RAIMI Tools–Data Miner User's Manual

U.S Environmental Protection Agency, Region 6
Multimedia Planning and Permitting Division
1445 Ross Avenue – Suite 1200, Dallas, TX 75202

Date Revised	Manual Version	Software Version
September 2003	First Edition	Data Miner Version 1.0

Copyright © 2003 U.S. Environmental Protection Agency (U.S. EPA)

This is an unpublished work created in the year stated above. U.S. EPA owns all rights in and to this work and intends to maintain and protect it as an unpublished work. In the event of inadvertent publication, the above stated date shall be treated as the year of first publication. In the event of such publication, U.S. EPA intends to enforce its rights in the work under the copyright law as a published work. All rights reserved.

These commodities are under U.S. Government distribution license control. As such, they are not to be re-exported without prior approval of the U.S. Department of Commerce.

Trademarks

Microsoft Excel, Microsoft Access, Windows, Windows 95, Windows 98, Windows Me, Windows NT, Windows 2000, and WordPad are trademarks of Microsoft Corporation in the USA and other countries. AutoCAD is a registered trademark of Autodesk, Inc. Other company, product and service names may be trademarks or service marks of others.

Rights and Disclaimer

The document is for informational and instructional purposes. U.S. EPA reserves the right to make changes in specifications and other information contained in this publication without prior notice, and the reader should, in all cases, consult U.S. EPA to determine whether any changes have been made.

U.S. EPA MAKES NO WARRANTY OF ANY KIND WITH REGARD TO THIS MATERIAL INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OR MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

U.S. EPA SHALL NOT BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL, OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING BUT NOT LIMITED TO LOST PROFITS) ARISING OUT OF OR RELATED TO THIS PUBLICATION OR THE INFORMATION CONTAINED IN IT, EVEN IF U.S. EPA HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

RESTRICTED RIGHTS LEGEND Use, duplication, or disclosure by the Government is subject to restrictions as set forth in the subdivision (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

The work presented in this document has been funded by the U.S. EPA. Mention of trade names or commercial products does not constitute endorsement or recommendation for use by the Agency. This document has not been subject to the agency's peer and administrative review and has not as yet been approved as an EPA document.

Table of Contents

Data Miner User's Manual

1 Introduction 1-1

Understanding Data Miner 1-1

Supported Database Structures 1-2

Table Linkage Considerations 1-2

Query and Extraction Considerations 1-3

How to Use This Manual 1-3

2 Installing Data Miner 2-1

Installing Data Miner 2-1

Installing the InterBase Server 2-5

3 Starting Data Miner 3-1

Starting Data Miner 3-1

Opening a Dataset 3-3

Navigating Data Miner 3-4

The Main Window 3-4

The Menu Bar 3-6

Toolbar Buttons 3-7

4 Using the Data Organizer Editor 4-1

Starting the Data Organizer Editor 4-1

The Tables Tab 4-2

The Views Tab 4-3

Using the List of Views 4-4

Importing a View 4-5
Creating a New View 4-6
Exporting a View 4-7
Adding Tables to a View 4-8
Working with the Join and Fields Subtabs 4-9
Join Subtab 4-10
Field Subtab 4-12

5 Running a Query 5-1

Selecting Tables and Views 5-1
Composing a Query 5-3
Query For 30-Source Example 5-3
Working with Sample Queries 5-4
Dallas County Emissions Greater Than Zero Tons Per Year 5-5
Statewide Query For Benzene Emissions Greater Than 5 Tons Per Year 5-5
All Emissions From An Individual Source 5-5
Working with the .cfg File 5-5

6 The Report Window..... 6-1

Navigating the Query Report Window 6-2
Sorting Query Results 6-3
Resizing the Lower Frame 6-3
Saving a Query Report 6-3

7 References 7-1

Introduction 1

This chapter gives you a brief overview of the **Data Miner** program and shows you how to navigate through Data Miner, giving you a quick start in analyzing the data you need.

In this chapter, you will learn to:

- Understand Data Miner
- Understand supported database structures
- Understand table linkage considerations
- Understand query and extraction considerations
- Use this manual

Understanding Data Miner

Data Miner is a large client-server database processing system that facilitates the assembly of multi-source emissions inventories for air and risk modeling.

U.S. EPA developed Data Miner under the Regional Air Impact Modeling Initiative (RAIMI) to meet the functional need of accessing large regulatory air emissions databases, such as the Texas Point Source Database (PSDB), to extract information to support air and risk modeling, risk attribution analysis, and solutions tracking.

Modeling and risk-assessment projects require inspection and analysis of large databases. Because there are numerous relational databases, each having many fields, it can take significant time to track down particular details embedded in this mass of information. In addition to the complexity of the information, many applications are unable to handle the massive volumes of data. For example, common desktop software such as Microsoft Excel cannot handle more than 65,600 rows, and Microsoft Access is limited to data sizes smaller than 26 letters.

To overcome these limitations, you can use a client-server application such as Data Miner. The server consists of a Relational DataBase Management System (RDBMS) to prepare datasets linked to your existing databases from which information must be extracted. The client application queries and modifies the datasets.

With Data Miner, you can:

- Create and edit database table relationships and views for complete access to all emissions attributes maintained in the database
- Link source-specific parameters necessary for air and risk modeling from multiple database tables through the Data Organizer component
- Extract the source-specific data sets by constructing and executing simple or complex data queries in the Query Builder component
- Generate database/spreadsheet tables as a comma-delimited text file (*.csv) or Microsoft Access file for input into air and risk modeling components. (Note that Data Miner output may require pre-processing before being used as input for particular models.)

Supported Database Structures

You can use any database that is in the Interbase format. To use Data Miner with your existing databases, you will need access to an InterBase RDBMS (***.gdb**).

The following databases have been successfully converted to .gdb format and accessed with Data Miner:

- Louisiana Toxic Emissions Data Inventory (TEDI)
- Texas Point Source Database (PSDB)
- Federal Toxic Release Inventory (TRI)

Note: The examples in this manual refer to the PSDB.

Table Linkage Considerations

The PSDB contains 63 tables. Typically only a small number of these tables must be joined to provide adequate information to conduct air and risk modeling. Other tables may be of interest to support other project objectives, such as attribution analysis or permitting support. The ability to reliably and accurately combine relational data tables is essential to emissions characterization, air modeling, and risk modeling.

Query and Extraction Considerations

Many databases, including the PSDB, contain large information that is not directly or immediately usable to achieve project objectives. Therefore, the capability to select certain data sets over others is necessary. For example, the PSDB contains emissions for the entire state of Texas, but a project may focus on only a single county. The ability to reliably and accurately extract datasets of interest is essential to efficient project and data management.

How to Use This Manual

This manual uses a sample emissions characterization scenario to better illustrate how to use Data Miner.

The example uses a hypothetical 30-source test subset, not the entire PSDB. The 30-source test subset includes multiple facilities, sources, source types, contaminants, and emission rates. It is representative of the PSDB and the information needs that Data Miner users typically demand. The following table presents the 30-source test set.

No.	UPN	Type
1	JE0F01W	FLARE
2	JE0F011	FUGITIVE
3	JE0F00U	FUGITIVE
4	JE0F000	STACK
5	JE0F01K	STACK
6	JE0F01X	STACK
7	JE4D028	FUGITIVE
8	JE4D021	FUGITIVE
9	JE4D025	FUGITIVE
10	JE4D001	STACK
11	JE4D01H	STACK
12	JE4D01P	STACK
13	JE1500S	FLARE
14	JE15015	FUGITIVE
15	JE15017	FUGITIVE

No.	UPN	Type
16	JE15014	STACK
17	JE1504P	STACK
18	JE15036	STACK
19	JE110D3	FLARE
20	JE1104E	FUGITIVE
21	JE110ED	FUGITIVE
22	JE11027	STACK
23	JE1105	STACK
24	JE11004	STACK
25	JE0S00S	FLARE
26	JE0S009	FUGITIVE
27	JE0S00J	FUGITIVE
28	JE0S001	STACK
29	JE0S002	STACK
30	JE0S003	STACK

This manual uses the Data Miner Data Organizer Editor to construct a view linking the following seven tables to produce an emissions inventory containing the data elements necessary to support modeling, attribution analysis, and solutions tracking.

- AC_ACCOUNT
- CCD_COUNTYCODE
- CE_CURR_EMISS
- CN_CONTAM_NAM
- FC_FACILITY
- FB_PT_FC_INDX
- PN_POIN_NAME
- PT_POIN

Installing Data Miner 2

This chapter guides you through the basic steps for installing Data Miner. In this chapter, you will learn to:

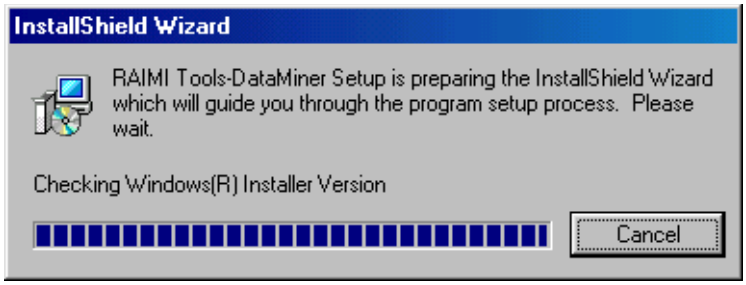
- Install Data Miner
- Install the InterBase Server

Installing Data Miner

Perform the following steps to install Data Miner.

Step 1 Unzip the DataMiner.zip file.

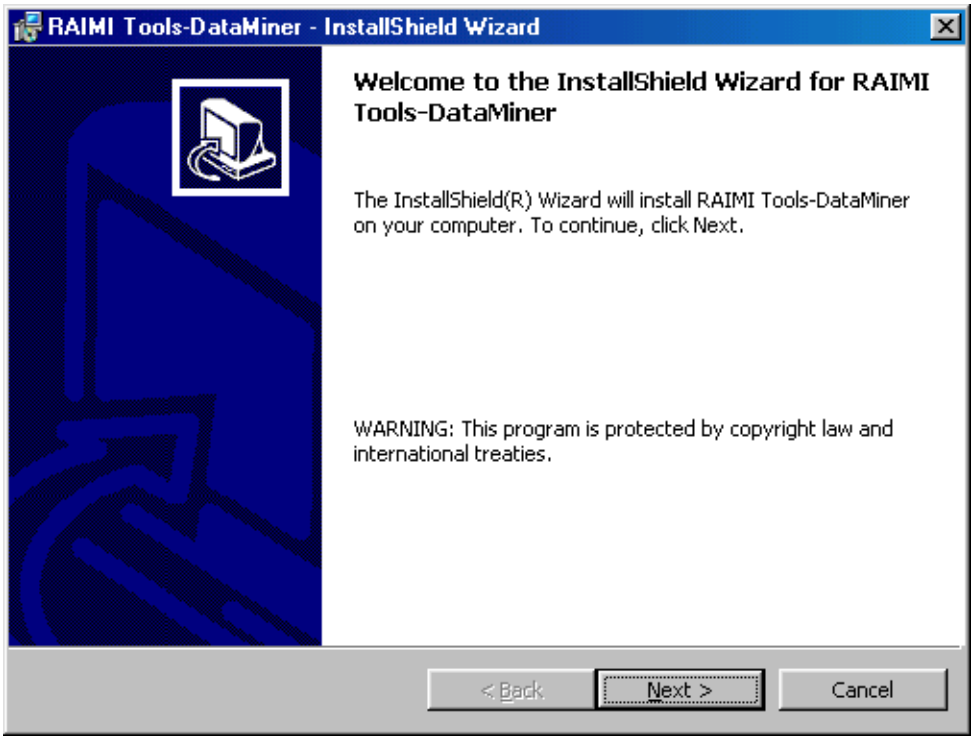
Step 2 Double-click on the setup.exe file. The installation program sets up the Windows Installer on your system.



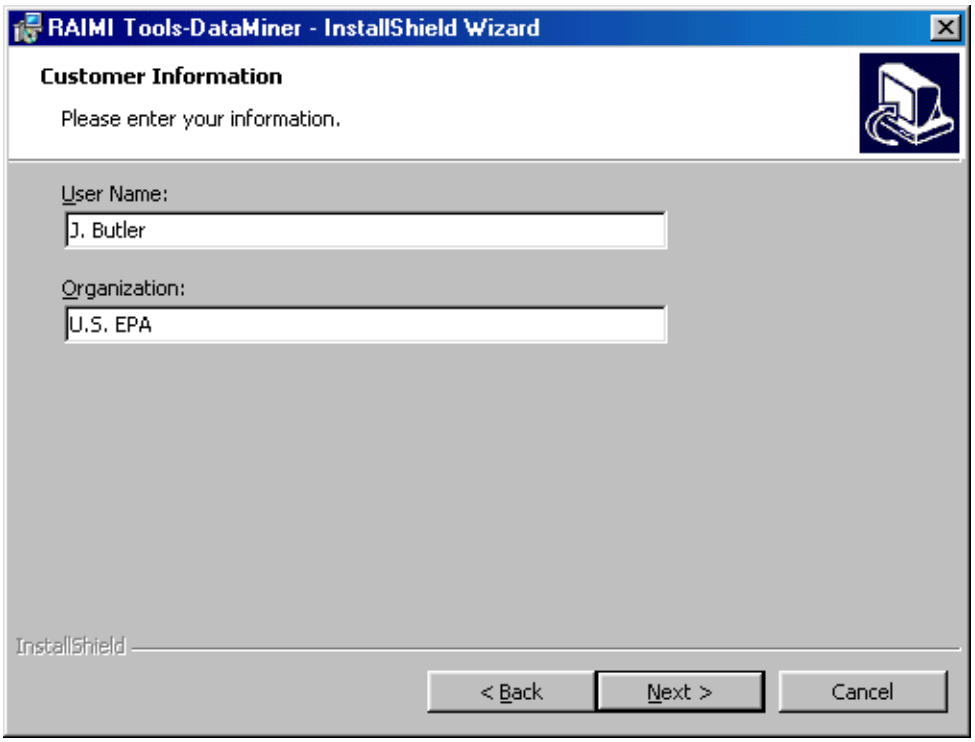
Step 3 Once the Install Shield Wizard completes its configuration, it displays a window similar to the following.

Step 4 If prompted, restart your computer to continue the installation.

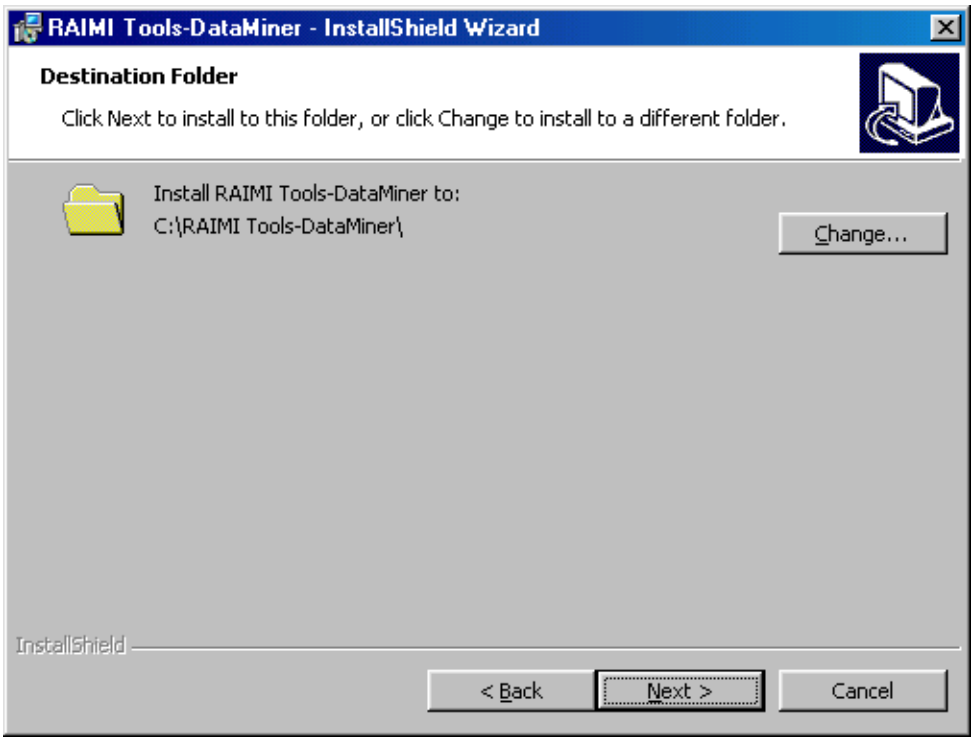
Step 5 The RAIMI Tools-DataMiner InstallShield Wizard starts. Click Next to continue the installation.



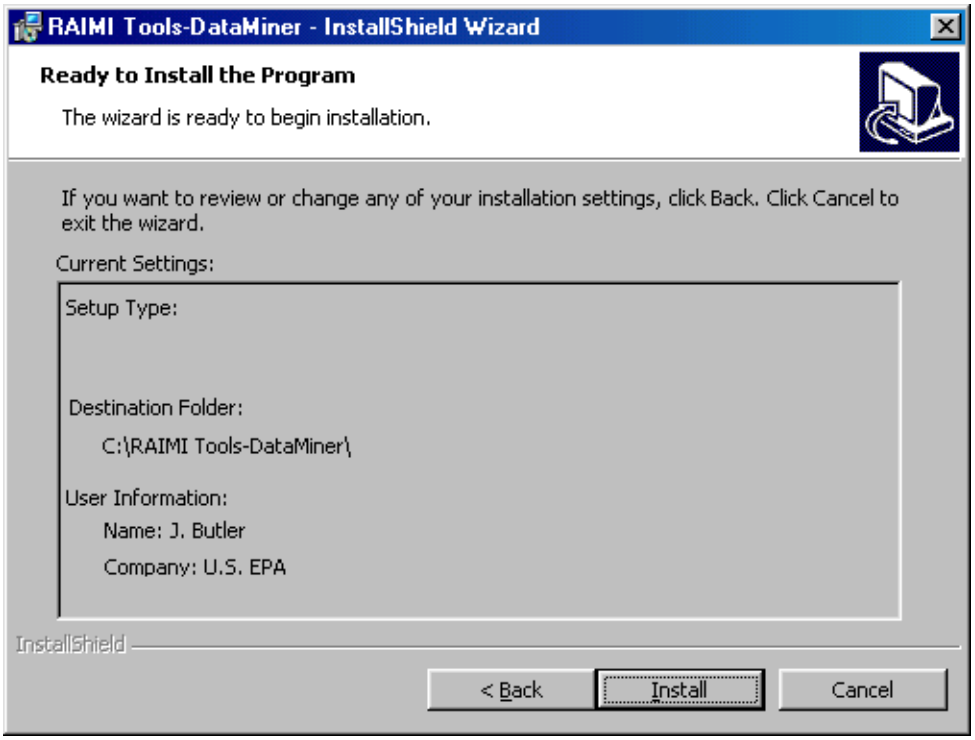
Step 6 Enter your user name and organization and click Next.



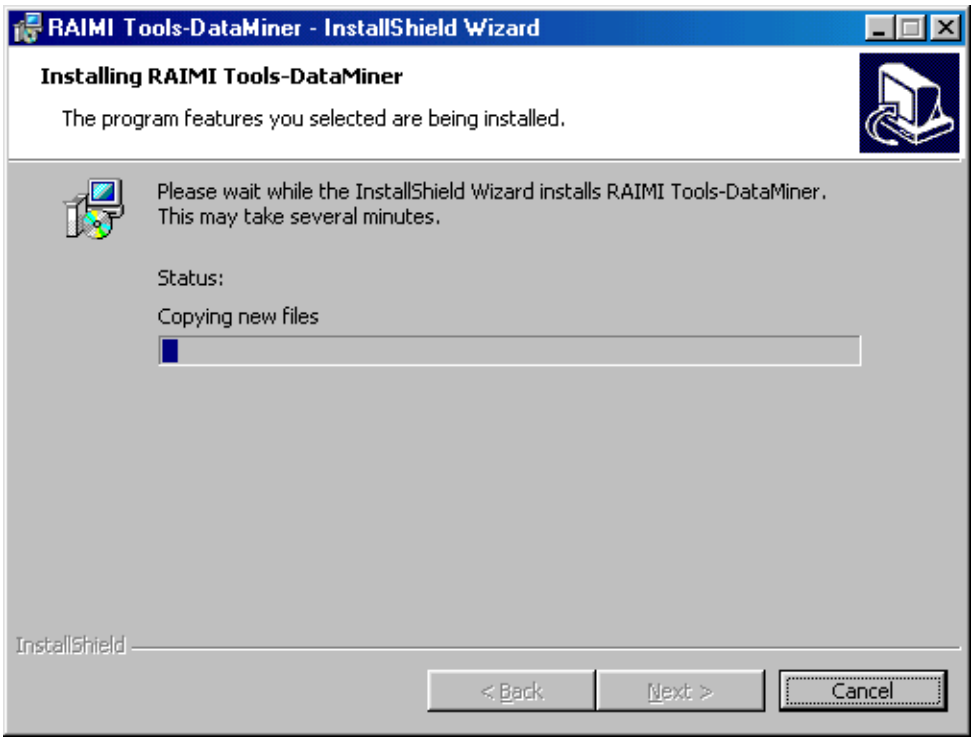
Step 7 The Data Miner installation defaults to the RAIMI Tools-DataMiner folder. Click Change to change to a different folder. Once you select the correct folder, click Next.



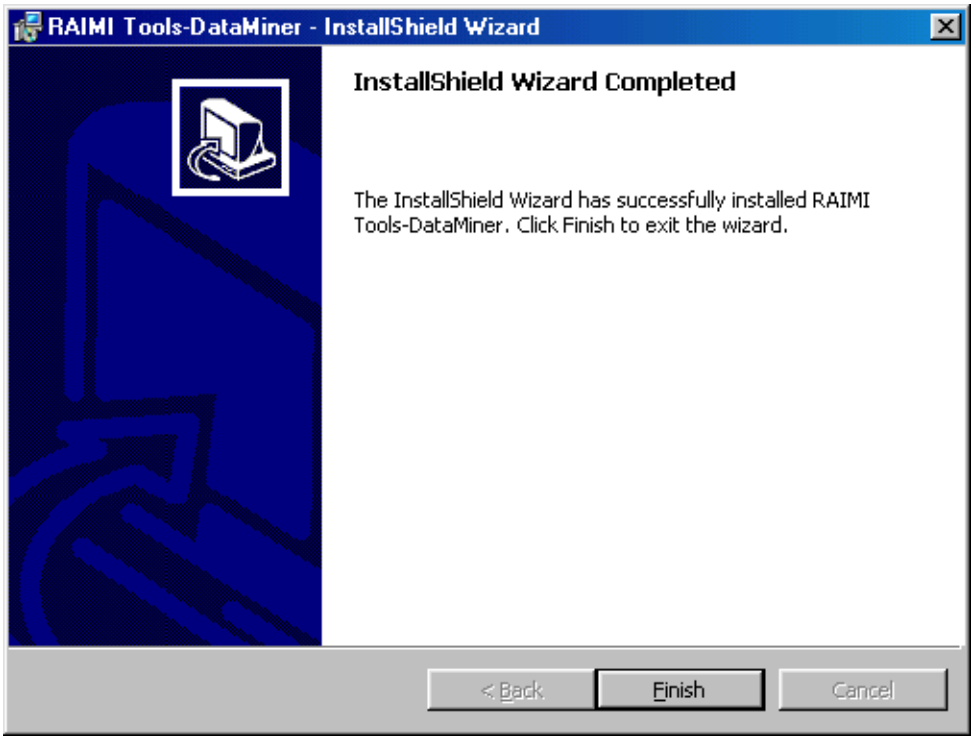
Step 8 Confirm the summary information is correct and click Install. If any information is not correct, click Back to correct the information and continue the installation.



Step 9 The installation begins and displays a status indicator similar to the following.



Step 10 Once the InstallShield Wizard copies all the files to your computer, click Finish to complete the installation.



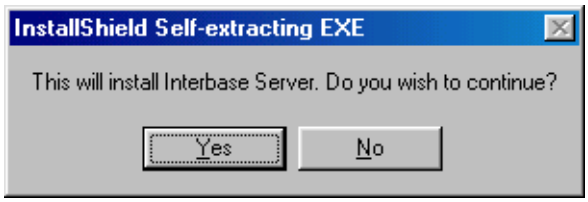
Installing the InterBase Server

Before you can use Data Miner, you must install the InterBase server on your computer. The InterBase Server installation is part of the Data Miner installation.

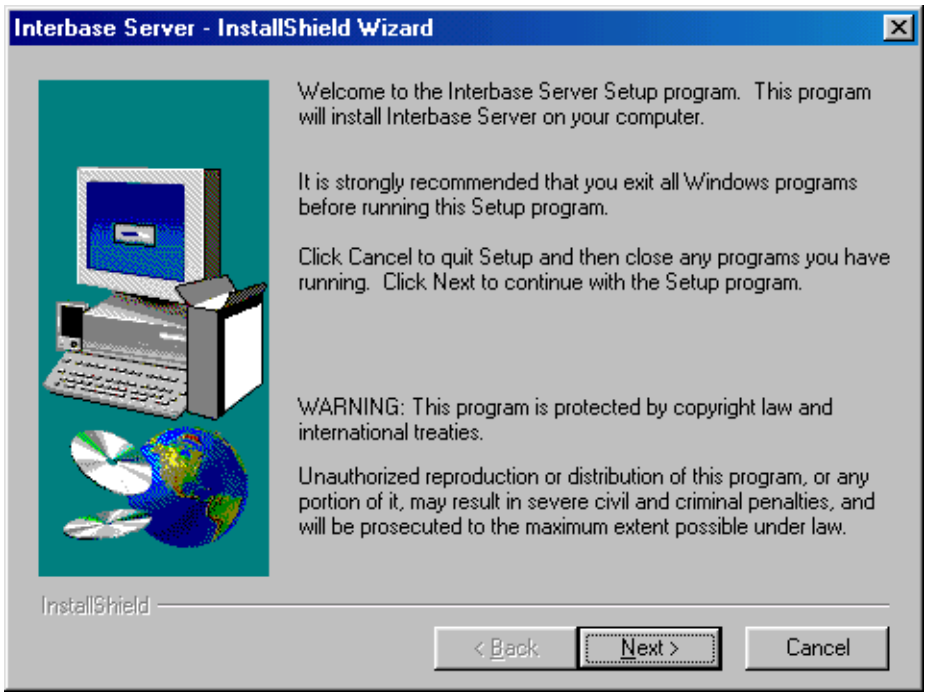
Note: For more information on installing and working with the Interbase server, see the InterBase documentation.

To install InterBase, perform the following steps.

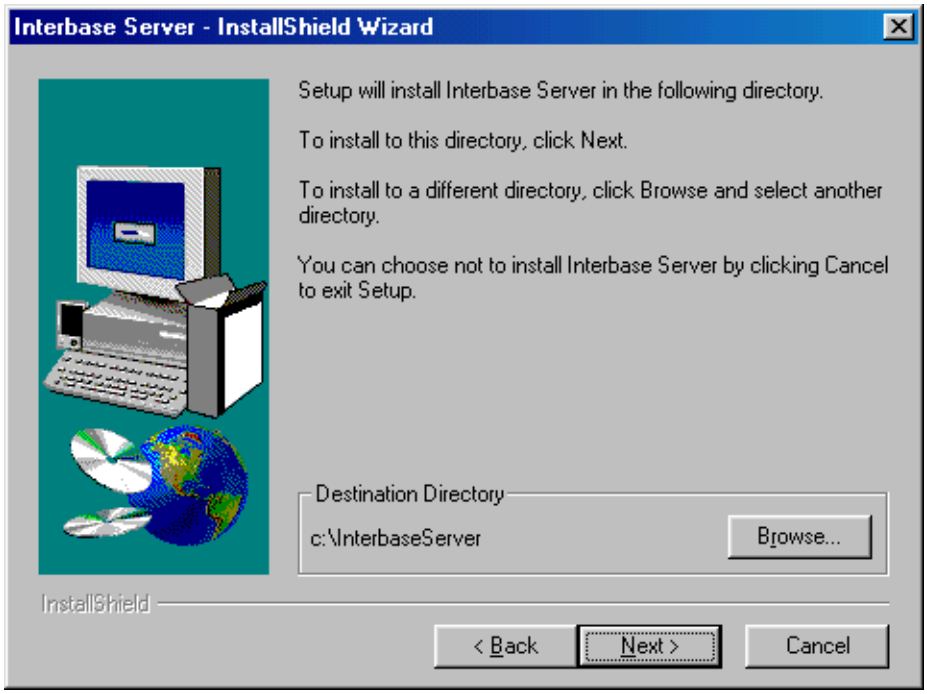
Step 1 Once you install Data Miner, the installation process prompts you to install InterBase. Click Yes to continue the installation.



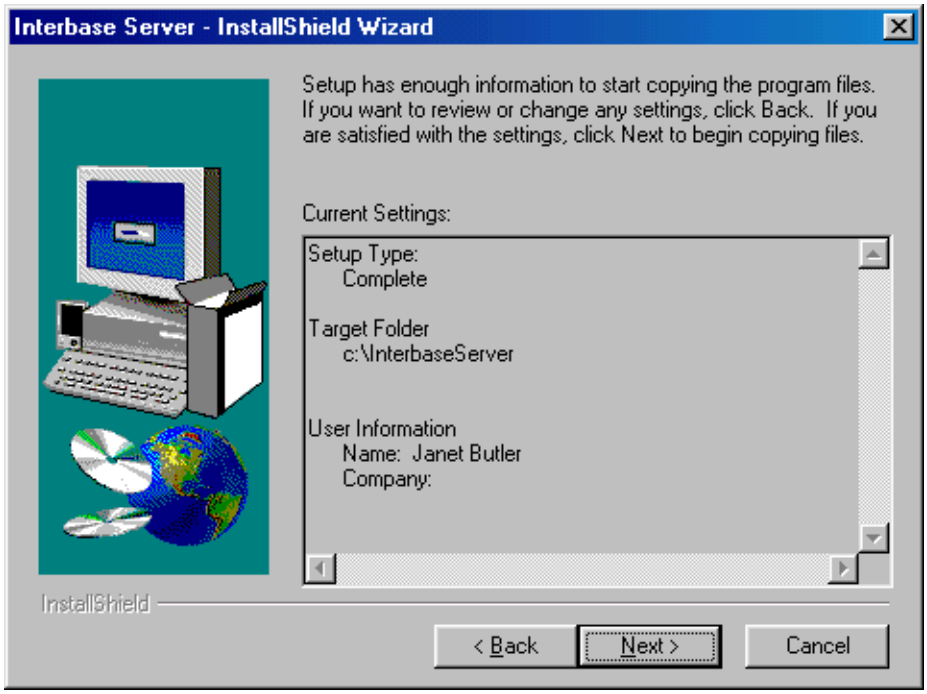
Step 2 Ensure you have no other programs running and click Next.



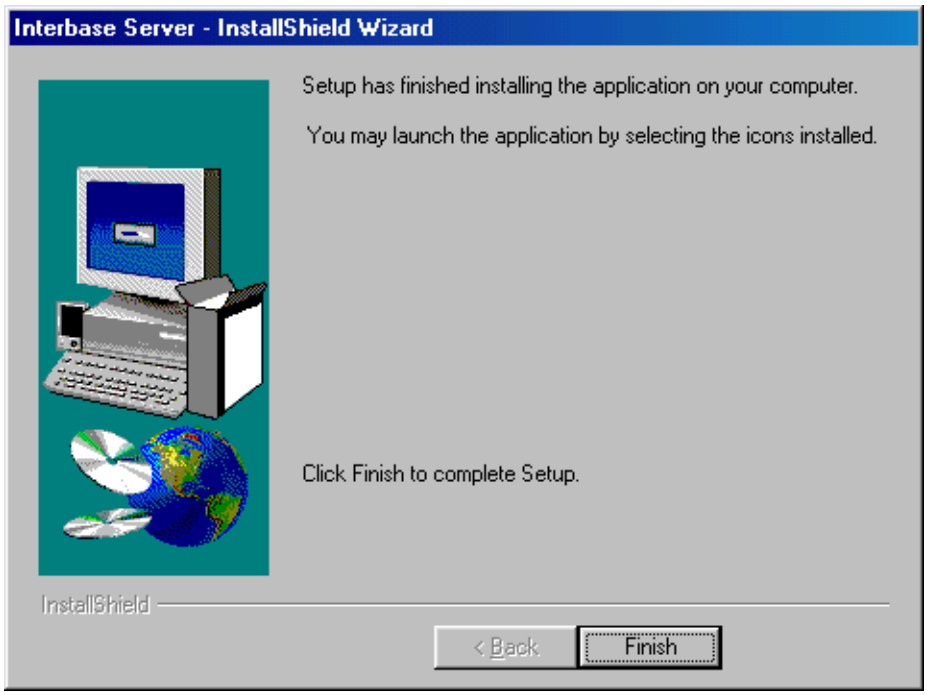
Step 3 The InterBase installation defaults to the Interbase folder. Click Change to change to a different folder. Once you select the correct folder, click Next.



Step 4 Confirm the summary information is correct and click Install. If any information is not correct, click Back to correct the information and continue the installation.



Step 5 Click Finish to complete the InterBase installation.



Starting Data Miner 3

This chapter guides you through the basic steps for starting Data Miner. In this chapter, you will learn to:

- Start Data Miner
- Open a dataset
- Navigating Data Miner

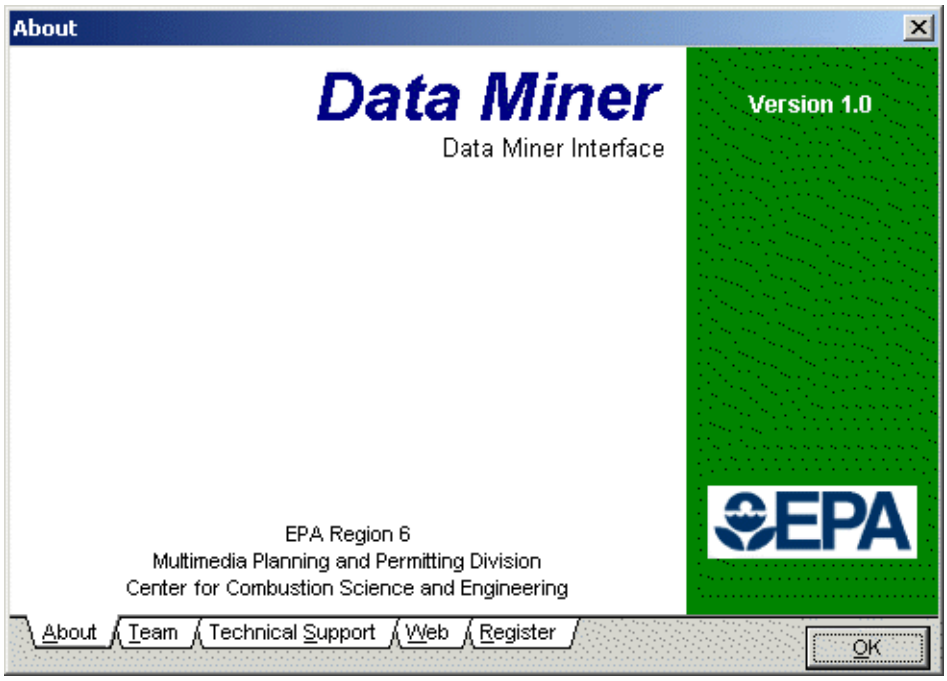
Starting Data Miner

Perform the following steps to start Data Miner.

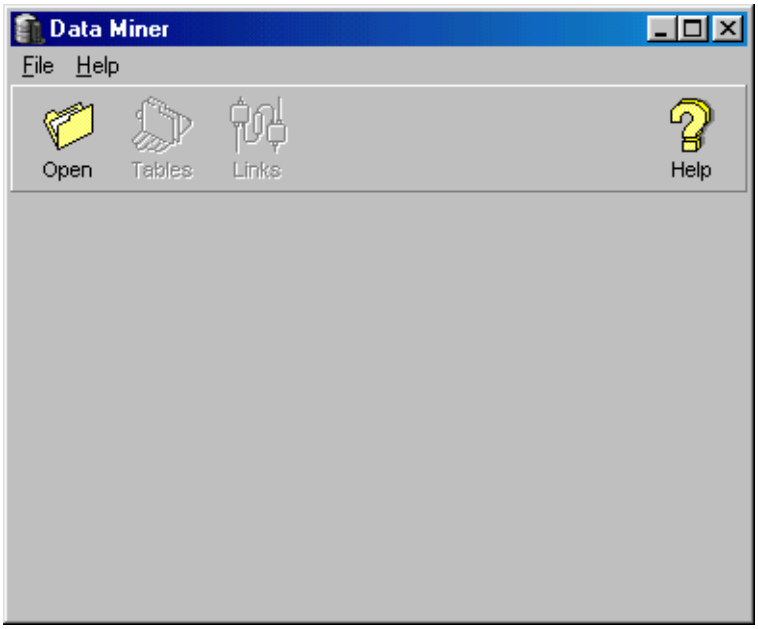
Step 1 Double-click on the **Data Miner** icon, if you have created a shortcut on the desktop, or, from the Windows **Start** menu, choose:

Programs > Data Miner

The **About** dialog box appears.



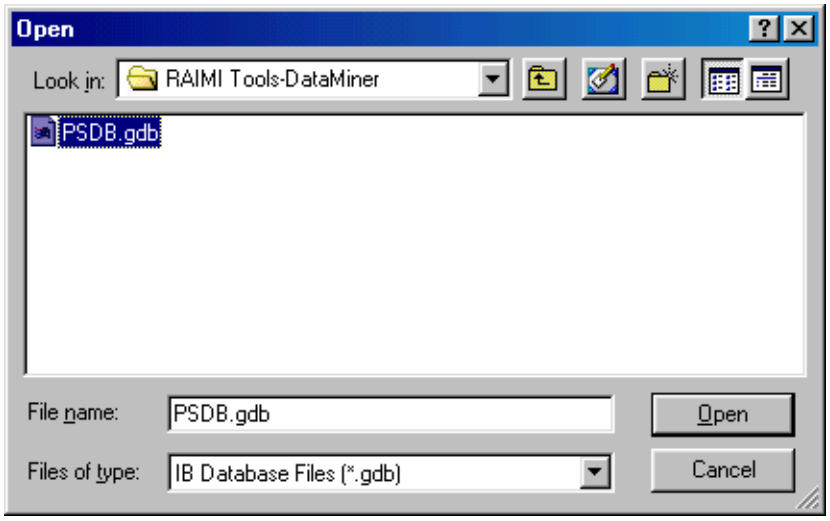
Step 2 Click **OK**. The **Data Miner** interface main window appears.



Opening a Dataset

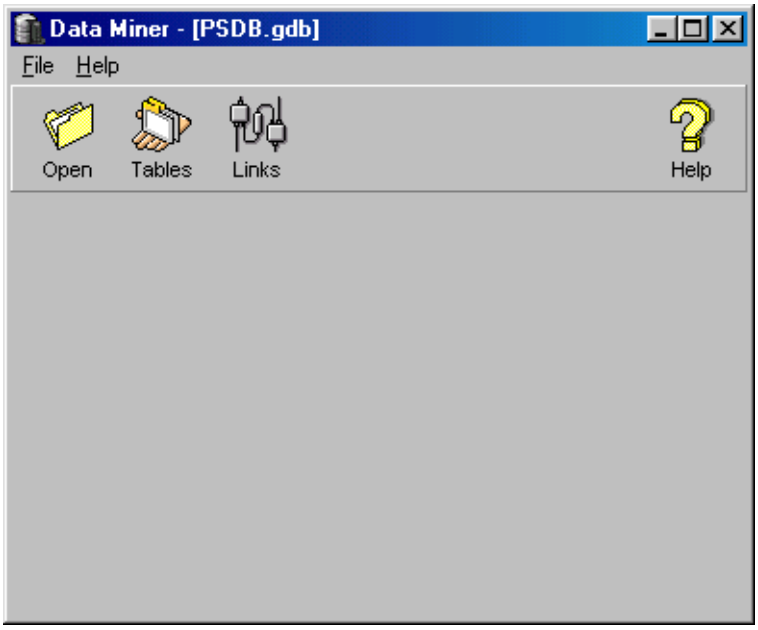
Once you start Data Miner, you must open a dataset. Perform the following steps to open a dataset.

Step 1 Select **File** I **New** or click on the **Open** button to display the Open dialog box.



Step 2 Specify the name and location of the dataset (***.gdb** file) you wish to use. Use the Open menu to locate the file **PSDB.gdb**, highlight it and click the **Open** button.

Data Miner returns you to the main window. The remaining toolbar buttons, which were shaded out before, are now active.



Navigating Data Miner

Data Miner has three principal components:

- **The main window** that provides access to the principal tools
- **The Data Organizer Editor (**

), a tool that allows you to:
  - Create or delete Views of the Tables contained in the database
  - Add and remove Tables from the Views
  - Add and remove Fields to be displayed under the Tables
- **The Query Builder (**

), a tool that allows you to compose SQL Queries with a few mouse clicks

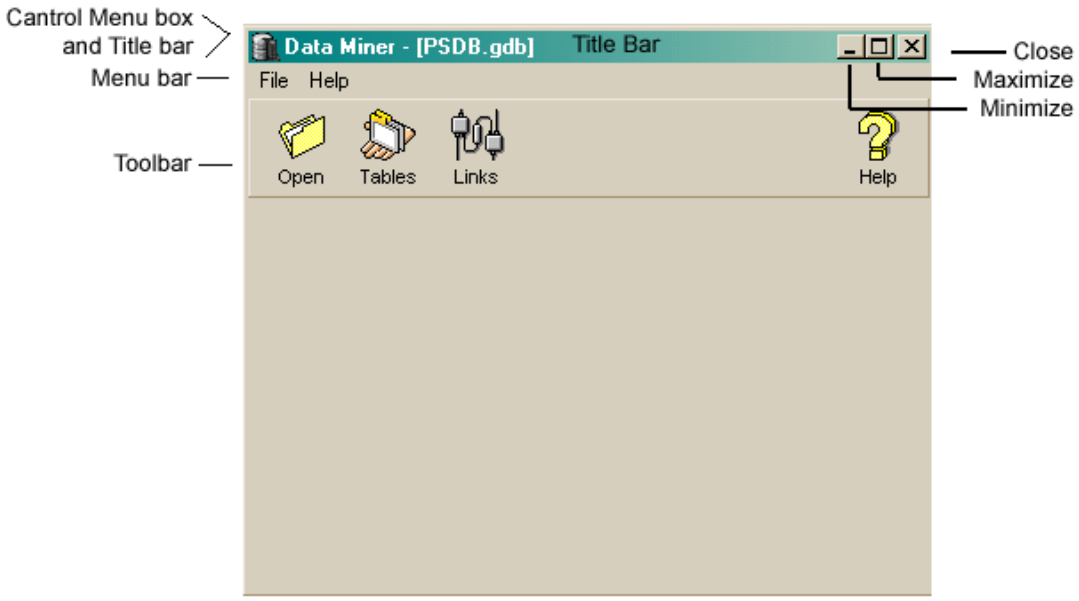
In this section, you will learn how to navigate Data Miner's main components:

- The main window
- The menu bar
- The toolbar buttons

The Main Window

Data Miner's window components follow the standard Windows features. For more information on standard Windows commands, see your MicroSoft Windows documentation.

The following figure highlights the components of the Data Miner main window.

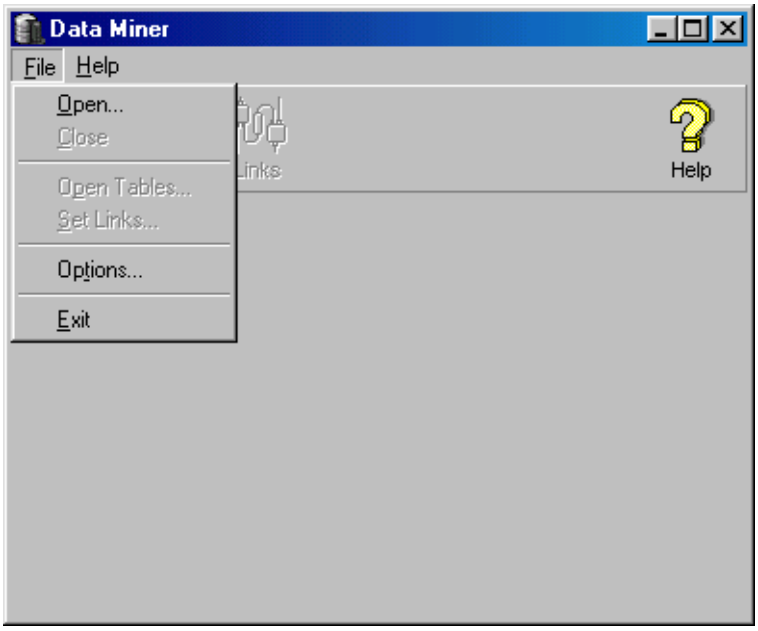


The following table lists the components of the Data Miner window.

Window Component	Description
Control Menu box	Displays the options: Move, Size, Minimize, Maximize, and Close
Title Bar	Displays the program name (Data Miner) and the full path and name of the project file currently in use.
Minimize button	Minimizes the Data Miner window.
Maximize/Restore button	Maximizes the Data Miner window to occupy the entire screen or restores its pre-maximized size and position.
Close button	Closes Data Miner.
Menu bar	Displays menu names. To open a menu, move the mouse over the menu name and press the left mouse button. A drop-down menu appears displaying a list of related commands.
Toolbar buttons	Series of shortcut buttons that provides fast selection of some of the menu commands.

The Menu Bar

To access the menu bar, click on the File menu, or press Alt-F.



The following table lists descriptions of each menu bar command option.

Menu Bar Component	Description
Open	Displays the dialog box in which you specify the name and location of the ***.gdb** file you wish to access for information.
Close	Closes a ***.gdb** file that is already open.
Open Tables	Opens the list of **Tables** and **Views** available for query. Select one and click **OK** to launch the **Query Builder**.
Set Links	Opens the dialog box in which you can: • Add or remove links between the **Tables** and **Views**, **Master Fields** and **Lookup Fields** • Create or remove **Views** • Edit the name of the currently selected **Table**
List of Files	Contains a list of up to four of the most recently used ***.gdp** files.
Exit	Closes the Data Miner program.

Toolbar Buttons

The toolbar buttons are shortcuts to some of the menu items in the drop-down menus. The following table explains the function of each toolbar button, as well as the equivalent menu command.

Button	Menu Command	Description
	File I Open	Displays the dialog box in which you specify the name and location of the ***.gdb** file you wish to access for information.
	File I Open Tables	Opens the list of **Tables** and **Views** available for query. Select one and click **OK** to launch the **Query Builder**.
	File I Set Links	Launches the Data Organizer Editor in which you can: • Add or remove links between the **Tables** and **Views**, **Master Fields** and **Lookup Fields** • Create or remove **Views** • Edit the name of the currently selected **Table**

Using the Data Organizer Editor 4

The Data Organizer Editor allows you to view and modify the structure of your dataset. In this chapter, you will learn to:

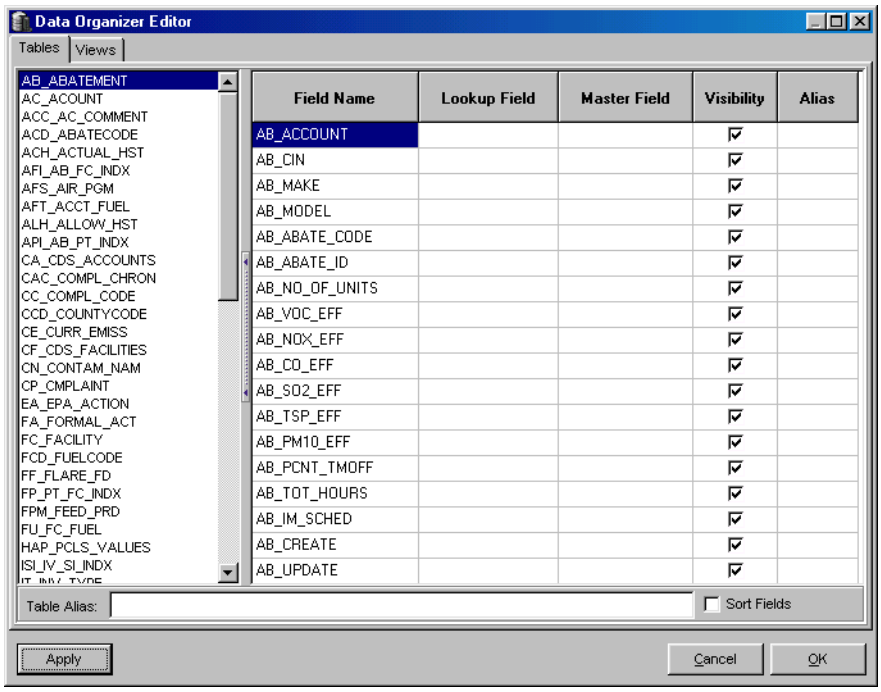
- Start the Data Organizer Editor
- Use the Tables Tab
- Use the List of Views
- Create or Change a View
- Work with the Join and Fields Subtabs
- Set Links

Starting the Data Organizer Editor

Perform the following step to start the Data Organizer Editor.

Step 1 Select the menu command **File** I **Set Links** or click on the **Links** toolbar button to start the **Data Organizer Editor.**

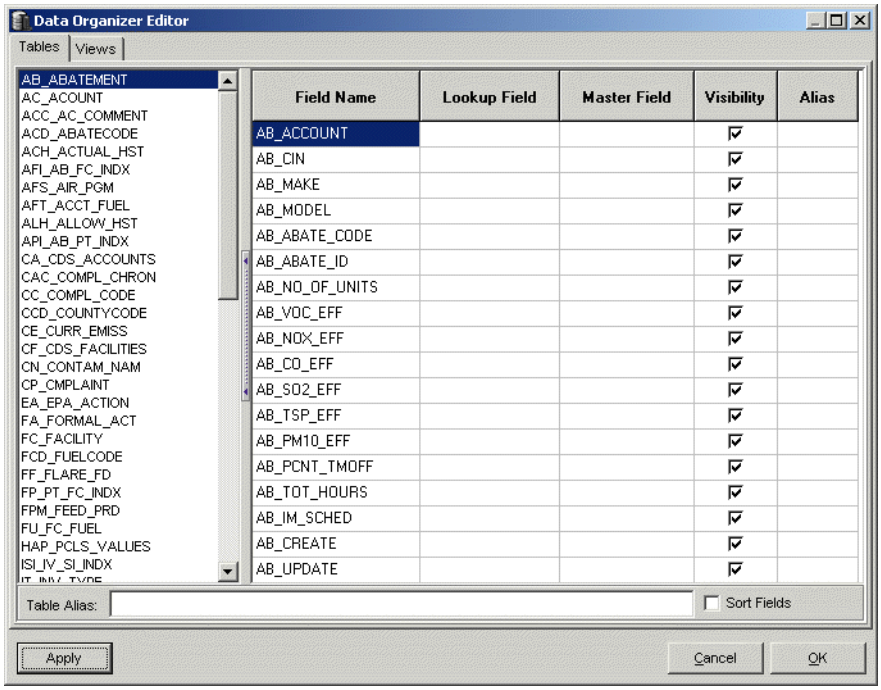
The **Data Organizer Editor** appears with the **Tables** tab selected.



The Tables Tab

The Tables Tab appears when you open the Data Organizer Editor. The Tables tab enables you to establish certain conventions for viewing and accessing the information in a table. These conventions, which include field aliases, lookup fields, and visible fields, will apply whenever the data table is accessed.

When you select the **Tables** tab, Data Miner displays a two-frame window that displays all of the **Tables** in the database.



To modify information in the Tables tab, perform the following steps.

Step 1 To edit an **Alias**, select the Table in the list and enter the changes in the text window of the lower toolbar.

Step 2 Use the **Sort Fields** checkbox to alphabetize the **Fields** list.

Step 3 To assign a lookup field to a field in the active table, highlight the column, click on the ellipse (...), and select the table and field from the pull down list.

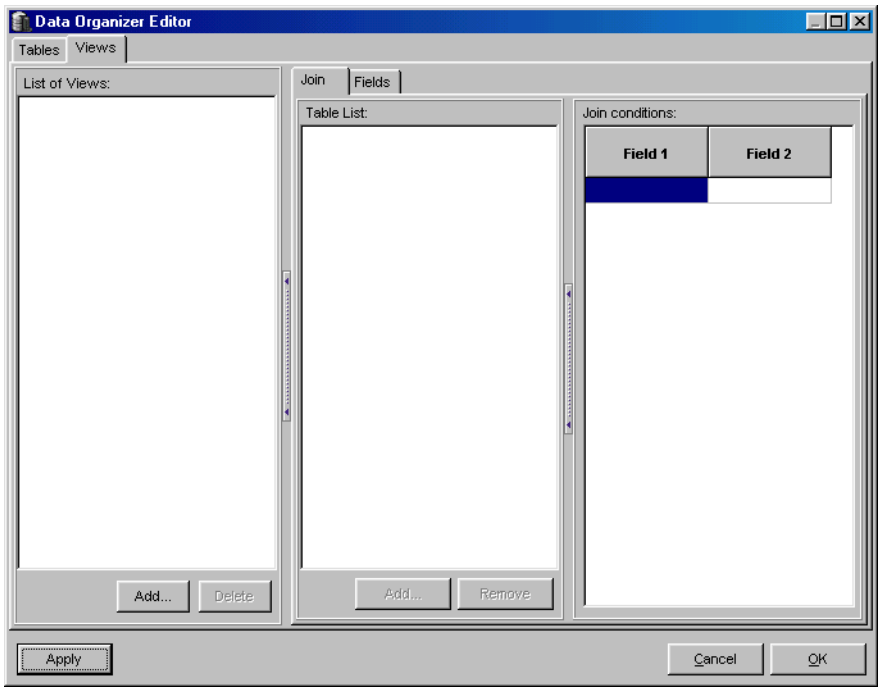
Step 4 To assign a master field to a field in the active table, highlight the column, click on the ellipse (...), and select the table and field from the pull down list.

The Views Tab

The Views tab lists the views for the data base. A View is a group of linked data tables within the data base being operated on. The view should contain all the data fields that you want to query on.

To work with the Views tab, perform the following steps.

Step 1 Click on the Views tab to switch to the Views for the emissions characterization dataset.



The toolbar at the bottom of the **Data Organizer Editor** window, which appears under both tabs, contains three buttons with the following functions:

Button	Function
Save	Saves changes made using the Data Organizer Editor.
Cancel	Closes the Data Organizer Editor and returns you to the main window without affecting any changes.
OK	Closes the Data Organizer Editor and returns you to the main window with changes.

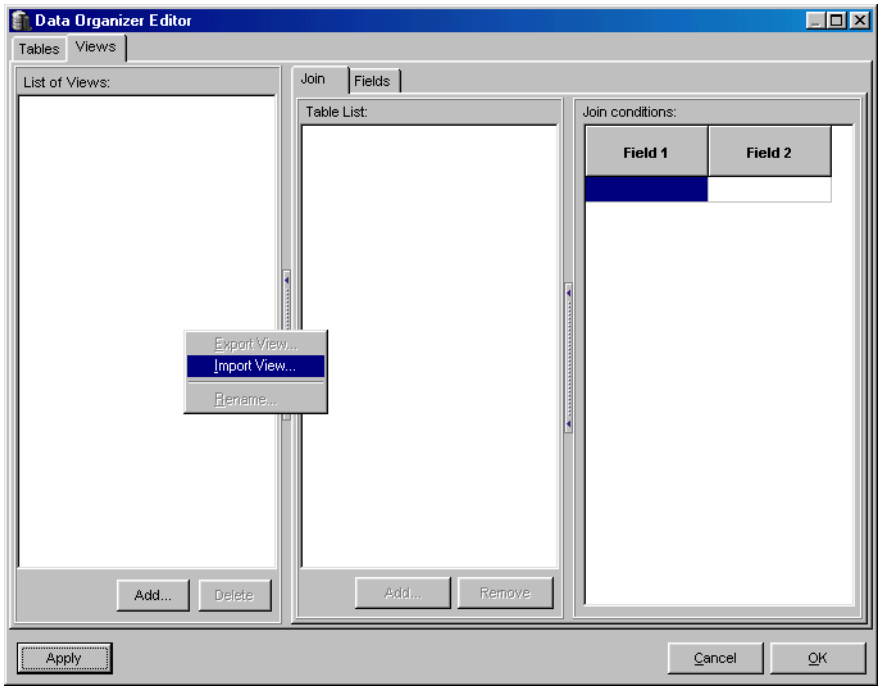
Using the List of Views

The Views window consists of two sections: the List of Views on the left and the Join/Fields subtabs on the right. The List of Views section is where you add, delete, rename, import, or export Views. To import, export, or rename, right click in this area.

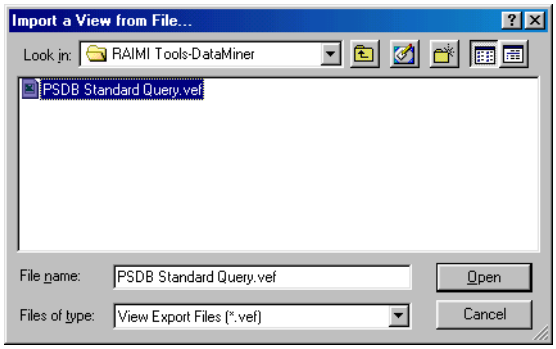
Importing a View

Perform the following steps to import a view file (.vef) into Data Miner.

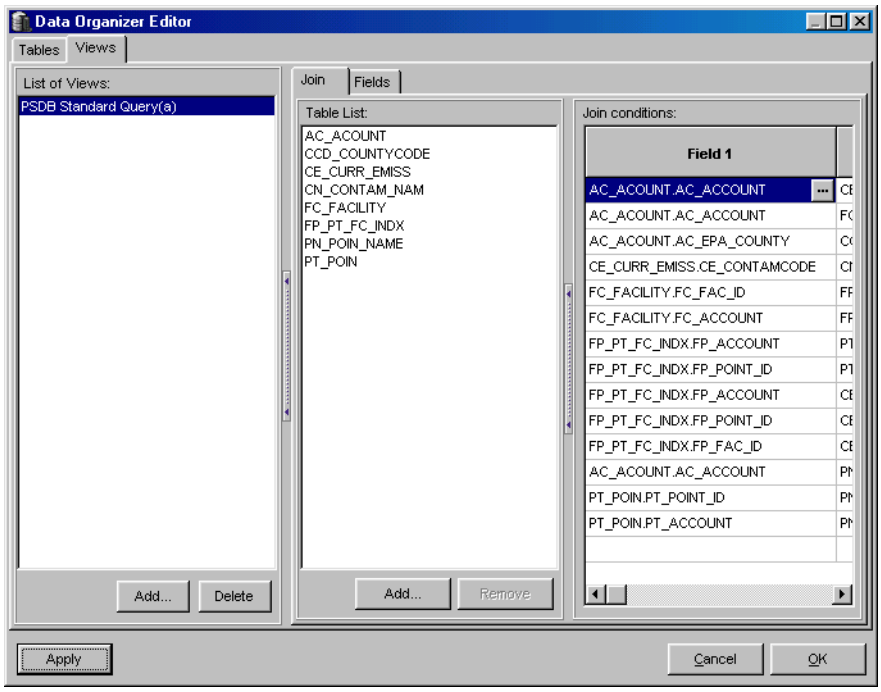
Step 1 Right click in the List of Views section and select Import View.



Step 2 Data Miner 1.0 includes one sample view, "PSDB Standard Query.vef". This view links the PSDB tables that provide the necessary information for air dispersion and risk modeling, in addition to supporting source and emissions information. Select the .vef file name and click Open.



Step 3 The new view appears highlighted in the List of Views window.



The **List of Views** frame contains the following buttons:

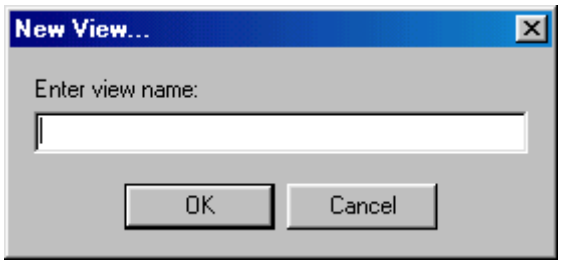
Button	Function
Add	Creates a new View.
Delete	Removes Views that you no longer need.
Create	Appears only in case of a special-structure file.

Creating a New View

To create a new view, perform the following steps.

Note: To create or modify a View, you must be very familiar with the data dictionary to know which data fields are in each table and how to link the tables together. If you are modifying a view for the PSDB, refer to the PSDB data dictionary.pdf on the Data Miner distribution CD.

Step 1 Click the Add button in the List of Views. The New View window appears.



Step 2 Enter the name of the new view and click OK.

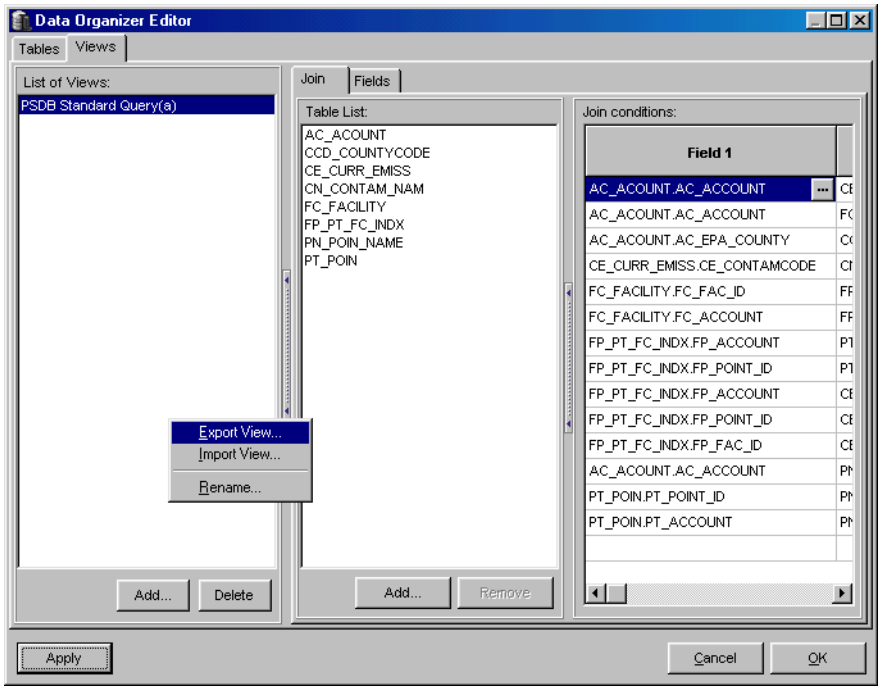
Step 3 After saving the names of the view, you must select tables and create join conditions to actually create the view.

Exporting a View

It is recommended that you make a copy of a View before changing it. To make a copy, perform the following steps.

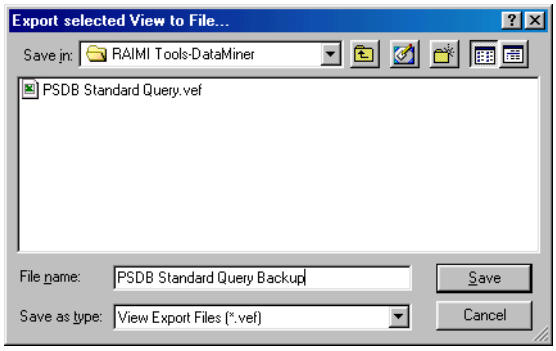
Note: Data Miner saves the open view when you close the Data Organizer Editor using the OK button on the bottom right corner of the window. Once you close the view in this manner, it is not possible to restore the original view. To modify a view but keep the original without changes, you must export the view and save it with a new file name, then import the view back into Data Miner.

Step 1 Right click in the List of Views section.



Step 2 Select Export View.

Step 3 Specify the file name and click Save.

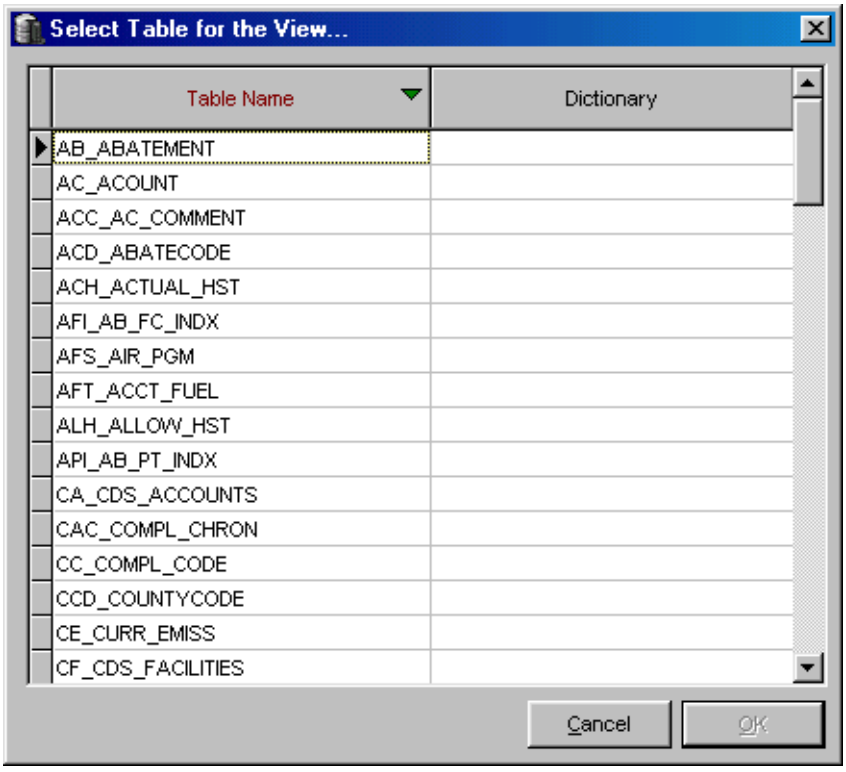


Adding Tables to a View

When you add tables, you must link them to similar data fields in other tables to ensure the View works properly. To add tables to a View, perform the following steps.

Step 1 Open or create the view you want to work with.

Step 2 Click the Add button at the bottom of the Table List in the Join tab. The Select Table for the View window appears.

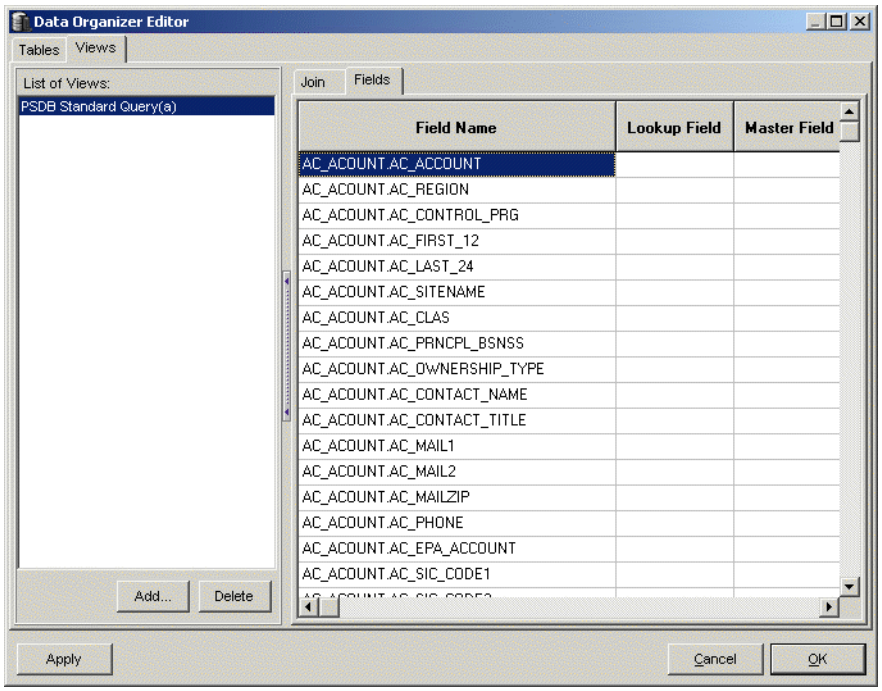


Step 3 Select a table for the view and click OK.

Step 4 Create the links in the Join Conditions tab by selecting a field from one table and selecting a similar field from another table. For more information, see the Join Subtab section.

Note: For the sample scenario, the PSDB data dictionary specifies the required links. Erroneous data will result from queries made with improperly linked tables in a View.

Step 5 Select the Fields tab. This tab displays all the data fields available from the linked tables in a View.



Step 6 Include or exclude specific data fields by checking or unchecking the Visibility checkbox.

Step 7 To rename a field, enter the new name in the Alias column.

Step 8 Click OK to save your changes.

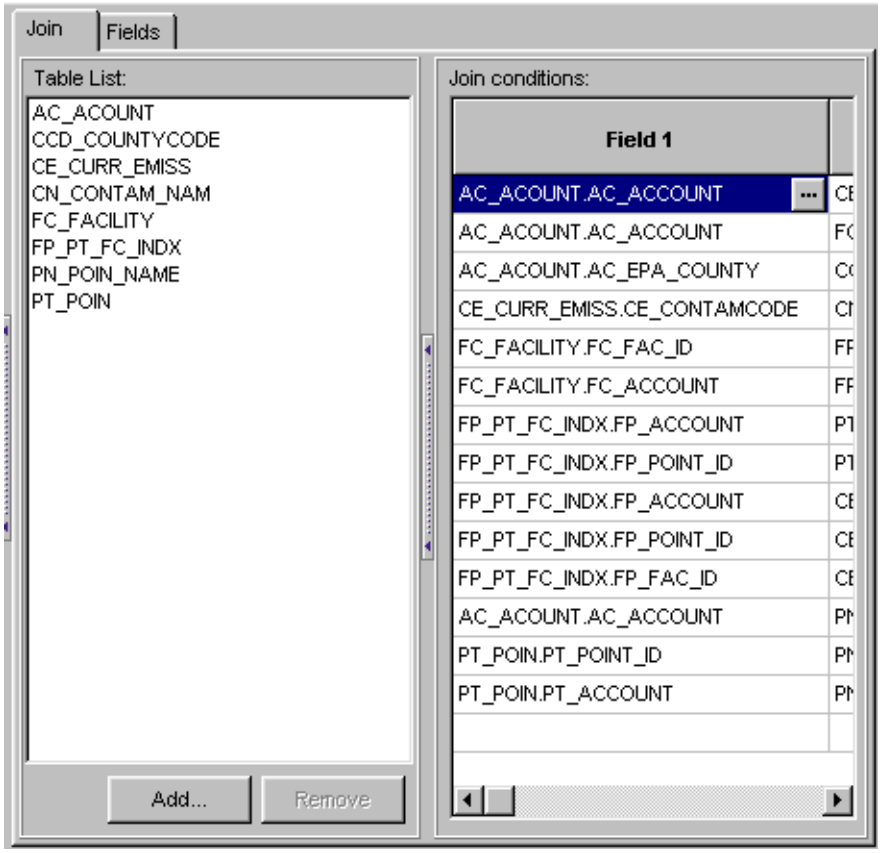
Working with the Join and Fields Subtabs

The Views window contains two subtabs: **Join** and **Fields**.

Join Subtab

The Join Subtab allows the user to add or change tables to a view and to change the join conditions that define the data relationships between tables. When you select this tab, the **Table List** appears in the center frame. Use the **Add** button to add a **Table** to the selected **View** and the **Remove** button to remove a selected **Table** from the selected **View**.

To the right is a frame labeled **Join Conditions**, which has two columns, "Field 1" and "Field 2." Join Conditions establish the relationships between the tables that appear in the "Table List." To access information in a table, that table must be linked to other tables in the list through the Join Conditions. For the PSDB, the file "PSDB Data Dictionary.pdf" describes the tables, fields, and relationships for this database. You may change the fields associated with the **Tables** listed in the center frame.

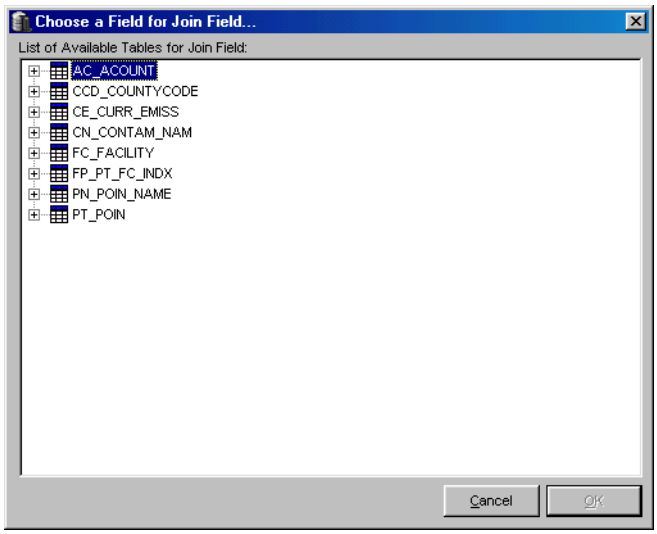


In the previous window, the fields "AC_ACCOUNT" from table "AC_ACCOUNT" (field 1) is joined to the "CE_ACCOUNT" field in table "CE_CURR_EMISS". By establishing this Join Condition, you can access data in these two tables because the tables are linked by the "ACCOUNT" fields.

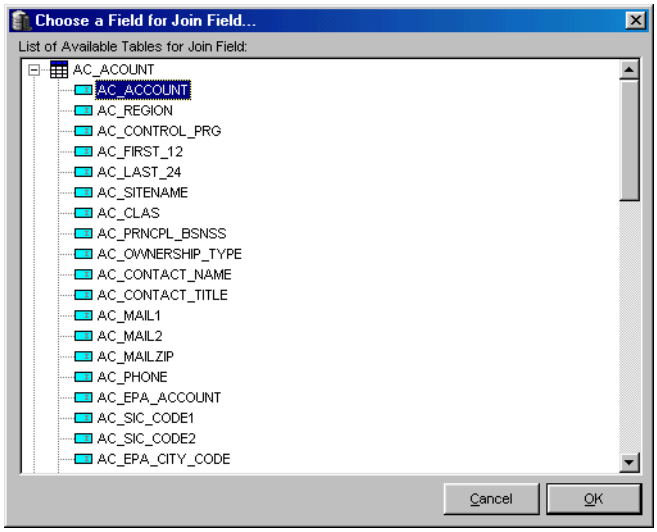
To establish the join conditions, perform the following steps.

Step 1 Highlight a row in field 1.

Step 2 Click on the ellipse (...). The Choose a Field for Join Field window appears.



Step 3 Double-click on the table you want to select, or click on the "+" expand button.



Step 4 Double-click on the field you want to select, or highlight it and click OK.

Step 5 Join the selected field in the Field 1 column to a table and field in the same row of the Field 2 column by repeating steps 2 through 4, selecting the appropriate table name and field name.

Step 6 Continue this series of steps for the joined tables and fields.

Step 7 Click OK.

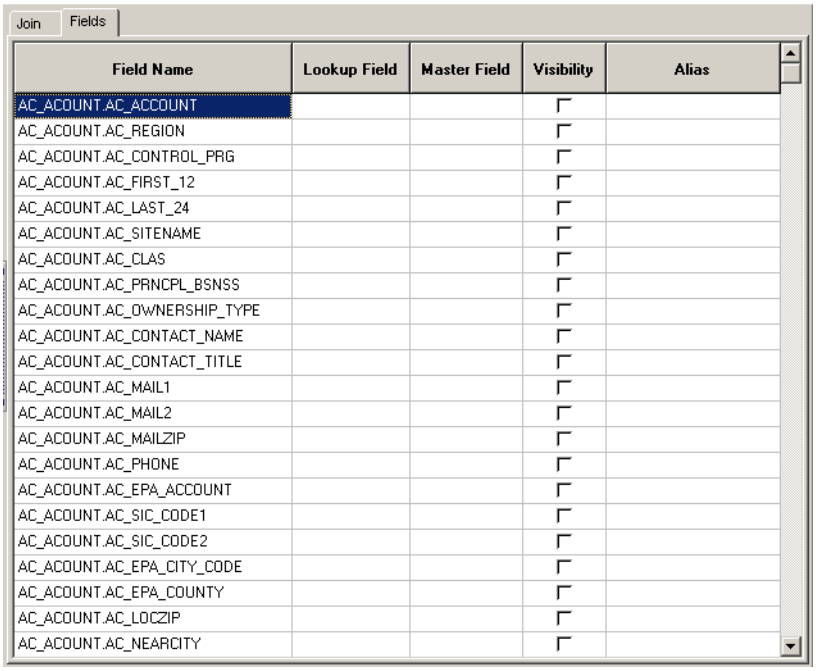
Step 8 When you finish with the **Data Organizer Editor**, select one of the following:

- Click Save to keep changes that you made to the links between **Views**, **Tables** and **Fields**.
- Click Cancel to return values to their original state when you started.
- Click OK to keep your changes in effect until you shut down the **Data Organizer Editor**.

Step 9 Data Miner returns you to the main window.

Field Subtab

When you select the Field tab, Data Miner replaces the center and right frames with a single frame containing five columns that list the fields and the Views in which they are included



The following table describes each column in the Field tab.

Column	Description
Field Name	Lists field names associated with the Tables in the selected View.
Lookup Field	Not used.
Master Field	Not used.

Column	Description
Visibility	A check in the "Visibility" field indicates that data from this field will be visible when you run a query, and that Data Miner will extract this data when saving a queried dataset.
Alias	Allows you to specify a more meaningful name for the Field Name. Data Miner will export the Alias as a column header.

Running a Query 5

You can run sophisticated queries using Data Miner. In this chapter, you will learn to:

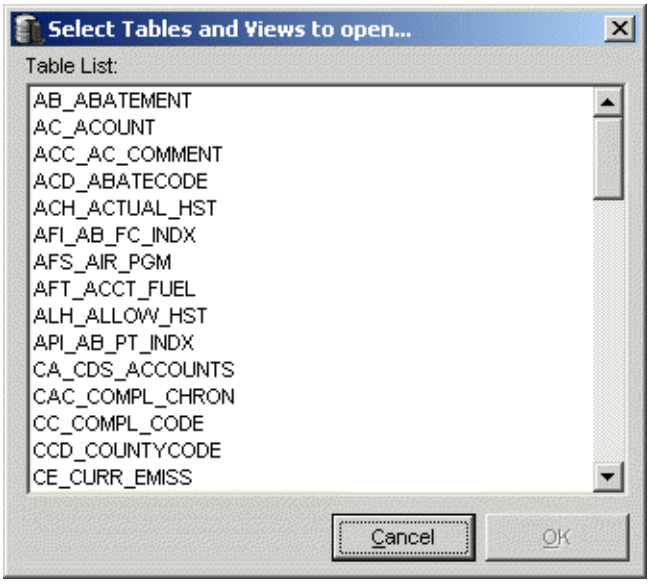
- Select Tables and Views to include in your query
- Compose a Query
- Work with the .cfg File

Selecting Tables and Views

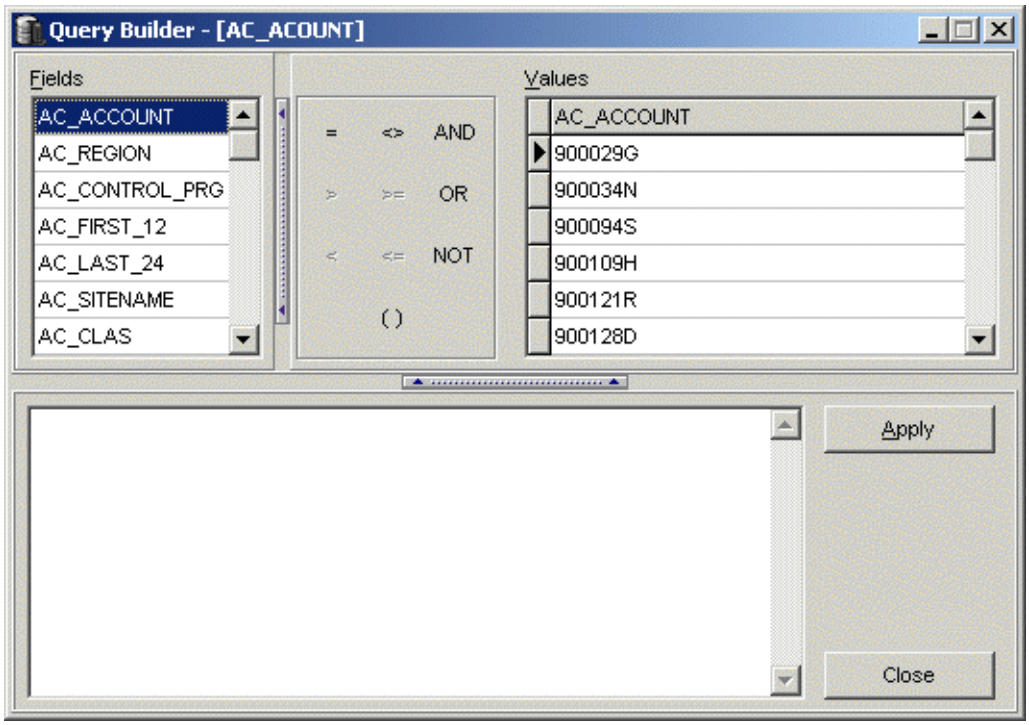
Perform the following steps to select Tables and Views to include in your query.

Step 1 In the **Data Miner** main window, select the **File** l **Open Tables** menu command or click on the **Tables** toolbar button.

The Select Tables and Views to open dialog box appears. The names appearing in the list include both the names of created **Views** and any **Aliases** assigned to **Tables**.



Step 2 Select a **View** or **Table** and click **OK**. The **Query Builder** dialog box appears.



The Query Builder window contains all the selected fields on the left, the operating symbols in the center, and all the data values for the selected field on the right. The actual query is in the field at the lower left of the window.

Composing a Query

Queries take the form:

[field_name] operation_sign ['value']

Multiple strings have 'AND', 'OR', or 'NOT' between them.

Note: Aliases appear as field names if you assigned aliases earlier.

Perform the following steps to compose a query.

Note: If you have used the Query Builder before, the previous query statement will appear in the text box. You can delete the existing **Query** statement in the text box (the lower frame) by highlighting + **CTRL-X** or by using the **Delete** or **Backspace** keys.

Step 1 Select a **Field** in the upper left frame by double-clicking. The **Field** name appears in the text box below.

Note: You can type the query directly into the box rather than clicking on field names, operators and ranges.

Step 2 Select an **operator** with a single click on the "equals" button (=) in the center frame. The "equals" sign appears in the text box after the **Field** name.

Step 3 Select the desired information by double-clicking on a **Values** entry in the right frame. This text appears in the text box after the "equals" sign.

Note: When you launch **Query Builder**, the **Report** window opens at the same time, but the **Query Builder** dialog box is in front of it. When you run a **Query**, the requested data appears in the **Report** window. However, you must close the **Query Builder** dialog box before you can work with the **Report** window.

Step 4 Once you build the query, click Apply.

Step 5 To cancel the query, click Close while the query is running.

Step 6 When Data Miner completes the query, click Close.

Query For 30-Source Example

Specify a query that selects all of the following:

- the 30-source test set
- stack or flare sources
- emission rate records greater than 1 ton per year (tpy)
- emission rate records less than 5 tpy

This query would look like the following:

```
((Unique_point_name = 'JE0F01W') OR
(Unique_point_name = 'JE0F011') OR
(Unique_point_name = 'JE0F00U') OR
(Unique_point_name = 'JE0F000') OR
(Unique_point_name = 'JE0F01K') OR
(Unique_point_name = 'JE0F01X') OR
(Unique_point_name = 'JE4D028') OR
(Unique_point_name = 'JE4D021') OR
(Unique_point_name = 'JE4D025') OR
(Unique_point_name = 'JE4D001') OR
(Unique_point_name = 'JE4D01H') OR
(Unique_point_name = 'JE4D01P') OR
(Unique_point_name = 'JE1500S') OR
(Unique_point_name = 'JE15015') OR
(Unique_point_name = 'JE15017') OR
(Unique_point_name = 'JE15014') OR
(Unique_point_name = 'JE1504P') OR
(Unique_point_name = 'JE15036') OR
(Unique_point_name = 'JE110D3') OR
(Unique_point_name = 'JE1104E') OR
(Unique_point_name = 'JE110ED') OR
(Unique_point_name = 'JE11027') OR
(Unique_point_name = 'JE11005') OR
(Unique_point_name = 'JE11004') OR
(Unique_point_name = 'JE0S00S') OR
(Unique_point_name = 'JE0S009') OR
(Unique_point_name = 'JE0S00J') OR
(Unique_point_name = 'JE0S001') OR
(Unique_point_name = 'JE0S002') OR
(Unique_point_name = 'JE0S003'))
AND
((Pnt_Type = 'ST') OR (Pnt_Type = 'FL'))
AND
(Actual_Annual > '1' )
And
(Actual_Annual < '5')
```

Working with Sample Queries

The following queries are additional example queries you can use with Data Miner.

Note: These queries will work with the sample view provided on the Data Miner Version 1.0 CD.

Dallas County Emissions Greater Than Zero Tons Per Year

(CCD_COUNTY_NAME = 'DALLAS') AND (Actual_Annual > '0')

Note: Queries are not case specific, except for the data strings, such as 'DALLAS'. Also, the CCD_COUNTY_NAME field was not made visible in the view, but the field can still be used in a query.

Statewide Query For Benzene Emissions Greater Than 5 Tons Per Year

(Contam_Name = 'BENZENE') AND (Actual_Annual > '5')

Note: 'Contam_Name' is an alias for "CN_CONTAM_NAME". This alias was defined in the data organizer editor. Also, there may exist various spellings or multiple names for individual chemicals. For the PSDB, it may be better to query based on Chemical Abstract Service Number or the contaminant code assigned by the State of Texas. These values are related in the table CN_CONTAM_NAM.

All Emissions From An Individual Source

Unique_Point_Name = 'JE0F01W'

Working with the .cfg File

Data Miner remembers the last query run for each view by storing the query as a text string in a configuration (.cfg) file for the database (for example, PSDB.cfg). Data Miner limits the size of the CFG to approximately 1800 lines of text, or approximately 64KB. If the .cfg file size is exceeded, Data Miner may not access that view. In this event, you can edit the .cfg file with a text editor to remove unnecessary lines of text containing either unused views or old queries.

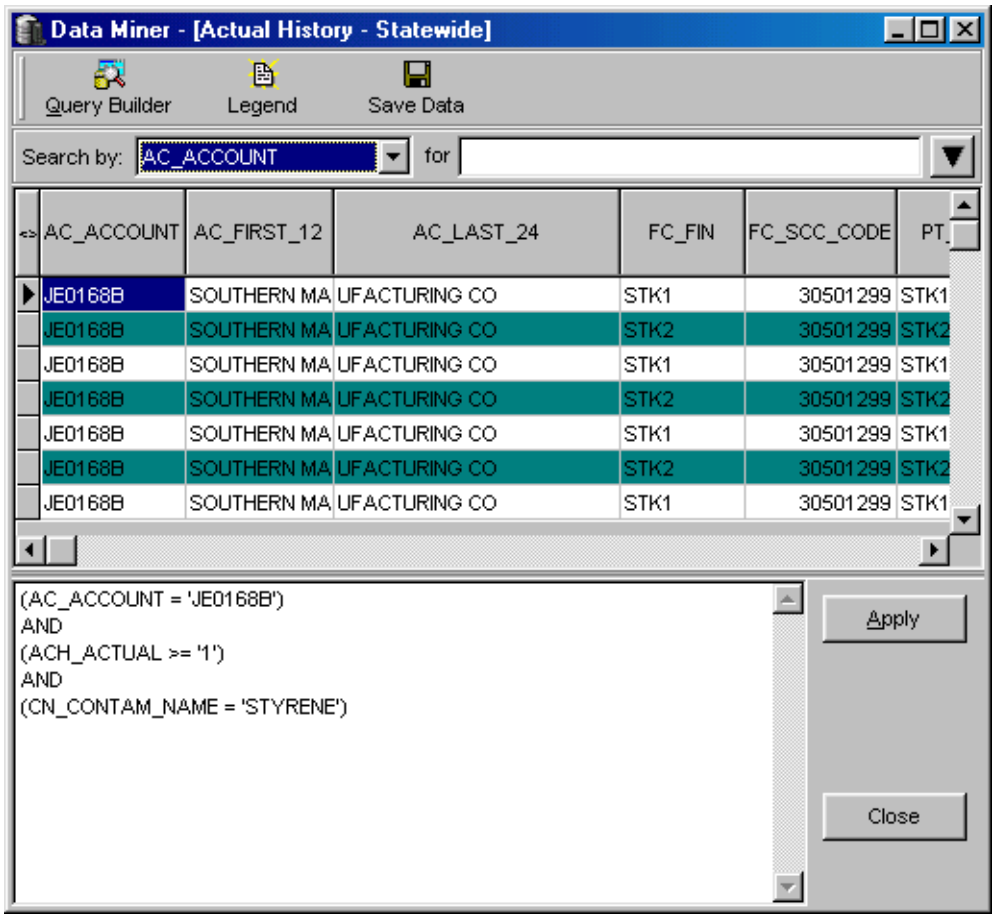
The Report Window 6

Once you compose a query, you can generate a report for that query. In this chapter, you will learn to:

- Navigate the Query Report window
- Save a Query Report

Navigating the Query Report Window

The **Query Report** window is divided into an upper and a lower frame. The lower frame shows the **Query** that Data Miner executed to extract the data shown in the upper frame.



The following table lists the components of the **Report** window.

Component	Description
Control Menu box	Displays the options: **Move**, **Size**, **Minimize**, **Maximize** and **Close**.
Title bar	Displays the program name (**Data Miner Report**) and between brackets, the full path and name of the project file currently in use.
Minimize button	Minimizes the **Data Miner** window.
Maximize/Restore button	Maximizes the **Data Miner** window to occupy the entire screen or restores its pre-maximized size and position.

Component	Description
Close button	Closes Data Miner.
Data window	Displays the records you extracted from the database with your Query statement.
Query Statement field	Displays your Query statement.
Query Builder button	Launches the Query Builder.
Legend button	Opens a box that displays the name of the **View** or **Table** that is the subject of the **Query Report**. Use this button if another window should happen to overlap the title bar and cover this information.
Save Data button	Allows you to save the data in the **Report** as a comma-separated text file (***.csv**) or a Microsoft Access database file (*.mdb) for further use.

Sorting Query Results

You can sort query results in the Report window. Click on the appropriate column header to sort query results based on a specific field (column).

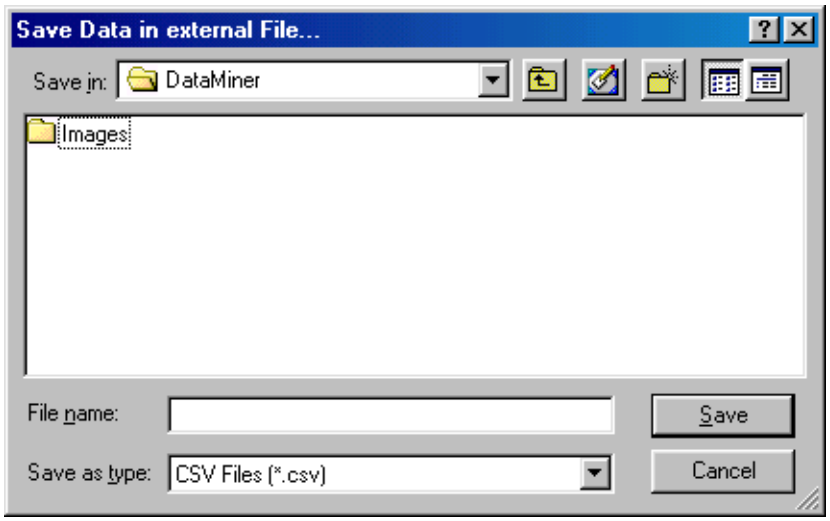
Resizing the Lower Frame

Since the lower frame requires only a single line for the **Query**, you may wish to reduce its size to make more room for the data display. To do this, position the cursor on the frame border so that a vertical arrow with a point on either end appears. Click and drag the frame to the desired height.

Saving a Query Report

To save the data, perform the following steps.

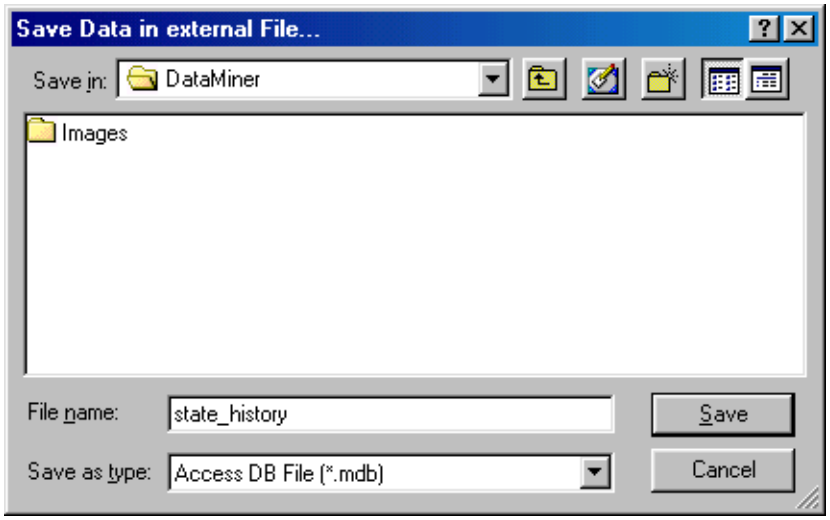
Step 1 Click the Save Data button. The Save data in external file window appears.



Step 2 Navigate to the directory where you want to save the data.

Step 3 Select the type of file (.csv or .mdb) in the Save as type field.

Step 4 Type in the appropriate file name and click save.



References 7

U.S. Environmental Protection Agency Solid Waste and Emergency Response, *Human Health Risk Assessment Protocol for Hazardous Waste Combustion Facilities.* EPA530-D-98-001A. U.S. Environmental Protection Agency. Research Triangle Park, NC, July 1998.