World Trade Analyzer

User Guide

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About This User Guide

The World Trade Analyzer User Guide describes how to use the World Trade Analyzer (hereinafter referred to as “Analyzer” or “WTA”) for data analysis and reporting.

This guide contains the following chapters:

- **Chapter 1** introduces you to Analyzer, describes the Analyzer data, and provides information about how you interact with the Analyzer Windows interface.
- **Chapter 2** provides an overview of the Analyzer including its major components: Tables, Graphs, and Commodity Information.
- **Chapter 3** describes how to work with Table Views.
- **Chapter 4** describes how to work with Graph Views.
- **Chapter 5** describes the Selector, which you use to choose the data that you want to display in a table or a graph.

Software Requirements and Documentation

To use Analyzer you must first install Oracle Personal Express and Express Analyzer. For further information consult the following documents:

- *Personal Express Installation* — Provides installation instructions and explains how to configure your system to support Personal Express.
- *Express Client Installation*— Provides installation instructions and configuration information for Express Analyzer and Administrator.
- *World Trade Analyzer Installation Notes*

Conventions

This manual uses a set of terms, symbols, and typographic conventions to categorize specific information. Familiarity with these conventions will help you use this manual more effectively.

The following icons are used in this manual:

Icon	Meaning
	A procedure that you should follow to complete a task
	References to other manuals or other sections of this manual

You will find the following text conventions in this guide:

Convention	Usage
UPPERCASE	Indicates directory names, file names, operating system commands, Express commands and objects, and acronyms.
`Courier`	Indicates examples and anything that you must type exactly as it appears. Type all the characters shown in Courier font exactly as they are printed.
boldface	Indicates menu items, command buttons, options, and field names.
italic	Indicates variables, including variable text. Variable text is used when dialog boxes or their components are unlabeled or have labels that change dynamically based on their current context. The wording of variable text does not exactly match what you see on your screen. Italic type is also used for emphasis and for titles of documents.

Keyboard Formats

All key names are shown using small capital letters. For example, the Control key is shown as CTRL. The UP ARROW, DOWN ARROW, LEFT ARROW, and RIGHT ARROW keys are collectively referred to as the arrow keys.

Key combinations and key sequences appear in the following formats:

Format	Meaning
KEY1+KEY2	A plus sign (+) between key names means to press and hold down the first key while pressing the second key. For example, "press ALT+TAB" means to press and hold down the ALT key while pressing the TAB key.
KEY1, KEY2	A comma (,) between key names means to press and release the keys one after the other. For example, "press ALT, F, O" means to press and release the ALT key, press and release the F key, then press and release the O key.

Help System

When you are working in Analyzer, there are a number of ways to get assistance for tasks you want to perform. You can access the Help system in several ways:

Help buttons — You can click on a Help button to see a Help topic specific to your current situation. For example, when you choose the Help button in a dialog box, you see the Help topic that describes that particular dialog box.

F1 Key — View Help for the current object or property by selecting it, then pressing the F1 key. This is called context-sensitive help. You select an object by clicking on it.

Chapter 1

Introduction

World Trade Analyzer

The International Trade Division of Statistics Canada provides its users with access to world trade flow statistics through a variety of means including a PC compatible database and custom reports. To provide these users, as well as new potential customers, with a powerful new capability for accessing and using this information, Statistics Canada contracted with Enterprise Information Services Inc. to build a World Trade Analyzer Database and Software System (hereinafter called "Analyzer" or "WTA"). This system is built using Oracle Corporation's Express Analyzer and Express Objects software. This software provides state-of-the-art Windows access to powerful multidimensional analytic databases.

The system includes annual data beginning in 1980. The system includes detailed and aggregate trade data and a variety of tools for accessing and processing this data. This system is distributed to customers via CD ROM.

Data Coverage

The WTA contains international trade flow data. Data is included for commodities at the Total and 1-4 digit SITC levels. The geographic dimension includes a World total, individual countries and regional aggregates. In addition to value in US dollars, a variety of analytic data measures, derived from the basic data, are also provided. These measures include information such as growth rates and geographic market shares.

Data Measures

The WTA includes a variety of data sets including basic data dimensions such as SITC commodity codes, descriptive information such as country names, raw data on values, and derived data such as growth rates and geographic shares. Each of these sets of data is described in following sections.

Basic Data Dimensions and Descriptive Information

The WTA databases contain the following basic data dimensions:

- SITC - Total through 4-digit
- Importing and Exporting Countries
- Time - Years beginning in 1980

For each of these dimensions, the WTA also includes related information such as long descriptions.

Data Variables and Derivatives

There is one basic data variable contained in the WTA databases:

- Value in thousands of US dollars

In addition, the data can be viewed in the following time-series and share concepts:

- Level
- Period to Period Change in the Level
- Period to Period Percent Change
- Share of Exporting and Importing World totals

Interacting with the Analyzer Windows Environment

Analyzer is a standard Windows product, and most interactions with it will therefore be familiar. This section describes tasks that may be performed with the mouse and special and mouse pointers.

Using the Mouse

Table 1.1 describes some of the tasks you can perform using the mouse.

Table 1.1 Analyzer Tasks that are Performed with the Mouse

To. . .	Do this. . .
Select an object in a page	Click the left mouse button on the object. The selected object is outlined with a heavy border.
Drill down or up icon and in this	Click once with the left mouse button on a drill (+ or -). Clicking on the plus icon expands the list; clicking on the minus icon collapses the list. You can use the mouse to drill in the Selector tables. See the section “Drilling” later in chapter.
Display a component	Click the right mouse button on the object or specific menu component.

Mouse Pointers

The appearance of the mouse pointer changes, depending on the task you are doing. Some mouse pointers are standard in Windows; for example, when you see the "wait" pointer, shaped like an hourglass, you know the system is busy and you must wait for it to finish before you can continue. Other mouse pointers help you understand what you can do in Analyzer; for example, you see the "invalid" pointer if you attempt to drop an object in an invalid location.

Analyzer uses the mouse pointers listed in Table 1.2.

Table 1.2 Mouse Pointers Used in Analyzer

Mouse Pointer	Meaning
	The **split bar pointer** appears when the mouse pointer is over the split bar, which separates the panes of a window. You drag the split bar pointer to resize the panes.
	The **invalid pointer** indicates that the current location is not a valid drop point.
	The **move pointer** indicates that you can move the object to another location.
	The **drag-and-drop pointer** appears when you are dragging an object or component (an element of a table or graph) from one location to another.
	The **rotate pointer** appears when you are rotating or exchanging edges, whether directly on a table or using the Dimension Bar.
	The **focus pointer** indicates that the pointer is over the table databody.

Clicking and Dragging

Click and drag is a standard Windows mouse technique. You use it in Analyzer to resize objects and to select multiple items in a list or a range of data cells in a table.

To select by clicking and dragging:

1. Click on the anchor point with the left mouse button to identify the top of the list or one corner of the range of data cells in a table.

2. Hold the mouse button down and drag to the end of the list or the opposite corner of the range of cells.

3. Release the mouse button. The selected items are highlighted.

To resize by clicking and dragging:

1. Click on one of the object's sizing handles with the left mouse button.

2. Hold the mouse button down and drag the handle. The rectangle that contain the object grows or shrinks.

3. Release the mouse button. The object becomes the new size.

Dragging and Dropping

You use *drag and drop* in Analyzer to move objects that are represented by icons and labels. Moving an icon or a label can have several meanings. For example:

- You can reconfigure your table's layout by dragging a dimension label from one edge in the table and dropping it on another edge.

To drag and drop:

1. Click on the object with the left mouse button.

2. Hold the button down and drag the object to the new location.

3. Release the mouse button.

Chapter 2

Analyzer System Overview

Starting Analyzer

To start Analyzer, double-click on the Analyzer icon in the Express Client program group. Once you have entered Analyzer, you will see the Analyzer top screen as shown in Figure 2.1. This screen includes a set of navigational buttons on the bottom of the screen. At the very bottom of the screen there are three buttons: **System Settings**, **About**, and **Exit**. To exit Analyzer click on **Exit.**

Figure 2.1 Analyzer Top Screen

Analyzer Databases and System Settings

To operate properly, Analyzer must have the appropriate WTA databases attached. This function is handled through the **Systems Settings** screen shown in Figure 2.2.

The Analyzer databases include one large database (WORLDDAT.DB) which may be placed on your PC's hard drive, an external drive, or on a LAN. A database may also be accessed on the CD on which it was received. However, for best performance, it is recommended that the databases be placed on a hard drive or LAN.

The Analyzer's *System Settings* screen allows you to determine the directory and path for this large database. When you click on **System Settings**, you will see the screen shown in Figure 2.2.

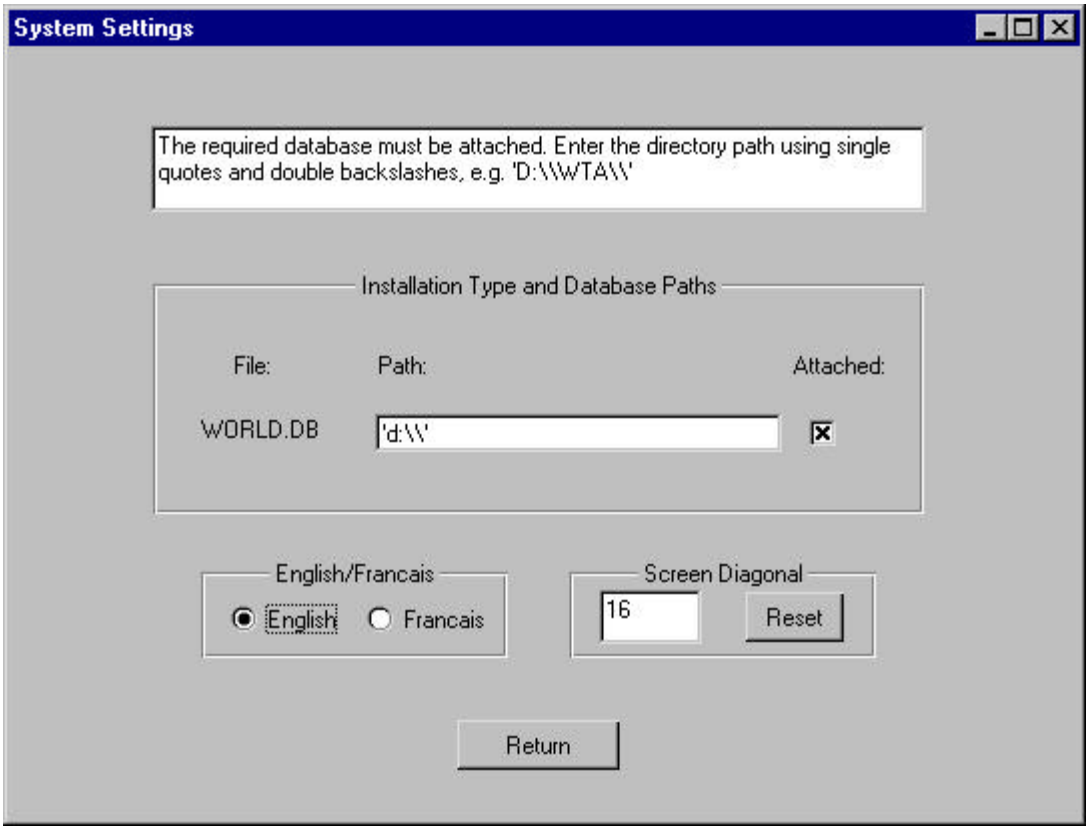


Figure 2.2 System Settings Screen

Data File Location

The *File* column in the System Settings screen (see Figure 2.2) allows you to indicate where the large WTA data file is located. As described in the System Settings screen, fill in the full path name indicating where WORLDDAT.DB is stored.

Language

The English/French choice box allows you to choose between English and French versions of Analyzer. Note that you must have installed the French version of Personal Express for the French version to be complete.

Return

To return to the Top Screen, click on **Return** at the bottom of the System Settings screen.

Major System Components

In Analyzer, there are two principal views of trade flow data:

- **Tables** You may view data through multi-dimensional tables which allow data rotation, drill-down through data hierarchies, and a collection of powerful selection and data analysis tools.

- **Graphs** You may view data in a variety of graph types, also with rotational, drill-down and data selection and analysis tools.

There is also a Commodity Information view that provides long descriptions for SITC commodity codes.

System Navigation

To access any of the system views, click on the relevant button in the top screen (see Figure 2.1). Once you have moved to any of these views, you may move to an alternative view through a menu at the top of the screen. Each of these system navigation functions is discussed in further detail in later chapters.

Chapter 3

Working with Table Views

Understanding Table Views

In Analyzer, a table presents data in the form of a report. In addition to presenting the data in an easy-to-understand format, a table lets you explore and analyze the data, viewing it from different perspectives.

Table Views can be used to perform the following tasks:

- Select data to display in tables.
- View all the data on a single table page using the scroll bars or keyboard navigation.
- Move to other pages of data in the table.
- Change the layout of tables to present data from different perspectives.
- Copy data from a table into another application.
- Use formatting to change the display of data.

Table View Components

The WTA Table View is shown in Figure 3.1.

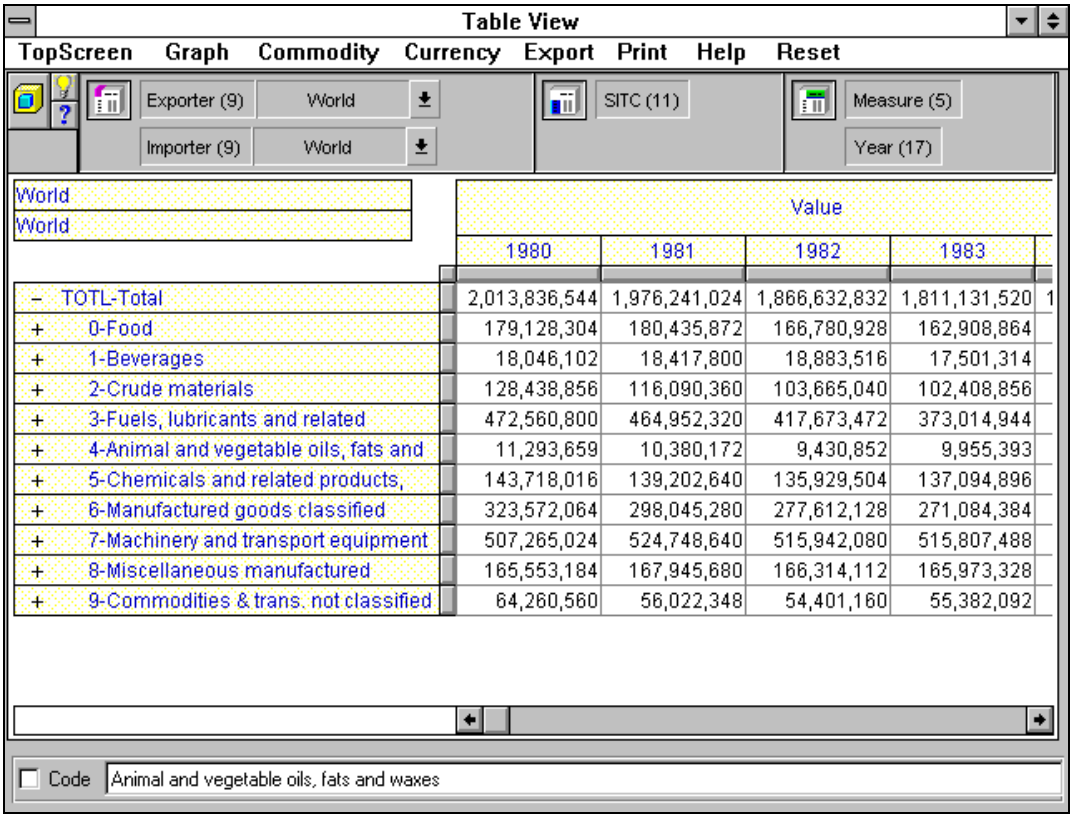


Figure 3.1 WTA Table View

There are three parts to a Table View in Analyzer:

- A menu bar.
- The data table.
- A commodity description bar.

Menu Bar

The menu bar is at the top of the Table View screen. Choose the **Graph** or **Commodity** choices to navigate to other parts of Analyzer. Use the **Export** or **Print** choices to print or export data. See later sections for descriptions of these choices.

Data Table

Within the data table, there are five parts (its components) which include:

- **The Dimension Bar** is located at the top of the table. The Dimension Bar is used to select data and to arrange the data on the table. It is discussed in the next section and in the section "Using the Dimension Bar to Move Dimensions and Exchange Edges" later in this chapter.

- **The Table Databody** includes the cells of data in the table. A later section describes how to navigate within the table databody.

- **The Page Edge** includes the dimensions which represent pages in the table. In Figure 3.1, the page edge includes Exporting and Importing countries. The current values of both these dimensions are World Totals. These values are shown in the upper left corner of the table. These values are also shown in the left box within the Dimension Bar, where the table icon in highlighted in the upper-left corner (representing pages).

- **The Row Edge** includes the dimension(s) shown as table rows. In Figure 3.1 this edge includes SITC codes. The contents of the Row Edge are also shown in the middle box of the Dimension Bar, where the left edge is highlighted.

- **The Column Edge** includes the dimension(s) shown as table columns. In Figure 3.1 these values are Measures and Year. The contents of the Row Edge are also shown in the right box of the Dimension Bar, where the top (column) edge is highlighted.

Commodity Description Bar

The commodity description bar is located at the bottom on the screen. When you set focus on a commodity, by clicking with the mouse or by using the arrow keys, this bar shows the full long description of the commodity (which may be partially truncated in the table depending on how wide you have set the row edge). The Code check box allows you to toggle between SITC Code numbers or full descriptions to be included in the SITC table. This takes affect when a change is made to the display such as drilling up or down in the commodity list.

The Dimension Bar and Data Selection

A dimension bar is shown in Figure 3.2

Figure 3.2 The Dimension Bar for a table.

The Cube icon is used to access the Selector (see Chapter 5 for a full description).

The three table icons on the Dimension Bar represent the three table edges. The dimension labels appear in the pane associated with the appropriate table edge, as shown in Figure 3.2. The page edge labels include the names of the dimensions that are visible on the current page of the table.

One way you can change the data displayed in a Table View is by selecting a different page; this is accomplished by clicking on an arrow next to a page dimension and choosing a different value from the drop-down choice list.

Note: A table can display a maximum of 8,000 cells across and 7,000 cells down — that is, 8,000 columns and 7,000 rows. Keep this maximum in mind when selecting data.

Navigating in a Table Databody

The table databody is the area of the table that contains the data cells, as shown in Figure 3.1. When this area extends beyond the screen boundary, you can click on the databody and use the scroll bars or the keyboard shortcuts listed below to view the other table rows and columns.

Use. . .	To. . .
Scroll bars	Scroll to areas of data that initially fall outside the screen boundaries.
PGUP key	Move up to the previous screen of data.
PGDN key	Move down to the next screen of data.
CTRL+PGUP	Move left to the next screen of data.
CTRL+PGDN	Move right to the next screen of data.
HOME	Move directly to the beginning of the row.
END	Move directly to the end of the row.
CTRL+UP ARROW	Move directly to the top of the column.
CTRL+DOWN ARROW	Move directly to the bottom of the column.
CTRL+LEFT ARROW	Move directly to the beginning of the row (same as HOME).
CTRL+RIGHT ARROW	Move directly to the end of the row (same as END).
CTRL+HOME	Move directly to the first cell (at the extreme upper left).
CTRL+END	Move directly to the last cell (at the extreme lower right).

Changing the Layout of a Table

Tables are extremely flexible. Once you have chosen the data to display in a table, you can move the dimensions around on the table edges to show the information you want to examine. This flexibility lets you see the data from many perspectives and gives you a broad view of its meaning.

There are two ways to move and exchange dimensions and edges in a table. You can use the Dimension Bar, or you can drag and drop values directly on the table.

Using the Dimension Bar to Move Dimensions and Exchange Edges

You can use the Dimension Bar to move dimensions, exchange dimensions, and exchange entire edges. When you change the table's layout, different data appears, reflecting a different view of the relationships among the dimensions.

To move or exchange a single dimension using the Dimension Bar, drag the dimension's *label* to a new location.

To exchange entire edges using the Dimension Bar, drag the edge's *icon* to a new location.

Figure 3.3 shows a dimension bar after clicking on the Exporter dimension and before dropping it on the row edge. The mouse pointer is the move pointer (described in Chapter 1); the black arrow indicates that the Exporter dimension will appear after the SITC dimension when you release the mouse button.

Figure 3.3 Exchanging Edges Using the Dimension Bar

Figure 3.4 shows the results of moving the Exporter dimension after the SITC dimension. The Row Edge now contains both the Exporter and SITC dimensions.

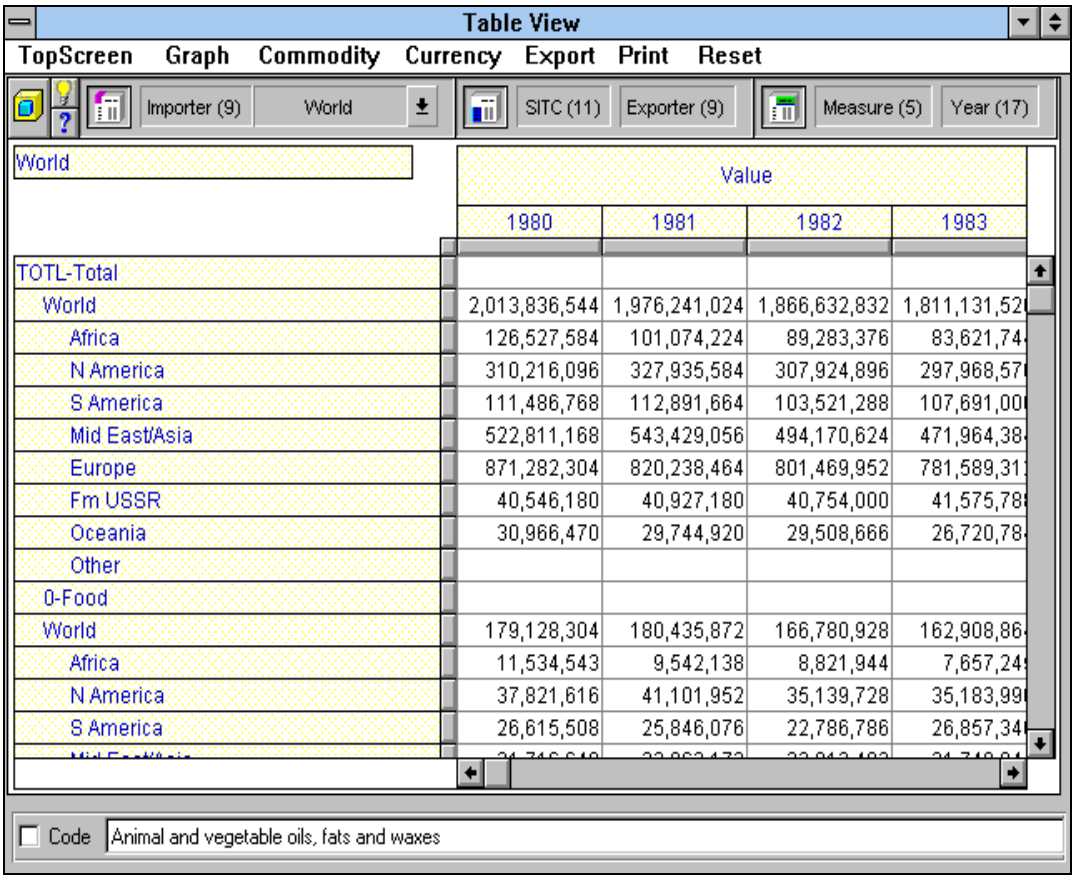


Figure 3.4 Table after Moving a Dimension Using the Dimension Bar.

Notes: Analyzer *moves* the dimension if you drop it before or after another dimension. The mouse pointer changes to the move pointer plus an arrow, indicating the drop location, as shown in Figure 3.3. Analyzer *exchanges* the dimensions or edges if you drop one on top of another. When the mouse is over another dimension or edge, the mouse pointer changes to the rotate pointer, as described in Chapter 1.

You cannot move a dimension from the column edge or the row edge if it is the only dimension on that edge. However, you can exchange it with a dimension on another edge.

A graph can also include the Dimension Bar, although the icons that represent the edges are different. For more information about using the Dimension Bar in graphs, see Chapter 4.

Using the Mouse to Move and Exchange Dimensions

The Dimension Bar provides one way to change a table's layout. You can also drag and drop dimensions directly on the table.

To move dimensions:

1. Click on one of the labels for the dimension you want to move. You can do this on any edge. However, you cannot move a dimension from the column edge or the row edge if it is the only dimension on that edge.

2. Hold the mouse button down and drag to a new location.

3. Release the mouse button. Note: Analyzer prevents you from dropping a dimension in an inappropriate place.

To exchange dimensions:

1. Hold the SHIFT key down and click on the dimension to exchange.

2. Continue holding the SHIFT key and the mouse button while you drag the dimension to the new location. The two dimensions are exchanged.

Note: To exchange entire edges, you must use the Dimension Bar.

Drilling

Drilling is the process of expanding and collapsing a tree diagram or hierarchical list in order to see more or fewer levels of detail. You drill down to expand the list and drill up to collapse the list. In Analyzer this concept applies to any kind of tree display. To drill down, expanding the outline, click once on the plus icon (+). To drill up, collapsing the outline, click once on the minus icon (-). Note: You can also drill in tables and graphs by choosing Drill Up, Drill Down, or (in graphs) Drill from the right mouse pop-up menu.

Figure 3.5 shows a Table after drilling down on the SITC dimension.

World World	Value			
	1980	1981	1982	1983
– TOTL-Total	2,013,836,544	1,976,241,024	1,866,632,832	1,811,131,52
+ 0-Food	179,128,304	180,435,872	166,780,928	162,908,86
+ 1-Beverages	18,046,102	18,417,800	18,883,516	17,501,31
– 2-Crude materials	128,438,856	116,090,360	103,665,040	102,408,85
+ 21-Hides,skins and furskins,raw	5,072,997	4,696,021	4,472,706	4,263,16
+ 22-Oil seeds and oleaginous fruit	10,470,863	11,436,525	10,424,298	10,190,79
+ 23-Crude rubber (including	10,235,593	8,539,250	7,302,398	8,295,28
+ 24-Cork and wood	22,721,980	17,562,144	16,249,744	16,478,85
+ 25-Pulp and waste paper	10,867,235	10,439,015	8,762,382	8,678,84
+ 26-Textile fibres (except wool tops)	19,124,040	18,116,760	16,243,397	15,949,76
+ 27-Crude fertilizers and crude	10,655,828	10,430,583	9,346,793	8,858,88
+ 28-Metalliferous ores and metal	32,110,572	27,737,960	24,036,720	22,833,05
+ 29-Crude animal and vegetable	7,179,667	7,132,067	6,826,602	6,860,21
+ 2X-Crude materials	81	32	0	

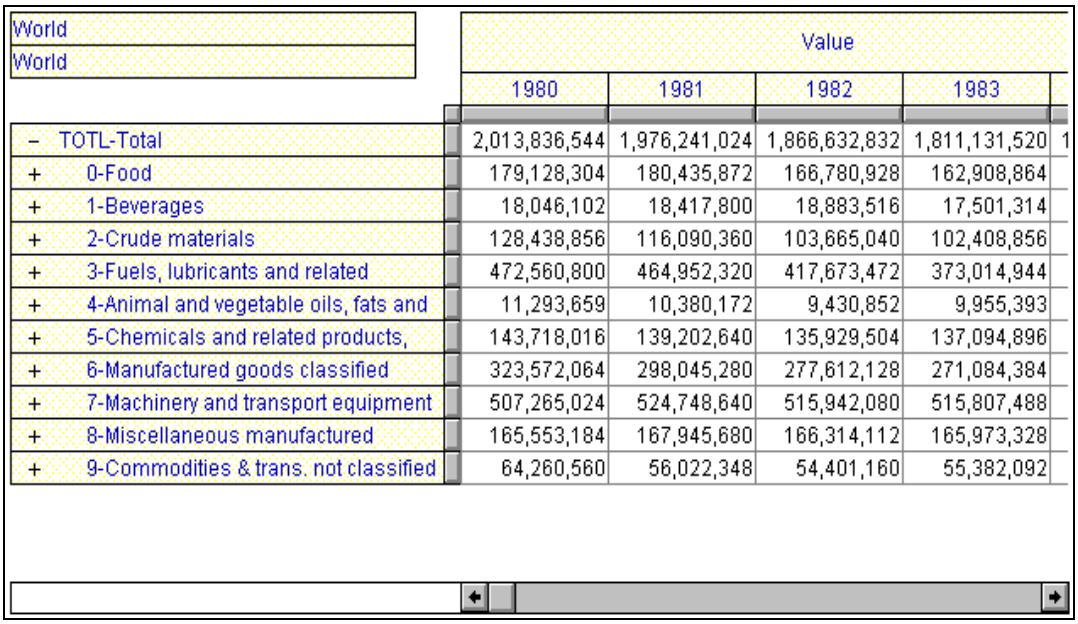
Figure 3.5 Table after Drilling

Copying Data into Another Application

In Analyzer, you can select data cells from any table and copy them into another application, such as Microsoft Excel. The *anchor cell* (the cell that was clicked on to begin selecting) is outlined; the other selected cells are highlighted.

There are several ways to select data cells for copying:

- You can select a range of data cells by clicking and dragging.
- You can select a range of data cells by clicking to identify an anchor point, then pressing the SHIFT key and clicking to identify the extent of the range.
- You can use the keyboard to identify the extent of a data cell selection. From the anchor cell, press the SHIFT key followed by one of the keystrokes described in the section "Navigating in a Table" earlier in this chapter.
- You can use highlighters to select data rows or columns, or to select the entire databody. Analyzer displays the row, column, and body highlighters as raised buttons to the left of, and above, the data cells. You can turn highlighters on and off, using the right mouse pop-up menu.



World World	Value			
	1980	1981	1982	1983
– TOTL-Total	2,013,836,544	1,976,241,024	1,866,632,832	1,811,131,520
+ 0-Food	179,128,304	180,435,872	166,780,928	162,908,864
+ 1-Beverages	18,046,102	18,417,800	18,883,516	17,501,314
+ 2-Crude materials	128,438,856	116,090,360	103,665,040	102,408,856
+ 3-Fuels, lubricants and related	472,560,800	464,952,320	417,673,472	373,014,944
+ 4-Animal and vegetable oils, fats and	11,293,659	10,380,172	9,430,852	9,955,393
+ 5-Chemicals and related products,	143,718,016	139,202,640	135,929,504	137,094,896
+ 6-Manufactured goods classified	323,572,064	298,045,280	277,612,128	271,084,384
+ 7-Machinery and transport equipment	507,265,024	524,748,640	515,942,080	515,807,488
+ 8-Miscellaneous manufactured	165,553,184	167,945,680	166,314,112	165,973,328
+ 9-Commodities & trans. not classified	64,260,560	56,022,348	54,401,160	55,382,092

Figure 3.6 Table View Including Highlighters.

After selecting the cells you want to copy, press CTRL+C to copy them to the Clipboard. Then open the other application and paste the cells, using that application's standard method of pasting.

Printing Pages and Views

In Analyzer, you can print a full screen or tables or graphs. When you print a full screen containing a table or graph, Analyzer prints only that portion of the data that is currently visible. It does not print additional data pages or any part of a table that extends beyond the screen boundaries.

However, when you print a table or graph independently, you can print all the data pages. In addition, when you print a table that extends beyond the screen boundaries, Analyzer prints all the data on each page, using multiple sheets of paper if necessary.

To print a screen or view:

1. Select the page or view you want to print.

2. Display the Print dialog box (see Figure 3.7) by:

   Choosing **Print** from the right mouse pop-up menu.

   or

   Clicking on the Print button on the menu.

3. Specify the settings you want in the Print dialog box. If you need help understanding the settings, choose **Help**.

4. When you have specified the print settings you want, choose **OK**.

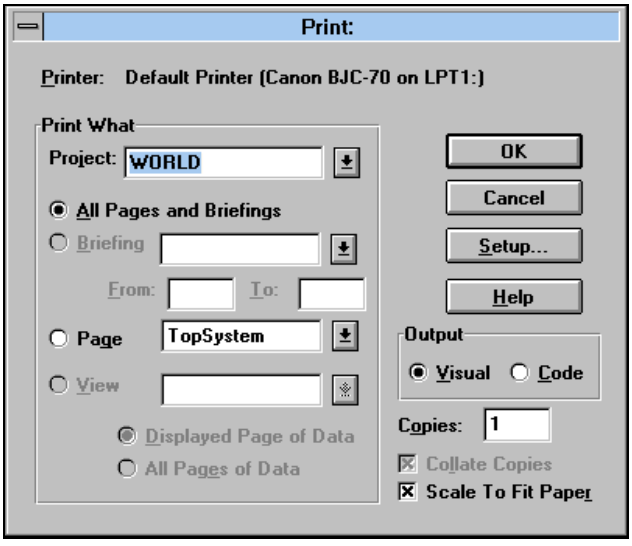


Figure 3.7 Print Dialog Box

Exporting Data

To export data to a file, choose **Export** in the menu bar. Figure 3.8 shows the Export Specifications Dialog Box.

You may export data in one of three formats:

- Microsoft Excel
- Tab Delimited
- Comma Separated

Choose one of these three formats by clicking on your choice in the *File Format* box. In addition, you may choose to add a header (e.g. report title) to the top of each page and a footer (e.g. footnote) by clicking the check box and filling in the appropriate form field. You must also fill in the *File* field. To export the data, click on **Export**. To cancel the Export and return to the primary screen, choose **Cancel**.

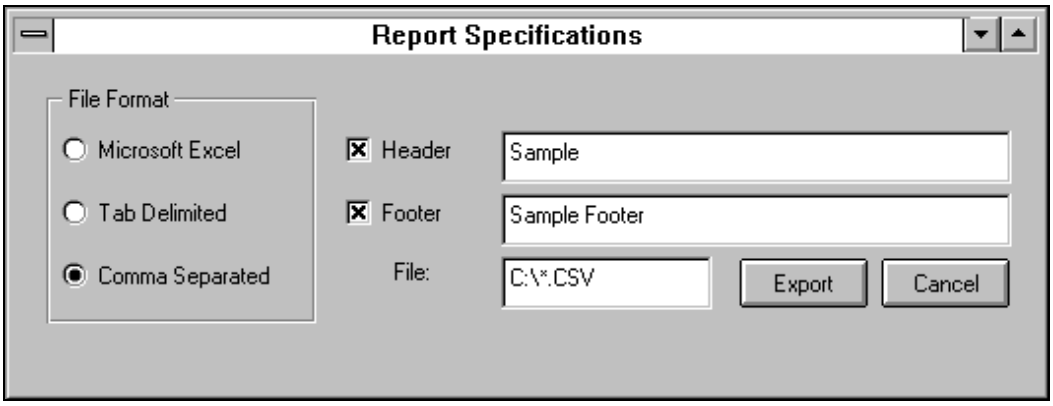


Figure 3.8 Export Specifications Dialog Box

Changing Currencies

To change the currency shown in the data view, choose **Currency** in the menu bar. Figure 3.9 shows the Currency Dialog Box. Choose a currency to display in the list on the left. The exchange rate used to convert from US Dollars will then be displayed in the table on the right.

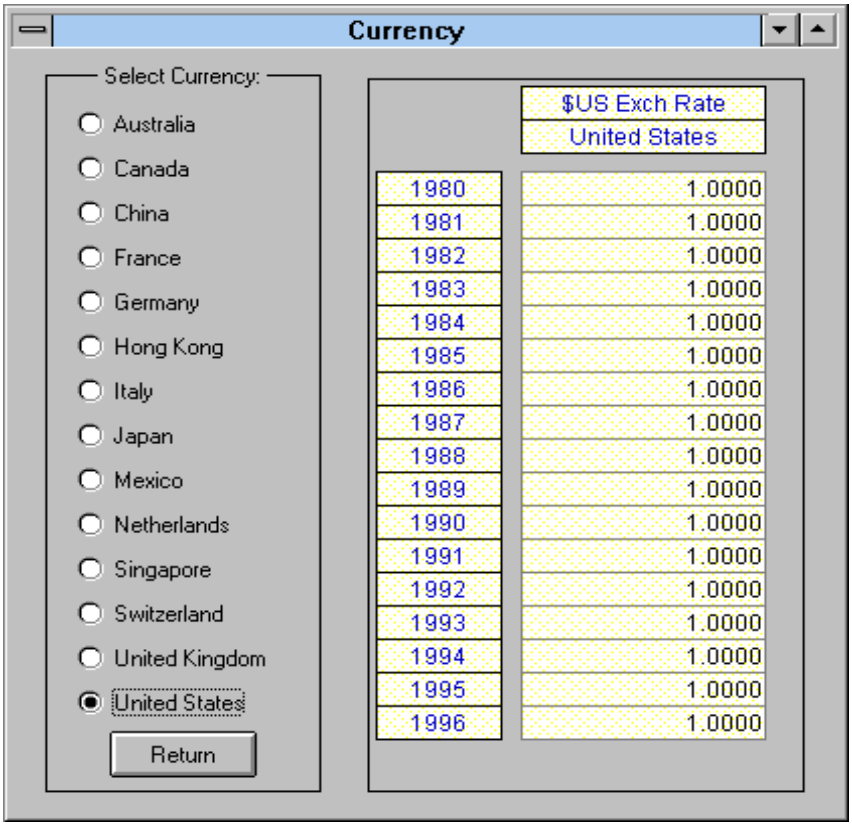


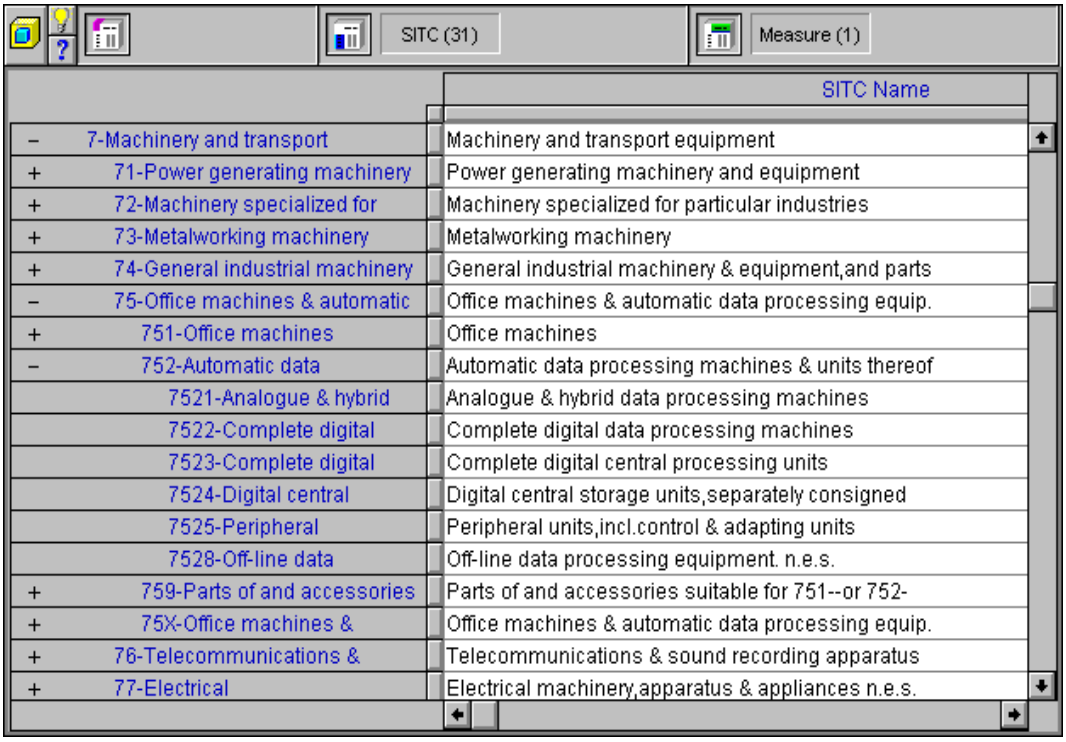
Figure 3.9 Currency Dialog Box

Resetting the Data View

You may reset the Data View to its original default setting by clicking on the **Reset** choice in the menu bar. You may likewise reset the default Graph View.

Commodity Descriptions

From the Analyzer Top Screen or from Table or Graph views, you may move to the Commodity Information View using the **Commodity** choice on the menu bar. This view includes long descriptions for SITC commodity codes:



	SITC Name
– 7-Machinery and transport	Machinery and transport equipment
+ 71-Power generating machinery	Power generating machinery and equipment
+ 72-Machinery specialized for	Machinery specialized for particular industries
+ 73-Metalworking machinery	Metalworking machinery
+ 74-General industrial machinery	General industrial machinery & equipment,and parts
– 75-Office machines & automatic	Office machines & automatic data processing equip.
+ 751-Office machines	Office machines
– 752-Automatic data	Automatic data processing machines & units thereof
7521-Analogue & hybrid	Analogue & hybrid data processing machines
7522-Complete digital	Complete digital data processing machines
7523-Complete digital	Complete digital central processing units
7524-Digital central	Digital central storage units,separately consigned
7525-Peripheral	Peripheral units,incl.control & adapting units
7528-Off-line data	Off-line data processing equipment. n.e.s.
+ 759-Parts of and accessories	Parts of and accessories suitable for 751--or 752-
+ 75X-Office machines &	Office machines & automatic data processing equip.
+ 76-Telecommunications &	Telecommunications & sound recording apparatus
+ 77-Electrical	Electrical machinery,apparatus & appliances n.e.s.

Figure 3.10 Commodity View Drilled Down to SITC 4-Digit Level

Chapter 4

Working with Graph Views

Understanding Graph Views

In Analyzer, trade data is displayed in a Graph View in addition to a Table View. The graph view may be accessed by using the navigation buttons on the Top Screen or by using the Graph choice on the Table or Commodity Information menus.

Different kinds of graphs may be generated to display different aspects of this data. Analyzer provides a rich assortment of graph types to choose from, including bar graphs, pie graphs, and scatter graphs.

This chapter gives you basic information about working with the Analyzer Graph Views and changing the way they look. In it you will learn about:

- Understanding graphs
- Understanding graph types
- Working with graph components and properties
- The organization of data in a graph

Graph View Components

Figure 4.1 shows the initial Graph View screen. There are three basic parts to the Graph View screen:

- The menu bar at the top of the screen which includes choices for returning to the Analyzer Top Screen and for navigating to **Table** or **Commodity** views of import data. The **Print** choice is described in the previous chapter.
- A dimension bar located below the menu bar and above the graph.
- The graph itself which covers most of the screen.

Graph View

Figure 4.1 shows the initial Graph View.

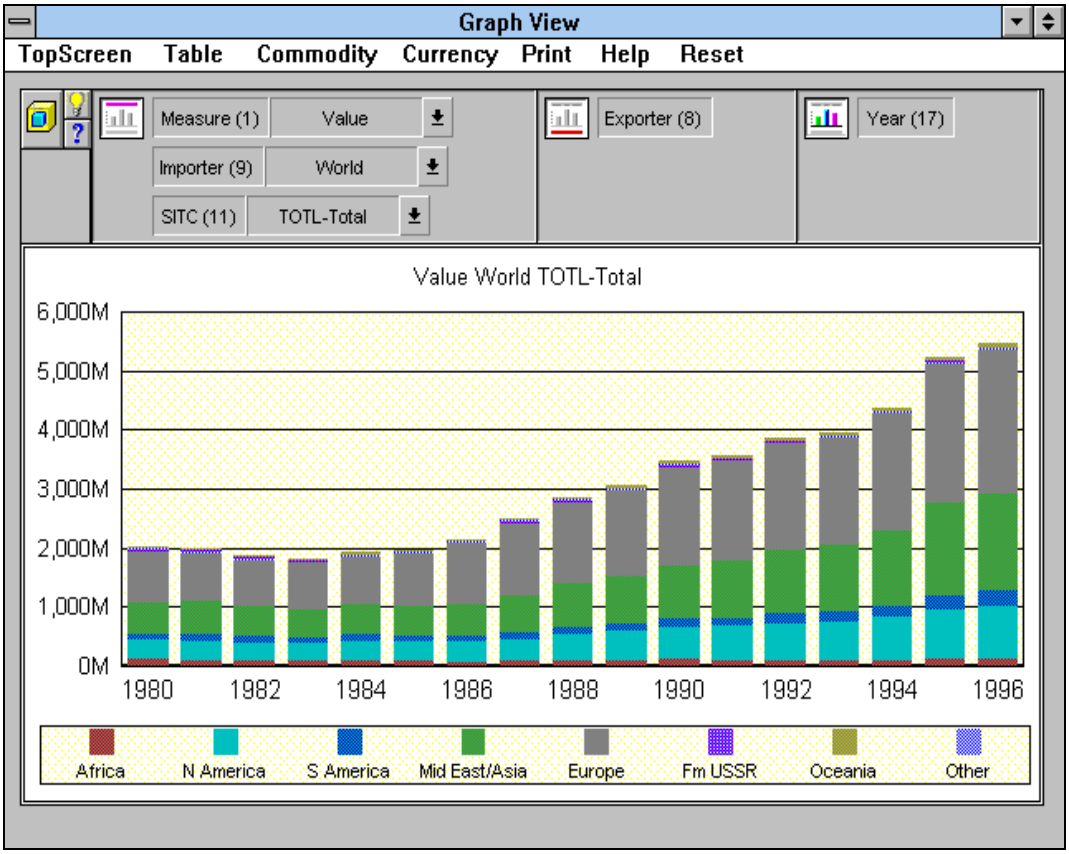


Figure 4.1 Initial Graph View

There are four fundamental actions you can pursue in a graph view:

1. Selecting data to display
2. Changing graph types
3. Changing the layout of the graph
4. Modifying graph components to affect their appearance

Each of these actions are discussed in following sections.

Selecting Data

Use the Selector to choose the specific dimension values you want to display. To choose a new dimension value from a currently selected list, click on one of the choice lists in the page edge of the dimension bar (Measure, Exporter or SITC in Figure 4.1). To expand these lists or choose new values, use the Selector tools. The Selector may be accessed in three ways from a graph view.

To display the Selector:

- On the Dimension Bar, click on the Selector button in the upper left corner of the Dimension bar.

  or

- Click on the graph background with the right mouse button, then choose **Select data**.

  or

- Click on one of the dimensions in the Dimension bar

For more complete information about using the Selector, see Chapter 5.

Note: The type of data selected may not be appropriate for, or supported by, all graph types (such as negative numbers or growth rates in a pie chart). Graph types and data requirements for specific graph types are discussed in the next sections.

Understanding Graph Types

When you display data in a graph, it is important to consider the kind of graph you want to use. Analyzer offers a large number of graph types, allowing you great flexibility in displaying trade data. You can select the following categories of graph types. You can also create mixed graph types, such as bar-line graphs.

- Bar graphs (seven types)
- Line graphs (seven types)
- Area graphs (seven types)
- Pie graphs (six types)
- Pie-Bar graphs (two types)
- Scatter graphs (two types)
- Bubble graphs (one type)
- 3-D graphs (one type)

To see pictures of various graph types:

1. Click on the graph background with the right mouse button, then choose **GraphType** from the pop-up menu to display the Graph Type dialog box.
2. Select a graph category. Pictures of each graph type in the category appear in the Graph Type box.

Consult Table 4.1 to review data requirements for graph types.

Data Requirements for Graph Types

While all graphs require numeric data, several graph types have additional data requirements. Table 4.1 lists the different graph types and any restrictions that apply.

Table 4.1 Data Requirements for Different Graph Types

Graph Type	Data Requirements
3-D graph	No restrictions
Any dual-Y graph	At least two rows of data (one for each axis)
Any percentage graph	No negative numbers
Area graph	At least two columns of data
Bar graph	No restrictions
Bubble graph	At least three columns of data
Line graph	No restrictions
Pie graph	No negative numbers
	If you have only one column of data, you will see one pie on the graph, even if you select a multiple pie graph type
	If any column has all zero or NA data, that pie will not appear on the graph; in a single pie graph, if the first column of data has all zero or NA data, the graph will be blank
Pie-bar graph	No negative numbers
	At least two columns of data
	At least two rows of data
	Last value in the column dimension must be a total of the other values
Scatter graph	At least two columns of data

Changing Graph Types

The initial graph in the Analyzer Graph View is a stacked bar chart. If this type of graph does not meet your needs for a particular analysis of the data, you can change the graph's type.

To change the graph type:

1. From the graph's right mouse pop-up menu, choose **GraphType** to display the Graph Type dialog box. Click in the area outside the data display to activate the pop-up window.

2. In the Graph Type dialog box, select a graph category. The graph types in that category appear in the Graph Type box, shown in Figure 4.2. Graph types are described in more detail in the section "Understanding Graph Types," later in this chapter.

3. Select a graph type.

4. Choose **OK**.

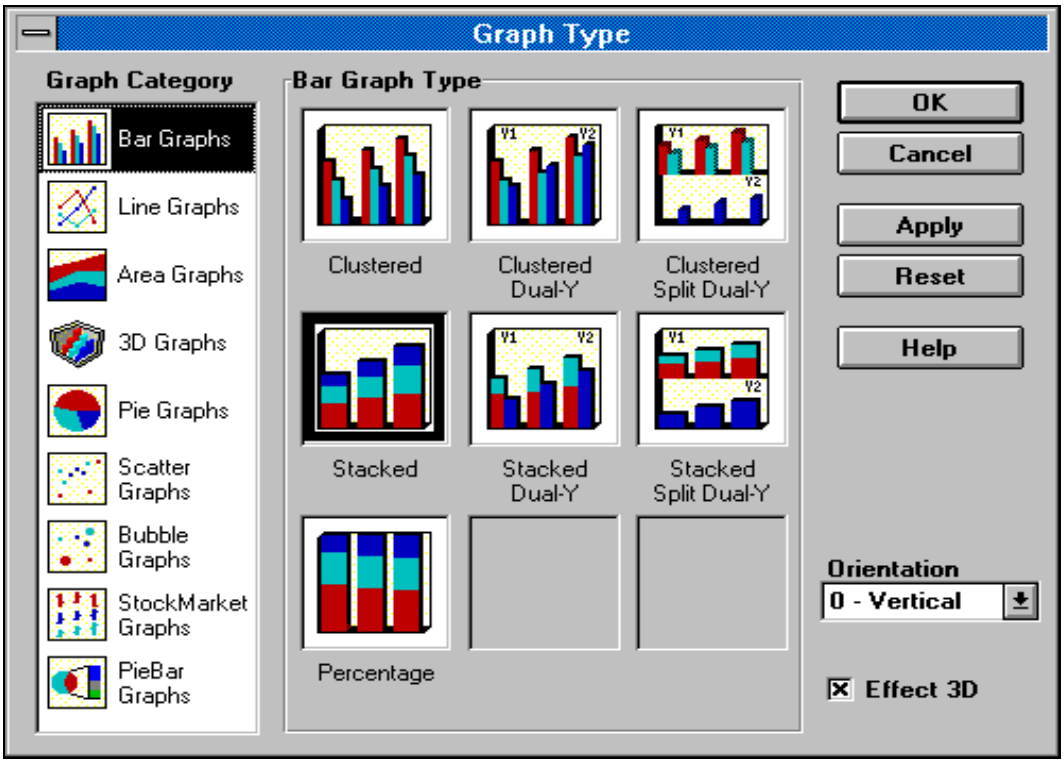


Figure 4.2 The Graph Type dialog box, showing the graph types available in the Bar Graphs category.

Mixed-Type Graph

Not all kinds of graphs are created by changing the graph type. You create a mixed-type graph by changing the MarkerType property for particular markers. To create a mixed-type graph, right click on any marker in a data row, then set the MarkerType property to a type appropriate for that row. For example, Figure 4.3 shows a stacked bar-line graph, created by changing a the stacked bar chart shown in Figure 4.1, and clicking with the right mouse button on selected Exporters, then setting MarkerType to Line in the pop-up window. Note that a line is drawn through the symbols on the bottom of the chart.

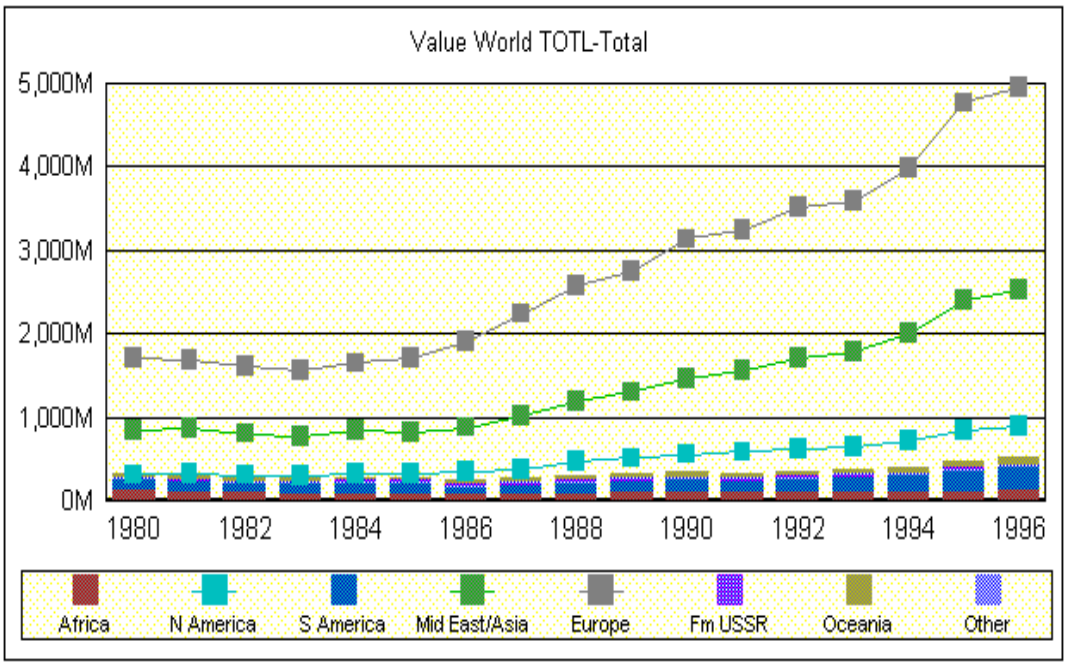


Figure 4.3 Stacked Bar Chart Changed to Mixed-Type by Changing Marker Type

Changing the Layout of a Graph

In addition to changing data selections and graph types, you may want to change the layout of a graph. As with Tables, you may exchange the dimensions in a graph. However, the Dimension Bar is the only way to move or exchange dimensions or edges in a graph. You cannot drag dimension labels in a graph as you can in a table. In a graph, the Dimension Bar works the same way as it does in a table, although the icons that represent the page, row, and column edges are specific to graphs.

See Chapter 3 for a description of how to use the Dimension Bar.

It is easy to understand the relationship between the rows, columns, and pages of data and their appearance in a table. However, in a graph, although the pages are clearly the same as those in a table, it is less obvious which components of the graph correspond to a row of data and which to a column. It is important to understand the relationship, since rows and columns of data are represented in different ways, depending on the graph type.

Table 4.2 summarizes where the rows and columns are in different types of graphs.

Table 4.2 Rows and Columns in Different Graph Types

Graph Type	Rows	Columns
3-D	Boxes (3-D markers) of the same color	One box (3-D marker) of each color, running from the left wall to the lower-right edge of the graph
Area	An area of one color	Locations along area markers
Bar	Bars (2-D markers) of the same color	One bar (2-D marker) of each color: a cluster or a stack
Bubble	Round data markers of the same color	One data marker is defined by three columns: one for the marker's location along the X-axis, one for its location along the Y-axis, and one for the size of the marker
Line	A line	One point on each of the lines, at the same X coordinate
Pie or ring	Slices of the same color	One pie or ring
Pie-bar	Each slice is a row; the markers in the bar represent the slice connected to the bar	Each 2-D marker in the bar represents a different column of data for the row of data connected to the bar
Scatter	All squares (data markers) of the same color	Each marker is defined by two columns: one for the marker's location along the X-axis, and one for its location along the Y-axis

Working with Graph Components

Graphs are made up of smaller parts, or components. For example, a title or a tick mark is a graph component. Components can be selected and their characteristics can be controlled by setting properties.

Because there are many graph components, you can control a graph's appearance at a very detailed level. For example, because the X-axis and the X title are different components, you can display them in different colors or you can display the X-axis, but hide the X title. Nonetheless, the basic parts of a graph are standard, with some variation from one graph type to another. Each basic part can be made up of one or more components, and the components that comprise a particular graph part vary with the graph type.

The basic parts of a graph are:

- **Dimension Bar** — An area at the top of the graph containing icons that represent the graph's data edges, plus buttons that allow you to display the Selector, and access the on-line Help system. You use the Dimension Bar to change the layout of the data on the graph. The Dimension Bar is discussed throughout this chapter.

- **Axes** — Some graphs may contain up to three axes:

  X-axis — Columns of data appear along the X -axis, when the graph has one.

  Y1- and Y2-axes — Data values appear at regular intervals along Y-axes. The Y2-axis appears along the right side of a vertically-oriented dual-Y graph. Note: A graph displays one page of data at a time. The subtitle identifies which page of data is shown. You can use the Dimension Bar to display other pages of data.

- **Plot area** — The area where data is displayed.

- **Subtitle** — Text that identifies the page of data that is shown in the graph. The label of the current page dimension value appears in the subtitle. However, if you change the subtitle text, your new text appears on every page of the graph.

- **Tick marks** — Lines that mark off intervals along axes.

- **Labels** — Text used to label parts of the graph. A graph may display labels for tick marks or, in pie graphs, for slices and pies.

- **Legends** — The key to the graph. Each legend marker corresponds to a row of data and is the same color as the markers in the corresponding row. Legend text identifies the dimension value that each row represents. Legend markers and text appear in the legend area. In line graphs, legends can also have legend lines.

- **Markers** — Shapes on the graph that actually represent data. Markers can be bars, lines, small squares, circles, pie slices, or (in some cases) one of a number of shapes. In general, different graph types use different shapes. All markers in the same data row have the same color and shape. Not all kinds of markers are available for every graph type. For example, line graphs can have a data line and data markers, while pie graphs have slices.

- **Footnote** — Optional text component used to display any additional information (not shown).

- **Fitlines** — Optional lines showing linear, logarithmic, or exponential trends in data (not shown). Only graphs that have axes (such as bar graphs and scatter graphs) can have fitlines. All three different fitlines exist for each row of data that is displayed in the graph.

- **Titles** — Optional text components that provide titles for the graph itself or for one of the axes (not shown). All graph types can have the title component. Only graphs that have axes can have axis titles. For example, a pie graph has no axis titles.

Each of these basic graph parts is made up of one or more graph components. You control the appearance of a graph by selecting individual components and setting their properties, as described in the section “Properties” later in this chapter. Each component has its own right mouse pop-up menu, which allows you to set many of the component’s properties.

Different types of graphs include different components. For example, only pie and pie-bar graphs have slice components, while only 3 -D graphs have Z tick labels.

Graph Properties

Each graph has properties that control the appearance of the entire graph. Graph properties let you control such characteristics of the graph as the orientation and the background color. Some of these properties can also be set from the right mouse pop-up menu.

To select the graph object, click on the graph background with the left mouse button.

To set graph properties with the right mouse pop-up menu, click on the graph background with the right mouse button.

Graph Component Properties

In addition to the graph as a whole, each component in the graph also has properties that control the appearance of that component; for example, you can set the color of the component.

Each graph component has its own right mouse pop-up menu, which you can use to set these properties.

To set properties for a component from its right mouse pop-up menu:

1. Click on the component with the right mouse button. The right mouse pop-up menu appears.

2. To select an action or property name from the menu, do one of the following:

   a. Hold the right mouse button down and drag to the menu choice.

   b. Release the button.

   or

   Click on the menu choice with either mouse button.

Suppose you want to change the color used for the graph plot area. You can set the FillColor property from the plot area component's right mouse pop-up menu, When you choose FillColor from the pop-up menu, the Color dialog box is displayed, as shown in Figure 4.4.

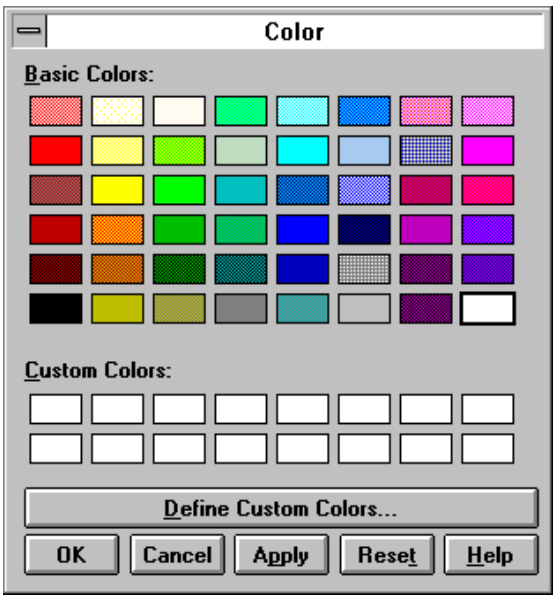


Figure 4.4 The Color Dialog Box

Printing Graphs

To access the Analyzer printing function, use the **Print** option on the Graph View menu bar

Printing with this facility is described in further detail in the “Printing Screens and Views” section in Chapter 3.

Tip: Graph colors that look good on your monitor may not look as good in a printed graph. Therefore it is suggested that you test printing the graph and change the colors of the graph components as necessary.

Chapter 5

Selecting Data

When you first display a measure in a table or graph, each dimension in the measure has a default selection. This selection might include all the values in a dimension; if there are many values in the dimension, only a manageable number of the values might be displayed. In most cases, you will want to make changes to the default selection. The Selector provides an easy way to change a dimension's selection.

This chapter introduces you to the Selector. In it you will learn:

- What the Selector is
- How to display the Selector dialog box and Selector tools
- How to modify selections
- How to sort selections
- How to save selections
- How to work with hierarchies

What Is the Selector?

The Selector is a set of tools that you use to choose the dimension values to display in a table or graph. Each Selector tool is a dialog box or a set of dialog boxes that allow you to specify criteria for including dimension values in a selection or for sorting dimension values. For example, the List tool is a dialog box that allows you to select dimension values from a list of available dimension values. The Top/Bottom tool is a set of dialog boxes that allows you to select, for example, the top five exporting countries based on total value in 1996.

The Selector Dialog Box

The Selector dialog box allows you to use more than one tool at a time to specify criteria for selection or sorting before you update a table or graph view. In the Selector dialog box, you can also work on more than one dimension's selection before updating the view, and you have access to buttons that allow you to save a selection to use again and set options for the Selector dialog box appearance. You can access the Selector dialog box through a button on the Selector toolbar, through a button on the Dimension Bar of a view, and through the **Select Data** choice on one of many right mouse pop-up menus.

Figure 5.1 shows the Selector dialog box, with the Exporter dimension selected.

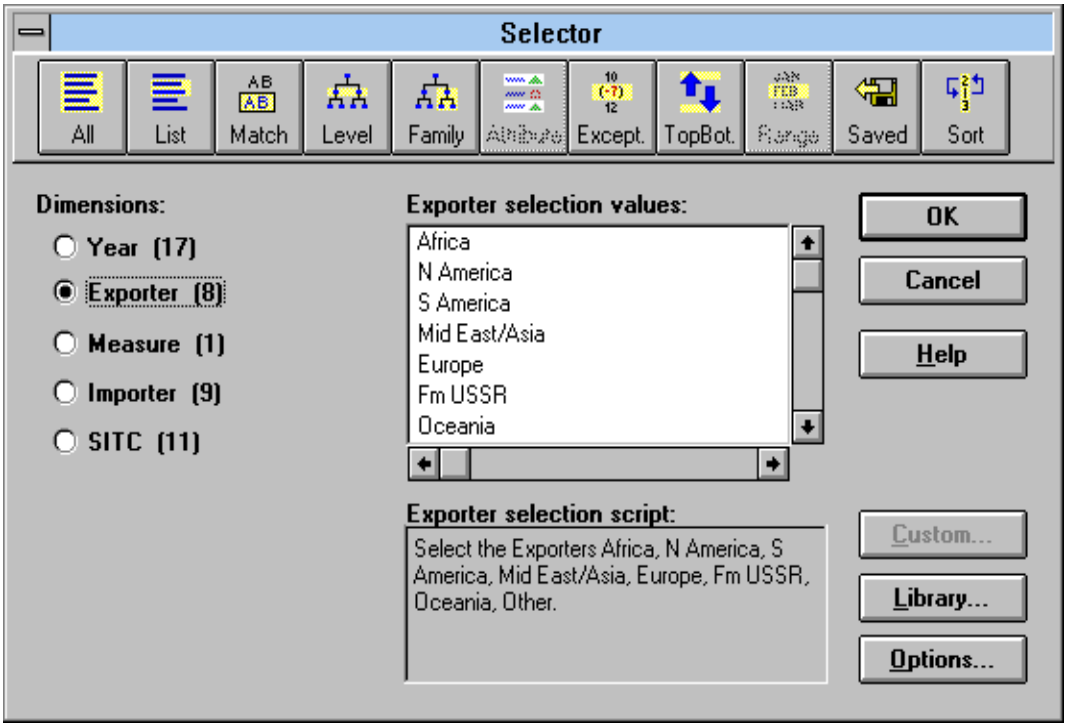


Figure 5.1 Selector Dialog Box, showing criteria for selecting values of the Exporter dimension.

Along the left side of the Selector dialog box is a list of the dimensions in the table or graph from which you displayed the Selector. After each dimension name, the number of values selected for the dimension appears in parentheses. For example, there are 8 dimension values in the current selection for the Exporter dimension.

The dimension that is selected when the Selector dialog box is first displayed depends on how and where you display the dialog box. The Selector in Figure 5.1 was displayed by double-clicking on the Exporter dimension on the Dimension Bar. If the selected dimension is not the one you want to work with, click on the dimension whose selection you want to change. The selection script describes the criteria used to determine which dimension values are included in the selection and how these values are sorted. For example, the criteria for the Exporter selection in Figure 5.1 starts with the default selection.

Displaying the Selector Dialog Box

You can display the Selector dialog box from the Dimension Bar on a view and from the right mouse pop-up menu on a table or a graph.

To display the Selector dialog box:

On the Dimension Bar of a table or graph containing actual data, click on the Selector button in the top-left corner.

or

On the Dimension Bar of a table or graph containing actual data, double-click on the dimension you want to work with.

or

From the right mouse pop-up menu of a table, a graph, or of some of the table and graph components, choose **Select Data.**

Selector Tools

Along the top of the Selector dialog box, you see several buttons, which give you access to the Selector tools. When a tool is not available for the selected dimension, the button is dimmed. For example, in Figure 5.1, the Range button is dimmed, because the Range tool applies only to time dimensions. Table 5.1 describes each of the selector tools.

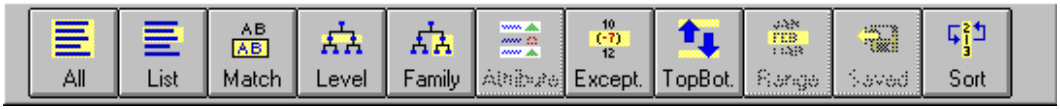


Table 5.1 Selector Tools

Tool	Description
All	Selects or deselects all the values in the dimension, or all the values in a hierarchy. A hierarchy structures dimension values into different levels, such as Countries and States.
List	Selects or deselects dimension values from a list.
Match	Selects or deselects dimension values that contain a specified string of characters, for example SITC codes that contain “eggs.”
Level	Selects or deselects all the dimension values at one or more levels in a hierarchy, for example, all the dimension values at the State level.
Family	Selects or deselects a family of values in a dimension hierarchy. For example, to select Europe and all the countries in Europe, you could use the Family tool to select Europe and its children.
Attribute	Selects or deselects values based on a common attribute. An attribute is a particular characteristic that is shared by a number of dimension values. Dimension values across various levels of a dimension hierarchy (or outside a hierarchy) can have the same attribute. For example, the Period dimension might have a monthly attribute so that you could pick all months.
Exception	Selects or deselects dimension values based on the values of a measure that uses the dimension. For example, you might select the countries which import greater than $10,000,000. You can also use the Exception tool to base your selection on the comparison of two different measures.
Top/ Bottom	Selects or deselects the dimension values with the greatest or least data values in a particular measure. For example, you might select the top 10 importing countries in 1996 Value.
Range	Selects or deselects a range of time values. For example, you might select the range of months between January and June of last year. Using the Range tool, you could also select all months from January of this year to date, or you could select the last three months.
Saved Selection	Selects or deselects dimension values in a saved selection.
Sort	Sorts dimension values, using rules you specify. You can also use this tool to change the rules for automatic sorting and to turn automatic sorting on or off.

Displaying Dimension Values in the Current Selection

The Selector dialog box gives you some information about the selected dimension; you see the number of selected values and the script that determines which values are included in the selection.

To see the dimension values in the current selection, click on the List button. The List tool is displayed, as shown in Figure 5.2. The Selected Dimension Values box (In Figure 5.2, the Selected Exporter box) lists the dimension values included in the current selection.

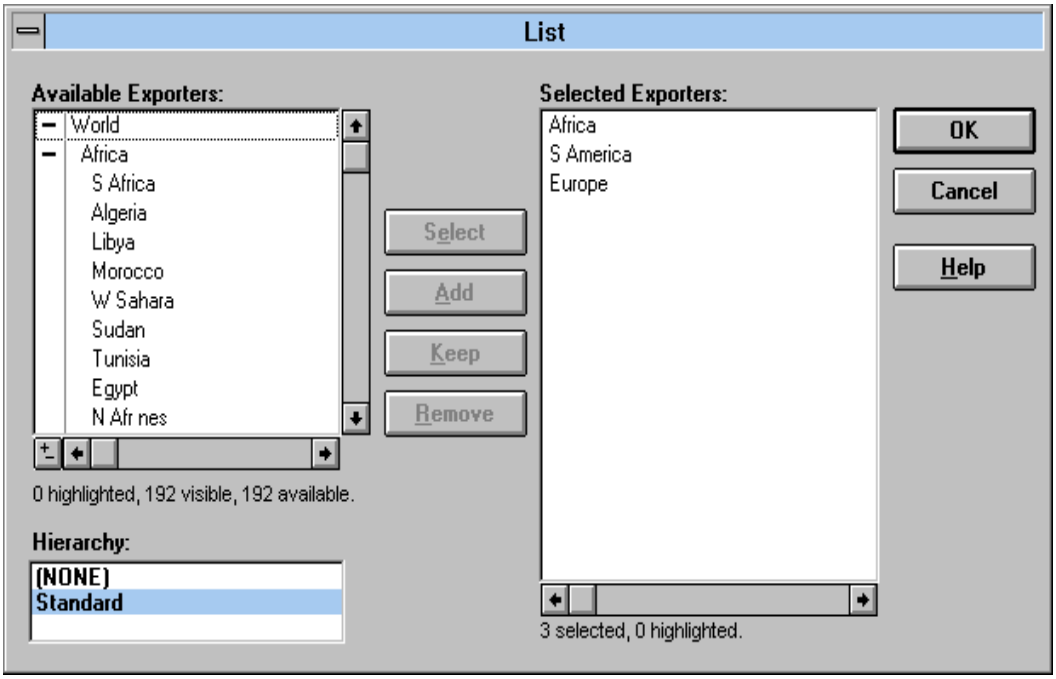


Figure 5.2 List Tool displaying the current Exporter values in the Selected Exporter box.

Replacing the Current Selection

When you use the Selector, you can build on the current selection for a dimension, or you can start over by replacing the current selection. For example, in Figure 5.2, the current selection includes Africa, Europe, and South America. If you were interested in value for only Europe, you might replace the current selection with Europe only.

To replace the current selection:

1. Use one of the Selector tools to specify the values you want.

2. In the Selector tool, choose **Select** as the selection type.

3. Choose **OK** to close the Selector tool and return to the Selector dialog box or to the view or dimension list box.

When you replace a selection, the old selection script is replaced with the script generated by the Selector tool you used. In the example described above, you could use the List tool to select only Europe, as shown in Figure 5.3.

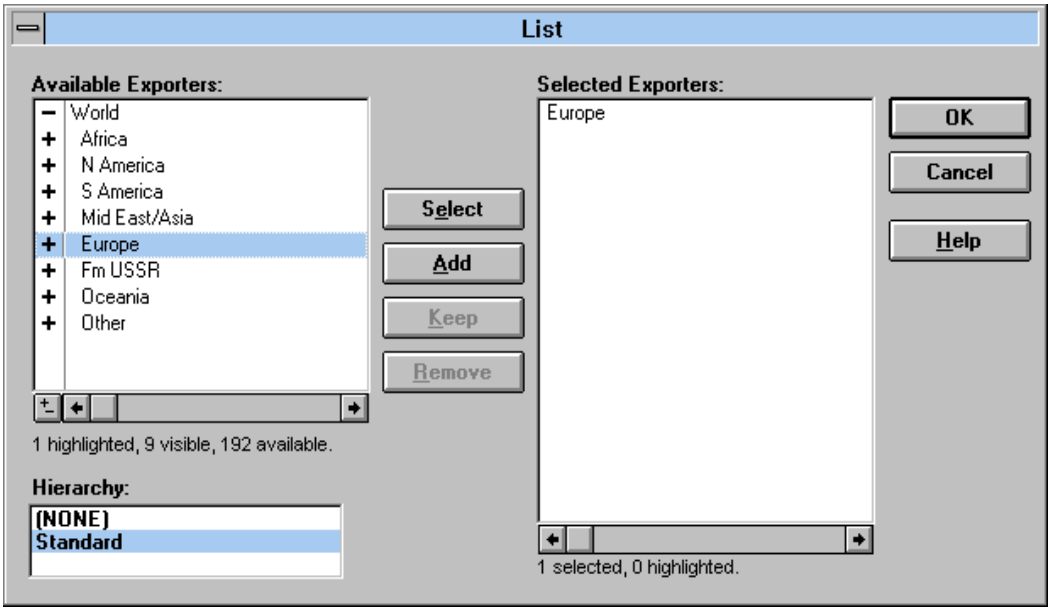


Figure 5.3 List Tool after highlighting Europe in the Available Exporters box and choosing **Select.**

Using Match to Select Dimension Values

You may use the Match Selection tool to select dimension values based on an alphabetic match, for example, if you were interested in finding all commodities that included “eggs“. Figure 5.4 shows the Match Dialog box with this example.

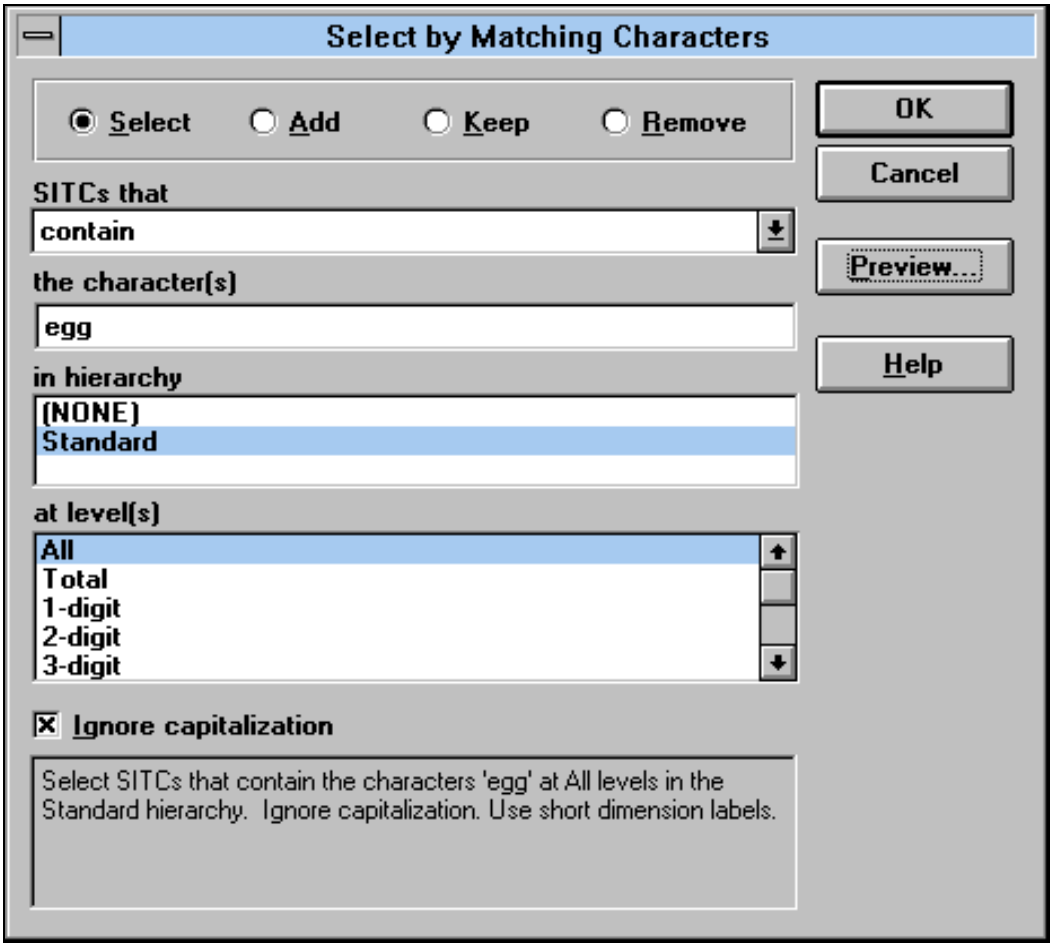


Figure 5.4 Match Dialog Box

Tip: You can see the values that will be in the selection after you finish using a Selector tool by choosing **Preview**. This allows you to see what would happen if you changed a selection before you actually change it.

Figure 5.5 shows the result of the match on “eggs” and by choosing **Preview** in the Match dialog box.

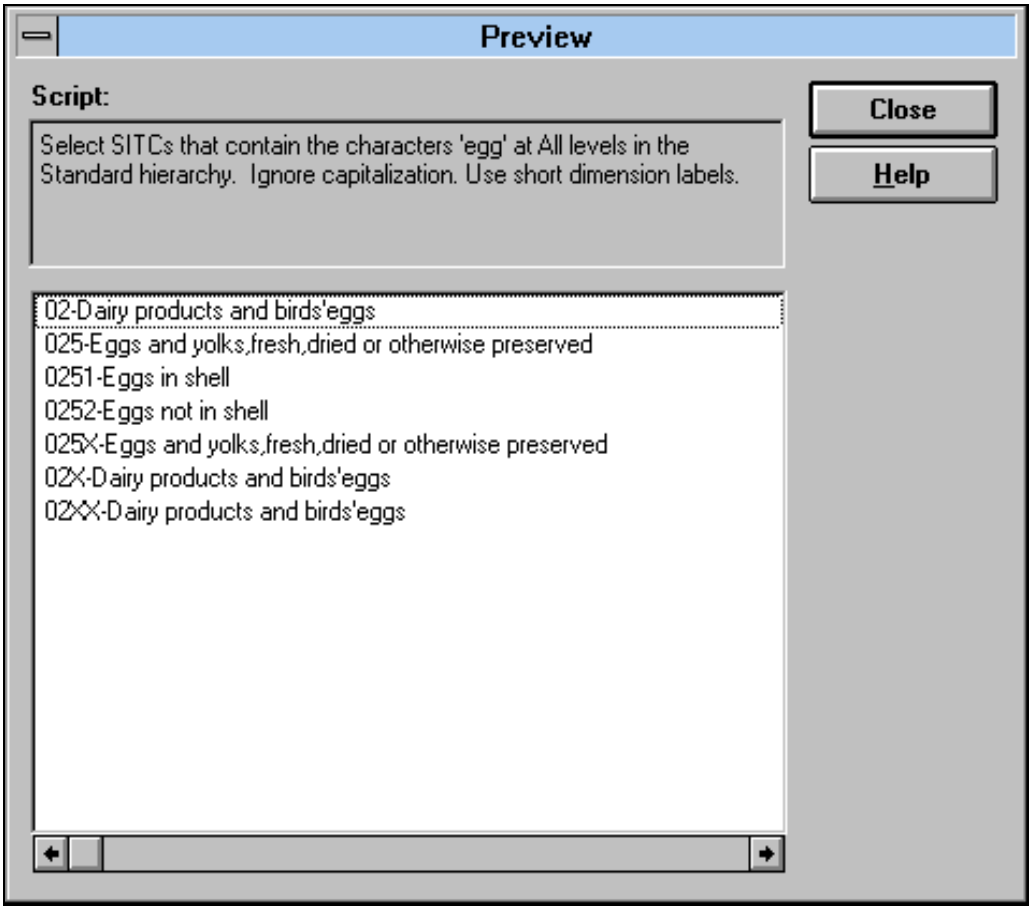


Figure 5.5 Preview of the Match selection tool results.

Refining a Selection

You can refine your current selection by:

- Adding dimension values
- Keeping only the values you want
- Removing dimension values
- Sorting dimension values

Sections which follow describe each of these options and provide examples of selection tools.

Tip: You do not have to remove unwanted dimension values before you select new dimension values. Choosing **Select** replaces the old values with the newly chosen values.

Adding Dimension Values

To add dimension values to the current selection:

1. Use one of the Selector tools to specify the values you want to add.

2. In the Selector tool, choose **Add.**

3. Choose **OK** to close the Selector tool and return to the Selector dialog box or to the view or dimension list box.

The values are added to the selection, and the script that the tool generates is added to the selection script.

For example, you can use the Family tool to add the countries in Europe to the selection created in Figure 5.3. Figure 5.6 shows how you would add the children of the Europe dimension value (countries in Europe) to the selection created in Figure 5.3

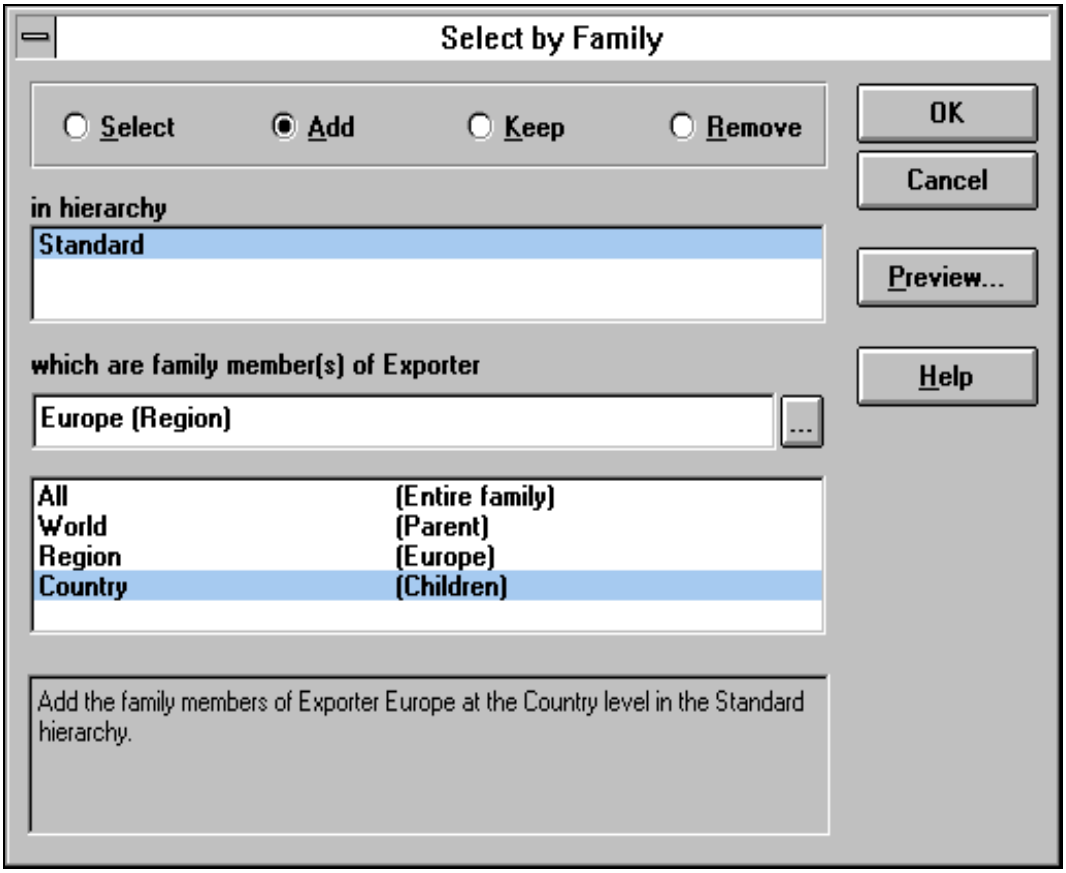


Figure 5.6 Select by Family Dialog Box, filled out to add countries in Europe.

When you choose **OK** in the dialog box shown in Figure 5.6, the new values are added to the current selection. If you invoked the Family tool from the Selector dialog box, choosing **OK** returns you to the Selector dialog box, where you can continue to refine the selection, using other tools. Figure 5.7 shows the Selector dialog box displaying the addition to the Selection script and the new values.

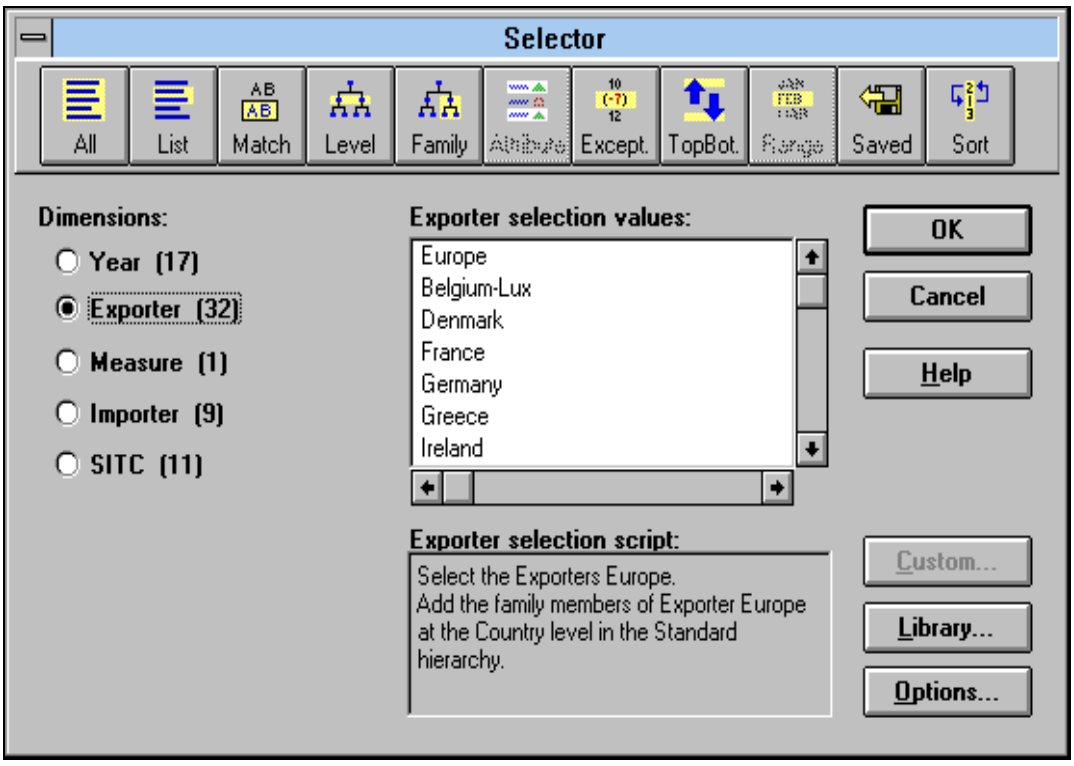


Figure 5.7 Selector Dialog Box after adding European countries to the selection.

Keeping Dimension Values

You can choose to keep in the current selection only those dimension values that meet your criteria.

To keep only certain values in the current selection:

1. Use one of the Selector tools to specify the values you want to keep.

2. In the Selector tool, choose **Keep**.

3. Choose **OK** to close the Selector tool and return to the Selector dialog box or to the view or dimension list box.

The values you chose remain in the selection, and all other values are removed. The script that the tool generates is added to the selection script. For example, using the selection shown in Figure 5.7, you could keep only those Exporters where 1996 Value exceeded $200,000,000, as shown in Figure 5.8.

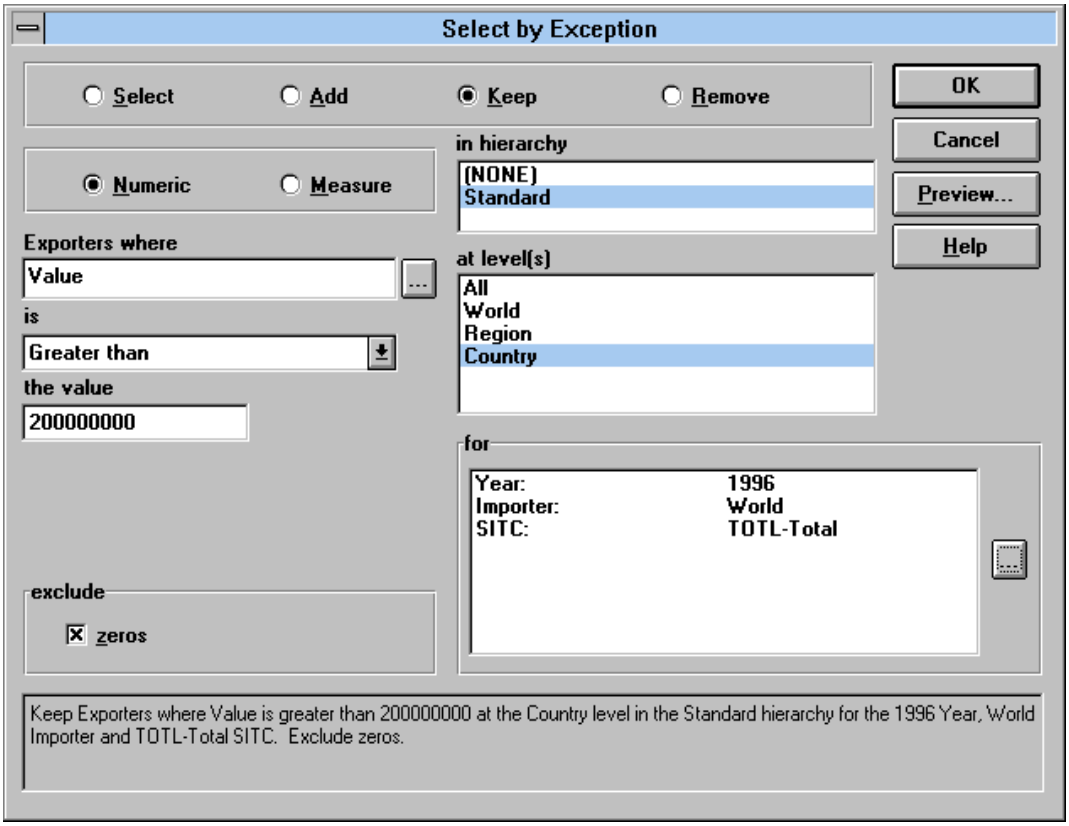


Figure 5.8 Select by Exception Dialog Box, filled out to keep only those Exporters where total 1996 Value exceeded $200,000,000.

To change the value of a box that has an ellipsis button next to it, click on the ellipsis button. This displays a related dialog box that allows you to choose appropriate values.

When you choose **OK**, you close the Exception tool and are returned to the Selector dialog box or to the table or graph view. Figure 5.9 shows the Selector dialog box with the new addition to the selection script and the Exporters where total 1996 Import Value exceeded $200,000,000.

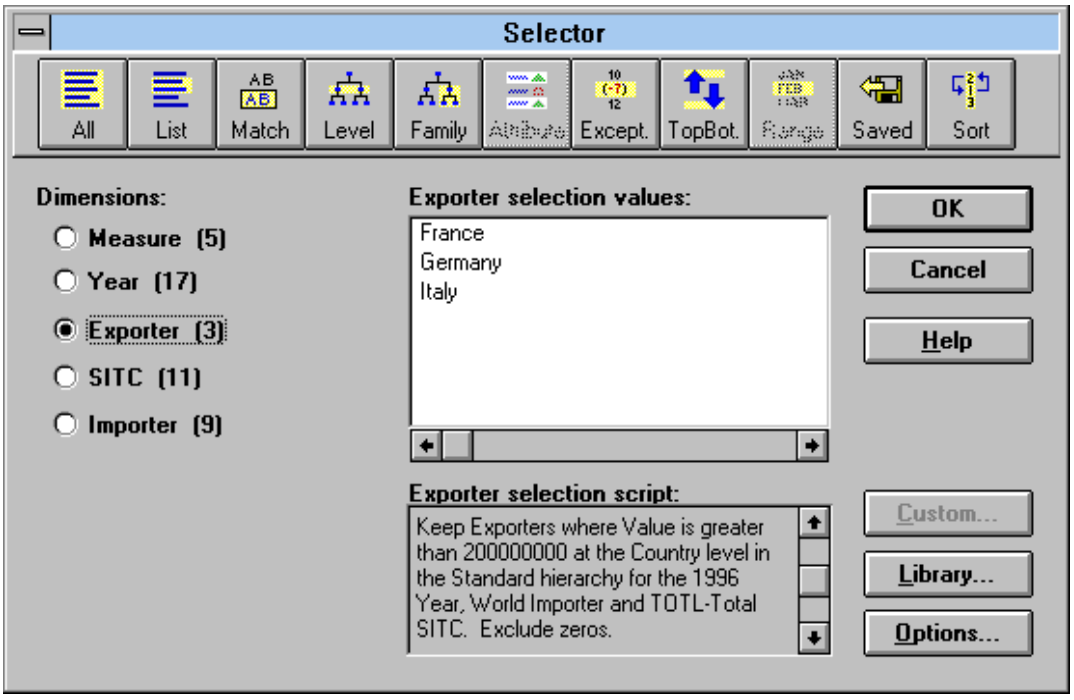


Figure 5.9 Selector Dialog Box after keeping only the Exporters where 1996 Value exceeded $200,000,000.

Removing Dimension Values

You can refine a selection by removing dimension values that you do not want.

To remove values from the current selection:

1. Use one of the Selector tools to specify the values you want to remove.

2. In the Selector tool, choose **Remove**.

3. Choose **OK** to close the Selector tool and return to the Selector dialog box or to the view or dimension list box.

The values are removed from the selection, and the script that the tool generates is added to the selection script. For example, you can use the Top/Bottom tool to remove the bottom values of the Exporter dimension, based on Value as shown in Figure 5.10.

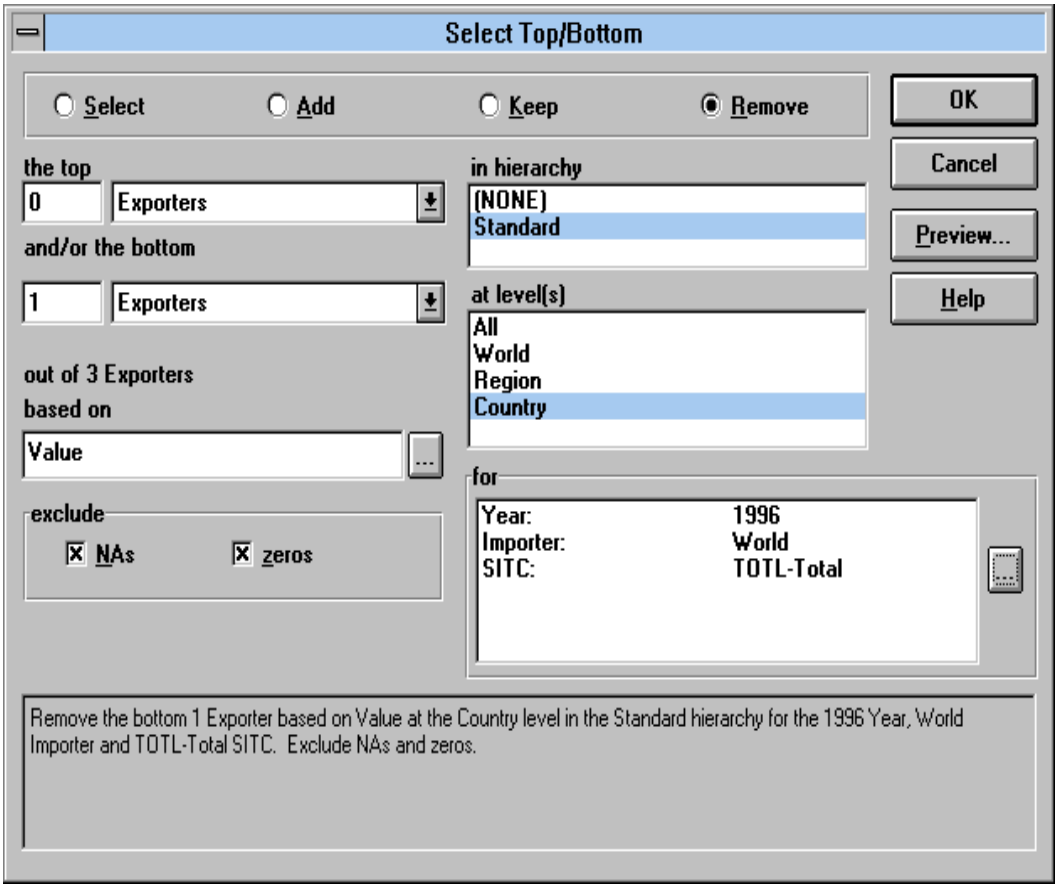


Figure 5.10 Select Top/Bottom dialog box, filled out to remove the bottom Exporter based on Value.

To change the value of a box that has an ellipsis button next to it, click on the ellipsis button. This displays a related dialog box that allows you to choose appropriate values.

When you choose **OK**, you close the Top/Bottom tool and are returned to the Selector dialog box or to the view or dimension list box. Figure 5.11 shows the Selector dialog box with another addition to the selection script.

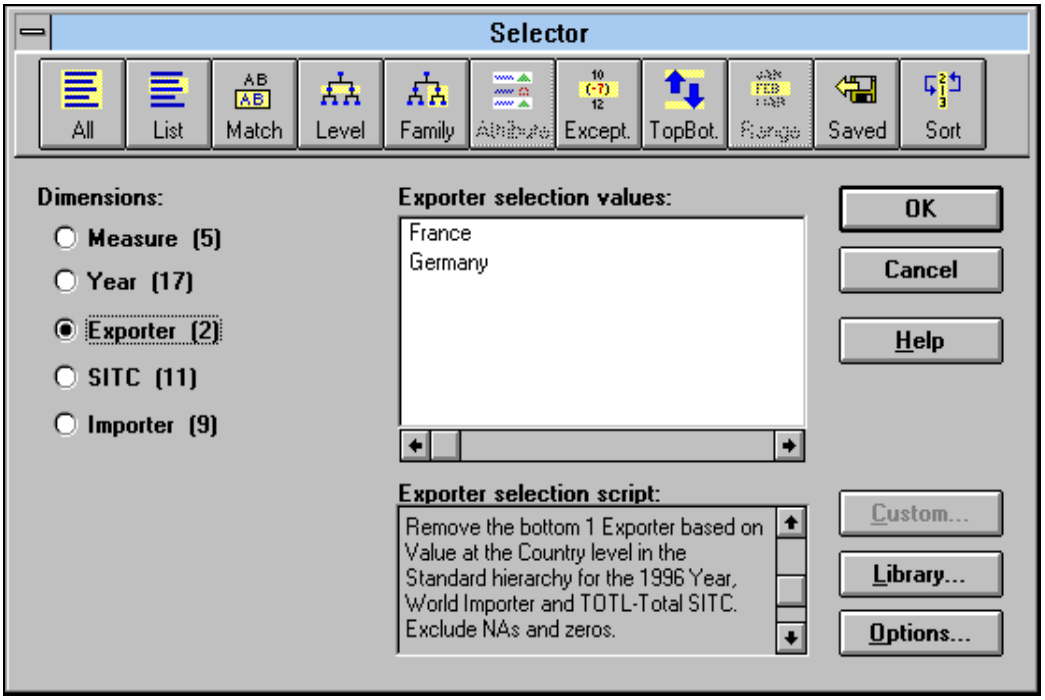


Figure 5.11 Selector Dialog Box after removing the bottom Exporter based on Value.

Saving Selections

You might find yourself creating the same selection more than once. For example, you might have a monthly report in which you list the five top commodities based on value. Or you might be interested in only certain countries. You can save a selection that you create and use it later. You can save a selection in one of two forms:

- **Static** — Saved selections that always have the same values each time you use them. If you look at the script for a static saved selection, you notice that it lists the dimension values that will be included. You would use a static saved selection to select those countries in which you have an interest.

- **Dynamic** — Saved selections that can vary each time you use them, because they are based on the criteria you set in the selection rather than on the dimension values that met the criteria when you saved the selection. For example, in the spring you might select the top commodities based on import value and save the selection. When you use the selection in the fall, the top five commodities might be different from those in the spring. A script for a dynamic saved selection is a description of the criteria used to determine which dimension values to include; it does not list the dimension values themselves.

Using Saved Selections

The Saved Selection tool enables you to use selections that you have saved. As with selections you build using other tools, you can replace the current selection with a saved selection, or you can refine the current selection using the saved selection.

Sorting Your Selection

You may use the Sort tool to sort dimension values. You can also use the Sort tool to have Analyzer sort the dimension values each time you change the selection. You can specify the rules to use for automatic sorting.

There are many ways in which you can sort dimension values. The basic types of sorting are:

- **Alphabetical** — Sorts values in alphabetical order.

  Note: When you sort values alphabetically, the Selector sorts by the labels that it is currently using, which might be different from the labels used in a table or graph

- **Database** — Sorts values in the order in which they are stored in the database.

- **Data Value** — Sorts values based on the data values of a chosen measure.

- **Dragdrop** — Lists values so that you can sort them manually.

- **Hierarchy** — Sorts values in the order they appear in a hierarchy.

- **Level** — Sorts values into groups by level.

- **Time** — Sorts time values sequentially.

The content of the Sort Selection dialog box changes, depending on the sort type you select. Each sort type offers additional choices, and most require additional information. Figure 5.12 shows the Sort Selection dialog box with the Hierarchy sort type.

Note: Sorting affects only the order in which the dimension values appear in the table, graph, or dimension list box. It does not affect the order in which they are stored in the database.

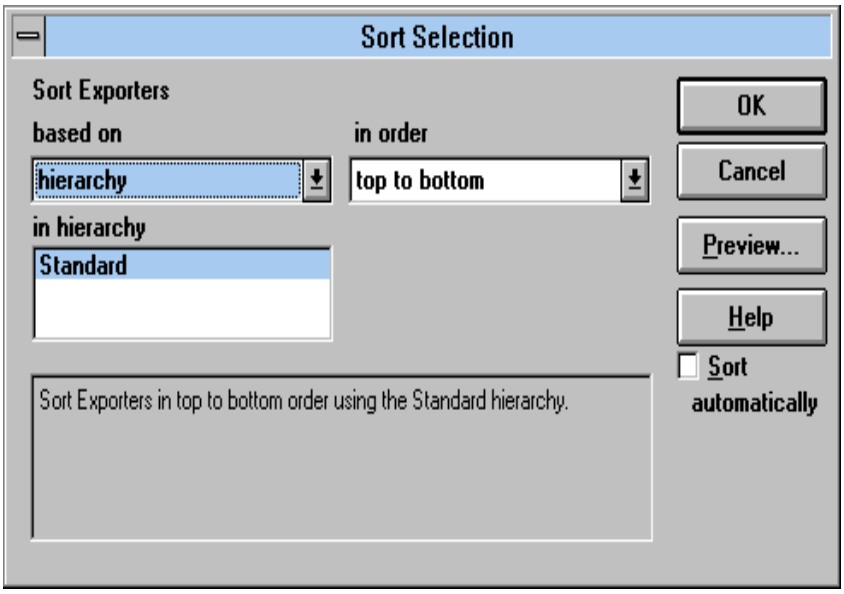


Figure 5.12 Sort Selection Dialog Box.

Accepting or Discarding Changes

When you use the Selector dialog box for access to Selector tools, you can continue to refine the selection without affecting the table or graph from which you displayed the Selector. When you have selected the dimension values you want to work with, you can accept the changes and return to the table, graph, or dimension list box in one step.

To accept the changes you have made to a selection, choose **OK** in the Selector dialog box. The table or graph immediately reflects the change you have made to the dimension's selection.

To discard your new selections, choose **Cancel** in the Selector dialog box. You return to the table or graph, and the selections remain as they were before you displayed the Selector dialog box.

Working with Hierarchies

Some dimensions have values at varying levels of aggregation. For example, the Exporter dimension has regions and countries. In a measure that has Exporter as one of its dimensions, each Exporter value holds the total of all the values of the countries in that region. The dimension also has a World Total value that holds the total for all the countries.

A hierarchy provides structure for dimensions that have values at several different levels. You can see the structure of a hierarchy in several places in the Selector. In the List tool, different levels of a dimension hierarchy are indented, as shown in Figure 5.13.

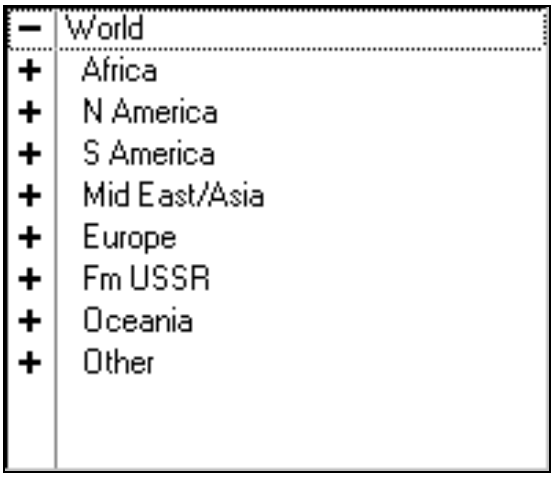


Figure 5.13 Available Exporters box in the List tool. Indentation shows hierarchical relationships.

Other Selector tools allow you to select dimension values based on the structure of a hierarchy. The level tool allows you to select all the dimension values at a particular level. In Figure 5.14, all the values at the region and country levels in the Standard hierarchy are selected.

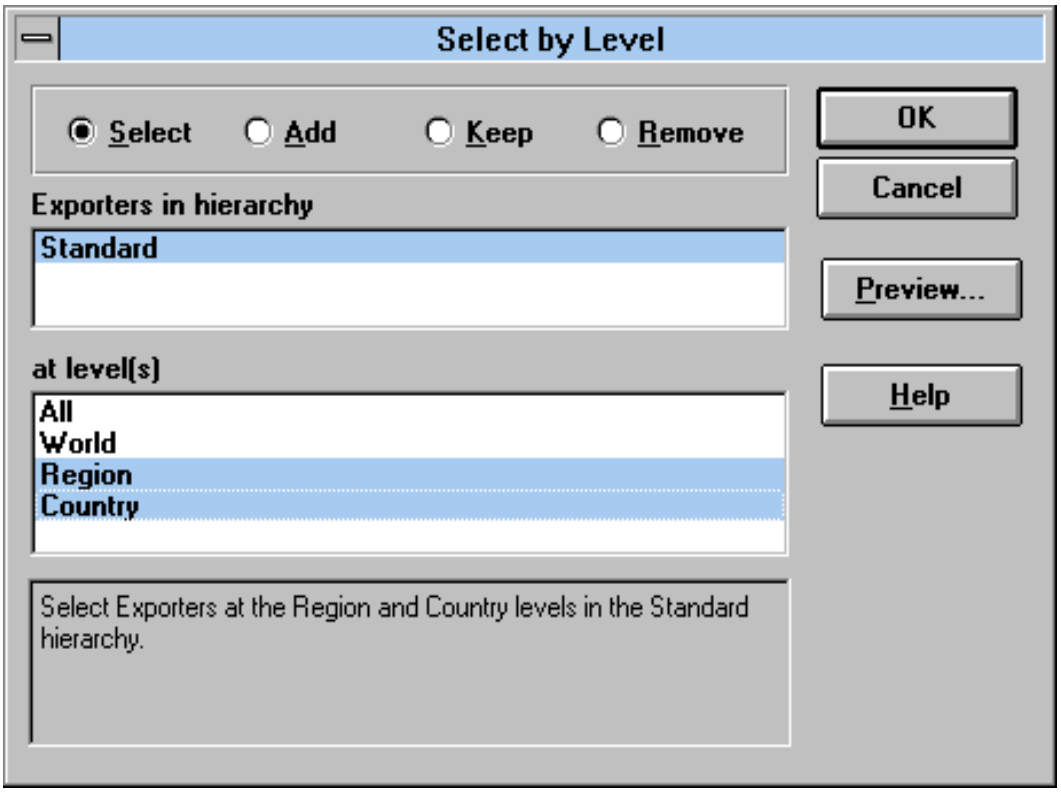


Figure 5.14 Level Tool with settings for selecting all the Region and Country values in the Standard hierarchy.

The Family tool allows you to select dimension values that are related to a particular dimension value. Hierarchical relationships are described in the same terms that are used for family relationships. Less aggregate values are called children of the immediate aggregate and descendants of higher levels of aggregation. Aggregate values are called parents of the values they immediately aggregate and ancestors of lower levels of aggregation.

In the previous example, European countries are all children of the Europe region and Europe is their parent. Figure 5.15 shows the Family tool with Europe and its countries selected.

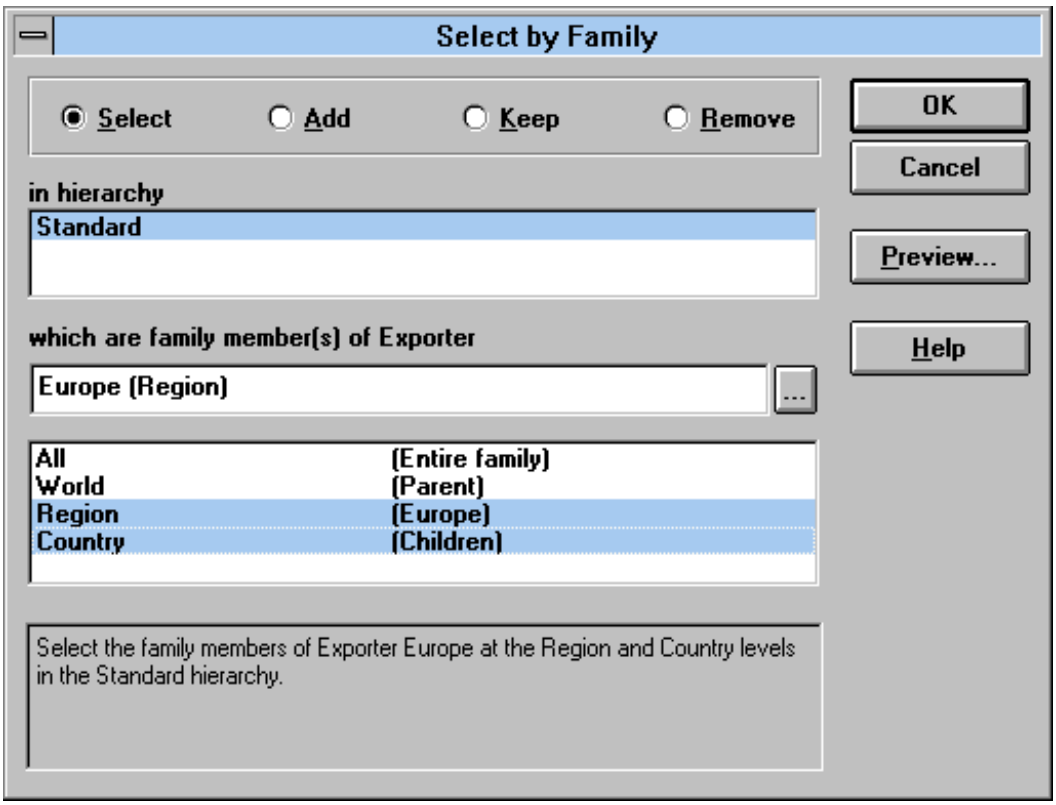


Figure 5.15 Family Tool selecting Europe and its countries.