expression Line

Use the Expression line to apply and display aggregate functions and computing fields. For each item in a report, you can display its JavaScript syntax and modify it to fit your own needs.



The Expression line includes the following components:

- **Data Function** – Shows available data functions that can be applied to table columns.
- ✕ – Cancels and removes a formula. This icon appears only when you enter syntax.
- ✓ – Accepts and applies the formula. This icon appears only when you enter syntax.

Table 5-1 lists the default syntax for Report section items.

Table 5-1 Report Expression Syntax

Report Element	Syntax
Table Dimension	<code>CurrBreak.Value[ "Column Name" ]</code>  "Column Name" refers to the dimensional column name. The column name can be modified.
Table Fact	<code>Tables[ "Section" ].Columns [ "Column Name" ].Sum[currBreak]</code>  "Section Name" refers to either the Results or Table section. Column Name refers to the fact column name. Sum refers to the return of underlying values and can also be an applied Data functions such as Avg, Max, and Min.
Group Label	<code>CurrBreak.Value[ "Column Name" ]</code>  "Column Name" refers to the dimension or fact column name.

**Table 5-1** Report Expression Syntax (*Continued*)

Report Element	Syntax
Group Fact	<pre>Tables["Section"].Columns ["Column Name"].Sum[currBreak]</pre> <p>“Section Name” refers to either the Results or Table section. “Column Name” refers to the fact column name.</p> <p>To apply a break at the parent level (the highest level), use the following syntax:</p> <pre>Tables["Section Name"].Columns ["Column"].Sum[currBreak.Parent]</pre>

You can concatenate the syntax listed in Table 5-1 with other JavaScript expressions to customize the content of labels, facts, and dimensions.

For example, if you wanted a group header to show a union of the Total label and the amount, you could insert a field in the Expression line to concatenate Total with the table fact syntax.

```
Format(Tables("Results").Columns("Amount").Sum(currBreak) / Tables("Results").Columns("Amount").Sum(currBreak.parent), "0%")
```



Or, you could insert a field to show the sum (or any other data function) of the column divided by the sum of the parent level expressed as a percentage.

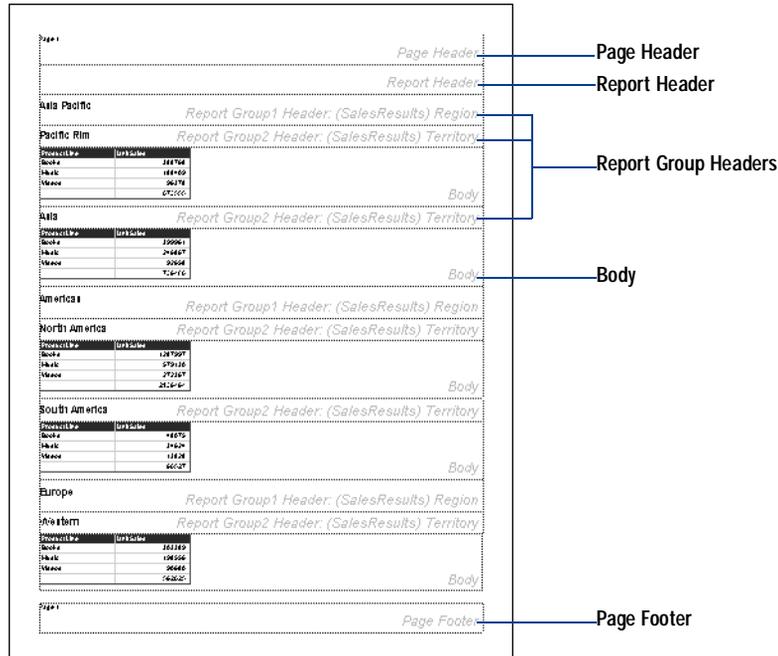
```
"Total: " + Format(Tables("Results").Columns("Amount").Sum(currBreak), "#,##0")
```



If you plan to use this feature, add the labels in a computed field. For information on how to add a computed field, see “Adding Computed Items” on page 5-21.

## Report Components

The Report Designer offers a variety of dynamic tools for constructing the report you want to create with all of the components you want it to contain. Understanding how these components perform and how they integrate with Report section elements is fundamental to building a successful report.



Report pages are structured areas, or bands, of information. Each band contains a different report component and can be customized to include other report elements such as graphic objects, predefined fields, computed fields, charts, and pivot tables. A report's components are:

- **Body** – Contains one or more tables whose contents are based on the items listed in the Table Dimensions and Table Facts panes of Outliner. Every report has a body that holds a table of data. Tables can be based on the same or different results sets within the document.
- **Report Group Headers** – Categorize data into repeating collections of records organized according to the header band.

- **Report Header/Footer** – Fully customizable summary bands of information. Report headers print only on the very first page of the report. Report footers print only on the very last page.
- **Page Header/Footer** – Contain data this is repeated on every page, such as page numbers. These bands are also fully customizable.

## Creating a Custom Report

The Report section uses tables as the basic building blocks of custom reports. Tables contain columns of dimensions and facts as determined by the Results items you place in the Dimensions and Facts panes in Table Outliner.

To create a basic report:

- 1 Choose **Insert**→**New Report**.

Brio Intelligence creates a new Report section and inserts a blank table in the Body band of the report in the Content pane.

★ **Tip** Choose **Report**→**Section Boundaries** to view the bands for the report components.

- 2 If the Table Outliner is not visible, click **Table** on the Section title bar to open the Table Outliner.

The Table Outliner has two panes: Dimensions and Facts.

- 3 Drag Results items from the Query sections of the Catalog pane to the Table Outliner panes.

Use the Dimensions pane to build dimension (label) columns, such as Month, Region, or Product Line. Use the Facts pane to build the facts (numeric values) in the report, such as Amount Sales or Units Sold. Results and Table items added to the Facts pane are automatically totaled.

Table 5-2 lists the column formatting options available in Brio Intelligence.

**Table 5-2** Table Column Formatting Options

<b>Options</b>	<b>Description</b>
Changing the Column Name Heading (Title)	To modify the column title, click Expression on the Section title bar, then select the column title that you want to modify. In the Expression line, type the new title between the quotation marks (" ") and click the check mark.
Hide/Show Column Name Heading (Title)	To toggle the display of column titles, choose <b>Column Titles</b> on the shortcut menu. A check mark appears next to Column Titles to indicate that column titles are visible. Choose this option again to clear the check mark and hide column titles from view.
Remove Column	To remove a selected column from the report (and Table Outliner), choose <b>Remove Column</b> on the shortcut menu. This option is available for dimension and fact columns. Items should be removed with caution as computed items may draw data values from the deleted item.
Hide/Show Column Total	To toggle the display of column totals, choose <b>Show Column Totals</b> on the shortcut menu. A check mark appears next to Column Totals to indicate that column totals are visible. Choose this option again to clear the check mark and hide column totals from view.  This option is available only for fact columns.
Select Column	Click anywhere inside the column.
Suppress Duplicates	To suppress the duplicate values for a column, select the column and choose <b>Format</b> → <b>Suppress Duplicates</b> . Use this feature if you want to display only the first instance in the column of a duplicate value when individual database records include redundant information. This feature is especially useful if records are associated with the same date, location or customer.
Text Wrap	To wrap text within a column, select the column and choose <b>Format</b> → <b>Text Wrap</b> .
Reordering Columns	If you want the columns in the table to appear in a different order, drag the item in order of how you want it to appear in the Table Outliner. You can also select the column in the actual report and drag it to a new position in the report.

## Inserting Additional Tables in a Custom Report

A custom report may contain multiple tables, each originating from the same or different result sets in the document. Multiple tables in one band are a powerful way to compare values.

To add multiple tables to one report:

- 1 Choose Report→Insert Table.  
The cursor changes to a crosshair .
- 2 In the Body band, left-click and hold your left mouse button to position your cursor where you want to insert the table, and then drag to create the table.  
A numbered table is inserted.
- 3 Drag the Results items from the Query sections of the Catalog pane to the Table2 Outliner panes.

Each new table that you insert has its own corresponding dimensions and facts pane in the Table Outliner.

## Adding Report Groups

A report group is the topmost level at which you can structure data in a report. When you drag an item from the Catalog pane into the Groups Outliner, Brio Intelligence automatically supplies a report group header band and adds a label inside the band that identifies the group.

For example, if you create a report to show purchases by state, each state would serve as a report group header in the report. You can place multiple items in one header or add a multiple levels of group headers.

This step is not necessary to create a report, but it may help you to better organize the content of the report. You can show additional headings, graphics, and totals in the report group header band.

To create a report group:

- 1 If the Groups Outliner is not visible, click **Groups** on the Section title bar to open the Groups Outliner.
- 2 Drag the item on which you want to group data from the Catalog pane to the Report Group1 field in the Groups Outliner.

The selected item automatically populates the group header.

## Inserting Report Headers and Footers

Report headers and footers are summarizing bands of information. Report headers print only on the first page of a report. Report footers print only on the last page of a report.

★ **Tip** Do not confuse report headers and footers with report *group* headers. Report group headers categorize data into repeating collections of records in a header band, based on the Results columns in the Groups Outliner.

To view and create a report header or footer:

- 1 Choose **Report**→**Section Boundaries** to view the bands for the report components.
- 2 Choose **Report**→**Headers And Footers**→*Option*.

You can view the report header, the report footer, or both. The Report Header band appears on the first page of the report. The Report Footer band appears on the last page of the report.

- 3 Drag objects from the Catalog pane to the Report Header or Report Footer band. The selected item automatically populates the report header or footer.

## Inserting Page Headers and Footers

Page headers and footers allow you to specify data that is repeated on every page, such as a page number.

To insert a page header or page footer:

- 1 Choose **Report**→**Section Boundaries** to view the bands for the report components.
- 2 Choose **Report**→**Headers And Footers**→*Option*.

You can view a page header, a page footer, or both.

- 3 Drag objects from the Catalog pane to the Page Header or Page Footer band. The selected item automatically populates the report header or footer.

## Adding Other Report Elements

You can resize report band items and use the tools available on the Format toolbar to change properties such as number, font, alignment, border, and background.

You can also add graphic items and fields from the Catalog pane to enhance your report. For example, use the Text Label tool to add text labels that identify values for numeric report group headers.

## Working with Graphic Elements

Brio Intelligence provides a complete set of graphic elements to assist you in designing presentation-quality reports (see Table 5-3). Lines, rectangles and ovals are considered vector graphics. Vector graphics consist of commands for creating the measures and shape of each line, rectangle, arc, and so on. The resolution of the output device defines the look of the vector graphic, since a vector graphic has no fixed resolution. This property enables you to resize the vector graphic without changing its resolution. Since a vector graphic contains only the instructions for creating an image, it requires less disk space.

Pictures are considered bitmapped graphics. A bitmap graphic consists of pixels, which have the appearance of small points. In computer memory, a pixel is shown as one or more bits, containing instructions for color, density and appearance for each pixel shown. As a result, bitmaps use more disk space and have a fixed resolution. If you resize a bitmap image, it may distort the original image.

**Table 5-3** Report Section Graphic Elements

<b>Element</b>	<b>Description</b>
Line	Creates a line that you can rotate.
Hz Line	Creates a horizontal line.
Vt Line	Creates a vertical line.
Rectangle	Creates a rectangle.
Round Rectangle	Creates a rectangle with rounded corners.
Oval	Creates an oval.

**Table 5-3** Report Section Graphic Elements *(Continued)*

Element	Description
Text Label	Creates a text label that you can use as a caption.
Picture	Allows you to insert bitmaps (.bmp extension).
Name	Sets the object's name.
Visible	Allows the object to be visible during Run mode. Use this to hide objects.
Locked	Locks an object. Use this to lock objects so they cannot be changed.

## Working with Fields

Brio Intelligence provides a computable field and predefined fields to assist you constructing and producing reports (see Table 5-4). These fields can be dragged and dropped anywhere within the report page, body, report group header, report header/footer, and page header and footer. You can also customize how numbers, dates, time, and text fonts appear in your report. For numbers, you can choose whether to use commas, decimals place, dollar signs or percentage symbols. For text items, you can choose fonts styles and sizes. For Query and Result limits, you can select specific limits.

**Table 5-4** Report Section Fields

Field Name	Description
Field	Inserts a computed field.
Query Limit	Inserts a selected query limit.
Result Limit	Inserts a selected result limit.
Query SQL	Inserts the last SQL sent to the database when you process a query.
Page Number	Inserts a page number.
Number of Pages	Inserts the total number of pages.
Page X of Y	Inserts the current page of the total number of pages.
Last Saved	Inserts date on which the report was last saved in MM/DD/YYYY format.
Last Printed	Inserts date on which the report was last printed in MM/DD/YYYY format.
Date	Inserts and stamps the current date in MM/DD/YYYY format.

**Table 5-4** Report Section Fields (Continued)

Field Name	Description
Time	Inserts and stamps current time in HH:MM:SS format.
Date & Time	Inserts and stamps date and time in MM/DD/YYYY and HH:MM:SS format.
Date Now	Inserts the current date in MM/DD/YYYY format.
Time Now	Inserts the current time in HH:MM:SS format.
Date & Time Now	Inserts the current date and time in MM/DD/YYYY and HH:MM:SS format.
File Name	Inserts the Brio Intelligence document (.brgy) name.
Path Name	Inserts the full path name of the document.
Report Name	Inserts the report name.

## About Computed Fields

A computed field contain a single value based on a calculation. You can create customized JavaScript expressions or modify JavaScript syntax for an existing report element. A computed field is repeated based on the report component in which it is inserted.

To create a computed field:

- 1 Choose **Report**→**Insert Field**.  
The cursor changes to a crosshair .
  - 2 Left-click and hold your left mouse button to position your cursor in the report component where you want to insert the field, and then drag to create the table.  
A field labelled Empty Field is inserted.
  - 3 Click the empty field to select it, and then enter JavaScript syntax in the Expression line.  
You can copy and paste JavaScript syntax from existing report items into the Expression line to build the expression. To do this, select an existing item and copy the syntax in the Expression line. Then select the new field and paste the syntax into the Expression line.
  - 4 When you have defined the equation, click .
- The field displays the computed value.

## Inserting Limit Values

You can select and show limits applied in the Query and Results sections to aid in the visual construction and production of the report.

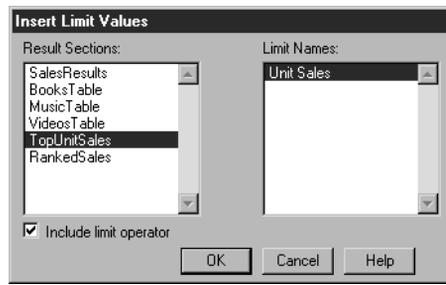
To use a limit value in a report:

- 1 Choose **Report**→**Insert Predefined Field**→**Query Limit** or **Result Limit**.

The cursor changes to a crosshair  $\oplus$ .

- 2 Left-click and hold your left mouse button to position your cursor in the report component where you want to insert the limit field, and then drag to create the field.

The Insert Limit Values dialog box appears.



- 3 In the Query or Result Sections list, select the section that contains the limits that you want to show.

A list of applied limits populates the Limit Names list.

- 4 Select the **Limit Name** that you want to use from the Limit Names list.

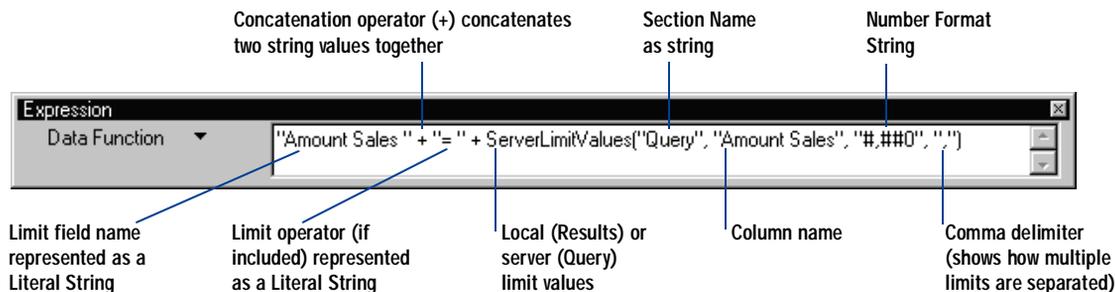
To show the operator used in the expression, select the **Include Limit Operator** check box.

- 5 Click **OK**.

To modify the Limit field name or the values being shown:

- Double-click the Limit field and modify the statement on the Expression line.

The JavaScript expression for the Limit Value field appears in the Expression line.



## Inserting Page Breaks

You can insert a page break before or after a report group header.

To toggle page breaks:

- 1 Choose **Report**→**Section Boundaries** to view the bands for the report components.
- 2 Select a report group header.
- 3 Choose **Insert**→**Page Break Before** or **Page Break After**.

A check mark appears next to the selected page break option to indicate that it is active. Choose this option again to clear the check mark and remove the page break.

## Working with a Report Page

Brio Intelligence gives you complete control of your report page setup and provides a number of features that assist you in designing effective, high-quality reports.

### Displaying Rulers

Horizontal and vertical rulers help you line up items based on precise units of measure. Available units of measurement include inches, centimeters, and pixels, which you select by clicking the measure indicator  at the intersection of the top and left rulers.

To toggle the display of the ruler:

- Choose **Report**→**Ruler**.

A check mark appears next to Ruler to indicate the ruler is visible. Choose this option again to clear the check mark and remove the ruler from view.

### Using Grids

Brio Intelligence provides a layout grid that automatically snaps all objects to the closest grid spot.

To toggle the display of the grid:

- Choose **Report**→**Grid**.

A check mark appears next to Grid to indicate the grid is visible. Choose this option again to clear the check mark and remove the grid from view.

### Using Design Guides

Design guides are horizontal and vertical lines that you place in your report to help you line up objects. Design guides are similar to grids in that objects automatically snap to align to the design guides.

If rulers are visible, click the ruler and drag one or more design guides from both the horizontal and vertical rulers.

To toggle the display of design guides:

- ▶ Choose **Report**→**Design Guides**.

A check mark appears next to **Design Guides** to indicate they are visible. Choose the option again to clear the check mark and remove the design guides.

## Setting Up a Report

Use the **Report Page Setup** command to specify report page parameters including, page size, margins, and columns.

### Specifying Page Size

When deciding on page size for your report, consider the type of output you want. Do you want to print the report or view it onscreen? Brio Intelligence allows you to select printer dimensions or to specify custom dimensions for your report pages.

To specify page size:

- 1 Choose **Report**→**Report Setup**.  
The **Report Setup** dialog box appears.
- 2 Click the **Page Size** tab to view the **Page Size** page.
- 3 Choose the page dimension option you want to use.
  - **Use Printer Dimensions** – Determines the printable area based on your printer. If you want to only print the report, select the option.
  - **Use Custom Dimensions**– Allows you to specify the width and height of your report page.

If you export reports to HTML pages, you can use this setting to control the number of “pages” that are included in each HTML file. Each page is exported to a single HTML file by default. To ensure that all pages in your report are contained in a single HTML file, set the page height to a large number.

- 4 Click **OK**.

## Specifying Page Margins

Use the Margin tab to specify the blank space that borders the report area on your page. Since the report area can hold a variety of objects, such as page numbers, text, and lines, change the margin area to accommodate the size of your report area. Margins are set for an entire report.

To specify page margins:

- 1 Choose **Report**→**Report Setup**.

The Report Setup dialog box appears.

- 2 Click the **Margin** tab to view the Margin page.

- 3 Enter the Top, Bottom, Left and Right margin sizes.

Margins are measured in units of inches, pixels or centimeters. To change the margin units, click the Measurement icon  located above the Content pane until you find the measurement unit you want to use.

- 4 Click **OK**.

## Setting Up Page Columns

You can set up a multicolumned report and have data flow from the bottom of one column to the top of the next column. You can specify as many columns as you want.

To create a multicolumned report:

- 1 Choose **Report**→**Report Setup**.

The Report Setup dialog box appears.

- 2 Click the **Column** tab to view the Column page.

- 3 Select the number of columns that you want to include on the page.

If you want to include more than four columns on the page, enter the number of columns in the **Other** field.

Brio Intelligence automatically determines the column width and spacing based on the number of columns specified, the page size, and the page margins. Column width and spacing measurements are set in either inches, pixels, or centimeters.

# Enhancing Report Data

You can apply limits, sorts, computations, and break totals to refine the data in your reports.

## Sorting Report Items

You can use the Sort icons to quickly sort a report group header or table column.

To sort items quickly:

- 1 Drag the table column that you want to sort.



- 2 Click the Ascending or Descending icons on the standard toolbar.

To apply sort conditions using the Sort line for report group labels

- 1 If the Sort line is not already displayed, click Sort on the Section title bar.  
The Sort line appears below the Section title bar.
- 2 Click a report group label in the Content pane.  
The Sort line should read Report Group $x$ , where  $x = 1, 2, 3$ , and so on.
- 3 Drag a report group label from the content area to the Sort line.
- 4 Double-click the name of the report group label on the Sort line to toggle between ascending and descending sort order.

To sort table columns:

- 1 If the Sort line is not displayed, click **Sort** on the Section title bar.  
The Sort line appears below the Section title bar.
- 2 Click anywhere within the table column (dimension or fact) in the Content pane.
- 3 Drag table dimensions or table facts from the Content pane to the Sort line.
- 4 Reorder the Sort items to determine the nested sort order.
- 5 Double-click the item in the Sort line to toggle between ascending and descending sort orders.

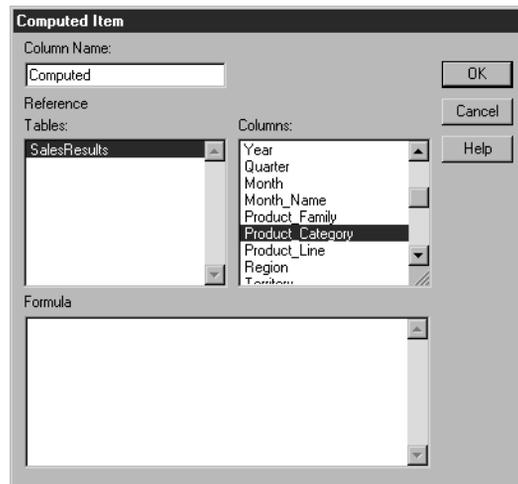
## Adding Computed Items

Use the Add Computed Items command to build equations to compute totals, or to apply functions to existing values. Since a report may derive its values from a wide range of data sources (relational database queries, OLAP queries, imported data sets, and local-join queries), you select the Request item that you want to use from the applicable Results section.

To add a computed item:

- 1 Select a table column and choose **Report**→**Add Computed Item**.

The Computed Item dialog box appears.



- 2 In the Column Name field, type a name that describes the computation.  
The default name is Computed.
- 3 In the Item pane, select the Request column from which to compute the new data item.  
Note that the columns available for reference are only the columns that exist in the results set that is the source for the rest of the table.
- 4 Modify the existing syntax of the table column you selected or define a new computed item by building an expression in the Formula pane.

Brio Intelligence uses JavaScript to compute data items. The JavaScript engine supported in Brio Intelligence does not accept European or non-US number formats for computing data items. More information about JavaScript can be found in *BrioQuery Object Model and Executive Information Systems*.

- 5 Click **OK** to apply the definition to the computed item column.

A new computed column is added to the Facts pane in Table Outliner for the selected table.

## Applying Data Functions

Data functions enable you to determine the nature of the values represented in a Table Fact column in the Report section. Data functions retrieve underlying values and recalculate the value according to the type of data function that you specify. For example, the totals for a column are sums (the default data function) of the values in a column. You can use other data functions to change the totals to averages instead of sum.

Brio Intelligence provides a variety of prebuilt data functions that can be accessed from the Expression line. You can also define your own data functions using JavaScript.

To apply a prebuilt data function in the Report section:

- 1 Select a table fact.
- 2 Choose **Report**→**Data Function**→**Function**.

The totals in the column are recomputed to reflect the selected data function. Table 5-5 lists the prebuilt data functions available in the Report section.

Table 5-5 Report Section Data Functions

Data Function	Description
Column Name	Returns the table column name.
Sum	Returns sum of underlying values. This is the default data function.
Average	Returns average of underlying values.
Count	Returns number of underlying values.
Maximum	Returns highest of underlying values.



Table 5-5 Report Section Data Functions (Continued)

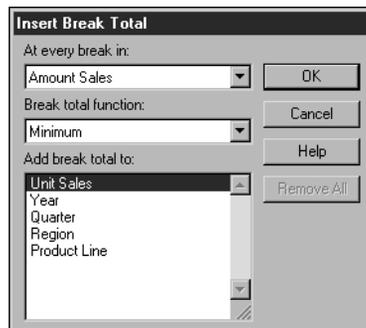
Data Function	Description
Minimum	Returns lowest of underlying values.
% of Category	Returns group total percentage of the value.
Null Count	Returns number of nulls among underlying values.
Non-Null Count	Returns number of underlying values; null values are excluded.
Non-Null Average	Returns average of underlying values; null values are excluded.

## Applying Break Totals

To apply a break total to a column in a report table:

- 1 Select a column and choose **Report**→**Break Total**.

The Insert Break Total dialog box appears.



- 2 Select a **break column** from the At Every Break in drop-down list.
- 3 Select the **data function** you want to apply from the Break Total Function drop-down list. See “Applying Data Functions” on page 5-22 for a list of data functions that you can use with break totals.
- 4 Select one or more columns on which to display the break total and click **OK**.

## Hiding and Focusing on Reported Data

A straightforward way to refresh your view of a report is to single out items for closer focus or remove some of the reported elements. This allows you to concentrate on particular items of interest. Hiding a group item removes the item from the report, but not from the Outliner. Focusing a group item removes all items except the focused item from the report, but not the Outliner.

### Focus On Items

To focus on a report item:

- 1 Select a group header and choose **Report**→**Focus On Item**.

Brio Intelligence updates the report to focus on the data. A drill icon  appears in the Outliner next to the column you selected.

- 2 Choose **Chart**→**Focus On Items**.

The chart is redrawn to display only the chart object(s) selected. A drill icon  appears in the Outliner next to the item(s) on which you focused.

To return to the original chart display:

- Choose **Chart**→**Show All Items**.

### Hide Items

To hide a group item:

- Select a group header and choose **Report**→**Hide Item**.

You can only select one group item to hide at a time.

Brio Intelligence updates the report to hide the data. A drill icon  appears in the Outliner next to the column that you selected to hide.

To restore all hidden groups:

- Choose **Report**→**Show Hidden Item**.

All items listed in the Outliner are fully restored to view. The drill icon disappears.

## Using Multiple Data Sources in a Report

You can create reports that contain data from multiple queries that use a wide range of data sources (relational database queries, OLAP server queries, imported data sets, and local join queries).

In a sense, the data in a single table correlates data across queries in a report, retrieving all rows from the table on the “left” and any rows from the table on the “right” that have matching values. Unlike actual joined topics in the Query section, the tables are not linked in the same sense. In the Report section, data is only in the report.

The rules for using multiple data sources in a single report are:

- Report group headers require a common value that belongs to all results or table sets be included in the report. If you introduce a unique value belonging to one results or table set, nothing is returned for any band below that group header.
- Table Dimensions items can originate from only one data source.
- Values from multiple data sources can be included in Table Facts.
- The Results column that you place as a table determines the Facts used. For example, you have two Results sets:

Results 1	Region	Sales
	East	10
	West	20

Results 2	Region	Units
	East	100
	West	200
	South	400

If you place “Region” from Results 1 into the Table Dimension and then dropped Results 1: Sales and Results 2: Units into the Table Facts, you get the following table:

Region	Sales	Units
East	10	100
West	20	200

Note that the data from Results 2: South is not included.

- Smart charts and pivot tables added to a multiple data source report are subject to the same restrictions as described above.

To build a multiple data source report:

- 1 Build the queries that you want to include in the report:
  - Verify item data types and associated data values in source documents so that you know how to correlate them when creating the reports.
  - Build the Request line, and add server and local limits, data functions, and computations to the query as needed.
- 2 Click **Process**.
- 3 Choose **Insert**→**New Report**.  
A new report section appears.
- 4 In the Catalog pane, expand the  button of the Results or Table set that you want to include in your report.
- 5 If necessary, click **Groups** on the Section title bar to open the Group Outliner.  
A group header categorizes data into repeating collections of records in a header band.
- 6 If necessary, click **Table** on the Section title bar to open the Table Outliner.  
The Table Outliner shows two panes: Table Dimensions and Table Facts. Use the Table Dimensions pane to build the column dimensions (labels) in the report. Use the Table Facts pane to build the numeric values in the report.
- 7 To build the group header band, drag the item(s) from the Results sections of the Catalog pane to the Groups Outliner.
- 8 To build the column dimensions of the report, drag the item(s) from the Query sections of the Catalog pane to the Table Dimensions in Outliner pane.
- 9 To build the column numeric values of the report, drag the item(s) from the Query sections of the Catalog pane to the Table Facts in Outliner pane.

# Creating Smart Reports

Smart reports allow you to embed charts and pivot tables into a report body. These reports show only the data that is relevant to the report section in which they are placed. For example, if the report is grouped by year and you insert a chart in the report body, the chart replicates automatically so that there is a chart for each year of data in the report. Each year's chart contains data specific to that year.

★ **Tip** Smart reports are refreshed whenever you reprocess the query. Also, if you change a chart or pivot table in its home section, the Smart report is updated and the changes are reflected in the Report section.

To embed a chart or pivot in a report:

- 1 In the Catalog pane, drag an existing pivot table or chart to either the report group header, page header, footer, or report body.
- 2 Size the pivot table or chart by clicking the embedded report until handles appears. The pointer changes to a two-sided arrow.

## Formatting Report Items

Table 5-6 lists formatting techniques you can use in the Report section.

Table 5-6 Report Section Formatting Techniques

Format	Description
Number	To modify the way numbers, dates and currency appear, select the item and choose <b>Format</b> → <b>Number</b> . When the Number tab appears, apply any desired changes.
Style	To modify the appearance of a report item, select the item and choose <b>Format</b> → <b>Style</b> → <i>Option</i> . Options include bold, underline, italic, and so on
Alignment / Justify	To modify the way an item is justified within a row or column, select an item, choose <b>Format</b> → <b>Justify</b> → <i>Option</i> . Options include left, center, right, top, middle, and bottom.

**Table 5-6** Report Section Formatting Techniques *(Continued)*

<b>Format</b>	<b>Description</b>
Font	To modify the font of a report item, select the item and choose <b>Format</b> → <b>Font</b> . When the Font tab of the appears, apply any desired changes.
Keep Together	Instructs Brio Intelligence not to split a band when a break is encountered. When a break is encountered, the entire band is moved to the next page.
Keep With Next	Instructs Brio Intelligence to keep bands within a group together when paginating a report. If the lower band cannot fit on the page when the report is paginated, both bands are moved to the following page.

For information about formatting commands, see *Getting Started with Brio Intelligence*.

# Converting Detail Reports from Brio Intelligence Versions Earlier than 6.0

You can use the Report Designer to modify Detail reports created in documents prior to Brio Intelligence version 6.0.

Brio Intelligence version 6.0 and later opens Detail reports in read-only mode. To work with the contents of a Detail report, you must first convert it to the new Report Designer format.

---

⇒ **Note** You can convert Detail reports to Report Designer format only if the results set is saved with the document. If your results set is not saved with your document, reprocess the query and then choose **File**→**Save Results With Document**.

---

To convert a Detail report to Report Designer format:

- 1 In the Section catalog, select the Detail report you want to convert.

The detail report is displayed in the Content pane and a Detail menu appears on the menu bar.

- 2 Choose **Detail**→**Convert To Report**.

Brio Intelligence converts the Detail report to the new Report Designer format and inserts a new Report section into the document. The original Detail report is left unchanged.

While every effort has been made to make the converted report as close as possible to the original Detail report design, you may need to clean up some reports, especially those that use computed items, multiple page headers/footers, or complex formatting.

Detail reports can be exported from Brio Intelligence 6.x to all of the previously supported formats, including Excel (.xls), Lotus 1-2-3 (.wks), tab-delimited text (.txt), comma-separated text (.csv), and HTML (.htm).

## Display Differences

The page margins of a report created by the conversion process may appear smaller than in the original Detail report. This is because the new Report section is a WYSIWYG display that includes the unprintable area that exists outside of report margins. In Brio Intelligence version 5.x, Detail reports did not display or store information about the unprintable area. You can manually adjust the margin sizes in the converted report if needed.

If a Detail report contains multiple page header and footer sections, Brio Intelligence resolves these to a single page header and footer section during the conversion process. The height of the headers and footers in the converted report is equal to the combined heights of all headers and footers in the original Detail report. This may cause graphic and text objects in the headers and footers to overlap. You should manually adjust the properties, size, and/or position of these objects as necessary.

## Conversion of Detail Report Categories

Categories from Detail reports are converted into report groups in the new Report section. The converted report displays Report Group Header and Footer sections if the corresponding category header and footer bands are visible in the original Detail report. The height of these header and footer sections remains the same. Detail report category labels are converted into JavaScript-based computed fields. Display properties remain unchanged.

## Conversion of Data Area

In order to preserve as much of the original data and layout as possible, the conversion process translates the Detail report body information to a single table object in the body section of the converted report. This may lead to a loss of fidelity when converting complex or non-tabular style Detail reports.

## Conversion of Facts

During report conversion, Detail report facts are added to the right of the dimension columns in the body section table. Number formats applied to Detail report facts are migrated to the converted report. If no number format exists, then the default number formats are applied to date, time, and number fields.

Because Brio Intelligence version 6.x uses JavaScript as the scripting, the conversion process does not automatically convert any computed facts contained in the Detail report. For computed items located in the Detail report body, the expression is omitted from the version 6.x table object. The conversion process may attempt to replace the computed column with another fact. If that occurs, simply delete the extraneous column.

For computed items located in a group header or footer, the code of the old Brio scripting language expression is placed in a text field in the associated header/footer area to aid in manual conversion. Before you correct these placeholder items, Brio displays an error message in the field which reads `<string>(1):unterminated string literal`. The Detail report's *Surface Math* option has no equivalent in the converted report and is ignored.

## Conversion of Smart Reports

Brio Intelligence 6.x is able to convert Detail reports containing multiple *smart* charts and pivot tables. Some converted smart charts may look different or even invisible once converted and displayed in the Brio Intelligence 6.0 Report section. This is due to some changes in the chart section that affect the way that charts are plotted within a given sized area. As a result, embedded charts may need to be resized manually by the user.

## Conversion of Graphic Objects

Certain graphic object properties are no longer supported and are ignored during the conversion process. These properties include the shadow, sunken button, and raised button fill effects.

The width of line objects in Detail reports is expressed in whole pixels. When a report is converted, the pixel line widths are converted to the nearest point equivalent.

# Report Menu Command Reference

Table 5-7 provides a quick reference to the commands available on the Report menu and lists any related shortcuts.

Table 5-7 Report Menu Commands

Command	Description	Keyboard Shortcut	Shortcut Menu
Design Guides	Toggles the display of design guides.		
Grid	Toggles the display of grid lines.		
Rulers	Toggles the display of rulers.		
Section Boundaries	Toggles the display of section boundaries (bands).		
Page Margins	Toggles the display of page margins		
 Sort	Sorts the selected column values in ascending order (alphabetical or numeric).		✓
Data Function	Applies a prebuilt data function to the selected item.		✓
Add Computed Item	Opens the Insert Computed Item dialog box.		✓
Break Total	Opens the Insert Break Total dialog box.		✓
Focus On Items	Updates the report to include only the selected data.		✓
Hide Item	Hides the selected item from view.		✓
Show Hidden Items	Restores the selected hidden item.		✓
Show All Items	Updates the report to include all items removed by focusing.		✓
Insert Table	Inserts a blank table in the report.		✓
Insert Field	Inserts a blank field in the report.		
Insert Predefined Field	Inserts a predefined field in the report.		
Insert Graphic	Inserts a vector graphic in the report.		
Picture	Inserts a picture in the report.		

**Table 5-7** Report Menu Commands *(Continued)*

<b>Command</b>	<b>Description</b>	<b>Keyboard Shortcut</b>	<b>Shortcut Menu</b>
Remove Selected Items	Removes the selected item from the report.	[Del]	✓
Headers and Footers	Toggles the display of report and page headers and footers.		
Report Setup	Opens the Report Page Setup dialog box for adjusting page size, margins, and columns.		



# Glossary

**Adaptive Report Level** The level of privilege that a user can interact with a Brio Intelligence document. The adaptive report levels are View; View and Process; Analyze; Analyze and Process; Query and Analyze; and Data Model, Query, and Analyze. When a document is registered to the OnDemand Server, groups of users are granted access to it with specific Adaptive Report level privileges.

**ADR (also called as sync)** See *Automatic Distributed Refresh*.

**Aggregate Limit** Limits placed on aggregated request line items or aggregated meta topic items.

**API** Application Programmer Interface

**API Socket (DaAPISock)** The API (such as ODBC, SQL Net, and so on) or protocol level information used when connecting to a database that has been abstracted in an API Socket. Brio has one API socket for each supported API/communication protocols.

**Application Server** A framework for developing applications that provides fundamental capabilities required by many applications such as session and resource management, and security.

**Auditing** The monitoring of Brio Intelligence Repository objects to determine usage patterns.

**Automatic Distributed Refresh** The process of synchronizing locally saved documents and the version in the repository.

**Auto-Join** An administrator can configure a connection file to cause joins to occur automatically for users using the Auto-Join feature. Auto-Join can be configured one of three ways: Best Guess, Custom, and Server-Defined.

**Auto-Process** The automatic processing of a query.

**Axes** Straight lines on a chart used for measurement and categorization. Typically the X-axis and the Z-axis are both used for categories while the Y-axis is used for quantification (for example, Facts/Values). Pie charts only use the X-axis for its categories and the Y-axis for its Facts/Values.

**BCS** See *Broadcast Server*.

**Brio Repository, Brio Intelligence Repository** A specific group of tables created using Brio Intelligence on a database server and used to store Brio Intelligence document objects, including data models and standard queries. Administrators can use Brio Intelligence Designer to upload these objects to the repository for end-users to download, providing a template for query and report building. Documents built from repository objects can be version-controlled or audited through a link to the repository.

**Brio Intelligence Designer** A client/server-based tool that delivers query, analysis, and reporting capabilities and centralized solution administration for developers, database administrators, and system administrators.

**Brio Intelligence Explorer** A client/server-based tool that delivers query, analysis, and reporting capabilities for power users who need to directly access data sources—or to explore the information organized in prebuilt data models stored in the repository.

**Brio Intelligence Navigator** A client/server-based tool that provides simplified query, analysis, and reporting for analysts who need more structured access to the data stored in the repository, but need full analysis and reporting functionality.

**Broadcast Server** A Brio application, residing on a server, that enables users to schedule queries to process on a regular basis or during convenient off-hours, and then distribute the results across a network or to an intranet.

Business Intelligence Organizations utilize information from various operational systems, data marts and/or data warehouses in order to improve business processes, enhance customer service, accelerate sales and increase profitability.

**Catalog** A collection of database tables and local results. This is the information the user can use in his/her data model or query.

**Catalog Pane** Shows a list of elements available to the active section. For example, if Query is the active section, the Catalog pane displays a list of database tables. If Pivot is the active section, the Catalog pane displays a list of results columns. If EIS is the active section, the Catalog pane displays a list of embeddable sections, graphic tools, and control tools.

**Categories** Groupings by which the data is organized (for example, month).

**CGI** See *Common Gateway Interface*.

**Chart** A graphical representation of data. Users create charts to convert raw data into eloquent, visual information.

**Chart Section** With a varied selection of chart types, and a complete arsenal of OLAP tools like group and drill-down, the Chart section is built to support simultaneous graphic reporting and ad-hoc analysis.

**Client/Server** A network architecture in which each computer or process on the network is either a client (requests information) or a server (delivers requested information).

**Clustered Bar Charts** Occurs when the categories are viewed side by side within a given category, useful for side by side category analysis. Clustering is only done with vertical bar charts.

**Common Facilities** One of the four categories of objects defined by the Object Management Architecture (OMA). The Common Facilities is a collection of services that many applications may share, but the services are not as fundamental as Object Services. For example, Print Facility and Mobile Agent Facility.

**Common Gateway Interface** A native executable launched by the Web server. The role of our CGI is to pass requests from Web clients to ODS and results from ODS back to Web clients.

**Computed Item** A virtual column (as opposed to a column that is physically stored in the database or cube) that can be calculated by the database during a query, or by Brio Intelligence in the Results section. They are calculations of new data based on functions, data items and operators provided in the dialog box. They can be included in reports or reused to calculate other data.

**Connection File** See *Open Catalog Extension Files*.

**Controls Folder** Contains prebuilt items that can be added to your EIS section, such as list boxes, radio buttons, and command buttons. You can then attach scripts to the controls embedded in the EIS section to execute actions.

**Correlated SubQueries** Subqueries that are evaluated once for every row in the parent query. A correlated sub query is created by joining a topic item in the subquery with one of the topic items in the parent query.

**Cross Join** Creates a query where none of the tables is joined. Every row in one table is joined to every row in another table.

**Cube** The data in OLAP databases (MS Plato, Essbase, MetaCube) is stored in *3-dimensional* cubes, which is different from standard relational databases (*2-dimensional*). Cubes are made up of dimensions and measures. A cube may have dozens of dimensions.

**DaConnect (aka DaConn)** Brio Intelligence's main connectivity class. Contains all the connectivity specific information. Instance of a connection class is made whenever Brio Intelligence needs to connect to any database.

**Daemon-mode BQ** The Brio client/server executable. It is spawned in daemon mode by node JREs. The role of the daemon-mode BQ is simply to execute database queries and return results.

**DaSession** When a client needs to perform an operation such as select, insert, update on a database, a session is created. The life time of a session synchronizes with the operation's duration. Sessions are created when a client needs to perform operations on the database and are destroyed when the operation is considered complete.

**Data Function** Compute aggregate values, including averages, maximums, counts and other statistics, which summarize groupings of data. You can use data functions to aggregate and compute data from the server before it reaches the Results section, or compute different statistics for aggregated totals and items in the other analysis sections.

**Data Model** A representation of a subset of actual database tables that acts as a menu for the query-builder. Data models are the sources for building the Request, Limit, and Sort lines in a query section. You create a data model by dragging database tables from the Catalog pane Table Catalog into the Content pane. The data model displays database tables graphically as topics when they are in the Content pane.

Data models can be distributed through the Brio repository and used by end users to create their own queries.

**Database Function** A predefined formula in a database.

**Database Server** A computer that stores database management system software (DBMS, for example, Oracle, Sybase, Essbase), and a database shared by a network of computer clients. Most databases are used in a client/server environment.

By storing data on a single, powerful machine on a network, the data is centralized and accessible to many users. The server ensures that the data is maintained correctly and serves as a traffic cop to regulate client machine access to the data. The server's computing power is also useful in computing and filtering data from the database before it reaches your workstation. For small or localized databases, your own computer can act as both database server and client.

**Datatype** The type of data stored in a specific column in a database. For example, data can be stored as a numeric datatype.

**Date Group** A feature in the Results and Table sections that separates a date into Year, Quarter and Month columns. The display format for the new Month column is automatically set to *mmm* so that the month names sort chronologically (as opposed to alphabetically) in the report sections. Quarters are based on the calendar year, beginning January 1.

**Design Mode** A toggled environment used to build and modify EIS sections. In Design mode, you build EIS sections with an array of prebuilt control items and graphic items.

Designers can switch out of design mode to test EIS features and deploy them to end users. Design mode is only available in EIS sections. Brio Intelligence Navigator users cannot switch to EIS Design mode.

**Detail View** Displays a topic as a database table. When Detail view is selected by the user, the database returns ten sample rows from the associated table. Each topic item is displayed as a database field. Detail view enables users to browse a sample of the raw data, which is useful when unfamiliar with the data model or the underlying data. Users cannot view a meta topic in Detail view.

**Dimension** In an OLAP database cube, categories of information are called dimensions. Examples of dimensions may be Location, Products, Stores, and Time.

In Brio, related, nonquantifiable items in a topic are also referred to as dimensions, such as Contact or Store Name.

**Dimension (Legend Dimension)** The current axis categorization or grouping method. This can be set to the X, Y, or Z-axis for most chart types. For line and area charts it can only be set to the Y or Z-axis. For pie charts it is always set to the X-axis. When you change the Legend Dimension the color is distributed along the new axis you change to.

**Dimension Tab** In the Pivot section, the tab that enables you to pivot data between rows and columns.

**Dimension Table** Consists of numerous attributes about a specific business process. Each row in a dimension table is unique.

**Drill Anywhere** This feature enables a user to drill into and add items to pivot reports residing in the Results section, without having to return to the Query section or trying to locate the item in the Catalog pane. Drill Anywhere items are broken out as new pivot label items.

**Drill to Detail** This feature enables a user to retrieve items from a data model that are not in the Results section, without having to rerun the original query. This feature provides the ability to interactively query the database and filter the data that is returned. Drill to Detail sets a limit on the query based on the user's selection and adds the returned value as a new pivot label item automatically.

**Drilldown** Allows you to progressively narrow your focus on a selected chart category. Very useful when you have too many categories on a particular axis.

**EIS** See *Executive Information System*.

**EIS Home** This button returns you to the EIS section that has been designated as the EIS Home section. If you have only one EIS section, then EIS Home will return to that section. If you have several EIS sections, the default EIS Home will be the top EIS section in the Catalog pane. In Design mode you can specify another EIS section to be the EIS Home section.

**Embedded Section** A Brio Intelligence section that is embedded in a Smart report or other Brio Intelligence section. All embedded sections maintain live data content and formatting from the original section. Reprocessing the query, or modifying the original section will automatically update the display of that embedded section.

**Executive Information System** Allows users to build and deploy analytic applications. Analytical applications focus on delivering significant prepackaged business content that is encapsulated within an application. With Brio Intelligence, customers and independent software vendors can leverage their knowledge of industry specific best practices and assemble their own analytical applications for deployment to end users using the Web. Combining embeddable Report sections with enhanced EIS controls into a visual workspace and hooking up interactivity between these controls and the native Brio Technology application, an application designer can quickly create a variety of robust applications.

**Expression Line** Displays displays the JavaScript syntax for each item displayed in a report. Use this line to build equations in the Report section. For ease of use, it can be undocked and resized.

**Extranet** An intranet that is partially accessible to authorized outsiders. Extranets are secured by user names and passwords.

**Fact Table** Created to store business activity measures. Most fact tables are extremely large. Each row in a fact table contains numeric measures (fully additive measures, nonadditive measures and/or semiadditive measures) and foreign keys to each dimension table.

**Facts** The numeric values that are broken up in the body of the Pivot section. To add facts to the Pivot, put Results columns from the Catalog pane into the Outliner's Facts pane. Facts are the numeric values in a relational database that are available to analyze. In an OLAP Query, they are called measures.

**Facts/Values** The data that is being visually represented, usually a numeric amount (for example, \$15,000)

**File Server** A computer and storage device dedicated to storing files.

**Filters** In the OLAPQuery section, filters enable you to define and apply limits to the query once Top or Side Labels have been added to the query. You set a filter by applying comparison operators on the values for a specific member. Additional server-specific functions are available based on the selected OLAP database cube. Filters are built to include or exclude data according to specific criteria. Filters can be set on any level in a dimension. However, they must be one of the labels in the Outliner. Filters can be made of members of one of the dimensions or selected by a measure. OLE DB for OLAP has other filter operator types (Top N, Top Sum, Top N %, Bottom N, Bottom N %, Bottom Sum.) Essbase and MetaCube have their own operator types. In Essbase and MetaCube, filters can be done on measures. In OLE DB for OLAP, filters cannot be placed on measures.

**Foreign Key** A database column or set of columns included in the definition of a referential integrity constraint.

**Fully Additive Measure** Attributes in a table that can have their values added together across any dimension.

**Grain** The level of detail at which measures in a table are recorded is referred to as the grain.

**Grouping Columns** This feature, in the Results and Table sections, creates a new column in a dataset by grouping data from an already existing column. Grouping columns consolidate nonnumeric data values into more general group values and map the group values to a new column in the dataset.

**Hardwire Mode** In hardwire mode whenever the OLAP Query is changed, the database is queried to fetch new cube data. In contrast, process mode is manually controlled. You add or remove several items to the Outliner, and then press Process to query the database. When determining whether to use hardwire mode or process mode, consider the size of the cube in which you are working.

**Hierarchy** In an OLAP database cube, a hierarchy organizes a dimension's levels and corresponding members into parent and child relationships. For the levels in a Location dimension, the hierarchy would have Country as the parent of the child City and City as the parent of the child Address.

**Home** Abstract base interface that some Lightning interfaces derive from. Provides basic methods to manipulate and create Bean objects.

**HTML** See *Hypertext Markup Language*.

**Hypertext Markup Language** A programming language used to create World Wide Web pages, with hyperlinks and tags that explain how to format the information on the screen.

**Icon View** Icon View shrinks a selected topic to an icon in the Content pane. The topic remains part of the data model, but is deactivated and can not be accessed by the query. Associated items are removed from the Request line when a topic is made into an icon, and the topic is not recognized as joined to other topics. Icon view is helpful in restricting the use of server time when a topic is infrequently used, and does not have to be active at all times.

**Imported Files** Excel, Text, or CSV files imported into Brio Intelligence. The information in the file goes into a table or a results object. Imported results can be used in other queries (like regular results) for local join purposes.

**Indexes** Indexes are created in a database to increase the performance of data retrieval. Just as book indexes help to locate specific information faster, database indexes provide a faster access path to table data. Indexes are created on one or more columns of a table.

**Insight** A Web plug-in that delivers query, analysis, and reporting functionality for intranet, Internet, or extranet access to information. Based on user profiles or report-level security, the client environment adapts in six stages from full query, analysis, and reporting with data refresh to static report viewing.

**Integrity Constraints** Constraints on tables that guarantee the data adheres to certain business rules. Integrity constraints are defined with a table and are stored as part of the table definition, central to the database data dictionary, so that all database applications adhere to the same set of rules.

**Internal Function** Internal functions are built-in formulas, defined in the Brio application.

**Internet** A global network connecting millions of computers. Unlike online services, which are centrally controlled, the Internet is decentralized by design. Each Internet computer, called a host, is independent.

**Interval** Equal subdivisions within a given scale. The interval can be set manually or to best fit.

**Intranet** A network belonging to an organization, usually a corporation, accessible only by organization members, employees or other authorization users. Intranet Web sites look and act just like any other Web site, but the firewall surrounding an intranet fends off unauthorized access.

**ISAPI** This is a shared library that implements HTTP using Microsoft's Web server plug-in API (ISAPI). Thus it is appropriate for customers with Microsoft Web servers. Functionally it is equivalent to our CGI. Its advantage is that it is far more scalable than a CGI executable.

**Item** An item is a visual representation of a database column and is a member of a topic in the Query section. Items are used to create queries and reports. For example, the Customer Topic may have items including Name, Address, and Phone. You select items from data model topics to build the Request, Limit, and Sort lines in the query section.

**Java Server** The OnDemand server classes packaged in a single JAR file (`ODSClasses.jar`). This component is responsible for managing, routing, and queuing client requests.

**JavaScript** The scripting language for Brio Intelligence products. Brio Intelligence 6.x includes the Netscape JavaScript interpreter (version 1.4.) JavaScript and Brio's Object Model allow application developers to use the full functionality of the industry-standard scripting language to control Brio Intelligence applications.

**Job Repository** A set of database tables which store a queue of scheduled jobs. There can be multiple job repositories in an organization. Job repositories are polled periodically by a Broadcast Server, which downloads and processes jobs when they are due to run.

**Join** A relational database concept indicating a link between two topics. A join typically occurs between identical or similar items within different topics. Joins allow row records in different tables to be linked on the basis of shared information in a column field. For example, a row record in the Customer table is joined to a related record in the Orders table when the Customer ID value for the record is the same in each table. This allows the order record to be linked with the record of the customer who placed the order. If you request items from unjoined topics, the database server has no way to correlate the information between the two tables and leads to awkward datasets and run-on queries.

Brio displays joins visually in the workspace between topics to indicate joins between database tables. Users can also create new joins which are not already specified in the database.

**Join Path** A predetermined join configuration for a data model. Administrators create join paths for users to simply select the type of data model needed, in a user-friendly prompt, upon processing a query. Join paths ensure that the correct tables in a complex data model are being used in a query.

**JRE (Java Runtime Environment)** This is the Java interpreter used to run the Java Server. We ship this as part of our ODS product. Internally we often use the term “JRE” to refer to a running instance of our Java Server.

**Legend Box** An informative box containing color-keyed labels to identify the data categories of a given dimension.

**Level** Similar types of members in an OLAP database cube are grouped at the same level. For example, using the members listed in a Location dimension, France, the USA, and Japan belong to the Country level. Paris, Palo Alto, and Tokyo belong to the City level. 35 Main Street belongs to the Address level.

**Limit** Constraints placed on topic items or request line items to limit them to a certain set of values. Limits appear on the limit line in Brio Intelligence. For example, although the database may display worldwide sales figures for all stores, you may only want to see sales for stores in Germany. Limits make data sets retrieved through a query more efficient and manageable by filtering out unnecessary information.

**Limit Joins** Joins that are created between a database table and a local results object. The topic item being joined is limited by the values of the column being joined in of the local results object. A limit join is one of the options that can be chosen in a Modify Join operation between a topic item and a local results item.

**Linked Data Model** Documents that are linked to a master copy in a repository. When changes are made to the master, users are automatically updated with the changes when they connect their duplicate copy to the database.

**Load Balancing** A technique used to improve the scalability of the OnDemand Server.

**Local Computed Meta Topic Items** Computed item definitions evaluated by Brio Intelligence results engine. Local computed items are created to be meta topic items. They can be dragged to the request line like regular topic items. The only difference is that the results engine evaluates these items as opposed to the database.

**Local Joins** A join between a local results object and a database table or another local results object. Brio Intelligence performs the actual join in this case.

**Local limits** Limits placed on the local dataset in the Results section, as opposed to the Query section. Limits in the query section restrict the data retrieved by the query to the desktop. Local limits screen data from view in the Results set; although it's still there, you cannot see the data that has been excluded or use it in reports unless the limit is removed.

**Local Results** Results of other queries within the same data model. These results can be dragged into the data model to be used in local joins. Local results are displayed in the catalog when requested.

**Locked Data Model** Data Models that are locked cannot be modified by a user.

**Manager** See server.

**Master Data Model** A Data Model that exists independently and has multiple queries that reference it as a source. When using a master data model, the text “Locked Data Model” appears in the Content pane of the Query section. This means that the data model is linked to the master data model displayed in the Data Model section, which may be hidden by an administrator.

**MDX** Multi Dimensional eXpressions is the language used to give instructions to OLE DB for OLAP- compliant databases (MS Plato), as SQL is the language used for relational databases. When you build the OLAP query section’s Outliner, Brio Intelligence translates your requests into MDX instructions. When you process the query, MDX is sent to the database server. The server returns a collection of records to your desktop that answer your query. *See SQL.*

**Measures** Numeric values in an OLAP database cube that are available for analysis. Measures may be margin, cost of goods sold, unit sales, budget amount, and so on. *See Facts.*

**Members** In an OLAP database cube, members are the content values for a dimension. In the location dimension, they could be Palo Alto, Paris, Tokyo, 35 Main Street, USA, France, Japan, and so on. These are all member values for the location dimension.

**Metatopic** A customized, virtual topic, built from regular topics that reflects the exact topic and item structure of database tables. Metatopics allow items from disparate topics to be consolidated in a single topic, simplifying its appearance and reducing its conceptual resemblance to the underlying database structure. You can choose to view a data model in terms of its original topics, metatopics, or a combination of both.

**Metadata** Data about data. Stored in database tables, metadata describes the history, content, and function of database tables, columns and joins in understandable business terms. Metadata can overcome the awkward names or ambiguous abbreviations often used in a database. For example, in a table named CUST\_OLD, metadata may use a descriptive business name, such as Inactive Customers.

**Mime Type** A browser mapping of a file type to either a helper application or a plug-in. When a browser attempts to open a file of a particular mime type, it either loads the associated plug-in or launches the associated helper application. A file’s mime type is determined either by a) the file extension or b) the HTTP header. Plug-ins tell browsers what mime types they support and what file extensions correspond to that mime type.

Brio Web clients support the following mime types: *application/x-brioquery* mime type (for .bqy files). This is the default mime type our Web clients support and are ordinary Brio files. *application/x-brioquerydata* (for .bqd files). These are data files in text or Excel format, whose extension has been changed to .bqd. When a Brio Web client is launched to open a BQD file, it imports the data and executes any BrioScript or JavaScript the file contains.

**Morphing** Mechanism by which Brio Web clients provide document security. *See Adaptive Report Level.*

**Multidimensional Database** A database that stores data in a format often referred to as a cube, such as Essbase, MS OLAP, MetaCube, and so on. *See also* Relational database and OLAP database.

**Nonadditive Measure** Attributes in a table that cannot be added across any dimension, such as a percentage value (for example, margin rate).

**NSAPI** This is a shared library that implements HTTP using Netscape's Web server plug-in API (NSAPI). It is equivalent to our CGI. Its advantage is that it is far more scalable than a CGI executable.

**Null Value** A null value is absent of data.

**OCE** *See Open Catalog Extension Files.*

**OCE Wizard** Wizard or set of screens used to create a new OCE or modify an existing OCE.

**ODS** *See OnDemand Server.*

**OLAP Database** A database that stores its information in cubes. Cubes contain dimensions and measures. A cube may have dozens of dimensions. Cubes are built to hold aggregated data, which anticipate how users think about business models. Cubes deliver this information efficiently and quickly.

**OLAPQuery Section** Analyzes and interacts with data stored in an OLAP cube. When you use Brio Intelligence to connect to an OLAP cube, the document immediately opens an OLAP Query section. The OLAPQuery section displays the structure of the cube as a hierarchical tree in the Catalog pane. Queries are built by dragging measures and dimension levels or members directly into the Outliner panes.

**OnDemand Server** A Brio server application that enables users to view and select from a list of available documents over the Web, as well as to build and process new queries.

**OOA** Object Oriented Analysis.

**OOA&D** Object-Oriented Analysis & Design.

**Open Catalog Extension Files** Encapsulate and store connection information used to connect Brio applications to a database. OCE files specify the database API (ODBC, SQL\*Net, etc.), database software, the network address of the database server, and your database user name. Once created, a user can specify the OCE file and database password and logon. An OCE file is required for a Brio Intelligence document to use a database. The file extension is `.oce`.

**Open Client DBLib** API to connect to Sybase, Redbrick, SQL Server, and so on.

**Open Metadata Interpreter** The Tables, Columns, Joins, Lookups and Remarks tabs available in the connection wizard when you edit a custom metadata source. These tabs allow Brio administrators to specify a customer source of metadata that can be accessed through SQL statements, and provided to end users with data models.

**Outliners** Drag-and-drop command lines used in the Pivot, Chart, OLAPQuery and Report sections. Each Outliner pane corresponds to a specific layout element of the report. When an item is dragged to an Outliner pane, the item assumes the layout attributes of the respective report element. Data appears simultaneously in the Content pane with the appropriate formatting.

**Pivot Dimension** A row or column of labels that corresponds to an item in the Catalog pane.

**Pivot Section** The Pivot section is used to create crosstab reports and analyze data.

**Pivot Table** Analytical tools that resemble spreadsheets or crosstabular reports. A pivot table overlays a dynamic datacube, which allows data to be sliced and diced for ad-hoc, interactive, and multidimensional analysis.

**Pivoting** In the Pivot section, pivoting is the ability to change a label from a top to a side (or a side to a top) orientation with a simple click and swing of the label's Dimension tab.

**Plot Area** The area bounded by the X-, Y-, and Z-axis. For pie charts, it is the rectangular area immediately surrounding the pie.

**Plug-in** A special application file placed in the browser Plug-in directory. Plug-ins add seamless functionality to a Web browser, enabling the browser to open particular plug-in file types.

**Plug-in / Helper** The two implementations we support for our Web clients. The terms are short for browser plug-in and helper application respectively. The plug-in implementation is a shared library which the browser loads when the user requests a document of the application/x-brioquery mime type. The helper implementation is an application launched by the browser when that same mime type is requested. The plug-in is generally considered a *better* implementation because it runs within the browser. Brio provides helper applications on all platforms (Windows, Mac and Unix) and plug-ins on Windows only.

**Predefined Drill Paths** Enables a user to drill directly to the next level of detail, as defined in the data model.

**Primary Key** A database column or set of columns included in the table definition of the PRIMARY KEY constraint. Primary key values uniquely identify the rows in a table. Only one primary key is defined per table.

**Query** A query is set of database instructions to return an answer set to a specific question. Each row returned in the Results section of a document is an answer to the question posed in the Query section.

**Query Computed Items** Item definitions created by the user. This can include other request line items or topic items and or database functions. The definition is sent to the database and the database evaluates them.

**Query Log** Log of all SQL statements sent to the database (also referred to as SQL Log).

**Quickview** A Web plug-in that offers simplified report viewing and data refresh for users who need to view published, formatted reports within their browser.

**Relational Database** A database that stores its information in tables that are related or joined to each other by common pieces of information called keys. Relational databases store information in tables. A table is subdivided into column fields. Related information is grouped in column fields. Column fields have parents and children. For example, the Customer table may have columns including Name, Address, and ID number. Each table contains row records that describe information about a singular entity, object, or event, such as a person, product, or transaction. Row records are segmented by column fields. Rows contain the data that you retrieve from the database. Database tables are linked by Joins. (*See also Join*)

**Report Group** In the report section, embedded reports and tables are grouped by other data items. Items placed in the Groups Outliner break information into these dimensional groupings. For example, your table may include the name, contact information, and sales for each of your distributors. This table gains in clarity when broken into groupings that classify the stores by geographical region, year, or both.

**Report Section** A dynamic, analytical report writer, that provides users with complex report layouts and easy to use report building tools. Pivot tables, tables, and charts can be embedded in a report. The report structure is divided into group headers and body areas, with each body area containing a table of data. Tables are created with dimension columns and fact columns. These tables are elastic structures. Multiple tables can be ported into each band, each originating from the same or different result sets.

**Repository** Central location used to store data models, queries and queries with reports. Repository is usually a database chosen by the user.

**Request Line** Holds the list of items requested from the database server and that will appear in the user's results.

**Request Line Items** Columns listed in the request line.

**Results Section** A section in a Brio Intelligence document that contains the dataset derived from a query. Data is massaged in the Results section for use in the report sections.

**Run Mode** A toggled environment used to test EIS sections. It simulates a Navigator user's view of the section. In Run mode, you can not add any features, but you can use features that are part of the deployed EIS sections. *See also Executive Information System and Design Mode.*

**Scale** The range of values that allows one to gauge how much each category represents. This range can be either at equal intervals or at logarithmic interval. The scale can be set manually or to best fit.

**Script** A series of instructions for a computer. Scripts are activated when an event occurs, such as clicking a button or selecting an item from a drop down list. Brio Intelligence's scripting language is JavaScript.

**Section Pane** Lists all the sections that are available in the current Brio Intelligence document.

**Section Title Bar** A navigational aid under the toolbars that provides a means of moving between sections and toggling section-specific tools and gadgets, such as the outliner.

**Semiadditive Measure** Attributes in a table that can be summarized across some dimensions, but not all.

**Server Administrator** A stand-alone executable for administering the Brio OnDemand Server and the Brio Broadcast Server.

**Server Components** The components that make up the OnDemand Server. These include the Web Broker, the ODS Manager, the ODS Node(s), and the ODS Repository (ies).

**Server Computed Meta Topic Items** Metatopic item definitions created by the user. These can use any of the database functions available. These items can also use any of the other topic items in the data model. These items are evaluated by the database.

**Session Socket (DaSessionSocket)** Session information specific to each database or API is abstracted in a session socket. We have session sockets for each of the APIs we support.

**Simple Join** Retrieves rows to create a query where the values in joined columns match.

**Slicer** An axis that filters the data in an OLAPQuery. Only individual members can be used in a slicer. A slicer can be thought of as a third axis in a OLAP Query. The other axis are the Side Labels and the Top Labels. Every dimension folder contains a members subfolder named "Values for..." that dimension. This subfolder contains the members that are eligible for the slicer.

**Snapshot** A read-only table snapshot is a local copy of table data that originates from one or more remote master tables.

**Sort** Conditions placed on request line items to sort the results in ascending or descending order. These are displayed in the sort line in Brio Intelligence.

**SQL** *See Structured Query Language.*

**SQL Net** Oracle's native API to connect to an Oracle database.

**Stacked Charts** A chart where the categories are viewed on top of one another for visual comparison. This type of chart is useful for subcategorizing within the current category. Stacking can be used from the Y- and Z-axis in all chart types except pie and line. When stacking charts the Z-axis is used as the Fact/Values axis.

**Stored Procedure** Precoded queries in languages other than SQL. This is a feature available in some database software. Brio Intelligence can run stored procedures and retrieve the Results.

**Structure View** Displays a topic as a list of component items allowing users to see and quickly select individual data items. Structure view is the default view setting.

**Structured Query Language** The language used to give instructions to relational databases. When you build the query section's Request, Limit, and Sort lines, Brio Intelligence translates your requests into SQL instructions. When you process the query, the SQL instructions are sent to the database server. The server returns a collection of records to your desktop that answers your query. This reply is displayed as the Results section. You can look at the SQL generated by a query in the Query Log, or code a query directly in SQL using the Custom SQL window.

**Subquery** A query embedded within another query.

**Surface Values** A setting in the Pivot section to base aggregate calculations on the values in the report, rather than the values in the Results section.

**Synonym** An alias for a database table or view. It is a direct reference to a table view.

**Table** The basic unit of data storage in a database. Database tables hold all of the user-accessible data. Table data is stored in rows and columns.

**Table Catalog** Displays tables, views, and synonyms to which users have access. Users drag tables from the Table catalog to the Content pane to create data models in the Query section.

**Table Section** Used to create tabular-style reports. It is identical in functionality to the Results section, including grain level (table reports are not aggregated). Other reports can stem from a Table section.

**Top and Side Labels** In the Pivot section, labels are the column and row headings on the top and sides of the pivot. These define categories by which the numeric values are organized.

**Topic** A topic is a visual representation of a database table in the Content pane. Topics are part of data models displayed in the Query section and can contain one or more items.

**Topic Items** Individual items in a topic or metatopic.

**Topics** Visual representation of tables in the database, related by joins that link certain items in each topic. Each topic title bar displays the topic's name. The topic shows a list of items, one for each column in the database table.

**Underlying Values** Another name for Results values. When Use Surface Values is disabled in a Pivot section, aggregate calculations are based on values in the Results section.

**Union/Intersection/Minus Queries** Queries created to perform set operations such as Union, Intersection, and Minus. These queries are created by the Append Query option.

**Variable Limits** Limits that prompt users to enter or select limit values before the queries are processed on the database.

**View** A custom-tailored presentation of the data in one or more database tables. Views do not actually contain or store data; rather, they derive their data from the tables on which they are based, referred to as the base tables of the views.

**Web Clients** The Web-enabled counterparts of our client/server application (Brio Query). See *Insight* and *Brio Intelligence Designer*.

**Web Components** Web server components of the OnDemand Server are Web Broker, HTML pages without ODS tags, and the Zero Administration Web client installers. See *OnDemand Server*.

**World Wide Web** A system of Internet servers that support specially formatted documents. The documents are formatted in a language called HTML (HyperText Markup Language) that supports links to other documents, as well as graphics, audio, and video files.

**WWW** See *World Wide Web*.

**Zero Administration** Installs Brio Web applications (Insight and Quickview) automatically without the help of an administrator when a user logs on to the OnDemand Server.

# Index

## Symbols

- % Increase function, 3-10
- % of Category function, 5-23
- % of Column function, 3-10
- % of Grand function, 3-10, 4-19
- % of Row function, 3-10

## Numerics

- 2-D bar charts, 4-9
- 2-D bar charts, using to analyze data, 4-9
- 3-D bar charts, 4-12
- 3-D View, 4-11

## A

- Add Computed Item command, 2-13, 3-15, 4-38, 5-32
- Add Cume command, 3-15
- Add Date Group command, 2-13
- Add Grouping Column command, 2-13
- Add Selected Items command, 3-15
- Add Totals command, 3-15
- adding computed items, 2-6, 3-14, 4-20, 5-21
- adding cumulative totals, 3-8
- adding date groups, 2-9
- adding grouping columns, 2-7
- adding lines to labels, 4-9
- adding other report elements, 5-12
- adding report groups, 5-10

- adding totals and subtotals, 3-7
- applying data functions to tables, 2-10
- area charts, 4-14
- ascending sorts, 2-13, 4-38, 5-32
- Average function, 2-10, 3-9, 4-19, 5-22
- axes, 4-3
- axis grid lines, showing, 4-27

## B

- bar, 4-4
- bar charts
  - 2-D, 4-9
  - 3-D, 4-12
  - clustered, properties, 4-34
  - properties, 4-34
  - stacked, 4-13
  - three-dimensional, 4-12
  - two-dimensional, 4-9
- bar-line charts
  - properties, 4-34
- best fit, charts, 4-26
- Break Total command, 2-13
- break total data functions, 2-10
- break totals, 2-11

## C

- changing chart color schemes and fill patterns, 4-35
- changing chart data labels, 4-36

- changing chart legends, 4-29
- changing color of chart elements, lines, and text, 4-37
- changing column names, 5-9
- changing label nesting levels, 3-6
- changing the view of a chart, 4-26
- chart angle and elevation
  - changing, 4-27
- chart dimensions, 4-4
- chart elements, 4-8, 4-26
- chart elements, working with, 4-8
- chart format, determining what to use, 4-6
- chart formats and types, 4-6
- chart label properties, 4-32
- Chart menu commands, 4-38
- chart properties, changing, 4-30
- Chart section
  - applying sorts in, 4-21
  - computed items, 4-20
  - data functions, 4-19
  - diagram, 4-2
  - Outliner, 4-5
- chart terminology, 4-3
- chart terminology , 4-3
- Chart This Pivot command, 3-4
- charting a pivot table, 3-4
- charting basics, 4-3
- charts
  - adding computed items, 4-20
  - adding lines to labels, 4-9
  - area, 4-14
  - building, 4-5
  - combination, 4-16
  - creating, 4-5
  - creating from pivot tables, 3-4
  - inserting text, 4-28
  - line charts, 4-16
  - multidimensional, 4-11
  - Outliner, 4-5
  - pie charts, 4-7
  - pivoting, 4-23
  - ribbon charts, 4-15
  - stacked bar, 4-13
  - terminology, 4-3
  - three-dimensional, 4-11
  - three-dimensional bar, 4-12
  - two-dimensional, 4-7
  - two-dimensional bar, 4-9
  - zooming, 4-26
- clustered bar charts, 4-12
  - properties, 4-34
- color
  - changing, in charts, 4-37
- Column commands
  - Add Grouping, 2-13
  - Hide, 2-13, 4-38, 5-32
  - Modify, 2-13
  - Unhide, 2-13, 4-38, 5-32
- Column Name function, 5-22
- column names
  - changing, 5-9
  - hiding, 5-9
- columns, 2-8 – 2-12, 5-9, 5-19
- combination charts, 4-16, 4-34
- commands
  - Chart menu, 4-38
  - formatting, 2-12
  - Pivot menu, 3-15
  - Report menu, 5-32
  - Table menu, 2-13
  - Tables menu, 2-13
- comparing related values, 4-18
- components, report, 5-7
- computed fields, 5-13 – 5-14
- computed items
  - adding, 2-13, 4-38, 5-32
  - Chart section, 4-20
  - Report section, 5-21

- Table section, 2-6
- concatenating report element syntax, 5-6
- converting detail reports, 5-29 – 5-31
- Count function, 2-10, 3-9, 4-19, 5-22
- creating
  - charts, 4-5
  - custom reports, 5-8
  - pivot tables, 3-3
  - pivot tables from charts, 4-23
  - smart reports, 5-27
  - tables, 2-3
  - three-dimensional bar charts, 4-12
- cumulative limits, 3-8
- cumulative totals, adding, 3-8
- custom functions, 2-10
- custom totals, inserting, 2-10
- customizing chart patterns, colors, and labels, 4-35
- customizing chart properties and labels, 4-30

## D

- data calculations, in pivot tables, 3-7
- Data Function command, 3-15, 4-38, 5-32
- data function definitions, 3-9
- data functions
  - in charts, 4-19
  - in custom reports, 5-22
  - in pivot tables, 3-9
- data, pivoting, 3-3
- Date & Time field, 5-14
- Date & Time Now field, 5-14
- Date field, 5-13
- Date Group command, Add, 2-13
- Date Now field, 5-14
- dates, breakout columns, 2-9
- deleting columns, 2-12
- descending sorts, 2-13
- design guides, 5-17

- Design Guides command, 5-32
- Detail reports, converting, 5-29
- display differences, 5-30
- displaying axis grid lines, 4-27
- displaying rulers, 5-17
- Drill Anywhere command, 4-38
- Drill Down command, 3-15
- Drill Up command, 3-15
- drilling into charts, 4-24
- Drillup command, 4-38
- duplicate values, suppressing, 5-9

## E

- elements
  - selecting pivot, 3-4
  - working with chart, 4-8
- Expression line, 5-5
- expression syntax, 5-5

## F

- facts, 3-3
- features, sort line, 4-21
- fields, 5-13
- File Name field, 5-14
- focus on items, 4-25, 5-24
- Focus On Items command, 3-15, 4-38, 5-32
- font styles, changing, 5-27
- fonts, changing, 5-28
- footers
  - page, in custom reports, 5-11
  - report, 5-11
- formatting commands, 2-12
- formatting report items, 5-27
- formatting reports, 5-27
- functions
  - in sorts, 4-23
  - weighted, 3-12

## G

- Grand Total command, 2-13
- grand total data functions, 2-10
- grand totals, 2-10
- grand totals, inserting, 2-10
- graphic elements, 5-12
- Grid command, 5-32
- grid lines, 4-4
- grids, 5-17
- group fact syntax, 5-6
- group headers, report, 5-10
- Group Items command, 3-16, 4-38
- group label syntax, 5-5
- grouping columns, 2-13
- guides, design, 5-17

## H

- headers
  - page, in custom reports, 5-11
  - report, 5-11
  - report group, 5-10
- Headers and Footers command, 5-33
- Hide Column command, 2-13, 4-38, 5-32
- hide items, 4-25, 5-24
- Hide Items command, 3-16, 4-38, 5-32
- hiding and focusing on charted data, 4-25
- hiding and focusing on reported data, 5-24
- hiding column names, 5-9
- hiding column totals, 5-9
- horizontal lines, 5-12

## I

- Increase function, 3-10
- Insert Field command, 5-32
- Insert Graphic command, 5-32
- Insert Predefined Field command, 5-32

- Insert Table command, 5-32
- inserting
  - additional tables in a custom report, 5-10
  - limit values, 5-15
  - page breaks, 5-16
  - page headers and footers, 5-11
  - report headers and footers, 5-11
  - text, 4-28
  - text in charts, 4-28
- items, sort, 4-22

## K

- Keep Together command, 5-28
- Keep With Next command, 5-28

## L

- label properties
  - chart, 4-32
  - charts, 4-32
- label reference, in sorts, 4-22
- labels, nested, 3-6
- Las Saved field, 5-13
- Last Printed field, 5-13
- legend, 4-4
- legends, positioning and resizing, 4-29
- Limit command, 2-13
- limit values, in reports, 5-15
- limiting data in a table, 2-4
- limits
  - cumulative, 3-8
  - removing, 2-5
  - tables, 2-4
- limits, cumulative, 3-8
- line charts, 4-16
- lines, 5-12
- Locked command, 5-13

## M

- manipulating chart data, 4-18
- manipulating table data, 2-4
- margins
  - Report section, 5-19
- Maximum function, 2-10, 3-10, 4-19, 5-22
- menu commands
  - Chart, 4-38
  - Pivot, 3-15
  - Report, 5-32
  - Table, 2-13
- Minimum function, 2-10, 3-10, 4-19, 5-23
- Modify Column command, 2-13
- Modify command, 3-15
- Modify Computed Item command, 4-38
- modifying pivot tables, 3-4
- moving pivot table elements, 3-5
- multicolumned reports, 5-19
- multidimensional charts, 4-11
- multiple data sources, in reports, 5-25

## N

- nested
  - labels, 3-6
- Non-Null Average function, 3-10, 4-19, 5-23
- Non-Null Count function, 3-10, 4-19, 5-23
- Null Count function, 3-10, 4-19, 5-23
- number formats, changing, 5-27
- Number of Pages field, 5-13

## O

- object names, 5-13
- Outliner
  - Chart section, 4-5
  - Pivot section, 3-4
  - Table section, 2-3
- Outliner pane usage, 4-3

- Outliner Panes and X, Y, And Z Axes, diagram, 4-4
- ovals, 5-12

## P

- page breaks, inserting, 5-16
- Page Margins command, 5-32
- Page Number field, 5-13
- Page X of Y field, 5-13
- Path Name field, 5-14
- Picture command, 5-32
- pictures, 5-13
- pie charts
  - analyzing data, 4-7
  - rotating, 4-9
- pie slices, positioning, 4-8
- pivot elements, selecting, 3-4
- Pivot menu commands, 3-15
- Pivot menu commands , 3-15
- Pivot Outliner, 3-4
- Pivot section, diagram, 3-2
- pivot tables
  - calculating totals and subtotals, 3-7
  - charting, 3-4
  - how to use, 3-3
  - modifying, 3-4
  - selecting elements, 3-4
  - subtotals, 3-7
  - working with pivot items, 3-4
- pivoting data, 3-3
- planes, 4-4
- plot area, 4-3
- positioning pie slices, 4-8
- Properties command, 4-38
- properties, chart label, 4-32

## Q

- Query Limit field, 5-13
- Query SQL field, 5-13

## R

- rectangles, 5-12
- reference Items, 4-22
- reference items, in sorts, 4-22
- Refresh Data command, 3-16, 4-38
- Remove command, 2-13
- Remove Selected Items command, 3-15, 4-38, 5-33
- removing columns, 5-9
- reordering columns, 5-9
- report components, 5-7
- report element syntax, concatenating, 5-6
- report expression syntax , 5-5
- report group headers, 5-10
- report headers and footers, 5-11
- Report menu commands, 5-32
- Report Name field, 5-14
- report pages, 5-17
- Report section
  - computed fields, 5-14
  - computed items, 5-21
  - creating smart reports, 5-27
  - data functions, 5-22
  - elements, 5-3
  - Expression syntax, 5-5
  - fields , 5-13
  - formatting items, 5-27
  - formatting techniques, 5-27
  - graphic elements , 5-12
  - limit values, 5-15
  - toolbar, 5-4
  - using multiple data sources, 5-25
- Report section, diagram, 5-2
- Report Setup command, 5-33
- reports
  - adding computed items, 5-21
  - data functions, 5-22
  - inserting page breaks, 5-16
  - multicolumned, 5-19
  - smart, 5-27

- Restore Name command, 3-16, 4-38
- Result Limit field, 5-13
- ribbon charts, 4-15
- rotating and elevating charts, 4-27
- rotating pie charts, 4-9
- round rectangles, 5-12
- rows, selecting, 2-12
- Rulers command, 5-32

## S

- Section Boundaries command, 5-32
- selecting chart elements, 4-26
- selecting columns, 5-9
- selecting columns and rows, 2-12
- selecting pivot table elements, 3-4
- setting
  - bar chart properties, 4-34
  - chart label axis properties, 4-32
  - chart value axis properties, 4-33
  - general chart properties, 4-30
- setting up
  - page columns, 5-19
  - reports, 5-18
- Show All Items command, 3-16, 4-38, 5-32
- Show Hidden Items command, 3-16, 4-38, 5-32
- showing column names, 5-9
- showing column totals, 5-9
- showing pie percentages, 4-9
- showing positive and negative values, 4-8
- slice, 4-4
- smart reports, 5-27
- Sort Ascending command, 2-13, 4-38, 5-32
- Sort command, 3-15, 5-32
- Sort Descending command, 2-13
- sort items, 4-22
- sort line features, 4-21
- sorting
  - chart items, 4-21
  - charts, 3-6

- pivot tables, 3-6
- report items, 5-20
- reports, 5-20
- tables, 2-5
- specifying
  - page margins, 5-19
  - page size, 5-18
- stacked bar charts, 4-13
- staging data in tables, 2-3
- subtotals, 3-7
- Sum function, 2-10, 3-9, 4-19, 5-22
- suppressing duplicate values, 5-9
- surface values, in data functions, 3-11
- syntax
  - concatenating, 5-6
  - expression, 5-5
- syntax, concatenating, 5-6

## T

- table column formatting options, 5-9
- table dimension syntax, 5-5
- table fact syntax, 5-5
- Table menu commands, 2-13
- Table Outliner, 2-3
- Table section
  - computed items, 2-6
  - data functions, 2-10
  - diagram, 2-2
- tables
  - adding computed items, 2-6
  - limits, 2-4
  - modifying pivot, 3-4
  - pivot, 3-3 – 3-4, 3-7
  - working with, 2-12
- tables as a data staging area, 2-3
- text in charts, inserting, 4-28
- text labels, 5-13

- text, wrapping, 5-9
- three-dimensional bar charts, 4-12
- Time field, 5-14
- Time Now field, 5-14
- Total commands, 2-13
- totals
  - break, 2-11
  - calculating pivot totals, 3-7
  - cumulative, 3-8
  - inserting in Tables section
    - break, 2-10
    - custom, 2-10
    - grand, 2-10
    - surface, 3-10
- two-dimensional bar charts, 4-9
- two-dimensional charts, 4-7

## U

- Ungroup Items command, 3-16, 4-38
- Unhide Column command, 2-13, 4-38, 5-32
- Use Surface Values command, 3-15

## V

- value reference, in sorts, 4-22
- values, 4-3, 4-18, 5-9
- vertical lines, 5-12
- Visible command, 5-13

## W

- weighted functions, 3-12
- weighted values example, 3-12
- wrapping text, 5-9

## X

- X-Categories, 4-3

## Y

Y-Facts, 4-3

## Z

Z-Categories, 4-3

zooming charts, 4-26