IBM Cognos Business Intelligence Series 7
IBM Cognos Series 7 PowerPlay

Version 7.5

PowerPlay Web User Guide

Information Management software

Product Information

This document applies to IBM Cognos Series 7 PowerPlay Version 7.5 and may also apply to subsequent releases. To check for newer versions of this document, visit the IBM Cognos Information Centers (http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp).

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Introduction

The PowerPlay Web documentation is HTML-based help that shows you how to view, explore, format, and distribute PowerPlay reports using your Web browser. You need have only a Web browser and Adobe Acrobat Reader installed on your computer to open data from PowerPlay Enterprise Server.

Use IBM Cognos PowerPlay Web to:

- view reports and multidimensional cube data
- add calculations to your data
- choose from a variety of graphical display formats
- create your own reports
- send email notification of changes occurring in your data
- publish your reports to the portal for your colleagues to view

Note: Some Asian languages are not supported by IBM Cognos Impromptu, IBM Cognos Impromptu Web Reports, and IBM Cognos Visualizer.

Finding information

To find the most current product documentation, including all translated documentation, access one of the IBM Cognos Information Centers at http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp.

You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

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Chapter 1: PowerPlay Web

Use PowerPlay Web to view and explore reports using your Web browser. A report consists of current data selected from a cube. A cube is a multidimensional data source that contains measures (data) organized into dimensions. For example, a Sales cube might structure information into dimensions such as Product Line, Sales Representatives, Channels, and Locations.

You view PowerPlay Web reports in PowerPlay Web Viewer or in PowerPlay Web Explorer. In PowerPlay Web Viewer, reports appear in PDF format. You can print information or further explore the report by opening it in PowerPlay Web Explorer.

In PowerPlay Web Explorer, reports appear in an interactive format, which lets you explore the relationships among different dimensions of your business. You can change the information in the report, add calculations, and change how the information appears. You can also save the results for other PowerPlay Web users.

Reports created in PowerPlay for Windows or PowerPlay for Excel open in PowerPlay Web Viewer. You can open these reports in PowerPlay Web Explorer to further explore the report. Other reports or cubes that are Web accessible open in PowerPlay Web Explorer.

Cubes are created by your administrator.

PowerPlay Web Viewer

Use PowerPlay Web Viewer to view and analyze reports created by report authors. In PowerPlay Web Viewer, reports appear as PDF documents. With high resolution formatting, PowerPlay Web Viewer provides high quality reports on the Web.

Depending on how the report author published the report, you can customize the information in the report (p. 9). For example, you can use prompts to select dimensions and filters.

You can either print the information or open the report in PowerPlay Web Explorer (p. 14) if you want to explore the report further. For information about saving reports, see (add xrefs).

Customize the Report Content

Depending on how the report was created, you may be able to customize the information in the report.

The choices that you can select may include:

- dimensions (p. 18)
- row and column content (p. 52)
- zero suppression (p. 53)
- short headings (p. 57)
- currency and currency format

For example, you open a report and use prompts to choose the years and products you want to see in the report. The report appears with the selected years and products. You can return to the prompts to change your selections. Each time you change the selections using the prompts, PowerPlay refreshes the report to show the new information.

Prompts are available only available if the report author included them in the report.

Steps

1. Open a report (p. 18).
2. On the **Modify Reports** page, select the information using the prompts and click **OK**.

   If the report is already open, you can return to the prompts using the change report settings button  .

The report appears with the information you selected using the prompts.

If the prompts include dimensions, you can quickly remove all filters from all dimensions using the reset dimensions button  on the dimension line.

View Layers on Pages

Reports created in PowerPlay for Windows or PowerPlay for Excel may include different categories of information by using layers. In PowerPlay Web Viewer, each layer appears on a separate page.

You can show layer views when you export the report in PDF format. As well, when enabled by your administrator, you can view explanations about each category in the report or drill through the report to reveal more information(p. 35).

Step

- Scroll to the next page in the report.

The page appears showing the content for the next layer.

Explore Reports

If you want to further explore the data or change a report in PowerPlay Web Viewer, you can open the report in PowerPlay Web Explorer. For example, in PowerPlay Web Explorer you can change the report by selecting measures and dimensions, or by drilling down or drilling up to change the focus of the report.

Step

- Click the explore button  .

The report opens in PowerPlay Web Explorer.

Note: If the report was created in PowerPlay Reporter, the layout of the report may change after you click the explore button. This is because some Reporter features are not supported in PowerPlay Web Explorer.

Accessible Reports

Cognos is committed to assisting people with disabilities, and promotes initiatives that make workplaces and technologies accessible. For example, Cognos Series 7 provides a report-reading solution for accessibility. This report-reading solution is currently available in English. In addition to the English report-reading solution, the Upfront Accessible theme can be read in English and French.

Using PowerPlay Web Viewer, you can open PowerPlay Web reports using screen reading technology. When accessibility is enabled in PowerPlay Enterprise - Server Administration, PowerPlay reports are published with markup tags that screen readers can read if the reports are in PDF format.

Using screen reading technology, you have full access to

- the **Modify Report** page, where you customize the report content (p. 9)
- PowerPlay Web Viewer reports

  Although the reports are accessible, the links in them are not. For example, if you click the explore button in PowerPlay Web Viewer, the report opens in PowerPlay Web Explorer, but is not accessible to screen readers.

  To return to accessible reports from Web pages that are not accessible to screen reader technology, click the **Back** button in your Web browser.

The Accessible Modify Report Page

There are a number of ways you can access information and make selections in the Modify Report page. For example, you can use quick access keys to move to a specific area in the page, and then use different key combinations to make selections.

Quick Access Keys

Use the quick access keys listed in the table below to move the screen reader to specific areas in the Modify Report page if your administrator has made these keys available to you. All other accessibility tags conform to the Microsoft standard for accessibility.

Quick access keys	Description
Alt + M	Moves the screen reader to the dimension line section.
Alt + Z	Moves the screen reader to the **Options** section.
Alt + R	Moves the screen reader to the **Currency and Format** section.
Alt + O	Activates the **OK** button.
Alt + C	Activates the **Cancel** button.

Dimension Line Section

Use the following keys or key combinations to access information and make selections in the dimension line section of the Modify Report page.

Keys	Description
Tab	Accesses the first control in the dimension line section or moves from one list box to the next.
Alt + 1, 2, 3, 4, 5, 6, 7, 8, 9	Moves to individual drop-down lists.
Alt + 0	Moves to the last drop-down list.
Shift + Tab	Moves backward among the drop-down lists.
Alt + Down Arrow	Expands the items in a drop-down list.
Down Arrow	Moves down through the items in a drop-down list.
Up Arrow	Moves up through the items in a drop-down list.
Enter	Makes a selection. Each time the Enter key is pressed to make a selection, the **Modify Report** page refreshes and the screen reader returns to the beginning of the page.

Options Section

Use the following keys or key combinations to access information and make selections in the Options section of the Modify Report page.

Keys	Description
Tab	Accesses the first control in the **Options** section or moves from one Option control to the next.
Space Bar	Toggles the state of a check box.
Alt + Down Arrow	Expands the items in a drop-down list.
Down Arrow	Moves down through the items in a drop-down list.
Up Arrow	Moves up through the items in a drop-down list.

Keys	Description
Enter	Makes a selection. Each time the Enter key is pressed to make a selection, the **Modify Report** page refreshes and the screen reader returns to the beginning of the page.

Currency and Format Section

Use the following keys or key combinations to access information and make selections in the Currency and Format section of the Modify Report page.

Keys	Description
Tab	Accesses the first control in the **Options** section or moves from one Option control to the next.
Space Bar	Toggles the state of a check box.
Alt + Down Arrow	Expands the items in a drop-down list.
Down Arrow	Moves down through the items in a drop-down list.
Up Arrow	Moves up through the items in a drop-down list.
Enter	Makes a selection. Each time the Enter key is pressed to make a selection, the **Modify Report** page refreshes and the screen reader returns to the beginning of the page.

The Accessible PowerPlay Web Viewer Report Page

There are a number of ways you can access information and make selections in the PowerPlay Web Viewer report page.

Quick Access Keys

Use the Alt + Y quick access key to move the screen reader to the toolbar. You have access to the toolbar only if your administrator has made it available.

To use this quick access key, your Web browser must be the active window (not Adobe Acrobat Reader). To toggle between your Web browser and Adobe Acrobat Reader, press Ctrl + Tab.

PowerPlay Web Viewer Report Page

Use the Tab key to access the first control in the report or to move from one report control to the next.

PowerPlay Web Explorer

PowerPlay Web Explorer gives you a multidimensional approach to business analysis. It brings together the key dimensions of your business and lets you explore any combination of data: up, down, and across critical dimensions. You can determine the impact that each area of your business has on overall results and compare that with other dimensions as you explore further. For example, you can examine sales in South America during 2005, and then filter your analysis for a specific product line and a specific sales channel. You can publish reports to show query results generated in HTML format by the PowerPlay server.

When exploring information from your Web browser, you can do things such as

- adding your own calculations to the results
- filtering data
- suppressing, highlighting, and sorting values
- choosing the type of display, such as crosstab, pie chart, or bar chart, and the amount of data shown
- publishing, exporting, printing, or bookmarking reports

Your administrator creates and publishes the cubes that you use.

The PowerPlay Web Explorer Interface

When you open a cube in PowerPlay Web Explorer, the data appears in the interface specified by your administrator. The interface is one of the following:

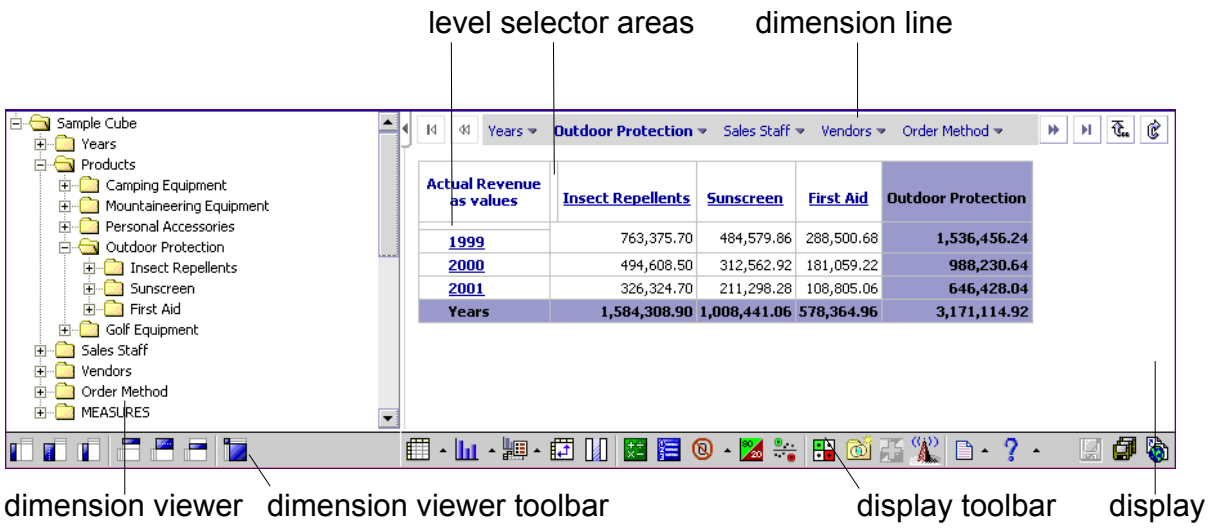
- Generic interface

  The Generic interface is based on a generic HTML style and is recommended if you use a dial-in Web connection or are accessing larger cubes. This interface is available in all Web browsers.

- Enhanced interface

  The Enhanced interface is based on enhanced Web Technology support and is available if you use Internet Explorer 5.5 or higher, or Netscape 7.1 (Windows only), as your Web browser.

  The Enhanced interface is as follows.



Dimension Viewer

The dimension viewer shows a full tree view of the dimensions and measures in a cube. This view helps you understand the data structure and find the items you require. In the dimension viewer, you see an organized view of all dimensions, levels, and categories in a selected cube in a Windows folder-like presentation.

In the dimension viewer, you can perform the following actions using drag and drop or right-clicking:

- change a row or column
- change a measure or add new measures to your report
- create a nested crosstab or chart
- filter

If you prefer to use the full browser window for the display, you can close the dimension viewer by clicking the hide/show dimension viewer button .

Dimension Line

You can use the dimension line to add categories to rows and columns, and filter the data in the cube. You can drag items from the dimension line to the crosstab or chart, or you can right-click the categories to view information about the data.

Display

In the display, you can right-click to perform actions that are associated with individual data elements. When you right-click the row and column headings, or data cells, the available actions appear in a flyout menu.

Level Selector Toolbar

You can left-click the row and column level selector areas to open the level selector toolbar that contains buttons for expanding categories, deleting levels of data, swapping categories, changing levels, and viewing explanations.

Display Toolbar

Many of the controls in the Enhanced interface are available from menus or dialog boxes that you open from the display toolbar.

For example, to open the Calculations dialog box, click the calculations button  .

In this document, the display toolbar is referred to as the toolbar.

Dimension Viewer Toolbar

You can use the dimension viewer toolbar buttons to complete the same tasks as when you drag items from the dimension viewer.

For example, to add a category as the nested top level in columns, click the insert before the columns button  .

If you use Netscape as your Web browser, you must use the dimension viewer toolbar for tasks which also can be completed in Internet Explorer using drag-and-drop. When you use Netscape, the dimension viewer toolbar is enabled by default.

Choose Categories

When you open a new report, the categories from the first two dimensions on the dimension line appear as the rows and columns. To explore the categories from other dimensions, choose categories to replace the current categories or add nested categories (p. 24) to the report.

A category is a set aspect of your business, represented by a row or column in a crosstab. Your administrator organizes categories into the dimensions of a cube. Each dimension appears as a folder in the dimension viewer and on the dimension line of your report. For example, the dimensions in a cube may include Years, Locations, Products, and Channels. The intersection of all the categories on the dimension line are calculated to give you the values for your report.

Categories appear as hyperlinks in the report. When you click a category, its child categories replace the categories in the report. When you click a summary category, the parent categories replace the child categories in the report.

You can also add any calculated categories that your administrator may have defined in a cube so you can analyze specific combinations of data.

If you use Netscape as your Web browser, you must use the dimension viewer toolbar to switch categories.

Step Using the Dimension Line

- Drag the category from the dimension line to the column heading area or the row heading area.

Steps Using the Dimension Viewer Toolbar

1. In the dimension viewer, expand and click the category you want to appear as a row or column.
2. In the dimension viewer toolbar, choose where to add the category.
   - To add the category as the nested top level in the columns, click the insert before the columns button.

- To add the category as the nested top level in the columns, click the insert after the columns button.
- To add the category as the nested top level in the columns, click the insert before the row button.
- To add the category as the nested top level in the columns, click the insert after the row button.
- To replace the category in the rows, click the replace rows button.

If the dimension viewer toolbar does not appear under the dimension viewer, right-click the area under the dimension viewer and click **Show Toolbar**.

Choose Measures

A measure is a quantifiable amount built into a cube. It is often used to gauge how a business is operating, such as in identifying performance indicators.

A measure may be

- a simple summary of available information such as number of units shipped, revenue, expenses, inventory levels, or quotas
- a calculated value such as revenue variance (forecast revenue minus actual revenue)

By default, the display uses the first measure in the list of measures. You can change the default order of the list (p. 59). You can change the measure used or you can use other measures defined by your administrator.

For example, you use the Revenue measure to show the data for each product line. You can compare the product lines using the Cost measure instead, or you can change the measures in the report to compare Revenue to Cost.

If you use Netscape as your Web browser, you must use the dimension viewer toolbar to change the measure.

Steps Using the Dimension Line

- Choose to view one or more measures:
  - To view one measure, drag it to the Measure heading area.
  - To view, in a crosstab, multiple measures from the same parent, click and drag each measure from the Measures folder to a highlighted area between two column headings.

    You can use this method to reorder measures.
  - To view all measures, in a crosstab, drag the Measures folder to the row heading area or the column heading area.

The display uses the new measure.

Steps Using the Dimension Viewer Toolbar

1. In the dimension viewer, click the measure in the Measures folder.

2. In the dimension viewer toolbar, click the replace measures button.

   If the dimension viewer toolbar does not appear under the dimension viewer, right-click under the dimension viewer and click **Show Toolbar**.

The display uses the new measure.

Open a Report or Cube

You open reports or cubes to view, analyze, or explore current data. You open reports and cubes that are Web accessible from the PowerPlay Web Table of Contents.

You can also open reports or cubes from one of the Cognos portals: Upfront or Cognos Connection. Upfront is the Web interface for Cognos enterprise applications and other Web data. Cognos Connection is the portal to Cognos ReportNet, the Web-based reporting solution. For information about using Upfront, see the Upfront online help. For information about Cognos ReportNet, see the Cognos ReportNet *User Guide*.

Before you can open reports or cubes, they must be published to your Cognos portal and added to PowerPlay Enterprise Server by your administrator.

Step

- From the PowerPlay Web **Table of Contents**, click the report or cube.

  Reports are identified by the report icon  .

  Cubes are represented by the cube icon  .

A report opens in PowerPlay Web Viewer (p. 9) in PDF format. If the report author has defined prompts for the report, you can customize the information (p. 9) that you want to see in the report before it opens.

A cube opens in PowerPlay Web Explorer (p. 14) and shows the first two dimensions as the rows and columns.

Dimensions

Dimensions are a broad grouping of descriptive data about a major aspect of a business, such as products, dates, or markets. Dimensions are represented by the rows and columns in a report or cube, and appear as folders.

You can drill down and drill up by selecting categories in a folder. For example, selecting Camping Equipment from the Products folder narrows the scope of the report to the information for that product.

You can also choose dimensions to filter information. If you choose a dimension that is not associated with the rows or columns, the data changes to reflect the new filter. For example, if a report's rows show Years and the columns show Products, you can choose the North America dimension from the Locations folder to filter the report content based on North American data.

Setting Preferences

You can specify regional settings, such as a time zone and currency, and select languages if your administrator has enabled these settings.

Data formats depend on the locale configuration settings for your IBM Cognos Series 7 product. By default, Series 7 server products and Impromptu use a data format configuration file named cerlocale.xml. Architect, Visualizer, PowerPlay Client, and Transformer use Windows Regional Settings for locale settings and data format information. However, you can configure these products to use the data format configuration file.

For information about managing data formats, copying data format information, or editing the data format configuration file, see the Configuration Manager *User Guide*, or contact your administrator.

Select Regional Settings

You can format the numeric values of your query results using the settings of a specific country or region. For example, some regions of Europe use a period (.) as the thousands separator.

The availability of this feature and the individual regions are controlled by your administrator.

Steps

1. From the PowerPlay Web **Table of Contents**, click the **Preferences** tab.

   If you opened a report from Upfront, contact your administrator.

2. In the **Locale** box, select the region.

Select a Language

You can select the language to use in the PowerPlay interface. This selection overrides the language specified in your Web browser. When you change your selection, all elements change, including the help.

For information about setting language preferences, see the help for your Web browser.

Steps

1. From the PowerPlay Web **Table of Contents**, click the **Preferences** tab.

   If you opened a report from Upfront, contact your administrator.

2. In the **Language** box, select the language.

Chapter 2: Exploring Data

Use PowerPlay to find specific categories or measures for your analysis, or to explore data by drilling down for more specific details or drilling up for a more general picture. You can also filter data to get the information you want. To further explore, you can nest child categories under a parent category or add calculations to show you the exact information you require. Drill through options may provide access to another cube, report, or data source.

Find Specific Dimensions or Measures

You can search the current report or cube to find specific categories, dimensions, or measures in your data. Finding specific items in highly complex and large dimensions can significantly speed up your analysis time.

When you search the current report, PowerPlay searches the data in the current display. When you search the cube, PowerPlay searches all the data in the cube.

You can search for text in a category or measure based on the following criteria:

- contains
- begins with
- ends with

The search results provide the category name and full path. For example, searching a cube for Star Lite shows the following results.

- Category: Star Lite
- Path: Products/Camping Equipment/Tents

Steps

1. Click the arrow beside the help button and click **Find**.
2. In the **Search String** box, select your search criteria and type the text to search for.
3. In the **Find Text In** box, choose to search a report or a cube, and select the scope of the search.

   For example, you can limit the search in a report to rows. For cubes, you can limit the search to a specific dimension.
4. Click **Find**.
5. In the **Results** list, click the category that represents the items you wanted to find and choose one of the following options:
   - To isolate the data in a category in the current report, click the **Go To** link.
   - To filter the report on the returned category, click **Filter**.

- To show the returned category in the report rows, click **Replace Rows**.
- To show the returned category in the report columns, click **Replace Columns**.

Scenario Dimensions

A scenario dimension is a dimension in which categories represent different scenarios. For example, when analyzing financial data, you can analyze several sets of values at the same time, such as planned, budget, or actual values, or best and worst case values.

Unlike regular dimensions, scenario dimensions do not roll up to a single root category because the values would not be useful.

A scenario dimension is distinguished from other dimensions by the scenario dimension icon  . Scenario dimensions are defined by the Transformer modeler. If the modeler identified a default category for the scenario dimension, the default category appears as a default filter in the dimension line.

Drill Down and Drill Up

You can drill down and drill up to explore different aspects of your business and move between levels of information.

For example, you can examine revenue for an entire product line and then drill down to see revenue for each individual product in the line. When you finish viewing individual product revenue, you can drill back up. After you familiarize yourself with the hierarchy, you can drill down and drill up multiple levels at a time. If you want to examine the impact of a single aspect of your business on the whole, you can drill down to the lowest-level category in a dimension.

The available drill-down and drill-up features depend on the display type you choose.

Step to Drill Down

- Change the category levels using one of the following:
  - To drill down to a lower-level category, in the dimension line, click the lower-level category.
  - To drill down one category level at a time, click a row or column heading link until you reach the category level.
  - To drill down one level across all categories, right-click the column or row level selector area, and click **Down a Level**.
  - To drill down directly to the categories associated with a specific data value in crosstab displays, double-click the data value.

Step to Drill Up

- Change the category levels using one of the following:
  - In the dimension line, click the higher-level category.

- To drill up one level across all categories, right-click the column or row level selector area, and click **Up a Level**.
- To drill up to parent row and column categories, double-click the data value where the totals for rows and columns intersect.

Different Paths to a Category

The Transformer modeler can define multiple paths in a dimension that lead to the same categories. A primary drill-down path is the main path in a dimension. An alternate drill-down path is another path in the same dimension leading to the same categories.

For example, the main path of the years dimension is by year and one of its alternate paths is by month. Both of these paths converge at the day level.

Restricted Data Values

The Transformer modeler can build security rules into cubes where data is sensitive, for example in financial applications. When the display shows a category level for which you do not have the correct security access, you see the word "denied" instead of a data value. When you drill down on a category, you cannot view a lower level of a restricted data value. The word "denied" also appears for summary totals of a category that include this restricted data value.

Filter Data

A filter changes the focus of a report by limiting information to a level of a dimension and emphasizing only the information you choose. If you want to examine the impact of a single aspect of your business on the whole, you can filter to the lowest-level category in that dimension.

For example, you start with a report that shows revenue in all regions for all product lines.

Using the dimension line, you filter the report using the sales region dimension to show revenue for the Americas.

Step

- In the dimension line, click the category you want to filter on.

  Another option for filtering is to right-click the category in the dimension viewer and then click **Filter**.

The filtered category appears bolded in the dimension line and the values in the display change to reflect the filtered category.

To remove all filters from all dimensions, click the reset button  .

Nest Categories

When you open a report, the categories from the first two dimensions of the dimension line appear in the rows and columns. To view more detail in the report, you can add nested categories from the current dimension, different dimensions, and measures. A nested report includes summary information for nested categories.

For example, a report shows Products categories in the columns and Years categories in the rows. You can add the quarters as nested categories. The summary for each quarter is shown in the following report.

Revenue as values		Camping Equipment	Golf Equipment	Mountaineering Equipment	Outdoor Protection	Personal Accessories	Products
2006	2006 Q 1	115,969,290	58,379,261	36,539,206	2,410,113	131,722,288	**345,020,158**
	2006 Q 2	131,594,512	62,467,714	42,683,784	2,632,786	153,205,078	**392,583,874**
	2006 Q 3	130,979,047	56,040,116	41,443,786	2,621,541	147,252,623	**378,337,113**
	2006 Q 4	122,376,880	54,485,598	40,379,738	2,694,775	162,054,064	**381,991,055**
	2006	**500,919,729**	**231,372,689**	**161,046,514**	**10,359,215**	**594,234,053**	**1,497,932,200**
2007	2007 Q 1	145,539,940	81,537,354	59,768,436	1,879,174	184,020,708	**472,745,612**
	2007 Q 2	153,809,380	69,081,676	60,116,560	1,887,360	194,759,998	**479,654,974**
	2007 Q 3	54,031,962	25,129,545	21,643,417	706,857	65,032,264	**166,544,045**
	2007 Q 4	0	0	0	0	0	**0**
	2007	**353,381,282**	**175,748,575**	**141,528,413**	**4,473,391**	**443,812,970**	**1,118,944,631**
Years		**1,590,730,027**	**729,044,204**	**409,715,631**	**76,002,938**	**1,886,038,235**	**4,691,531,035**

Step

- In the dimension line, locate the category you want to nest and add it to the row nest level area or the column nest level area.

The nested category appears in the display as a sublevel within the row or column category.

You can delete a nested category using the right-click menu available from the level selector area for the nested category.

Move or Copy Rows, Columns, and Nesting Levels

To quickly change the view of your crosstab data in the Enhanced interface, you can move or copy rows, columns, and nesting levels.

You can also reorder measures in your crosstab (p. 59).

Step

- Choose whether to move or copy a particular level:
  - To move a level, drag the level selector area of the nested level to a target level area in the current axis or the other axis.
  - To copy a level, press Ctrl and drag the level selector area of the nested level to a target level area in the current axis or the other axis.

The target level area appears highlighted on the outer edge of an axis.

The level or a copy of the level appears in the new location.

You can delete a nested category using the right-click menu available from the level selector area for the nested category.

Create a Subset of Categories

You can define subsets of categories based on specified criteria. Subsets help you isolate, explore, and analyze specific elements of your data.

You can create subsets by search criteria, by measure value, or by individual category selection. You can also create a subset for a dimension directly from a crosstab. After you create the subset, it appears in the dimension viewer in the dimension you used to create the subset.

Subsets can be dynamic, meaning that they are updated whenever a change in the cube data affects the categories in the subset. For example, you are a regional manager for a company that sells outdoor products. To analyze the sales in your region of the products that are environmentally-friendly, you create a subset defined by search criteria that all products contain the text "Enviro." As more products are added to the cube that meet the search criteria, they are added to the subset dynamically.

You can create, edit, and delete subsets only in PowerPlay Web Explorer. In PowerPlay Web Viewer, PowerPlay for Windows, and PowerPlay for Excel, you can open PowerPlay Web Explorer reports that include subsets, but you cannot modify a subset.

Previously, dragging and dropping a category in a particular location in a custom subset redefined the custom subset. Now you can reorder categories in dimensions. As a result, dragging and dropping a category in a particular location in a static custom subset now applies the crosstab rendering functionality. This change in functionality improves efficiency and provides consistent drag and drop behavior across all crosstab axes and levels.

If you create a subset by individual category selection, it can contain categories from multiple levels, but only categories in the same dimension. You cannot nest a subset within the dimension from which it was derived or within another subset if both subsets are from the same dimension.

When you drill through from a report that uses a subset, subset values are not applied to the target report.

Steps to Use Search Criteria or Measure Value

1. Click the custom subsets button  .
2. Type a name for the subset.
3. Select the dimension on which to create the subset.
4. Define the search criteria or measure value:
   - To define search criteria, click **Define Rule by Search Criteria** and click **Next**. Click **Add** and create the search definition by providing the search string, starting category to search, and scope of category levels. Click **OK**.

The search string is not case sensitive.

You can define more than one search definition. You can also edit and delete existing definitions in the **Create Custom Subset by Name Search** dialog box.

When you finish defining the search definitions, click **Next**.

- To define a measure value, click **Define Rule by Measure Value** and click **Next**. Define the measure value by choosing the measure on which you want to base the rule, values you want returned, category, and scope of category levels you want to search. You can also apply dimension filters, if appropriate. When you finish defining the measure value, click **Next**.

5. Review the search results.

   To remove a search result from the subset, click the result and click **Remove**. To return the search result to the subset, click the result and click **Re-enable**.

   Categories that are returned in the result set based on the subset rule are dynamic. If there are changes in the data source, the returned result set reflects those changes, and they are identified by a binocular icon  .

6. If you want to add categories that were not returned in the result set, in the **Available Categories** list, select the categories and click the add to custom subset button.

   These categories are static. If you modify the subset rule or if there are changes in the data source and a different result set is returned, these additional categories are still included in the subset and remain until you delete them.

7. Click **Finish**.

In the dimension viewer, the subset appears as a new category.

You can rename, edit, or delete the subset using commands on the right-click menu when you select the subset.

Steps to Use Category Selection

1. Click the custom subsets button  .
2. Type a name for the subset.
3. Select the dimension on which you want to create the subset.
4. Click **Select Categories** and click **Next**.
5. Select the categories you want to appear in the subset and click the add to custom subset button.
6. Click **Finish**.

In the dimension viewer, the subset appears as a new category. The categories are static and remain in the subset until you delete them.

You can rename, edit, or delete the subset using commands on the right-click menu when you select the subset.

Steps Using a Dimension in a Report

1. Select rows or columns you want to include in the subset.
2. Right-click in the heading area of a selected row or column and click **Create Custom Subset**.

You can rename, edit, or delete the subset using commands on the right-click menu when you select the subset.

Create Subsets with Top and Bottom Categories

You can create subsets that include categories with either the highest or lowest values of a specific measure.

Users can dynamically select the number of categories to include in the subset, such as the top 10 or the bottom 25.

Steps

1. Click the custom subsets button  .
2. Type a name for the subset, choose the dimension to be used as the basis for the subset, click **Define Rule by Measure Value**, and click **Next**.
3. Set options as follows and click **Next**:
   - Click the option to include values by top (sorted in descending order) or bottom (sorted in ascending order).
   - Type the number of categories to include in the subset definition.
   - Select the required dimension level as the starting point for the subset definition and select an appropriate scoping option.
4. Continue to follow the wizard to the last pane and click **Finish**.
5. Confirm that the dimension tree is updated to contain your new subset, with the filtered levels changed accordingly.

Automation developers must update any scripts that include the command to create subsets by measure. Although users of the current release can still explore reports and cubes with preexisting subsets and bookmarks, older PowerPlay versions cannot show the new subset definitions. Instead, they open as an empty subset.

Create a Copy of a Subset

You can create a copy of a static subset. After you create the copy, you can modify it to suit your needs. For example, you can use copies to create several similar subsets.

You must be using the enhanced interface to create a copy of a static subset.

Step

- In the dimension viewer, right-click a subset and click **Duplicate**.

A copy of the subset is created with the name **Duplicate of** ***original subset name***.

You can select the copy and edit it using the **Edit** command from the right-click menu.

Add or Remove Categories in a Subset

You can add categories to a subset if they are from the same dimension as the subset and from the same hierarchy from which the subset was initially created. Also, the category cannot be a hierarchy root.

Steps to Add Categories

1. In the dimension viewer, right-click a subset, click **Edit**.
2. In the **Available Categories** list, select the categories you want to appear in the subset.
3. In the **Result Set** list, select a category.

   The added categories will appear above the category you select in the **Result Set** list.
4. Click the add to custom subset button to move the categories from the **Available Categories** list to the **Result Set** list.
5. Click **Finish**.

The categories are added to the subset.

Steps to Remove Categories

1. In the dimension viewer, right-click a subset, click **Edit**.
2. In the **Result Set** list, select a category.
3. Click the remove from custom subset button to move the categories from the **Result Set** list to the **Available Categories** list.
4. Click **Finish**.

The categories are removed from the subset.

View Details of a Subset Definition

If a dimension filter or a crosstab row or column contains a subset, the **Explain** window shows a concise description of the subset definition, next to an identifiable icon.

For example, instead of just the subset name, categories that are included in the subset are listed in the form of searchable strings, ranges, or contains expressions. Starting point and scope may also be shown.

The following does not appear in the **Explain** window:

- categories in a static pick list
- explicitly included categories or categories with discarded results
- in subsets by measure, the top (root) level of a dimension.

Step

1. Right-click a row, column, or cell in the crosstab and click **Explain**.
2. Scroll as necessary, and observe the detailed description of your subset.

The text appears under any filters and, for multiple subsets, under an appropriate heading.

Hide Totals or Subtotals

Each report using a crosstab display shows a row and column with the total value of each category. Similarly, when you add nested categories to a report using a crosstab display, PowerPlay adds a subtotal summary row or column for each level of child categories so that you can see how each level of categories rolls up to the next level. If you do not want these totals or subtotals, you can hide them.

The report must use the crosstab or indented crosstab display to hide totals or subtotals.

Steps

1. Right-click one total or subtotal summary row or one total or subtotal summary column, and click **Hide/Show**.
2. Clear the **Show Summaries** check box and click **OK**.

The total or subtotal summary rows or columns are no longer visible.

Change In Behavior With Custom Subset Category Drag and Drop Functionality

In the Series 7 Version 3 release of PowerPlay Web, dragging and dropping a category in a particular location in a custom subset redefined the custom subset.

In the Series 7 Version 4 release of PowerPlay Web, you can reorder categories in dimensions. As a result, dragging and dropping a category in a particular location in a static custom subset now applies the crosstab rendering functionality. This change in functionality improves efficiency, and provides consistent drag and drop behavior across all crosstab axes and levels.

Add Calculations

You can create a custom calculation that combines rows or columns to obtain a new item.

You can perform the following types of calculations:

- Arithmetic: add, subtract, multiply, divide, exponentiate
- Percentage: percent, percent of base, cumulative percent, percent growth
- Analytic: average, median, maximum, minimum, percentile, rollup
- Financial: forecast, accumulate

For example, if your report shows quarters for the year, you can add new items showing the cumulative percentage that each quarter contributes. After a new calculated category is added, you can add other calculations using an existing calculated category.

Steps

1. Select the row headings or column headings for which you want to perform a calculation and click the calculation button  .
2. In the **Operation Type** box, select the type of calculation.
3. In the **Operation** box, select the calculation.
4. In the **Calculation Name** box, type a name for the calculation.
5. In the **Includes Categories** box, select the categories you want to include in the calculation.

   Decide whether you want to include or exclude zero-suppressed categories in your calculation. Suppressing zero values while still including them in your calculation may confuse other consumers of your report.
6. If you want to use a constant in the calculation, select the check box beside **Number** and type the constant.
7. If you want to move the calculation, select the **Movable** check box.

   For more information about moving calculations, see "Move Calculations" (p. 31).
8. Click **OK**.

The new calculated category appears in italicized text in the display.

Edit Calculations

You can edit calculations that you inserted as columns or rows in a report. You can also change the name of calculations.

For example, you created calculations for the cumulative percentage that sales for each quarter contribute to the year. You can change the calculation to show the contribution for each month if you want more specific details for your report.

In the Generic interface, you cannot modify an existing calculation. You must first delete the calculation and then re-create it with its new definition.

Steps

1. Right-click the calculation row heading or the calculation column heading, and click **Edit Calculation**.
2. Edit the items in the calculation and click **OK**.

The edited category appears in italicized text in the display.

Move Calculations

You can drag calculations to any location on an axis, using the Enhanced interface. You can also position the calculation at the top or on the left of the crosstab. When calculations are moved, they remain fixed in the position that you specify as long as you continue exploring within the same dimension in the crosstab.

If you move a calculation under a category that is not a parent of the operands for the calculation, the operand values are set to zero. For example, if you move the calculation Camping Equipment +1 under a category that is not a parent of Camping Equipment, the calculation produces the value 1 for all rows. This is because the value of Camping Equipment is set to 0. The operand is also set to 0 when you set the dimension bar filter to a category that is not a direct ancestor of the operands of the calculation.

You can move calculations in a time dimension, but not in a time category.

The following restrictions apply when dragging calculations in a crosstab:

- Calculations must be specified as moveable.
- Calculations can be moved only within the same dimension.
- Forecast calculations and ranks cannot be moved.

By default, calculations are not moveable unless a setting is enabled when the calculation is created.

Steps

1. Right-click the calculation row heading or the calculation column heading, and click **Edit Calculation**.
2. In the **Calculations** dialog box, click **Moveable** and click **OK**.
3. Click the calculation and drag it to the new location in the report.

The calculation appears in the new location.

If the crosstab changes, the movable calculation moves relative to the category to which it is related. It remains next to this category as long as the category is visible in the crosstab and the hierarchy of the dimension remains the same. Unlike a non-movable calculation, the calculation does not change locations when the definition of the calculation changes.

Forecasting Methods

TERMS OF USE

The forecasting methods used in the Forecasting Function are based on the statistical analysis of historical information drawn from underlying data sources. The accuracy of the forecasted values is subject to many variables. These variables include the accuracy of the underlying historical data and external events which could affect the validity of that underlying historical data for forecasting purposes. The Forecasting Function is to be used only as a guide of the future values for the measures being forecasted and is not intended to be used as the basis for complex financial or business decisions.

IBM makes no representations as to the accuracy of the actual future values and does not guarantee any specific results. You use the Forecasting Function and the data it generates at your own risk. The Forecasting Function may contain errors or produce inaccurate calculations. You accept the Forecasting Function and the documentation "AS IS". IN NO EVENT SHALL IBM BE LIABLE FOR DAMAGES OF ANY KIND INCLUDING, WITHOUT LIMITATION, DIRECT, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OF THE FORECASTING FUNCTION OR THE INTERPRETATION OF THE DATA RESULTING THEREFROM.

For information about the formula for each forecast method, see "Forecast Formulas" (p. 71).

Trend (Linear or Straight Line)

The trend forecasting method is based on the linear regression technique of time series forecasting. Trend forecasting gives the best forecasting reliability when the driving factors of your business affect your measures in a linear fashion. For example, when your historic revenue increases or decreases at a constant rate, you are seeing a linear effect .

A multiline plot of historic data should look linear or close to linear for greatest reliability. For example, if you are forecasting revenue for the next two quarters based on revenue for the past four quarters, and if the multiline plot of past quarterly revenue is linear or close to linear, then the Trend method gives you the best forecasting reliability.

Use the Trend forecasting method when only two data values represent two time periods in your historic data.

Growth (Curved or Curved Line)

The growth forecasting method is based on the exponential regression technique of time series forecasting. Growth forecasting gives you the best forecasting reliability when the driving factors of your business affect your measures exponentially. For example, when your historic revenue increases or decreases at an increasingly higher rate, you are seeing an exponential effect .

A multiline plot of historic data should look exponential for best accuracy. For example, if your revenues are growing exponentially due to the introduction of a best selling product, Growth forecasting will provide a more reliable forecast than the Trend method. Similarly, if you hire two additional sales representatives for your company, you can use Growth forecasting to determine which product line has the greatest growth potential to allocate your new resources effectively.

Autoregression (Seasonal)

The autoregression forecasting method is based on the auto-correlational approach to time series forecasting. Autoregression forecasting detects the linear, nonlinear, and seasonal fluctuations in historic data and projects these trends into the future. Autoregression provides the best forecasting reliability when the driving factors underlying your business are affected by seasonal fluctuations .

A multiline plot of time and revenue will show up-and-down fluctuations that may reflect seasonal variations. For example, if your revenues are growing exponentially due to the introduction of a best selling product, but sales of that product are also seasonal, then autoregression forecasting provides a more reliable forecast than the Growth method.

Use the autoregression method when you have historic data representing a large number of time periods (for example, more than 24 monthly periods) and when seasonal variations may occur in it.

For crosstabs, if you nest multiple levels of time, PowerPlay produces the forecast only at the highest level of time. For example, if you nest quarters within years for revenue and then insert a forecast calculation, PowerPlay generates the forecast only at the years level. To generate your forecast at the quarters level, delete the years level before you generate the forecast.

If you applied ranking in your crosstab, PowerPlay creates the forecast you request, however, forecasts are not included in the rankings.

If you convert the currency in your crosstab, PowerPlay creates the forecast on the currency-converted values.

Create a Forecast

You can make predictions about the future performance of your business based on past data by using one of these time series forecasting methods: trend, growth, or autoregression.

Calculated values can appear as *na*, or in scientific notation (for example, 1.7976931348623158e+308). If the values appear as *na*, PowerPlay does not have appropriate values on which to base a forecast. If the value appears in scientific notation, the result is larger than 15 digits.

Steps

1. Right-click a time category in your crosstab display or graphic display, and then click **Insert Calculation**.
2. In the **Operation type** box, select **Financial**.
3. From the **Forecast Method** list, select the forecasting method you want to use.

   The methods are Trend, Growth, and Autoregression.
4. In the **Forecast Horizon** box, type the number of time periods to forecast.
5. Click **OK**.

Tips

- To change the label of a calculation, right-click the label and click **Rename Calculation**. Type the new label in the **Calculation Name** box and click **OK**
- To see the forecasting method that was used, right-click the label, and click **Explain**.

Work in Design Mode

When you work with crosstab displays, you can create your report without showing the data. This can save you time if you are exploring a large cube with many levels. When you find the information you are interested in, you can quickly show the data in the display.

Some of the options on the toolbar are unavailable while **Get Data Later** is enabled.

Steps

1. Click the display options button  and click **Get Data Later**.
2. Explore the report until you are satisfied with its current state.
3. In the display, click **Get Data**.

Analyze Alternate Hierarchies

You can create crosstabs that show two different hierarchies of the same dimension in the rows and columns. Do this to isolate and analyze relative data at a fine level of granularity.

For example, you create a report that includes information on retailer types. The Retailers dimension in your report includes categories for each type of retailer, and an alternate hierarchy category that represents the vendors by region. Individual retailers are the lowest level in the Retailers dimension. In the alternate hierarchy, individual vendors are also the lowest level. When you create a crosstab that has the alternate hierarchy by retailer site in the rows and retailer type in the columns, you can quickly analyze the relative performance of the retailer type in the different regions.

Steps

1. In the dimension viewer, right-click the dimension category you want to filter on and click **Replace Rows**.

   The filtered category appears bolded in the dimension line and, in the display, the row headings and values change to reflect the filtered category.
2. Right-click the alternate hierarchy category in the dimension and click **Replace Columns**.

The column headings and values change to reflect the addition of the alternate hierarchy filter.

View a Chart and Table Together

You can improve your presentation and analytical capabilities by viewing a crosstab and a chart together in one browser window. In the split view, both displays use the same data and remain synchronized if you drill or filter in one view.

You can save split views with PDF exports and bookmarks created in PowerPlay. You can also save split views by publishing your report to the portal.

Steps

1. Click the display options button  .
2. From the **Display Options** menu, click **Split View**.

By default, a bar chart and a crosstab appear. You can use the crosstab and chart flyout menus on the toolbar to change the crosstab or the chart display.

View Explanations

You can see an explanation of the information you are exploring. The explanation contains general information about the status of the current display and any descriptions of the data that the Transformer modeler has added to the cube.

In PowerPlay Web Viewer, explanations are available for the row and column headings in the report. In PowerPlay Web Explorer, explanations provide additional information including details about suppression settings and whether the report includes custom exceptions.

Step for PowerPlay Web Explorer

- Choose whether to view explanations for the entire display or for individual cells:
  - To view explanations for the entire display, click the arrow to the right of the help button and click **Explain**.
  - To view explanations for individual cells in the display, right-click the cell and click **Explain**.

Step for PowerPlay Web Viewer

- In Adobe Acrobat Reader, pause the pointer over the row heading or column heading that you want an explanation for and click the heading.

A separate HTML window opens containing the descriptive information about the item.

Drill Through to Other Reports

You can drill through to another report or data source to reveal more detailed information from the current cube. You can drill through to information in another cube or to details in IBM Cognos Query or Impromptu Web Reports, depending on what the Transformer modeler has set up. For example, your report shows the 2005 sales for regions in the Americas, but another report contains

the specific sales information for the United States region. You drill through to the current report to see sales for each branch in the United States region.

When you drill through to a report, its current measure and dimension line are applied to the new report or query. For example, a report uses the Actual Revenue measure and the 2005 level from the Years dimension. The report that you drill through to also shows revenue for 2005.

When you drill through to a report, your current row and column selections are applied to the new report or query. This helps you to create a drill-through report that includes only the specific data and filtering criteria that you are interested in.

Drill-through information is applied when it is valid for the report or query that you drill through to. For example, you filtered a report by product. If Product is not a dimension in the report or query that you drill through to, then the filter cannot be applied, and data for all products appears.

If you attempt to drill through to a target that is located on a different computer, you may receive a IBM Cognos Application Firewall rejection message. If this occurs, contact your administrator.

Drill-through is available only if it has been set up by the Transformer modeler.

Steps

1. Click the drill through button  .
2. Click the report you want to drill through to.

Chapter 3: Formatting Data

PowerPlay includes many formatting options that you can use to make your reports more effective. For example, you can change from a crosstab display to a graphical display such as a pie chart or line chart. Graphical displays highlight general trends or relationships in the data. Custom exception rules emphasize exceptional data so you can quickly identify areas of success and areas that require more investigation. Other formatting options include changing colors and patterns, ranking data, and hiding specific categories.

Display Types

A display is a visual representation of the report data. You can change displays to

- show information from different perspectives
- find a trend
- compare variables, show variance, and track performance
- compare multiple measures

For example, you can change a crosstab display to a pie display to view the relationship of individual components of your data to the entire data set. Also, you can use more than one display type in the same report. For more information, see "View a Chart and Table Together" (p. 35).

When you view nested categories in graphic display types, each lowest-level intersection is shown in a separate display. To isolate the display for a nested category, click the link for the nested category. If there are no nested categories, only one display is shown.

To view summary information in a nested chart, click the zoom in button .

Tip: To return to the original view of the report, click the display options button and click **Reset**. If you prepared a bookmark, you do not return to the initial view.

Select a Crosstab Display

The standard crosstab display is the default display type, and it shows data in tabular format. The first two dimensions of the cube represent the rows and columns. In the cube for this report, the first dimension is Years and the second dimension is Products.

Revenue as values	Camping Equipment	Golf Equipment	Mountaineering Equipment	Outdoor Protection	Personal Accessories	Products
2004	333,298,825	153,642,831	0	36,163,624	391,632,187	**914,737,467**
2005	403,130,191	168,280,109	107,140,704	25,006,708	456,359,025	**1,159,916,737**
2006	500,919,729	231,372,689	161,046,514	10,359,215	594,234,053	**1,497,932,200**
2007	353,381,282	175,748,575	141,528,413	4,473,391	443,812,970	**1,118,944,631**
Years	**1,590,730,027**	**729,044,204**	**409,715,631**	**76,002,938**	**1,886,038,235**	**4,691,531,035**

If you nest categories, the nested categories appear in rows below or columns to the right of the top level dimensions. In this report, the Quarters level is nested in the Years level.

Revenue as values		Camping Equipment	Golf Equipment	Mountaineering Equipment	Outdoor Protection	Personal Accessories	Products
2006	2006 Q 1	115,969,290	58,379,261	36,539,206	2,410,113	131,722,288	345,020,158
	2006 Q 2	131,594,512	62,467,714	42,683,784	2,632,786	153,205,078	392,583,874
	2006 Q 3	130,979,047	56,040,116	41,443,786	2,621,541	147,252,623	378,337,113
	2006 Q 4	122,376,880	54,485,598	40,379,738	2,694,775	162,054,064	381,991,055
	2006	500,919,729	231,372,689	161,046,514	10,359,215	594,234,053	1,497,932,200
2007	2007 Q 1	145,539,940	81,537,354	59,768,436	1,879,174	184,020,708	472,745,612
	2007 Q 2	153,809,380	69,081,676	60,116,560	1,887,360	194,759,998	479,654,974
	2007 Q 3	54,031,962	25,129,545	21,643,417	706,857	65,032,264	166,544,045
	2007 Q 4	0	0	0	0	0	0
	2007	353,381,282	175,748,575	141,528,413	4,473,391	443,812,970	1,118,944,631
Years		1,590,730,027	729,044,204	409,715,631	76,002,938	1,886,038,235	4,691,531,035

Step

- Click the arrow to the right of the crosstab button  , and click **Crosstab**.

Select an Indented Crosstab Display

Use indented crosstabs so that the levels of nested categories are indented and the relationships between the categories are more easily identified. This display also presents a more compact format than a crosstab, making it better for printing.

Revenue as values	Camping Equipment	Golf Equipment	Mountaineering Equipment	Outdoor Protection	Personal Accessories	Products
2006						
2006 Q 1	115,969,290	58,379,261	36,539,206	2,410,113	131,722,288	345,020,158
2006 Q 2	131,594,512	62,467,714	42,683,784	2,632,786	153,205,078	392,583,874
2006 Q 3	130,979,047	56,040,116	41,443,786	2,621,541	147,252,623	378,337,113
2006 Q 4	122,376,880	54,485,598	40,379,738	2,694,775	162,054,064	381,991,055
2006	500,919,729	231,372,689	161,046,514	10,359,215	594,234,053	1,497,932,200
2007						
2007 Q 1	145,539,940	81,537,354	59,768,436	1,879,174	184,020,708	472,745,612
2007 Q 2	153,809,380	69,081,676	60,116,560	1,887,360	194,759,998	479,654,974
2007 Q 3	54,031,962	25,129,545	21,643,417	706,857	65,032,264	166,544,045
2007 Q 4	0	0	0	0	0	0
2007	353,381,282	175,748,575	141,528,413	4,473,391	443,812,970	1,118,944,631
Years	1,590,730,027	729,044,204	409,715,631	76,002,938	1,886,038,235	4,691,531,035

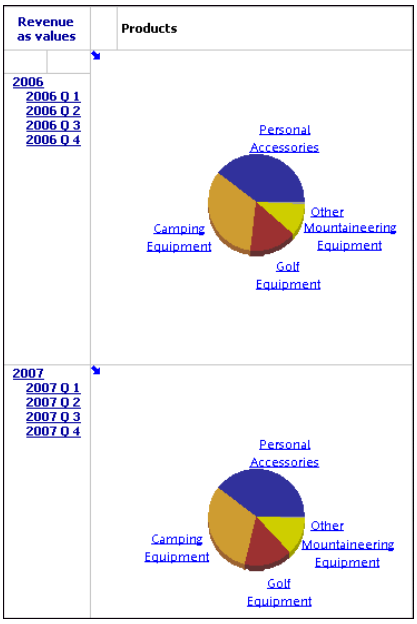
Step

- Click the arrow to the right of the crosstab button  , and click **Indented Crosstab**.

Select or Modify a Pie Display

The pie display charts the summary row of each column to show its proportional contribution to the whole. Any negative numbers are treated as absolute values; for example, the values -50 and 50 are plotted as 50. This type of display is useful for situations where there are not too many items.

Categories whose values are less than 10% of the total display are grouped in a slice labeled **Other**. The **Other** slice also contains any categories with 80/20 suppression, whose value is less than 20% of the total display. For more information, see "Apply 80/20 Suppression" (p. 54).



If the display does not have nested categories, a legend identifies the column and data value associated with each colored section of the pie.

Step to Select the Pie Display

- Click the arrow to the right of the chart button, and click **Pie**.

Steps to Modify the Pie Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the options that you want.

   For more information about using legends, see "Format Legends" (p. 56).
3. Click the **Palette** tab to modify the pattern or color of slices.

   You cannot modify the pattern or color of the slice labeled Other.

   For more information, see "Change the Patterns and Colors in a Display" (p. 60).
4. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
5. Click **OK**.

Select or Modify a Simple Bar Display

The simple bar display charts the summary row of each column to show absolute contribution. Use this display type to show change over a specific time period, contrast two or more variables, and reveal trends in a clear format. This type of display is useful for discrete data.

Step to Select the Simple Bar Display

- Click the arrow to the right of the chart button, and click **Simple Bar**.

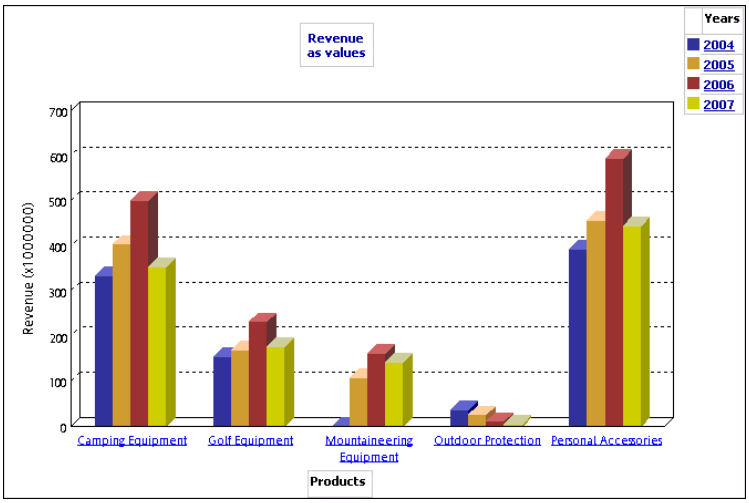
Steps to Modify the Simple Bar Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **Scale** tab to scale the Y-axis, show grid lines, or control the number of ticks on the axis. For more information, see "Modify the Y-Axis" (p. 55).
3. Click the **Statistical** tab to format statistical lines. For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Palette** tab to modify the pattern or color of bars. For more information, see "Change the Patterns and Colors in a Display" (p. 60).
5. Click the **Background** tab to apply a color, pattern, or gradient to the background of the display. For more information, see "Apply a Background Color" (p. 61).
6. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
7. Click **OK**.

Select or Modify a Clustered Bar Display

The clustered bar display plots the cell values of a crosstab in groups so that you can easily compare related information, summaries, and categories. One bar group is created for each column. Each bar in a group represents the row value.



If the display does not have nested categories, a legend identifies the row or column represented by each color.

Step to Select the Clustered Bar Display

- Click the arrow to the right of the chart button, and click **Clustered Bar** .

Steps to Modify the Clustered Bar Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the options that you want.
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis.

   For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Statistical** tab to format statistical lines.

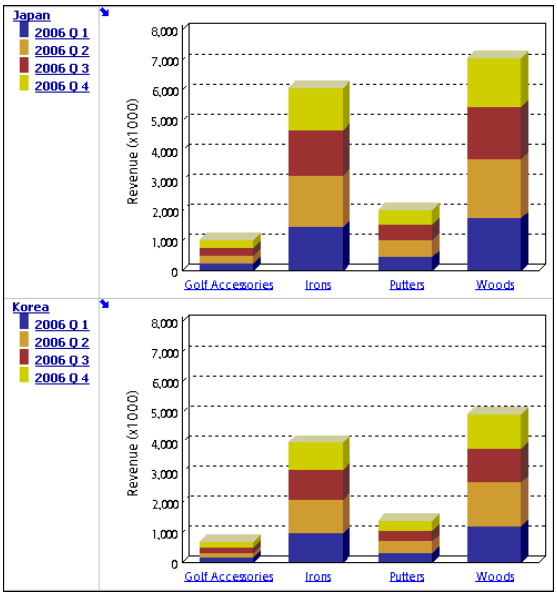
   For more information, see "Show Statistical Lines" (p. 48).
5. Click the **Palette** tab to modify the pattern or color of bars. For more information, see "Change the Patterns and Colors in a Display" (p. 60).
6. Click the **Background** tab to apply a color, pattern or gradient to the background of the display.

   For more information, see "Apply a Background Color" (p. 61).
7. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
8. Click **OK**.

Select or Modify a Stacked Bar Display

The stacked bar display shows trends across columns by plotting the relative proportions of parts to the whole and the relationship between the parts. One bar is created for each column. Within a bar, a segment represents the row value.



If the display does not have nested categories, a legend identifies the row or column represented by each color.

Step to Select the Stacked Bar Display

- Click the arrow to the right of the chart button, and click **Stacked Bar**.

Steps to Modify the Stacked Bar Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the options that you want.
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis.

   For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Statistical** tab to format statistical lines.

   For more information, see "Show Statistical Lines" (p. 48).
5. Click the **Palette** tab to modify the pattern or color of bars.

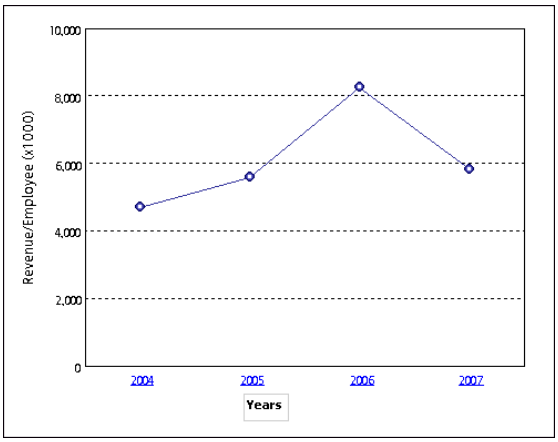
   For more information, see "Change the Patterns and Colors in a Display" (p. 60).
6. Click the **Background** tab to apply a color, pattern or gradient to the background of the display.

   For more information, see "Apply a Background Color" (p. 61).
7. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
8. Click **OK**.

Select or Modify a Simple Line Display

Similar to a simple bar display, the simple line display charts the summary row of each column to show absolute contribution. Use this display type to show change over a specific time period, contrast two or more variables, or reveal trends in a clear format. The simple line display is useful for discrete data.



Step to Select the Simple Line Display

- Click the arrow to the right of the chart button, and click **Simple Line**.

Steps to Modify the Simple Line Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the option that you want.
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis. For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Statistical** tab to format statistical lines.

   For more information, see "Show Statistical Lines" (p. 48).
5. Click the **Palette** tab to modify the pattern or color of lines.

   For more information, see "Change the Patterns and Colors in a Display" (p. 60).
6. Click the **Background** tab to apply a color, pattern or gradient to the background of the display.

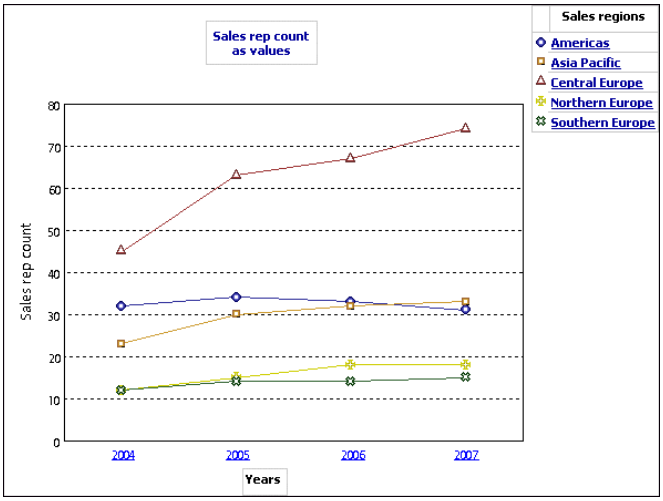
   For more information, see "Apply a Background Color" (p. 61).
7. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
8. Click **OK**.

Select or Modify a Multiline Display

The multiline display shows trends across columns by plotting the cell values of a crosstab in a line chart. One line is created for each column, with a segment of the line representing each row value.

Use this display type to reveal and compare trends and cycles that show relationships between variables, or to show time series analysis and relationships between variables.



If the display does not have nested categories, a legend identifies the row or column represented by each color.

Step to Select the Multiline Display

- Click the arrow to the right of the chart button, and click **Multiline**.

Steps to Modify the Multiline Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the options that you want.

   For more information about using legends, see "Format Legends" (p. 56).
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis.

   For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Statistical** tab to format statistical lines.

   For more information, see "Show Statistical Lines" (p. 48).
5. Click the **Palette** tab to modify the pattern or color of lines.

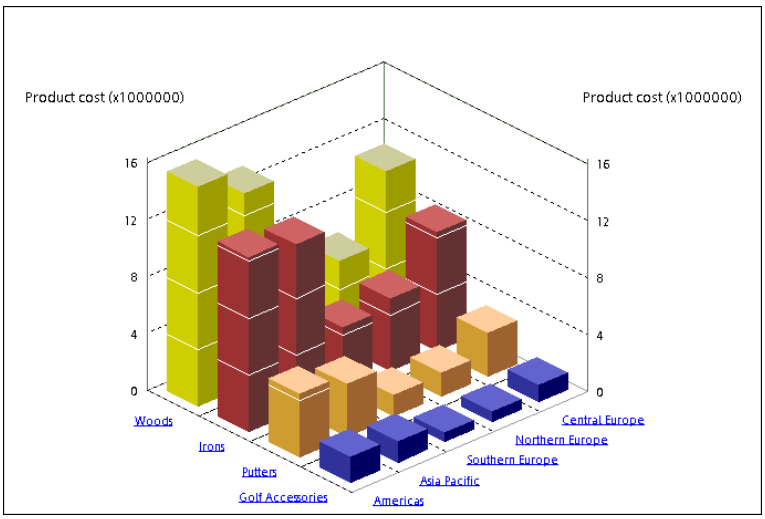
   For more information, see "Change the Patterns and Colors in a Display" (p. 60).
6. Click the **Background** tab to apply a color, pattern or gradient to the background of the display.

   For more information, see "Apply a Background Color" (p. 61).
7. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
8. Click **OK**.

Select or Modify a 3D Bar Display

The 3D bar display shows trends across columns by plotting the cell values of a crosstab in a three-dimensional bar. One bar is created for each column, with the top of the bar representing each row value. Use this display type to show relationships between two or more variables to analyze large quantities of data that are difficult to interpret otherwise, or to provide a different perspective on the data.



If the display does not have nested categories, a legend identifies the row or column represented by each color.

Step to Select the 3D Bar Display

- Click the arrow to the right of the chart button, and click **3D Bar**.

Steps to Modify the 3D Bar Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the options that you want.

   For more information about using legends, see "Format Legends" (p. 56).
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis.

   For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Palette** tab to modify the pattern or color of bars.

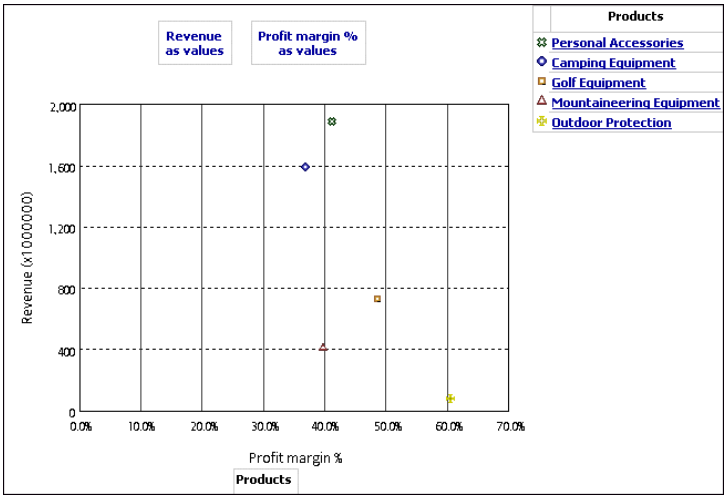
   For more information, see "Change the Patterns and Colors in a Display" (p. 60).
5. Click the **Background** tab to apply a color, pattern, or gradient to the background of the display.

   For more information, see "Apply a Background Color" (p. 61).
6. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
7. Click **OK**.

Select or Modify a Scatter Display

A scatter display shows the first measure on the Y-axis and the second measure on the X-axis.



Step to Select the Scatter Display

- Click the arrow to the right of the chart button, and click **Scatter**.

Steps to Modify the Scatter Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the options that you want.

   For more information about using legends, see "Format Legends" (p. 56).
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis.

   For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Statistical** tab to format statistical lines.

   For more information, see "Show Statistical Lines" (p. 48).
5. Click the **Palette** tab to modify the pattern or color of bars.

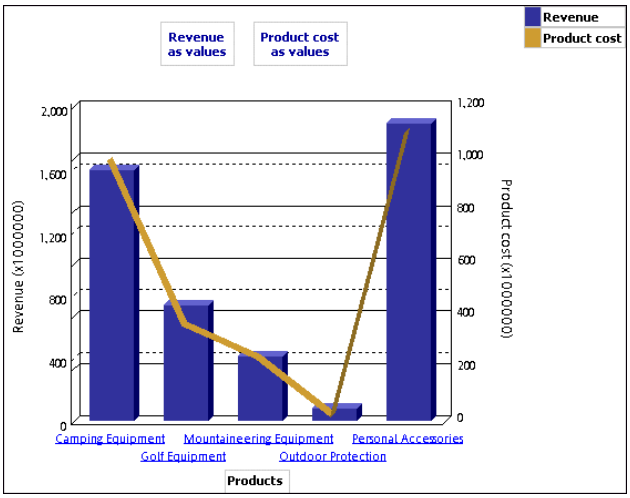
   For more information, see "Change the Patterns and Colors in a Display" (p. 60).
6. Click the **Background** tab to apply a color, pattern, or gradient to the background of the display.

   For more information, see "Apply a Background Color" (p. 61).
7. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).
8. Click **OK**.

Select or Modify a Correlation Display

A correlation display compares two measures in the same cube. The first measure in the cube appears as bars and the second measure appears as lines. By default, PowerPlay uses the first two measures in the cube for the display. However, you can change the measures that are compared.



Step to Select the Correlation Display

- Click the arrow to the right of the chart button, and click **Correlation**.

Steps to Modify the Correlation Display

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab, and select the options that you want.

   For more information about using legends, see "Format Legends" (p. 56).
3. Click the **Scale** tab to scale the y-axis, show grid lines, or control the number of ticks on the axis.

   For more information, see "Modify the Y-Axis" (p. 55).
4. Click the **Statistical** tab to format statistical lines.

   For more information, see "Show Statistical Lines" (p. 48).
5. Click the **Palette** tab to modify the pattern or color of bars.

   For more information, see "Change the Patterns and Colors in a Display" (p. 60).
6. Click the **Background** tab to apply a color, pattern, or gradient to the background of the display.

   For more information, see "Apply a Background Color" (p. 61).
7. Click the **Labels** tab to specify titles.

   For more information, see "Format Labels" (p. 61).

8. Click **OK**.

Step to Change a Measure Used in the Correlation Display

- From the dimension line, select a different measure.

  If both measures do not appear in the dimension line, use the scroll options to show the hidden part of the dimension line.

Show Report Values as Percentages

You can show report values as a percentage of the row or column subtotals or of the report total. Examining a dimension as a percentage can provide new insights into your business data. For example, you have Products in the rows of your report and show the revenue values for each product as a percentage of all rows. You can see which products contributed the most to total product revenue.

Step

- Click the display options button and click **Display Options**.

  In the **Display Measures** box, select a percentage data format and click **OK**.

The measure description shows the percentage data format used in the display.

Show Statistical Lines

You can use statistical lines to indicate minimum, maximum, mean, standard deviation, logarithmic regression, linear regression, or custom values. Statistical lines are series-based. When applying a statistical line to a chart with multiple series, you must specify the series to which the statistical line applies. You can specify the line type and the color of each statistical line independently.

You can set statistical lines on all displays, except 3D bar and pie displays. You cannot use standard deviation or logarithmic regression lines in a scatter display.

Steps

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **Statistical** tab.
3. Select the type of statistical line to use in the display and set the line properties.

   If you are defining statistical lines for more than one display, indicate the series to which each statistical line applies.
4. Click **OK**.

Convert Currency Values

You can convert the monetary values in your report into a different currency. For example, you can convert your report values from Canadian dollars to euros. You can select any currency that

your Transformer modeler has set up in the cube. The Transformer modeler also defines the default format for each currency.

When you format a currency value, the currency symbol can be specified separately from the format. This means that your browser locale settings can be used to format the number (for example, the decimal and group separators) while still preserving the currency representation.

Steps

1. Click the display options button and click **Display Options**.
2. In the **Currency** box, select the currency you want.

   If no currencies are available, none were defined in the cube.

If you use a currency other than the default currency defined in the cube, the currency name appears in the display.

Custom Exception Highlighting

You can emphasize specific data by defining custom exception highlighting rules.

You define custom exceptions as part of a report. PowerPlay stores these definitions so that each time you open a crosstab view of this report, the exceptions are available. Exception highlighting must be applied by the report user. You can define up to 20 custom exceptions, each with up to five value ranges.

Define a Custom Exception

You define a custom exception so that data that falls within a value range appears in a crosstab view with the defined formatting. For example, you can define a custom exception to show sales that are below target with a red background.

A custom exception can contain up to five value ranges, with formatting attached to each range. For each value range there is a minimum value, a maximum value, a font color and a background color.

Steps

1. Click the custom exception highlighting button  .
2. In the **Exceptions** dialog box, click **Add**.
3. Type an exception name.
4. In the **From** box, enter a minimum value for the first range or click **Minimum** to have no lower boundary.
5. In the **To** box, enter a maximum value for the first range or click **Maximum** to have no upper boundary.
6. Select formatting options for the range.
7. Define additional value ranges if required.

8. Click **OK**.

The new definition appears in the **Defined Exceptions** list. You must apply the exception before the highlighting appears in the report.

You can edit or delete definitions from the **Defined Exceptions** list.

Apply a Custom Exception

You must apply a defined custom exception before the highlighting appears in the report. PowerPlay can show only one custom exception definition for a particular cell at a time. When you apply an exception to a column, a row, or to the whole report, this application removes any exception that was previously applied to the same selection.

Where a cell lies at an intersection between two defined custom exceptions, only the most recently applied exception will be visible for that cell.

PowerPlay shows custom exceptions in crosstab view only. You can define custom exceptions in any view, but PowerPlay ignores them.

Custom exceptions apply to all cell types, including calculations, calculated categories, and measures.

You can apply one custom exception to a summary category and a different exception to its children. Apply the exception definition you want for the children to the summary total, expand the summary to show the children, and then apply the exception you want to the summary total only.

The custom exception must already be defined (p. 49).

Steps to Apply a Custom Exception

1. Click the custom exception highlighting button  .
2. Select a row, column, or measure in the crosstab.

   Tip: To select the entire crosstab, click the Measure cell in the crosstab. To clear the selection of the entire crosstab, click the Measure cell again.
3. From the **Defined Exceptions** list, click the custom exception you want to apply and click **Apply**.
4. Click **OK**.

Steps to Remove the Application of an Exception

1. Click the category where the custom exception is applied.
2. Select (**none**) from the **Defined Exceptions** list.
3. Click **OK**.

Highlight Exceptions Automatically

PowerPlay can automatically highlight exceptional values within new data. Exceptions stand out in a report or crosstab and call attention to their values.

PowerPlay considers a value exceptional if it is significantly higher or lower than the value expected compared to its row and column totals. By default, automatic highlighting shows low values in a bold red font and high values in a bold green font.

For example, in the crosstab display below, exceptional values are highlighted in red or green based on exception rules applied to the data.

Revenue as values		Austria	Italy	Spain	Southern Europe
2006 Q 1	2006/Jan	2,520,615	3,228,474	3,754,261	9,503,350
	2006/Feb	2,566,372	4,036,127	3,468,527	10,071,026
	2006/Mar	2,614,468	2,973,917	3,560,511	9,148,896
	2006 Q 1	7,701,455	10,238,518	10,783,299	28,723,272
2006 Q 2	2006/Apr	2,519,086	4,222,420	3,247,635	9,989,141
	2006/May	2,162,638	3,744,729	3,045,259	8,952,626
	2006/Jun	1,900,892	4,576,092	3,717,323	10,194,307
	2006 Q 2	6,582,616	12,543,241	10,010,217	29,136,074
2006 Q 3	2006/Jul	2,006,198	4,067,478	3,774,609	9,848,285
	2006/Aug	2,371,841	4,309,855	3,709,833	10,391,529
	2006/Sep	2,171,683	3,525,634	3,130,159	8,827,476
	2006 Q 3	6,549,722	11,902,967	10,614,601	29,067,290
2006 Q 4	2006/Oct	2,551,604	3,857,856	2,986,792	9,396,252
	2006/Nov	2,471,889	3,263,432	3,481,976	9,217,297
	2006/Dec	2,542,664	3,881,657	3,658,784	10,083,105
	2006 Q 4	7,566,157	11,002,945	10,127,552	28,696,654
2006		28,399,950	45,687,671	41,535,669	115,623,290

With Web browsers that support cascading style sheets, you may see another font or color for automatic exception highlighting if your PowerPlay administrator has specified different fonts or colors.

In the Enhanced interface, the exception highlighting button is not on the PowerPlay toolbar by default. To add the exception highlighting button to the PowerPlay toolbar, contact your administrator.

Step

- Click the automatic exception highlighting button.

PowerPlay applies the rules and shows **Exception highlighting** in the display.

Sort Values

In crosstab displays, you can sort the row and column values in ascending or descending order. For example, a report shows the product sales for the previous ten years. You sort the sales figures to order them from the highest figure to the lowest figure. The data remains sorted until you drill down or drill up.

Steps to Sort Values

1. Select the row or column in which you want to sort the values.

   The row or column becomes highlighted, and the sort button appears in the row or column heading.

2. Click the sort button, and choose to sort by ascending or descending order.

The values and the sort icon change to show the type of sort action that you applied to the row or column.

Step to Remove Value Sorting

- Click the sort button, and click **No Sort**.

Swap Rows and Columns

You can exchange the positions of categories in rows and columns. For example, a report contains few rows but many columns that exceed the width of the printed page. You swap the rows and columns to fit the report on one page.

You can exchange the positions of categories within a nested crosstab. For example, you have Products nested within Years but you exchange the positions to see Years nested within Products.

In addition to the toolbar and right-click menu controls described below, you can drag and drop rows and columns to swap them (p. 24).

Step to Swap Rows and Columns

- Click the swap button  .

Step to Swap Nested Levels

- Right-click the level selector area for the nested category, and choose how you want to swap the nested levels:
  - If the nested category is in a column, click either **Swap Up** or **Swap Down**.
  - If the nested category is in a row, click either **Swap Right** or **Swap Left**.

The positions of the parent category and the nested category are exchanged.

Limit the Size of Crosstabs

To improve the performance and readability of large reports, you can limit the data that appears in crosstab displays. For example, you set a row limit of 20 and a column limit of 10. Values that you set in PowerPlay for the rows and columns override the default row and column limits set by your PowerPlay administrator.

When you limit the size of a crosstab, PowerPlay provides the following navigation buttons in the display.

Button	Description
	Moves to the next page of columns.
	Moves to the previous page of columns.
	Moves to the first page of columns.

Button	Description
	Moves to the last page of columns.
	Moves to the next page of rows.
	Moves to the previous page of rows.
	Moves to the first page of rows.
	Moves to the last page of rows.

When you limit the number of rows or columns in a report with nested categories, you must choose the number of categories you want to show at the lowest level. Subtotal categories are always included on each page (unless Hide Subtotals is enabled), even if the limit must be exceeded to do so.

Steps

1. Click the display options button  .
2. Click **Display Options**.
3. Select the number of rows you want to show.
4. Select the number of columns you want to show.
5. Click **OK**.

The crosstab shows the limited number of rows and columns.

Apply Zero Suppression

You can ignore categories whose values fall into a low range. For example, sales channels that are not active contributors to the bottom line are better left out of the report. You can also ignore categories that either do not apply to the report or that return zero values.

The default zero suppression settings remove rows or columns containing all zeros, missing values, overflow values, or the results of dividing by zero. You can do this for rows, columns, or both. Zero suppression only applies to the first measure.

When you apply zero suppression to a chart that supports multiple measures, the suppression is only applied to the first measure. You cannot apply suppression to a second measure, such as the line of a correlation chart, or to conditions when both measures are zero.

The **Explain** window includes information about your selected zero suppression options, and any PowerPlay URLs created by the **Prepare Bookmark** command retain your changed settings, provided zero suppression was enabled for the crosstab.

The **Rows/Columns Only** setting saved with your Web report applies when running in Windows. However, if you open a Web report in PowerPlay using the **Run report in Windows** command,

your PowerPlay for Windows preferences will override any zero suppression options set on the Web.

Enabling zero suppression on a large reports may have a negative impact on performance.

The PowerPlay administrator can enable or disable zero suppression options for specific cubes or reports. If any of the options described below are not available, contact your administrator.

Steps

1. Click the zero suppression options button  .
2. Click **Zero Suppression** to suppress zeros in the entire report, or click either **Rows Only** or **Columns Only**.
3. To change the default zero suppression settings, click the zero suppression options button and click **Options**.
4. Change the suppression settings and click **OK**.

   To remove the suppression, click the zero suppression button again.

   If you want to retain your changed settings after you return from a drill-through report or cube, remember to use **Return to Source**. Any other navigation method will cause your changes to be lost, and your report will revert to the default zero suppression settings.

Apply 80/20 Suppression

80/20 suppression removes rows or columns whose absolute values do not contribute to the top 80% of results. It then summarizes the removed rows or columns into a single row or column named Other.

For example, the Great Outdoors Company records data for eight retailer types. However, four retailer types contribute 80% or more of the total revenue. When 80/20 suppression is applied to a retailers report, the retailers that contribute 20% or less of total revenue are grouped in the Other column.

Revenue as values	Department Store	Golf Shop	Outdoors Shop	Sports Store	*Other*	Retailers
2004	218,702,078	81,215,607	226,186,674	251,409,694	*137,223,414*	**914,737,467**
2005	234,093,351	117,475,668	353,378,729	299,825,656	*155,143,333*	**1,159,916,737**
2006	262,268,935	166,343,991	507,156,406	382,221,520	*179,941,348*	**1,497,932,200**
2007	166,878,294	128,767,474	407,281,116	288,785,273	*127,232,474*	**1,118,944,631**
Years	**881,942,658**	**493,802,740**	**1,494,002,925**	**1,222,242,143**	***599,540,569***	**4,691,531,035**

In Microsoft SQL Server Analysis Services cubes, if the dynamic rollup of the Other category includes a category that is also filtered as a result of the overall 80/20 suppression, a conflict results that causes PowerPlay to return an NA value for the Other category.

Step

- Click the 80/20 suppression button  .

  80/20 suppression appears in the display. If a category labeled Other is not shown, all the categories in the report dimension contribute to 80% of the total.

To show all categories, click the 80/20 suppression button again.

Modify the Y-Axis

You can change some properties of the Y-axis. For example, you can increase the number of gridlines to make it easier to distinguish the differences between categories that have similar values.

Steps

1. Click the arrow to the right of the chart button  , and click a chart type.
2. Click the arrow to the right of the chart button and click **Chart Options**.
3. Click the **Scale** tab and select the options that you want:
   - To set the maximum or minimum scale value, select the **Use manual axis scale** check box, and enter a value in the appropriate box.
   - To turn grid lines on or off, select the **Show the gridlines** check box.

   For a 3D bar display, select the gridline boxes for the appropriate facings.
   - To reverse the axis so that the largest number is at the bottom, select the **Reverse Axis** check box.
   - To specify the number of ticks on the axis, select the **Number of Ticks** check box and enter a value in the box.
   - To specify the location of the axis, under **Axis Placement**, click either **Left**, **Right**, or **Left and Right.**

   The last three options are not available for 3D bar displays.
4. Click **OK**.

Resize Charts

You can resize a chart to a percentage of the screen. This helps you to view a chart size that suits your environment.

Steps

1. Click the arrow to the right of the chart button and click a chart type.
2. Click the arrow to the right of the chart button and click **Chart Options**.
3. Click the **General** tab.
4. Select the **Percentage of screen** check box.
5. In the **Height** and **Width** box, type a number between 10 and 500.

   To maintain a 1:1 aspect ratio in the resized chart, type the same number in both the **Height** and **Width** boxes.

6. Click **OK**.

Format Legends

You can use either an HTML legend, or an embedded legend. An embedded legend has the advantage of being part of the display, and is included when the display is copied. However, because the embedded legend is part of the image, it can contain only a limited number of categories. An arrow indicates if some categories are not visible. An HTML legend lets you perform crosstab operations, such as drag and drop.

Steps

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab.
3. Choose to use an HTML legend or an embedded legend.
4. If you selected an embedded legend, specify where you want it to appear in the display.
5. Click **OK**.

Add Rank Categories Based on Measure Values

You can add rank categories to your reports to show rank ordinals. Ranking adds ordinals to a report so you can compare your categories to one another. For example, you have a report that outlines revenue for all your products. You add a rank category to this report to see which products generated the most revenue.

Categories are ranked by their value in a specific row or column. The rank ordinals appear in a new row or column. The labels and values of the rank category are italicized.

The rank results can be unsorted, meaning that they are not in numerical order, or they can be sorted in ascending or descending order. Rank categories and sort orders are automatically regenerated whenever there is a change to the report data. You can rank more than one row or column in the same report.

You cannot rank forecast calculation or total summary values.

If the rank option is not available, contact your administrator to enable the ranking feature.

Steps

1. Click the column or row on which you want to base the rank category, and click the rank button  .
2. Change the ranking properties.
3. Click **OK**.

The new rank category appears in the report, to the right of the selected column or under the selected row.

Hide Categories

You can selectively show or hide any category in a report, including precalculated categories that were inserted when the cube was created. When you hide categories, the summaries in the report are not affected.

Step to Hide Categories

- Decide whether you want to hide one or several categories.

  To hide a single category, right-click the category you want to hide, and click **Hide Selection**.

  To hide more than one category, right-click a category and click **Hide/Show**. Move the categories you want to hide to the **Hidden Categories** box and click **OK**.

Steps to Hide Precalculated Categories

1. Click the display options button.
2. Click **Display Options**.
3. Select the **Hide Calculated Categories Defined in the Cube** check box, and click **OK**.

Steps to Show Hidden Categories

1. Click the display options button.
2. Click **Reset**.

All hidden categories reappear in the display regardless of the method used to hide the categories.

Show Short Names

You can switch between long and short category names in your report. A short name is an optional property that is defined for any category in a cube. You may want to show short category names so that you can see all the rows or columns without scrolling.

Short names appear in

- crosstab displays
- the dimension viewer
- drill-down views
- the **Explain** dialog box
- the **Calculations** dialog box
- exported PDF and CSV reports
- the **Find** dialog box
- the **Hide/Show** dialog box

When you show short names, long names will still appear for any category that does not have a short name defined in the cube.

Steps

1. Click the display options button.
2. Click **Display Options**.
3. Select the **Show Short Names** check box.
4. Click **OK**.

Add a Title

You can create or edit a title for the report. In addition to typing a name for the title, you can use variables in the report title. For example, you can use variables to show the cube file name and date in the report title.

By default, the cube title, if defined by the Transformer modeler, is used for the report title.

Steps

1. Click the display options button, and click **Edit Title**.
2. Type the title and, if enabled by your PowerPlay administrator, HTML tags to format the title.

   For more information about using HTML tags in the report title, see "Valid HTML Tags in Report Titles" (p. 58).
3. To add information to the title using variables, select items from the **Variables** box, and click **Insert**.
4. To show the dimension bar when you export the report to PDF, select the **Display Dimension Bar Information** check box.
5. Click **OK**.

Valid HTML Tags in Report Titles

The default serve settings limit the embedded HTML content that you can use in the titles of reports. This helps to ensure that unwanted scripts are not run when a consumer views a published report. Your administrator can change the server settings to allow any valid HTML tag in a report title.

The following HTML tags are valid when embedded HTML restriction is enabled:

- <I>, <B>, <U>,
 (with no attributes)
- <P> (with align, dir, style, class, and title attributes permitted)
- <SPAN>, <DIV> (with dir, style, and class attributes permitted)

To ensure XML compatibility, use closing brackets with all tags.

Unrecognized tags, tags with invalid attributes, and any tag containing a style attribute with unexpected values appear as text in the title.

Style Attribute Values

The style attribute, which is permitted on the <P>, <SPAN> and <DIV> tags, can have only the following values:

- font
- font-size
- font-weight
- font-style
- color
- background-color
- text-decoration

Some style elements are not permitted. For example, the font-family element is not recognized. The font-size element can have only numbers after it, and the color element should only be used with the rgb (#,#,#) format.

For example, to create a title in 24 point bold, red text, type the following in the Title Text box:

```
<p STYLE="font-size:24;color:rgb(255,0,0);font-weight:bold">My
Customized Report</p>
```

Show Multiple Measures in a Report

You can show multiple measures in a report. When you use multiple measures, the measures appear as rows or columns and you can use many of the layout techniques you use for categories. For example, you can change the layout order by dragging a measure to a different location. Also, you can hide one or more of the measures (p. 57).

You can reorder only the top-level measures in the measures dimension.

Multiple measures are not appropriate for all display types. You cannot change to correlation display or scatter display if the report includes multiple measures.

Steps

1. In a crosstab display, add measures to the report from the dimension viewer.
   - To add all measures, right-click the **Measures** folder, and click either **Replace Rows** or **Replace Columns**.
   - To add individual measures, click the measure and drag it to the highlighted area that appears above or below another measure.
2. To move a measure, click the measure and drag it to the highlighted area that appears between two other measures.

3. To maintain the measures layout for future use, save the report to the portal, export to .pdf or .csv format, or prepare a bookmark.

   When you close the cube, the revised order of the measures is not saved in the cube.

Use Layers to Show Multiple Categories in Your Report

You can use layers to present data in pages where each page is filtered on a different category from the same level in a dimension. For example, you need a report that shows revenue by product for each retailer type. When you export the revenue by product report to PDF format, you choose to use layers based on the retailers dimension. The PDF report will show revenue by product for each retailer type on a separate page.

Steps

1. Click the file button  and click **Export PDF**.
2. On the **Display** tab, select **Include Layers** and choose the dimension for which you would like to apply the layers effect.
3. Click **Export**.

The PDF report shows each category on a separate page.

Change the Patterns and Colors in a Display

To help highlight different categories in bar and pie displays, you can specify colors, patterns, or gradients for each series of bars or pie slices. Patterns are especially useful when printing in black and white. For line displays, you can specify the color, line type and marker type of each line in the display.

PowerPlay has a 16-color palette. If a display requires more than 16 colors, colors are repeated in more than one series.

In a pie display, all categories whose values are less than 10% of the total display are grouped in a slice labeled Other. You cannot modify the default color of this slice.

Steps

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **Palette** tab.
3. Select the formatting that you want to apply.
4. Click **OK**.

Apply a Background Color

You can apply a color, pattern, or gradient to the background of the display. When you apply a gradient to the background, you can set the direction of the gradient.

Steps

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **Background** tab.
3. Specify the background formats that you want to apply.
4. Click **OK**.

Format Labels

You can customize the labels used in a chart display. For example you can create a custom chart title and format font properties.

One of the options for horizontal axis labels is to use a vertical or diagonal alignment of labels. These options require more display space than the default horizontal alignment. If the display does not include sufficient space for a vertical or diagonal alignment of labels PowerPlay will use the default horizontal alignment.

Steps

1. Click the arrow to the right of the chart button and click **Chart Options**.
2. Click the **Labels** tab.
3. Select the label that you want to edit.
4. Specify the properties for the label.

   If the font you require is not listed, contact your administrator.
5. Click **OK**.

Add Format Markers

You can add markers to simple line, multiline, and correlation displays.

Steps

1. Click the arrow to the right of the chart button, and click **Chart Options**.
2. Click the **General** tab and select whether to show markers and values.
3. Click the **Palette** tab, and select a marker type.
4. Click **OK**.

Chapter 4: Distributing Results

Distribute your results by

- publishing the report to the IBM Cognos portal for others to view (p. 63)
- creating an alert that sends an email notification when a specific condition in your data occurs (p. 64)
- exporting the report to a different file format, such as Microsoft Excel (.xls) format (p. 66)
- creating a bookmark to the report that you can save in your Web browser or send to others (p. 69)
- printing the report (p. 69)
- reusing graphical elements from a report, such as a chart, in other applications (p. 69)

Publish New Reports

After opening and exploring a data source, or opening and modifying an existing report, you can publish a new report to the IBM Cognos portal.

Steps

1. Click the save as button.

   If prompted, provide authentication information.

2. Follow the steps in the wizard, and click **OK**.

   You must have write permissions to the portal location that you choose.

The report reappears in your Web browser and is also available for other users from the IBM Cognos portal.

Replace Existing Reports

If you change a report that was already published to the IBM Cognos portal, you can replace the report for other report consumers.

You can replace a report only if you access the report from the portal and if you have write access to the portal location.

Steps

1. From the IBM Cognos portal, open a report.
2. Modify the report.
3. Click the save button.

The report information is replaced in the portal location, and the report remains open in your Web browser.

Create an Agent

To help individuals who are responsible for business processes manage business events that are time-critical, you can create an agent that examines a data source on a predefined schedule to determine if a business event occurred. When the agent detects a business event, the agent sends a notification to one or more recipients that includes details about the business event.

For example, you can create an agent that will notify you if a specific customer places an order with a value greater than $200,000. The notification initiates a follow-up process with the customer.

An agent appears as an entry in Upfront. Agent entries are similar to other Upfront entries. For example, you can view the properties and create custom views of Agents.

You can provide notification about changes or updates to other types of information delivered through Upfront. For example, you can deliver notifications that are triggered each time an Impromptu report runs. For more information, see the IBM Cognos Web Portal *User Guide*.

Before you create an agent, identify some important information about the data sources and the individuals responsible for the processes that provide input to the data sources. To select the most appropriate schedule for the agent, you should know how often the data sources are updated. By scheduling the agent to run immediately after the data source update, the agent evaluates the most current data. To ensure that the business event triggers some action, select email recipients that have control over the processes that contributed to the business event.

To create an agent, the IBM Cognos reporting environment must include IBM Cognos NoticeCast. Also, you must have owner or write privileges for the NewsBox where the agent will appear. Anonymous and guest users can't create agents.

Steps

1. In the crosstab, select the row, column, or cell that you want the agent to evaluate.
2. Click the agent button  .
3. Click the **Create Agent** link.
4. On the **Condition** page, enter the parameters for the agent.
5. If you are prompted to select a destination NewsBox, click **Other NewsBox**, select a NewsBox in the NewsBox list and click **OK**.
6. On the **Name, Description and Location** page, enter the name and description information for the agent, and select a destination NewsBox.
7. On the **Schedule** page, choose when to run the agent:
   - If you want the agent to run each time the data source is refreshed, select **Run when the Data Source** is refreshed.

- If you want the agent to run on an established schedule, select **Run on the following schedule**, and then select the schedule you want to use from the drop-down list.

8. On the **Send an Email** page, enter the information you want to include in the email notification.
9. If you want to receive duplicate emails, choose one of these options:
   - Clear the **Suppress duplicate emails for the selected topics** check box, and click **Select topics**.
   - On the **Select topics** page, select the topics for which you don't want duplicate notifications and click **OK**.
10. If you want to attach a PDF of the report to the email, select the **Include the report as a .pdf attachment** check box.
11. Click **Finish**.

The agent appears as an entry in Upfront.

For information about editing agents, see "Modify an Agent" (p. 65).

Modify an Agent

After you create an agent in PowerPlay, you can modify the agent in Upfront by modifying the data evaluated, the schedule, or the notification list.

For information about creating agents in PowerPlay, see "Create an Agent" (p. 64).

Steps to Modify the Data Evaluated

1. In Upfront, click the **Actions** link for the agent NewsItem.
2. On the **Agent Actions** page, click **Modify the rule**.

   The PowerPlay cube appears, as well as the **Agent** tab showing the current agent conditions.
3. Select the row, column, or cell that you want the agent to evaluate and click **Update Agent**.

   The **Modify the Rule** page appears. The agent description now shows the new data that the agent evaluates.
4. On the **Modify the Rule** page, enter the parameters for the agent and click **OK**.

Steps to Modify the Agent Schedule

1. In Upfront, click the **Actions** link for the agent NewsItem.
2. On the **Agent Actions** page, click **Schedule**.
3. On the **Agent Schedule** page, choose when to run the agent and click **OK**.

Steps to Modify the Agent Notification List

1. In Upfront, click the **Properties** link for the agent Newsitem.
2. On the **Agent** tab, click **Edit email list**.

3. On the **Email Recipient List** page, modify the email recipient information as required and click **OK**.
4. On the agent **Properties** page, click **OK**.

Subscribe to the Agent Notification

You can subscribe to a notification created by another user.

Steps

1. In Upfront, click the **Actions** link for the agent NewsItem.
2. On the **Agent Actions** page, click **Modify the rule**.

   The PowerPlay cube appears, as well as the **Agent** tab showing the current agent conditions.
3. Click **Add me to the notification list**.

Exporting Data to an Alternate Format

You can export the data in a report for use in other applications. You can export data in

- delimited text format (.csv) for use in a variety of applications (p. 66)
- .xls format for use in Microsoft Excel (p. 68)
- .pdf format to preserve report formatting and distribute the report for use in Adobe Acrobat Reader (p. 68)

Export Data in CSV File Format

Delimited text format is one of the most popular export formats, because the resulting file can be used as an import source by many applications. The delimited text format ensures a high degree of compatibility in multi-language environments. It also ensures reliability when importing into other applications such as Microsoft Excel.

PowerPlay uses the following format conversions when you create a .csv file.

Format	Conversion Details
Numeric data	The decimal symbol for the locale is used, even if the format or pattern of the number contains an explicit decimal that differs from the locale. The digit grouping symbol (the symbol used to group large numbers such as thousands in the US locale) is not used in the CSV export. The negative sign symbol but not the format of the locale is used. This may also be different from the explicit format used for that number. The negative symbol is always leading. For example, for a German locale of DE_DE, a number that was formatted as (765 000.45) is exported to CSV format as -765000,45.
Currency data	Currency values follow the same rules as numbers. The currency symbol is not exported. For example, if the locale is EN_US, and the format of the number in a PowerPlay report is $123,456.00, PowerPlay exports 123456.00.
Character data	In some products, you can optionally allow quotes to be put around the text. This technique ensures that a text field containing the list separator (such as a comma) is not interpreted as multiple fields in the exported file.
Date and time data	Dates are exported in ISO format, *YYYY-MM-DD*. Time is exported as ISO format, *hh*:*mm*:*ss*.The hour value (*hh*) uses the 24-hour clock. **Note:** In PowerPlay, the date is defined in the Transformer model and is exported as text.

You can view this data in any application that supports comma separated value files, such as Microsoft Excel. If you do not have Microsoft Excel installed, you can save the .csv file to your computer, and then open the file in another application.

If your administrator enabled the Dimension Line in CSV Export setting, the dimension line appears in your .csv file.

If you have Microsoft Excel installed, you can save the comma-separated value file (.csv) to your computer or open the data directly in Microsoft Excel.

To open the data directly in Microsoft Excel, your Web browser must be configured to recognize the CSV format.

To configure Internet Explorer Web browsers for Export CSV, you must set the MIME type for the Microsoft Excel Comma Separated Values File format to **text/x-csv** for your operating system.

Tip: For more information about associating a file name extension with a file type, see the Microsoft Windows help.

Steps

1. Create a report.
2. Click the file button  and click **Export CSV**.

   You are prompted to open the file or save it to your computer.

If the cells in your .csv file appear jumbled together, ensure that the regional settings for PowerPlay are consistent with the regional settings of your operating system.

Export Data in XLS Format

You can export reports as formatted Microsoft Excel spreadsheets (.xls).

You can export a maximum of 65,536 rows, including any headings. For large queries, export to .csv format.

Steps

1. Create a report.
2. Click the file button and click **Export XLS**.

   You are prompted to open the file or save it to your computer.

Export Data in PDF Format

You can export reports to PDF format. PDF export settings ensure that PDF output closely matches the original report. You can customize the pagination, word-wrap, status line, paper size and orientation of your PDF report output so that the PDF matches the HTML display as closely as possible. As well, you can choose to show borders that aid report readability. You can also show layer views filtered on each sibling in a dimension level.

If you want to present data in pages, where each page is filtered on a sibling of a dimension level, you must first select a filter in the dimension that you are using for layers. This filter specifies the dimension whose children you want to use as layers in the PDF report.

Steps

1. Create a report.
2. Click the file button and click **Export PDF**
3. Select the paper, display, and pagination properties.
4. Decide whether you want to use the settings for the current report or all reports.
   - Click **Apply** to save the setting for use in other reports and then click **Export**.

The **Include Layers** and **In Dimension** settings must be specified for each PDF export.

- Click **Export** to use the settings in only the current report.

A PDF is exported using the properties you selected. To return to the default PDF export settings, click **Reset**.

Prepare a Bookmark

Bookmarks are a convenient way to return to specific reports. For example, you bookmark a report showing sales figures filtered for a specific set of products. You then select the name of the report from the list of bookmarks in the Web browser. The report opens in the browser and shows current data.

When you prepare a bookmark, PowerPlay defines a complete URL for the report. The URL includes information about the categories in the report, data formats, and filtering that is not usually included in the URL. After you prepare the bookmark, you can add the URL to your list of bookmarks or favorites in your Web browser.

Steps

1. Create a report.
2. Click the file button and click **Prepare Bookmark**.

   The complete URL for the report appears in either the Location or the Address box of your Web browser.
3. Use the features of your Web browser to add the bookmark to the list of Web browser bookmarks or favorites.

Print Reports

You print reports from PowerPlay Web Viewer using the print options in Adobe Acrobat.

Steps

1. Open a report in PDF format.
2. On the Adobe Acrobat Reader toolbar, click the print button.

   Do not use the print command in your Web browser to print reports.

Reuse Graphical Displays in Other Applications

If you use Microsoft Internet Explorer, you can reuse charts and chart legends in other documents, such as Microsoft Word documents or Microsoft PowerPoint presentations. The copied content will be an embedded graphical element in the alternate application. A link to the original data source is not maintained.

Chart legends are created using HTML tables. If the target application does not support the HTML formatting, the legend may look different.

Steps

1. Right-click a chart or chart legend, and click **Copy to Clipboard**.

   Tip: If **Copy to Clipboard** is not available, press Ctrl while you right-click.

2. Open the document into which you want to paste the chart, and click **Edit, Paste**.

IBM Cognos BI for Microsoft Office

IBM Cognos BI for Microsoft Office enables integration between PowerPlay Web content and Microsoft Excel. IBM Cognos BI for Microsoft Office works with PowerPlay cubes and reports that were published to IBM Cognos BI for Microsoft Office.

IBM Cognos Go! Office is available online from the IBM site (http://www.ibm.com).

Chapter 5: Forecast Formulas

You can make predictions about the future performance of your business based on past data by using one of these time series forecasting methods: Trend, Growth, or Autoregression.

All PowerPlay forecasting methods use univariate techniques, which means that each category, whether a row, a column, or a summary row or column, is treated as a separate time series.

For clarification of the forecast functions and the legal explanation of its terms of use, see "TERMS OF USE" (p. 32).

Trend Forecast Formula

The formula for Trend forecasting is

$y = at + b$

where y is the dependent variable (for example, revenue), t is the independent time variable,

$$a = \frac{N\left(\sum_{i=1}^{N} t_i y_i\right) - \left(\sum_{i=1}^{N} t_i\right)\left(\sum_{i=1}^{N} y_i\right)}{N\left(\sum_{i=1}^{N} t_i^2\right) - \left(\sum_{i=1}^{N} t_i\right)^2}$$

(the slope of the trend line)

and

$$b = \frac{\left(\sum_{i=1}^{N} y_i\right)\left(\sum_{i=1}^{N} t_i^2\right) - \left(\sum_{i=1}^{N} t_i\right)\left(\sum_{i=1}^{N} t_i y_i\right)}{N\left(\sum_{i=1}^{N} t_i^2\right) - \left(\sum_{i=1}^{N} t_i\right)^2}$$

(the intercept)

The coefficient of determination, a measure of how closely the trend line corresponds to your historic data, is defined by the following equation:

$$R^2 = 1 - \frac{SSE}{SST}$$

where

$$SSE = \sum_{i=1}^{N} \left(y_i - \hat{y}_i\right)^2$$

(sum square of residual errors)

and

$$SST = \left(\sum_{i=1}^{N} y_i^2\right) - \frac{\left(\sum_{i=1}^{N} y_i\right)^2}{N}$$

Growth Forecast Formula

The formula for Growth forecasting is

$y = bt^2$

where b is the intercept and a is the constant growth rate.

PowerPlay uses a logarithmic transformed regression model to solve this equation.

Autoregression Forecast Formula

The formula for Autoregression forecasting is

$$y_t = \sum_{j=1}^{M} d_j y_{t-j}$$

where

$$\sum_{j=1}^{M} \phi_{|j-k|} d_j = \phi_k \qquad (k = 1, \ldots, M)$$ (d_j are the linear prediction (LP) coefficients)

and

$$\phi_j \equiv \langle y_i y_{i+j} \rangle \approx \frac{1}{N-j} \sum_{i=1}^{N-j} y_i y_{i+j}$$ (auto-correlation of the historic series)

PowerPlay uses Burg's algorithm and a data window (M) equal to half the number of data points to solve these equations.

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