



# Set Analyzer User's Guide

**Version 2.2**

**Windows**

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# BusinessObjects Set Analyzer™

## Version 2.2

### User's Guide

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# Contents

<b>Finding the Information You Need</b>	<b>vii</b>
It's in the Documentation .....	viii
About this Guide.....	xiii
<b>Chapter 1 Introduction</b>	<b>15</b>
Overview.....	16
What is Set Analyzer? .....	16
What is a Set?.....	16
What are Sets? .....	18
<b>Chapter 2 Installing and Starting Set Analyzer</b>	<b>21</b>
Overview.....	22
System Requirements .....	22
Installing Set Analyzer .....	23
Starting Set Analyzer.....	26
<b>Chapter 3 The Set Analyzer Environment</b>	<b>29</b>
Overview.....	31
Sets View .....	32
StepManager View .....	36
VisualData View .....	40
VisualSets View.....	44
Refine View .....	47
Event Analysis.....	52
Functions Menus.....	56
User Options.....	58
<b>Chapter 4 Getting Started with Set Creation</b>	<b>61</b>
Overview.....	62

Processing Sets .....	62
Working with Existing Sets in Sets View .....	74
<b>Chapter 5     Advanced Set Creation</b>	<b>89</b>
Overview .....	90
User Defined Object Trees .....	90
Sampling .....	93
Scoring Points .....	97
Importing and Exporting .....	101
Cloning Sets .....	105
<b>Chapter 6     Scheduling Set Processing</b>	<b>107</b>
Overview .....	108
Freehand SQL .....	110
<b>Chapter 7     Models</b>	<b>113</b>
Overview .....	114
How to Create a Processing Model .....	115
How to Create a Distinct Model .....	118
How to Process a Distinct Model .....	118
Setting the Component and Display Order of Distinct Models .....	119
How to View a Distinct Model .....	120
Processing Models .....	120
<b>Chapter 8     Private and Public Sets and Folders</b>	<b>123</b>
Overview .....	124
What are Set Analyzer Folders? .....	124
Folder Attributes .....	124
Managing Folders .....	124
Public and Private Sets .....	127

**Index**

**131**



# Finding the Information You Need

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## In this chapter

□ <b>It's in the Documentation</b> .....	<b>viii</b>
A Documentation Service on the Web	viii
Multimedia	ix
Online Guides	x
Online Help	xiii
What to Do for More Information	xiii
□ <b>About this Guide</b> .....	<b>xiii</b>
Audience	xiii
Conventions Used in this Guide	xiv

## It's in the Documentation

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**Note:** SET ANALYZER documentation includes the SET ANALYZER Administrator's Guide and the SET ANALYZER User's Guide. The information in this chapter pertains only to the documentation available on the BUSINESSOBJECTS CD-ROM, and not to SET ANALYZER documentation.

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Now more than ever, BUSINESSOBJECTS documentation delivers product information that is rich, convenient, and easy-to-use.

Whether you're a novice or experienced user, BUSINESSOBJECTS documentation is the place to go for discovering our products, exploring their features, or locating precise information.

Product information has been substantially expanded to encompass not only facts about product features but also tips, samples, and troubleshooting instructions.

For your convenience, our documentation is available from all products in a variety of formats including Windows online help, HTML, Acrobat PDF, paper, and multimedia.

Documentation has been designed first and foremost with speed and ease of navigation in mind. All the information you require is readily available just a few mouse clicks away.

The next sections highlight new and key features of our documentation.

### A Documentation Service on the Web

If you have access to the Internet, you can checkout More Tips and Samples, the BUSINESSOBJECTS documentation service on the World Wide Web. From here, you can obtain the latest in updates, tips, samples, or troubleshooting.

From the Help menu, you can select the More Tips and Samples command to check out the Tips page.

Open to everyone with an Internet connection, this service lets you get the most out of BUSINESSOBJECTS products and documentation. You can also get there from your browser with the following URL:

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From INFOVIEW, you can go directly to the Tips page by clicking a button on your browser.

From the Tips page, registered customer support contacts can explore the full electronic version of the BUSINESSOBJECTS documentation set. It offers detailed information on all BUSINESSOBJECTS products, updates, troubleshooting instructions, tips, and much more.

Registered Developer Suite customers can download new documentation and code samples.

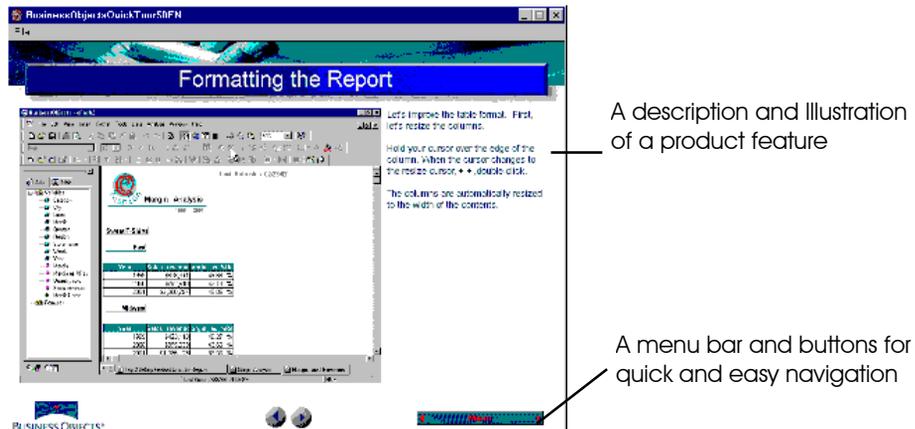
## Multimedia

BUSINESSOBJECTS documentation in multimedia includes Quick Tour and the BUSINESSMINER tutorial, both of which cover the main concepts and features of the products using images and animation.

### Quick Tour

Quick Tour is a multimedia presentation that introduces new features in BUSINESSOBJECTS. Aimed primarily at users updating from a previous version of BUSINESSOBJECTS, it is also an excellent primer for first-time users of the product.

You can use Quick Tour as an accompaniment to the guide *Getting Started with BusinessObjects*.



*An actual screen from Quick Tour*

## The BusinessMiner Tutorial

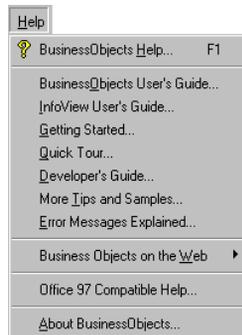
This multimedia tutorial teaches novice users how to use the powerful desktop data mining software, BUSINESSMINER. Each lesson in this tutorial has a narrated, animated presentation which shows users how to answer a business question using BUSINESSMINER. Users can then try out the demonstrated tasks themselves by following the step-by-step exercises in the accompanying guide.

## Online Guides

### User's Guides

All BUSINESSOBJECTS user's guides are available as Acrobat Portable Document Format (PDF) files. Designed for online reading, PDF files enable you to view, navigate through, or print any of their contents. The full list of BUSINESSOBJECTS guides is provided in the Deployment Guide.

From a BUSINESSOBJECTS product, you can gain access to its related guides from the commands of the Help menu.



The Help menu of BusinessObjects provides commands for viewing the BusinessObjects User's Guide, Getting Started with BusinessObjects, and the Error Message Guide. For Developer Suite customers, the menu also displays the Developer's Guide.

From a PDF file, you can search for specific occurrences of a word using the Find command, or navigate to the exact location of a topic by clicking on an entry in the Index or Table of Contents.

During installation, the BUSINESSOBJECTS installer program automatically copies these files to:

### **Business Objects\Online Guides\En**

To open a document, you can select it from the Help menu provided that you have installed the Adobe Acrobat Reader, version 3.0 or higher on your machine. This Reader is available on the BUSINESSOBJECTS CD-ROM. You can also download it for free from Adobe Corporation's web site at:

**<http://www.adobe.com>**

## **The Error Message Guide**

The Error Message Guide is a compilation of the error messages that can appear with ordinary use of BUSINESSOBJECTS products. It is delivered with products as a PDF file or a set of HTML files.

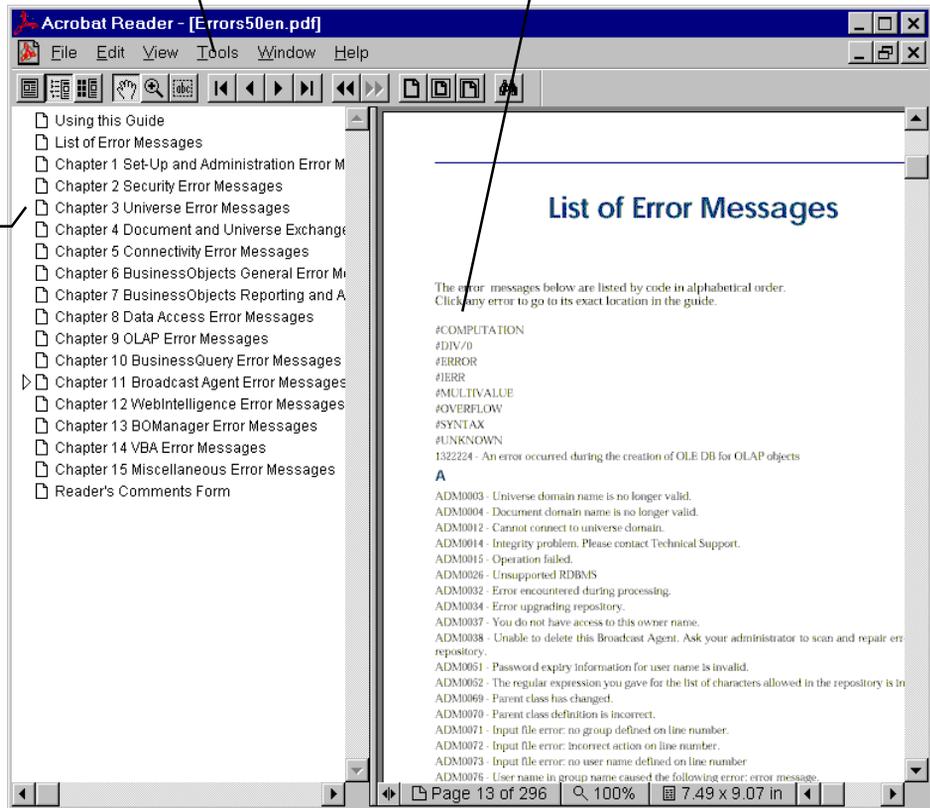
This guide provides you with detailed troubleshooting information so that you can determine the reasons for an error and take the appropriate steps to resolve it. It allows you to search for error messages by code. Each error message appears with its probable cause and the recommended course of action.

You can open this online guide from any of the BUSINESSOBJECTS products by selecting the Error Messages Explained command from the Help menu.

The Find command on the Tools menu lets you search for error messages.

Click an error message to go to its explanation in the guide.

Click the List of Error Messages bookmark to view the error messages by code.



To view the same information from INFOVIEW, you can click the Error Messages button on the interface.

## Online Help

The extensive online help system consists of step-by-step procedures and reference information for all the commands, toolbars, and options of the product.

For BUSINESSOBJECTS Windows desktop products, online help is available in the form of .hlp and .cnt files that comply with the standards of Microsoft Windows online help.

For WEBINTELLIGENCE products, the online help is available as HTML files that are accessible directly from the interface.

## What to Do for More Information

If you cannot find the information you are looking for, then we encourage you to let us know as soon as you can. Feel free to send us any requests, tips, suggestions, or comments you may have regarding this or other BUSINESSOBJECTS documentation using the Reader's Comment Form at the back of this guide.

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To find out information about Business Objects products and services, visit our web site at:

**<http://www.businessobjects.com>.**

## About this Guide

This guide describes how to use SET ANALYZER to create and manage sets that you can then use as objects in your BUSINESSOBJECTS reports.

## Audience

This guide is intended for end users, also referred to as SET ANALYZER users.

## Conventions Used in this Guide

The conventions used in this guide are described in the table below.

Convention	How Used
SMALL CAPITALS	The names of all products such as SET ANALYZER, DESIGNER, SUPERVISOR, BUSINESSOBJECTS, WEBINTELLIGENCE.
This font	The names of BUSINESSOBJECTS classes, objects and conditions.  For example, Customer, Sales, Revenue, Service, etc.
This font	Code, SQL syntax, computer programs.  For example: @Select(Country\Country Id)

# Chapter 1 Introduction

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## In this chapter

□ Overview .....	16
□ What is Set Analyzer? .....	16
□ What is a Set? .....	16
□ What are Sets? .....	18
What is a Subject?	18
What is the Current Subject?	19
What is a Source?	19
What is the Current Source?	19

## Overview

This chapter describes SET ANALYZER and sets. The chapter lists the different tasks that you (the set author) and the administrator perform that enable you to create and modify sets that you then use in your BUSINESSOBJECTS reports.

## What is Set Analyzer?

SET ANALYZER is a suite of tools that help you create sets for your data. After the administrator integrates these sets with BUSINESSOBJECTS, you can use them to create your BUSINESSOBJECTS reports.

## What is a Set?

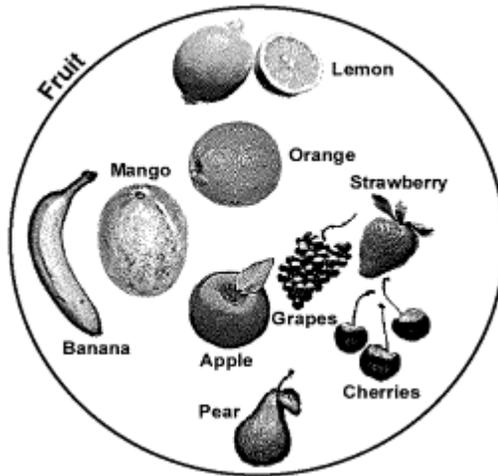
We instinctively categorize items to enable us to use them in a more efficient manner. We think in terms of collections of things, such as prime numbers, cities with over a million inhabitants, and fruit. These collections, or sets, makes our use of lists of items easier to communicate and to manage.

**Example**     **A set that contains fruit**

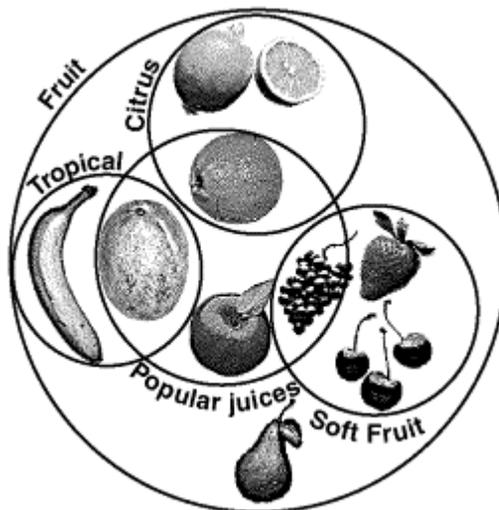
.....  
Consider a set that contains fruit. The set 'fruit' contains all fruits and may contain any number of sub categories of fruits; e.g. citrus, soft fruit, etc.

Strawberries and oranges are both in the set 'fruit' and may also be grouped in separate sub-categories or sub-sets: oranges in the sub-set 'citrus fruits' and strawberries in the sub-set 'soft fruit'.

The set 'fruit' might contain apples, oranges, cherries, bananas, strawberries, lemons, pears, and mangoes. Each of these might belong to one or more of a number of sub-sets that a user might create such as citrus fruits, soft fruits, tropical fruits, and popular juices. The following two figures show a set of fruit and a set of fruit divided into sub-sets.



*Set of fruit*



*Set of fruit with sub-sets*

The identification of sets is a useful method of categorizing items. Two sets may share items that conform to the characteristics of both sets. These sets are said to overlap. For example grapes occur in the sub-sets 'soft fruit' and 'popular juices'. Both of these sub-sets also occur wholly within the set 'fruit'.

.....

## What are Sets?

Sets are lists of data contained in tables in the main database along with your source data. Sets allow you to define complex selections and custom groupings based on any ad-hoc definition. For example, you may have a list of all your clients in a main database and source data that indicates other characteristics that are common to marketing surveys. Sets allow you to identify and target groups of these clients based on their meeting or not meeting criteria that source data allow you to specify. For instance, you might want to select all your clients living in a particular geographic area who own their own homes, are below a certain age, and have children.

Each set:

- Contains items based on a single subject.
- Is uniquely identified by its name and the author's name.
- Has a description.
- Has a last modified date.
- Is allocated to a folder.
- Contains a count of its members.
- Contains members that can record an accumulated score based on user defined weightings.
- Can be processed from many steps, each step based on a single table or view. Each view/table shares a common key across all the source of a subject.

## What is a Subject?

The subject of a set is the central theme of a set. A set can contain data for only one subject; e.g. customers, accounts, products, etc. You can define a subject *customer* that permits access to many tables and views that describe the customer entity.

## What is the Current Subject?

The current subject is the subject that you select for processing a set. Once you select a subject, you have access only to the fields that relate to the subject that you have selected. For example, if your current subject is *customer*, you have access to all the fields that relate to customer. You do not have access to the fields that relate to the subject *products*.

## What is a Source?

A source is a table within the current database that you have access to for processing your set. Each source has a unique name. When you process a set for the current subject, you can select any source from the list of available sources.

## What is the Current Source?

The current source is the table that you select from the list of available sources. Changing the current source updates the list of objects and object trees that you work with in processing your set.



# Installing and Starting Set Analyzer

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## In this chapter

□ Overview .....	22
□ System Requirements .....	22
Hardware Requirements	22
Software Requirements	22
Memory Requirements	23
Disk Space Requirements	23
□ Installing Set Analyzer .....	23
□ Starting Set Analyzer .....	26
What do You Need to Start Set Analyzer?	26
How to Start Set Analyzer	27

## Overview

This chapter presents the hardware and software requirements for installing SET ANALYZER, and shows you how to install SET ANALYZER. The chapter also describes how to start SET ANALYZER.

## System Requirements

### Hardware Requirements

To install and use SET ANALYZER, you need:

- A personal computer with a Pentium 90 processor or higher
- A hard disk
- A CD-ROM drive
- A VGA or higher-resolution monitor capable of 800 x 600 (or higher) display; 1024 x 768 recommended
- A Microsoft compatible mouse or pointing device

### Software Requirements

To install and use SET ANALYZER, you need one of the following versions of Microsoft Windows:

- Microsoft Windows 95 or 98 or 2000
- Microsoft Windows NT 4.0 (workstation or server versions, service pack 4)
- Microsoft Windows 2000 (without service pack 1)

## Memory Requirements

To install and use SET ANALYZER, you need the following RAM:

Microsoft Windows version	Minimum RAM
Windows 95, 98	32 MB
Windows NT, 2000	64 MB

## Disk Space Requirements

To install and use SET ANALYZER, you need the following disk space.

Microsoft Windows version	Minimum disk space	
	<i>with demo database</i>	<i>without demo database</i>
Windows 95, 98, NT, 2000	90 MB	35 MB

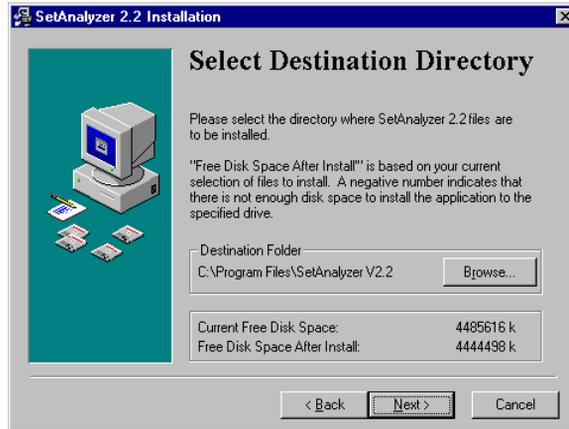
## Installing Set Analyzer

1. Restart Windows and close any programs that are running. Do not start any other applications.
2. Insert the SET ANALYZER CD-ROM into your CD-ROM drive. The SET ANALYZER installation Welcome screen appears.



3. Follow the instructions on the screen by clicking the Next button.

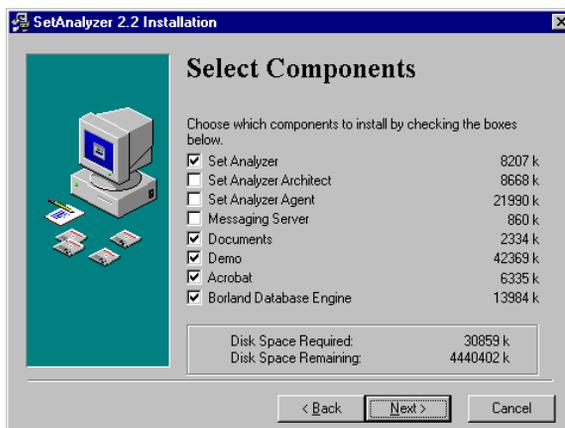
The Select Destination Directory screen appears.



4. Select the destination folder for SET ANALYZER

If you want to	Then
install SET ANALYZER in the default target drive and directory, C:\Program Files\SetAnalyzer,	click Next.
install SET ANALYZER in a different directory,	click Browse to choose a different drive or directory. After choosing the new directory, you return to the Select Destination Directory screen. Click Next.

The Select Components screen appears. The Select Components screen shows you how much disk space is required for each component.



5. Find out which components to install from the SET ANALYZER Administrator. Select the components you want to install. The following components are available.

Component	Description
SET ANALYZER	You use SET ANALYZER to process sets from metadata that the SET ANALYZER Administrator configures in the Set Repository.
SET ANALYZER Architect	SET ANALYZER Administrators use SET ANALYZER Architect to configure users for the system and to configure the metadata in the Set Repository.
SET ANALYZER Agent	SET ANALYZER Administrators use SET ANALYZER Agent to schedule updates for fast counts and for sets. <b>Note:</b> You can install this component only on Windows NT 4.0 and only if your license key allows it.
Messaging Server	The Messaging Server handles communications among all SET ANALYZER modules involved in task scheduling, which is handled by SET ANALYZER Agent.  The Messaging Server is a prerequisite for the scheduling module. If you are not installing the scheduling module, there is no need to install the Messaging Server.
Documents	PDF versions of the SET ANALYZER documents.

Component	Description
Demo	The sample database in Microsoft Access format.
Acrobat	Adobe Acrobat Reader
Borland Database Engine	Enables SET ANALYZER to connect to the database. <b>Important:</b> You must install this the first time any SET ANALYZER component is installed. SET ANALYZER requires Version 5.0 of the Borland database engine. If you have already installed Version 5.0 of the Borland database engine for other applications, you do not need to reinstall it.

A typical SET ANALYZER user installs the following components:

- SET ANALYZER user module
- Documents
- Sample database
- Borland Database Engine

After you select components, click the Next button.

6. Click the Next button to continue with the installation. Follow the on-screen instructions.

When the installation is complete, a message appears indicating that the process has been successful.

## Starting Set Analyzer

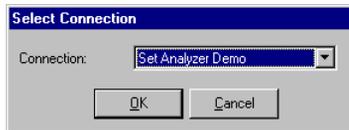
### What do You Need to Start Set Analyzer?

In order to start and use SET ANALYZER, the Database Administrator (DBA) must create the following for you:

- A valid connection to a database
- An allocated user name and password for SET ANALYZER.

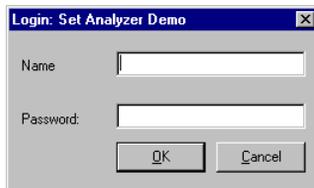
## How to Start Set Analyzer

1. Double-click the SET ANALYZER icon on your desktop or on the Windows Start menu.
2. If the Select Connection dialog box appears on your screen, select the database you will use to process sets, click OK, then go to Step 3.



*The Select Connection dialog box*

3. In the Login box, enter your user name and password, then click OK.



*The Login dialog box*

---

**Note:** The DBA needs to configure a default connection for you in order for you to run SET ANALYZER. The connection settings are configured by the DBA on installation and should not be changed by the user. Otherwise, SET ANALYZER may not run properly.

You can connect with other databases when starting SET ANALYZER from the Select Connection dialog box. In order for the Select Connection dialog box to appear on your screen, the DBA must enable the *Allow choice on connection* option in SET ANALYZER Connect.

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# The Set Analyzer Environment

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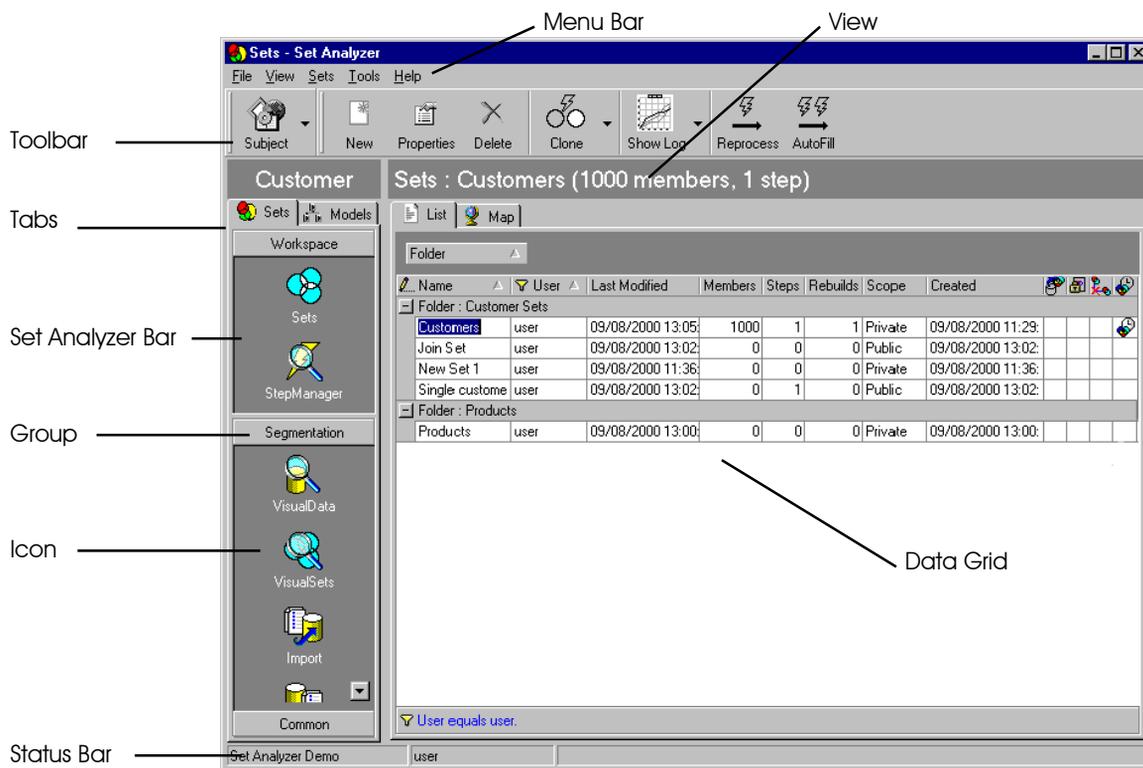
## In this chapter

□ Overview .....	31
□ Sets View .....	32
List Tab	32
Map Tab	34
□ StepManager View .....	36
Data Grids	37
Buttons	38
List of Steps	39
□ VisualData View .....	40
Buttons	41
Source List	42
Object Trees	42
Detail Windows	43
Objects List	44
□ VisualSets View .....	44
Buttons	45
Set Selector	46
Collections	47
Universe Area	47
□ Refine View .....	47
Data Grid	48
Buttons for Deleting Members	49
Buttons for Comparing Sets	49
Overview Window	50

□	<b>Event Analysis</b> .....	<b>52</b>
	Buttons	53
	Analysis Details	54
	Window	54
	Event Activity	55
□	<b>Functions Menus</b> .....	<b>56</b>
□	<b>User Options</b> .....	<b>58</b>

# Overview

This chapter describes the SET ANALYZER environment. You use the different views and the functions menu in SET ANALYZER to create sets.



For information on how to use SET ANALYZER to create sets, refer to Chapters 4 and 5.

## Sets View

You can perform the following functions from Sets view:

- View a list of existing sets
- Delete a set
- Name and describe sets
- Define the current set
- Create a new set and clone existing sets
- Define set scope
- Access and create models
- View and process models

To display the Sets view, click on the Sets icon in the Workspace Group in the SET ANALYZER Bar. The Sets view has two tabs: List and Map.

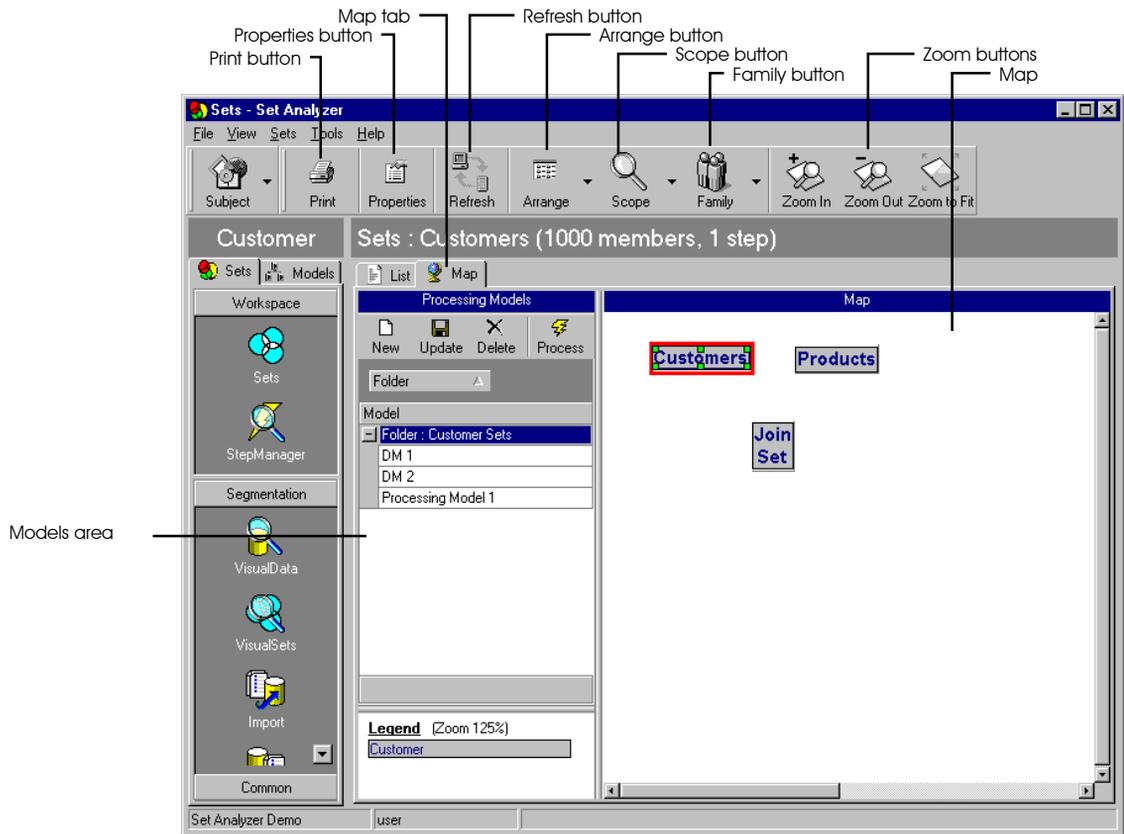
### List Tab

Component	Description
	Allows you to choose the current subject.
 New button	Displays the Set Details dialog box, ready for you to enter the new set details.
 Properties button	Displays the Set Details dialog box, allowing you to edit a set's properties.
 Delete button	Deletes the currently selected set, after confirmation.
 Clone button	Copies all the steps from a selected set into a new set and optionally also copies the members of the original set. Refer to "Cloning Sets" in Chapter 5.

Component	Description
 Show Log button	Shows the Processing Log for the selected set, in either text or graphical format. This shows the details of all the times the set has been processed in the past.
 Reprocess button	Reprocesses a set that has been processed and is not frozen.
 AutoFill button	Used to process a set from a selected base date to a specific date or x periods from the base date. The AutoFill button is enabled only if the set is dynamic and if the AutoFill option is enabled in the set's properties.
Filter bar	Allows you to apply a filter to any column in the set list.
 Sort arrows	Allow you to display the items in any column in ascending (up arrow) or descending (down arrow) order.
Data grid	Shows information for all sets created for the current subject. All columns in the grid can be ordered, filtered, and searched to provide access to information in the table.
 External set	A set that is managed outside of SET ANALYZER. You cannot add any actions for the set, but you can create joins and transformations to derive other sets.
 Frozen set	Specifies that the set cannot be changed or reprocessed, either by the set owner or by anybody else. The only way to change or reprocess the set is to uncheck this field. This flag is useful when creating a snapshot set that must not be reprocessed, e.g. a specific mailing campaign.
 Terminal set	A set that cannot have children (via a join or transformation) and no one else can use the set.
 Dynamic set	A set that contains information about set members who join the set, leave it, stay in it, or simply visit the set, during specified calendar periods. You can see this history in the Build History tab in the Set Details window. By contrast, sets that do not contain this information are called "snapshot sets".

Component	Description
 User Group bar	Allows you to group sets in the sets list by one of the columns.
 Set is incomplete	Processing of the selected set has not been finished.

## Map Tab



Component	Description
 Print button	Displays the Print Diagram window, so that you can specify print details and print the map.
 Properties button	Displays the Set Details box, which shows the details for the selected set in the map.
 Refresh button	Refreshed all the set information.
 Arrange button	Provides options for controlling how sets are displayed in the Map area. Compact displays the network in compact format, Layout Up to display children below parents, Layout Down to display children above parents.
 Scope button	Allows you to control which sets are displayed in the map area – current sets, all sets, or all your own sets.
 Family button	Allows you to choose whether children, parents or both are displayed.
 Zoom buttons	Allows you to set the zoom level in the map area to control the display the sets.
Models area	List existing models in a data grid. Also lets you create a new Processing Model.
Map area	Displays sets.

## StepManager View

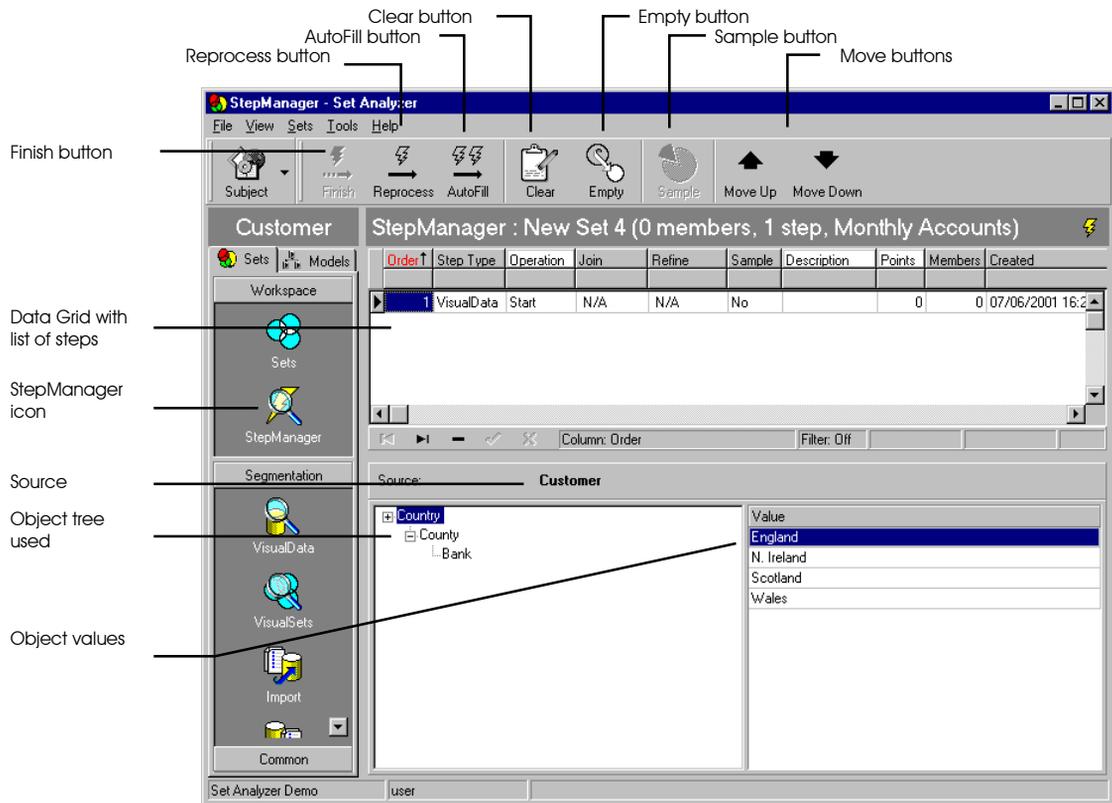
Sets are fixed snapshots of the data at the moment in time when the set is created. If the data in the database subsequently changes, the set remains as it is. So for example, if last week you created a set of all customers who are male and single, and this week some of the single men marry and some new single men are added to the database, then they will not be included in your set by default.

On demand, or using a scheduler, you can reprocess the set to contain the list of keys of people that now meet your question (single males). To analysts, it is often more important to maintain a snapshot or fixed record of the people who matched at a moment in time.

Often it is useful to maintain a snapshot of the data. For instance, when running a marketing campaign, a user might create a set of customers in the south east region in order to generate a mailing list. When the user comes to analyze the campaign, she wants to analyze all customers who were in the original mailing list and not all customers who are living in the south east at the time of the analysis. In this case, it is important that the set is not updated if the underlying data changes.

However, there are also occasions when it is important that the set does reflect the current data. For example, if a user is doing weekly analysis of total sales of all beverages, then the set needs to be updated. Each week, the set should include any new products that have been added since the set was last refreshed.

StepManager allows the user to view and edit the steps that have been taken to process the set and to reprocess the set based on the most up to date data in the database. You display the StepManager view by clicking the StepManager icon in the Workspace Group in the SET ANALYZER Bar. Each component is described in the sections below.



## Data Grids

The StepManager view is divided into data grids. The upper grid contains a summary of each step taken to process the set and the lower grid contains the detailed selections taken for each step of the process. You select the step in the upper grid and the relevant details are shown in the lower grid.

## Buttons

The following table describes each of the buttons in the StepManager view.

Button	Description
 Finish button	Executes all the process steps, starting from the first incomplete step. Use this if the step process has been deferred (Process Later) at process time.
 Reprocess button	Executes all the steps described in the window. This is equivalent to the user manually performing all the steps described in the creation of the set.
 AutoFill button	Used to process a set from a selected base date to a specific date or x periods from the base date. The AutoFill button is enabled only if the set is dynamic and if the AutoFill option is enabled in the set's properties.
 Clear button	Clears the set of all actions and members, leaving just the set name remaining.
 Empty button	Empties all the members from a set, leaving all the steps behind. This is a useful option when storage space is at a premium. You can reprocess the set, although you will get the current data, not the original "snapshot."
 Sample button	Allows you to see the type of sample that was used. When no sample was used, the button is grayed.
 Move buttons	Allow you to move the selected step up or down to change the step order.

## List of Steps

The following table describes the information displayed for each step.

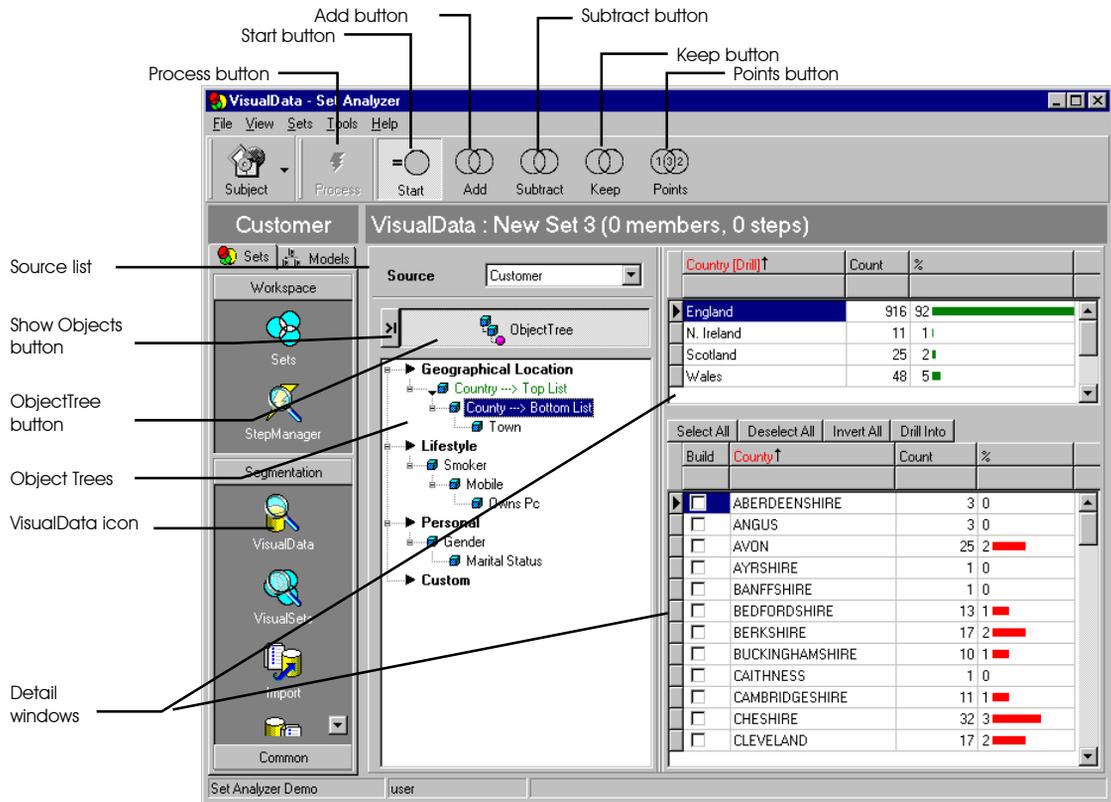
Column	Description
Order	The order in which the step was taken while processing the set. You can change this by highlighting the relevant row and clicking on the Move buttons.
Step Type	The step type that was chosen for each step. This corresponds to whether the step used the VisualData view, an import, etc.
Operation	The operation can be a start, add, subtract, etc., depending on the options selected when processing the set.
Join	If the step used the VisualSets view, this field states whether the sets were joined as an intersection or a union.
Refine	If the step used the Refine view, this field states whether the refine was a Delete Single, a Delete Visible, or a Delete Hidden.
Sample	Specifies whether the action was created using a sample.
Description	When processing the set, it is possible to enter a description of the step. You can edit this field in the StepManager view.
Points	The points that were allocated when processing the set are displayed. You can edit this field in the StepManager view.
Members	A running total of the number of members in the set at the end of each step.
Created	The date and time that the step was originally executed.
Build Start	The date and time that step was last processed.
Minutes	The number of minutes the step took to create.

## VisualData View

A new set is empty. An empty set needs to have members added to it before it can be used. You fill the set in the VisualData view. You can perform the following functions from the VisualData view:

- Navigate through the database using the predefined object trees to locate the categories of data required to fill the current set.
- Create your own object trees for data navigation.
- View the contents of the database categories in the detail windows on the right of the view. These detail windows provide information about the content of the categories and how they relate to other categories.
- View the components of a category by moving it to the top detail window. When you move a category to the top window, its sub-categories appear in the lower window. You move a category to the upper window by double-clicking it in the lower window.
- View the relationship between the upper and lower window categories as indicated in the Object Tree.
- View the number of members currently in the set, shown in the application View Bar.

You display the VisualData view by clicking the VisualData icon in the Workspace Group in the SET ANALYZER Bar. Each component is described in the sections below.



## Buttons

The following table describes each button in the VisualData view toolbar.

Button	Description
 Process button	Processes the set you have defined from the selected object tree.
 Start button	Removes all set members from the current set and replaces them with the selected members.

Button	Description
 Add button	Adds the selected members to the set.
 Subtract button	Subtracts the selected members from the set.
 Keep button	Performs an intersection between the set and the selected members. Removes those members from the set that do not exist in your selected members.
 Points button	Updates the points value held against each member in the set. Only members that exist in the set are updated.
 Object Trees button  Objects button	If the Object Trees button is selected, you can browse categories in the object trees. If the Objects button is selected, you can browse the objects in the objects list.
 Show/Hide Objects button	Displays/hides the Objects list and Objects button.

## Source List

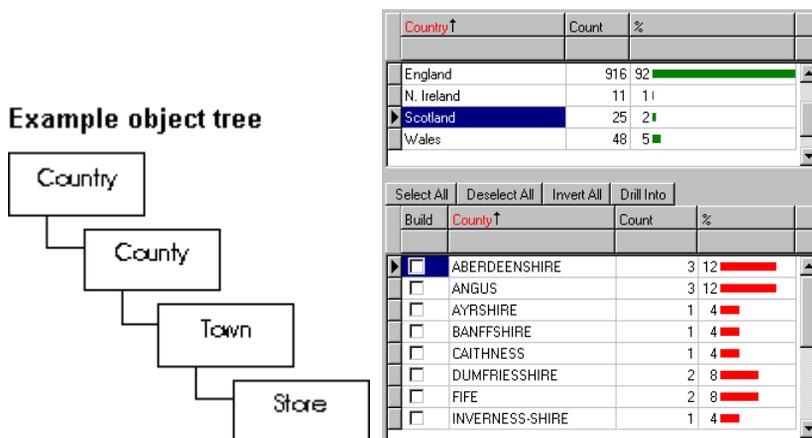
The source list includes all the sources in the database available for the current subject. The default hierarchical structure of database objects is displayed in the Object Trees.

## Object Trees

The objects in the Object Trees indicate the default relationships in the source database. The Database Administrator defines these relationships.

When you click on an object in an object tree, the distinct values of the object appear in the lower of the two detail windows on the right of the view. If you double-click a segment in the bottom detail window, all the segments move to the top detail window and their sub-segments are shown in the bottom window.

The following figure uses a sample Geography object tree. The user selected the country Scotland from the bottom detail window and double-clicked it. The country segments moved to the top window and their sub-segments are displayed in the bottom window.



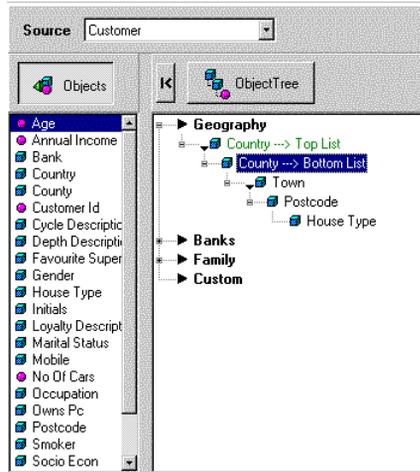
Scotland represents the Country level in the example object tree. With countries in the bottom window, if the user double-clicks on Scotland, the Country level moves to the top window and the sub-segment members – the County level – are displayed in the bottom window.

## Detail Windows

The Detail windows display the component categories of the database. The top window contains the parent segment and the bottom window contains the sub-segments of the selected segment in the top window. Both windows indicate how many members each segment contains and what percentage they represent of the total members in the parent segment.

## Objects List

When you click the Show Objects button, , the Objects list is displayed.



You can display the values associated with an object in the Objects list, without using the Object Trees:

1. Click on the Objects button above the Objects list.
2. Select an object ( denotes a dimension object,  denotes a measure object).

The object's values are displayed in the lower Detail window.

**Tip:** To return to browsing in the object trees, remember to select the Object Trees button.

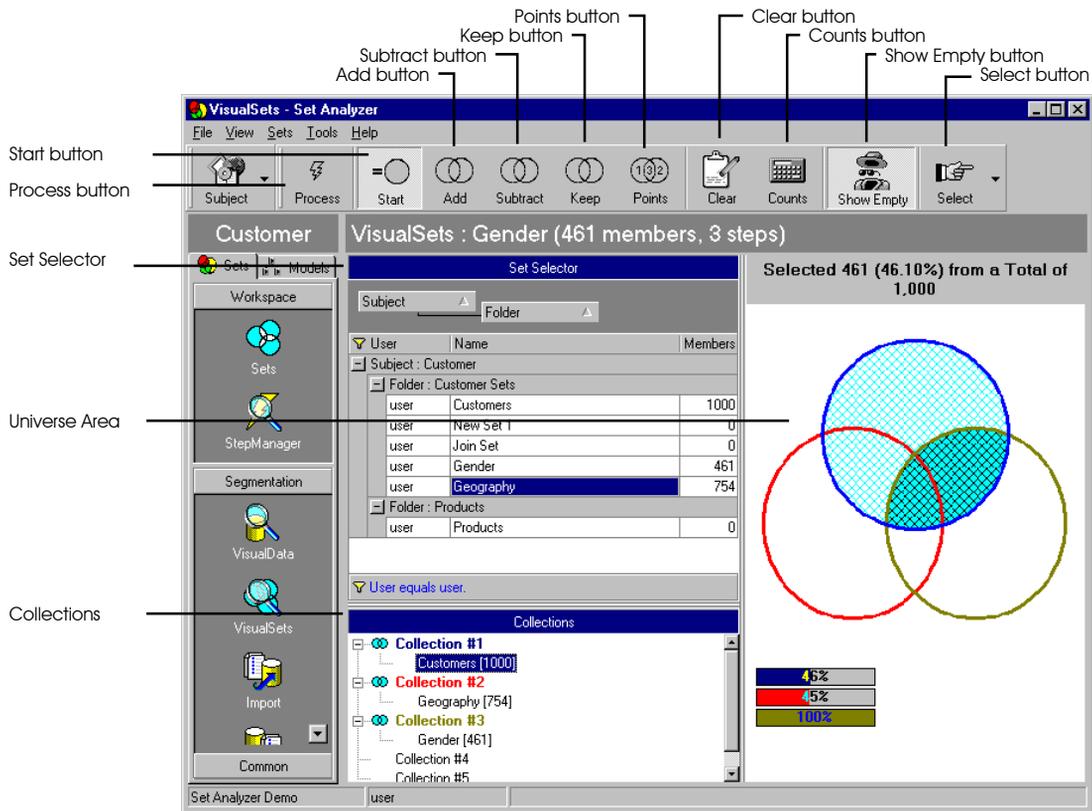
## VisualSets View

Once you have created a set, you can add or remove members to or from it using the database navigation facilities of the VisualData view. You can also add or remove members to and from a current set from a previously created set. You can perform the following functions from the VisualSets view:

- Construct sets that contain members that several sets have in common.
- Perform set mathematics on any combination of sets.

- Manage complex exclusions based on existing sets.

You display the VisualSets view by clicking the VisualSets icon in the Workspace Group in the SET ANALYZER Bar. Each component is described in the sections below.



## Buttons

The following table describes each button in the VisualSets view toolbar.

Button	Description
 <p>Process button</p>	Combines the sets you have selected in the Universe area.

Button	Description
 Start button	Replaces the current set with the selected members of the sets in the universe.
 Add button	Adds the selected members in the sets in the universe to the current set.
 Subtract button	Subtracts the selected members in the sets in the universe from the current set.
 Keep button	Keeps the intersection of the current set and the selected member in the sets in the universe.
 Points button	Updates the points for the selected members in the sets in the universe.
 Clear button	Resets the universe so that it is empty.
 Counts button	Calculates the number of members (and percentage) currently selected from the available sets in the universe.
 Show Empty button	Shows the empty segments in the diagram colored white. Otherwise empty segments are colored gray.
 Select button	Allows you to make various selections in the universe.

## Set Selector

The Set Selector grid shows you all the subjects and sets available. The number of members in each set is shown and the names should indicate what the set contains.

## Collections

The Collections list shows you the sets that have been selected for inclusion in the VisualSets operation. You can combine sets for inclusion in the universe by dropping them in the same collection. By dropping sets in separate collections, they are displayed individually in the graphical universe area. The color of each collection matches the color of the set in the universe. You add a set to a collection by dragging and dropping it from the Set Selector list. You can rename the collections by right-clicking on the collection and choosing the Rename option.

## Universe Area

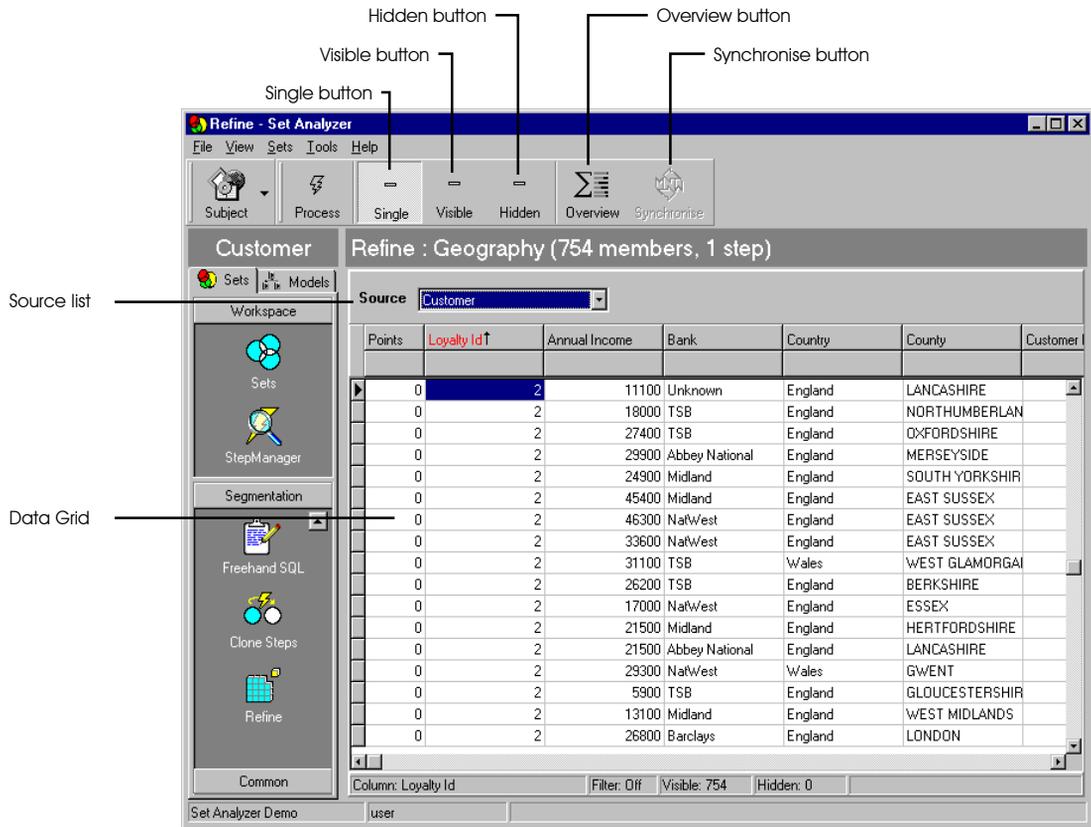
Displays graphically all the sets selected for inclusion. To include members in a set or intersection, click the area. A selected area is shown crosshatched. Click the area again to exclude it. You can use the Select All and Select None buttons to quickly select all or none of the set members in the universe.

## Refine View

The Refine view contains operations that you use in the final stage of set creation. You browse and fine-tune the contents of the current set from the Refine view. You can perform the following functions from the Refine view:

- Browse the contents of the current set.
- Remove members from the current set using filter criteria.
- Summarize the contents of the set in relation to the whole source table.
- Summarize the contents of the set in relation to another chosen set.
- Summarize the contents of the set in relation to itself.

You display the Refine view by clicking the Refine icon in the Workspace Group in the SET ANALYZER Bar. Each component is described in the sections below.



## Data Grid

The data grid lists all the members in the current set. Each member is represented as a row with its attributes in columns. These attributes are the various segments to which each item belongs and some correspond to levels that appear in the object trees. It is important to remember that a set is stored simply as a list of ID or key fields (e.g. customer\_id). The view here is created from joining the set to the main source database – not all the information you see here is stored in the set.

## Buttons for Deleting Members

The following table describes the buttons in the Refine view toolbar that you use to delete members from a set.

Button	Description
 Process button	Processes the deletion of the members you have selected with the Single, Visible, or Hidden buttons from the current set.
 Single button	After you select a member by clicking in a column to highlight it, you delete the single member by clicking the Single button, then the Delete button.
 Visible button	Filters make some members visible while hiding others. To delete all the visible members (those that correspond to the filter expression), click the Visible button, then the Delete button.
 Hidden button	Filters make some members visible while hiding others. To delete all the hidden members (those that <i>do not</i> correspond to the filter expression), click the Hidden button, then the Delete button.

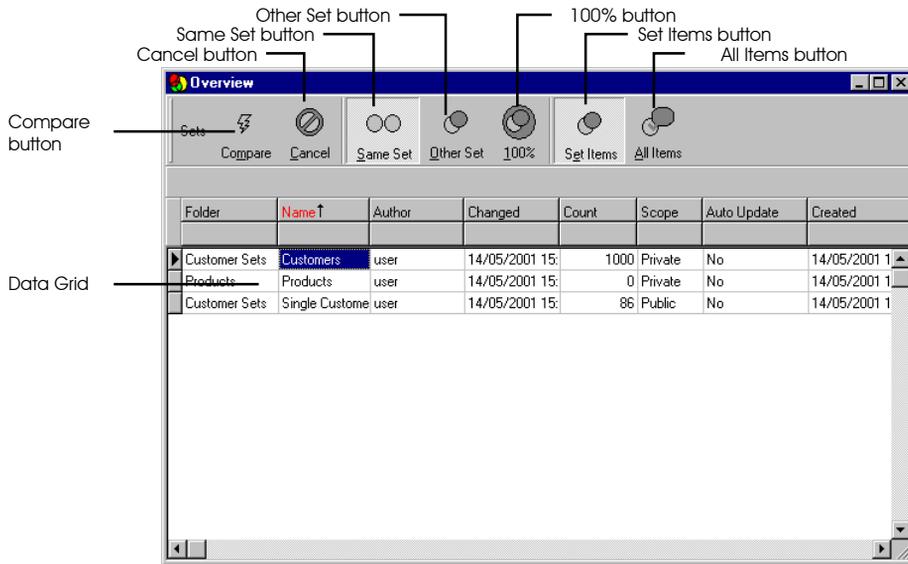
## Buttons for Comparing Sets

The following table describes the buttons in the Refine view toolbar that you use to compare a set to itself and to other sets.

Button	Description
 Overview button	Displays the Overview window, which you use to compare a set to itself.
 Synchronise button	Synchronizes the list of members in the set with the values in the Overview window. The Synchronise button is enabled when the Overview window is active.

## Overview Window

You compare a set to itself, to another set, or to the entire population, in the Overview window.



### Data Grid

The data grid lists the values of the currently chosen column in the Refine view. The list contains only the unique values. For the values in the list, the overview indicates:

- How many members in the current set belong to each value.
- How many members in the total database correspond to each value.
- The relative proportions these represent.

Differently colored horizontal bars indicate the relative proportions of the segment in the set and the database as a whole. The colors correspond to the following relation between values, sets, and tables.

Color	Corresponds to
Red	Indicates the values in the current set
Blue	Indicates the values in a comparison set
Green	Represents the values in an entire table

If a column in the list of members contained in the current set contains five different values for the items listed, then there will be five rows in the Overview window, one row for each value. Each row will show the number of members in the set corresponding to this segment, relative to how many members in the total database correspond to this segment.

## Buttons

The following table describes the buttons in the Overview window toolbar.

Button	Description
 Compare button	Executes the actions you selected with the other buttons on the toolbar.
 Cancel button	Cancels the selection.
 Same Set button	Compares the current set with itself .
 Other Set button	Compares the current set with a set that you highlight in the selection screen.
 100% button	Compares the current set with the entire table.
 Set Items button	Compares the contents of the current set with contents of the selected set, but only for members present in the source set.

Button	Description
 All Items button	Compares the contents of the current set with all of the contents of another set.

### Further information

For further information about comparing sets, refer to Chapter 4, "Getting Started with Set Creation."

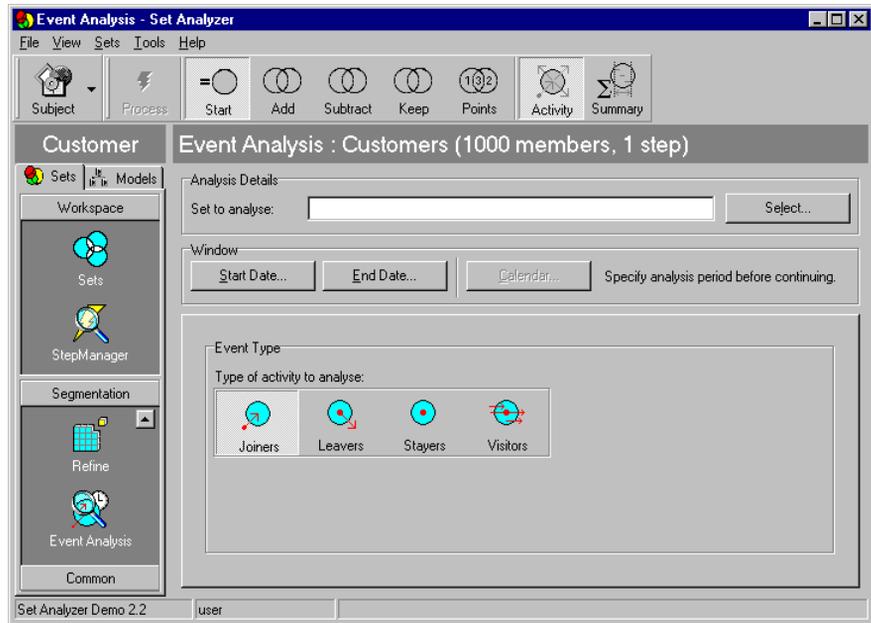
## Event Analysis

The Event Analysis view allows you to analyze dynamic sets.

To display the Event Analysis view:

1. Click on the Segmentation group.
2. Click the Event Analysis icon.

The Event Analysis view appears.



## Buttons

The following table describes each button in the Event Analysis view toolbar.

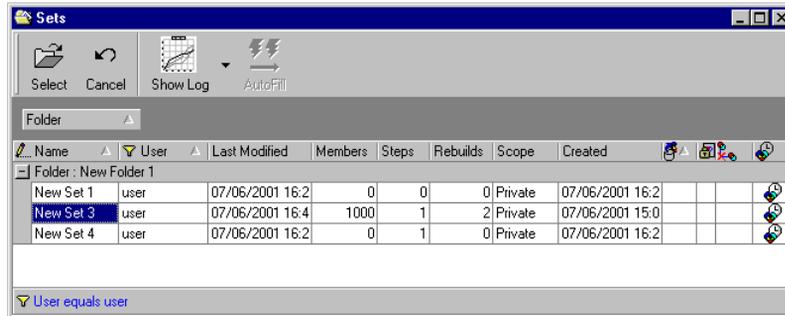
Button	Description
 Process button	Processes the selected set.
 Start button	Replaces the current set with the members of this action.
 Add button	Adds the members of this action to the current set.
 Subtract button	Subtracts the members of this action from the current set.

Button	Description
 Keep button	Replaces the current set with the intersection of the set and the members of this action.
 Points button	Updates the points for the members of this action in the selected set.
 Activity button	Create an action based on activity within the analysis period.
 Summary button	Create an action based on the summary of activity within the analysis period.

## Analysis Details

In the Analysis Details area, you select the set and period dates you want to use for the action.

You use the Select button to display all available dynamic sets and select one.



## Window

You now specify the analysis period. You can simply specify start and end dates, or you can use the calendar associated with the set to specify the analysis period.

## Event Activity

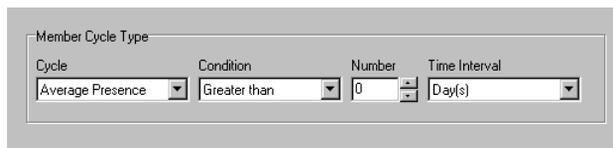
The event activity depends upon whether you have selected the Activity or Summary button.

When you click on the Activity button, you can choose an Activity type to analyze.



Button	Description
 Joiners button	Analyzes the selected set for people who joined the set in the analysis period.
 Leavers button	Analyzes the selected set for people who left the set in the analysis period.
 Stayers button	Analyzes the selected set for people who were always present within the set in the analysis period.
 Visitors button	Analyzes the selected set for people who were at one time or another in the set in the analysis period.

When you click on the Summary button, you can construct a summary action for the analysis.

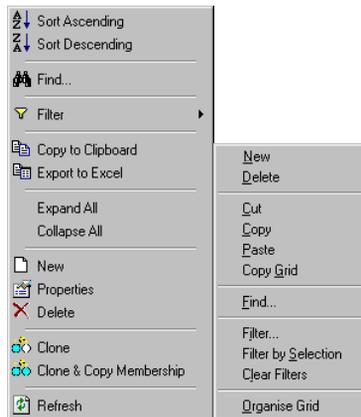


Placeholder	Description
Cycle	Allows you to select members based on their type of presence with respect to the calendar periods.
Condition	Allows you to set a condition for inclusion.

Number	Allows you to set the number of periods over which to perform the selection.
Time Interval	Allows you to select the time periods to use.

## Functions Menus

You can access the Function menu by right-clicking anywhere in the data grid. The menu displayed depends on the view you are in.



The following table describes each Functions menu command.

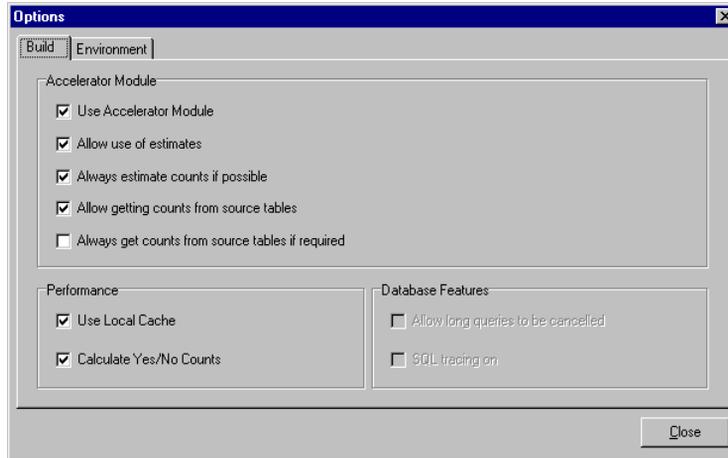
Command	Description
Sort Ascending	Sorts the entries in the Data Grid in ascending order, based on the contents of the selected column.
Sort Descending	Sorts the entries in the Data Grid in descending order, based on the contents of the selected column.
Find	Displays a Find dialog box, allowing you to find an item in the grid.
Copy to Clipboard	Copies the contents of the grid to the clipboard.
Export to Excel	Allows you to specify a filename of a new Excel Spreadsheet to which the contents of the grid will be exported.

Command	Description
Expand All	Opens all folders in the data grid.
Collapse All	Collapses the data grid to show only folders.
New	Creates a new entry.
Properties	Displays the Set Details dialog box, showing the selected set's properties.
Delete	Deletes an existing entry.
Clone	Copies all the steps from a selected set into a new set.
Clone & Copy Membership	Copies all the steps from a selected set into a new set and also copies the members of the original set.
Refresh	Refreshes the selected option. <b>Tip:</b> This is not the same as pressing F5 which refreshes all data from the repository.
New	Creates a new entry.
Cut	Standard clipboard cut.
Copy	Standard clipboard copy.
Paste	Standard clipboard paste.
Copy Grid	Copies the contents of the entire grid to the clipboard.
Find	Displays a Find dialog box, allowing you to find an item in the grid.
Filter	Displays either the Text Filter, Number Filter, or Date Filter dialog box depending on whether you have selected a column containing text, numbers, or dates. You set a filter from either of these dialog boxes.
Filter by Selection	Applies a filter to a given column based on the value you are highlighting in the current row and column.
Clear Filters	Clears the filters for all columns in the grid.
Organise Grid	Provides the facility to reorganize the column orders by displaying one row per column in a customized form and allowing you to drag rows up and down within the list.

## User Options

You can view the limits currently applied to your user account and optionally select certain user options from the Options dialog box. To display the Options dialog box, select Options from the Tools menu.

The Options dialog box has two tabs.

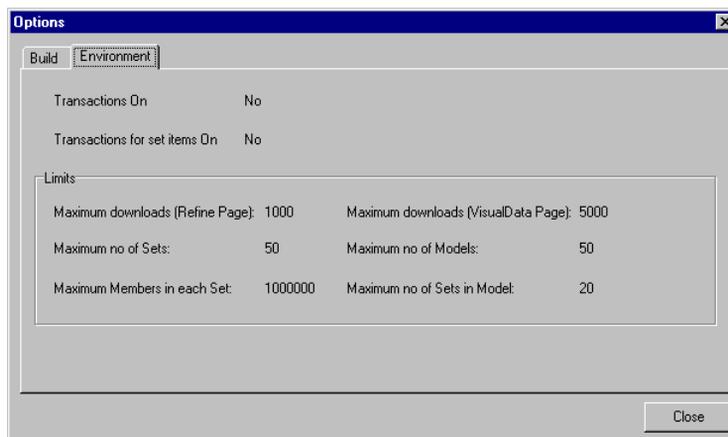


From the Build tab, you can:

Use	To
Use Accelerator Module	display a warning message when you choose an object in the VisualData view, if there is no fast count associated with it.
Allow use of estimates	allow SET ANALYZER to use estimates when you drill down an Object Tree.
Always estimate counts if possible	make SET ANALYZER use estimates rather than getting counts from source tables. (Probably not as accurate as getting counts from the source tables, but can be much quicker.)
Allow getting counts from source tables	allow SET ANALYZER to get counts from source tables when you drill down an Object Tree.

Use	To
Always get counts from source tables if required	make SET ANALYZER get counts from source tables rather than using estimates. (Accurate, but possibly slower than using estimates.)
Use Local Cache	alter performance by using a local cache or doing yes/no counts.
Calculate Yes/No Counts	alter performance by doing yes/no counts.
Allow long queries to be cancelled	for some database platforms, you can allow long queries to be canceled.
SQL tracing on	for some database platforms, SQL tracing can be switched on.

The Environment tab allows you to view the limits currently applied to your user account.





# Getting Started with Set Creation

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## In this chapter

□ Overview .....	62
□ Processing Sets .....	62
Choosing a Subject	62
Creating a New Set	63
Starting a Set	68
Confirm Step Details	71
Removing Members from a Set	72
□ Working with Existing Sets in Sets View .....	74
Editing the Data Grid	74
Combining Sets	79
Updating Sets	81
Comparing Sets	84
Deleting Sets	86
Defining Set Scope	87

## Overview

This chapter shows you how to use SET ANALYZER to process a set. It outlines the process and tells you what to do at each stage.

The chapter describes how to work with existing sets.

## Processing Sets

The following table describes the steps involved in processing sets.

Step	Description
Step 1	Choose a subject.
Step 2	Create a new set
Step 3	Populate the set.
Step 4	Remove entries from the set (if required).

## Choosing a Subject

To choose a subject:

1. Click on the Subject dropdown in the Toolbar.



2. Select a subject from the list.

The subject becomes the current subject for all successive set operations. The current subject is the central theme of the set. A set contains data for only one subject; e.g. customers, accounts, or products.

## Creating a New Set

You create a new set in the Sets view. When you create the new set, you name it, allocate it to a folder, and specify its scope. A newly created set is empty.

To create a set:

1. Click on the Workspace group and click on the Sets icon.

The Sets view is displayed.

2. Click the New button in the Toolbar.

The Set Details dialog box is displayed.

The screenshot shows a dialog box titled "Set Details [New Set 1]". It has a toolbar with "Save & Close", "Save", "Undo", and "Dependencies" buttons. The "Details" tab is active. The form contains the following fields and options:

- Name:** Text box containing "New Set 1".
- Folder:** Text box containing "Customer Sets" with a browse button.
- Scope:** Dropdown menu set to "Private".
- Type:** Dropdown menu set to "Snapshot".
- External:**
- Terminal:**
- Frozen:**
- Notes:** Text area with a scroll bar.
- User:** Text box containing "user".
- Members:** Text box containing "0".
- Steps:** Text box containing "0".
- Created:** Text box containing "07/06/2001 15:57:14".
- Last modified:** Text box containing "07/06/2001 15:57:14".

3. On the Details tab, type a name in the Name box.

Each set must have a name that identifies it for later operations. The name you choose should be unique to you within the host folder. If you want to use duplicate names for sets, you must allocate the sets to different folders.

4. Either accept the default folder, or click on the  (Folder) button, select an existing folder or create a new one.

Each set belongs to a folder, which enables sets to be shared among user groups (by giving them Read Only or Read/Write access) or kept private to the user who created it. (Refer to Chapter 8 "Private and Public Sets and Folders" for more information.)

5. Choose the scope for the set. The scope may be Private or Public, which allows you either to share the set with other users or keep it private. When you create a set and allocate it to a public folder, its scope is defined to be public. When you create a set and allocate it to a private folder, its scope is defined to be private. (Refer to Chapter 8 "Private and Public Sets and Folders" for more information.)
6. If your installation has been set up to use Calendars, you can choose the time of set you want to create – snapshot or dynamic.  
  
If you choose Dynamic, the Dynamic Profile tab is displayed. This tab is described in step 11 below.
7. The External check box specifies that this set has been created by an external action. This is used if SET ANALYZER is being used as a storage mechanism by other applications. The other application can create a set and store it within the SET ANALYZER repository. An external set can only be created and reprocessed from the other application, but can be used as a starting point for any other set.
8. The Terminal check box specifies that the set cannot be used as the starting point for any other set. So it is not possible to use this set within the VisualSets view.
9. Frozen – This specifies that the set cannot be changed or reprocessed, either by the set owner or by anybody else. The only way to change or reprocess the set is to uncheck this field. This flag is useful when creating a snapshot set that must not be reprocessed, e.g. a specific mailing campaign.
10. Add any descriptive notes about the set.
11. If you are creating a Dynamic set, click the Dynamic Profile tab.

12. Choose appropriate options for your set.

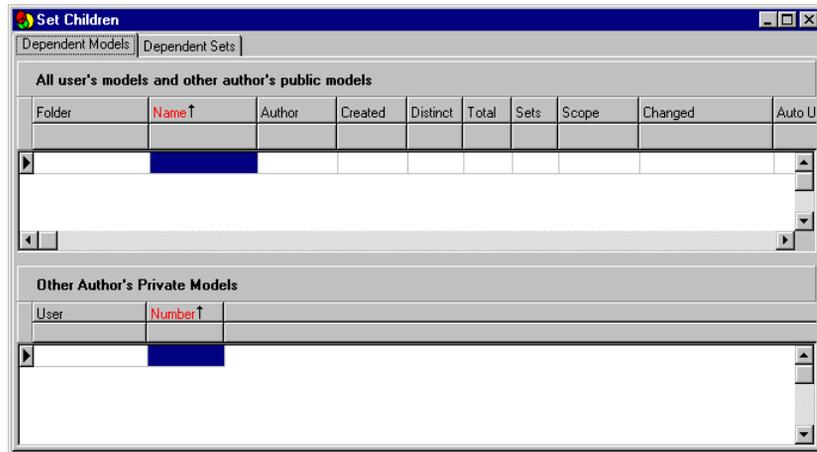
Box	Purpose
Calendar	Choose a calendar for the set if you want to ensure that the set is built/rebuilt according to the periods in the calendar.
Period Grain	The default period associated with this calendar.
Stored History	Choose All or Custom if you want to keep historical data about episodes of membership in the set, including their start and end dates. If you choose to keep historical information, the set becomes a <b>dynamic set</b> . This means, for example, that you can create other sets based on if and when someone was a member of the dynamic set. You can use the Event Analysis function to perform analyses about joiners, leavers, stayers, and visitors in dynamic sets (see the section "Event Analysis").

Box	Purpose
<Period> Retained	If you choose Custom in Stored History, select the number of calendar periods to retain Leavers in the set. This determines for how long after a membership episode has ended that SET ANALYZER keeps the record. If Stored History has been set to All, then such records are kept indefinitely.
Allow adding steps if stored history exists	The default is unselected as you would not normally want to do this with a dynamic set. Changing a set's definition after it has been rebuilt a few times can make its history difficult to interpret.
Allow multiple processing in current period	The default is to prevent multiple processing in the current period as you would not normally want to rebuild the set twice in the same period. This does not apply if you are not using a calendar.
Allow Auto-fill	For new sets, the period associated with the first build is called the <i>base period</i> . For subsequent builds, the most recently ended period is associated with the set. However, if you check Allow Auto-fill, the associated period comes <i>after</i> the period for the most recent build. Thereafter, each build increments the active period for that set. If the set is dynamic and Allow Auto-fill is checked, the AutoFill button in Sets view is enabled.
Stop at current period	Selecting Stop at current period causes normal behavior to be adopted once the auto increment rebuild period is equal to the current period.
Start processing on	If you use a calendar, this date will be used as the Period Start Date for the first rebuild.
Reprocess count	The number of times the set has been reprocessed.

13. You can check whether the set has any dependent sets, by clicking the Dependencies button in the toolbar.

The Set Children window is displayed, showing a list of all sets that are dependent on the current set. This shows you whether changes to the current set have any effect on any other sets.

Your user information, creation, and last changed date are entered automatically.



14. Click the  button to close the Set Children window.
15. Click Save & Close.

The new set is displayed in the Sets view. The name of the set is displayed in the view title bar. As it is a new set, it contains 0 steps and 0 members.

---

**Tip:** If you created a calendar based set, the  symbol is displayed in the data grid, indicating that this is a **dynamic set**. If you did *not* create a calendar based set, the  symbol is *not* displayed in the data grid, indicating that this is a **snapshot set**. If the Allow Auto-fill option was checked, the AutoFill button in Sets view is enabled.

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If you're not happy with the set details, you can click the Properties button to change them.

## Starting a Set

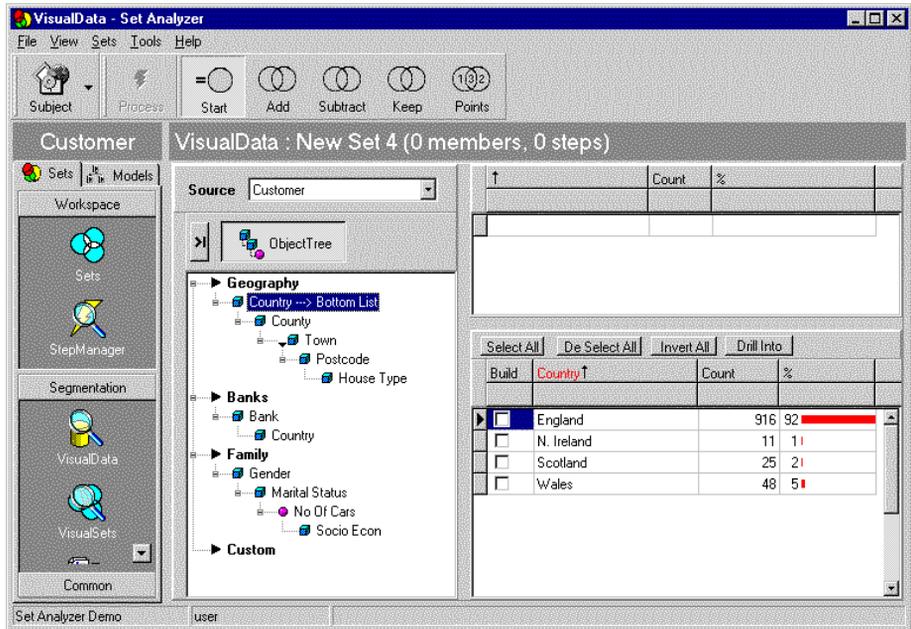
Once you have created and saved a set, you can add members to it in the SET ANALYZER VisualData view. The VisualData view Object Tree contains a directory tree-like listing showing segments for members in the database that you can drill down on.

The SET ANALYZER Administrator creates these default object trees in SET ANALYZER Architect.

You can add members individually or in groups by choosing a higher segment level in the object tree.

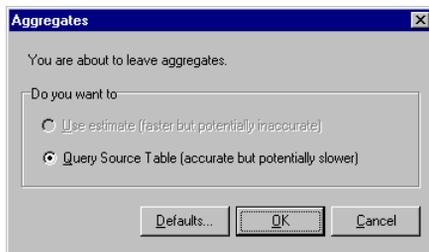
1. In the Object Tree window, click on the top level of the object tree to which you want to add objects.

A list of subcategories appears in the bottom detail window.



2. Select a subcategory to drill down the object tree.

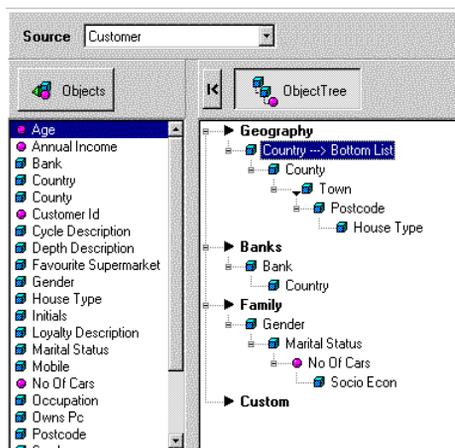
If the subcategory you select does not have a fast count associated with it, the Fast Counts dialog box is displayed. (The SET ANALYZER Administrator creates fast counts on some subcategories to speed up your process of selecting set members.)



Choose whether you want to use an estimate (probably quicker, but not necessarily as accurate) or query a source table (accurate but probably slower) and click OK.

**Tip:** You can change the defaults for this dialog box by clicking the Defaults button.

3. If the hierarchy doesn't have the categories you want, you can click on the  button to open the Objects list (or drag the side bar to the left of the Object Tree to the right).



4. Select the object that you want to add to an object tree and drag it to the desired place in the object tree.

For example, if you want to see Marital Status by Country, you drop Marital Status on top of County in the object tree. The Target dialog box appears.

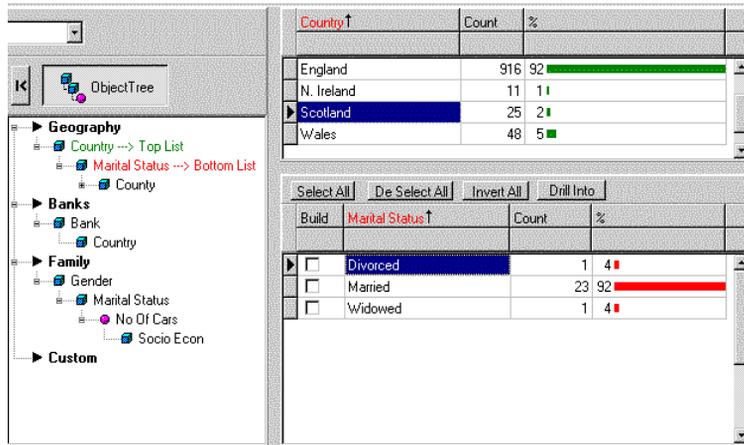


5. Select the location for the new object in the object tree.

If you want to	Then
add the field before the target segment,	select Add Before, then click OK.
replace the target segment with the field,	select Replace, then click OK.
add the field after the target segment,	select Add After, then click OK.

6. Double-click a segment in the lower detail window.

The segment moves to the upper detail window and its component segments are displayed in the lower window. In the following figure, the user double-clicked Scotland. Note that the object tree now shows Marital Status below country and the lower detail window displays Marital Status information for Scotland, which is selected in the upper detail window.



7. In the lower detail window, select the segments you want to include in your set.
8. Click the Process button.

The Confirm Step Details dialog box appears.

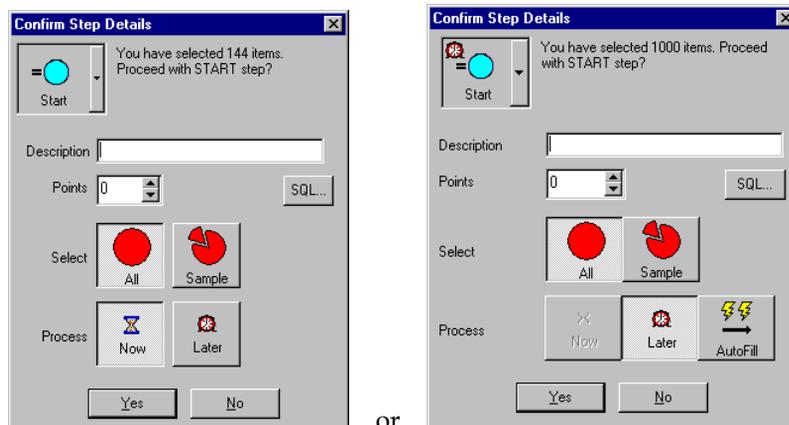
9. Click Yes to continue with the process.

You have other actions you can take from the Confirm Step Details dialog box. These are described in the following section.

The populated set is listed in Sets view.

## Confirm Step Details

Whenever you begin to process a set, the Confirm Step Details dialog box appears offering you processing options.



The Confirm Step Details dialog box offers you the following options:

- Enter a description of the step to be processed, for reference purposes.
- Change the step type using the drop down list that includes the Start button. You can select Add, Subtract, Keep, or Points.
- Confirm the number of members you have selected to process.
- Allocate points for scorecarding by using the spinners or typing directly into the Points box.
- View the SQL that SET ANALYZER will use to make the selection.
- Select between processing the set from all the selected items or from a sample of the selection. Clicking the Sample button displays the Sampling window.

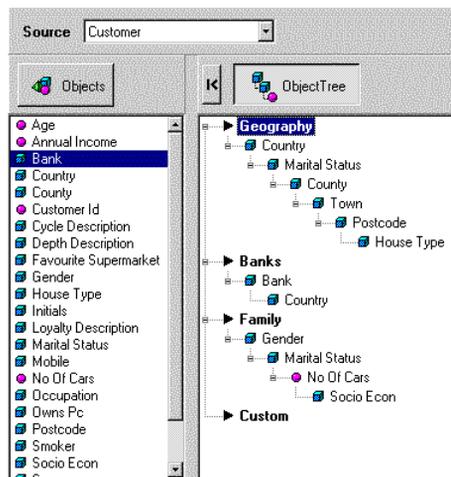
- Decide whether to process the set now or later. If the set is dynamic and if the AutoFill option is enabled in the set's properties, the AutoFill button is displayed and you choose to process the set from a selected base date to a specific date or x periods from the base date. Clicking the Later button executes the Process Later option, which allows you to build up several steps and then process them all at once. The process step is created in the StepManager view, but the members will not be added to the set until you select the Finish option from the StepManager view. Clicking AutoFill displays the Dynamic Set AutoFill dialog box, allowing you to set up AutoFill requirements.

## Removing Members from a Set

In addition to adding members to a set, you can remove members from a set. You can subtract or delete members from a set.

### Subtracting members from a set

1. In the VisualData view, click the Subtract button.
2. Click the  button to open the Objects list.



3. Create the required object tree by dragging objects from the objects list if necessary.

For example, if you want to subtract married customers who bank with certain banks from your set, you drag Bank on top of Marital Status and select After in the Target dialog box.

- In the lower detail window, double-click on the segment for which you want to display sub-segments.

The segment from the lower detail window moves to the upper detail window and its sub-segments are displayed in the lower detail window.

Continuing the example, if you double-click Married in the lower detail window, it moves to the upper detail window and bank information for the married segment is displayed in the lower detail window.

Marital Status ↑		Count	%
Divorced		25	3
▶ Married		812	89
Single		25	3
Unknown		27	3

Build Bank ↑		Count	%
<input type="checkbox"/>	Abbey National	120	15
<input type="checkbox"/>	Barclays	102	13
<input type="checkbox"/>	Lloyds	110	14
<input type="checkbox"/>	Midland	108	13
<input type="checkbox"/>	NatWest	122	15
<input type="checkbox"/>	TSB	119	15
▶ <input checked="" type="checkbox"/>	Unknown	131	16

- In the lower detail window, select the Bank segment that you want to subtract from your set.
- Click the Process button.

The Confirm Step Details dialog box appears and indicates how many members you are removing from the set.

- Click Yes to proceed.

## Working with Existing Sets in Sets View

This section describes how to edit the data grid in order to have different views of your data and then describes how to perform the following operations on sets:

- Combining sets
- Update sets
- Compare sets
- Delete sets
- Define set scope

## Editing the Data Grid

You can have different views of your data by:

- Sorting and ordering items in the list.
- Changing the column order and width.
- Filtering items from the list.

### Sorting and ordering items in the list

By default, one column is sorted in ascending order and an arrow appears in the column header.

You can order each column so that the item display is in ascending or descending order by clicking in the column header. If a column has a sort order in place, then it will show an upwardly pointing (ascending) or downwardly pointing (descending) arrow.

To reverse a sort on a column, click the column header again.

To remove a sort from a column, hold down the Ctrl key when clicking the column.

If you want to choose more than one column to order the sort, hold the Shift key when clicking each column that you want to be part of the sort.

## Changing the column order and width

You can change the order of the columns in the data grid by clicking on the header of the appropriate column and dragging it to the new location.

You can resize a column by dragging its edge to a new width.

## Grouping sets

You can group sets according to one of the columns, by dragging the column above the grid. Two green arrows show you where to place the heading.

Folder	Name	User	Last Modified	Count	Steps
Customer sets	Customers	user	30/06/2000 14:38:10	23	2
Product sets	Products	user	30/06/2000 12:09:03	0	0

You can add subgroups by dragging more column headings above the grid.

Folder	Name	Count	Steps
User : user			
+ Last Changed : 30/06/2000 12:09:03			
+ Last Changed : 30/06/2000 14:38:10			

## Filtering items from the list

When lists contain many items, it is often useful to restrict the number of items in the list by applying a filter.

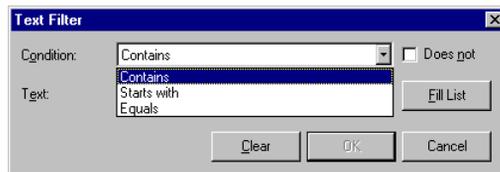
You can apply a filter to each column in the list. The filters limit the items shown in the column to the condition set by the filter; for example, "Names starting with B," or "Values greater than 10." . You can apply a different condition to each column.

To set a filter:

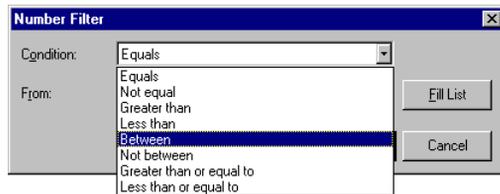
1. Right-click on the column to which you want to apply a filter.

A Filter dialog box appears.

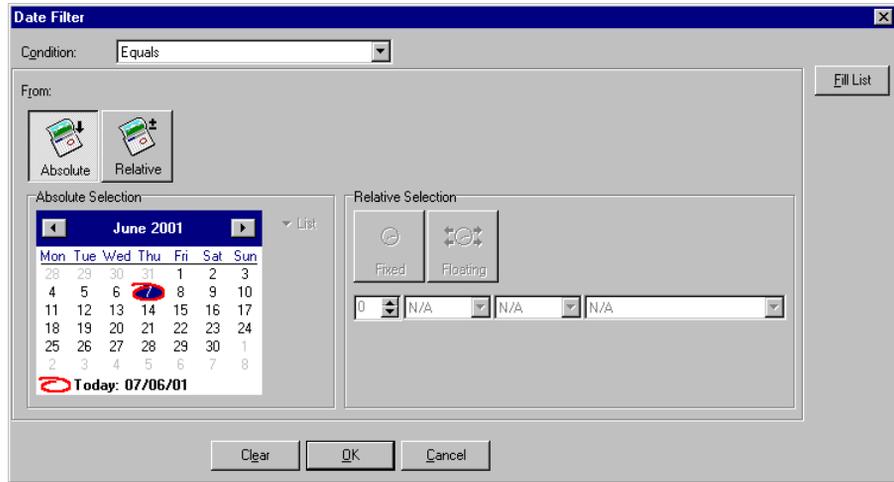
If	Then
you clicked on a column with numeric values,	the Number Filter dialog box appears.
you clicked on a column with text values,	the Text Filter dialog box appears.
you clicked on a column with date values,	the Date Filter dialog box appears.



*Number Filter dialog box*



*Text Filter dialog box*



*Date Filter dialog box*

**Tip:** In the Date Filter dialog box you can choose absolute dates from the calendar or relative dates.

2. Select the values for your filter, then click OK.

For information on the meaning of the filter expressions, refer to the section, "Filter expressions."

## Filter expressions

The list of possible filter expressions that you can select from the dialog box depends on whether you have selected to apply a filter to a column containing text or numeric values. The following two tables describe text and numeric filter expressions.

### Text filter expressions

When you set a filter expression for a character column, the Text Filter dialog box enables you to choose whether the operations filters items that contain or do not contain the specified value. All character filters are case insensitive.

Filter expression	Action
= VALUE	Only those items exactly matching the value are displayed.

Filter expression	Action
# VALUE	Only those items that do not match the value are displayed.
= %VALUE%	Any items that contain the value are displayed.
# %VALUE%	Only items that do not contain the value are displayed.
= VALUE%	Only items that start with the value are displayed. (e.g. =AT% will display "attack" and "ATOM", but not "match" or "at first.")
# VALUE%	Only items that do not start with the value are displayed.

### Numeric and date filter expressions

When you set a filter expression for a column containing numeric values or dates, the choice of expression allows the filtering of values that conform to ranges of values. This allows you to choose to display only items that have a value in the relevant column between specific dates or within a range of values.

Filter expression	Action
in VALUE1, VALUE2	Only items that fall between the two specified values are displayed.
out VALUE, VALUE	Only items that fall outside the two specified values are displayed.
= VALUE	Only items that equal the specified values are displayed.
!=VALUE	Only items that do not equal the specified values are displayed.
> VALUE	Only items that are greater than the specified value are displayed.
< VALUE	Only items that are less than the specified value are displayed.
>= VALUE	Only items that are greater than or equal to the specified value are displayed.
<= VALUE	Only items that are less than or equal to the specified value are displayed.

## Combining Sets

In a multi-user environment, many people might be producing sets that they make available to others. You may want to process a set that contains members from another user's previously processed set. To avoid repetition of the process and to ensure that sets contain the correct members, SET ANALYZER allows you to combine existing sets with your own sets.

### When to combine sets

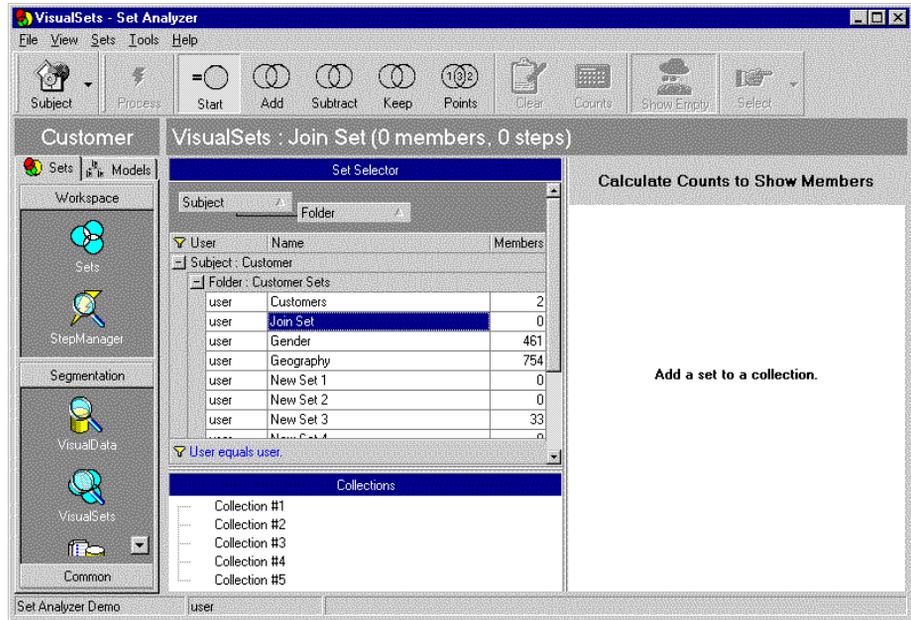
You most commonly combine sets when you want to add the contents of a set to one of your own sets or when you want to subtract the contents of a set from one of your own.

### Combining multiple sets

After creating a new set in the Sets view, you combine sets to populate the new set in the SET ANALYZER VisualSets view.

1. Create a new set in the Sets view.
2. Select the new set as the current set.
3. Open the VisualSets view.

The name of the currently selected set is displayed in the view heading.



Existing sets are shown in the Sets Selector. You can group the sets and sort them in the grid.

4. Drag and drop the sets you want to add to the new set from the Set Selector into collections in the Collections list. You can add more than one set to a collection.

A graphical representation of the join you are creating is displayed in the view. The colors of the groups match the colors of the collections they represent.

5. In the graphical panel, select areas that you want to include in the set.

**Tip:** When you click on an area, it is selected, (shown by shading). When you click on a selected area, it becomes unselected. You can use the Select All and Select None buttons to select and clear all the sets.

6. Click the Counts button to have SET ANALYZER calculate the number of members (and percentage) currently selected from the available sets.
7. Click the Start button.
8. Click the Process button.

The selected members of the sets are added to the new set.

## Updating Sets

Sets are fixed snapshots of the data at the moment when the set is created. If the data in the database changes, the set remains as it is. So, for example, if last week you created a set of all customers who are single and male, and this week some of the single men in the existing set get married and some additional single men are added to the database, then they will not be included in your set by default.

You can either leave the set as it is at the moment you created it or reprocess it to reflect the current data.

You can reprocess the set either from Sets view or from StepManager view. You only need to use StepManager view if you want to view or edit the steps involved in the build process.

### Sets View

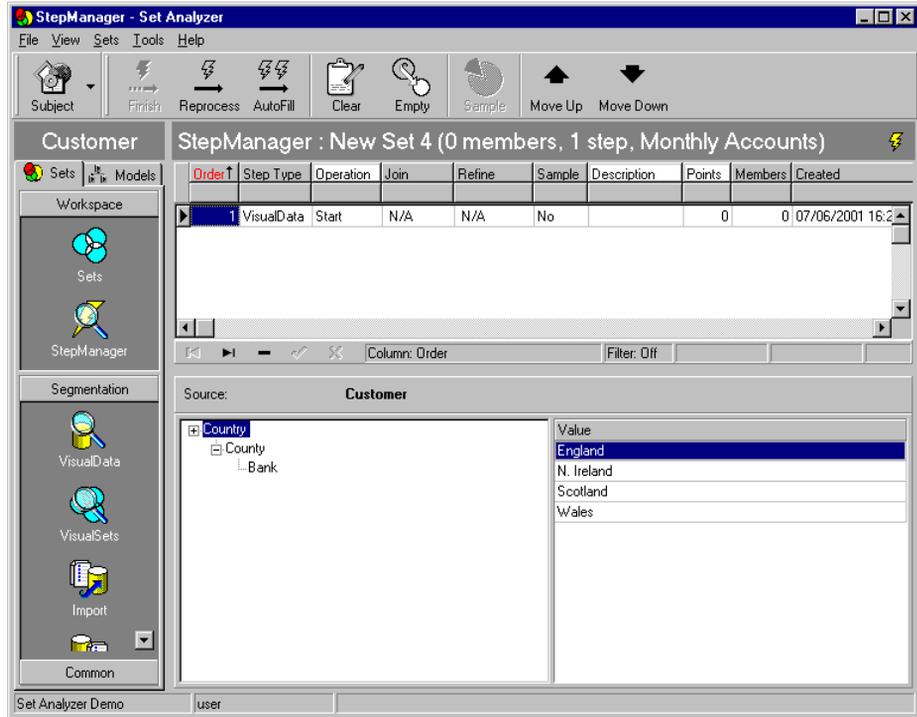
To reprocess a set in Sets view:

1. Select the set you want to update.
2. Select either the Reprocess or AutoFill button to update the set.

If	Then
you want to execute all steps in the build process,	click the Reprocess button. The set is reprocessed.
you want to process the set from a selected base date to a specific date or x periods from the base date,	click the AutoFill button. (The AutoFill button is enabled only if the set is dynamic and if the AutoFill option is enabled in the set's properties.) The Dynamic Set AutoFill dialog box is displayed. See the section "The Dynamic Set AutoFill dialog box" below.

## StepManager View

You can view and edit the process steps in StepManager view before you reprocess the set.



Each field in the StepManager window is described in detail in Chapter 3, "The Set Analyzer Environment."

To reprocess a set:

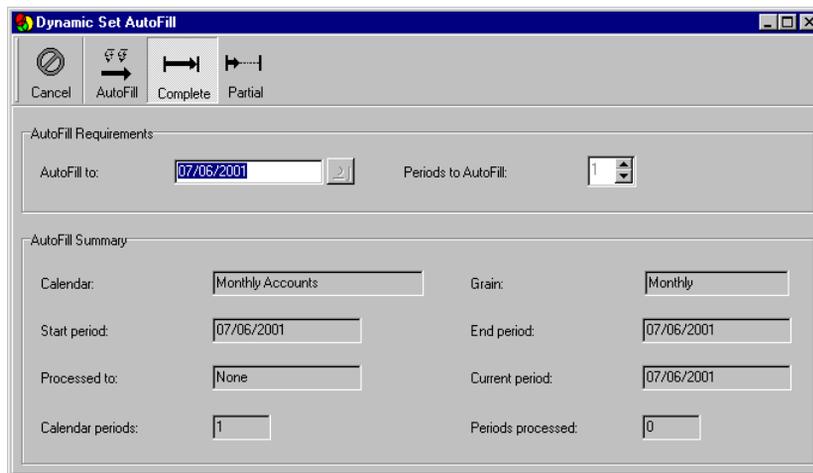
1. In Sets view, select the set you want to update.
2. Click the StepManager icon.  
The StepManager view is displayed.
3. If you want, you can edit the steps that have been taken to process the set.
4. Select either the Finish, Reprocess or AutoFill button to update the set.

If	Then
you want to execute all steps described in the StepManager view,	click the Reprocess button.
you want to execute all the process steps, starting from the first incomplete set,	click the Finish button.
you want to process the set from a selected base date to a specific date or x periods from the base date,	click the AutoFill button. (The AutoFill button is enabled only if the set is dynamic and if the AutoFill option is enabled in the set's properties.) The Dynamic Set AutoFill dialog box is displayed. See the section "The Dynamic Set AutoFill dialog box" below.

### The Dynamic Set AutoFill dialog box

Dynamic sets that have the AutoFill option enabled in their properties can be processed from a selected base date to a specific date or x periods from the base date.

You do this by clicking the AutoFill button, which is available in Sets view, StepManager view, or the Confirm Step Details dialog box when you reprocess a set.



Component	Description
AutoFill button	Processes the set to the period specified.
Complete button	Defaults the 'AutoFill to' date to the current period or the base period if there is no current period.
Partial button	Allows you to change the period to AutoFill to.
AutoFill Requirements	Shows the date to AutoFill to and the number of periods to AutoFill. You can change both of these by clicking the Partial button and then the appropriate button. As the date to autofill changes, the number of periods also changes accordingly and vice versa.  <b>Tip:</b> What dates you can choose to AutoFill to are determined by the selected base date and whether or not the 'Stop at Current Period' option is checked in the set's properties.
AutoFill Summary	This provides summary data such as start and end periods, total number of periods, etc.

## Comparing Sets

To compare a set to itself, to another set, or to the entire population, you need to use the Overview feature. The Overview feature summarizes the set contents according to the values in a chosen column. You would want to compare sets to view the number of members in the set and in the total database that correspond to each value. This can help you decide, for example, whether it makes sense to use the set as it exists or sampling for your business needs.

Since each member in the current set has attributes that correspond to the levels of segments in the object tree, it's useful to order the members by the major segments. The Overview function opens an additional window that lists the various distinct values of the currently chosen column. The list contains only the unique values.

### What does the Overview show you?

For each value in the list, the overview indicates:

- How many members in the current set correspond to each value.

- How many items in the total database correspond to each value.
- The relative proportions these represent.

Differently colored horizontal bars indicate the relative proportions of the category in the set and the database.

Color	Indicates
Red	Values in the current set
Blue	Values in a comparison set
Green	Values in the entire table

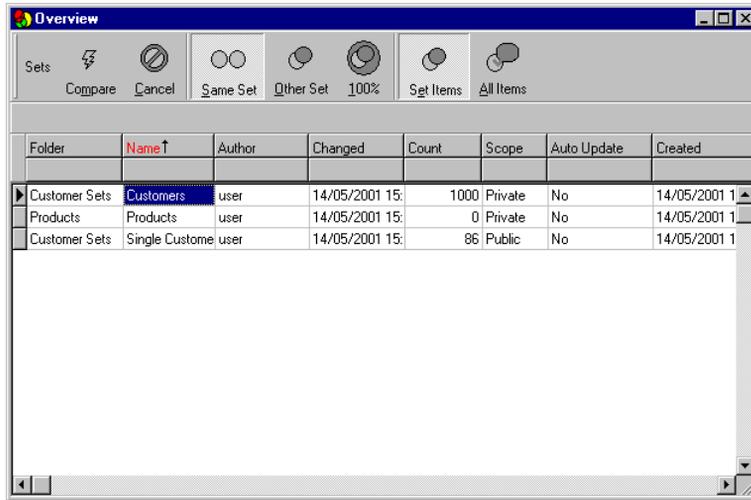
### How to do an overview

1. In Sets view, select the set you want to overview.

The set must already contain members.

2. Click on the Refine icon to open the Refine view.
3. Refer to the Object Tree to see which columns correspond to segments in the object tree. Use these columns for the Overview function.
4. Locate one of these columns in the Refine view.
5. Sort the list by the chosen column.
6. Click the Overview button.

The Overview window is displayed.



- Decide whether you want to compare the set against the entire table or against another set.

If	Then
you want to compare the set against the entire table,	click the 100% button, then click Compare.
you want to compare the set against another set,	select the other set, click the Other Set button, then click Compare

The Overview window appears as a panel above the set members list. Each row of the Overview window corresponds to a unique value in the column you choose.

## Deleting Sets

To delete a set, select the set in Sets view and click the Delete button in the toolbar.

## Defining Set Scope

You can change the scope of a set between public and private, which enables you to share the set with other users or keep it private. When you create a set and allocate it to a public folder, its scope is defined to be public. When you create a set and allocate it to a private folder, its scope is defined to be private. For further information on folders, SET ANALYZER user , and setting scope, refer to the chapter "Private and Public Sets and Folders."



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**In this chapter**

□ <b>Overview .....</b>	<b>90</b>
□ <b>User Defined Object Trees.....</b>	<b>90</b>
Default Object Trees	90
Custom Object Trees	90
Building a Custom Object Tree	90
□ <b>Sampling .....</b>	<b>93</b>
Set Analyzer Sampling Scenarios	93
The Sampling Module	94
Creating a Sample	94
StepManager/Reprocessing Samples	97
□ <b>Scoring Points.....</b>	<b>97</b>
Why Score Points?	97
How Does it Work?	98
Tracing Selections with Binary Numbers	98
How to Allocate Points	98
Splitting a Set into Cells	99
□ <b>Importing and Exporting.....</b>	<b>101</b>
How to Import Keys into Your Set	101
How to Create an Export File	103
Customizing an Export File	104
□ <b>Cloning Sets.....</b>	<b>105</b>
Why Clone Sets?	105
How to Clone a Set	106

## Overview

This chapter shows you how to use SET ANALYZER to perform advanced tasks such as defining object trees in the VisualData view, sampling, importing and exporting sets, converting between subjects, and creating models.

## User Defined Object Trees

### Default Object Trees

Object trees provide a useful method of navigating the database. The Database Administrator defines the default object trees for each source in the database. The default object trees provide the usual paths through the database from the highest level segment to lower sub-segments. These object trees indicate the logical hierarchies inherent in the database. Each level may contain a number of segments, each of which can contain many sub-segments.

The object trees are like inverted trees that branch into sub-segments until the single items in the database are located at the tips of the branches (referred to as "leaf nodes"). Each item belongs to only one sub-segment, which in turn belongs to only one higher segment until the top of the object tree is reached. The object tree paths enable the rapid location or drill down to individual items. Each segment contains many sub-segments allowing you to add many items to a set with one operation.

### Custom Object Trees

You can also create your own object trees by selecting objects from the Objects list and adding them to the existing object trees.

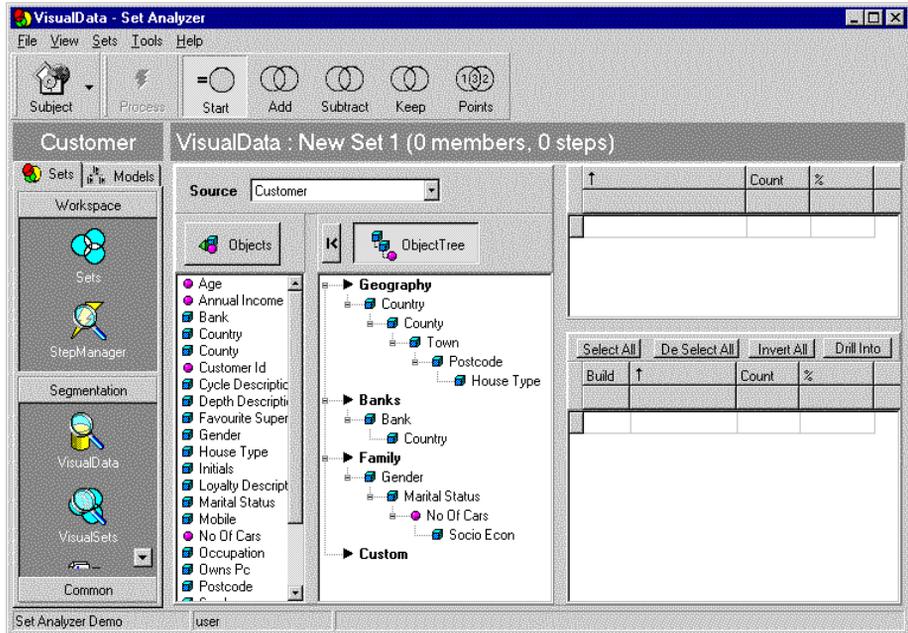
### Building a Custom Object Tree

You build an object tree from the SET ANALYZER VisualData view.

1. Select the VisualData view.

- Click the Object List button.

The list of objects is displayed to the left of the Object Tree panel.



- Verify that the Object Tree button and not the Objects button is selected.

If you select the Objects button and select an object, the data is drilled into by that object. For example, if with the Objects button selected, you selected Bank, the database will be segmented into the number of different values of Bank.

- Select an object you want to add to the object tree and drag and drop it to the desired place in the object tree.

The Target dialog box appears.

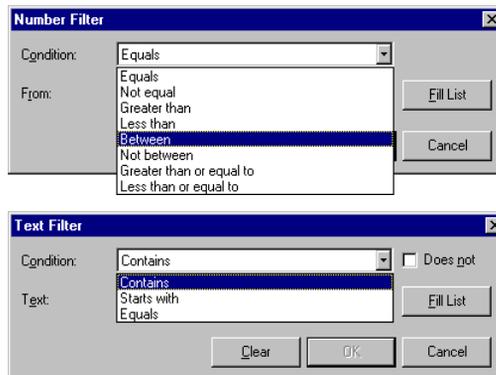


- Select the location for the new field in the object tree and decide whether you want to insert a custom condition.

If you want to	Then
add the object before the target object,	select Add Before, then click OK.
replace the target object,	select Replace, then click OK.
add the object after the target object,	select Add After, then click OK.
insert a custom condition,	select Custom Yes/No Condition, then click OK.  A filter dialog box appears--see Step 6.

- Insert the custom condition.

The custom condition you insert depends on whether the field you have chosen to add is a column of text or numeric data. If you have selected a field of text, for example, Bank, the Text Filter dialog box appears. If you have selected a field of numeric data, for example, Number of Children, the Number Filter dialog box appears.



From either dialog box, select the Conditions list and type in the required values for the dialog box. For example, if in the Number Filter dialog box, you select Equal, you will need to type in one value. If you select Between, you will need to type in two values.

The Title field defaults to an English expression of the filter condition. You can modify the title field.

7. Click OK.
8. Repeat Steps 4 through 7 to add the fields you want to your object tree.
9. Use this object tree instead of one of the default object trees to populate the Detail windows and process the set.

## Sampling

Sampling allows you to further refine your selection by defining the exact characteristics of the output. Normally selection focuses on defining the criteria that defines your output. Normal selection, however, may produce too many people for your purposes. For example, what happens if you want only the top 100 people from the 129 who match on other specific criteria?

If you select from a database of 3 million customers and your selection is based on certain age, gender, and income groupings, you might produce a target of 270,320 customers. If you want only 10,000 people, how do you select these people? If you then want to split them into five cells of 2,000 people in order to test different treatments in order to determine the most effective treatment to use on the remaining 260,230, then what do you do?

### Set Analyzer Sampling Scenarios

In the above examples, the 129 people and the 270,320 people are referred to as the sample frame. They represent the total population from which the final sample can be drawn. The final sample can be no bigger than the size of the sample frame.

SET ANALYZER provides four specific types of sampling scenario:

Sampling Scenario	Example
Random	Select 100 people randomly from the sample frame.
Ranked	Select the top 100 people from the sample frame.
Stratified random	Select 50 males and 50 females randomly from the sample frame.

Sampling Scenario	Example
Stratified ranked	Select the top 10 people in each town in the sample frame.

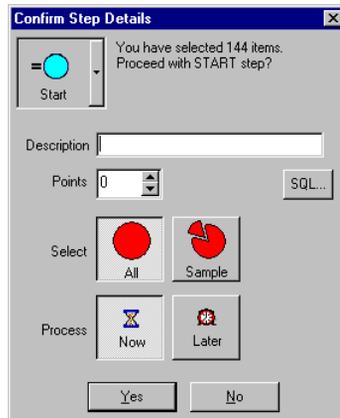
## The Sampling Module

The sampling module is a single interface that provides a mix between random sampling and the ability to choose data based on ranked attributes. In addition, it is possible to stratify each selection into groups. The benefit of being able to stratify or group your data allows you to produce skewed samples. For example, your data may be based on a 60/40 male/female split. However, you may want to target 25% male/75% female, which is easy to do using the sampling module.

## Creating a Sample

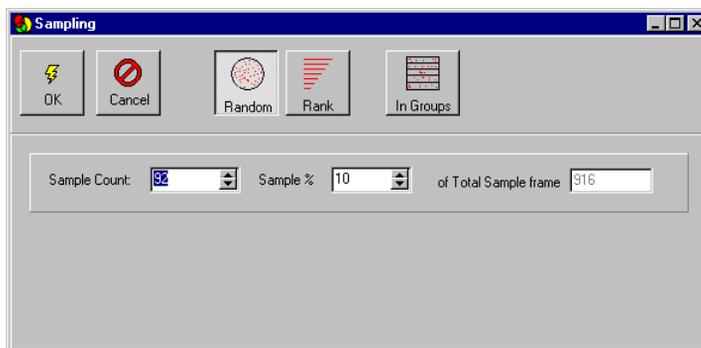
You create a sample as part of processing a set.

1. After you click a Process button, the Confirm Step Details dialog box is displayed.



2. Click the Sample button.

The Sampling dialog box appears on your screen.



- Choose whether you want a random or ranked sample.

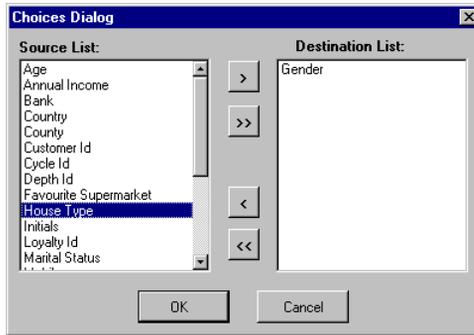
If you want	Then
a random sample,	click the Random button, then go to Step 5. <b>Note:</b> A random sample creates a different result set each time it is created. SET ANALYZER uses a linear congruential generator to produce the pseudo random numbers to generate the sample.
a ranked sample,	click the Rank button. You are presented with a list of fields in a grid with sample data to allow you to choose the columns to be ranked. Go to Step 4.

- Sort on the column(s) matching the field to be used for the ranking, then select OK.

You can sort the column in either ascending or descending order to specify whether you choose the top  $n$  or bottom  $n$ . Descending order produces the top  $n$ .

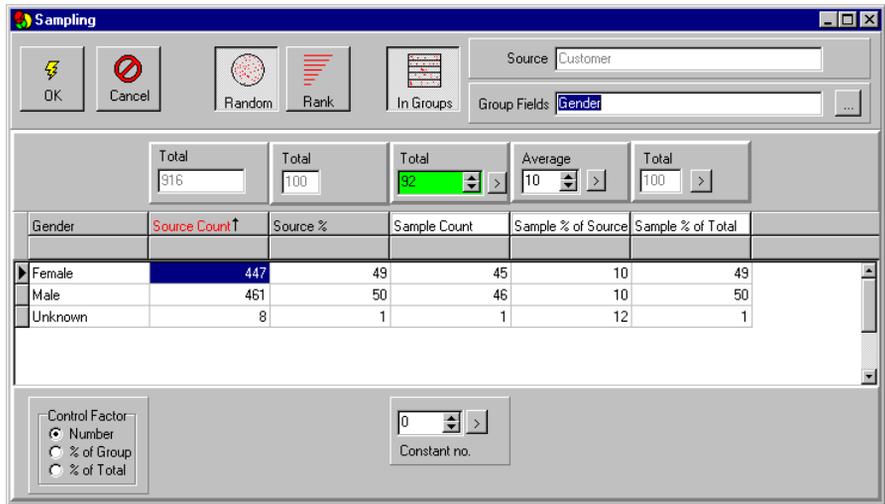
- In addition to selecting between rank or random, you may also define a grouping or strata by clicking the In Groups button. Selecting a group organizes the data by the groups you select.

The Choices dialog box appears on your screen.



6. Select the columns you want to group by.
7. Click OK.

A grid listing available strata appears.



Column	Description
Source Count Total	Total size of the original sample frame.
Source Count	The breakdown of the original source, grouped by the selection you made in the Choices dialog box using the In Groups button.
Source %	Grouped source count as a percentage of the total.

Column	Description
Sample Count	Shows the numbers that will be used to process the sample.
Sample % of Source	The sample count as a percentage of the source count.
Sample % of Total	Count as a percentage of the sample total.

**Tip:** You can change the sample counts. For example, if Unknown gender is not relevant, you can enter a value of 0 in the Sample Count column. You can also apply a constant number to the Sample Counts column, by entering the number in the Constant no. box and clicking the > button.

8. Within the grid, type in the counts required, then click OK.

## StepManager/Reprocessing Samples

The definition of your sample is retained within the StepManager view. You cannot edit the sample definition, although you can replace the step by deleting it and adding an identical step with your revised sample definition.

A random sample, when reprocessed, will produce a different output, simply because it is random.

A ranked sample, when reprocessed, will produce a sample that is similar to the previous sample, assuming the underlying data has not changed significantly.

## Scoring Points

### Why Score Points?

With SQL tools and selection tools in general, all matching items are returned as equal. This is not always the case in marketing, for example, so SET ANALYZER provides the ability to score each selection. The scores for each selection are then accumulated.

## How Does it Work?

You can allocate a number of points to each step or process operation.

For example, select Tennis Players and award 1 point. Select Contacts in New York, and award 2 points, and select Contacts spending more than \$200 and award 4 points. Each member can exist only once in a set, but if a member is selected for more than one reason, then the points allocated are accumulated on a member by member basis. In this example, someone who matches on all three conditions accumulates 7 points.

---

**Note:** The points score must be an integer and can be positive or negative. Limits for number size vary by database and installation. Typically, the points value is not very large.

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## Tracing Selections with Binary Numbers

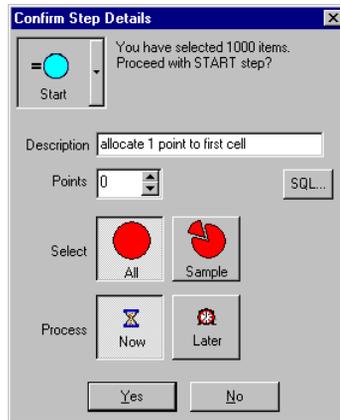
It is possible to trace exactly which selections a particular set member has come from by using the technique of adding  $2^{(n-1)}$  numbers together; i.e. 1,2,4,8,16,32. In the above example, a set member with 3 points must be a tennis player and a customer/prospect in New York, but does not spend more than \$200. This is because the number 3 can be generated only by a match of 1 and 2. Fifteen can only be generated by a match on 1+2+4+8.

## How to Allocate Points

You allocate points when you process your set.

1. In the VisualData view, select the data to be processed into your set, as you would for any other selection.
2. Click the Process button.

The Confirm Step Details dialog box is displayed.

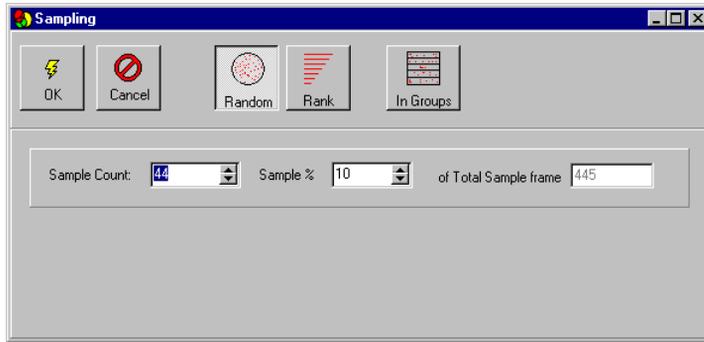


3. In the Confirm Step Details dialog box, use the spinners to allocate points to the item that you selected. Type in a description, then click Yes to proceed with the process.

## Splitting a Set into Cells

You can split a sample set into cells by allocating points. This allows you to allocate different point amounts to different parts of the sample set. You split a set into cells from the VisualSets view.

1. From the VisualSets view Set Selector, select the set that contains the sample and move it to a collection.
2. Click the Select All button.
3. Click the Points button, then click the Process button.  
The Confirm Step Details dialog box appears on your screen.
4. Click the Sample button.  
The Sampling screen appears.
5. Type in the desired size of the cell in the Sample Count box, then click OK.



The Choices dialog box appears on your screen.

6. In the Choices dialog box, move Set Points from the Source List to the Destination list and click OK.

The Sampling dialog box appears showing the state of the sample (at this point there will be only one row, indicating that all members of the set have 0 points). The size of the sample you selected appears in the Sample Count column.

7. Click OK.

The Confirm Step Details dialog box is displayed.

8. Use the spinners or type in a value to allocate points scoring to the sample, then click Yes.

This splits the set into two cells. One cell contains all set members that you allocated points (equals the number you entered in the Sample Count box). The other cell contains all set members with 0 points (equals the Source Count minus the Sample Count).

9. Repeat steps 1-7 to further divide the remaining set members into the number of cells that you require, allocating a different points scoring each time. You must reset the Sample Count to 0 for all groups that do not have 0 points.

In this way, each subsequent sample will be taken only from the set members that have not yet been allocated to a cell.

## Importing and Exporting

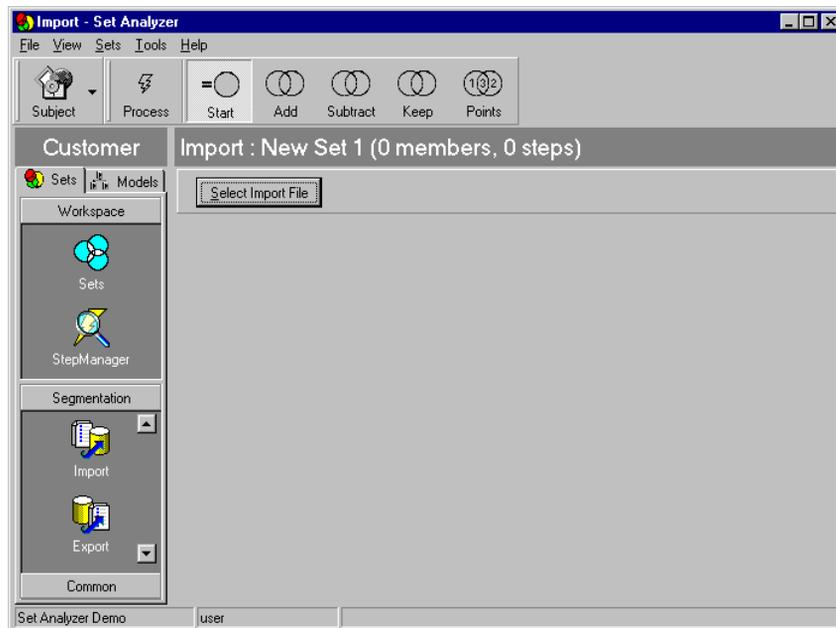
You can export multiple columns from a set or import lists of keys into a set. A set is simply a list of keys. Importing lists of keys enables you to process sets from external data, e.g. mailing suppression files. SET ANALYZER enables you to:

- Export multiple columns based on the members of the current set. The file that you export will contain one row per set member. You can export to a text file, .csv file, or an Excel spreadsheet.
- Import lists of keys from a text file, .csv file or an Excel spreadsheet. The file must contain a column based on the key. The keys must exist in the primary source table for the current subject in order to be imported.

### How to Import Keys into Your Set

1. In Sets view, select the set into which you want to import keys.
2. Click on the Import icon.

The Import view is displayed.



3. Click the Select Import File button and from the Open dialog box, select the file from which you want to import keys.
4. Select an operation: Start, Add, Subtract, Keep. Then, click the Process button.

---

**Note:** Importing from a text file and selecting Subtract defines an exclusion list. This allows you to process the exclusion in the native database. The alternative, based on heterogeneous queries or on processing the results on a client PC, is highly impractical.

The import file need contain only one column.

The import process will import only keys that exist in the dimension table for the current subject. If a customer file contains 100 items and only 99 of the customer primary keys exist in the customer table, then only 99 items will be inserted in the set.

There is no message to inform you that items have not been inserted. The items are rejected in order to maintain referential integrity.

The process of inserting items is much more efficient than a single row insert using standard SQL. As many as 1000 items are inserted in one SQL pass, but multiple passes are seamless to the user, and so to the user an unlimited number of items can be inserted in one single operation.

---

---

**Tip:** If you are not sure of the type of file format required to import into SET ANALYZER, then create a set with a small number of items. Then choose Export from the File menu (do not change the default options for delimiters, etc.). Then create a new set and import from the same file.

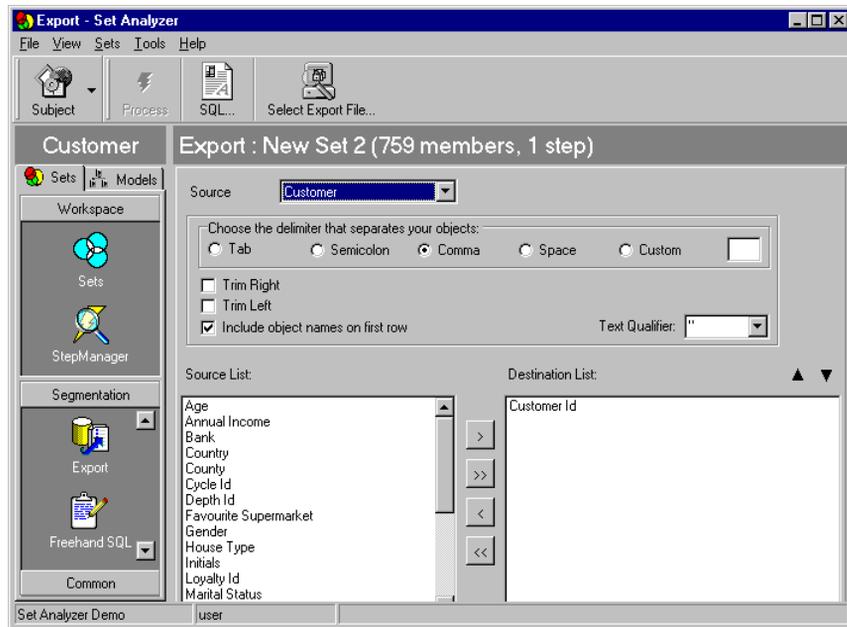
Confirm that you have imported the items into your set. Now open the text file (.txt), comma separated file (.csv) or Excel (.xls) file. You will see how the first row contains a column name. This is required for the import to work successfully.

---

## How to Create an Export File

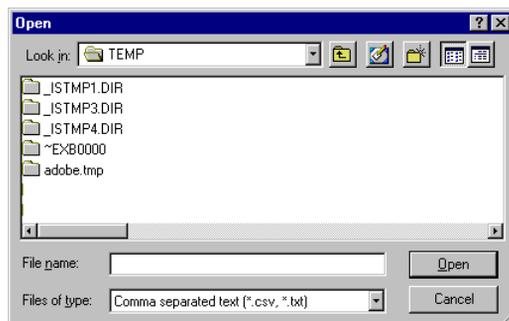
1. In Sets view, select the set that you want to export.
2. Click on the Export icon.

The Export view is displayed.



3. Select the source.
4. Click Select Export File.

The Open dialog box is displayed.



5. Select a folder and name the export file, which is the target file to which the exported file is sent.
6. Click Open to return to the Export view.
7. Select the field delimiter and text qualifier.
8. Move the set members you want to export from the Source List to the Destination List, then click Process.

---

**Note:** You may need to install ODBC drivers for .txt, .csv, and .xls files. SET ANALYZER treats the file as an ad-hoc ODBC data source and selects from it as if it were a table. This will work without a column name. The first row will be ignored.

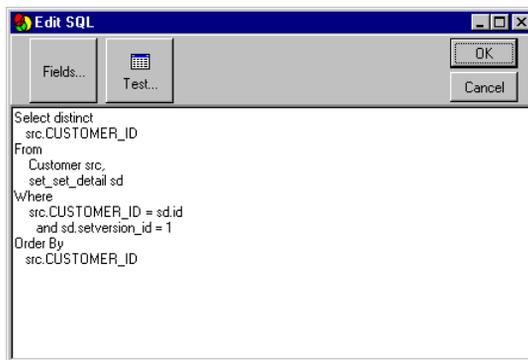
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## Customizing an Export File

By default, you can only export columns from a single table in a single export operation. You can customize the SQL to include other tables. When you do this, you will need to include the relevant joins.

1. From the Export view, click on the SQL button.

The Edit SQL dialog box is displayed.



2. Edit the SQL, taking note of the following restrictions:
  - By default, you can export columns only from a single table/view in a single export operation.

- You can amend the SQL to include other tables.
  - You will need to include the relevant joins.
3. To verify your export SQL, click the Test button.
  4. After verifying your export SQL, click OK.

## Cloning Sets

Cloning copies all the steps from a selected set into a new set and optionally also copies the members of the original set.

Once you have cloned a set, you can use the StepManager view to change the step type, delete steps, and reorder steps in your cloned set.

## Why Clone Sets?

You clone sets for the following reasons:

- To copy one set and then to modify it slightly, while leaving the original set 100% intact.
- To create a copy of an original set so you can refresh the new set based on the data currently held in the database. This is relevant if the data has changed over time. This allows you to implement segment churn analysis. With two sets based on the same logic, but processed at two different times, you can determine who is new, who has stayed, and who has left.
- To add steps from another set into the current set.

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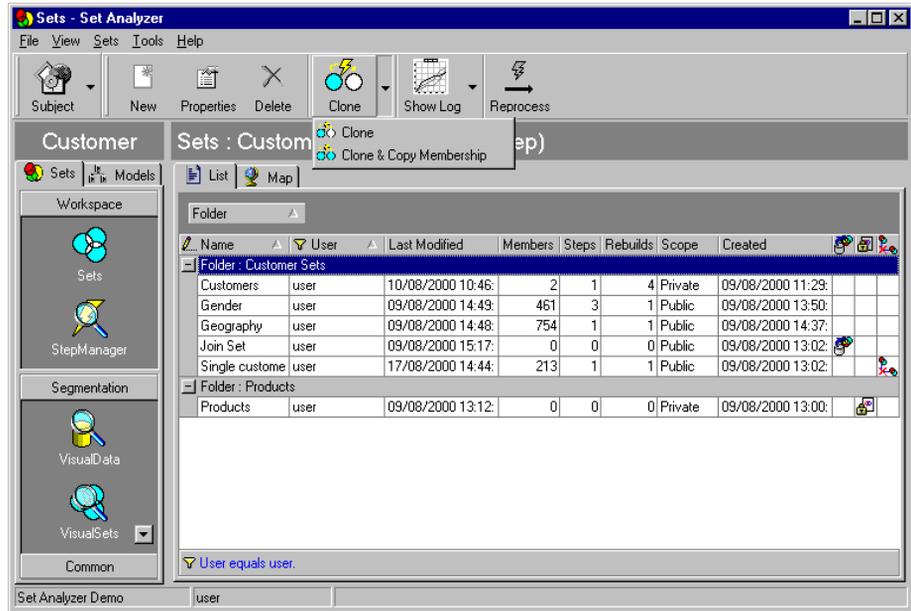
**Note:** You need to be careful in adding steps from another set into the current set. You might find you have two steps in your set using Start. Start is the command that begins to create a new set. The second Start ignores all steps between the first Start and the second Start.

---

---

## How to Clone a Set

1. Select the set from which you want to clone the new set..
2. Click the arrow on the Clone button.



3. Choose whether you want to clone the set without its membership or with its membership.

---

**Note:** If you choose to clone the membership and the set is large, the cloning process may take a long time.

---



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**Tip:** When you clone a set, the steps are not processed and so the members of the final set are not changed.

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# Chapter 6      Scheduling Set Processing

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## In this chapter

□ Overview .....	108
□ Freehand SQL .....	110
How to use Freehand SQL	110
Selecting a Table and Fields	112
Testing the SQL Syntax	112

## Overview

You can schedule a set to be reprocessed or finished, either as a one-off process or on a regular basis. You can define steps within a set as 'Process Later', freeing up the client PC and allowing all processing to be managed by SET ANALYZER Agent.

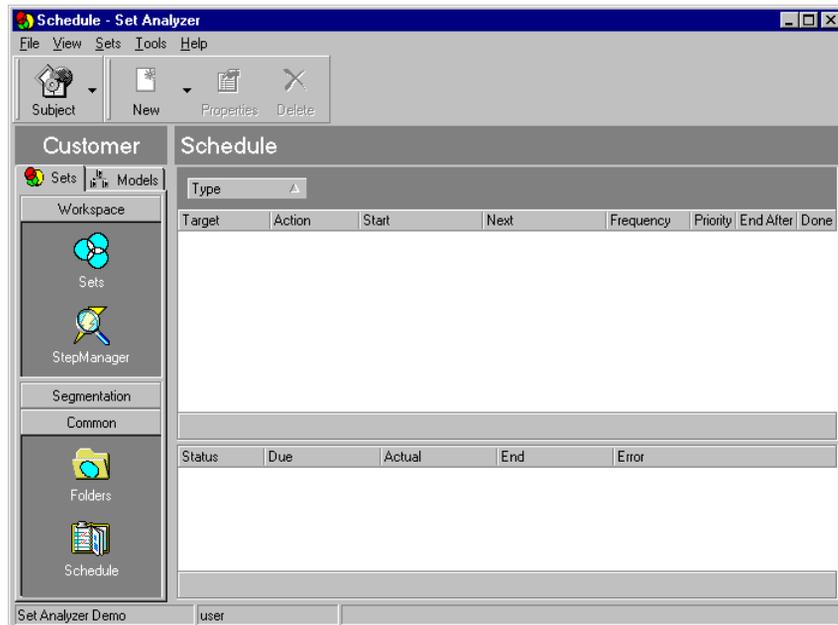
You can schedule processing only if SET ANALYZER Agent has been installed and configured. Also, the Database Administrator must have given permission to you (your user name) to perform scheduling operations.

For each set, you can create many schedule specifications. Each specification defines how and when you want the scheduler to process the set.

To create a specification or schedule a set reprocess:

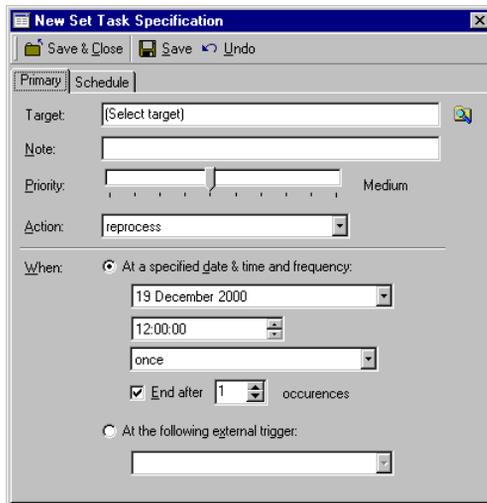
1. Click the Schedule icon.

The Schedule view is displayed.



2. Click the New button to create a Set Task or Model Task schedule specification.

The New Set Task Specification dialog box is displayed.



3. On the Primary tab, click the  button to pick a target.
4. Add a note to describe the task.
5. Move the slider to choose the priority for the task. Move the slider right to lower the priority, or left to increase the priority.
6. Choose the action.

Task	Description
reprocess	This option processes all steps in the set.
finish	This option processes all the steps that have not yet been processed. Steps remain unprocessed if you select the Later option, when processing a set.

7. Specify when and how often the task should be performed.

The date specifies the 'base date' for the Task Specification. For a task that repeats over time this is the first date on which it will process. By default, this date is the current date – use the drop down to use a calendar to change this date as required.

8. Once all the details have been entered, click the Save button to create the Task Specification.
9. Click the Schedule tab to view a list of scheduled tasks.

10. Click Save and Close to return to the Task Specifications window.

When the Task Specification has been confirmed, it will be shown in the Task Specification window, along with the scheduled tasks created for it by the Controller-Agent.

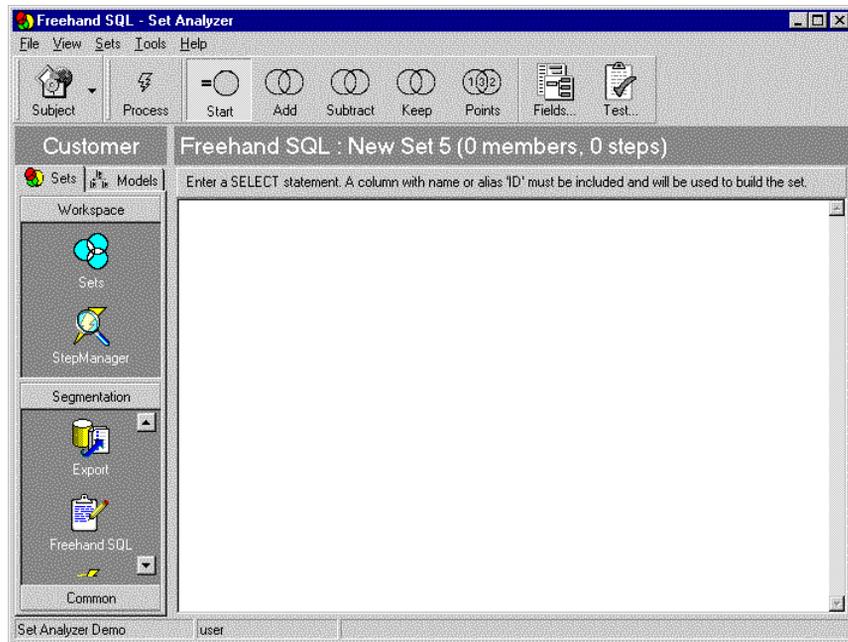
## Freehand SQL

When you need to go beyond the standard SET ANALYZER user module functions to create your own set, Freehand SQL allows you to write your own SQL to process sets. For example, this may be necessary to link in with a fact table or if some information necessary to create the set is not held in the dimension table.

### How to use Freehand SQL

1. In Sets view, select an existing set, or create a new set.
2. Click on the Freehand SQL icon.

The Freehand SQL view is displayed.



3. Type in the SQL in order to generate a list of keys to form the set.
4. Click the Process button.

---

**Note:** The normal set operations (Start, Add, Subtract, etc.) are used to determine how the results of the free hand SQL are applied to the current set.

The SQL statement can return as many columns as necessary, but one column must be named ID. This column is used as the list of IDs with which to create the set.

It is not possible to create a set containing IDs that are not listed in the dimension table. When you process a set from freehand SQL, any IDs that are not in the dimension table are discarded.

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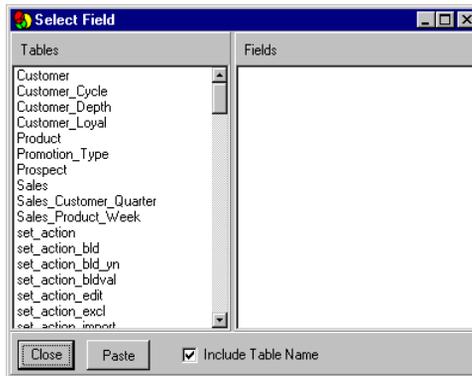
**Example**    **A SQL statement to process a set**

```
.....  
Select skus.skus_id as ID, sum(sales.volume)  
  From skus, sales  
  Where skus.skus_id = sales.skus_id  
  Group by skus.skus_id  
  Having sum(sales.volume) > 100000  
.....
```

## Selecting a Table and Fields

When you are writing an SQL statement in the Freehand SQL view, you can open a dialog box that allows you to select from all the tables in the database and to see the fields available for each table.

1. Click on the Fields button. The Select Field dialog box is displayed.



2. Select the table and then the field you want.
3. Click the Paste button to paste the field directly into the Freehand SQL view.

## Testing the SQL Syntax

To test the SQL syntax from the SQL Build window, click the Test button. This allows you to verify that the syntax of the SQL statement is correct and that it is returning the correct data before you process the set. This does not actually process the set.

# Chapter 7      Models

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## **In this chapter**

□ <b>Overview .....</b>	<b>114</b>
How do Models Differ from Combining Sets?	115
Model Access and Editing Restrictions	115
□ <b>How to Create a Processing Model.....</b>	<b>115</b>
□ <b>How to Create a Distinct Model.....</b>	<b>118</b>
□ <b>How to Process a Distinct Model.....</b>	<b>118</b>
□ <b>Setting the Component and Display Order of Distinct Models ..</b>	<b>119</b>
□ <b>How to View a Distinct Model.....</b>	<b>120</b>
□ <b>Processing Models .....</b>	<b>120</b>

## Overview

Models are designed to make the process of reporting on your data a more powerful and flexible process than is possible using the functionality of your existing report tools. Models are a way of collecting a number of existing sets to form a group of sets that can be used together as one entity.

Our use of data when reporting is usually limited to summarizing data by the attributes of information recorded in the database. This often restricts us in our grouping of the data. The logical groups in the data that relate values to categories are valuable to ensure that the data is stored coherently and validly. We often find, however, that we require other groupings that may not be formal or easy to define logically.

SET ANALYZER enables you to create sets of the data that create virtual categories that can be varied over time or saved for frequent use. This enables reporting to consider flexible and real world groups of data without the need to transform the data structure. Models enable these sets to be used together, grouping the data and comparing their values. The distinction between these virtual categories and those that exist in the database is that no attributes exist for their classification. Members are chosen or assigned to the category ensuring maximum flexibility. Furthermore, the members corresponding to the category can be varied at any time to maximize the flexibility and responsiveness of the categories.

There are two main types of model that can be created within SET ANALYZER:

- Processing Models
- Distinct Models

Processing Models allow you to group a number of sets together so that they can be processed and reprocessed together. For example, if you have processed a final set which has been processed from several other sets, in order to reprocess the final set you need to reprocess all the other sets first, and ensure that each dependent set has finished processing before the set starts. This would be a very lengthy and manual task, and so building a processing model allows you to group all these sets together and let Set Analyzer work out which sets must be processed in which order.

Distinct Models allow you to group together a number of sets and ensure that there is no overlap between them. Set Analyzer creates a new list of members that removes any duplication of members. This can be very useful, for example, if you have created several mailing campaigns and you want to ensure that no contact is mailed more than once. The distinct model will allow you to define a priority for each set and ensure that each member is allocated to only one set.

### How do Models Differ from Combining Sets?

When you create a model, the component sets retain their identity and the members they contain. Combining sets combines the contents of sets within one set. Distinct Models do not combine the components of each constituent set but the model is aware of their contents to avoid double counting.

### Model Access and Editing Restrictions

The following restrictions apply to the sets that you can include in a model.

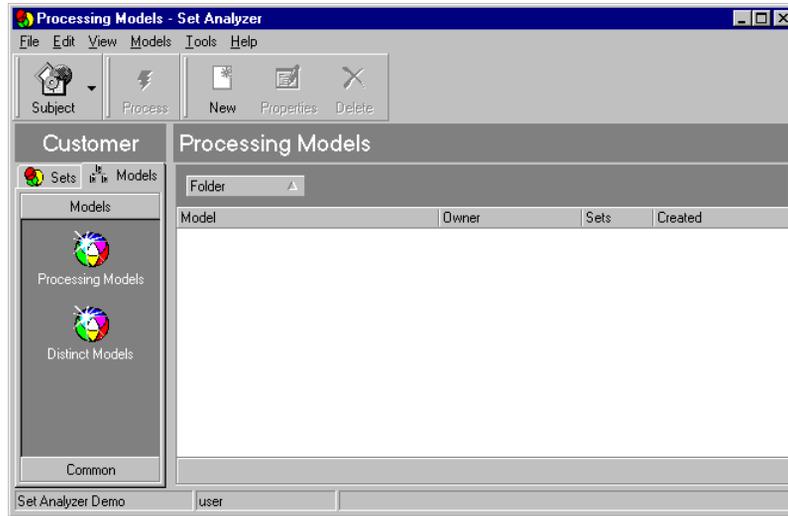
- A model can be private or public.
- A SET ANALYZER user's private model cannot contain other users' private sets.
- A public model cannot contain any user's private sets.

## How to Create a Processing Model

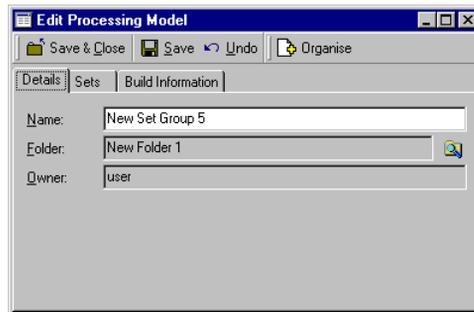
You create a processing model from the Processing Models icon within the Models tabs. After you create the model, you process it.

1. In SET ANALYZER, click on the Models group in the SET ANALYZER Bar.
2. Click the Processing Models icon.

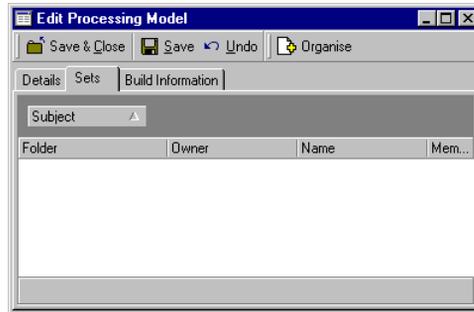
The Processing Models view is displayed.



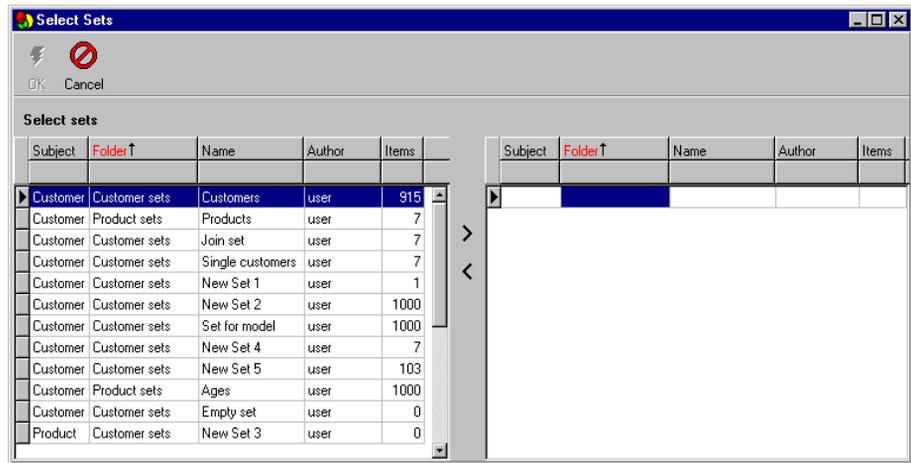
3. Click the New button. The Edit Processing Model dialog box is displayed.



4. Enter a name for the Model.
5. Click on the folders button to choose a folder for the model.
6. Click the Sets tab.



7. Click the Organise button. The Select Sets dialog box is displayed.



8. Use the > and < buttons to select the sets to include in the model.

**Tip:** The selected sets will be processed in the order they are displayed in the selected sets list, on the right hand side of the dialog box. Use the sorting bar, filter bar, or right-click an entry and choose the Organise Grid option to set the order of selected sets.

9. Click the OK button.

The selected sets are now displayed in the Edit Processing Model dialog box.

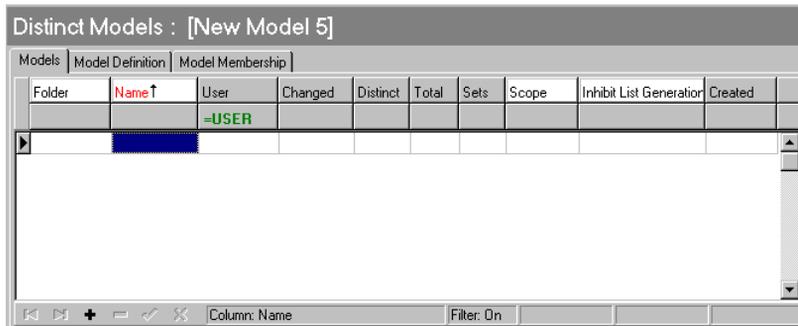
10. Click the Build Information tab. The processing order is displayed. Check this is correct. To change the order, click the Organise button again and change the processing order.
11. Click Save & Close.

## How to Create a Distinct Model

You create a distinct model from the Distinct Models icon within the Models tabs. After you create the model, you process it.

1. In SET ANALYZER, click on the Models group in the SET ANALYZER Bar.
2. Click the Distinct Models icon.

The Distinct Models view is displayed.



3. Click the New button in the toolbar to create an empty model.
4. Select a folder for the new model or create a new one.
5. Select a folder audience.
6. Click Select in the Folder dialog box to return to the Distinct Models view.
7. Type in a name for the new model.

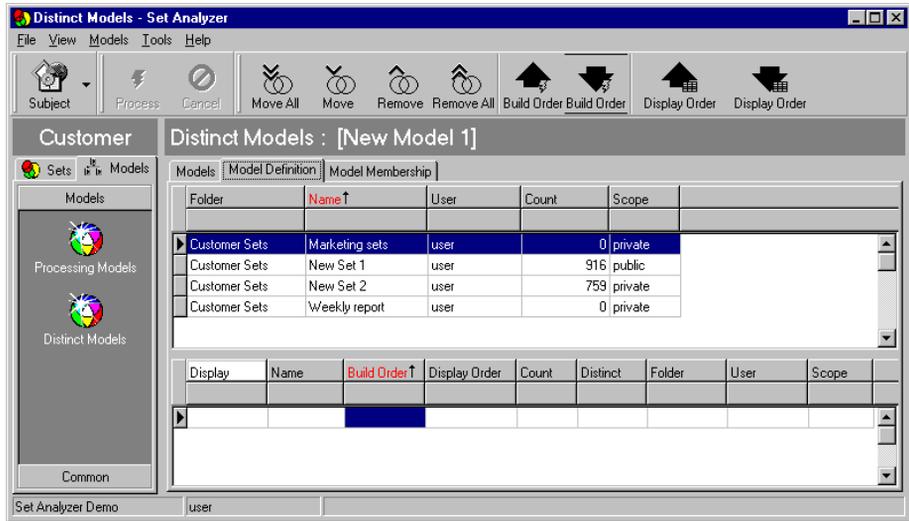
The new model has the same attributes or columns as a normal set describing the scope, and user details.

8. Click the Apply Changes button to save the new model.

## How to Process a Distinct Model

When you process a distinct model, you add existing sets to the model.

1. In the Distinct Models view, click the New Model button.
2. Click on the Model Definition tab.



3. Add sets to the model by selecting the sets from the list of sets and click the Move button in the toolbar (or double-click the set) to move them to the lower list of selected sets.

The selected sets are shown in the order in which you selected them. You can change the order using the Order buttons in the toolbar.

4. Type in a Display Name for the set.

By default, the display name is the same as the original set name, but you can change this.

5. When you have added all the sets you want to the model, click the Process button.

## Setting the Component and Display Order of Distinct Models

The order in which sets are listed as component items for a model determines the priority order for the calculation of distinct items. The model will be made up of all the items from the first set plus only those items from subsequent sets that have not already been allocated to the model. Thus, the first set has the highest priority.

**Example**      **Content of each segment in a model**

.....

Consider three sets A, B, and C. If you define the order as A, B, C, then the content of each segment or grouping is as follows:

A = A

B = B-A

C = C - (B+A)

.....

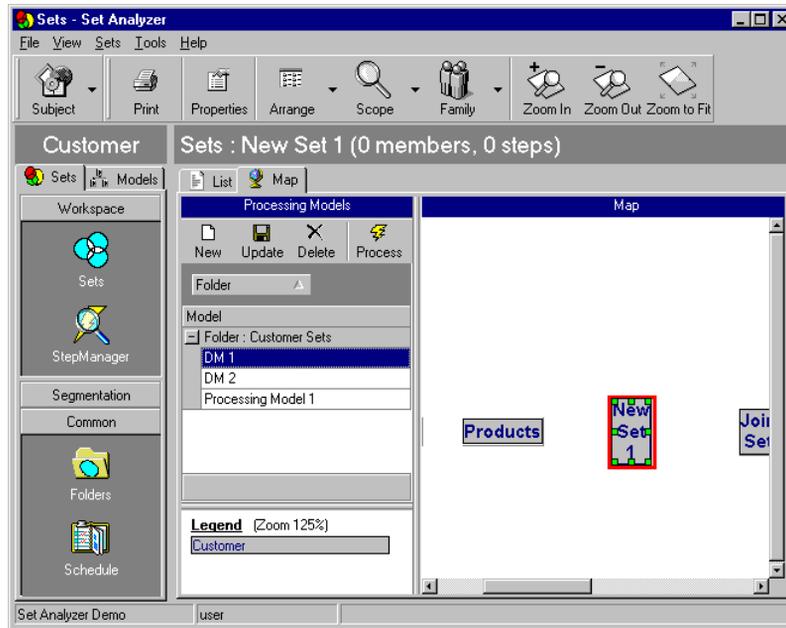
## How to View a Distinct Model

After building a model, you can view its component items on the Model Membership tab. You can order and filter these items as you do for sets.

## Processing Models

You can list, update and process models in the Sets view.

1. In Sets view click the Map tab. The Map view is displayed.



All your existing processing models are listed in the Models data grid. You can also create a new processing model here, by clicking the New button.

Available sets are listed in the Map area.

**Tip:** Use the Arrange button to control the format of the Map area. Use the Scope button to choose which sets are displayed in the map area. Use the Zoom buttons to control the size of the set boxes. To print the Map area, click the Print button.

To display the properties of a set, click on the set in the Map area and click the Properties button.

To show child and parent relationships, use the Family button.

To update a model:

1. Select the model in the Models data grid.
2. Select the sets you want to include in the model by displaying them and selecting them in the Map area. To select multiple sets, hold down the left mouse key and drag a bounding box around the sets. The selected sets are highlighted.
3. Click the Update button.

To process a model:

1. Select the model in the Models data grid.
2. Click the Process button.

To delete a model:

1. Select the model in the Models data grid.
2. Click the Delete button.

# Private and Public Sets and Folders

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## In this chapter

□ Overview .....	124
□ What are Set Analyzer Folders? .....	124
□ Folder Attributes .....	124
□ <b>Managing Folders</b> .....	<b>124</b>
Creating a Folder	125
Renaming a Folder	126
Changing Folder Access	126
Deleting a Folder	127
□ <b>Public and Private Sets</b> .....	<b>127</b>
Public Sets	127
Private Sets	128
Deleting Sets with Dependencies	129

## Overview

This chapter describes folders and how to manage sets and folders.

## What are Set Analyzer Folders?

Folders allow you to group sets together in one place to make them more easily accessible and to help identify their purpose. Folders, like sets, are created by SET ANALYZER users. Each folder is owned by the user who created it and the folder owner controls access.

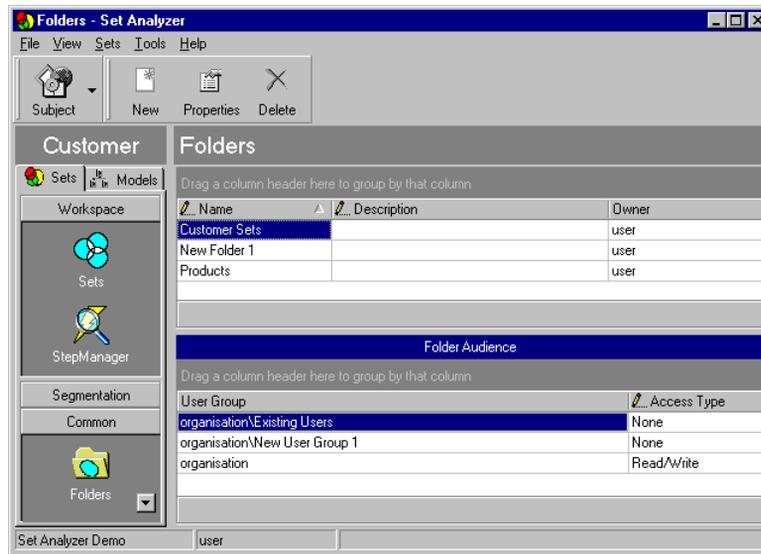
## Folder Attributes

Only the user who creates the folder can modify its attributes. The folder attributes are:

- Name: e.g. Promotions.
- Description: e.g. Analysis of promotions.
- Owner: The SET ANALYZER user who created the folder.

## Managing Folders

You manage folders from the Folders view, which you access by clicking on the Folders icon in the Common group in the SET ANALYZER Bar.



## Creating a Folder

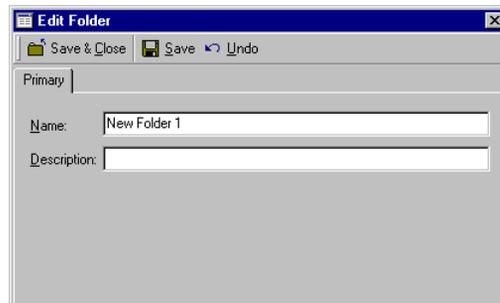
To create a new folder:

1. In the Common group, click the Folders icon.

The Folders view is displayed.

2. Click the New button.

The Edit Folder window is displayed.



3. Type a name for the new folder.
4. Type a description.

5. Click Save & Close.

The new folder is created with no access to any user group.

### Renaming a Folder

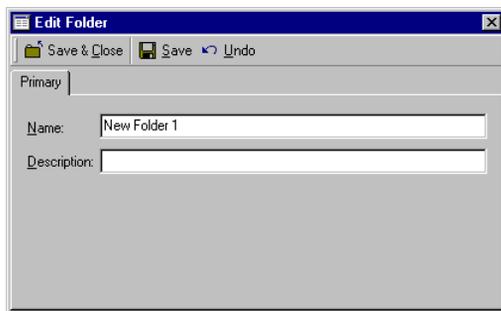
To rename a folder that you created:

1. In the Common group, click the Folders icon.

The Folders view is displayed.

2. Select the folder you want to rename and click the Properties button.

The Edit Folder window is displayed.



3. Type a new name for the folder.

4. Click Save & Close.

The folder is renamed.

### Changing Folder Access

You can change the access to any folder that you have created if you also created all the sets in the folder.

To change the type of access to a folder:

1. In the Common group, click the Folders icon.

The Folders view is displayed.

2. Select the folder you want to change.

3. In the Folder Audience part of the view, select the user group whose access you want to change.
4. In the Access Type column, choose the access type for the folder:
  - None – the selected user group does not have access to the folder
  - Read Only – the selected user group can view the contents of the folder
  - Read/Write – the selected user group can view and change the contents of the folder.

## Deleting a Folder

You can delete a folder only if you are the folder creator and the creator of all the sets in the folder. Components are deleted automatically when the folder is deleted provided that they are not being used in a model.

1. In the Folders view, select the folder that you want to delete and click the Delete button.

The Confirm Deletion of Folder dialog box is displayed, showing the consequences associated with the deletion.

2. Click Delete to confirm the action.

## Public and Private Sets

Sets can be public or private. When you create a set, it is, by default, private.

### Public Sets

A public set is a set that the user wants other users to be able to access. This is a useful method of sharing sets. The following rules apply to a public set:

- Only the creator can change its attributes and contents.
- All users can view the set contents if they have access to the folder containing the set.

### Possible actions for public sets

The following table describes restrictions on the actions that can be taken on a public set.

Action	Restriction
Delete	Only the creator can delete the set and then only if the set is not being used by a model. If you need to delete a set that is being used by a model, you should contact the user who owns the model that is using the set.
Scope	Only the creator can modify the scope and then only if the new scope is compatible with the scope of any model that contains it. If a set is not being used by any model, you can change the scope from public to private.
Rename	Only the creator can rename a set.

### Private Sets

A private set is a restricted access set. The following rules apply to a private set:

- Only the creator can access the set's content.
- You can place a private set in folders belonging to any user.

### Possible actions for private sets

The following describes restrictions on actions that can be taken with a private set.

Action	Restriction
Delete	Only the creator can delete the set and then only if the set is not being used by the set author's models.
Scope	Only the creator can change the scope.
Rename	Only the creator can rename the set.

## Deleting Sets with Dependencies

When you try to delete a set or model, the operation is disallowed if there are dependencies with other sets or users. For example, if another user's model contains a public set that you want to delete, you need to request that the other user remove the set from the model before you can delete the set.

If a set is being used by models, after you choose to delete the set a screen appears that shows:

- Details of public models that contain the set.
- A list of the users who have private models that contain the set.

Under certain circumstances, the information about the model can be private. In this case, SET ANALYZER lets you view the dependencies with the name of the user only.



# Index

## I

100% button 51

## A

Acrobat 26  
Activity button 54  
Add button 53  
Adobe Acrobat 26  
All Items button 52  
Analysis Details 54  
Audience 13  
AutoFill 33, 66, 81, 82, 83

## B

Borland Database Engine 26  
BusinessMiner 10

## C

Choices dialog box 95  
Clear button 38  
Clear Filters command 57  
Clone Steps icon 106  
cloning 105  
Collections 47  
column order  
    changing 75  
column width  
    changing 75  
columns  
    moving in the data grid 74  
combining sets 79  
Compare button 51, 86  
comparing sets 49, 84  
Confirm Step Details dialog box 71  
Conventions 14  
Copy Grid command 57  
Copy to Clipboard command 56  
Counts button 46

## D

data grid 33  
    editing 74

date filter expressions 78  
deleting members from a set 49  
Dependencies button 66  
disk space requirements 23  
distinct model  
    creating 118  
    processing 118  
distinct models 115  
Distinct Models view 118  
Documentation 8  
Documentation Service on the Web 8  
dynamic sets 33, 52, 67, 83

## E

Edit SQL dialog box 104  
Environment tab 59  
Error Message Guide 11  
Event Activity 55  
Event Analysis 52  
export files 104  
Export to Excel command 56  
Export view 103  
exporting a file 103  
exporting sets 101  
external set 64  
External set 33

## F

Filter by Selection command 57  
Filter command 57  
filter expressions 77  
    date 78  
    numeric 78  
    text 77  
filtering  
    in the data grid 74  
filtering items in the data grid 75  
Find command 56  
finishing 34  
folder  
    attributes 124  
folders 63, 123  
    creating 125, 126

    deleting 127  
    managing 124  
Freehand SQL 110  
Freehand SQL view 110  
Frozen set 33, 64  
functions menus 56

## G

group bar 34  
grouping sets 75

## H

hardware requirements 22  
Help 13  
Hidden button 49  
hierarchies 42

## I

Import view 101  
importing keys 101  
importing sets 101  
In Groups button 95

## J

Joiners button 55

## K

Keep button 54

## L

Leavers button 55

## M

Map tab 120  
Map view 120  
memory requirements 23  
Messaging Server 25  
Microsoft Windows 22  
Microsoft Windows NT 22  
Model Definition tab 118  
Model Task 108  
models  
    distinct 115  
    processing 114, 120

Models 114  
Multimedia 9

## N

naming a set 63  
New command 57  
New Model button 118  
New Set Task Specification dialog  
  box 109  
numeric filter expressions 78

## O

Object Tree window 68  
object trees 42, 68  
  building custom 90  
  custom 90  
  default 68, 90  
  user-defined 90  
Online Guides 10  
Online Help 13  
Options dialog box 58  
Organise Grid command 57  
Other Set button 51  
Overview button 49  
Overview window 50, 85

## P

Points button 54  
private sets 128  
Process button 53  
processing model  
  creating 115  
processing models 114, 120  
processing sets 62  
Properties command 57  
public sets 127

## Q

Quick Tour 9

## R

Random button 95  
Rank button 95  
Refine view 47  
Refresh command 57

## S

Same Set button 51  
Sample button 38  
sample sets

  creating 94  
  samples  
    reprocessing 97  
  sampling 93  
  Sampling dialog box 94  
  sampling module 94  
  Schedule view 108  
  scheduling set processing 108  
  scope 123  
  scoring points 97  
  Select button 46  
  Select Connection dialog box 27  
  set  
    scope 87  
  Set Analyzer  
    components 25  
    environment 31  
    installing 21, 23  
    introduction 15  
    starting 21, 26  
  Set Analyzer Agent 25, 108  
  Set Analyzer Architect 25  
  Set Children window 66  
  set creation  
    getting started 61  
  Set Details dialog box 53  
  Set Items button 51  
  Set Selector grid 46  
  Set Task 108  
  sets 16  
    advanced set creation 89  
    cloning 105  
    combining 79  
    comparing 84  
    creating 63  
    creating samples 94  
    customizing an export file 104  
    deleting 86  
    deleting sets with dependencies  
      129  
    dynamic 33, 52, 67, 83  
    existing 74  
    exporting 101  
    exporting a file 103  
    external 64  
    folders 63  
    frozen 64  
    importing 101  
    importing keys 101  
    naming 63

  private 128  
  private and public 123  
  processing 62  
  public 127  
  public and private 127  
  removing members 72  
  scheduling processing 108  
  scope 123  
  scoring points 97  
  scoring points using binary  
    numbers 98  
  snapshot 33, 36, 64, 67  
  splitting into cells 99  
  starting 68  
  terminal 64  
  updating 81  
Sets view 32  
  List tab 32  
  Map tab 32  
Show Empty button 46  
Show Log button 33  
Show Objects button 44  
snapshot sets 33, 36, 64, 67  
Software Requirements 22  
sort arrows 33  
sorting 56  
sorting items in the data grid 74  
source  
  current 19  
sources 19  
SQL 110  
  testing syntax 112  
Start button 53  
Stayers button 55  
StepManager view 36, 81, 82, 97  
subject  
  current 19  
  subjects 18  
  choosing 62  
Subtract button 53  
Summary button 54  
Synchronise button 49  
system requirements 22

## T

terminal set 64  
Terminal set 33  
text filter expressions 77  
Tools menu 58

**U**

Universe area 47  
updating sets 81  
user options 58

**V**

Visible button 49  
Visitors button 55  
VisualData view 40

VisualSets view 44