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SAS/ACCESS® 9.1 Interface to Baan

User's Guide

The Power to Know®

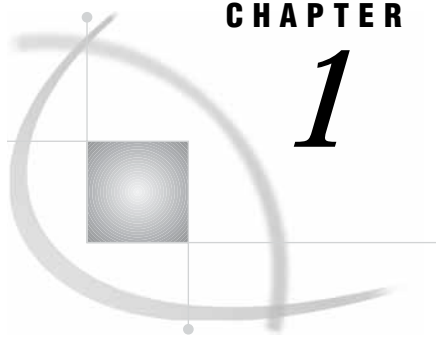**SAS/ACCESS® 9.1 Interface to Baan: User's Guide**

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How to Use This Document

Using This Document

SAS/ACCESS® 9.1 Interface to Baan: User's Guide describes the SAS/ACCESS Interface to Baan. It provides primary support for the SAS/ACCESS 9.1 Interface to Baan.

Audience

This document is intended for applications programmers and other users who are comfortable with their own operating environment and are reasonably familiar with either SAS or with Baan. It is assumed that users are completely unfamiliar with using both of the systems together. The glossary provides definitions of terms that might be new to a user who is unfamiliar with either system.
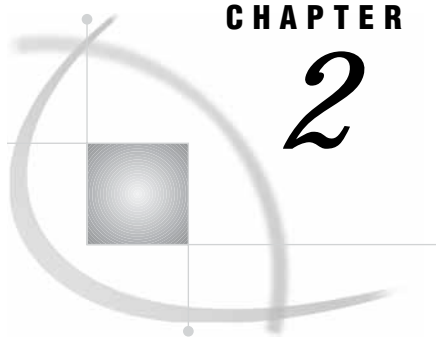
C H A P T E R

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Overview

Introduction

This chapter is a brief introduction to the SAS/ACCESS Interface to Baan application. For further information, consult the references that are listed in "Recommended Reading" on page 41 or your SAS Support Consultant.

Product Overview

The SAS/ACCESS Interface to Baan is a product that enables you to use Baan data to populate SAS software. After the Baan data is in a format that is recognized by SAS, you can perform analysis on the data using various SAS products that are available for information delivery.

Interface Definition

The SAS/ACCESS Interface to Baan enables you to use Baan data to populate SAS data formats. The process for importing Baan data into SAS uses the XCH (Exchange) module from Baan Utilities. With this tool, you can create a flat file (ASCII) that contains data from the Baan database. This flat file is then imported into SAS using the SAS/ACCESS Interface to Baan. After the initial setup has taken place, the Baan export and SAS import processes need to be run periodically in order to synchronize the data between Baan and SAS.

The following figure shows the process of passing data from Baan to SAS using the Baan Exchange utility and SAS/ACCESS Interface to Baan. After the data is passed to in SAS, it can be in the form of SAS data sets or views that can be read by a SAS data warehouse or used by the various solutions, applications, and reporting capabilities of SAS.

There are two methods of importing data into SAS:

☐ by using a wizard import procedure

☐ by using SAS/Warehouse Administrator.

Baan Integration
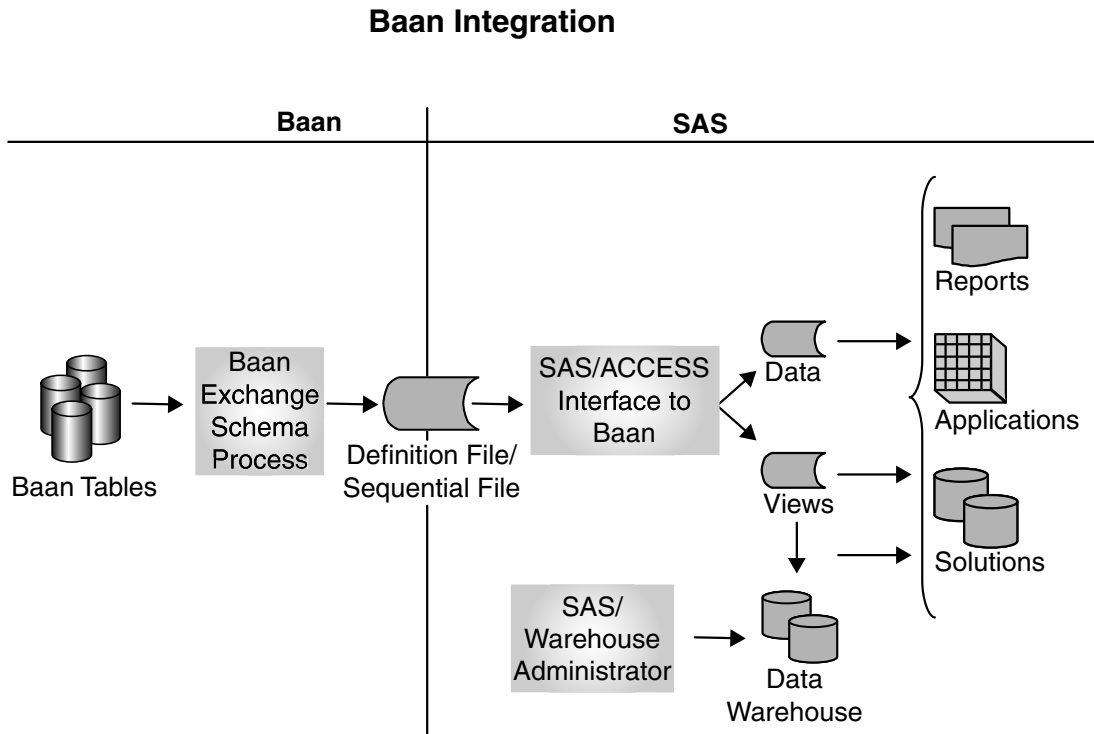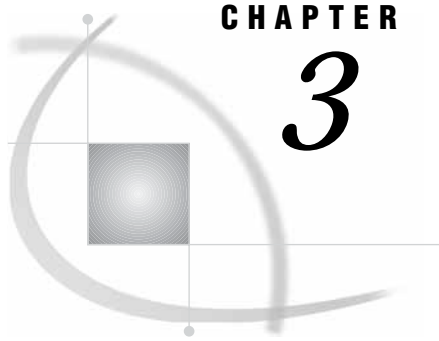
CHAPTER

3

Using the SAS/ACCESS Interface to Baan as a Stand-Alone Product

Using the SAS/ACCESS Interface to Baan **5**

Using the SAS/ACCESS Interface to Baan

This section provides instructions about how to use the stand-alone SAS/ACCESS Interface to Baan.

To use the stand-alone SAS/ACCESS Interface to Baan:

1 Open a SAS session.
2 Enter `%baan` on the command line to open the SAS/ACCESS Interface to Baan Welcome window.

Display 3.1 Welcome Window
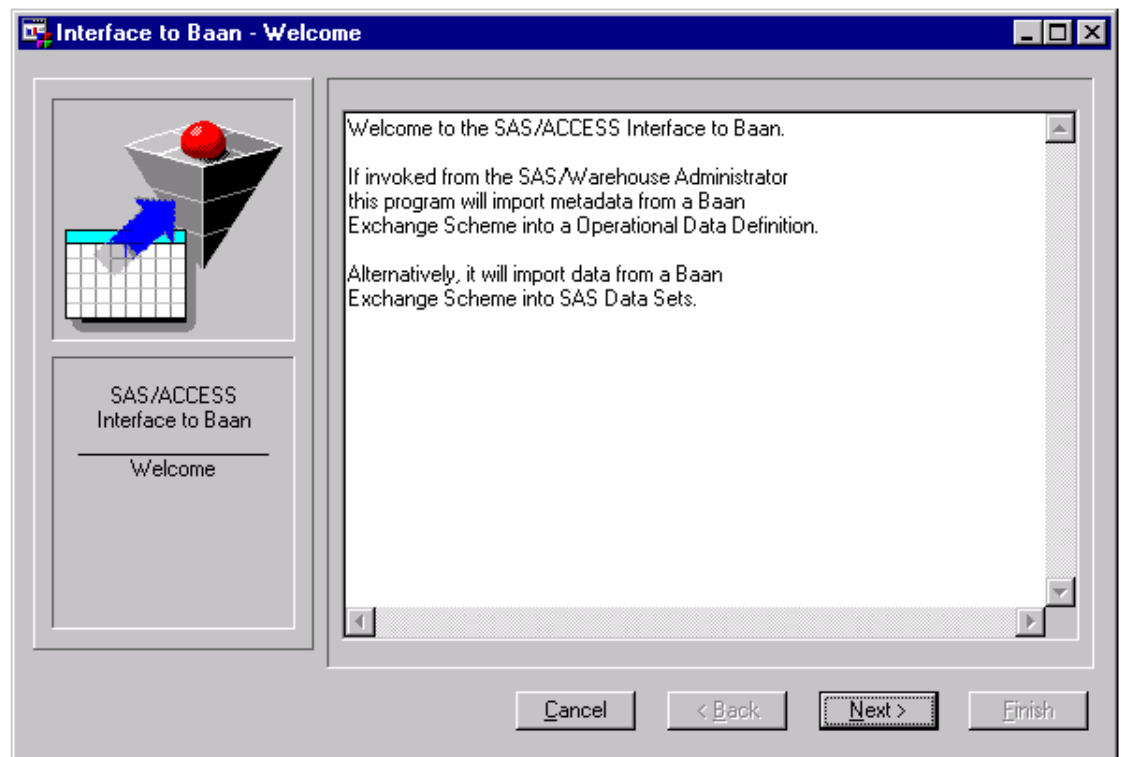
3 Click Next to display the Select Data Directory window.

Display 3.2   Select Data Directory Window
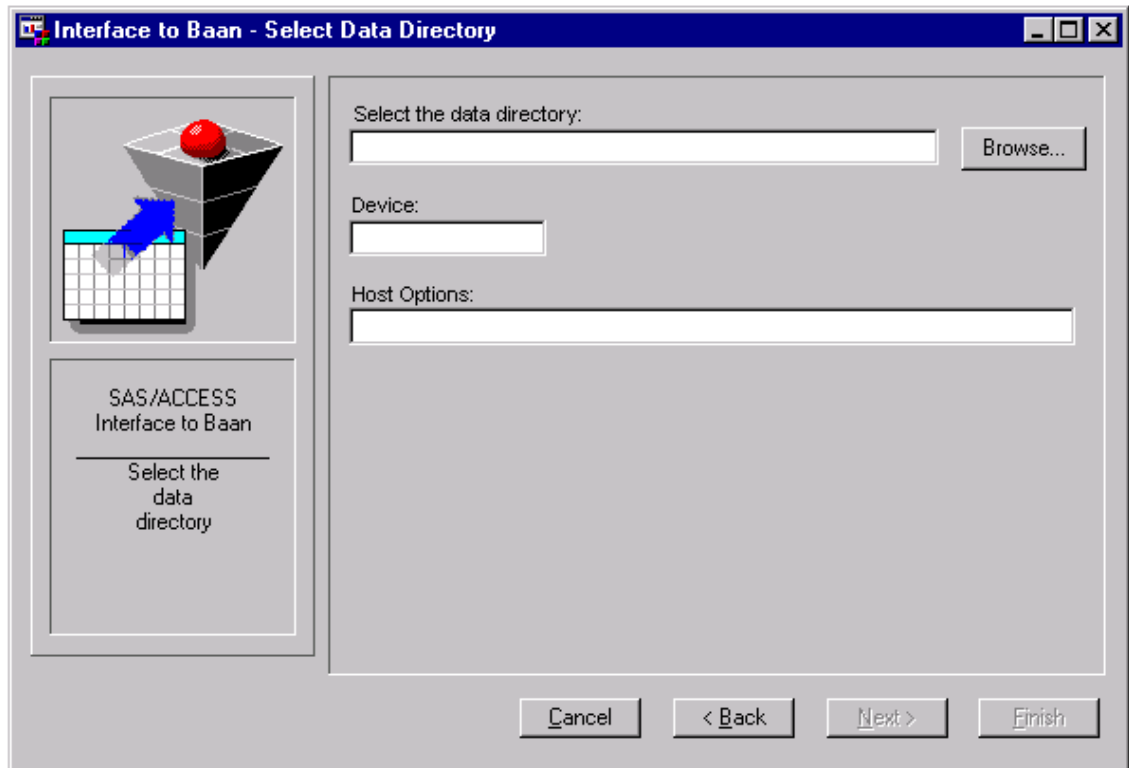
4 Select the directory for the data files. This corresponds to the Path for Sequential Files in the Baan Exchange Scheme.

Select the   specifies the pathname of the directory.
data
directory

Device   specifies the device that is used to access the directory and the files in the directory with.

Host Options   specifies any FILENAME options that are used to access the directory and the files in the directory.

An entry is required in the data directory field. Optionally, you can specify a device and host options for accessing the directory. For example, you can use the FTP access method to read a Baan Exchange Scheme from a server as follows:

Select the definition directory	baan/seq
Device	FTP
Host Options	Host='server' user='username' prompt

The Browse button opens the Select window in which you can select a directory, as shown in Display 3.3. This dialog box allows navigation only on the local host and will vary depending on your platform.

Display 3.3 Select Dialog Box

After you have specified the appropriate directory, click $\boxed{\text{OK}}$ to close the Select window. Click $\boxed{\text{Next}}$ to display the Select Definition Directory window.

Display 3.4   Select Definition Directory Window
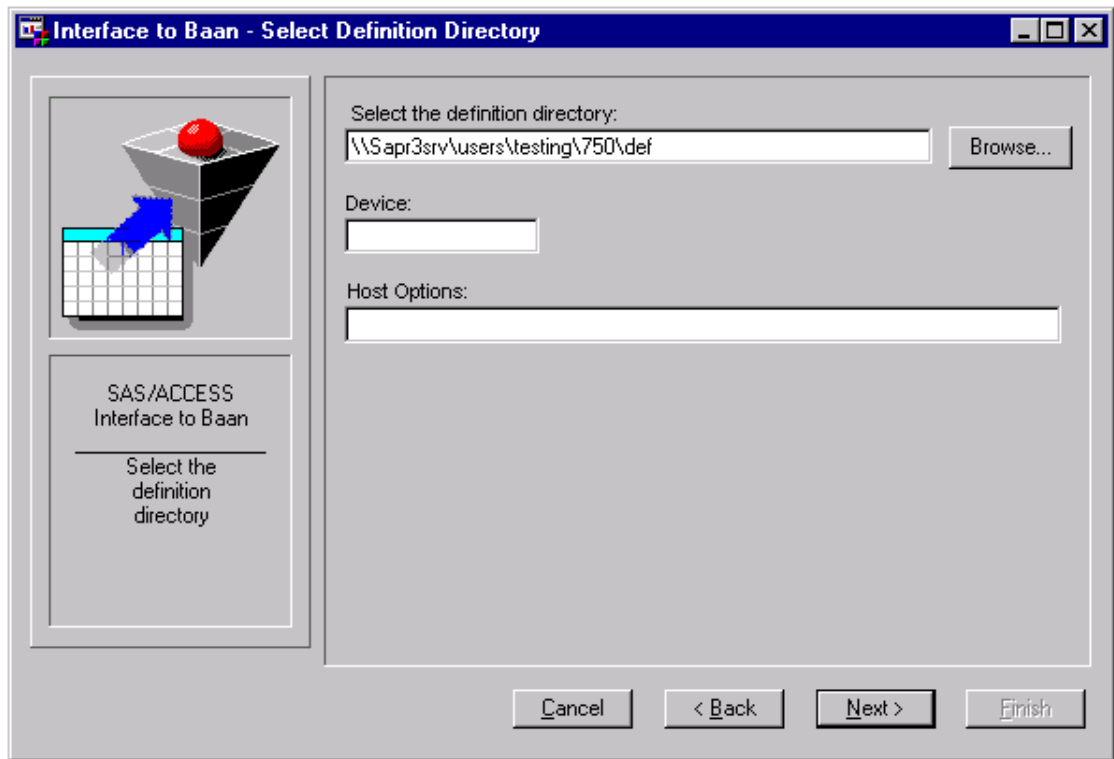
5 Select the directory for the definition files. This corresponds to the Path for Definition Files in the Baan Exchange Scheme.

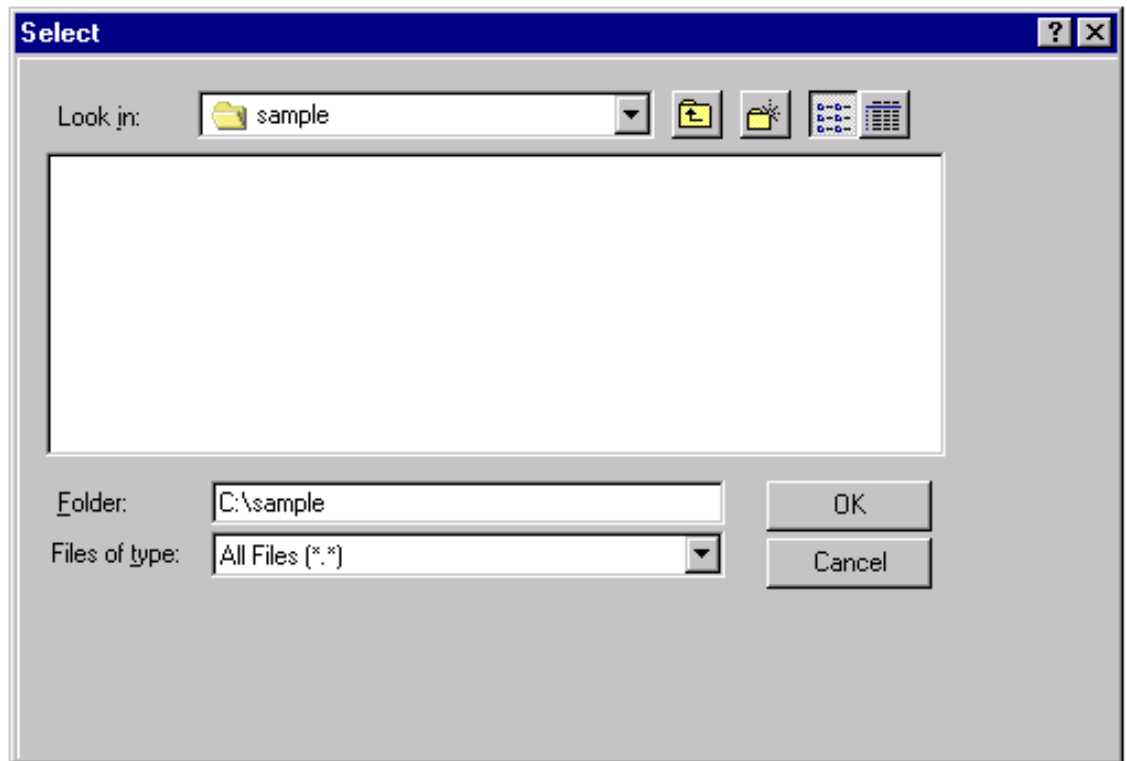|	
Select the definition directory	specifies the pathname of the directory.
Device	specifies the device that is used to access the directory and the files in the directory.
Host Options	specifies any FILENAME options that are used to access the directory and the files in the directory.
Browse	opens the Select window in which you can select a directory. This dialog window allows navigation only on the local host and will vary depending on your platform.

An entry is required in the definition directory field. Optionally, you can specify a device and host options for accessing the directory. For example, you can use the FTP access method to read a Baan Exchange Scheme from a server as follows:

Select the definition directory	baan/seq
Device	FTP
Host Options	Host='server' user='username' prompt

Click Next to continue to the Select Data Files window.

Display 3.5 Select Data Files Window
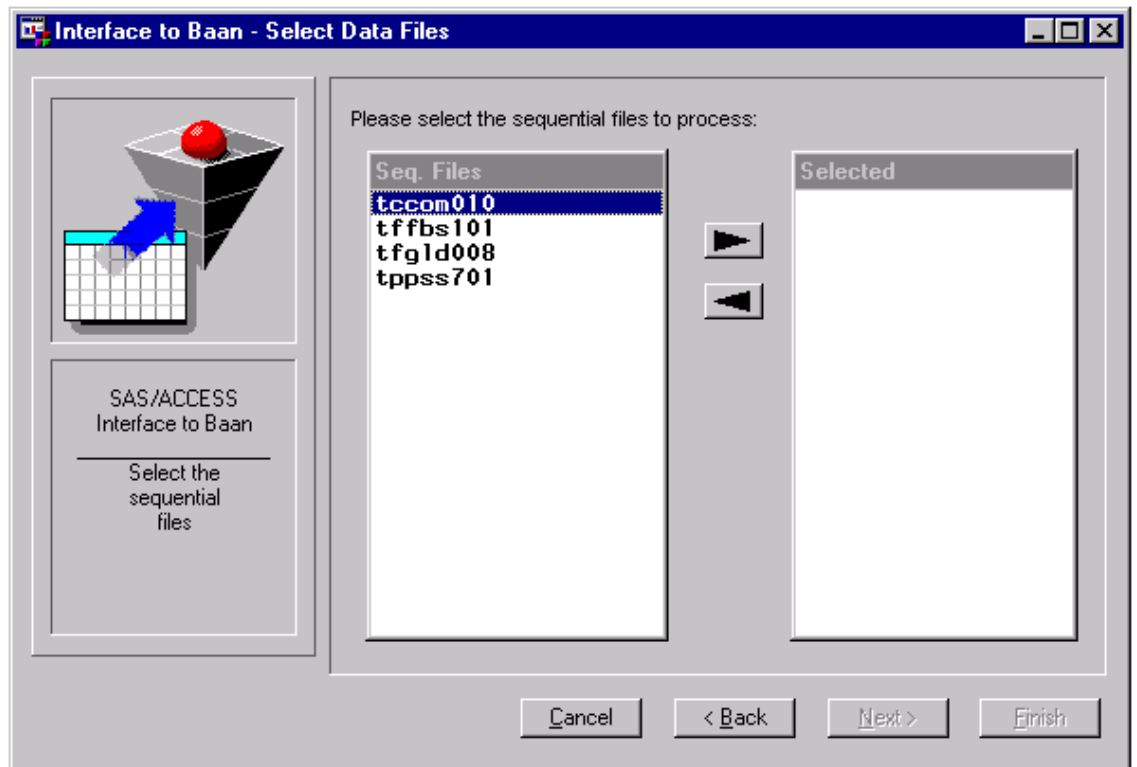
6 The wizard provides a list of files that are in the selected data directory. Select the data files to import by selecting a file, and then clicking the arrow buttons to move them to the other list box. At least one file must be in the **Selected** list box to enable the Next button. When you have selected the files to import, click Next to display the More Attributes for Exchange Scheme window.

Display 3.6 More Attributes for Exchange Scheme Window
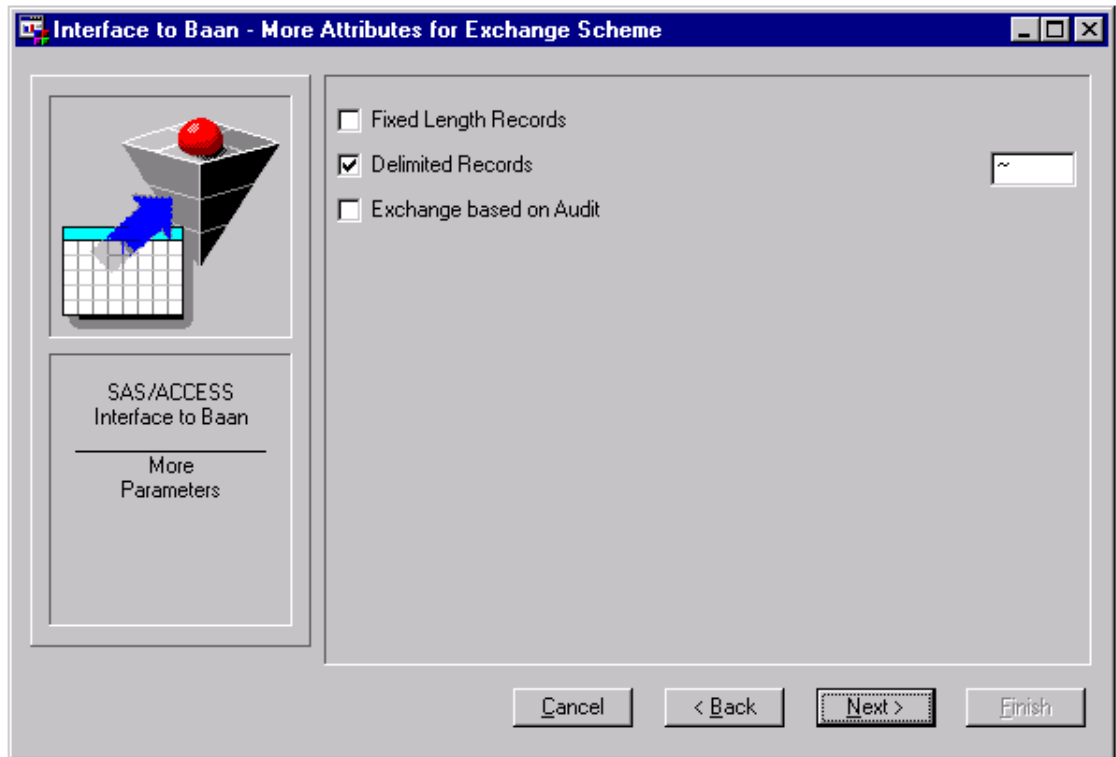
7 If the data files contain fixed-length records, select the **Fixed Length Records** check box. If the data files are delimited, select the **Delimited Records** check box. The default separator in a Baan Exchange Scheme is a tilde (~). If the delimiter in the files is not a tilde, enter the appropriate character in the field to the right.

If the Baan Exchange Scheme is using audit files, select the **Exchange based on Audit** list box. A Baan Exchange Scheme is based on audit files if the Exchange for Multi-sites is set to **Yes**. The data file contains only the changes to the tables that are identified by transaction codes. This can be useful for implementing changed data capture for Baan tables.

When you have chosen the options that you need, click Next to display the Select library and member window.

Display 3.7 Select Library and Member Window
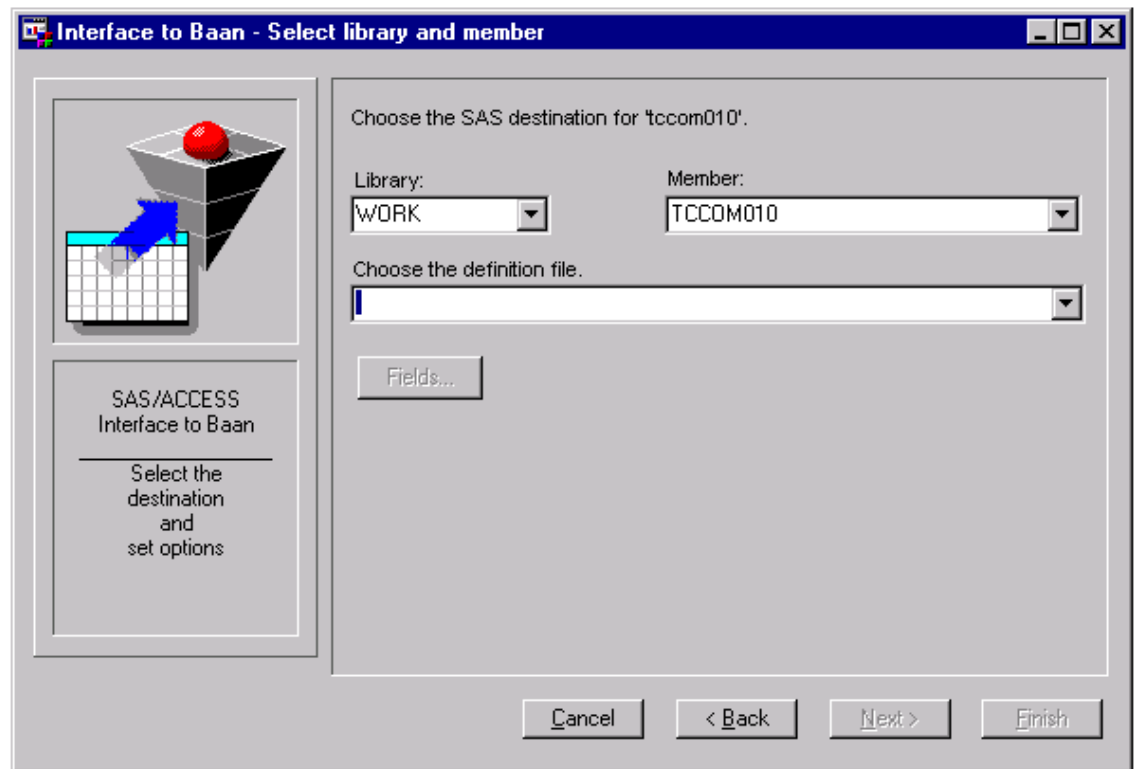
8 The elements available from the Select library and member window are

Library	specifies the library of the SAS data set. The selection list for libraries lists the locally assigned library references. The SAS library defaults to **WORK**.
Member	specifies the member name of the SAS view. The selection list for the member name lists the data sets or views in the selected library. The name defaults to the name of the sequential file.
Choose the definition file	contains the items found in the definition directory.
Fields	opens the window shown in Display 3.9. This window enables you to select and deselect columns and change the attributes for the SAS columns (for example, the name, the informat, and the format). Initially, all fields are selected and have a default SAS name, SAS format, and informat assigned.

To select a definition file, click the down arrow button to the right of the **Choose the definition file** field. A drop-down list box displays the available definition files.

Display 3.8   Select Library and Member Window: Choosing Definition File
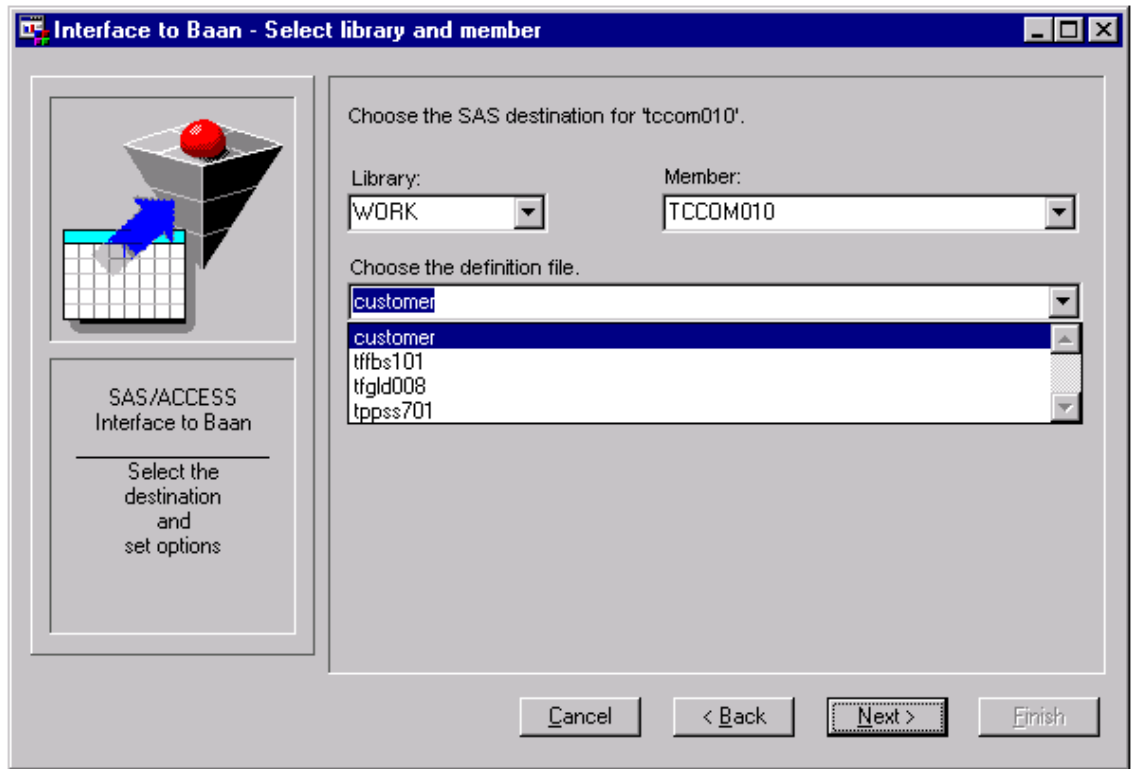
The Fields button is disabled until you select a definition file. When you click
Fields , the Select Fields window displays.

Display 3.9   Select Fields Window

9 You can use this window to
  □ modify column selections
  □ modify column attributes.

By default, all columns that are defined in the definition file are selected. To deselect a column, click the column to select it, and then click the `left arrow` button to move the column to the Available Columns list box. Choose extended selections from the left-hand list of Available columns by holding the SHIFT key down while selecting with the mouse button for an adjacent selec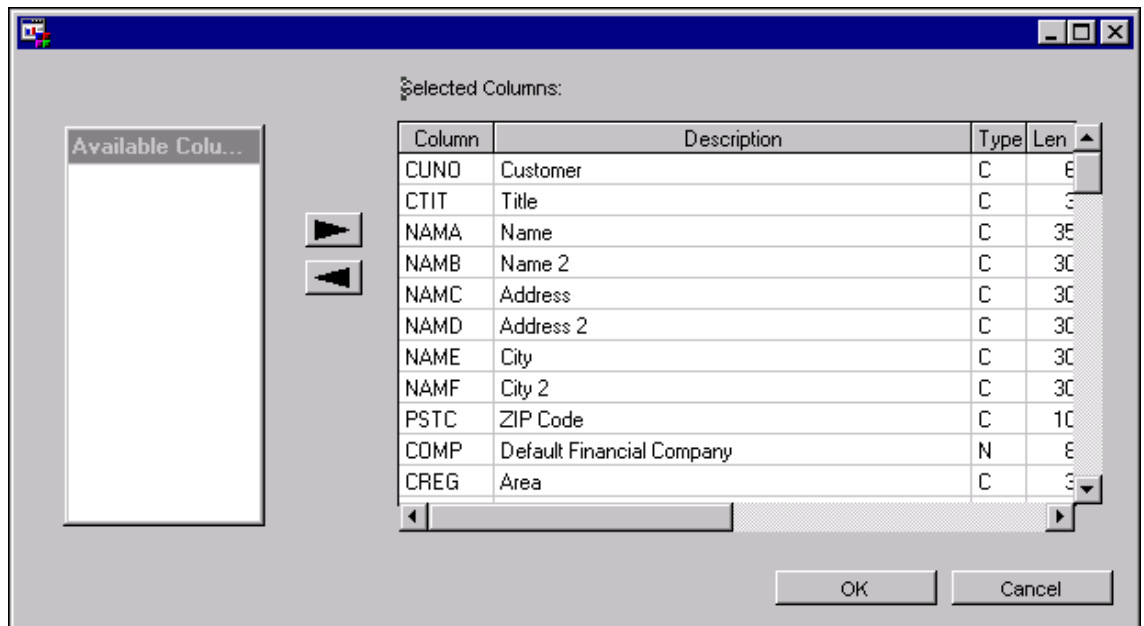tion, or by holding down the CTRL and SHIFT keys while selecting non-adjacent line items with the mouse. In the right-hand Selected Columns list box, SHIFT-click for multiple selections. To modify any of the attributes (for example, the SAS column name, the description, the type, length, format, or informat of the SAS variable), select the cell to be edited and enter the new value.

When you are finished, click OK to close the window and return to the Select library and member window. If you selected more than one sequential file in the Select Data Files window shown in Display 3.5, the Select library and member window will re-appear for each sequential file that you selected. After all the selections have been processed, click Next to display the Create SAS Statements window.

Display 3.10 Create SAS Statements Window

10 You can save the generated SAS DATA step into an external file. Enter a path and filename in which to save the source code. If a file already exists by that name, selecting the `Replace if it exists` check box causes the newly created file to overwrite the old one. If the file exists and the replace box is not selected, the source code will be appended to the existing file.

The Browse button opens the standard Save as dialog window.

When you are finished with the Create SAS Statements window, click $\boxed{\text{Next}}$ to display the Review the Settings window.

Display 3.11   Review the Settings Window
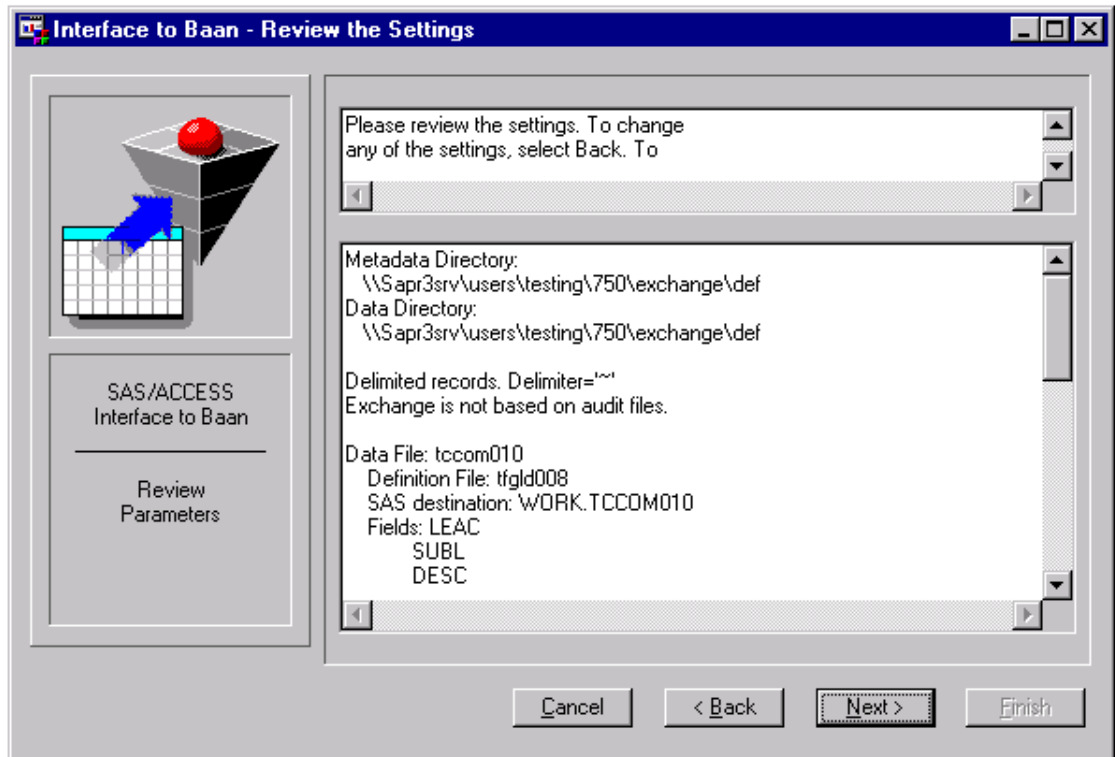
11 This window displays your selected settings and choices, and it enables you to review the settings and to go back before importing the data.

When you click $\boxed{\text{Next}}$, the DATA step(s) will be submitted and the data will be imported into SAS data sets.

Display 3.12   Import Data Dialog Box
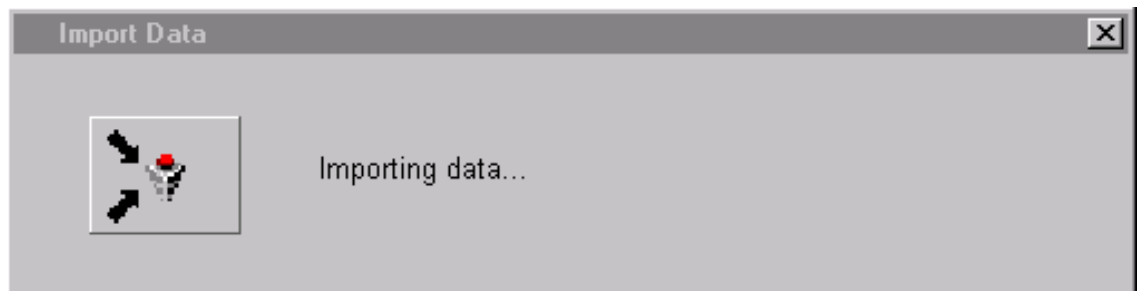
This dialog box is displayed while the data is being imported.

Display 3.13 Result Window
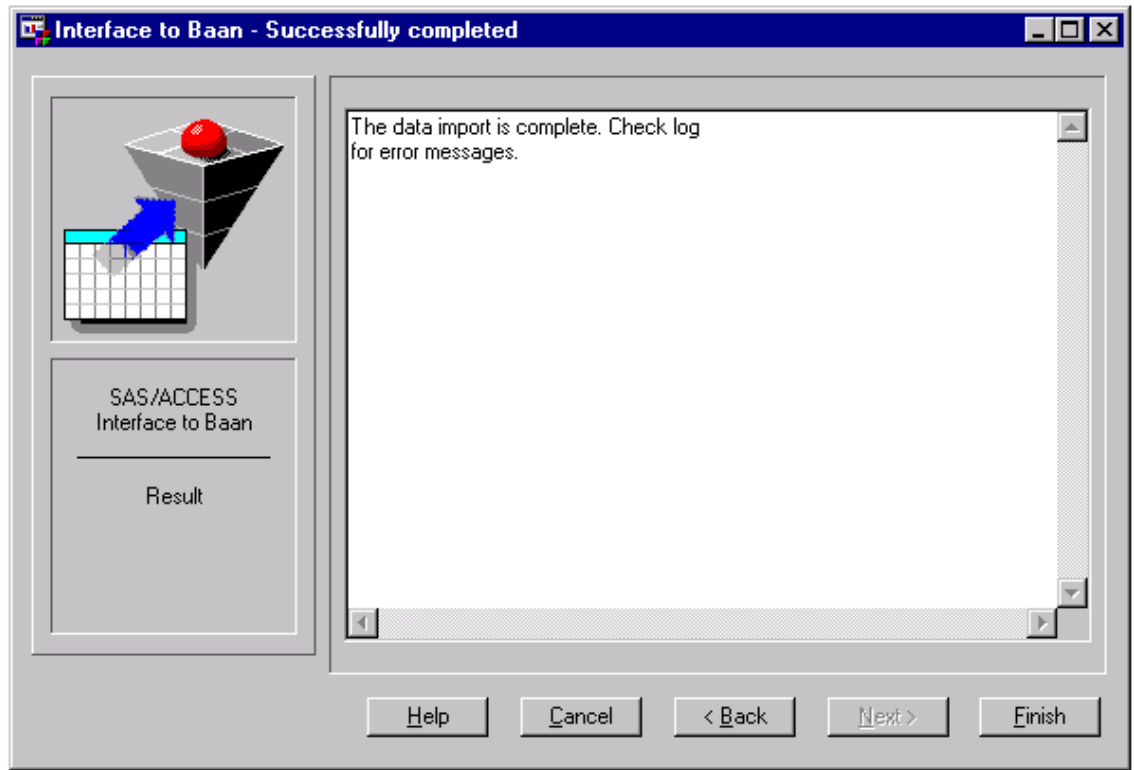
12 If the data has been imported successfully, the Result window is displayed. If errors occurred, use the ⬚Back⬚ button to make changes to your settings. Click ⬚Finish⬚ to close the application.

CHAPTER

4

Using the SAS/ACCESS Interface to Baan as a SAS/Warehouse Administrator Add-In

Introduction

This section describes how to use the SAS/Warehouse Administrator add-ins that are provided by the SAS/ACCESS Interface to Baan. There are two sets of add-ins available with the interface:

☐ add-ins that you can use to create operational data definitions (ODDs) in the warehouse environment and to define processes with which you can load data into a data warehouse. The add-ins read data definitions that are written by the Baan Exchange tool and create an ODD for each table that is exported from Baan. This is the basis for defining a process and job that read data that is exported by the Baan Exchange tool.

☐ add-ins that you can use to define a process for updating a SAS data table with data that is exported by the Baan Exchange tool.

For more information about the SAS/Warehouse Administrator, refer to the *SAS/ Warehouse Administrator: User's Guide*.
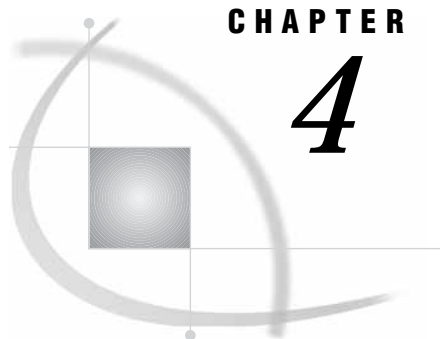
Installation

You must register the add-ins that are available with the SAS/ACCESS Interface to Baan in the SAS/Warehouse Administrator before you can have access to those tools and code generators. Enter and run the following install program from the command line to register the add-ins:

```
afa c=sashelp.ybaan.install.scl
```

The install program updates the tool and process registry in the SAS library _SASWA.

Note: Before calling the install program, you will need to assign the libref _SASWA. Use your AUTOEXEC file to declare the _SASWA libref. △

Importing a Baan Exchange Scheme - Overview

This section briefly describes how to define a process with which you can import data that has been exported by the Baan Exchange tool.

1 Import the metadata from the definition files that are created by the Baan Exchange tool and create ODDs in the warehouse environment:

   a Select a warehouse environment or an ODD group and use the Baan interface to import metadata from the definition file(s) by selecting

     | Tools | ► | Add-Ins | ► | Import Baan Scheme |

   from the menu.

   b Select the definition file(s) and specify all other necessary information in the interface and import the metadata.

2 Define the appropriate sequential file as the input source for the ODD:

   a Edit the process for each of the ODDs that are created by the import.

   b Define the sequential file as input to the ODD by selecting the ODD, then clicking the right mouse button and selecting

     | Add | ► | New External File |

   from the pop-up menu.

   c Edit the external file properties. At a minimum, the filename for the sequential file and the SAS filename information are required.

3 Define the code generator that will read Baan Exchange data:

   a Edit the process for the ODD and select the code generator from the process library by selecting the ODD, then clicking the right mouse button and selecting **Process Library** from the pop-up menu.

   b Select

     | Baan Exchange | ► | Extract |

   from the process library.

The Baan Exchange tool can export data that is based on audit files. In Baan, this is referred to as Exchange for Multi-sites. You can use the data that is exported using this option to implement changed data capture (CDC) in a SAS data warehouse. To define a process for updating SAS data tables with external data, several more steps are necessary.

4 Define the primary key information for update operations. This step is only required for working with changed data. To define the primary key, edit the process for the ODD, then click the ODD to select it. Click the right mouse button, and select

   | Add-Ins | ► | Update ODD imported from Baan Exchange |

from the pop-up menu. Select the fields that build the primary key.

5 Define the ODD as an input source to a warehouse table, usually a data table or a detail table.

6 Define the code generator to update the data table.

For more information, see "Importing the Metadata" on page 19.

Importing the Metadata

Use the SAS/Warehouse Administrator Explorer to import the metadata from the data definition files that are provided by the Baan Exchange tool. For information about how to start the SAS/Warehouse Administrator and its Explorer, see the *SAS/Warehouse Administrator's: User's Guide.*

The Explorer will look similar to that shown in Display 4.1.

Display 4.1 SAS/Warehouse Administrator - Invoke Add-Ins
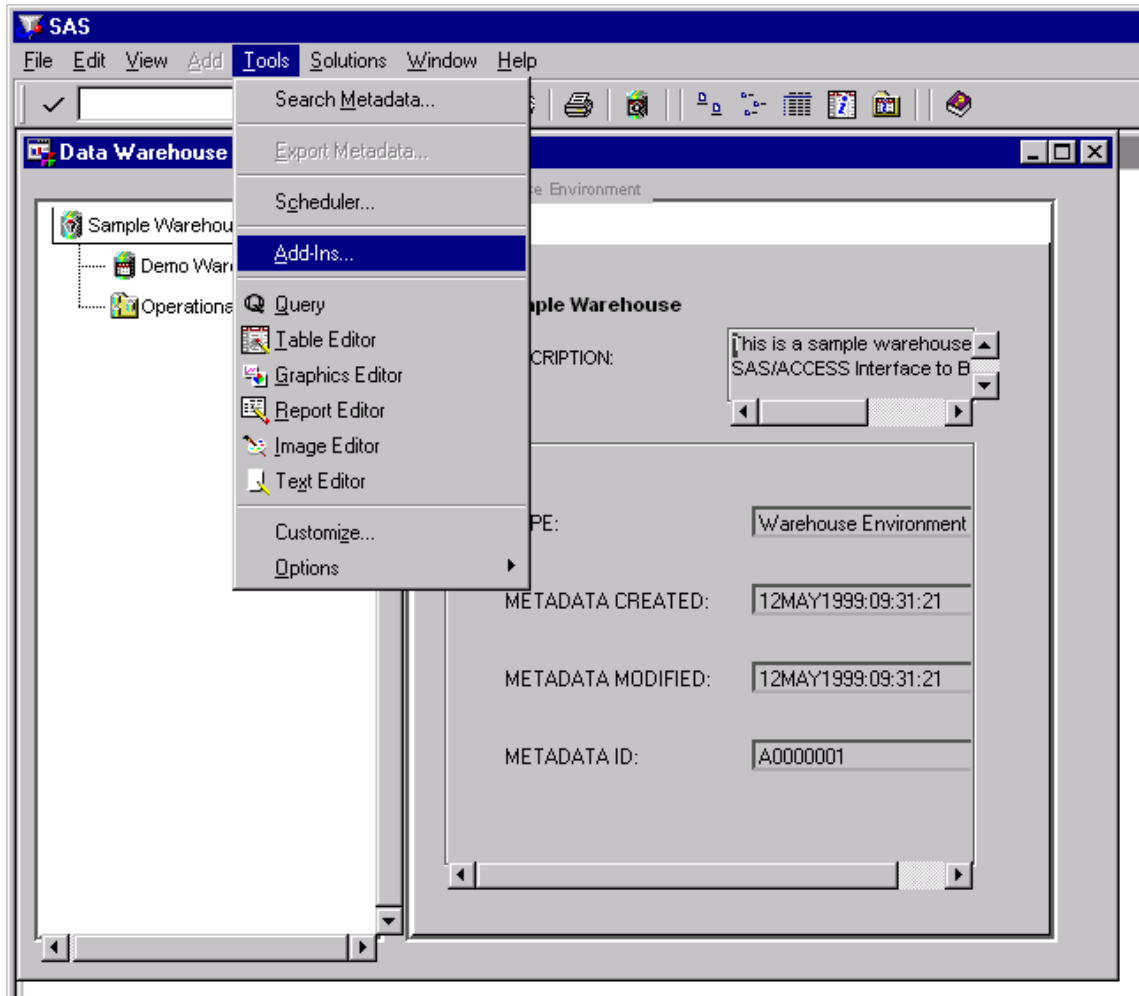
1 Select

Tools ► Add-Ins ► Import Baan Scheme

as shown in Display 4.2.

Display 4.2 Import Baan Scheme Menu
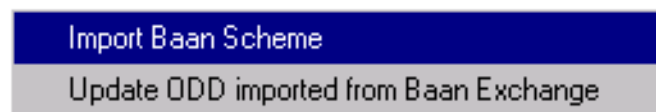
The Welcome window is displayed.

Display 4.3 Welcome Window
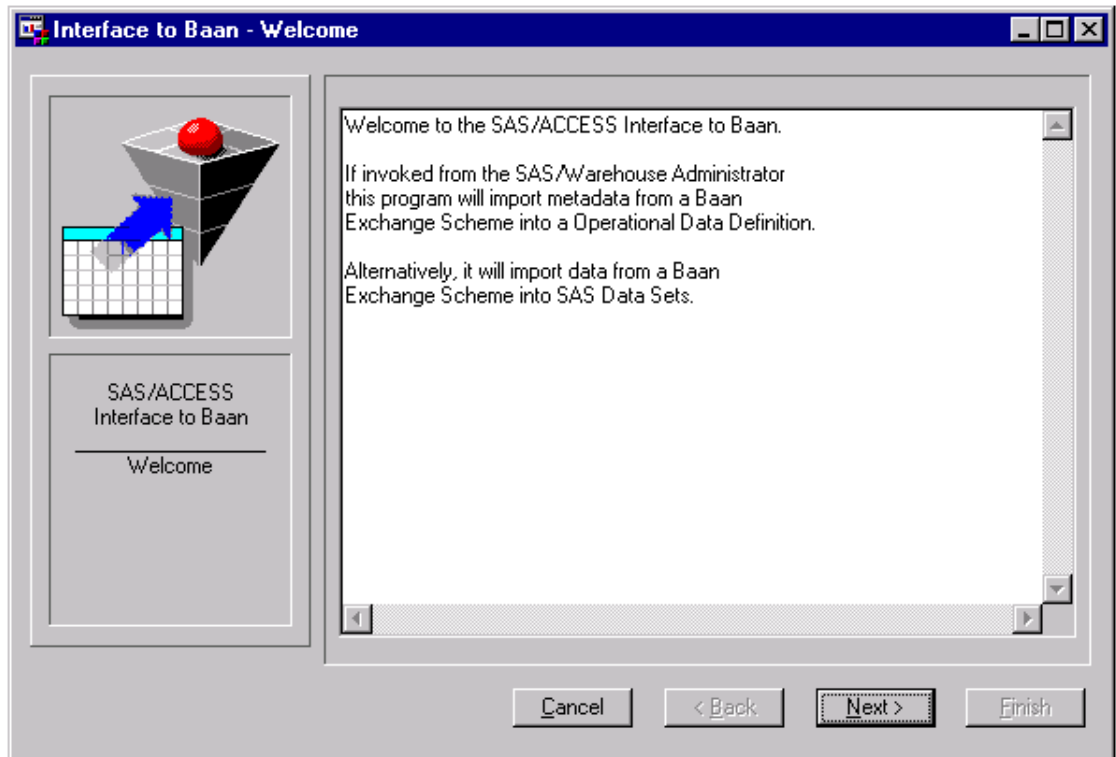
2 Click [Next] to display the Select Definition Directory window.

Display 4.4 Select Definition Directory Window
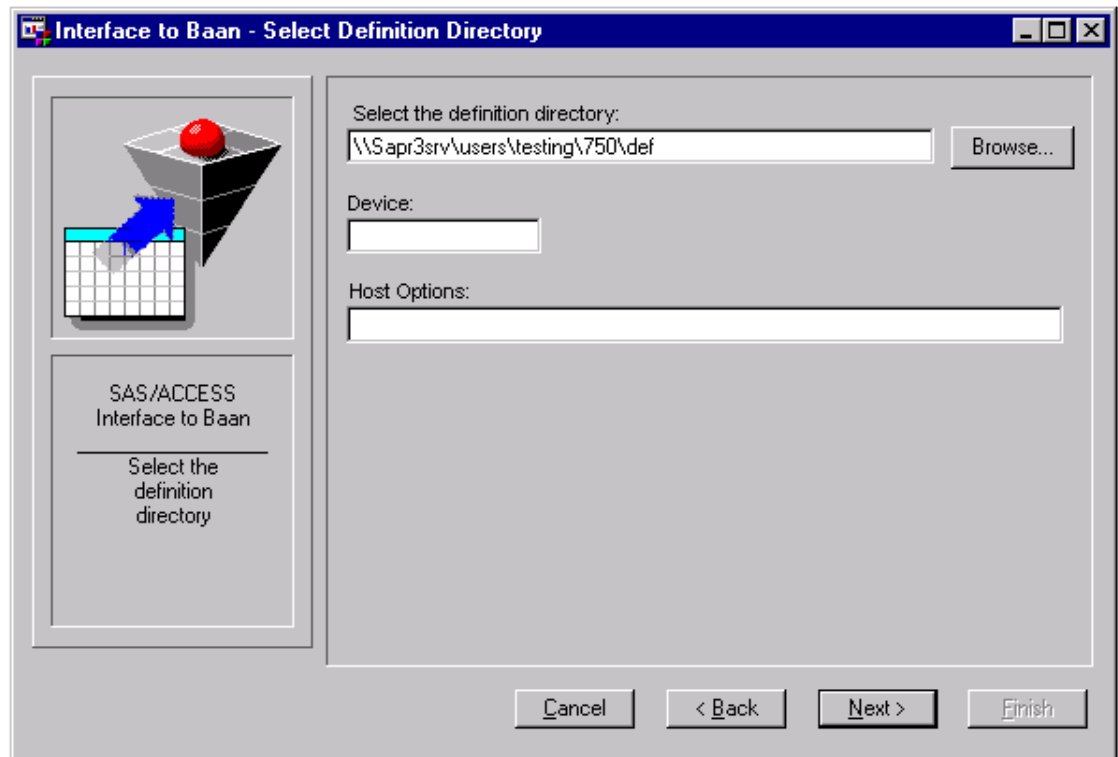
3 Select the directory for the definition files. This corresponds to the Path for Definition Files in the Baan Exchange Scheme.

`Select the definition directory`	specifies the pathname of the directory.
`Device`	specifies the device that you want to use to access the directory and the files in the directory.
`Host Options`	specifies any FILENAME options that are used to access the directory and the files in the directory.

An entry is required in the definition directory field. Optionally, you can specify a device and host options for accessing the directory. For example, you can use the FTP access method to read a Baan Exchange Scheme from a server:

Select the definition directory	baan/def
Device:	FTP
Host Options:	Host='server' user='username' prompt

The Browse button opens a dialog box in which you can select a directory. This dialog box only allows navigation on the local host. After you select the directory that contains the definition files that were exported from Baan in the **Folder** field, click OK to close the Select window. Click Next to display the Select ODD Group window.

Display 4.5 Select ODD Group Window
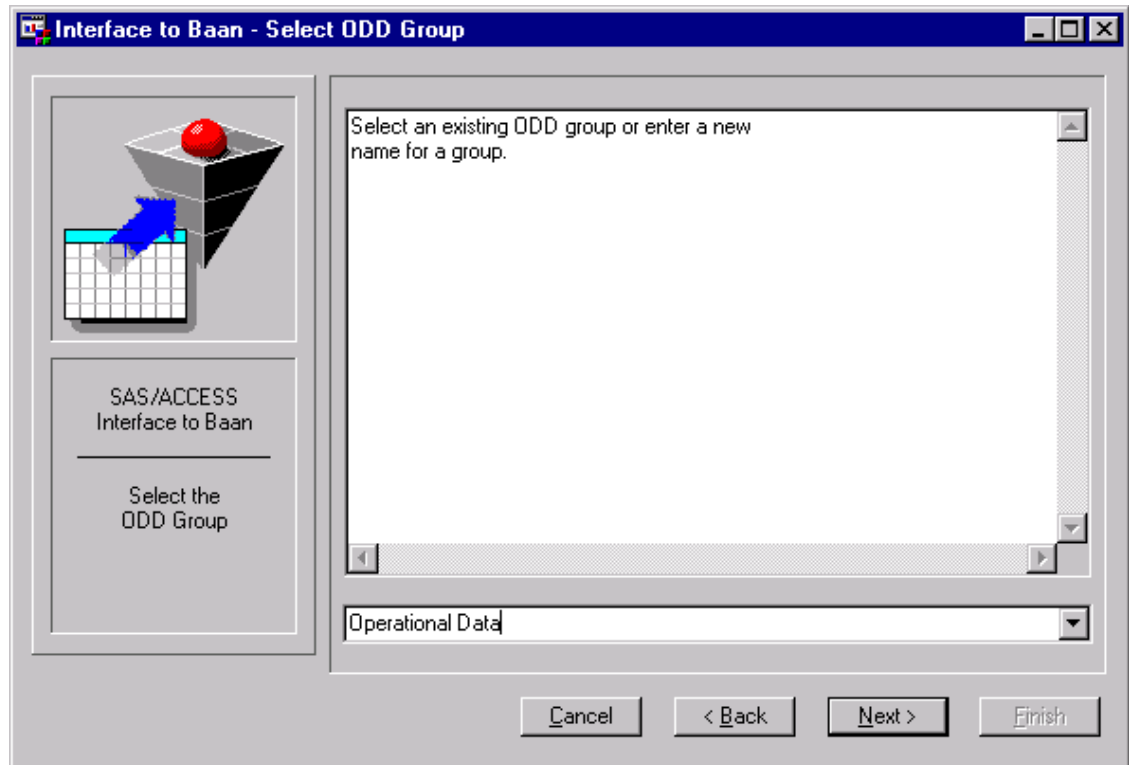
4 Select the target ODD group for the metadata import.

If an ODD group was selected when the add-in was invoked, this group is initially selected as the target ODD group. Otherwise, the directory pathname is the default name for the ODD group. Click the down arrow in the field to display a list of ODD groups that are defined in the warehouse environment. Select a group from the list or enter a new name for the ODD group. If the group does not exist, it will be created during the metadata import.

Click Next to display the Select Definition Files window.

Display 4.6 Select Definition Files Window
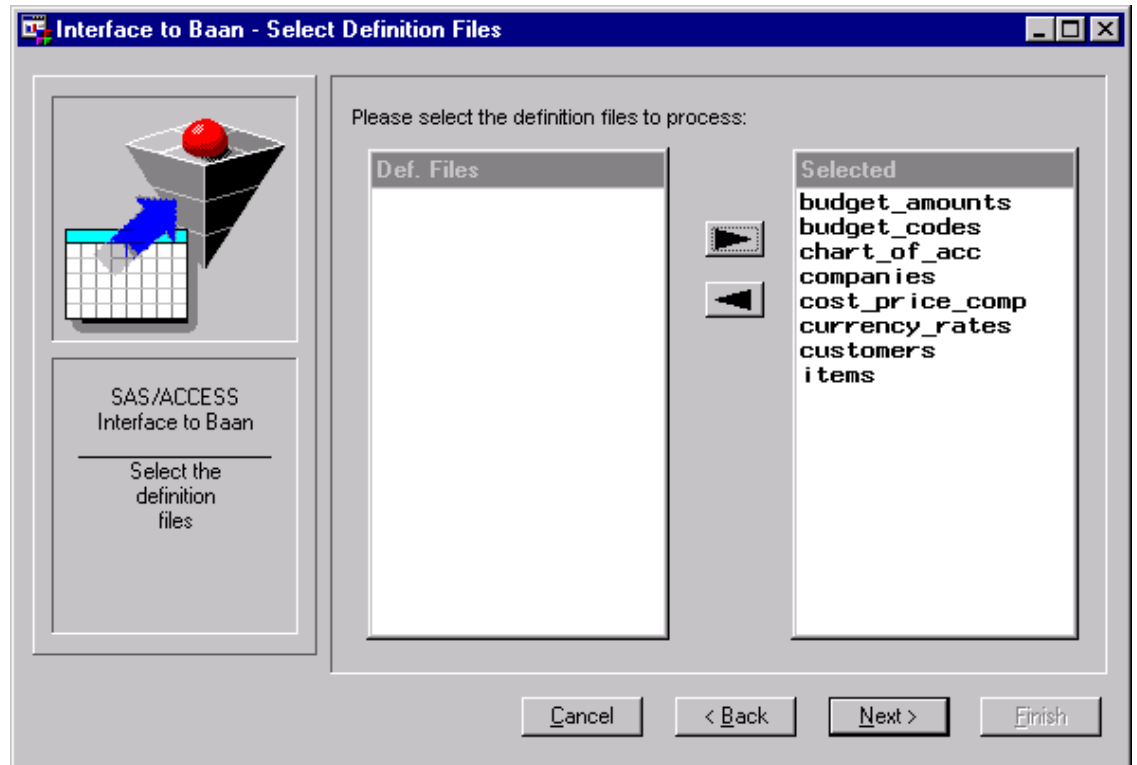
5 Select the definition files that you want to import by clicking a file that is listed in the Def. Files list box to highlight it, and then clicking the arrow buttons to move it to the Selected list box. You can highlight multiple files by pressing the CTRL key while selecting files or using CTRL-SHIFT.

In the example shown in Display 4.6, all files are selected. After you have moved the desired file(s) to the Selected list box, click [Next] to display the More Attributes for Exchange Scheme window.

Display 4.7 More Attributes for Exchange Scheme Window
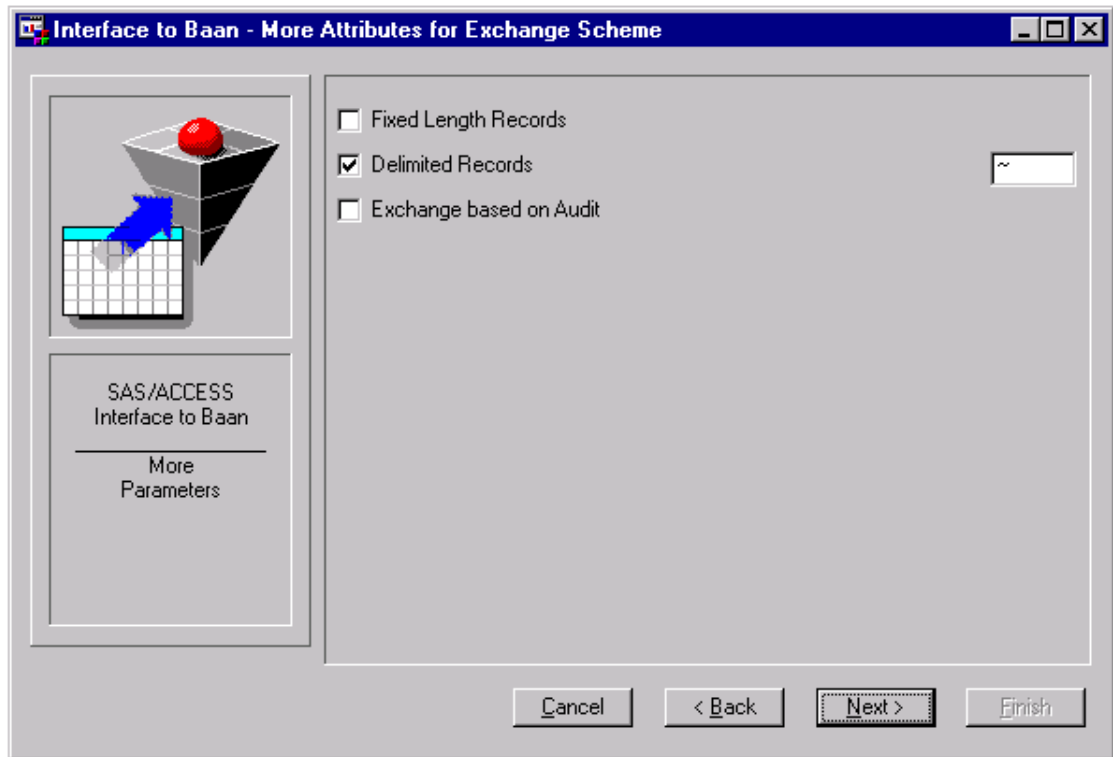
6 Select the appropriate check box designating whether the data files are delimited files or if they contain fixed-length records. The default separator for delimited records is a tilde (~). If the delimiter in the data files is not a tilde, enter the appropriate character in the field to the right.

If the Baan Exchange Scheme is using audit files, select the **Exchange based on Audit** check box. A Baan Exchange Scheme is based on audit files if the Exchange for Multi-sites in the scheme is set to **Yes**. The data file contains only the changes to the tables that are identified by transaction codes. This can be useful in implementing changed data capture for Baan tables. The SAS/ACCESS Interface to Baan add-in for the SAS/Warehouse Administrator provides a code generator for you to define processes for changed data capture. For more information about how to use the code generator, see "Defining the Process" on page 29.

Click Next to display the Select library and member window.

Display 4.8   Select Library and Member Window
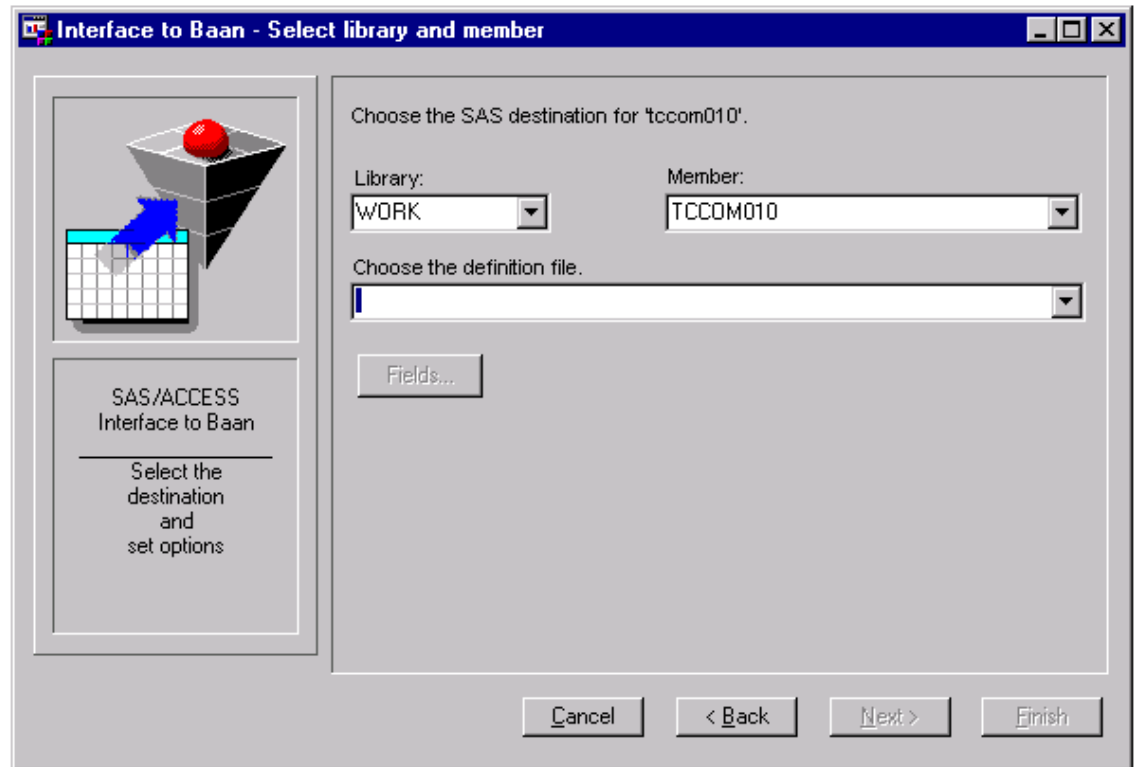
The elements available in the Select library and the member window are

Library
specifies the library for the SAS data set. The selection list for libraries lists the locally assigned library references. The SAS library defaults to **WORK**.

Member
specifies the member name of the SAS view. The selection list for the member name lists the data sets or views in the selected library. The name defaults to the name of the definition file.

Choose the definition file
specifies the definition file. The selection list for definition files lists the files selected in the Select Data Files window and defaults to the first file in the list.

Fields
opens the Select Fields window shown in Display 4.9. This window enables you to select and deselect columns and change the attributes for the SAS columns (for example, the name, the informat, and the format). Initially, all fields are selected and have a default SAS name, format, and informat assigned.

Display 4.9   Select Fields Window
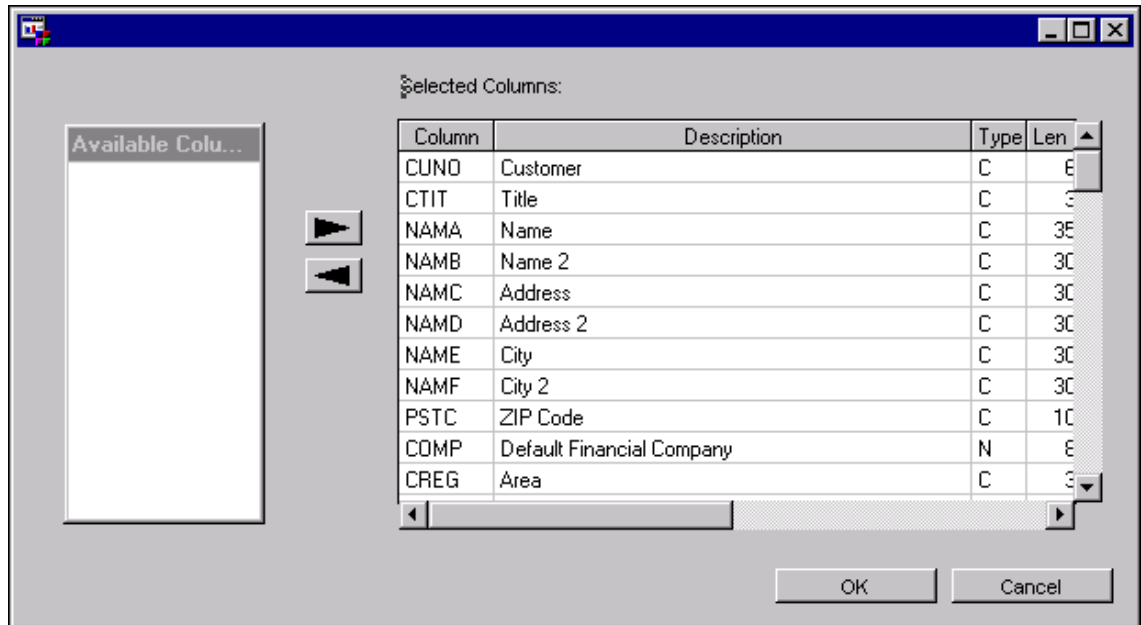
Use this window to

□ modify column selections

□ modify column attributes.

By default, all columns that are defined in the definition file are selected. To deselect a column, click the column to select it, then click the **left arrow** button to move the column to the Available Columns list box. Multiple selections on the left-hand list of available columns are chosen by pressing the SHIFT key while selecting with the mouse button for an adjacent selection, or pressing the CTRL and SHIFT keys while selecting nonadjacent line items. In the right-hand Selected Columns list box, SHIFT-click for multiple selections. To modify any of the attributes, (for example the SAS column name, the description, the type, length, format, or informat of the SAS variable) select the cell to be edited and enter the new value.

When you are finished, click $\boxed{\text{OK}}$ to close this window and return to the Select library and member window.

7 Select the SAS destination and change the field selections. Click $\boxed{\text{Next}}$ to display the Select library and member window for the next definition file in the list. The Select library and member window is repeatedly displayed for each selected definition file. After you have selected the SAS destination and field selections for each definition file in the list, click $\boxed{\text{Next}}$ to display the Review the Settings Window.

Display 4.10   Review the Settings Window
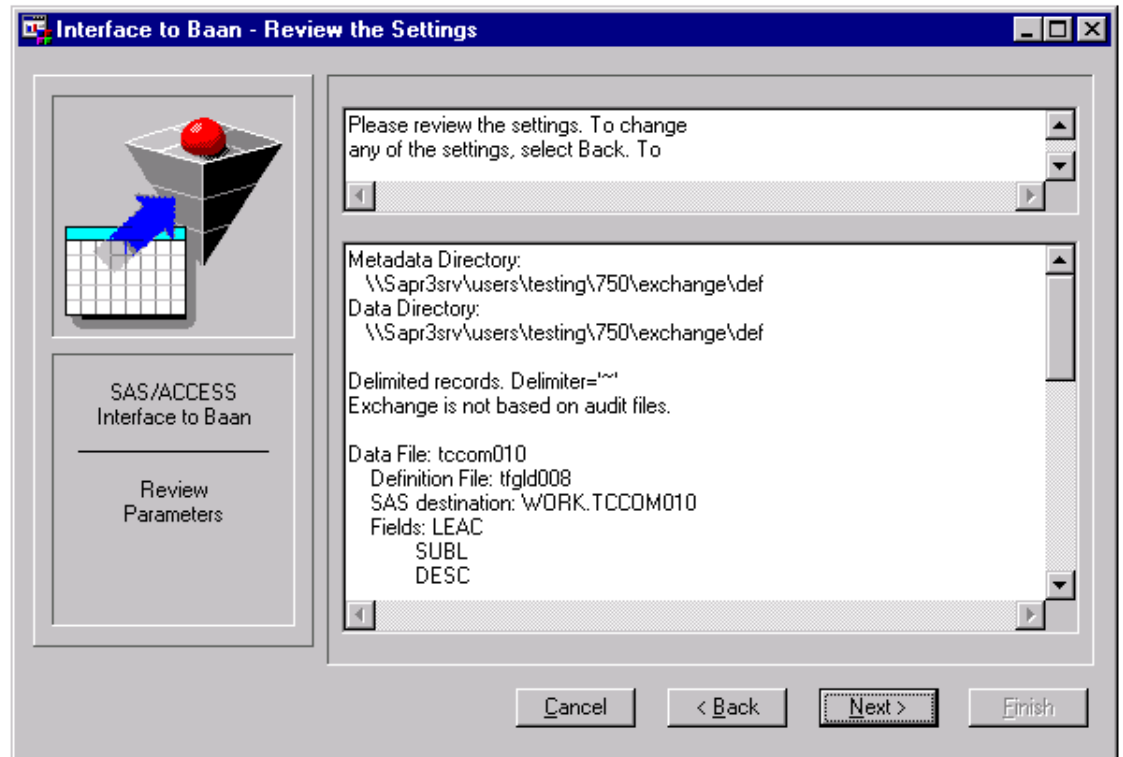
8 This window displays your selected settings and options, and enables you to review the settings and return to previous windows before you import the metadata. Select ⬚Next⬚ to begin importing the metadata into the warehouse environment. New ODDs are defined during this process. While adding the ODDs, the Add Metadata dialog box is displayed.

Display 4.11   Add Metadata Dialog Box
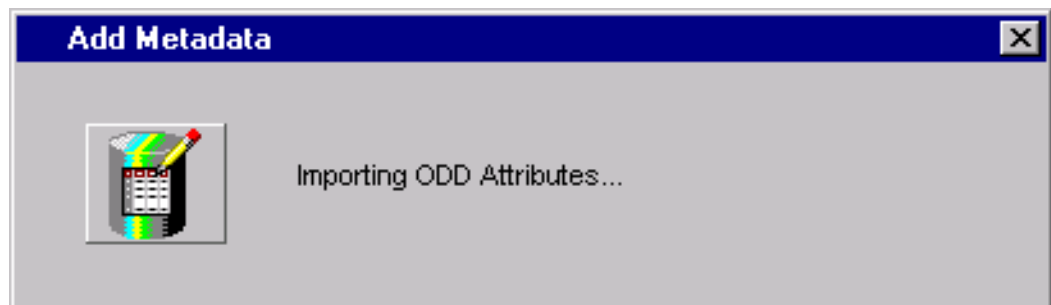
After the metadata has been imported into the warehouse environment, the Result window is displayed.

Display 4.12   Result Window
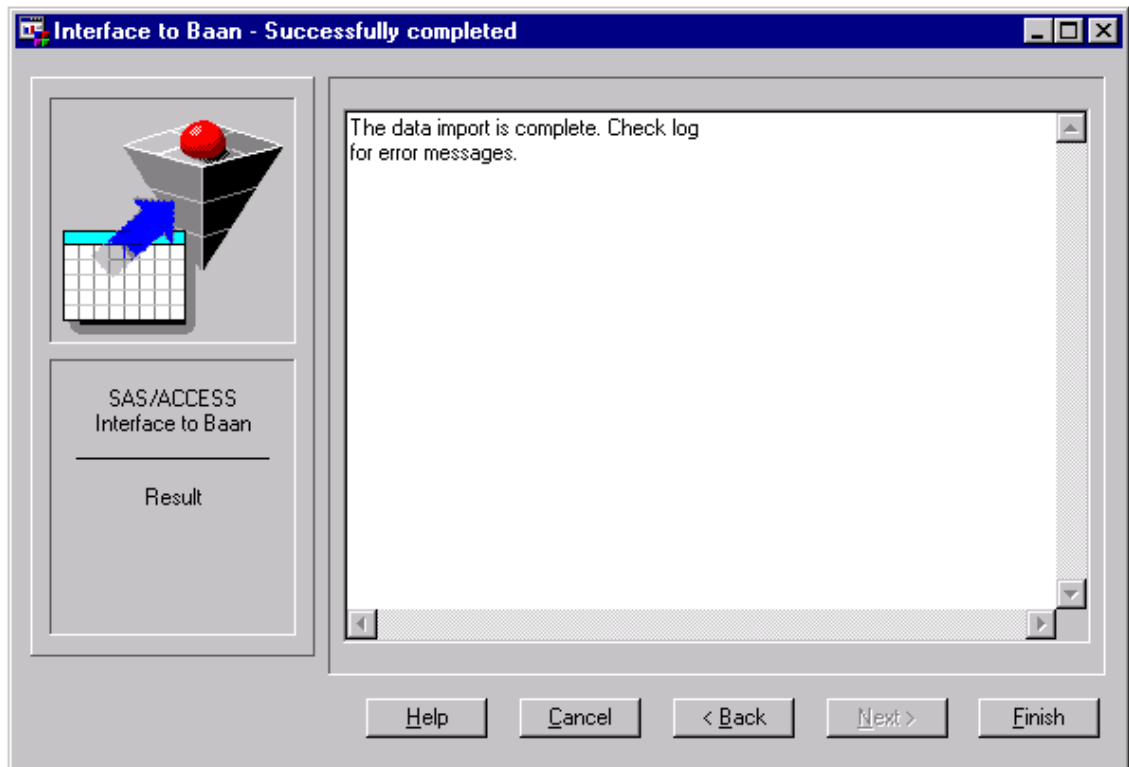
9 The Result window displays the outcome of the metadata import. Click `Back` to return to previous screens, correct selections, and restart the metadata import. Select `Finish` to close the SAS/ACCESS Interface to Baan add-in.

The metadata has been imported from the definition files into the ODDs in the warehouse environment. The following section describes the imported metadata in detail. Before you can read data from the files that were exported from Baan, you must associate the external data source and the appropriate SAS code generator with the ODD. For more information, see "Defining the Process" on page 29.

Interpreting the Metadata

This section describes the metadata that is created by the import. The SAS/ACCESS Interface to BAAN creates

- □ an operational data group (if required)
- □ library definitions (if required)
- □ operational data definitions.

The name, the data location (library and view), the column definitions, and various extended attributes for the ODD and for each of the columns are written to the metadata repository. The extended attributes for the ODD are

CREATED BY   contains the string 'ACCESS TO BAAN'

DELIMITER   contains the delimiter if the data file is a delimited file

EXCHANGE_   specifies whether the exchange scheme is based on audit Y|N
BASED
ON_AUDIT

LRECL   contains the logical record length.

   The extended attributes for the ODD columns are

POSITION   specifies the sequential position of the column in the data file

OFFSET   specifies the offset of the column in the fixed-length record

VARLEN   specifies the length of the column in the fixed-length record

Defining the Process

   This section describes the steps you must take in order to complete the definition of the ODDs in the SAS/Warehouse Administrator. You must define the external file as the data source for the ODD, and you need to define the code generator to read sequential files that are created by the Baan Exchange tool. The ODD budget_amounts is used as an example to describe these steps. You can find a detailed description of the windows that are used in this section in the *SAS/Warehouse Administrator: User's Guide*.

   Use the Process Editor in the SAS/Warehouse Administrator to define the metadata for the load process and to define the process flow from the source file to the target table.

   To open the process editor:

   1 Right-click the ODD in the Explorer window of the SAS/Warehouse Administrator.

   2 Select `Process` from the pop-up menu.

   3 If the ODD does not have a job associated with it, you are asked whether to create a new job for it. Select $\boxed{\text{Yes}}$ to create a new job.

   In the Explorer window of the SAS/Warehouse Administrator, select, for example, the ODD budget_amounts. The metadata for this ODD has been imported from the definition file.

   To create a process flow as shown in Figure 4.1:

   1 In the process view, right-click the ODD budget_amounts, and select

   $\boxed{\text{Add}}$ ▶ $\boxed{\text{New External File}}$

   from the pop-up menu.

   2 Right-click the External File icon and select `Properties` from the pop-up menu. The External File Properties window is displayed. Enter the filename for the external file and set any other necessary options on the General tab. From the File Location tab, select the data file that is the input source for the ODD. At a minimum, you must specify the fileref, the path of the external file, and the host. Click $\boxed{\text{OK}}$ to save your entries and close the window.

   3 Right-click the ODD budget_amounts, and select `Process Library` from the pop-up menu to display the Process Library window. Select

   $\boxed{\text{Baan Exchange}}$ ▶ $\boxed{\text{Extract from sequential file}}$

   and click $\boxed{\text{OK}}$.

Figure 4.1 Process Flow to Read External Files

Display 4.13   External File Properties Window
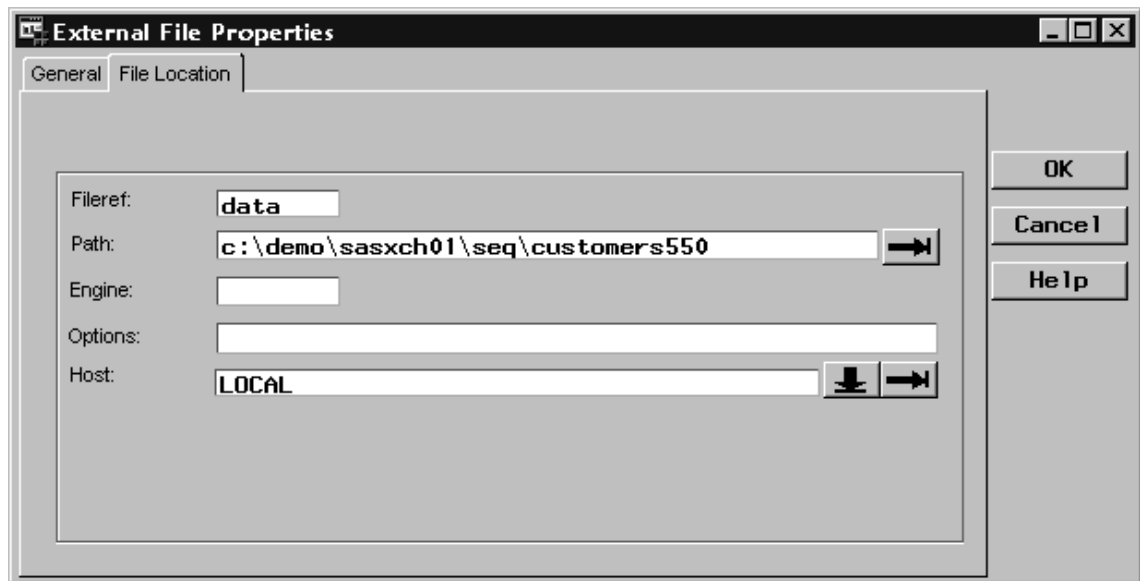
Note: In this example, the data file budget_amounts750 is specified. The Baan
Exchange scheme is used in this example to export data from two different companies.
To distinguish between the data from those two companies, the filename includes the
company number. When the Baan Exchange scheme is created, the filename of the
sequential file is defined containing a pound sign (#). When the data is exported, the
pound sign is replaced by the company number. △

Display 4.14   Process Library Window
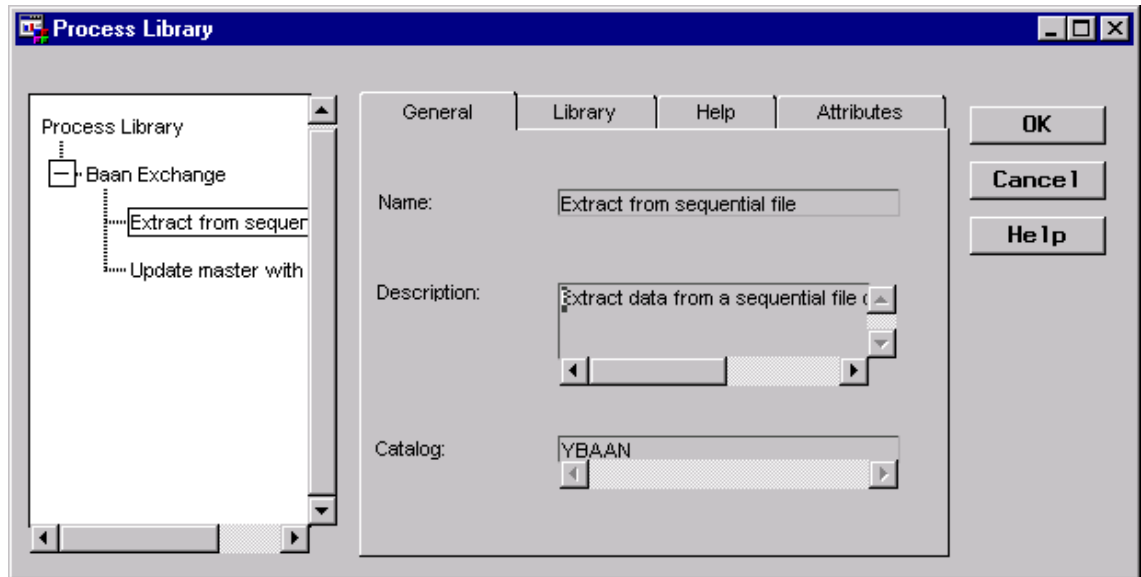
After you have finished setting up the process, you can create the view and extract the data. For further documentation about how to run a job and view the data, refer to the *SAS/Warehouse Administrator: User's Guide*.

Working with Changed Data

This section describes an example of an operational data mapping process for updating an existing SAS/Warehouse Administrator detail table with data that is extracted from Baan. The steps that are used in this section are related to the usage of the SAS/Warehouse Administrator. Only the windows that are related to the SAS/ ACCESS Interface to Baan are discussed in this document. For more detailed information, see the *SAS/Warehouse Administrator: User's Guide*.

In Baan, you can set up an Exchange scheme that uses the audit manager to create export files. For this example, only changes for a specified period will be exported.

To set up the Baan Exchange Scheme in SAS/Warehouse Administrator:

1 From the Data Warehouse Environment window, create and set up the data warehouse and detail table. For more detailed information about creating data warehouses and adding detail tables, see the *SAS Warehouse Administrator: User's Guide*.

Note: You must have an existing detail table in SAS/Warehouse Administrator in order to update the data using the Baan Exchange scheme. You cannot create this detail table by using the SAS/ACCESS Interface to Baan. △

2 Use the Baan Interface add-in to import the metadata into a new ODD. While configuring the Exchange scheme, select the `Exchange based on Audit` check box in the More Attributes for Exchange Scheme window shown in Display 4.7. Enter or select the necessary information on the remaining windows of the exchange scheme in order to complete the Baan import metadata process.

3 Update the ODD by entering the primary key information.

In the Data Warehouse Environment Explorer window, select the new ODD to open the ODD window. From the main menu of the ODD window, select

| Tools | ▶ | Add-ins | ▶ | Update ODD imported from Baan Exchange |

to open the Extended ODD Attributes window. In the Extended ODD Attributes window, select and move the columns with which to build the primary key.

Display 4.15   Extended ODD Attributes Window
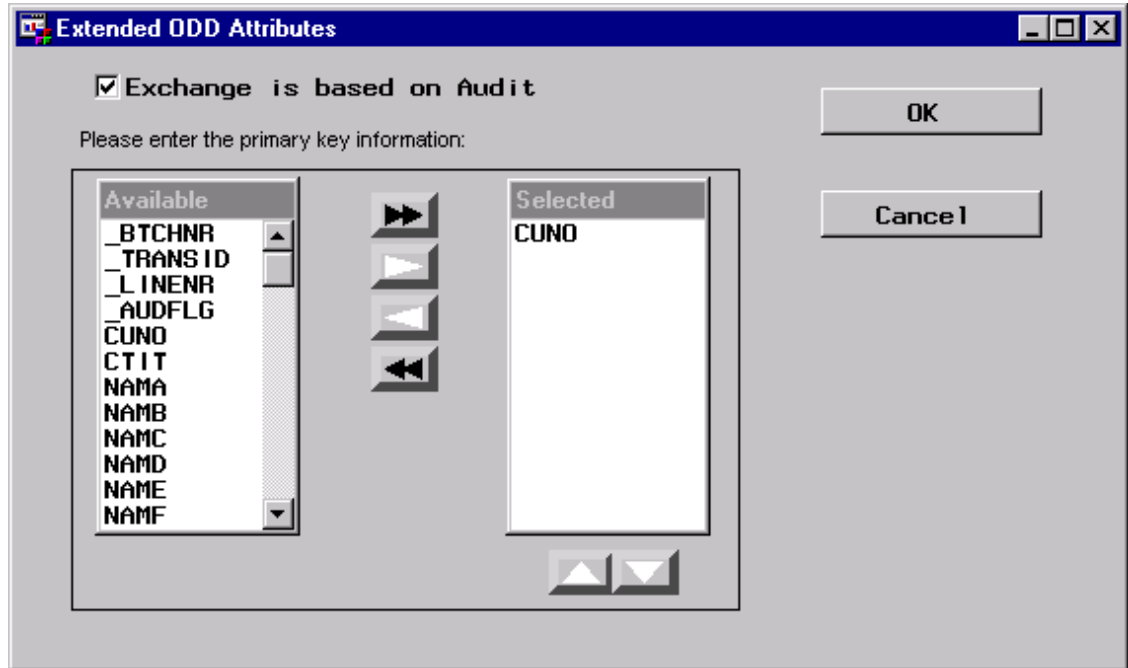
Exchange is based on Audit	indicates whether the Baan Exchange Scheme that is the source of this ODD is using the audit manager to create the export files.
Available	lists the columns in the ODD that were imported from the Baan Exchange Scheme.
Selected	lists the columns of the primary key.

To select a column in the **Available** list box, click the column to select it, and then click the **right arrow** to move the column to the **Selected** list box. Clicking the **double arrows** moves all columns from one list box to the other. Select multiple columns by holding the SHIFT key or the CTRL and SHIFT keys while selecting with the mouse button. The order of the columns in the **Selected** list box must match the order in which they are used in the primary key.

Note: Do not select the fields _BTCHNR, _TRANSID, _LINENR and _AUDFLG as part of the primary key. △

To re-order columns in the **Selected** list box, select an item and move it up or down by clicking the **up** or **down arrow** at the bottom of the list box.

Note: If a date value is part of the primary key, verify that the column is defined as a Baan date in all exchange schemes that are used to load the data, which will ensure correct updating of the data files in SAS. △

Select $\boxed{\text{OK}}$ to apply the changes and return to the ODD window.

Before mapping the ODD with the Detail Table, run the job associated with the ODD. For more information about running jobs, see *SAS/Warehouse Administrator: User's Guide*.

4 Add the Operational Data Mapping.

In the Explorer window, right-click the Detail Table that you want to update using Baan metadata and select **Process** from the pop-up menu. In the Process Editor window, right-click the Detail Table icon and select **Add** and then **Inputs** from the pop-up menu. To list the available ODDs, select the type ODD on the Table Type tab and click $\boxed{\text{Show}}$. From the list, select the ODD that defines the import from the Baan Exchange Scheme and click $\boxed{\text{OK}}$. The operational data mapping process is shown in Figure 4.2.

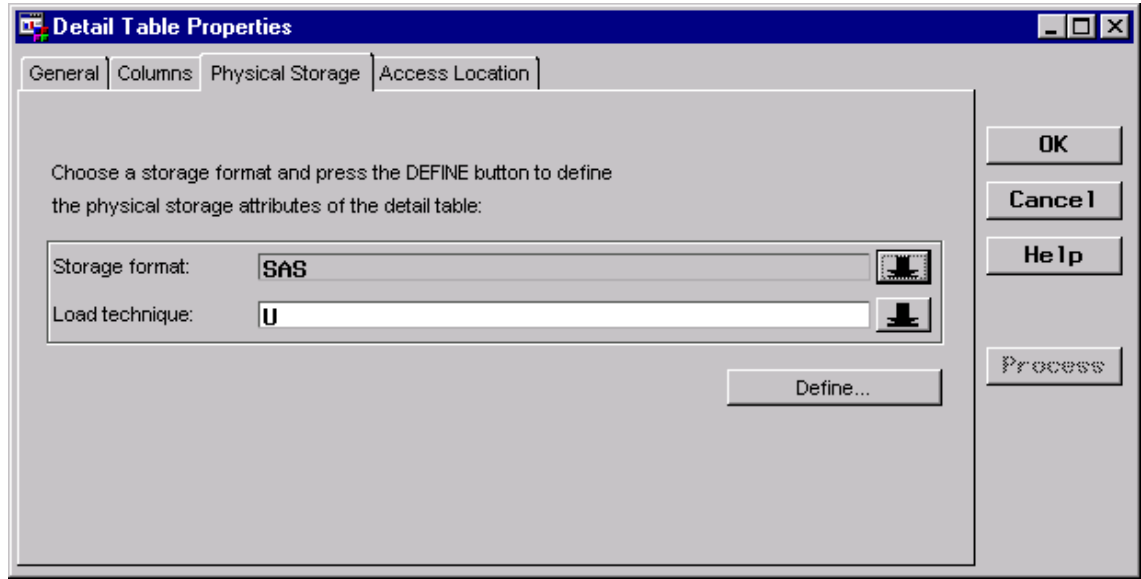**Figure 4.2**   Process Flow for the Operational Data Mapping
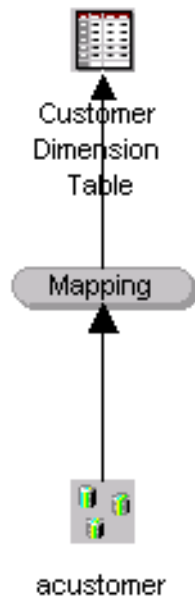
5 Edit the Detail Table Properties.

In the Process Editor window, right-click the Detail Table icon and select **Properties** from the pop-up menu. You can specify multiple properties for the detail table. For the example described in this document, the following is required at a minimum:

a From the Column tab, import the column information from the ODD table. If the load time information for the records is required, add a column for the load time, import the load time column from another detail table. The fields _TRANSID and _AUDFLG must be defined in the detail table.

b Specify the Physical Storage and the Access Location for the detail table. For the **Load technique**, enter **U** for update as shown in Display 4.16. Update is not in the list of predefined load techniques.

Display 4.16 Detail Tables Properties Window


6 Edit the Mapping Process Properties.

In the Process Editor, right-click the Mapping icon and select **Properties** from the pop-up menu. For the example described in this document, the following information is required at a minimum:

a In the Execution tab, select the **Compute Host** for the mapping process.
b In the Column Mapping tab, define the mapping for the columns. Click 1 to 1 Mappings and then Quick Map to automatically map equivalent column names from the source to the target column.

7 Select the code generator from the process library.

In the Process Editor, right-click the Detail Table icon and select **Process Library** from the pop-up menu. Select **Baan Exchange** and then **Update master with audit files** from the list of processes as shown in Display 4.17.

Display 4.17 Process Library Window
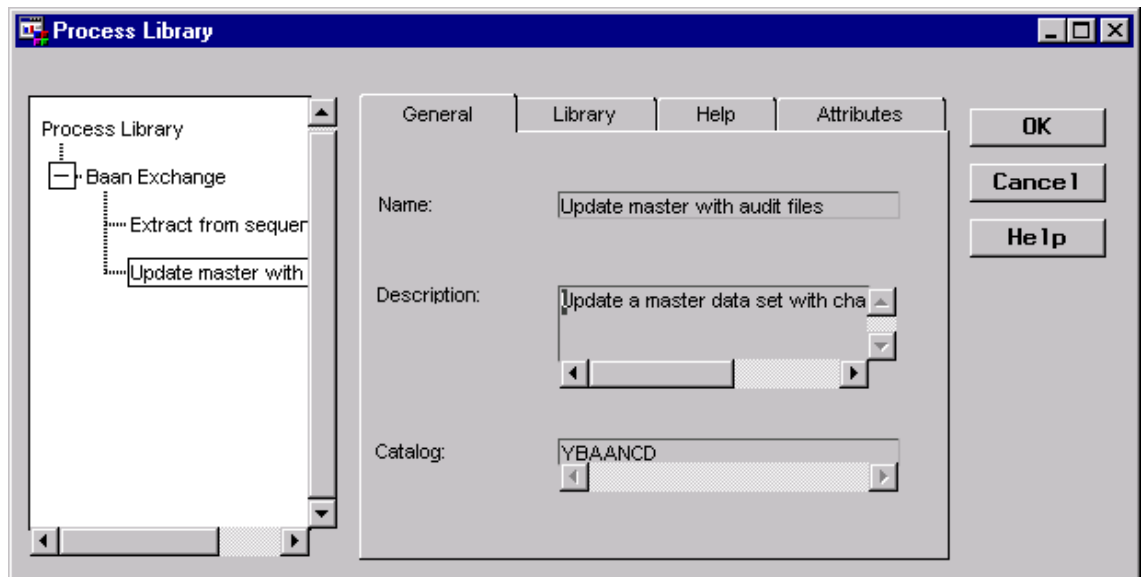
After you have finished setting up the process, you can load the data into the data warehouse. For further documentation about how to run a job and view the data, see the *SAS/Warehouse Administrator: User's Guide*.
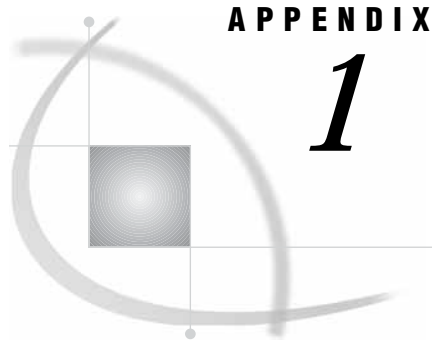
APPENDIX

1

Default SAS Formats and Informats

SAS Formats and Informats used with the SAS/ACCESS Interface to Baan **37**

SAS Formats and Informats used with the SAS/ACCESS Interface to Baan

This table displays the SAS formats and informats that are used with Baan data formats.

Table A1.1   SAS Formats and Informats Used with Baan Data

Baan Type/Format	SAS Type	SAS Informat/Input	SAS Format
Alphanumeric	C	$ASCII*n*.	$*n*.
Date Format DDMMYY	N	DDMMYY6.	DATE9.
Date Format DDYYMM	N	MMDDYY6. On substr(s,5,2)||substr(s,1, 4)	DATE9.
Date Format YYDDMM	N	DDMMYY6. On substr(s,3,4)||substr(s,1, 2)	DATE9.
Date Format YYMMDD	N	YYMMDD6.	DATE9.
Date Format DDMMYYYY	N	DDMMYY8.	DATE9.
Date Format DDYYYYMM	N	MMDDYY8. On substr(s,7,2)||substr(s,1, 6)	DATE9.
Date Format MMDDYYYY	N	MMDDYY8.	DATE9.
Date Format MMYYYYDD	N	DDMMYY8. On substr(s,7,2)||substr(s,1, 6)	DATE9.
Date Format YYYYDDMM	N	DDMMYY8. On substr(s,5,4)||substr(s,1, 4)	DATE9.
Date Format YYYYMMDD	N	YYMMDD8.	DATE9.
Date BAAN Number	N	value-715510 (see Note)	DATE9.
Numeric w/ Floating Decimal	N	w.d	BEST.
Numeric w/o Floating Decimal	N	w.	BEST.

Note: In bshell, a date is stored as the number of days starting from the year 0001. SAS stores dates as the number of days from January 1, 1960 to the specified current date. The value 715510 is the equivalent to January 1, 1960 in the bshell. △
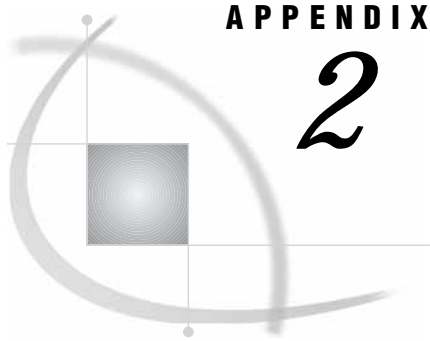
APPENDIX

2

Baan Exchange Module Session Codes

Using Baan Exchange Module Session Codes

You must perform several steps when you use both Baan and SAS to set up the exchange of Baan data. After the initial setup has taken place, run the Baan export and SAS import processes periodically in order to synchronize the data between Baan and SAS. When you import Baan data into SAS by using Baan software, perform the following setup procedures in chronological order.

Table A2.1   Baan Exchange Module Session Codes

Step #	Step Title	Baan Session(s) #	Description
1	Define the Exchange Scheme	TUXCH0101M000	Maintains the exchange scheme data. The exchange of data is done for a specific exchange (conversion) scheme.
2	Define the ASCII File and the ASCII File Formats	TUXCH0102M000 TUXCH0103M000	Maintains ASCII file codes. These codes are maintained per exchange scheme. For each ASCII file code, the actual ASCII file can be linked later. Within an exchange scheme, this code is unique for each ASCII file definition.
			To maintain the ASCII file format for each ASCII file that is entered in the exchange scheme, you can specify the characteristics of the fields in the ASCII file, such as field name, type, length, floating decimal, and so on.
			Note: To copy date values into SAS data sets, you must select the format of a date column in this Baan session. For date fields, specify the format in the field Date Format on the second tab.

Step #	Step Title	Baan Session(s) #	Description
3	Create the Definition File	TUXCH0204M000	Creates the name of the data definition file that is associated with the ASCII file.
4	Create the Batch	TUXCH0104M000	Maintains batch codes for the exchange schemes. A batch should group a collection of tables that belong together.
5	Create the Table and Field Relations (Export)	TUXCH0131M000 TUXCH0132M000	Allows the user to maintain the relations between ASCII files and tables. These relations are maintained per batch (line) in an exchange scheme. Each batch line will have an ASCII file and a table associated with it. By specifying multiple batch lines, it is possible to relate a table to multiple ASCII files. This session allows the user to define the relations at field level. These relations are maintained per batch line in an exchange scheme. You must enter all ASCII fields that should be filled from the table that is specified in the batch line. Fields of the ASCII file that are not defined here will be left empty.
6	Create the Export Script	TUXCH0228M000	Creates and compiles the scripts for export of data.
7	Export Data	TUXCH0233M000	Exports data into sequential ASCII files from tables. The exchange scheme details for this session are defined during various other sessions. These exchange scheme details determine how and when the data will be exported.

<APPENDIX>
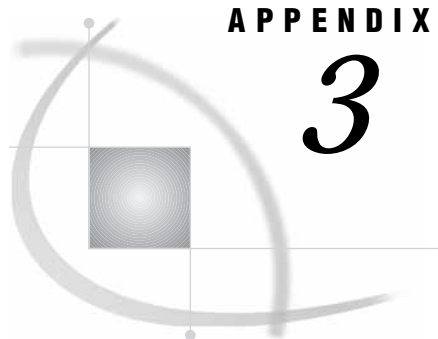
APPENDIX

3

Recommended Reading

<Recommended>

Recommended Reading **41**

Recommended Reading

Here is the recommended reading list for this title:

□ *Doing More with SAS/ASSIST*

□ *Getting Started with the SAS System*

□ *SAS/AF Procedure Guide*

□ *SAS/FSP Procedures Guide*

□ *SAS Language Reference: Concepts*

□ *SAS Language Reference: Dictionary*

□ *SAS Macro Language: Reference*

□ *SAS/Warehouse Administrator Metadata API Reference*

□ *SAS/Warehouse Administrator User's Guide*

□ *Step-by-Step Programming with Base SAS Software*

□ *Getting Started with SAS/ASSIST*

□ SAS Companion that is specific to your operating environment

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Glossary

add-in
    a SAS program that extends the functionality of SAS/Warehouse Administrator software. Some add-ins are utility tools that can be used for loading, transforming, and extracting data. Other add-ins enhance integration between the warehouse and other SAS components.

audit file
    a file in the Baan system that contains a record of all database transactions. Audit files are created by the audit trail function in Baan. If the audit trail function is enabled in Baan, then all database actions that are performed on fields, such as updating a field value, are recorded in the audit file.

audit trail
    a function in Baan that can be used to track and record all database transactions, such as updates to field values. When enabled, the audit trail function creates an audit file that contains a record of all database transactions that have been performed. If the audit trail function is disabled in Baan, no audit file is created.

changed data capture (CDC)
    a code generator for SAS/Warehouse Administrator that generates code for examining the differences between the data in two tables or views.

code generator
    an add-in to SAS/Warehouse Administrator that dynamically generates the code for a SAS/Warehouse Administrator process.

data mart
    in SAS/Warehouse Administrator, a limited data warehouse that is often designed to meet the needs of a particular department or individual. A data mart is more limited in scope than a data warehouse, which typically contains information that is used by more than one department.

data store
    in SAS/Warehouse Administrator, a table, view, or file that is registered in a data warehouse environment. Data stores can contain either individual data items or summary data that is derived from the data in a database.

data table
    in SAS/Warehouse Administrator, a metadata record that specifies a SAS table or view or a DBMS table or view that can serve multiple purposes. Data tables are

frequently used to define data stores. They can be used to define data stores, summary data, a join, or a table that holds information that does not fit anywhere else.

data warehouse
a collection of data that is extracted from one or more sources for the purpose of query, reporting, and analysis. In contrast to a data mart, a data warehouse is better suited for storing large amounts of data that originates in other corporate applications or which is extracted from external data sources such as public databases.

data warehouse environment
a metadata record that specifies the SAS library _MASTER. The _MASTER library contains host definitions and other metadata that is used by one or more data warehouses and ODD groups. On the SAS/Warehouse Administrator desktop, data warehouse environments are displayed as icons.

definition file
a file in the Baan system that describes the contents of an ASCII file.

delimited record
a record in which the values of each field are separated by a delimiter such as a comma or a period. In Baan, the default delimiter or separator is a tilde (~).

detail data store
in SAS/Warehouse Administrator, a table, view, or file that is registered in a data warehouse environment and which contains factual information that has not been summarized or which has only been partially summarized after being extracted from a data source.

detail table
a metadata record that specifies a SAS table or view or a DBMS table or view that can serve as a detail data store in SAS/Warehouse Administrator.

Exchange (XCH) module
a Baan utility that enables the Baan system to communicate with other data sources such as databases and spreadsheets. The Exchange (XCH) module enables Baan users to import, export, replicate, and convert data.

Exchange scheme
a set of data in the Baan Exchange module. A Baan Exchange scheme is similar to a folder. Each Exchange scheme contains a text description of the scheme. Exchange schemes also contain paths to identify the locations of the data objects that the Exchange schemes import or export, as well as the locations of the log files, sequential files, and definition files that are associated with the Exchange schemes.

extended attribute
an attribute that stores site-specific metadata that is not part of the standard metadata for an object in SAS/Warehouse Administrator. For example, an extended attribute for a table might contain the URL of a Web page that describes the table. Extended attributes can be added to all objects that are defined in the SAS/Warehouse Administrator Explorer, to all columns within objects, and to all process flows that are defined in the SAS/Warehouse Administrator Process Editor.

fixed-length record
a record in which a predefined number of positions are allocated for the value of each field. For example, in a fixed-length customer record, the fields might be Customer Name, Customer Address, and Customer Phone, and each of these fields would have a predefined length.

format
a pattern that SAS uses to determine how the value of a variable should be written or displayed. SAS provides a set of standard formats and also enables you to define your own formats.

host definition
in SAS/Warehouse Administrator, a metadata record that specifies a computer on which data stores are saved, where processes and jobs execute, or where the output from a process is sent. Host definitions are part of the global metadata for a warehouse environment and are included in the metadata records for data stores and processes that are defined in the data warehouse environment.

information mart
a grouping of metadata that can specify the locations of files and the methods for opening those files. Information marts can also specify code that generates output from data stores in a data warehouse.

job
a metadata record that specifies the processes that create one or more data stores (output tables). A job enables you to combine a series of process steps into a single unit. The processes can be specified with a process flow diagram in the Process Editor. If a process flow diagram is specified, SAS/Warehouse Administrator can generate code for the job. Alternatively, a job can reference a user-supplied program that contains the processes that create the data store(s). A job can include scheduling metadata that enables the process flow or user-supplied program to be executed in batch mode at a specified date and time.

join
in the SQL procedure, the combination of data from two or more tables (or from two or more SAS data views) to produce a single result table. A conventional join, which is often called an inner join, returns a result table for all the rows in one table that have one or more matching rows in the other table(s), as specified by the sql-expression.

mapping
See mapping process.

mapping process
a metadata record that is used for generating or retrieving source code that maps columns from one or more data sources (such as an ODD) to one or more targets. Common mappings include one-to-one mappings (one data source mapped to one target table) and joins (one or more data sources appended to a target table).

metadata
a description or definition of data or information.

metadata repository
a data store that contains an application's metadata.

ODD
a metadata record that provides access to data sources. The ODDs, in turn, are used for loading data into data stores in your warehouse.

ODD group
a metadata record that specifies a group that is used to organize ODDs and information marts.

primary key
a column or combination of columns that uniquely identifies a row in a table.

process flow diagram
a user-defined diagram in the Process View of the Process Editor in SAS/Warehouse Administrator. A process flow diagram consists of symbols, with connecting arrows and descriptive text, that illustrate the sequence of each process that is associated with a job. The process flow diagram illustrates how the data moves from one or more input sources to one or more output tables and also shows what extractions and transformations occur.

SAS data format
See format.

scheme
See Exchange scheme.

sequential file
a file that contains the data that you want to import to or export from Baan.

summary data
descriptive data that is derived from data in a database.

warehouse environment
See data warehouse environment.

Index

Your Turn

If you have comments or suggestions about *SAS/ACCESS® 9.1 Interface to Baan: User's Guide*, please send them to us on a photocopy of this page, or send us electronic mail.

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