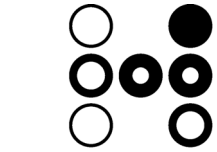
Hyperion® Analyzer

Release 6.1.1

Product Overview



Hyperion®

Hyperion Solutions Corporation

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Contents

Preface

Hyperion Analyzer Product Overview explains the product conventions and features necessary to use Hyperion Analyzer. Although this information is intended to help new users learn about Hyperion Analyzer quickly, every user will benefit from the feature descriptions and conceptual information.

Conventions

The following conventions are used in this document:

Table 1: Hyperion Document Conventions

Item	*Meaning*
➢	Arrows indicate the beginning of a procedure with sequential steps.
1, 2, 3 . . .	Numbers indicate sequential step procedures.
•	Bulleted items indicate a list of related items.
Boldface text	Boldface text indicates an important application component name or a user interface element.
Italic text	Italic text highlights terms of special emphasis.
`Courier` text	Courier typeface indicates that the user should enter **`Courier`** text exactly as it appears.
Properties | Caption	The vertical bar indicates a menu | sub-menu item.

Related Documentation

The Hyperion Analyzer documentation set includes:

Product Documentation

Hyperion Analyzer Release Notes contains a comprehensive list of new features, fixes, and late-breaking product developments.

The Hyperion Analyzer ***Information Map*** lists and describes all Hyperion Analyzer documentation and its location.

Hyperion Analyzer Getting Started describes the family of Hyperion Analyzer products, relates terminology central to multidimensional analysis, explains application fundamentals and graphical user interfaces, and leads users through the creation of their first report using the Hyperion Analyzer Java Web Client.

The ***Hyperion Analyzer Product Overview*** (this guide) profiles the analysis tools, explains methods for distributing and presenting reports, and tours the Hyperion Analyzer Samples report group.

Client Online Help

Hyperion Analyzer Java Web Client Online Help provides detailed information about navigation, report creation, and advanced Java Web Client topics.

Hyperion Analyzer HTML Web Client Online Help describes navigation, report creation, and the features specific to the Hyperion Analyzer HTML Web client.

Documents for Administrators

The ***Hyperion Analyzer Installation Guide*** describes Microsoft Windows and UNIX installation options, and system requirements. It summarizes the installation process and information essential to installing and configuring Hyperion Analyzer. This guide includes procedures for establishing a Hyperion Analyzer repository. It also includes troubleshooting and procedures for installing and uninstalling Hyperion Analyzer samples.

The ***Hyperion Analyzer Administrator's Guide*** describes product features essential to administrators.

Hyperion Analyzer Administration Tools Online Help explains the management of roles, users, user groups, and database connections, as well as provides online help for Hyperion Analyzer Analysis Server administration.

Documents for Developers

The ***Hyperion Analyzer API Toolkit Developer's Guide*** is an online guide providing detailed information for developers, incorporating Hyperion Analyzer Web technology into custom Web applications.

Ordering Documentation

A complete set of documentation is included on the CD in PDF and HTML format.

To order documentation:

- Visit the Hyperion Web site at www.hyperion.com.
- In the United States, call Hyperion Solutions Customer Support at (877) 901-4975.
- From outside the United States, including Canada, call Hyperion Solutions Customer Support, in the U.S.A. at (203) 703-3600. Clients who are not serviced by support from North America should call their local support centers.

Technical Support

Hyperion provides Web-based and telephone support to ensure that clients resolve product issues quickly and accurately. This support is available for all Hyperion products at no additional cost to clients with a current maintenance agreement.

- For Web-based support, or to see complete information on available support options, visit the Hyperion Web site at http://www.Hyperion.com.
- In the United States, call Hyperion Solutions Customer Support at (877) 901-4975.
- From outside the United States, including Canada, call Hyperion Solutions Customer Support, in the U.S.A. at (203) 703-3600. Clients who are not serviced by support from North America should call their local support centers.

Web Site

You can find up-to-date information on Hyperion service, support, and training programs on our Web site:

www.hyperion.com

The Hyperion Web site offers an array of service and support information, including product news and updates, frequently asked questions, and product download instructions.

This Guide

Product Overview profiles Hyperion Analyzer features. It is organized into eleven (11) sections:

- The **Hyperion Analyzer** section contains **What Hyperion Analyzer Does**, which states Hyperion Analyzer objectives. **Hyperion Analyzer Product Family** describes all Hyperion Analyzer components and their functionality.
- **Analyze Anywhere** outlines application features supporting open, cross-platform analysis.
- **Sophisticated Graphical User Interface** highlights aspects of the GUI interface. It includes descriptions of creating new reports, using the Report Creation Wizard, creating custom reports, and directions for accessing myriad formatting options.
- **Personalization** introduces the Point of View and Personal Variable features new to Hyperion Analyzer 6. It also describes user preferences and personalized database connections.
- **Analysis Tools** profiles each of the Hyperion Analyzer analysis tools: traffic lighting, Calculations, Show/Hide Only, Sorting, Retrieve Only Top/Bottom, and Restrict Data.
- The **Hyperion Essbase** section profiles server-based features that can be leveraged using Hyperion Analyzer clients.
- **Accessing External Information** describes external data retrieval, including import, relational access, and HIS drill-through.
- **Distributing Analysis** concerns internal and external distribution of Hyperion Analyzer reports as conventional reports, HMTL, and URLs.
- **Customizing and Extending** gives a brief overview of the Hyperion Analyzer API Toolkit.
- **Touring the Sample Report Group** is a report-by-report summary of Hyperion Analyzer features. This tutorial gives the user several hands-on experiences with analysis tools and formatting options.
- The **Glossary** describes Hyperion Analyzer terminology.

Hyperion Analyzer

What Hyperion Analyzer Does

Hyperion Analyzer enables organizations around the world to turn raw data into valuable business information.

Hyperion Analyzer enables users to analyze sophisticated multidimensional and relational data in an easy-to-use graphical interface. This empowers business people to explore enterprise data for growth and profit opportunities, to uncover emerging problems, and to test solutions before implementing them.

Hyperion Analyzer provides a set of advanced analysis tools, and enables users to leverage Hyperion Essbase server features simultaneously. Users can also retrieve and analyze relational data using analysis tools.

Analysis reports can be distributed internally and externally, saved as HTML Web content, and referenced using URLs.

Hyperion Analyzer Product Family

Hyperion Analyzer is a product family consisting of these components:

- Four client applications
- An analysis server
- A repository
- An API Toolkit

The **repository** centrally stores Hyperion Analyzer system data, user IDs, user preferences, and report definitions in relational database tables.

The **Hyperion Analyzer Analysis Server** communicates report definitions and system information between the repository, Web clients, and Hyperion Analyzer Administration Tools.

The **Hyperion Analyzer Administration Tools** client provides a 100-percent Java graphical interface for managing users, users groups, and database connections using a supported Web browser. It also provides access to several administration utilities.

The **Hyperion Analyzer Java Web Client** is an easy-to-use graphical interface that enables online analysis of both Hyperion Essbase and relational data. Users can design and format custom analysis applications without "coding." Hyperion Analyzer is commonly used to conduct sales, and key performance, financial and forecasting analyses.

The **Hyperion Analyzer Windows Client** is the same easy-to-use Java Web Client interface and functionality delivered as a Java application for supported Microsoft Windows operating systems.

The **Hyperion Analyzer HTML Web Client** is a 100-percent HTML thin client used by way of a supported Web browser. It is engineered for information consumers who do not require advanced design and content-creation capabilities.

Developers can incorporate the Hyperion Analyzer Java Web Client look and feel and functionality into their own custom Web applications using the **Hyperion Analyzer API Toolkit**.

Analyze Anywhere

Now, more than ever, Hyperion Analyzer enables large numbers of users to access analysis applications anywhere they use a Web browser.

Highest Scalability and Performance

Hyperion Analyzer has been re-architected to run inside leading J2EE-compliant application servers. This provides Hyperion Analyzer users the highest level of reliability, stability, scalability, and performance in the industry, and leverages their existing enterprise application server technology.

Open- and Cross-Platform

With the advent of Release 6.0, Hyperion Analyzer harnesses the power and performance of open systems platforms, including Microsoft Windows NT, IBM AIX, and Sun Solaris.

Completely Web-based

The powerful analysis functionality of Hyperion Analyzer is now available on the Web, using the 100-percent Java-based Hyperion Analyzer Java Web Client. Web-based functionality includes designing functionality previously offered by a separate Designer application, and the ability to leverage Hyperion Essbase server features using Hyperion Analyzer clients.

In keeping with this Web-based strategy, Hyperion Analyzer Administration Tools has been re-architected into a 100-percent Java application as well. This enables administrators to manage users, user groups, and database connections anywhere they can access the Internet.

There is also a 100-percent HTML thin client, the Hyperion Analyzer HTML Web Client.

Java Application for Microsoft Windows

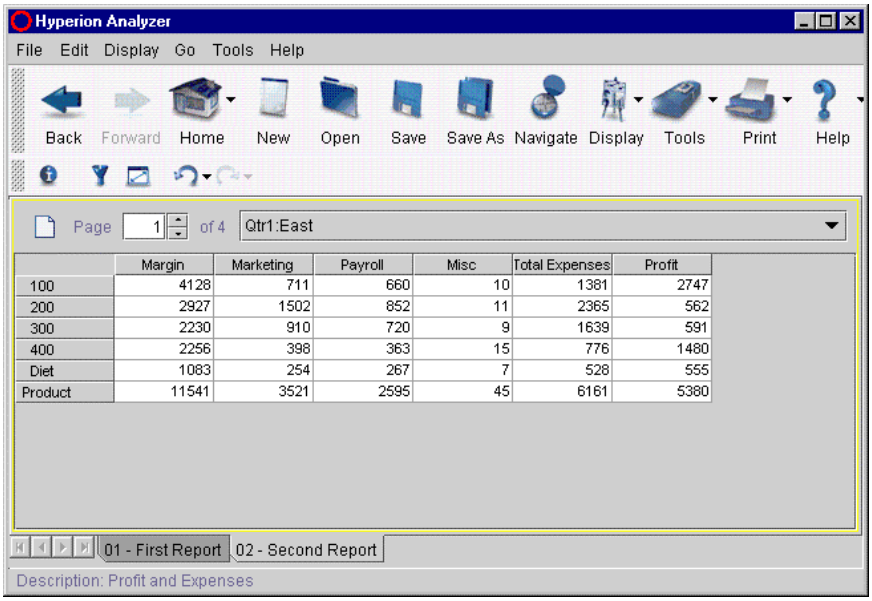
The **Hyperion Analyzer Windows Client** is the same easy-to-use Java Web Client interface and functionality delivered as a Java application for supported Microsoft Windows operating systems.

Sophisticated Graphical User Interfaces

The most important feature of Hyperion Analyzer is its new, sophisticated, yet easy-to-use graphical user interface.

New Graphical User Interfaces

Our methods and metaphors make online analysis as easy as surfing the Internet.



Hyperion Analyzer Interface

Quick Report Creation

Report Creation Wizard

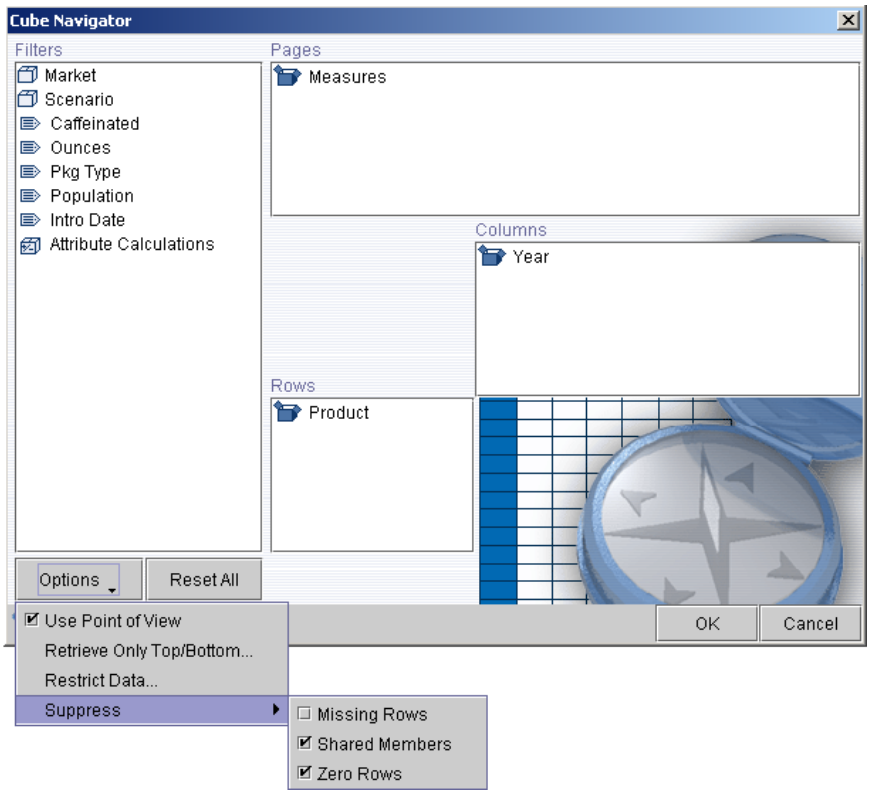
The Report Creation Wizard guides users through the process of creating reports by prompting them through a sequence of dialog boxes. To begin creating new reports, click the New… toolbar button.

The Report Creation Wizard displays the Select Layout dialog box, the Select Database Connection, the Cube Navigator and the Dimension Browser in order, until a database query has been defined, submitted and returned.

Cube Navigator

Cube Navigator is a graphic interface for composing multidimensional queries.

To create a query, users drag and drop dimension icons onto report axes panels. When dimensions are located, the corresponding Dimension Browser is displayed to expedite dimension member selection.

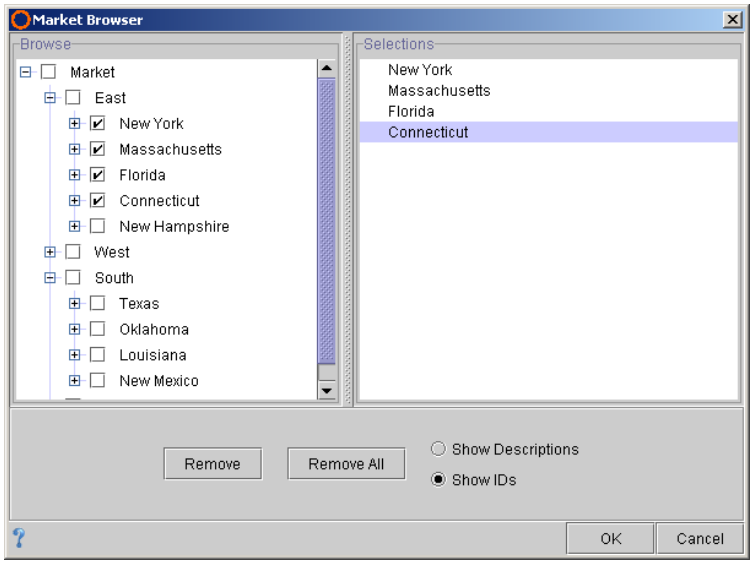


Cube Navigator with Extended Options Menu

Users can edit existing cubes with Cube Navigator or create entirely new cubes. Users can even query attribute dimensions in this same manner. Cube Navigator is displayed either as part of the Report Creation Wizard, or when users click the Navigate toolbar button.

Dimension Browser

The Dimension Browser is a graphic interface for composing dimension member selection statements. When dimensions are located to report axes panels, users are prompted to select specific dimension members for the query.



Dimension Browser

As with the Cube Navigator, there is nothing more to selecting dimension members than clicking member names.

The Dimension Browser right-click menu enables advanced member selection. Users can select members based on the following criteria:

- Familial relationships
- Database-specific selection options
- Member subsets
- Substitution variables
- Personal variables
- A member selection search

Using member selection statements also enables dynamic query result sets. When a report is loaded, all dimension members satisfying the member selection definition are returned, even as individual members are renamed, deleted, or added. This is particularly advantageous in large dimensions.

Custom Reports

Users can now create sophisticated custom reports in a programming-free environment, without leaving the Hyperion Analyzer Java Web Client.

To create a custom report, users initiate Design Report mode. Design Report mode is a graphic interface for designing custom reports, which enables users to drag and drop a selection of components onto an empty report panel.

Users can initiate Design Report mode from the Tools menu, the Tools toolbar button, or by selecting Custom from the Select Layout dialog box.

Reports can contain any number of visual and nonvisual interface components:


Browser buttons


Combo boxes


Data objects


Display type objects


Hot spots


Jump to report buttons


Memos


Check boxes


Panels


Pictures


Option buttons


Service buttons


Selection buttons


Text


Text boxes

HTML objects

New Undo and Redo functionality in Design Report mode enables report designers to remove and recover interface components with the click of the mouse.

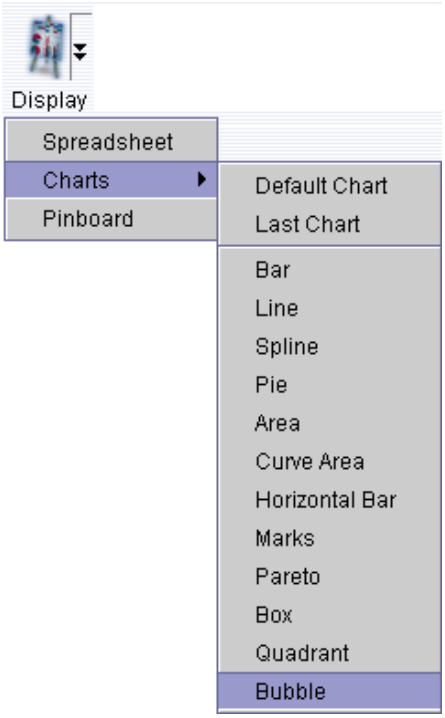
Text labels can be defined using dynamic tokens, variables that are replaced with actual values at run time. There are tokens for: cell reference, report description, report name, connection name, current time, user ID, user name, filter dimension, and page dimension.

Display Types

The visual representation of content plays an integral role in analysis, revealing exceptions, variations, and comparisons graphically.

Hyperion Analyzer users can present the same OLAP data differently. Spreadsheets, charts, and pinboards are collectively referred to as *display types*.

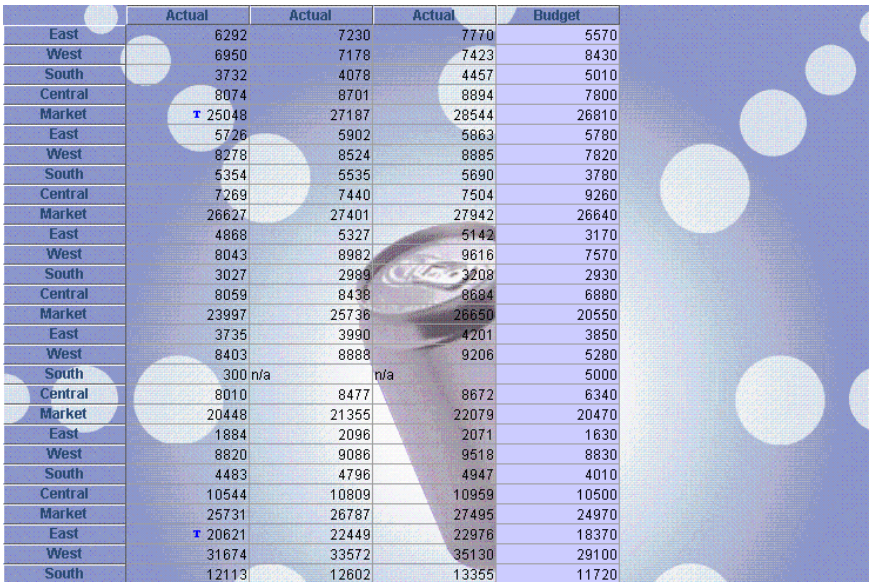
Users can change the display type (or chart type) of an object without reconstructing the report, with the click of a button.



Display Type Drop Down Menu

Transparent Spreadsheets

Background graphics can now be added to Hyperion Analyzer spreadsheets, enabling a higher level of customization and design.

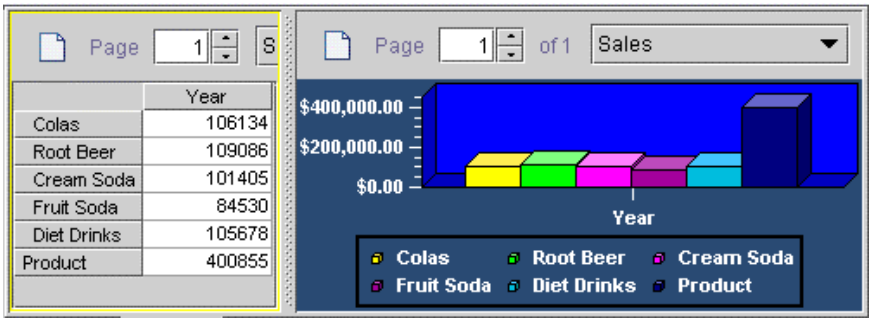


	Actual	Actual	Actual	Budget
East	6292	7230	7770	5570
West	6950	7178	7423	8430
South	3732	4078	4457	5010
Central	8074	8701	8894	7800
Market	25048	27187	28544	26810
East	5726	5902	5863	5780
West	8278	8524	8885	7820
South	5354	5535	5690	3780
Central	7269	7440	7504	9260
Market	26627	27401	27942	26640
East	4868	5327	5142	3170
West	8043	8982	9616	7570
South	3027	2989	3208	2930
Central	8059	8438	8684	6880
Market	23997	25736	26650	20550
East	3735	3990	4201	3850
West	8403	8888	9206	5280
South	300	n/a	n/a	5000
Central	8010	8477	8672	6340
Market	20448	21355	22079	20470
East	1884	2096	2071	1630
West	8820	9086	9518	8830
South	4483	4796	4947	4010
Central	10544	10809	10959	10500
Market	25731	26787	27495	24970
East	20621	22449	22976	18370
West	31674	33572	35130	29100
South	12113	12602	13355	11720

Spreadsheet Report

Composite Reports

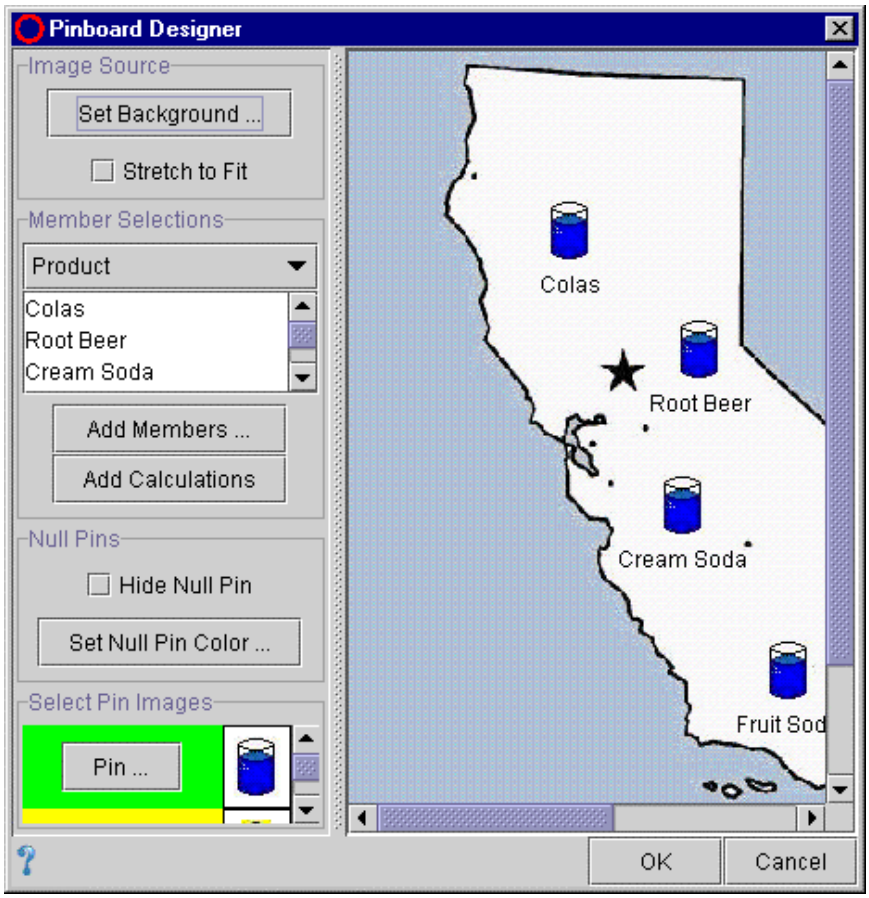
Users are not restricted to a single display type. You can combine multiple objects connected to diverse databases on a single report.



Composite Report

Pinboards

The Pinboard Creation Wizard not only simplifies the process of creating the pinboard display type, but enables the process to be integrated into the analysis application.



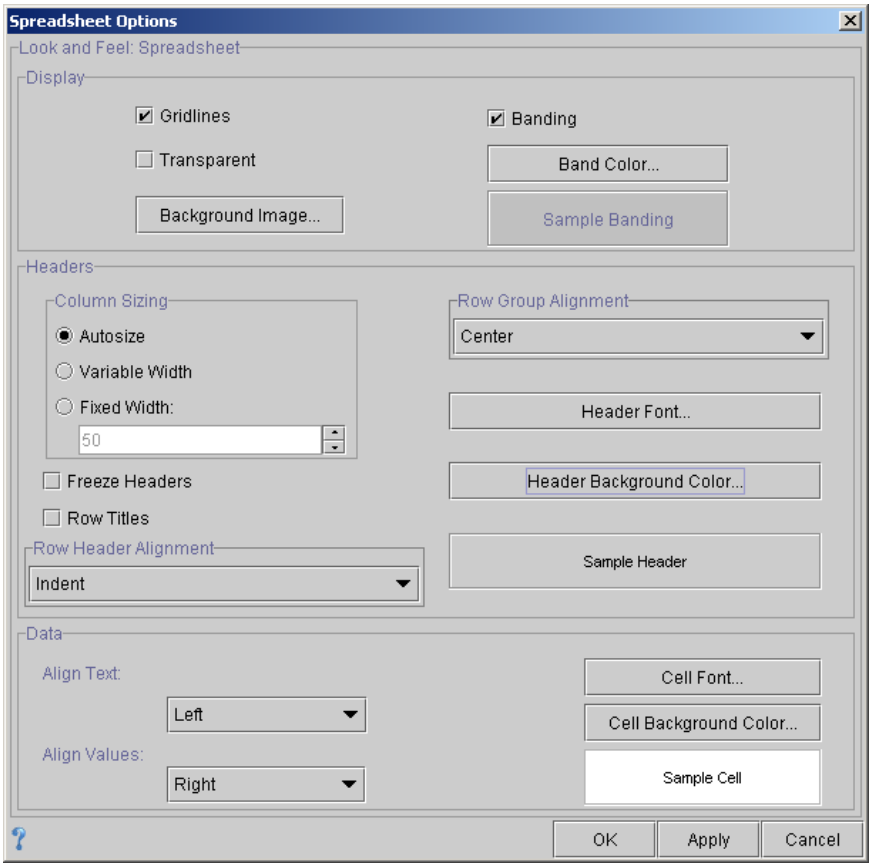
Pinboard Creation Wizard

Flexible Formatting

Users can further customize and format reports using Spreadsheet Options, Pinboard Options, and Chart Properties (located on the right-click menu).

Spreadsheet Options

The Spreadsheet Options dialogue box provides a central interface for formatting the spreadsheet display type.



Spreadsheet Options

Pinboard Options

Pinboard options trigger a Pinboard Creation Wizard, which prompts users through the process of creating a Pinboard display type.

Pinboard options:

- Background graphic
- Pin graphic
- Pin location
- Pin behavior
- Active Color
- Dimensions represented

Chart Properties

The Chart Properties dialog box provides a central interface for formatting all chart aspects.

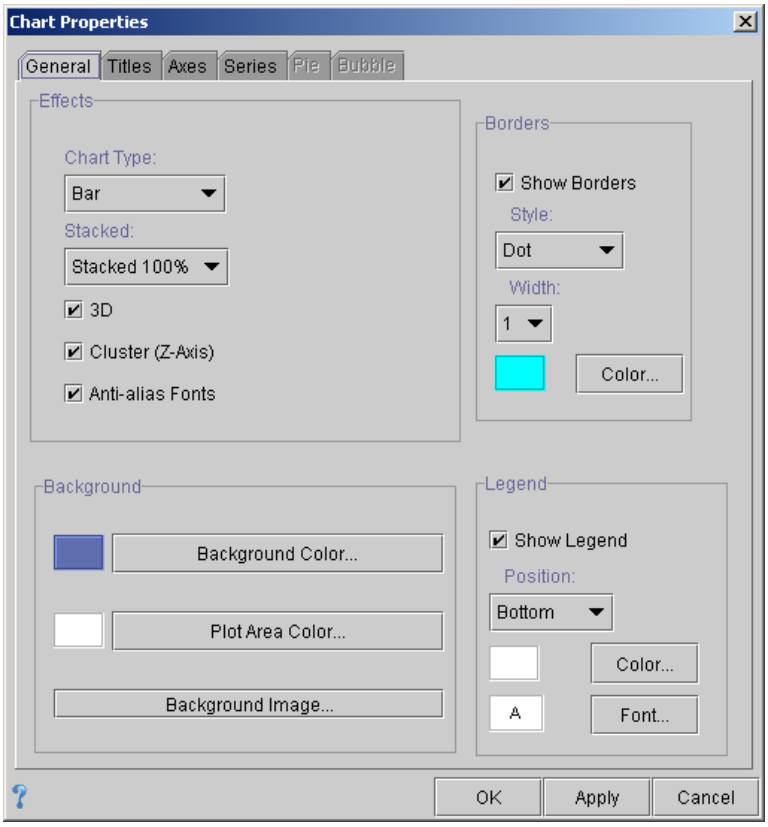
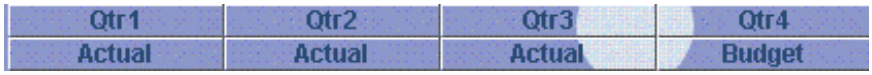


Chart Properties Dialog Box

Hyperion Analyzer chart objects now support gradation between two colors, using icon .GIF images as markers, and Spline, Box Plot, Bubble and Curve Area chart types.

Asymmetrical Analysis

Hyperion Analyzer accommodates asymmetrical analysis by enabling users to hide specified rows, columns, and chart objects.

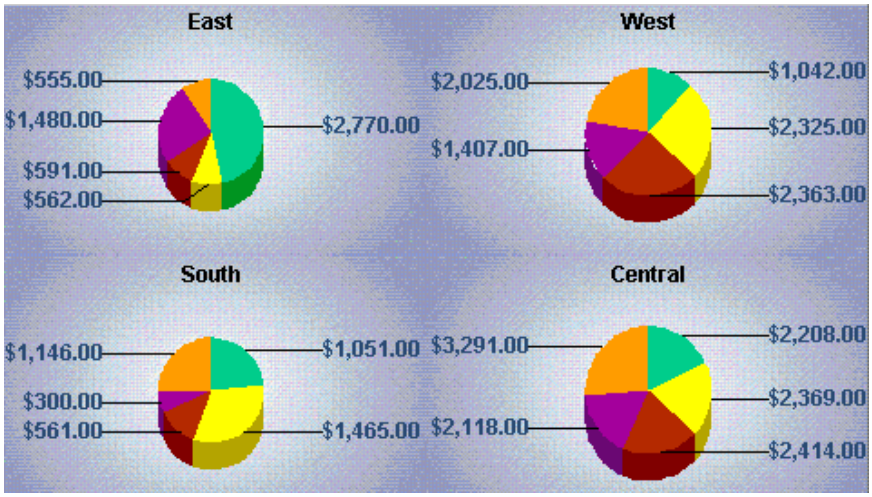


Asymmetrical Headers

Omitting the Budget dimension from the first three quarters, while simultaneously omitting the Actual dimension from the last quarter, enables the creation of a mid-year asymmetric Actual – Budget report.

Multiple Charts

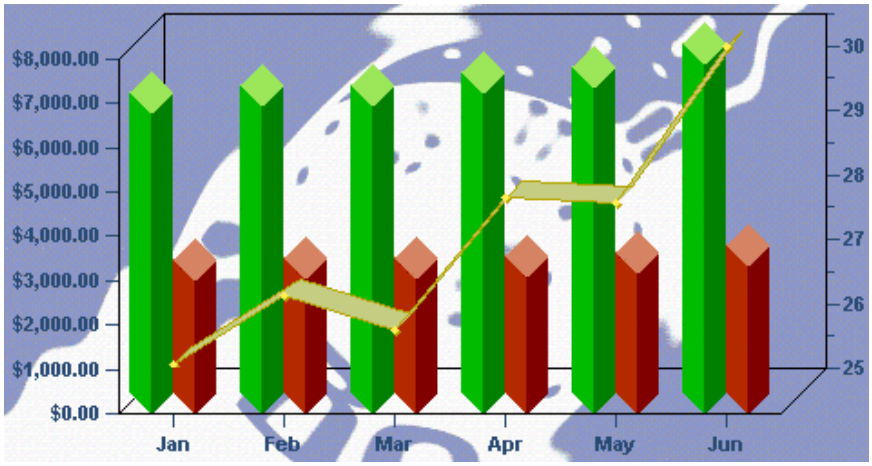
Hyperion Analyzer enables multiple charts to be displayed inside a single chart object, thus simplifying chart comparisons.



Multiple Pie Charts

Secondary Y-axis

Charts can display a second y-axis. Parallel axes enables information to be scaled independently, but displayed alongside other dimensions. Where a y-axis of percentages plotted on the same axis as values ranging into the millions, percentage values ranging between 0 and 100 would hardly be noticeable. As you can see in the following chart, separate y-axes allow percentages to carry comparable analytical weight.



Secondary Y-axis Chart

Personalizing Information

Hyperion Analyzer 6 takes user-customization to a new level.

Personalized Look and Feel

Users can customize the Hyperion Analyzer display and behavior using User Preferences. User Preferences are global settings applied to all reports. These default settings are stored in Hyperion Analyzer repository tables.

Personalized Database Connections

Users can define their own user-friendly database aliases. In addition to simplifying long identifiers, database connection names enable databases to be maintained on multiple servers. Users can create, maintain, and edit database connections using Connections User Preferences.

Personal Variables

Personal Variables enable users to define and name complex member selections. Once defined, users can leverage personal variables any time they are presented with the corresponding dimension and database connection.

In addition, other users can create personal variables, using the same name, dimension, and database connection that contain different dimension member selections. This technique enables designers to create hybrid reports that feature both generic and user-specific content.

Point of View

Point of View User Preferences enable users to insert automatically the dimensions and members that are of interest to them into the reports of others.

Point of View expedites the process of member selection in complex dimensions, and ensures accurate standardized selections.

Users can also define POV settings using personal variable selections.

Analysis Tools

A set of Analysis Tools further enhances the GUI by expediting comparisons, visually organizing data, and emphasizing structures and variances.

Enhanced Traffic Lighting

The Traffic Lighting Analysis Tool color-codes dimension member values.

Users can base color-coding on a comparison of two dimension members, or by fixed limits on a single dimension member. Colors graphically associate member values, whether or not they are sorted or ranked, and are commonly used to track profitability, highlight exceptions, and automate comparison analyses.

Traffic lighting definitions are maintained as the report is pivoted and changed.

	Actual	Budget
New York	7705	7190
Massachus...	3660	3420
Florida	4132	3710
Connecticut	3472	3120
New Hamps...	1652	1450

A Report with Traffic Lighting

Release 6.0 can color-code data fonts or cell backgrounds with an unlimited number of colors.

Calculations

Users can create calculated rows and columns in reports using the Calculations Analysis Tool.

The Calculations Analysis Tool interface enables users to select members, values, and operands using a simple point and click interface.

Over 20 mathematical and statistical calculations can be applied to query result sets:

- Average
- Cumulative
- Difference from average
- Divide
- Linear Regression
- Maximum
- Maximum Value
- Minimum
- Minimum Value
- Multiply
- Percent
- Percent Difference from Average
- Percent of Difference
- Percent of Total
- Rank Ascending
- Rank Descending
- Subtract
- Sum
- Trend
- Complex Calculations

Show/Hide Only

The Show/Hide Only Analysis Tool provides the ability to include or exclude dimension members from the main display panel using any of the following criteria:

- Member name
- Traffic lighting color
- Data value criteria

It is an excellent way to focus analysis on a discrete set of values.

Hide Only Values

Users can hide data outside prescribed threshold values, using the Hide Only Values Analysis Tool. This narrows analysis to a specific range of members using their data values.

Hide Only Colors

The Hide Only Colors Analysis Tool enables users to hide rows, columns, and objects based on their traffic lighting color. Sophisticated traffic lighting definitions further narrow the result set by setting thresholds for all or any dimension member values.

Hide Only Members

Users can also conceal or display specific dimensions, members, and member combinations using the Hide Only Members Analysis Tool.

Client-side Sorting

The Sorting Analysis Tool orders specified dimension member values in ascending or descending alphanumeric order. Sorting definitions are dynamic and are applied as the report is drilled, pivoted, and changed. Client-side sorting is especially important for sorting calculated columns or relational result sets.

Retrieve Only Top/Bottom

The Retrieve Only Top/Bottom Analysis Tool leverages Hyperion Essbase server-based sorting and ranking to control the size and order of an OLAP query result set. This protects the network server from transmitting, and the client from processing, large result sets.

Naturally, the Retrieve Only Top/Bottom Analysis Tool is central to Top/Bottom analysis.

Restrict Data

The Restrict Data Analysis Tool provides another means of narrowing the return set, by requiring that data values be relevant to specific rules and operands.

Applicable rules:

- Greater than (>) values in a column
- Less than (<) values in a column
- Equal to (=) values in a column

Applicable operands:

- AND
- OR

Data can be restricted by a comparison of another column or by using fixed limits on a single column.

Using Hyperion Essbase Features

Server-based features require Hyperion Essbase to execute labor-intensive processing, instead of the Hyperion Analyzer client. This improves query speed, reduces network traffic, and minimizes the information that Hyperion Analyzer must handle.

Edit Data

Users with permission can edit data values with Hyperion Analyzer and write edits back to the Hyperion Essbase database.

After edits have been applied, users can recalculate the database by using the client, and measure the impact of changed values.

Suppress Missing Rows, Zeros and Shared Members

Hyperion Analyzer leverages Hyperion Essbase to suppress missing rows, zeros, and shared members from the query result set. This prevents irrelevant information from being returned, reduces network traffic, and increases query speed.

Users can set suppress missing rows, zeros, and shared members as a user preference for all reports, or per individual reports as needed.

Label Mode

Using Label Mode, Hyperion Analyzer users can elect to display member IDs or member descriptions, instead of full dimension member names. Even when descriptions are displayed, only member IDs are stored in the repository.

Show Selected Member

Hyperion Essbase enables users to preserve the display of selected dimension members during Hyperion Analyzer client navigation.

Drill Settings

Because drilling is customizable, drilling can refer to almost any hierarchical navigation prompted by double-clicking a dimension label.

Users can customize Hyperion Analyzer drilling in three ways:

- The nature of the hierarchical navigation
- Whether the current dimension members are replaced or augmented
- Whether the drilled dimension member is replaced or augmented

Replace Members with Selections

When the Replace Members with Selections drill setting is on, existing dimensions are replaced with the member selection set generated by drilling.

This process enables users to maintain the current level of report detail while navigating along hierarchical lines.

Append Members with Selections

When the Append Members with Selections drill setting is on, existing dimension members are retained through the course of navigation. That is, the current members are appended with additional selections.

This allows users to control the complexity of their reports.

Accessing External Information

Relationships between data and reports are as significant as relationships between dimensions. Hyperion Analyzer provides numerous methods for relating information.

Analyzing Relational Data

A new easy-to-use interface expedites the process of drawing relational data into Hyperion Analyzer, and analyzing this data using all the ad-hoc query capabilities of the product.

A relational database connection wizard directs users through the process of creating their own database connections.

Relational Drill-through

Hyperion Analyzer enables users to drill through to related relational data from the lowest level of the Hyperion Essbase outline, by defining a link on Essbase database connections. Users can pass pages, filters, and row limits to focus and control the relational query result set.

Essbase Integration Services Drill-through

Essbase Integration Services (EIS) enables users to organize, format, and present relational data as an OLAP cube in Hyperion Essbase.

Hyperion Analyzer users can access Essbase Integration Services report data through Hyperion Essbase Linked Reporting Objects by drilling on cells marked for EIS drill-through.

EIS Drill Icon

Essbase Integration Services drill-through makes relational data available for the same sophisticated analysis as conventional multidimensional data.

Linking Reports

Linking refers to navigation between reports and the transmission of member selections between reports.

Users can create links to other reports and executables using the Drill | Links right-click menu. After being established, double-clicking marked cells passes the users display and member selections to the prescribed destination.

Linking to External Media

Hyperion Essbase Linked Reporting Objects (LROs) enable users to annotate data values, by associating external media with a cell.

LROs types:

Text documents

Objects

URLs

Double-clicking a cell marked with an LRO displays the associated media in the same manner as an HTML hyperlink.

Distributing Analysis

The value of analysis lies in its distribution. The people who produce, analyze and use OLAP data must be able to collaborate using OLAP data and tools.

Users can distribute Hyperion Analyzer reports internally and externally, present them as HTML Web content, export them to Microsoft Excel, and reference them using URLs.

Report Group Properties

Secure distribution paths can be prescribed for Hyperion Analyzer report groups using *report group properties*.

Sharing, and Distributing Report Groups

Report groups are distributed, or *shared*, to Administrator-defined user groups.

Users can share report groups only into user groups to which they belong.

When report groups are shared with user groups, the users in those groups can instantly review report group content.

Report Properties

Report Properties control report identification and report exploration. Report creators can limit the exploration of subsequent users when they save the report to a report group. Users can select the following report properties:

- Hide the report inside the report group.
- Protect the report from being overwritten.
- Prevent users from drilling up or down.
- Prevent users from accessing right-click menu items.
- Prevent user from changing display types.

Reports are automatically distributed as prescribed by report group properties, but individual report behavior is controlled by report properties.

Export to Microsoft Excel

As in previous releases of Hyperion Analyzer, users can export report data to Microsoft Excel instantly. This enables non-Hyperion Analyzer users to review information, and enables report data to be integrated into hundreds of other reporting tools.

Export to Clipboard

Users can copy row and column headers to the clipboard using the Office | Copy to Clipboard command. This enables Hyperion Analyzer report data to be duplicated and distributed to numerous external applications.

Enhanced Printing

Hyperion Analyzer offers advanced print features, including report summary pages, print preview, fit-to-page printing and multidimensional page control. These enhancements enable users to print all or specific report aspects based on print criteria.

Customizing and Extending Hyperion Analyzer

The Hyperion Analyzer API Toolkit enables Web developers to incorporate the Hyperion Analyzer Java Web Client "look and feel," and its functionality, into custom Web applications.

When developers can rapidly create custom analytical applications using proven components, dialogue boxes, and API calls, companies save money and time, and improve reliability.

Information on the Hyperion Analyzer API Toolkit is available in the *Hyperion Analyzer API Toolkit Developer's Guide*. In addition to profiling the API Toolkit, its methods, properties, and actions, the *Developer's Guide* describes samples that demonstrate the potential of the API Toolkit.

Touring the Sample Report Group

The **Hyperion Analyzer Java Web Client** is an easy-to-use graphical interface enabling online analysis of both Hyperion Essbase and relational data. With Hyperion Analyzer, users can design and format custom analysis applications without "coding." Hyperion Analyzer is commonly used to conduct sales and key performance, and financial and forecasting analyses.

Prerequisites for Starting the Java Web Client

Before starting, your administrator must provide a URL for the Hyperion Analyzer Java Web Client launch page. Your computer must also satisfy any system requirements.

Starting Hyperion Analyzer Java Web Client

- To start Hyperion Analyzer Java Web Client:

    1. Start a supported Web browser (such as Microsoft Internet Explorer 4 or 5, or Netscape Communicator or Navigator 4.7, 6.1, or 6.2).
    2. Select **File | Open** from the menu.
    3. Enter the URL of the Hyperion Analyzer launch page, and press **Enter**.
    4. Click the link launching the Hyperion Analyzer Java Web Client.

        The Hyperion Analyzer application window is displayed. The Login dialog box is displayed.

    5. Enter a valid user ID and password in the Login dialog box.
    6. Click **OK**.

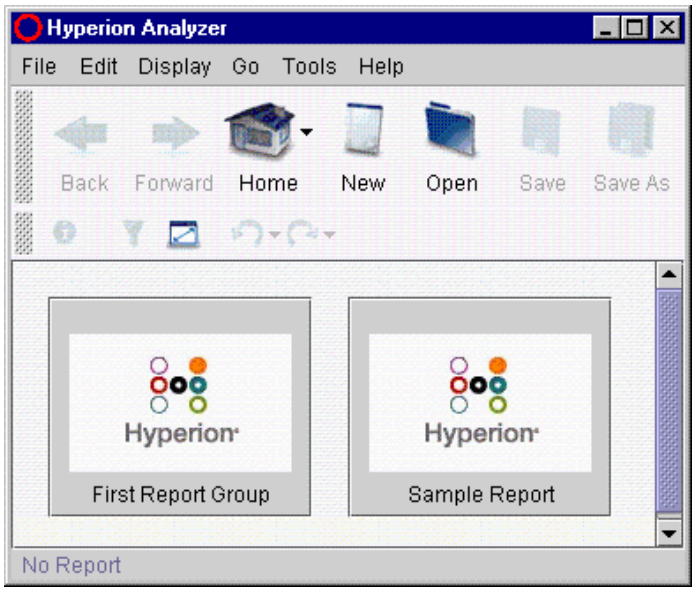
        The report or desktop specified by the Startup Options user preferences is displayed.

The Desktop

The **Hyperion Analyzer Desktop** centrally collects and presents report group icons. Report group icons are like application shortcuts on the Windows desktop.

- To locate the Desktop, select **Analyzer Desktop** from the **Home** toolbar button drop down menu.

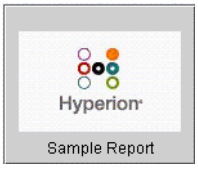
Home Toolbar Button



Hyperion Analyzer Desktop

Opening the Sample Report Group

- To open the Sample report group, click the **Sample Report Group** icon.



Sample Report Group Icon

The first report in the Sample report group is displayed in the Main Display panel. Report tabs for the other reports in the report group are displayed in order along the bottom of the interface.

Main Menu

The Main Menu report introduces the Sample report group and provides a starting point for OLAP and relational analysis.

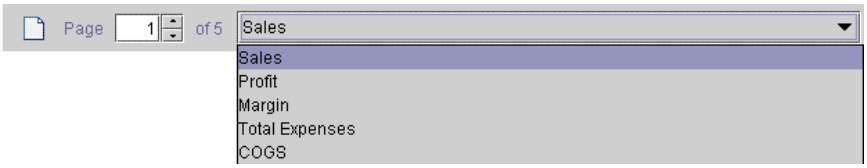
Key Features

The Main Menu is a **custom composite report**. It features corporate brand elements, a navigation panel, and a chart display type.

The navigation panel uses the drill-linking mechanism, enabling analyst to jump directly to reports that interest them. Users have the option of using **Report tabs** and the **Back** and **Forward** toolbar buttons for navigation.

The chart display type displays a summary product profitability report organized with regard to key business measures.

- Click the **Page control panel** to page through the key business measures.



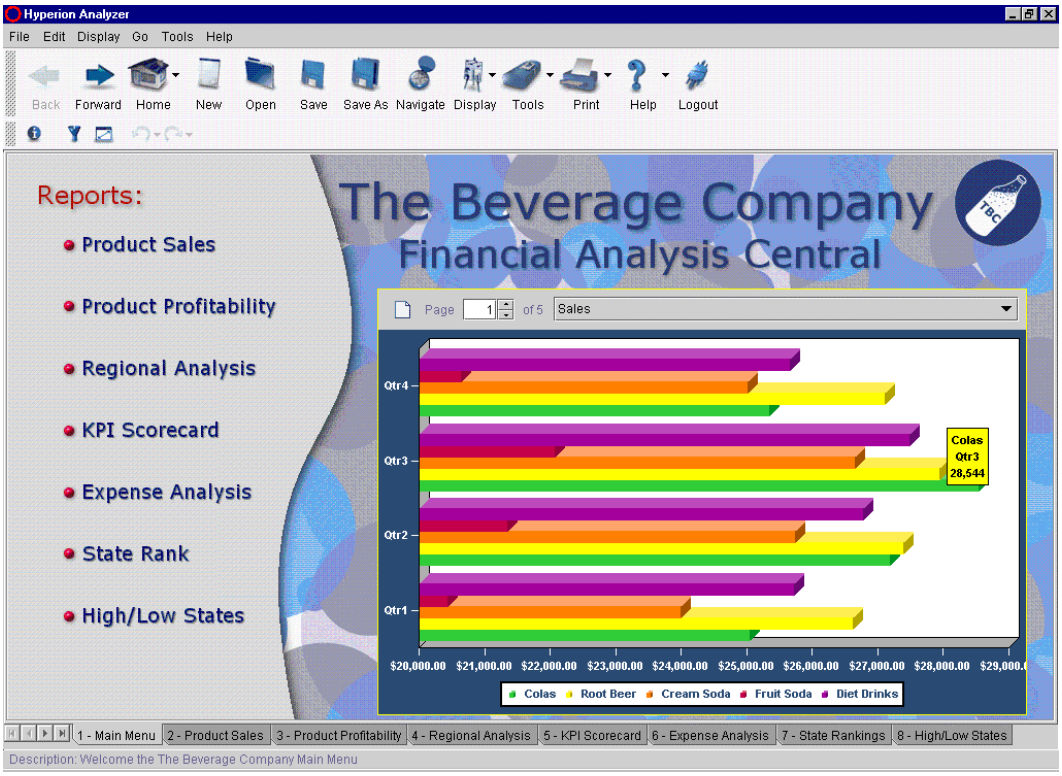
Measures Page Control Panel

The sophistication of the chart engine reveals itself in chart details. Notice that the chart includes a **custom legend**, **staggered labels**, and accommodates both **currency symbols** and **decimals places**.

The most important feature of Hyperion Analyzer is its **easy-to-use interface** for sophisticated, multidimensional, and relational analysis. Our methods and metaphors make online analysis as easy as surfing the Internet.

- Click the **Product Sales** link to proceed to the next report.

Product Sales Link


Hyperion Analyzer
File Edit Display Go Tools Help
Back Forward Home New Open Save Save As Navigate Display Tools Print Help Logout
Reports:
Product Sales
Product Profitability
Regional Analysis
KPI Scorecard
Expense Analysis
State Rank
High/Low States
The Beverage Company
Financial Analysis Central
Page 1 of 5 Sales
Qtr4
Qtr3
Qtr2
Qtr1
Colas Qtr3 28,544
$20,000.00 $21,000.00 $22,000.00 $23,000.00 $24,000.00 $25,000.00 $26,000.00 $27,000.00 $28,000.00
Colas Root Beer Cream Soda Fruit Soda Diet Drinks
1 - Main Menu 2 - Product Sales 3 - Product Profitability 4 - Regional Analysis 5 - KPI Scorecard 6 - Expense Analysis 7 - State Rankings 8 - High/Low States
Description: Welcome the The Beverage Company Main Menu

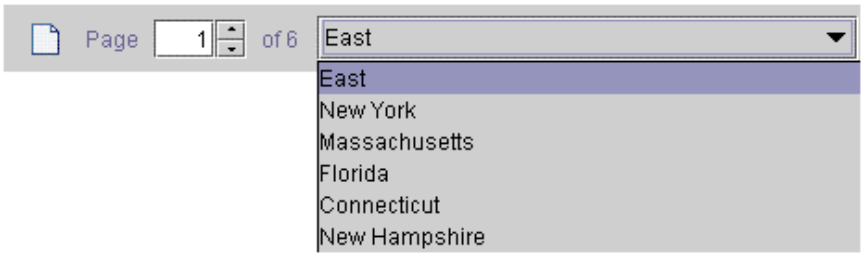
Main Menu

Product Sales

The Product Sales report charts product sales for each quarter organized with respect to their markets. With the Product Sales report, users can compare individual market performance, as well as review a summary for All Markets.

Key Features

- Click the Page control panel to page through the selected markets.



Markets Page Control Panel

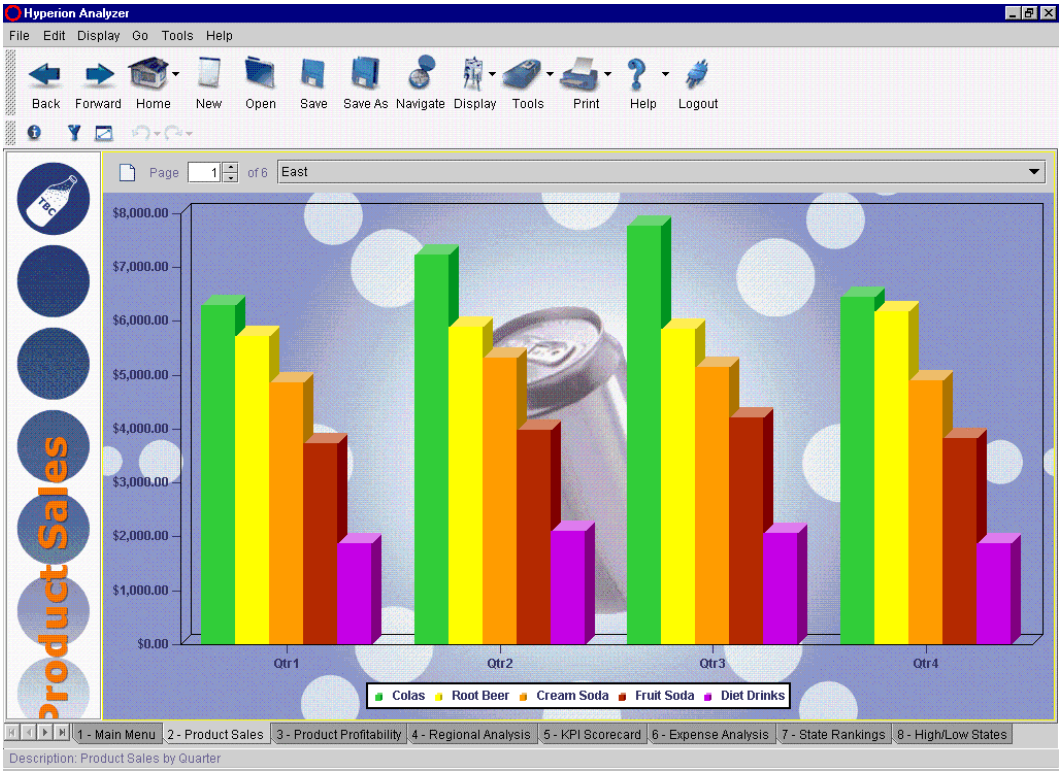
The Product Sales chart is a vertical bar chart. The chart display type provides users with **twelve different chart options**. Users also have the option of instantly transforming the same data into a **spreadsheet** or **pinboard**.

- Click the **Display** toolbar button drop-down menu for a complete list of display and chart types.

Display Toolbar Button

- Float the cursor over the individual bar chart objects to display the product name and its corresponding data value.

Float Over Text Box



Product Sales

The **transparent chart background** provides a strong graphical impact.

- Click the **Product Profitability** report tab to proceed to the next report.

Product Profitability Report Tab

Product Profitability

The Product Profitability report is a multidimensional spreadsheet of product sales for each quarter, organized with respect to key business measures.

The **nested dimensions** on both the rows and columns axes specify the multiple dimensions involved in intersections. The most significant features in this report are the **analysis tools**.

Key Features

The Product Profitability report features a traffic lighting definition that compares product Actuals to Budgets and color codes intersections red, yellow, and green based on percent differences.

Analysts can determine instantly into which ranges members fall, and in which areas problems lie.

The **traffic lighting analysis tool** color-codes dimension member values. Users can base color-coding on a comparison of two dimension members, or by fixed limits on a single dimension member. Traffic lighting graphically associates member values, whether or not they are sorted or ranked.

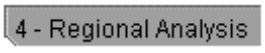
The **Calculations analysis tool** inserts two calculated columns in the Product Profitability report.

The "% Total" column calculates percent of Total profit by Product for each market.

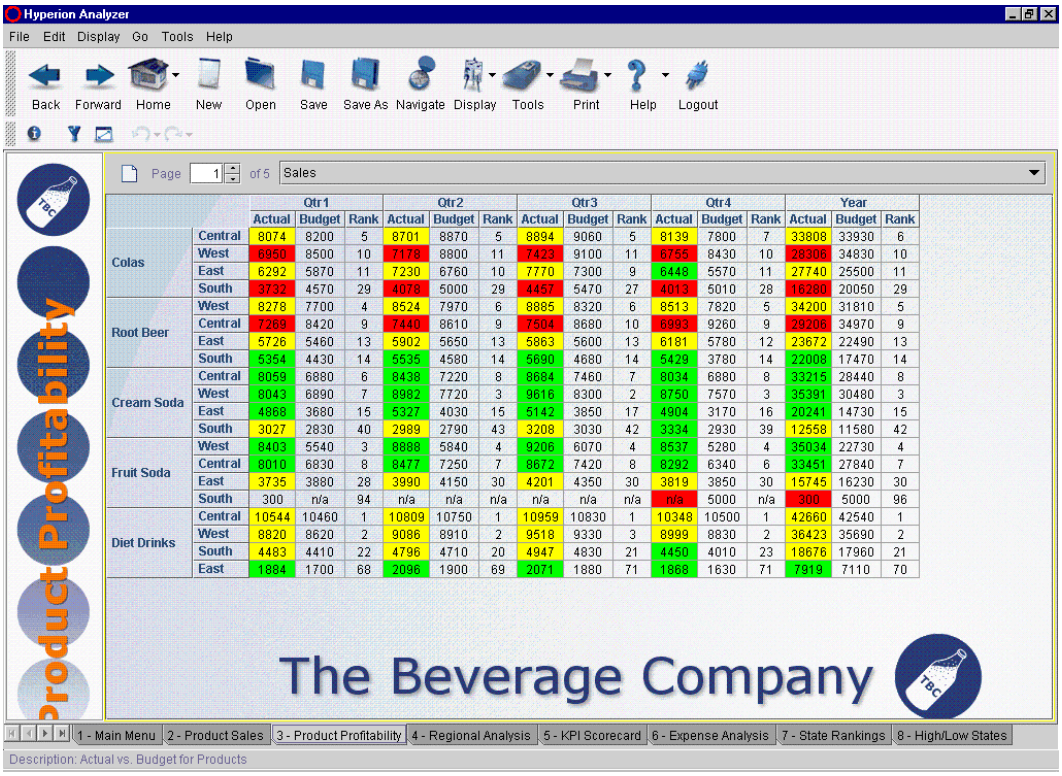
The "Rank" column assigns a ranking based on the "% Total" calculated column. The Calculations analysis tool enables analysts to build increasingly complex interdependent calculations.

Calculated columns are maintained as the report is pivoted and changed, and **dynamically update results and rankings** when data values are reloaded.

- Click the **Regional Analysis** report tab to proceed to the next report.



Regional Analysis Report Tab



		Qtr1			Qtr2			Qtr3			Qtr4			Year		
		Actual	Budget	Rank	Actual	Budget	Rank	Actual	Budget	Rank	Actual	Budget	Rank	Actual	Budget	Rank
Colas	Central	8074	8200	5	8701	8870	5	8894	9060	5	8139	7800	7	33808	33930	6
	West	6950	8500	10	7178	8800	11	7423	9100	11	6755	8430	10	28306	34830	10
	East	6292	5870	11	7230	6760	10	7770	7300	9	6448	5570	11	27740	25500	11
	South	3732	4570	29	4078	5000	29	4457	5470	27	4013	5010	28	16280	20050	29
Root Beer	West	8278	7700	4	8524	7970	6	8885	8320	6	8513	7820	5	34200	31810	5
	Central	7269	8420	9	7440	8610	9	7504	8680	10	6993	9260	9	29206	34970	9
	East	5726	5460	13	5902	5650	13	5863	5600	13	6181	5780	12	23672	22490	13
	South	5354	4430	14	5535	4580	14	5690	4680	14	5429	3780	14	22008	17470	14
Cream Soda	Central	8059	6880	6	8438	7220	8	8684	7460	7	8034	6880	8	33215	28440	8
	West	8043	6890	7	8982	7720	3	9616	8300	2	8750	7570	3	35391	30480	3
	East	4868	3680	15	5327	4030	15	5142	3850	17	4904	3170	16	20241	14730	15
	South	3027	2830	40	2989	2790	43	3208	3030	42	3334	2930	39	12558	11580	42
Fruit Soda	West	8403	5540	3	8888	5840	4	9206	6070	4	8537	5280	4	35034	22730	4
	Central	8010	6830	8	8477	7250	7	8672	7420	8	8292	6340	6	33451	27840	7
	East	3735	3880	28	3990	4150	30	4201	4350	30	3819	3850	30	15745	16230	30
	South	300	n/a	94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	5000	n/a	300	5000	96
Diet Drinks	Central	10544	10460	1	10809	10750	1	10959	10830	1	10348	10500	1	42660	42540	1
	West	8820	8620	2	9086	8910	2	9518	9330	3	8999	8830	2	36423	35690	2
	South	4483	4410	22	4796	4710	20	4947	4830	21	4450	4010	23	18676	17960	21
	East	1884	1700	68	2096	1900	69	2071	1880	71	1868	1630	71	7919	7110	70

Product Profitability

Regional Analysis

The Regional Analysis report features a coordinated pinboard, chart, and spreadsheet that users can navigate using **custom selection controls**.

Key Features

The Regional Analysis report features a pinboard display type. **Pinboards** are custom graphic representations of multiple dimensions. Pinboard dimensions are represented by a graphic, pin icons located on the graphic, and the color (or state) of the pins.

In the case of the Regional Analysis pinboard, the map background represents the Markets dimension. The children of Markets are displayed and located as **pin icons** for East, South, Central, and West. Traffic lighting definitions comparing Actual to Budget determine the state of the traffic light pins.

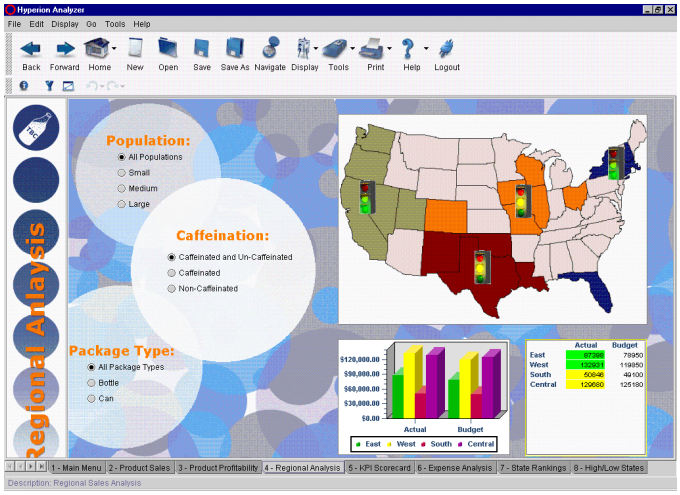
The Regional Analysis report is an excellent example of a Hyperion Analyzer custom report. With the advent of Hyperion Analyzer 6.0, users can create sophisticated custom report layouts in a **programming-free environment**, without leaving the Hyperion Analyzer Java Web Client.

A nonvisual **data source** object stores the database query and client-based formatting for a named database connection. As a result, all the objects on the report using that data source are coordinated.

This means that the custom selection controls in the Regional Analysis report prompt navigation in the **coordinated pinboard, spreadsheet, and chart objects**.

Hyperion Analyzer supports Hyperion Essbase **Attribute Dimensions**. Attributes are characteristics of conventional dimensions. Caffeination and Package Type are characteristics of Product dimension members. Users can browse and select attribute dimensions the same way they select conventional dimensions using the Dimension Browser.

Drilling increases or decreases the level of report detail by including or excluding members of the dimension hierarchy in the report display. Drilling methods can be customized in User Preferences, enabling a variety of hierarchical navigation.



Regional Analysis

- To drill down from All Markets to just Southern markets, double-click the **South** pin.

South Pin Icon

Notice that the Pinboard, chart, and spreadsheet navigate to the Southern markets together.

- Click the **Can** option button under the Package Type selection control.

Can Option Button

Once again, all report objects accommodate the selection.

- Click the toolbar **Back** button to return to the Regional Analysis report.

Back Button

- Click the **KPI Scorecard** report tab to proceed to the next report.

KPI Scorecard Report Tab

KPI Scorecard

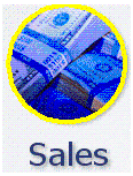
The Key Performance Indicator (KPI) Scorecard report demonstrates another use of pinboards. Product dimension members have been organized into pages that display key business measure pin icons.

Key Features

The pin icons are color-coded using a traffic lighting definition comparing Actual to Budget.

Instead of drilling down through the dimension hierarchy these pins have been set to **drill-link** to reports displaying detailed information about the nature of the Actual to Budget comparison.

- Double-click the Sales pin icon to drill link to the Sales report.



Sales Pin

The Inventory report is derived from a relational database. Hyperion Analyzer enables users to **access and analyze relational data** in the same way they analyze OLAP data.

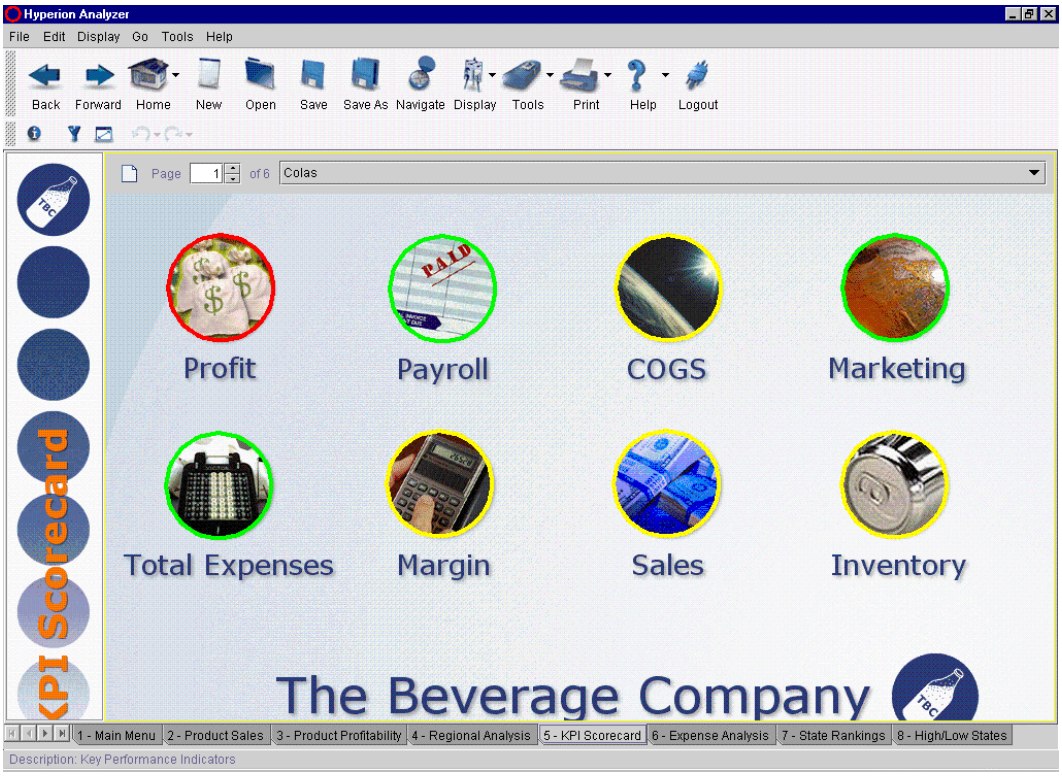
The interface for defining relational database access has been improved, and employs a **relational database wizard**. Now, users are able to access relational data, regardless of where it is located, and can merge relational and multidimensional data together on the same report.

- Click the toolbar **Back** button to return to the KPI Scorecard report.

Back Button

- Click the **Expense Analysis** report tab to proceed to the next report.

Expense Analysis Report Tab



KPI Scorecard

Expense Analysis

The Expense Analysis report details expenditures for the year as organized by product.

Key Features

Despite employing a conventional spreadsheet display type, the Expense Analysis report is a custom report.

The Expense Analysis report contains a dynamic **text box used for annotating reports**. Analyst can review notes relating to specific expenditures and their long-term benefits.

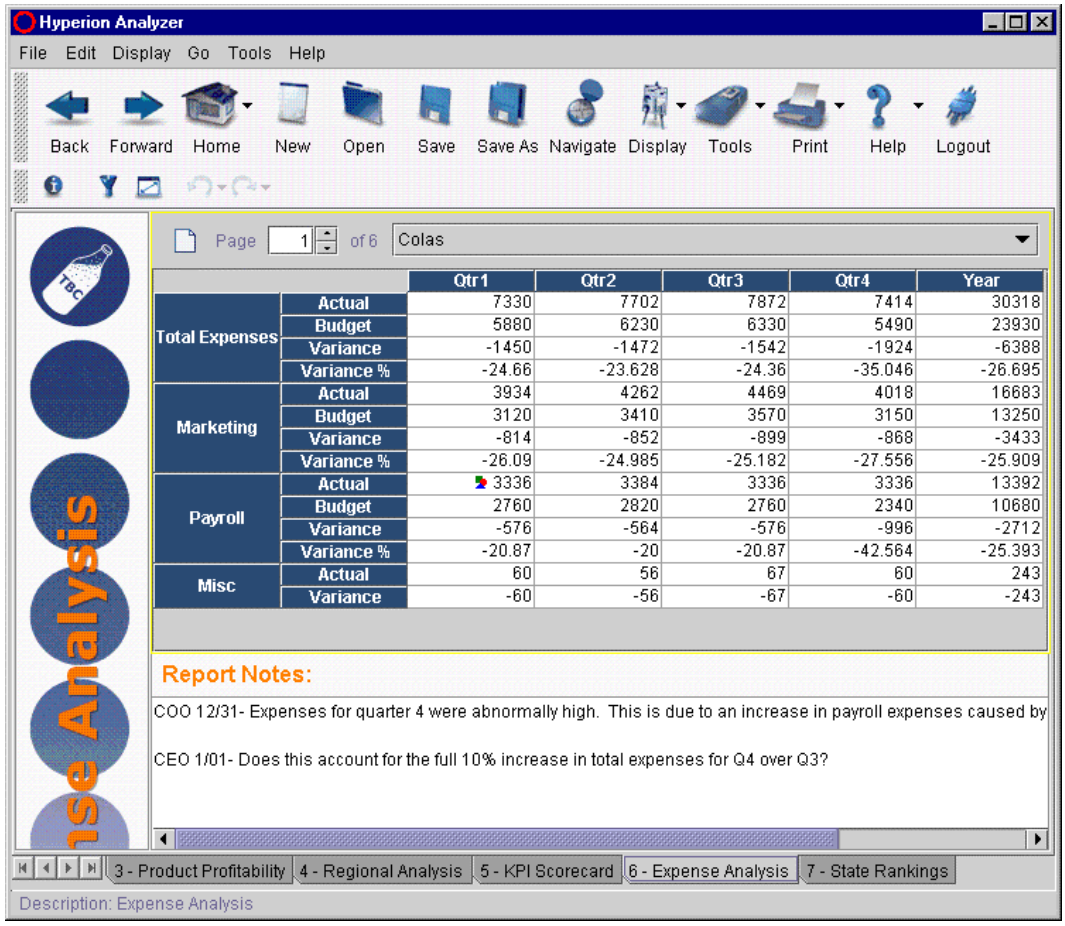
- Click the Details bar **Show/Hide Information Panel** button to display the Information panel.

Show/Hide Information Panel Button

The **Information panel** is composed of segments summarizing the source and nature of the Main Display panel. Each segment features different controls and context-sensitive right-click menus. Dragging and dropping dimensions between Information panel axes segments modifies the Main Display panel. Users can also right-click dimensions in the Information panel to make new Dimension Browser selections.

- Click the **State Rankings** report tab to proceed to the next report.

State Rankings Report Tab



Expense Analysis

State Rankings

The State Rankings report ranks state markets for the last year and, using a traffic lighting definition, color-codes intersections based on whether they have moved up or down in rank over time.

Key Features

Analysts can page through the different rankings for each member of the Measures dimension (Sales, Cost of Goods Sold, Margins, Total Expenses, and Profit).

Notice that the Information panel describes the traffic lighting criteria applied to the Q2, Q3, and Q4 columns separately. Analysts can then better understand the nature of the color-coding or decide if they would like to alter the traffic lighting definitions.

The Information panel also indicates that the **Sorting analysis Tool** has been employed to arrange markets in ascending order based on Q1 rank.

- Click the Details bar **Show/Hide Information Panel** button to hide the Information panel.

Show/Hide Information Panel Button

To focus your analysis, you can narrow the spreadsheet to only those states demonstrating decreasing performance. Because traffic lighting definitions are already in place, you can accomplish this by filtering on traffic lighting color.

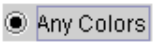
The **Show/Hide Only analysis tool** provides the ability to include or exclude dimension members from the main display panel using member name, traffic lighting color, or data value criteria. It is an excellent way to focus analysis on a discrete set of values.

- To create a Show/Hide Only definition:

1. Right-click the Q2 dimension member label, and select **Analysis Tools | Show/Hide Only…**
2. Select the **Show** option button from the Select Method group.

Show Option Button

3. Press the Ctrl key and click the Q2 Rank, Q3 Rank, and Q4 Rank member names from the Dimension/Attribute panel.
4. In the Where group, click the **Any Colors** option button.



Any Colors Option Button

5. In the Set Condition group, select "Equal to" from the drop-down list box and click the **Color…** button.

Equal To

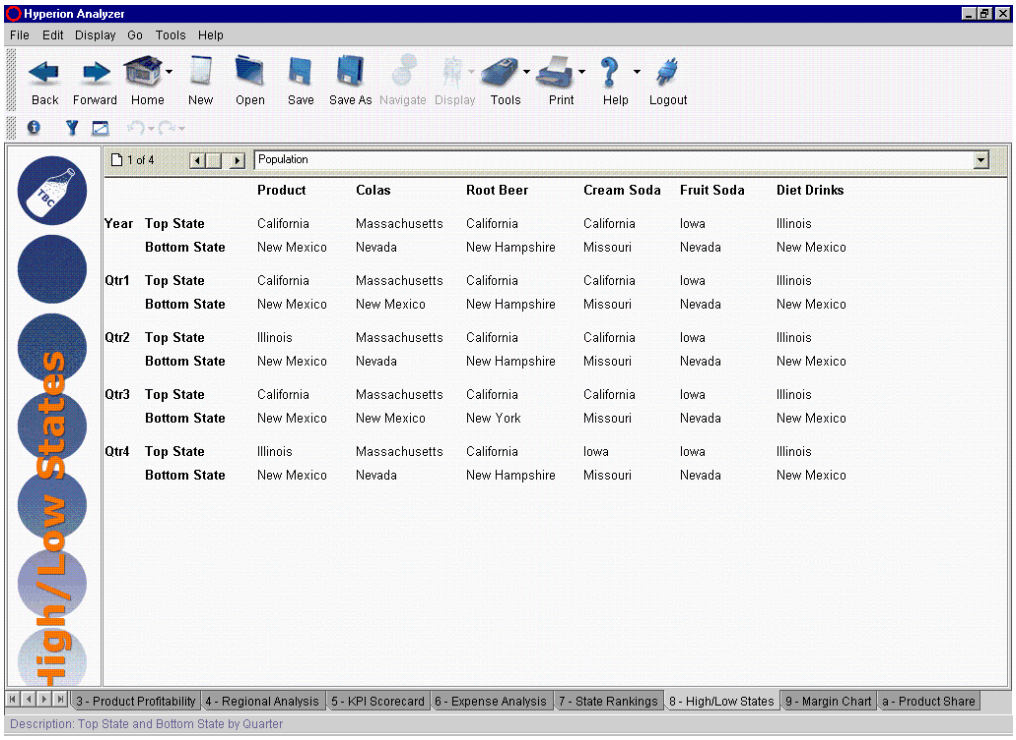
6. Select **Red** (the color of decreasing performance) from the Select Color dialog box.
7. Click the **Add** button.
8. After the Show/Hide Only definition Is displayed in the Applied panel, click **Close**.

The spreadsheet now displays only Market dimension members with at least one red traffic light intersection. This makes it much easier to identify and address the problems behind these declines.

- Click the toolbar **Forward** button to proceed to the High/Low States report.

Forward Button

High/Low States



		Product	Colas	Root Beer	Cream Soda	Fruit Soda	Diet Drinks
Year	Top State	California	Massachusetts	California	California	Iowa	Illinois
	Bottom State	New Mexico	Nevada	New Hampshire	Missouri	Nevada	New Mexico
Qtr1	Top State	California	Massachusetts	California	California	Iowa	Illinois
	Bottom State	New Mexico	New Mexico	New Hampshire	Missouri	Nevada	New Mexico
Qtr2	Top State	Illinois	Massachusetts	California	California	Iowa	Illinois
	Bottom State	New Mexico	Nevada	New Hampshire	Missouri	Nevada	New Mexico
Qtr3	Top State	California	Massachusetts	California	California	Iowa	Illinois
	Bottom State	New Mexico	New Mexico	New York	Missouri	Nevada	New Mexico
Qtr4	Top State	Illinois	Massachusetts	California	Iowa	Iowa	Illinois
	Bottom State	New Mexico	Nevada	New Hampshire	Missouri	Nevada	New Mexico

High/Low States

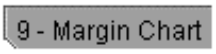
The High/Low States report summarizes the best and worst performing states by quarter for specific and overall Products.

Key Features

The entire report **displays only calculated columns**. All the dimension members and data value intersections have been hidden using the Show/Hide Only analysis tool.

The Top and Bottom states are determined using the **Calculations analysis tool** Max and Min calculations.

➢ Click the toolbar **Forward** button to display the Margin Chart report.



Margin Chart Report Tab

Margin Chart

The Margin Chart report displays both sales figures and profit percentage by product.

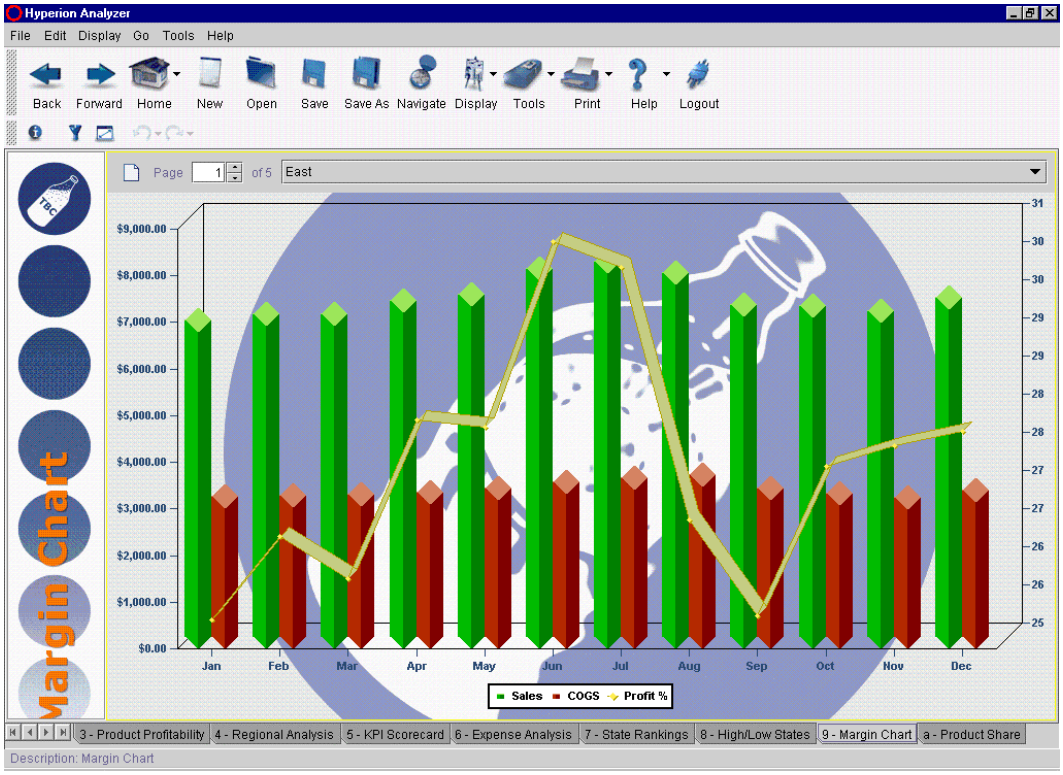
Key Features

A new chart engine enables the simultaneous display of **multiple chart types**. In this case, both a bar and a 3-D line chart are employed at the same time.

Notice also that the line chart is relative to a **secondary y-axis**, representing profit percentage rates, across from the y-axis representing sales values in dollars.

➢ Click the **Product Share** report tab to proceed to the next report.

Product Share Report Tab



Margin Chart

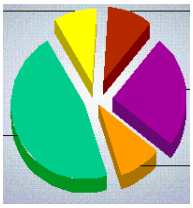
Product Share

The Product Share report feature uses **multiple pie charts** to illustrate product share in each market region. Reports of this nature are commonly used for Contribution analysis.

Key Features

Simultaneously displaying many charts is significant, even when a single chart type is used.

- To **rotate a pie chart**, click and drag a pie wedge in a circular motion.



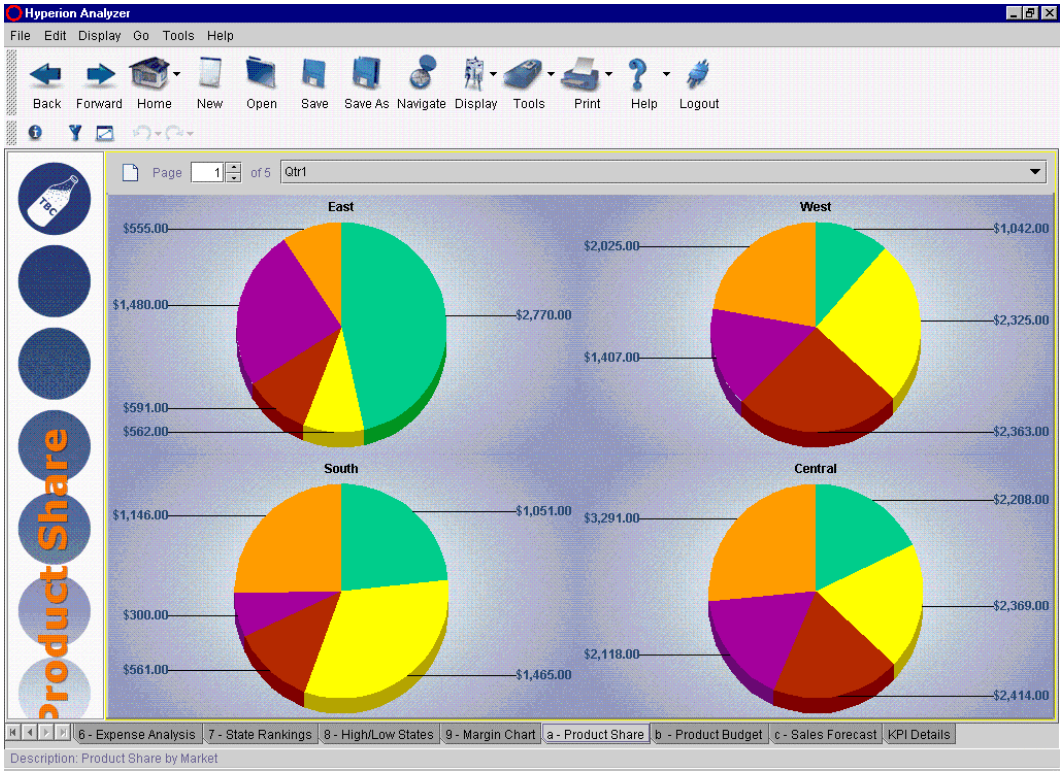
Drag and Drop Pie Wedges

- To **separate wedges**, do one of the following steps:
  - Right-click and drag a pie wedge.
  - Select a pie chart and press Page Up, or Page Down.

- Double-click a wedge to drill down through the dimensional hierarchy.

- Click the **Product Budget** report tab to proceed to the next report.

Product Budget Report Tab



Product Share

Product Budget

The Product Budget report is a mid-year spreadsheet report combining Actual and Budget dimension members for a projection of the year. Significant in this report is the use of **Asymmetrical analysis**, a common aspect of financial reporting.

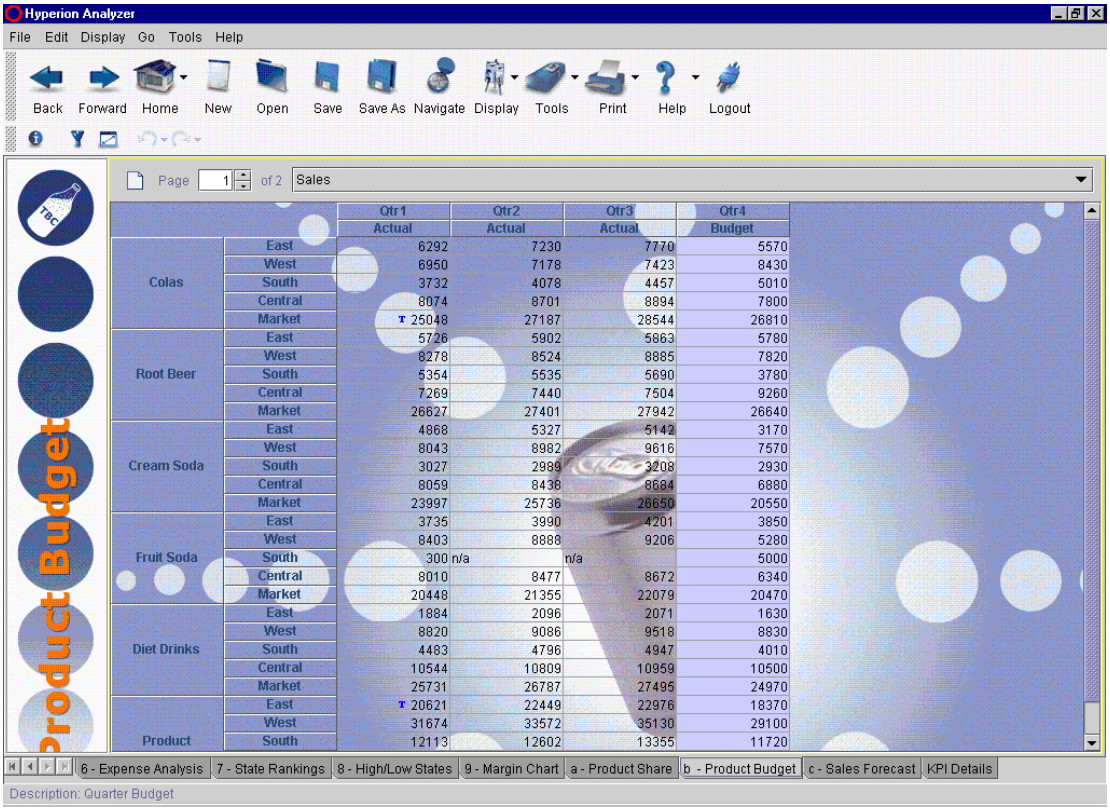
Key Features

Asymmetrical analysis reports feature nested dimensions that differ (by at least one member) across an axis. There can be a difference in the number of members or in the names of the members, but whatever the cause, dimension member symmetry has been abandoned.

Hyperion Analyzer accommodates asymmetrical analysis by enabling users to hide specified rows, columns, and chart objects.

- Click the **Sales Forecast** report tab to proceed to the next report.

Sales Forecast Report Tab



Product Budget

Sales Forecast

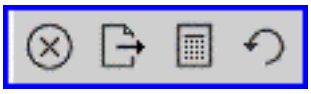
The Sales Forecast report contains a coordinated spreadsheet and chart that enable users to project sales and budget figures, apply them to the OLAP database, and appraise their consequences in real time.

Key Features:

Users with permission can **edit cell values and write edits back to Hyperion Essbase**.

Users can initiate Edit Data Mode only from the spreadsheet display type, however.

The Edit Data Bar is displayed at the bottom of the Main Display panel when users are in Edit Data Mode.



Edit Data Bar

- To edit data values:

  1. Right-click any cell and select **Edit Data** from the right-click menu.

     The Edit Data Bar is displayed.

  2. Double-click a cell to edit its data value.

     The cell border will become gray, and cell formatting will be disabled.

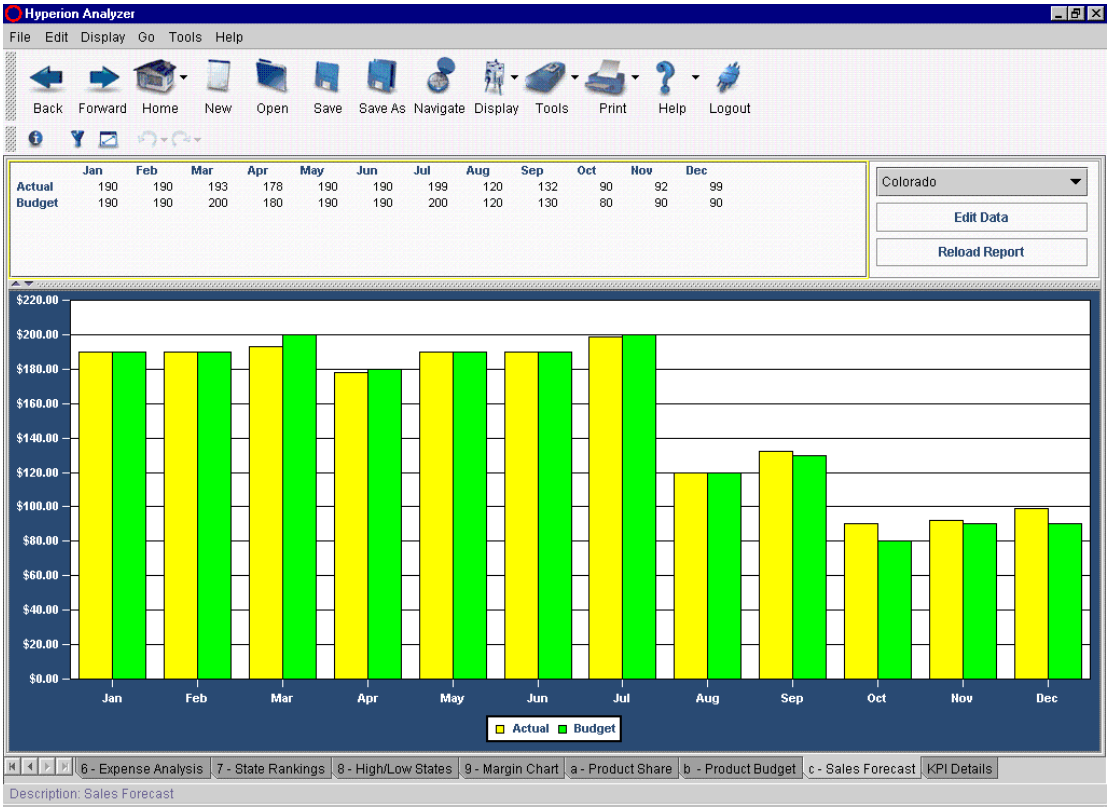
  3. Enter a new data value, and click outside the cell.

  4. Click the **Send/Commit** button.

     Only authorized users can successfully write changes to the database. The Confirmation dialog box is displayed if write-back is successful.

     If the database contains calculated members, users may elect to recalculate the database by clicking the **Calculate** button.

Click the **Close/Disable** button to exit Edit Data mode.



Sales Forecast

- To close the entire report group with a single click, right-click any report tab and select the **Close All** menu item.

Report Tab Right-click Menu

This concludes the Sample report group tour. See the *Hyperion Analyzer API Toolkit Developer's Guide* for additional samples of Hyperion Analyzer objects incorporated into Web applications.

Glossary

administrator. An individual who installs and maintains the Hyperion Analyzer system, including establishing user IDs, passwords, database connections and security. See also **System Manager**.

Analysis Server. Hyperion Analyzer Analysis Server. An application server that distributes report information and enables Web clients to communicate with the OLAP server.

asymmetric analysis. A report characterized by groups of members that differ by at least one member across groups. There can be a difference either in the number of members or in the names of the members.

attribute. A dimension member classification. An attribute can be specified to select and group members that have the specified attribute associated with them, and to perform calculations and application-specific functions.

attribute dimension. A type of dimension that enables analysis based on the attributes or qualities of the members of its base dimension.

axis. A discrete aspect of the two-dimensional report on which multidimensional data is displayed, such as filters, pages, rows, and columns.

calculation. The process of aggregating data, or of running a calculation script on a database.

calculation script. A set of instructions telling Hyperion Essbase how to calculate the values of a database.

cell. A unit of data representing the intersection of dimensions in a multidimensional database. Also, the intersection of a row and column in a spreadsheet.

chart. One of the five report display types. Chart reports also have a chart type property set for them. Charts are created using Hyperion Analyzer.

child. A member that has a parent above it in the database hierarchy. A child may have siblings (peers) that exist at the same level of the database hierarchy.

client. A client interface, such as Hyperion Analyzer, or a workstation on a local area network.

column. A vertical display of information in a grid or table. A column can contain data from a single field, derived data from a calculation, or textual information. Contrast with **row**.

database. A repository of data within Hyperion Essbase that contains a multidimensional data storage array. Each database consists of a storage structure definition (outline), data, security definitions, and optional scripts.

database connection. A user-friendly database alias used instead of a long database identifier (server name, application name, and database name) that enables database references to be more portable.

data source. A named client-side object connecting report components to databases, using database connections, queries, and other components.

descendant. Any member below a parent in the database outline.

Desktop. An automatically generated report that dynamically presents buttons that enable groups of reports to be accessed with a single click.

dimension. A data category that is used to organize business data for retrieval and consolidation of values. Each dimension contains a hierarchy of related members grouped within it.

display type. One of three Hyperion Analyzer formats saved to the repository: spreadsheet, chart, and Pinboard.

hierarchy. A set of multidimensional relationships in an outline, often created in a tree format.

intersection. A unit of data representing the intersection of dimensions in a multidimensional database. Also, a worksheet cell.

JDBC. Java Database Connectivity driver. Client-server communication agent between Java-based clients and databases.

linked reporting object (LRO). An external file that is linked to a data cell in a Hyperion Analyzer report.

member. A discrete item that forms part of a dimension.

missing data. A marker indicating that data in the labeled location either does not exist, contains no meaningful value, or was never entered.

multidimensional database (MDDB). A method for referencing data through three or more dimensions. An individual record is the intersection of a point for a set of dimensions.

multithreading. A client-server process that enables multiple users to work on the same applications without interfering with each other.

online analytical processing (OLAP). A multidimensional, multi-user, client-server computing environment for users who need to analyze consolidated enterprise data in real time. OLAP systems feature drill-down, data pivoting, complex calculations, trend analysis, and modeling.

parent. A member that has subordinate members below it in the hierarchy.

personal variable. A means by which users define and name complex member selections.

pinboard. One of the five report display types. Pinboards are graphic reports, composed of backgrounds and interactive icons called Pins. Pinboards are created using Hyperion Analyzer Design Tools.

point of view (POV). A means by which users automatically insert dimensions and members that are of interest to them into the reports of others.

pins. Interactive icons placed on graphic reports called pinboards. Pins are dynamic. They can change images, and traffic lighting color based on the underlying data values and analysis tools criteria.

report. A Hyperion Analyzer display of selected multidimensional cube dimensions and members. A report is both the content and the format of the display. After it is saved to the repository, a report becomes a multipurpose file that users can display in numerous formats.

report group. A group of Hyperion Analyzer reports.

repository. A set of relational database tables for storing report definitions and Hyperion Analyzer system information.

role. A user type label. Roles give or withhold the permissions needed for various Hyperion Analyzer tasks.

row. A horizontal display of information in a grid or table. A row can contain data from a single field, derived data from a calculation, or textual information. Contrast with **column**.

query. A component of the data source. Queries are SQL statements submitted to the database, which return multidimensional intersection result sets.

server. A multi-user database server that accesses data values based on the intersection of dimension members.

spreadsheet. One of the five report display types. Spreadsheets are tabular reports of rows, columns and pages, created using Hyperion Analyzer.

subset. A group of members selected by specific criteria.

substitution variable. A variable that acts as a global placeholder for information that changes regularly. You set the variable and a corresponding string value; the value can be changed at any time.

System Manager. An individual who installs and maintains the Hyperion Analyzer system including establishing user IDs, passwords, database connections, and security. See also **administrator**.

toolbar. A series of shortcut buttons providing quick access to the most frequently used commands.

traffic lighting. Color-coding of report cells, or Pins based on a comparison of two dimension members, or on fixed limits. Traffic lighting definitions are created using the Hyperion Analyzer Traffic Light Analysis Tool.

Uniform Resource Locator (URL). An address for a resource in the World Wide Web, such as a document, an image, downloadable files, a service, or an electronic mailbox. URLs use a variety of naming conventions and access methods, such as HTTP, FTP and Internet mail. URLs can point to files on a local network drive, or to reports in the Hyperion Analyzer repository.

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