

Linking, Importing, and Exporting Data

You'll want to read this chapter if you already have data on your computer that you want to pull into Access, or if you have created an Access database and want to export its data to another program. Most procedures described in this chapter for linking, importing, and exporting data are quick and easy to use. However, a few fine points can be tricky, especially if you're working with open database connectivity (ODBC), Paradox, or dBASE database files. Luckily, lots of online Help is available. Choose one of these topics from the Access Help Index to get going quickly:

- Importing Data
- Exporting Data

NOTE

See Chapter 4 for other ways to share data among Microsoft Office programs.

Link, Import, Export: What's the Difference?

Access gives you several ways to share data with other programs:

Link Lets you directly access data in another computer database. Any changes you make via Access will affect the original database as well as the Access database. That is, you'll be working with *live data*.

NOTE

In some earlier versions of Access, linking was called *attaching*.

Import Lets you make a separate copy of data from other programs and file formats into an Access table. Changes you make via Access will not affect the original data.

Export Lets you copy data from an Access table *to* some other program or file format, such as Microsoft Word or Excel, or even to a separate Access database. The exported data is an entirely separate copy that isn't linked to your original Access data in any way.

After importing or linking data from another program into Access, you can usually use that data as though you had created it in Access originally. Files linked from Lotus 1-2-3 files are read-only. For example, if you import or link a Paradox table into your Access database, you can open that table and use it as you would any Access table.

Similarly, you can use exported Access tables in other programs, just as though you had created the exported data in the other program originally. Thus you can export an Access table to Paradox format, fire up Paradox, and then open and use the table as you would any other "native" Paradox table.

NOTE

OLE is a technology that offers another way to combine information from separate programs. However, OLE lets you share *objects*, rather than *data*. We'll talk about OLE in Chapter 8.

Interacting with Other Databases

You can import or link data from any of these database formats:

- dBASE III, III+, IV, and 5.
- Paradox versions 3.x, 4.x, and 5.0.
- Microsoft FoxPro versions 2.0, 2.5, 2.6, and 3.0.



MASTERING THE OPPORTUNITIES

Automating Import and Export Procedures

You can use a macro or Visual Basic procedure to automate importing, linking, and exporting certain types of data. Here are the macro and Visual Basic actions you'll need to use:

TransferDatabase Lets you import or export data between the current Access database and another database. See the *TransferDatabase Action* and *TransferDatabase Method* topics in the Access Help Index.

TransferSpreadSheet Lets you import or export data between the current Access database and a spreadsheet file. See the *TransferSpreadsheet Action* and *TransferSpreadsheet Method* topics in the Access Help Index.

TransferText Lets you import or export data between the current Access database and a text file. See the *TransferText Action* and *TransferText Method* topics in the Access Help Index.

SendObject Lets you create Microsoft Excel (*.xls), rich text format (*.rtf), MS-DOS text (*.txt), HTML (*.htm), or HTX/IDC (*.htx, *.idc) output from a table, query, form, report, or module and then send that output in an electronic mail message. See the *SendObject Action* and *SendObject Method* topics in the Access Help Index.

Parts Four and Five of this book introduce macros and Visual Basic.

- ODBC databases, including Microsoft SQL Server. You'll need a properly installed and configured ODBC driver.
- Databases created with the Microsoft Jet database engine, including Microsoft Access (versions 1.x, 2.0, 7.0) and Microsoft Visual Basic.
- Databases kept in Microsoft Excel worksheets, versions 5.0 and 7.0.
- HTML and HTX tables and lists.
- Lotus 1-2-3 files (read-only when linked).

Before you bring data from one of these other formats into an Access database, you need to decide whether to link to that data or import your own copy of it. Table 7.1 lists some points that can help you decide.

NOTE

Access 97 does not automatically include the drivers for Paradox and Lotus 1-2-3 files when you install it. You can get these drivers by installing the Office 97 ValuPak. This option is included on the CD-ROM of the Microsoft Office Professional Edition 97. The ValuPak can also be downloaded from Microsoft's Web site: choose Help ► Microsoft on the Web ► Free Stuff from the Access menus. See Access 97 Help for more information on what the ValuPak provides.

TABLE 7.1: DIFFERENCES BETWEEN IMPORTED AND LINKED TABLES

IMPORTED TABLE	LINKED TABLE
Copied from the external table to your open database. (Requires extra disk storage.)	Linked to your open database. No copies are made. (Conserves disk storage.)
Use when you no longer need to have the original application update the table.	Use when you still need to have the original application update the table.
Converted to Access format and works exactly like a table you created from scratch.	Retains its original database format, but "acts like" an Access table.
You can change any properties, including the structure, of an imported table.	You can change some properties, but you can't change the structure of a linked table.
Access can work faster with imported tables.	Access may work more slowly with linked tables.
Deleting the table deletes the copy from your open database.	Deleting the table deletes the link only, not the external table.
Access translates certain data types of the original table to Access data types.	No data type translations are necessary.

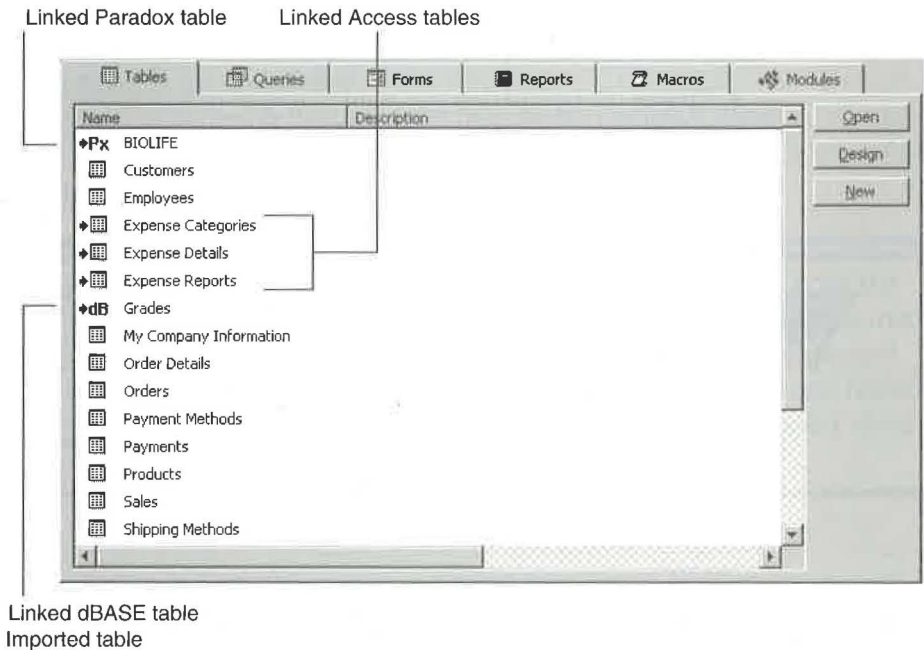
Where You'll See Imported/Linked Tables

When you import or link data from another database, Access treats the data as it would one of its own tables. For linked tables, however, special icons in the database window indicate that the data is not originally from Access.

In Figure 7.1 we linked Access tables named *Expense Categories*, *Expense Details*, and *Expense Reports* (from another Access database); a Paradox table named *Biolife*; and a dBASE table named *Grades* to an open *Order Entry1* database. We also imported a table named *Sales* from a Microsoft Excel worksheet. Notice that the icons next to the linked tables include an arrow symbol to indicate a link to the external tables; however, the icon next to the *Sales* table looks like any other Access table icon.

FIGURE 7.1

Special link icons indicate linked tables.



Importing or Linking a Table

Here are the general steps for importing or linking tables. The exact procedures will depend on the type of data you're importing or linking. Refer to the appropriate section below for more details.

1. Open (or create) the database you want to import or link the table to and switch to the database window if it isn't visible.
2. Do one of the following, depending on whether you are importing or linking:
 - *To import*, choose File ► Get External Data ► Import, or right-click on the database window (the shaded part, not a table name) and choose Import. Or click on the Tables tab on the database window, click on the database window's New button, and then double-click on Import Table in the New Table dialog box.
 - *To link*, choose File ► Get External Data ► Link Tables, or right-click on the database window and choose Link Tables. Or click on the Tables tab on the database window, click on the database window's New button, and then double-click on Link Table in the New Table dialog box.

NOTE

You cannot delete rows from linked Excel tables or text files.

3. Choose the type of data you want to import or link in the Files Of Type drop-down list. For example, click on the drop-down list button next to Files Of Type and then click on Paradox to import or link a Paradox table.
4. Locate the file name you want to import or link and then click on it in the list below Look in. Figure 7.2 shows a typical Link dialog box; the Import dialog box is similar.

TIP

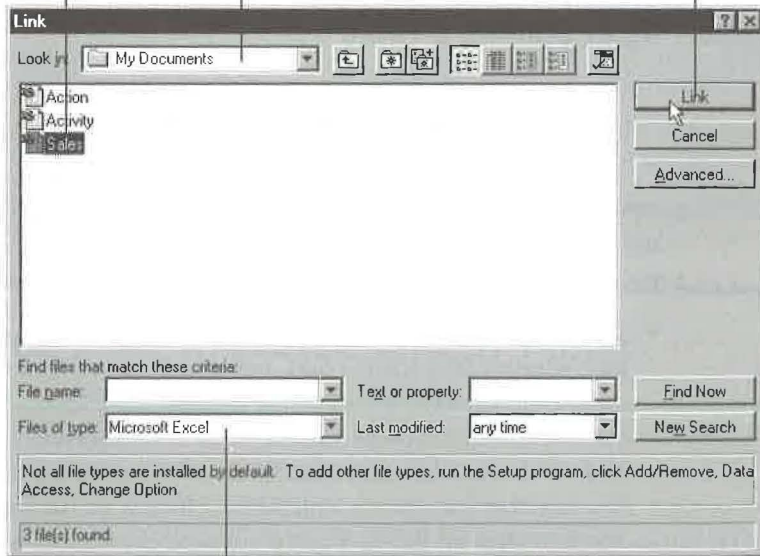
The techniques for locating drives, folders, and files in the Link and Import dialog boxes are the same ones that work in the Open and File New Database dialog boxes (see Chapters 1 and 5, respectively).

5. Click on the Import or Link button or double-click on the file name you want to import or link.

FIGURE 7.2

A Link dialog box for linking an Excel table.

1. Choose a file format.
2. Choose a folder.
3. Choose a file name.
4. Click on Link (or Import).



1. Choose a file format.

6. Respond to any additional prompts and dialog boxes that appear.
 - If you're linking a dBASE or FoxPro table, you'll be prompted to choose one or more existing indexes to associate with the table. Choosing indexes will speed up access to the linked table.
 - If you're importing or linking a table from Paradox or a SQL database, you may be prompted for a password. This password is set in the external program and is different from an Access user password.

NOTE

Passwords of linked tables are stored in your database so that you can open the table later by double-clicking on it in the Access database window. Be aware that the database password is stored in an unencrypted form. If you need to protect sensitive data in the linked table, you should implement user-level security, rather than use a database password. (See Chapter 18 and the Help Index topic *Linking Tables, Password-Protected Databases.*)

7. Click on OK if you see a message saying the operation is complete.
8. If the Import or Link dialog box remains on your screen, you can repeat steps 3 through 7 until you've imported or linked all the tables you want. When you're done, click on the Close button as needed.

For more help on importing and linking tables, go to the Access Help Contents, open the *Creating, Importing, And Linking Tables* book, open the *Importing Or Linking Tables* book, and then double-click on an appropriate topic. You also can look up topics and subtopics under *Importing Data* and *Linking Data* in the Access Help Index.

Importing or Linking Paradox Tables

Access can import or link tables (.db files) from Paradox version 3, 4, and 5. Follow these steps:

1. Start from the Access database window and choose the Import or Link command. (Two easy starting points are to choose the File ► Get External Data commands on the menu bar, or right-click on the database window and choose Import or Link Tables from the shortcut menu.)
2. Choose Paradox from the Files Of Type drop-down list.
3. Locate the file you want to import or link and then double-click on it in the list below Look In. You may be prompted for a password.
4. Type the password that was assigned to the table in Paradox and then click on OK.

5. Click on OK when you see the message saying the operation is complete.
6. Repeat steps 3 through 5 as needed. When you're done, click on Close.

Having trouble? Perhaps the following tips will help:

- A linked Paradox table must have a primary key (.px) file if you intend to update it through Access. If that file is not available, Access won't be able to link the table. Without a primary key, you'll only be able to view the linked table, not to change it.
- In general, any ancillary file that Paradox maintains for a table (such as a .mb file for memo fields) should be available to Access.
- Because Access can't open OLE objects stored in a linked or imported Paradox table, no OLE fields will appear when you open the table in Access.
- When linking a shared Paradox table that resides on a server, you must set the ParadoxNetPath key in the Windows Registry to the path of the Paradox.net or Pdoxusr.s.net file. Furthermore, if you're using Paradox version 4 or 5 to share data in your workgroup, you also must set the ParadoxNetStyle key to 4.x. For Paradox version 3 tables, set this key to 3.x (the default is 4.x).

For more details about importing and linking Paradox tables, ask the Office Assistant to search for *Import Or Link A Paradox Table*. You can also search for *Registry* or *Registry Editor* with the Office Assistant for details about using the Registry Editor.



WARNING

Making changes incorrectly in the Registry Editor can produce unexpected results in Access. Be sure to back up all or part of the Registry before making changes in the Registry Editor. See the topic *Backing Up The Registry* in the Registry Editor's Help Index for details.

Importing or Linking dBASE and FoxPro Files

Access can import or link tables (.dbf files) from dBASE III, IV, and dBASE 5 and from FoxPro 2.0, 2.5, 2.6, and 3.0. Here are the basic steps for importing or linking a dBASE or FoxPro table:

1. Start from the Access database window and choose the Import or Link command.
2. Choose dBASE III, dBASE IV, dBASE 5, Microsoft FoxPro, or Microsoft FoxPro 3.0 from the Files Of Type drop-down list.
3. Locate the file you want to import or link and then double-click on it in the list below Look In.

4. Double-click on the index file you want to use if the Select Index Files dialog box appears. Repeat this step until you've specified all the index files associated with the .dbf file you chose in step 3, and respond to any other prompts that appear. When you're done, click on the Close or Cancel button.
5. Click on OK when you see the message that the operation is complete.
6. Repeat steps 3 through 5 as needed. When you're done, click on Close.

When linking dBASE or FoxPro files, keep these points in mind:

- To improve performance later, you can have Access use one or more existing dBASE index files (.ndx or .mdx) or FoxPro index files (.idx or .cdx). The index files are tracked in a special information file (.inf) and are maintained automatically when you update the table through Access.
- If you use dBASE or FoxPro to update data in a linked .dbf file, you must manually update the associated indexes; otherwise, Access won't be able to use the linked table.
- If you move or remove any .ndx, .mdx, or .inf files that Access is using, then Access won't be able to open the linked table.
- To link tables on a read-only drive or CD-ROM drive, Access must store the .inf file on a writable directory. To specify this directory, you must specify the path for the .inf file in the Windows Registry.

For more about updating, look up *Import Or Link A dBase Or FoxPro Table* with the Office Assistant. Search for *Registry* or *Registry Editor* with the Office Assistant for details about using the Registry Editor.

Importing or Linking SQL Tables

If everything is properly set up, you can use Access and ODBC drivers to open tables on Microsoft SQL Servers and other SQL database servers on a network. Here are the basic steps for linking or importing SQL database tables:

1. Start from the Access database window and choose the Import or Link command.
2. Choose ODBC Databases from the Files Of Type drop-down list.
3. Click the Machine Data Source tab in the Select Data Source dialog box if you want to work with data from another user or system. Double-click on the SQL data source you want to use. (If necessary, you can define a new data source for any installed ODBC driver by clicking on the New button and following the instructions that appear. After creating the new data source, you can double-click on it to continue. Alternatively, you can manage your ODBC data sources by double-clicking on the 32-bit ODBC icon in Control Panel.)

4. Complete the remaining dialog boxes that appear, clicking on OK as needed to proceed. (These dialog boxes depend on the data source you chose.) For example, you may be prompted for the following:
 - Your login ID and password
 - Whether you want to save the login ID and password (if you're linking)
 - The tables you want to import or link
 - The fields that uniquely identify each record
5. Click on Close when you're finished importing or linking.

If you're having trouble with the importing or linking procedure, consider these points:

- Before connecting to a SQL database, you must install the proper ODBC driver for your network and SQL database. You can find information on this procedure by looking up the *Installing Drivers* topic in the Access Help Index.
- Access includes the ODBC drivers for Microsoft SQL Server, Access, Paradox, dBASE, FoxPro, Excel, Oracle 7, and Text. Before using any other ODBC driver, check with its vendor to verify that it will work properly.
- If you'll want to edit a linked SQL table, that table usually must contain a unique index. If no unique index exists, you can create one by executing a data-definition query within Access. For information on data-definition queries, open the *Microsoft Jet SQL Reference* book in the Access Help Contents, open the *Data Definition Language* book, and then double-click on the *CREATE INDEX Statement* topic.
- If the SQL table's structure changes after you link it, you'll need to use the Linked Table Manager to refresh your link to the table (see "Using the Linked Table Manager" later in the chapter) or delete and recreate the link.
- If an error occurs while you're importing, linking, or using a SQL table, the problem may be with your account on the SQL database server or the database itself. Please contact your SQL database administrator for assistance.

For more about the subtleties of importing and linking SQL tables, look up *Import Or Link An SQL Table* with the Office Assistant.

Importing or Linking Other Access Databases

Normally you'll want to store all the tables, forms, reports, and other objects that make up a given application in a single Access database. But in a large company, different departments might create their own separate Access databases. Fortunately, it's easy to import objects (tables, queries, forms, reports, macros, and modules) or link tables from other unopened Access databases into your open database. Then you can use the objects as if they were part of your currently open Access database. This method is

much easier than using copy and paste to copy several related objects at once. Also, linked tables allow many users to share a single copy of their data over a network.

**NOTE**

You can import just the structure or both the structure and data of Access tables. If you intend to import objects (forms, reports, queries, and so forth) for use with tables in the open database, the name and structure of the tables in the open database must match the name and structure of the tables originally used to create the objects you're importing.

To import objects or link tables from an unopened Access database:

1. Choose the Import or Link command from the Access database window.
2. Choose Microsoft Access from the Files Of Type list.
3. Locate the Access database you want to import or link and then double-click on it in the list below Look In.
4. Do one of the following:
 - To link: You'll see the Link Tables dialog box shown in Figure 7.3; skip to step 6.
 - To import objects: You'll see the Import Objects dialog box shown in Figure 7.4; continue with step 5.
5. Click on the tab for the type of object you want to import if you're importing objects. As Figure 7.4 shows, your options are Tables, Queries, Forms, Reports, Macros, and Modules. For additional import options, click on the Options button (see Figure 7.4) and then choose any of the options shown. (For help with the options, click on the ? button at the upper-right corner of the Import Objects dialog box, and then click on the place you need help with.)

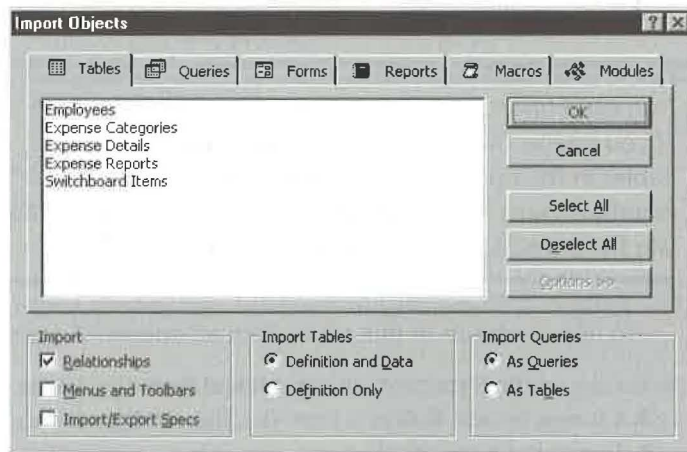
FIGURE 7.3

The Link Tables dialog box.



FIGURE 7.4

The Import Objects dialog box after clicking on the Options button and the Tables tab.



6. Use any of the following techniques to select the object(s) you want to import or link and then click on OK to continue.
 - To select all the objects of a particular type in one fell swoop, click on the Select All button.
 - To deselect all the selected objects, click on the Deselect All button.
 - To select one object that isn't selected yet, or to deselect an object that is selected, click on its name.

Access will import or link all the objects you selected and return to the database window.



The opposite of importing or linking a database is splitting it—a trick that can make your database run faster over networks. You can use the Database Splitter Wizard (Tools ► Add-Ins ► Database Splitter) to split a database into one file that contains the tables and another that contains the queries, forms, reports, macros, and modules. See Chapter 18 for details.

Using Linked Tables

After linking a table from another database, you can use it almost like any other Access table. You can enter and update data, use existing queries, forms, and reports, or develop

Another Reason to Use Wizards

Objects created with Access Wizards are perfect candidates for linking or importing into other Access databases that also contain objects created with those Wizards. For instance, if you use the Database Wizard or Table Wizard (with default settings) to create Customers tables in two Access databases—Order Entry and

Service Call Management, for example—those tables will have the same structure in both databases. If you then import into the Service Call Management database a report that was designed to print the Customers table in the Order Entry database, that report should work perfectly on the Customers table in the Service Order Processing database.

new ones. So even if the data resides in separate programs on separate computers, Access can use the external table almost as if you had created it from scratch in your open database. The only real restrictions are

- You can't change the structure of a linked table.
- You can't delete rows from a linked Excel table or text file.
- Lotus 1-2-3 files that you link to an Access database are read-only.

NOTE

After *importing* a table from another database, you can use it exactly like any other Access table. Access will never know that your imported table wasn't originally one of its own.

Setting Properties of Linked Tables

Although you can't add, delete, or rearrange fields of a linked table, you can set some table properties, including the Format, Input Mask, Decimal Places, and Caption. You change these properties in the table design view (see Chapter 6). In the database window you can right-click on the table name on the Tables tab, choose Properties, and change the Description property.

TIP

Anytime you click in a General or Lookup properties box in the Field Properties area of the table design window, the Hint box in the right side of the window will tell you if the selected property cannot be changed.

Renaming Linked or Imported Tables

Most objects will have their original file names when you import or link them to Access. After you've imported or linked such a file, however, you can give it a more descriptive name in your Access database window. For instance, you could rename an imported or linked dBASE table from *CredCard* to *Credit Cards (From dBASE)*.

To rename an imported or linked table quickly, right-click on its name in the database window, choose Rename from the shortcut menu, type a new name, and then press Enter.

Speeding Up Linked Tables

Although linked tables behave a lot like Access tables, they're not actually stored in your Access database. Each time you view linked data, Access must retrieve records from another file that may be on another computer in the network or in a SQL database. You might grow some gray hairs waiting for this to happen.

These guidelines can help speed up performance in a linked table on a network or SQL database:

- Avoid jumping to the last record of a large table unless you need to add new records.
- View only the data you absolutely need and don't scroll up and down unnecessarily.
- Create a form that has the Data Entry property on the Data tab set to Yes. That way, if you frequently add new records to a linked table, Access won't bother to display any existing records from the table when you enter data (see Chapter 13). This *data entry mode* (also called *add mode*) can be much faster than opening the form in edit mode and jumping to the last record. (If you need to see all the records again, choose Records ► Remove Filter/Sort.)

NOTE

Here are three more ways to open a form or table in data entry mode: (1) Choose Records ► Data Entry after opening a table or form; (2) choose Open Form In Add Mode as the Command for a form you've added to a switchboard with the Switchboard Manager (see Chapters 3 and 21); or (3) in a macro design window use the OpenForm action to open a form and set the action's Data Mode action argument to Add (see Chapter 20).

- Use queries and filters to limit the number of records that you view in a form or datasheet.

- Avoid using functions, especially domain-aggregate functions such as `DSum()`, anywhere in your queries. These functions require Access to process all the data in the linked table. See Chapter 10 for more about these functions.
- Avoid locking records longer than you need to when sharing external tables with other users on a network. Hogging the locks will slow response time for others and make you unpopular in a hurry. See Chapter 18 for more about using Access on a network.

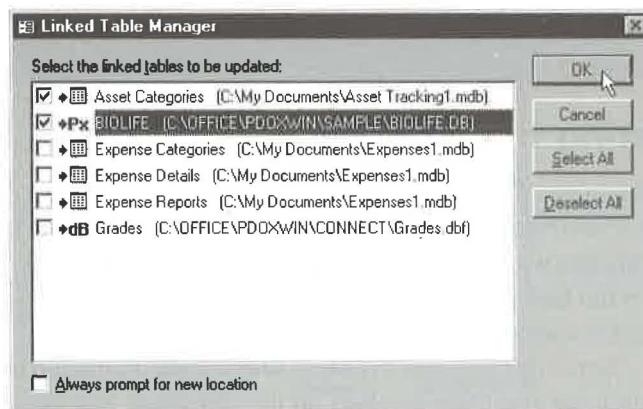
Using the Linked Table Manager

Access stores information about links to tables in your database. If you move the file that contains the linked table to another folder, Access won't be able to open the linked table. Fortunately, the Linked Table Manager can find the moved tables and fix things up quickly. Here's how to use it:

1. Open the database that you've linked the objects to.
2. Choose **Tools** ► **Add-Ins** ► **Linked Table Manager** to open the Linked Table Manager dialog box (see Figure 7.5). This dialog box shows the linked objects and the full path names of the associated source files.
3. Click on the appropriate checkboxes to select the linked tables you want to update. If you select a table accidentally, click on its checkbox again to deselect (clear) the box. Or click on the **Select All** or **Deselect All** buttons to check or clear all the checkboxes in one step.
4. Select (check) **Always Prompt For New Location** to force the Linked Table Manager to request the location for each table you checked in step 3.

FIGURE 7.5

The Linked Table Manager dialog box for a database with several linked files.



5. Click on OK.
6. Use the Select New Location Of dialog box that appears next to find the folder that contains the moved source table, and then double-click on the file name that contains the linked table. Repeat this step as needed.

TIP

The Select New Location Of dialog box works the same way as the Open, File New Database, Import, and Link dialog boxes you already know and love. See Chapters 1 and 5 for techniques you can use in these dialog boxes.

7. Click on OK when Access tells you that the links were refreshed successfully; then click on Close in the Linked Table Manager dialog box.

What the Linked Table Manager Cannot Do

The Linked Table Manager is great for finding files that have wandered off to a different folder or disk drive or have been renamed. However, if anyone has renamed the linked table or changed its password, Access won't be able to find the table and the Linked Table Manager won't be able to fix the problem. In these cases, you must

delete the link and then relink the table with the correct table name and/or password.

Also, don't expect the Linked Table Manager to move the database or table files for you. For that job, you'll need to use Windows Explorer or My Computer. Or go to any Access Open, File New Database, Link, Import, or Select New Location Of dialog box; then right-click on an empty area below the Look In list, choose Explore from the shortcut menu, and explore as you would with Windows Explorer.

Deleting the Link to a Linked Table

When you no longer need to use a linked table (or Access can't find it because someone has renamed it or changed its password), you can delete the link. To do this, open the database window that contains the linked table and click on the Tables tab. Then click on the table whose link you want to delete and press the Delete key. When asked if you're sure you want to delete the link, click on Yes.

Remember that deleting a link deletes the information used to access the linked table, but it has absolutely no effect on the table itself. You can relink the table at any time.

Importing or Linking Spreadsheets and Text Files

You can import or link any of these spreadsheet and text formats into Access tables:

- Microsoft Excel versions 2, 3, 4, and 5, Excel 7 (also known as Excel for Windows 95 or Excel 95), and Excel 8 (Excel 97).
- Lotus 1-2-3 or 1-2-3 for Windows (.wk1, .wk3, and .wk4 files). Lotus files that are linked are read-only.
- Delimited text (values are separated by commas, tabs, or other characters).
- Fixed-width text, including Microsoft Word Merge (each field value is a certain width).

When importing from a text file, you can create a new table or append the data to an existing table. If your spreadsheet or text file contains field names in the first row, Access can use them as field names in the table.

Access looks at the first row of data and does its best to assign the appropriate data type for each field you import. For example, importing cells A1 through C10 from the spreadsheet at the top of Figure 7.6 creates the Access table at the bottom of the figure. Here we

FIGURE 7.6

Importing a range of cells from an Excel spreadsheet into an Access table.

When you import cells A1 through C10 of this Excel spreadsheet...

	A	B	C
1	Last Name	First Name	Salary
2	Burns	Joe	\$38,000
3	Burns	Sunny	\$28,000
4	Gladstone	Wilma	\$35,500
5	Granolabar	Wanda	\$45,000
6	Kenobe	Obeewan	\$25,990
7	Maricks	Keith	\$55,000
8	Strappman	Hanley	\$35,000
9	Ujest	Shirley	\$45,000
10	Wilson	Chavelita	\$45,100

...Access creates this table.

Last Name	First Name	Salary
Burns	Joe	\$38,000.00
Burns	Sunny	\$28,000.00
Gladstone	Wilma	\$35,500.00
Granolabar	Wanda	\$45,000.00
Kenobe	Obeewan	\$25,990.00
Maricks	Keith	\$55,000.00
Strappman	Hanley	\$35,000.00
Ujest	Shirley	\$45,000.00
Wilson	Chavelita	\$45,100.00

Record: 1 of 9

told Access to use the first row of the range (row 1) as field labels. Values in row 2 (the first row of "real" data) were then used to determine the data types for each field.

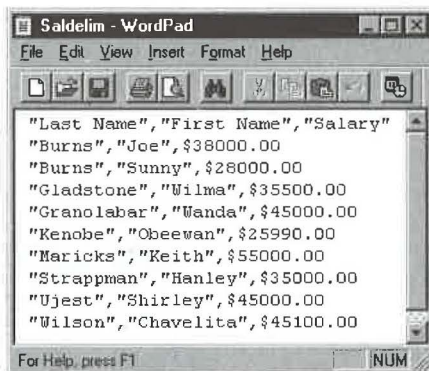
You can change the field names and data types assigned to an imported table during the import procedure. Alternatively, you can create an empty table with the field names and data types you want and then *append* an imported text file to the empty table. In Figure 7.7 we imported a delimited text file in which each field is separated by a comma and text fields are enclosed in quotes. Again we asked Access to use the first row as field labels. Access used the second row to determine each field's data type.

Figure 7.8 shows the results of importing a fixed-width text file into an Access table. This time, we told Access the field name to use for each field. (Access correctly figured out the other details, such as field position and data type.)

FIGURE 7.7

Importing from a delimited text file into an Access table.

When you import this delimited text file...



...Access creates this table.

Last Name	First Name	Salary
Burns	Joe	\$38,000.00
Burns	Sunny	\$28,000.00
Gladstone	Wilma	\$35,500.00
Granolabar	Wanda	\$45,000.00
Kenobe	Obewan	\$25,990.00
Maricks	Keith	\$55,000.00
Strappman	Hanley	\$35,000.00
Ujest	Shirley	\$45,000.00
Wilson	Chavelita	\$45,100.00

Record: 10 of 10

FIGURE 7.8

Importing from
a fixed-width
text file into an
Access table.

When you import this
fixed-width text file...

Burns	Joe	\$38000.00
Burns	Sunny	\$28000.00
Gladstone	Wilma	\$35500.00
Granolabar	Wanda	\$45000.00
Kenobe	Obeewan	\$25990.00
Maricks	Keith	\$55000.00
Strappman	Hanley	\$35000.00
Ujest	Shirley	\$45000.00
Wilson	Chavelita	\$45100.00

...Access creates this table

Last Name	First Name	Salary
Burns	Joe	\$38,000.00
Burns	Sunny	\$28,000.00
Gladstone	Wilma	\$35,500.00
Granolabar	Wanda	\$45,000.00
Kenobe	Obeewan	\$25,990.00
Maricks	Keith	\$55,000.00
Strappman	Hanley	\$35,000.00
Ujest	Shirley	\$45,000.00
Wilson	Chavelita	\$45,100.00

Importing or Linking Spreadsheets

Importing or linking a spreadsheet into Access is a snap thanks to the Import Spreadsheet Wizard. But before you import or link, remember that the data in your spreadsheet must be arranged so that:

- Each value in a given field contains the same type of data.
- Each row contains the same fields.
- The first row in the spreadsheet contains either field names or the first actual data you want to import, or you've defined a named range for the data you want to import.

If the spreadsheet you intend to use doesn't fit this specification, you'll need to fix it before importing or linking it into Access.

To import or link a spreadsheet:

1. Start from the Access database window in which the table should appear and choose the Import or Link command.
2. Choose the spreadsheet format you want to import from the Files Of Type drop-down list. Your choices are Microsoft Excel (for importing or linking) and Lotus 1-2-3 (for importing only).
3. Locate the spreadsheet file you want to import or link and then double-click on it in the list below Look In. The Wizard will take over. If your worksheet contains a named range or multiple sheets, you'll see a dialog box similar to Figure 7.9 (the Import Spreadsheet Wizard and Link Spreadsheet Wizard dialog boxes are the same, except for their title bars).
4. Choose whether to Show Worksheets or Show Named Ranges, click on the worksheet or named range you want to use, and then click on Next. Figure 7.10 shows the next dialog box you'll see.
5. If the first row of the range you're importing or linking contains labels that you want to use as field names for the table, select (check) First Row Contains Column Headings. If you don't check this box, Access will start importing or linking data with the first row of the range and will assign the name Field followed by a sequential number as the field names (Field1, Field2, Field3,...). Click on Next to continue to a dialog box that lets you choose whether to import the data into a new table or into an existing table.

FIGURE 7.9

This Import Spreadsheet Wizard dialog box appears if your worksheet contains multiple sheets or named ranges. If you're linking an Excel worksheet, the Link Spreadsheet Wizard dialog box will be the same except for its title bar.

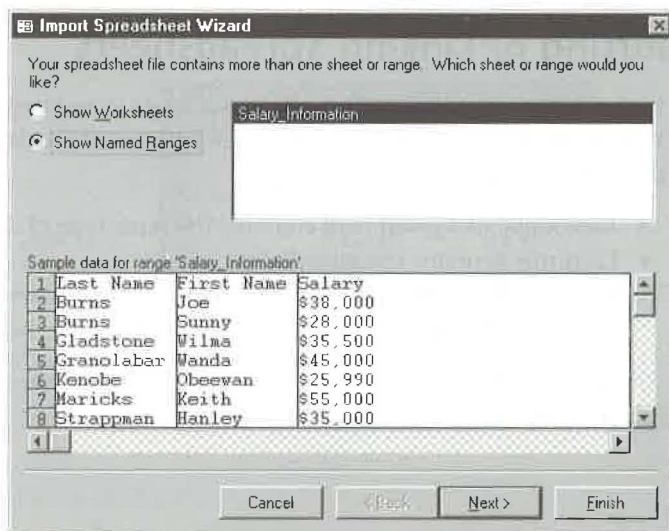
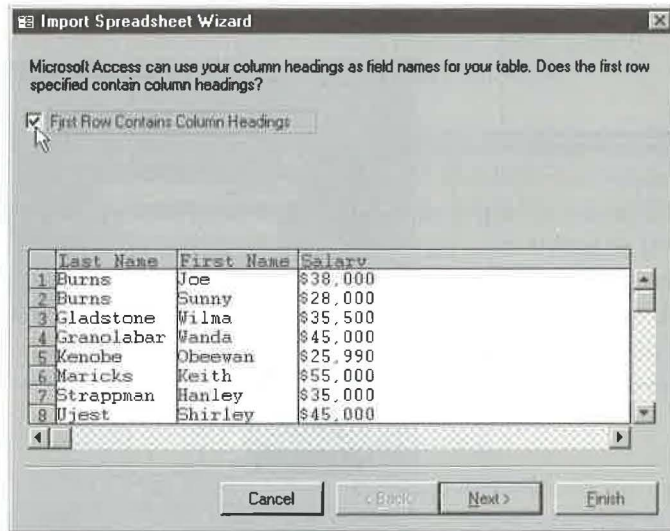


FIGURE 7.10

This dialog box lets you specify whether the first imported or linked row contains field names. In this example we're importing the spreadsheet shown at the top of Figure 7.6. Again, the Link Spreadsheet Wizard dialog box is similar.

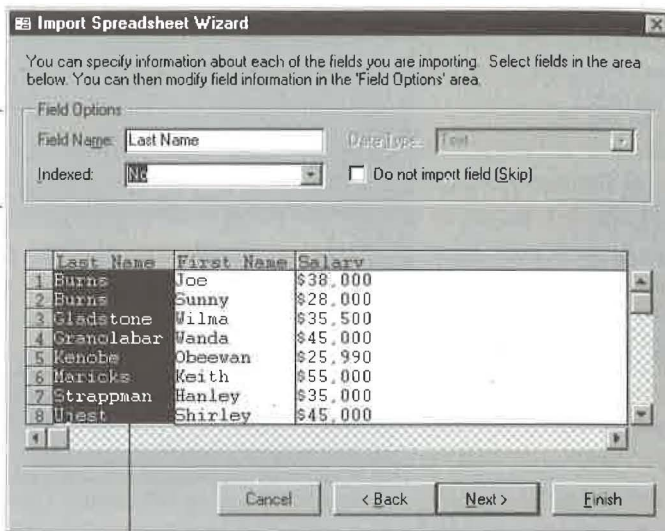


6. Click on your choice and choose a table in the open database if you select *In an Existing Table*. Click on Next.
7. If you're importing, you'll see the dialog box shown in Figure 7.11. From here you can specify information about each field you're importing. To tell the Wizard which field you want to define, click anywhere on the sample data for that field in the lower part of the dialog box. Then fill in the Field Name box, specify whether the field is indexed by choosing No, Yes (Duplicates OK), or Yes (No Duplicates) from the Indexed drop-down list, and specify a data type by choosing an option from the Data Type drop-down list (if available). If you prefer to skip the field—that is, not to import it—select (check) Do Not Import Field (Skip). Repeat step 7 as needed and then click on Next.
8. If you're importing, the next dialog box will let you specify how Access should assign the primary key. You can let Access add the primary key, choose your own primary key from a drop-down list of available field names, or omit the primary key. After making your selection, click on Next to continue.
9. The last dialog box lets you specify a table name if you chose to import data into a new table. If you're importing, you also can choose whether to analyze the new table's structure with the Table Analyzer Wizard. (Chapter 16 describes the Table Analyzer Wizard.) Complete this dialog box and then click on Finish.
10. If you're asked for permission to overwrite an existing table, click on Yes to overwrite the table and continue with step 10 or click on No to return to step 8.
11. When Access tells you that it has finished importing or linking the table, click on OK. You'll see the new table name in the database window.

FIGURE 7.11

This dialog box lets you specify the field name, indexing, and data type for each imported field, and it lets you skip fields as needed.

2. Choose options for the selected field.



1. Click anywhere in the field you want to change.

Importing or Linking Text Files

A *delimited* text file is one in which fields are separated by a special character, such as a comma or tab, and each record ends with a carriage-return/linefeed combination. Typically, character data items are enclosed in quotation marks as shown at the top of Figure 7.7.

A *fixed width* text file is one in which each field is a specified width, and each record ends with a carriage return/linefeed combination (see the top of Figure 7.8).

Before importing or linking a text file, make sure it's arranged so that each value in a given field contains the same type of data and the same fields appear in every row. The first row can contain the field names you want Access to use when creating the table.

The procedure for importing or linking text files is controlled by a Wizard that's fast and painless to use. In fact, reading these steps takes much longer than doing them:

1. Start from the Access database window in which the table should appear and choose the Import or Link command.
2. Choose Text Files from the Files Of Type drop-down list.

3. Locate the text file you want to import or link and then double-click on it in the list below Look In. The Wizard will take over (see Figure 7.12).
4. Choose the format that describes your data if Access didn't guess the correct format (either Delimited or Fixed Width) and then click on Next.

NOTE

The Advanced button in the Text Import Wizard and Link Text Wizard dialog boxes lets you define, save, load, and delete import specifications. You can use an import specification if you want more control over such things as the order of dates, date delimiters, time delimiters, and other details. In most cases, it's not necessary to use the Advanced button because the Wizard defines the specification for you. There's more about using import specifications later in this chapter.

5. What happens next depends on your choice in step 4:

- If you chose Delimited, you'll see the dialog box shown in Figure 7.13. Choose the delimiter that separates your fields, specify whether the first row of text contains field names, and specify the character that encloses text within fields (the Text Qualifier). As you make choices, the sample data in the dialog box will reflect your changes, so you can see immediately whether your choices make sense.

FIGURE 7.12

The first Text Import Wizard dialog box lets you choose a format for importing your data. If you're linking the text file, the Link Text Wizard dialog box will look the same except for its title bar.

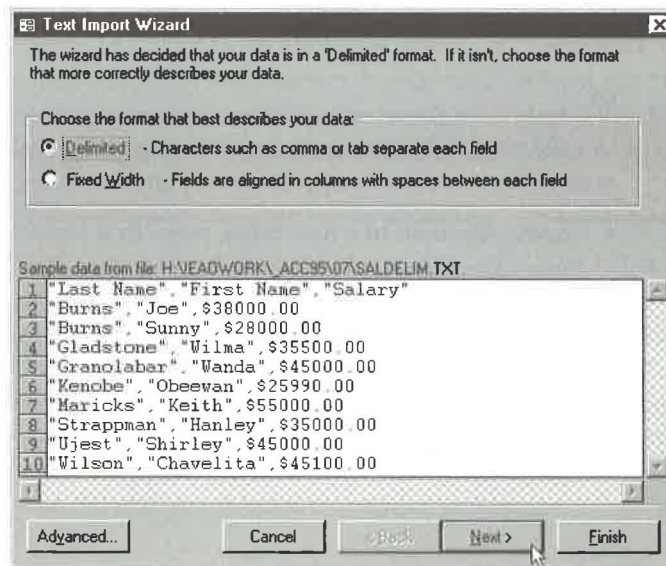
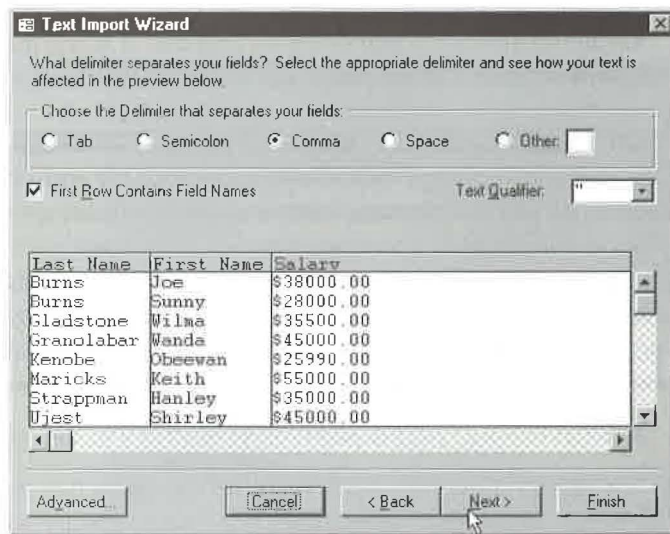


FIGURE 7.13

This Text Import Wizard dialog box lets you choose the delimiter and text qualifier (enclosing character for fields) for a delimited text file. You also can specify whether the first row of text contains field names. The Link Text Wizard dialog box is similar.



- If you chose Fixed, you'll see the dialog box shown in Figure 7.14. You might not need to change any of the settings, but if you do, the instructions in the dialog box explain how (it's easy!). As you specify the field breaks and field widths, the sample data in the dialog box will reflect your changes.
6. Complete the dialog box shown in Figure 7.13 or 7.14 and click on Next.
 7. Skip to step 8 if you're linking a text file.

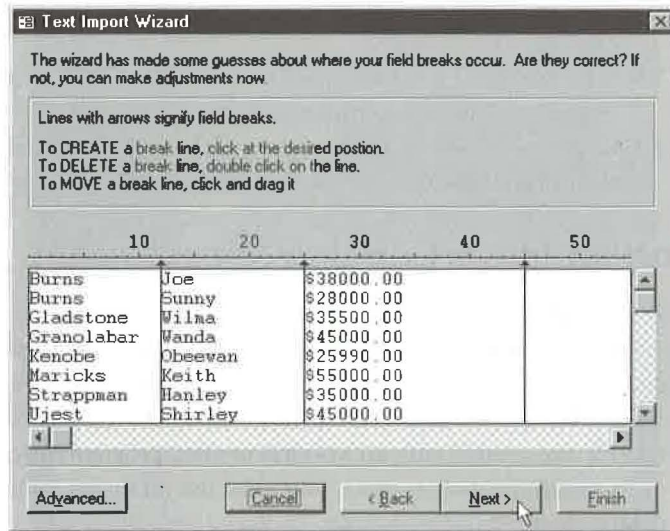
Or

Use the next dialog box to choose whether to store your data in a new table or an existing table if you're importing a text file:

- **To save the data in a new table**, select In A New Table, click on Next, and continue with step 8.
- **To add the imported data to the end of an existing table**, choose In An Existing Table, use the drop-down list to select the existing table, and then click on Next. Skip to step 10.

FIGURE 7.14

This Text Import Wizard dialog box lets you specify the position and width of each field in your fixed width file. The Link Text Wizard dialog box is similar.

**WARNING**

When you add imported data to the end of an existing table, each field in the data file you're importing must have the same data type as the corresponding field in the destination table, each field must be in the same order, the data must not duplicate data in primary key fields, and the data must not violate any validation rules. If you're using the first row as field names, the field names in your data file must exactly match the names of your table fields. (Appropriate error messages appear if the data breaks any rules, and Access gives you a chance to continue importing data or to cancel the import procedure.)

8. If you're importing to a new table or linking, specify the field name, indexing, and data type for each field, and skip fields as needed. The procedures are the same ones given for step 6 of the earlier procedure "Importing or Linking Spreadsheets." Repeat this step as needed and then click on Next.
9. If you're importing to a new table, specify how Access should assign the primary key. You can let Access add the primary key, choose your own primary key from a drop-down list of available field names, or omit the primary key. Click on Next to continue. The last dialog box lets you specify a table name.

10. If you're importing, you also can choose whether to analyze the table's structure with the Table Analyzer Wizard (see Chapter 16). Complete this dialog box and then click on Finish.
11. If you're asked for permission to overwrite an existing table, click on Yes to overwrite the table and continue with step 12 or click on No to return to step 10.
12. Click on OK when Access tells you that it has finished importing or linking the table. You'll see the new table name in the database window.

Using an Import or Link Specification

You can ignore the Advanced button in the Text Import Wizard and Link Text Wizard dialog boxes and focus on only the main steps given in the previous section. But suppose dates in your text file aren't in the standard month/day/year order used in the United States. Perhaps your data uses a period instead of a slash as a date separator. Or maybe the text file was created with an MS-DOS or OS/2 program instead of a Windows program.

In situations such as these, you must use an *import specification* to provide extra details about your file's format. To load a previously saved specification or to define a new one, click on the Advanced button in any Text Import Wizard or Link Text Wizard dialog box (refer to Figures 7.11, 7.12, and 7.13). Figure 7.15 shows the Import Specification dialog box for a delimited text file, and Figure 7.16 shows one for a fixed width text file. As you'd expect, the Link Specification dialog boxes are the same except for their title bars.

FIGURE 7.15

The Import Specification dialog box for a delimited text file. The Link Specification dialog box is similar.

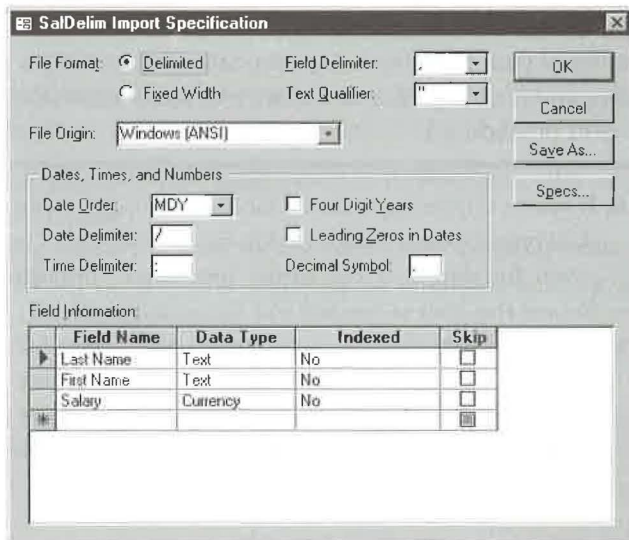
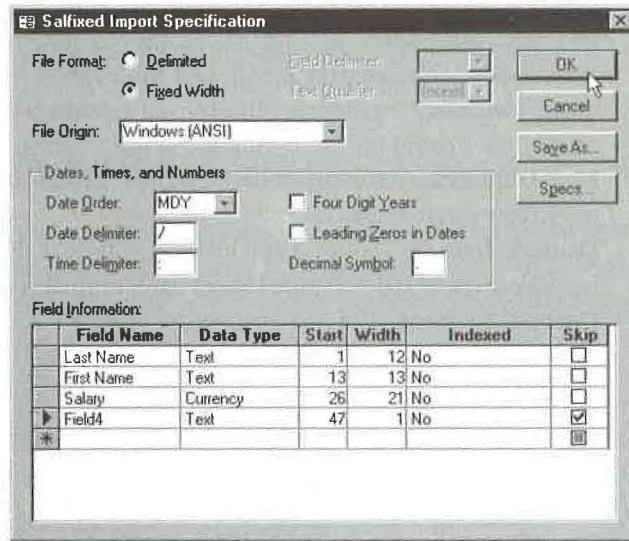


FIGURE 7.16

The Import Specification dialog box for a fixed-width text file. The Link Specification dialog box is similar.



Filling in the Specification

At the top of the Import Specification or Link Specification dialog box, you can specify the File Format (either Delimited or Fixed Width). For delimited files, you also can specify:

Field Delimiter If the text file uses a character other than a comma (,) to separate fields, type the correct character, or open the drop-down list and select one. The drop-down list includes comma, semicolon, tab, and space options.

Text Qualifier If the text file uses a delimiter other than double quotation marks (") to surround text fields, type the correct character, or open the drop-down list and select a character. Select {none} if your file doesn't use a text delimiter.

In the center portion of the dialog box, you can change these settings:

File Origin Controls the way Access interprets extended characters (those with ASCII codes higher than 128). If the text file was created with a Windows program, choose Windows (ANSI) from the File Origin drop-down list. If the file was created with a DOS or OS/2 program, choose DOS or OS/2 (PC-8).

Date Order If the text file has dates that aren't in the MDY (month, day, year) order commonly used in the United States, choose an option from the Date Order drop-down list. Foreign dates often appear in a different order, such as DMY (day, month, year) in France or YMD (year, month, day) in Sweden.

Date Delimiter If the text file has dates that aren't separated by a slash (as in 11/9/53 for November 9, 1953), type the delimiter character in the Date Delimiter text box. Some countries outside the United States use different delimiters, such as the period in France (09.11.53) and the hyphen in Sweden (53-11-09).

Time Delimiter If hours, minutes, and seconds are delimited by a character other than a colon (:), specify the correct character in the Time Delimiter text box.

Four Digit Years If years in your text file include all four digits, as in 11/9/1953, select Four Digit Years.

Leading Zeros In Dates If the dates in your text file include leading zeros, select Leading Zeros In Dates. (United States dates normally appear without leading zeros.)

Decimal Symbol If a character other than a period (.) is used for the decimal point in numbers with fractions, specify the correct character in the Decimal Symbol text box.

In the Field Information area near the bottom of the dialog box, you can define the Field Name, Data Type, and Indexed options for each field much as you do in table design view. To skip a field during the import, check the appropriate box in the Skip column. If you're working with a fixed-width file, you also can specify the Start and Width for each field. (However, it's often easier to drag the vertical lines in the dialog box shown in Figure 7.14.) If you do adjust the Start and Width values manually, make sure that no gaps exist between any two fields and that no fields overlap.



To calculate the Start value of a field, add the Start and Width values of the previous field. In Figure 7.16, for example, Field 1 starts at 1 and its width is 12. Thus Field 2 must start at 13 (1 + 12).

Managing Import and Link Specifications

You can save your specifications for later use when importing or exporting similar text files, and you can retrieve and delete import specifications as needed. Just use these two buttons in the Import Specification or Link Specification dialog box:

Save As Lets you save an import/export specification. Click on Save As, type a descriptive name for your specification (or accept the suggested name), and then click on OK. Access will save your specifications and return you to the Import Specification dialog box.

Specs Lets you use or delete an existing import/export specification. Click on the Specs button and then click on the specification you want to work with. Then to use the selected specification for the current file, click on the Open button. To delete the specification, click on the Delete button, click on Yes, and then click on Cancel.

Continuing with the Import or Link

When you're done changing the import or link specifications, click on OK in the Import Specification or Link Specification dialog box. You'll return to the Wizard dialog box you were using when you clicked on the Advanced button.

Importing or Linking HTML Files

Access 97 has a new feature that lets you import or link Hypertext Markup Language (HTML) files to an Access database. HTML is the special coding used for referencing graphic files and formatting in files that are published on the Internet. The files can be in .htm, .html, or .htm format. Version 1.0 is supported for HTML list files, and versions 2.0 and 3.x for HTML tables or lists. Figure 7.17 shows Microsoft Internet Explorer being used to view the file c:\Program Files\Microsoft Office\Access\Samples\cajun.htm. Figure 7.18 shows the same file after it was imported as a new table into an Access database.

FIGURE 7.17

A file being viewed with Microsoft Internet Explorer.

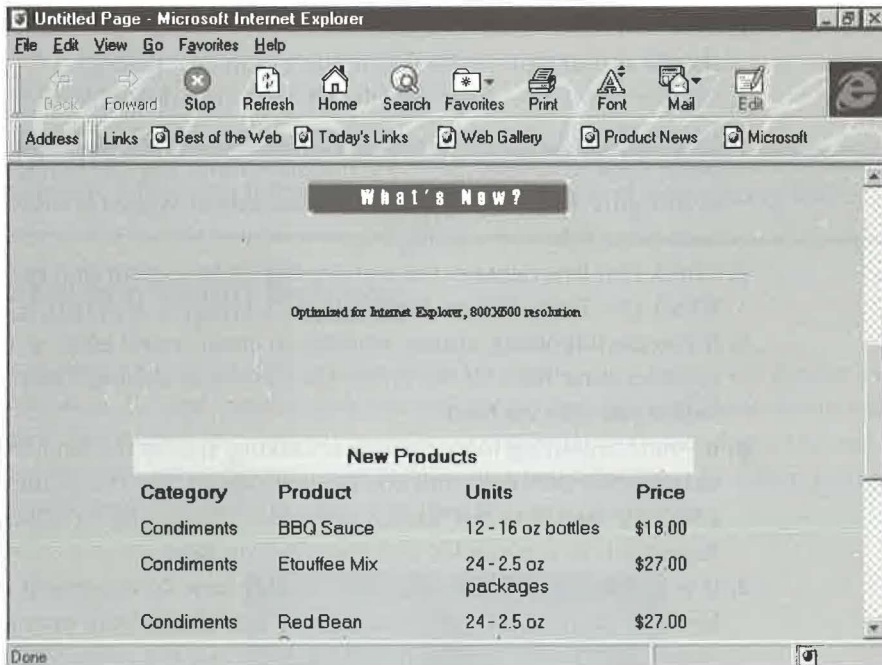


FIGURE 7.18

A table called *Cajun Products* imported from an HTML file.

The file was created without a primary key.

Category	Product	Units	Price
Condiments	BBQ Sauce	12 - 16 oz bottle	\$18.00
Condiments	Etouffee Mix	24 - 2.5 oz pack	\$27.00
Condiments	Red Bean Seasonings	24 - 2.5 oz pack	\$27.00
Confections	Beignet Mix	12 - 32 oz boxes	\$20.00
Confections	King Cake Mix	12 - 30 oz boxes	\$39.00
Grains/Cereals	Dirty Rice Mix	18 - 8 oz boxes	\$20.25
Grains/Cereals	Hushpuppy Mix	12 - 18 oz boxes	\$18.50
Produce	Black-eyed Peas	12 - 16 oz pack	\$8.50
Produce	Corn Soup Mix	24 - 14 oz pack	\$42.50
Produce	Hot Pickled Okra	18 - 12 oz jars	\$20.25
Seafood	Crawfish Jambalaya	12 - 15 oz cans	\$33.00

Record: 14 of 11

To import or link an HTML file:

1. Start from the Access database window in which the imported or linked table should appear and choose the Import or Link command.
2. Choose HTML Files from the Files Of Type drop-down list.
3. Locate the file you want to import or link and then double-click on it in the list below Look In to start the HTML Import Wizard. The first dialog box will show data as in Figure 7.10 where the Import Spreadsheet Wizard is shown. The only difference is the title of the dialog box.
4. Check *First Row Contains Column Headings* if Access can find the field names in the HTML file. Then click on Next.
5. If you are importing, choose whether to create a new table or append the records to an existing table. If the latter, click on *In an Existing Table:* and select a table before you click on Next.
6. If you're importing to a new table or linking, specify the field name, indexing, and data type for each field, and skip fields as needed. The procedures are the same ones given for step 6 of the earlier procedure "Importing or Linking Spreadsheets." Repeat this step as needed and then click on Next.
7. If you're importing to a new table, specify how Access should assign the primary key. You can let Access add the primary key, choose your own primary key from a drop-down list of available field names, or omit the primary key. Click on Next to continue. The final dialog box lets you specify a table name.

8. If you're importing, you also can choose whether to analyze the table's structure with the Table Analyzer Wizard (see Chapter 16). Complete this dialog box and then click on Finish.
9. If you're asked for permission to overwrite an existing table, click on Yes to overwrite the table and continue with step 10 or click on No to return to step 8.
10. Click on OK when Access tells you that it has finished importing or linking the table. You'll see the new table name in the database window.

Refining an Imported Table's Design

After importing a table, you can improve its design in several ways. To get started, open the table and switch to design view. Then, as necessary...

- **Change field names or add descriptions.** This modification is especially helpful if you didn't import field names along with the data.
- **Change data types.** Access does its best to guess the correct data type for each field based on the data you imported, and it gives you a chance to make adjustments. However, you can refine the initial choices as needed.
- **Set field properties** such as Field Size, Format, and so forth.
- **Set a primary key** to uniquely identify each record in the table and to improve performance.

NOTE

See Chapter 6 for more information about changing and customizing tables.

Troubleshooting Import Problems

If Access has problems importing records into your table, the program will display a message similar to the one shown below. For each record that causes an error, Access adds a row to a table named `xxx_ImportErrors` (or `xxx_ImportErrors1`, `xxx_ImportErrors2`, ...) in your database, where `xxx` is the name of the imported table. You can open that ImportErrors table from the database window to view the error descriptions.

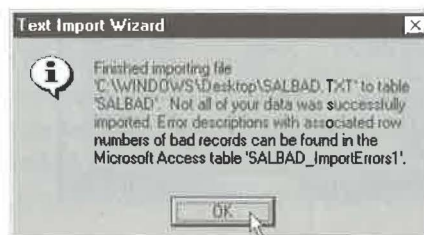


Figure 7.19 shows the ImportErrors table Access created when we tried to import the delimited text file shown at the top of the figure. Notice that the third line contains a tilde (~) instead of a comma as the field delimiter, and the sixth line has an exclamation point (!) where the decimal point belongs. The SALBAD table at the bottom of the figure contains the records Access imported from the text file. Notice that the bad record in line 3 of the Salbad text file was imported into the table as a blank record, and the bad currency field in line 6 was imported as a blank field.

TIP When importing a text file that might have bad data, do not assign any primary key. The resulting table records will appear in the same order as they appear in the text file, and blank table records and fields will be easier to trace to the corresponding lines in the text file. After cleaning up any problems with the imported data, you can assign a primary key to the table.

FIGURE 7.19

The delimited text file at the top of this figure caused the errors shown in the ImportErrors table. The valid records from the text file were stored in the SALBAD table.

```

"Last Name", "First Name", "Salary"
"Burns", "Joe", 38000.0000
"Burns"~"Sunny", 28000.0000
"Gladstone", "Wilma", 35500.0000
"Granolabar", "Wanda", 45000.0000
"Kenobee", "Obeewan", 25990!0000
"Maricks", "Keith", 55000.0000
"Strappman", "Hanley", 35000.0000
"Ujest", "Shirley", 45000.0000
"Wilson", "Chavelita", 45100.0000
  
```

Last Name	First Name	Salary
Burns	Joe	\$38,000.00
Gladstone	Wilma	\$35,500.00
Granolabar	Wanda	\$45,000.00
Kenobee	Obeewan	
Maricks	Keith	\$55,000.00
Strappman	Hanley	\$35,000.00
Ujest	Shirley	\$45,000.00
Wilson	Chavelita	\$45,100.00

Error	Field	Row
Type Conversion Failure	Salary	6

Problems When Importing to New Tables

When importing records into a *new* table, Access may run into these problems:

- Access chose an erroneous data type for a field because the first row of data didn't properly reflect the type of data you were importing. This error can happen if you forget to check the First Row Contains Field Names option or if a field that contains mostly text values has a number in the first row.
- One or more rows in the file contain more fields than the first row.
- The data in the field doesn't match the data type Access chose for the field or the data is blank. For example, a number may contain a bad character (as in the example of Figure 7.17), or a row may contain extraneous characters or summary information.

Problems When Importing to Existing Tables

When importing records to an *existing* table, Access may be tripped up if:

- The data in a numeric field is too large for the field size of a table field. For example, Access can't import a record if the table field has a Field Size property of Byte but the data contains a value greater than 255.
- One or more records in the imported data contain duplicate values for a primary key field in the table or for any field that has an Indexed property set to Yes (No Duplicates).
- One or more rows in the file contain more fields than the table contains.
- The data in a text file or spreadsheet field is the wrong type for the corresponding table field. For instance, the table field may be a Currency type, but the data contain a person's name.

TIP

Importing can take some time. But if the wait seems unreasonably long, it may be a sign that many errors are occurring. To cancel the import, press Ctrl+Break.

If Access reports errors or your imported table contains blank fields or records, open the ImportErrors table and try to figure out what went wrong. You may need to correct your data file, or you may need to change the structure of an existing table. After solving the problems, you can import the data again.

Be careful to avoid adding duplicate records when importing the data the next time. One way to prevent duplicate records is to copy your original data file and delete from the copy all records that made it successfully into the table. Make any necessary corrections to your data or table; then choose In An Existing Table when importing your data.

Another way is to delete the table you imported the first time and then import again; or just let Access overwrite the first table you imported.

For more information about the ImportErrors table, look up the *Import Errors Table* topic in the Access Help Index.

Exporting Data from Access

You can export data from your Access tables to any of the HTML, text file, spreadsheet, or database formats already discussed; this procedure allows you to maintain your data in Access and use it in many other programs. You also can export Access database objects to other Access databases and to your electronic mail program.

NOTE

Many database programs do not allow table and field names to contain spaces or have up to 64 characters (as Access does). When you export a table, Access automatically adjusts names that aren't allowed in another program.

You can export data from your Access database with any of these options. (You'll learn more about them soon.)

Save As/Export (On the File menu and the database window's shortcut menu) Converts an Access database object to Microsoft Access, Microsoft Excel (5-7, 4, or 3), Text Files, Paradox (3, 4, or 5), Lotus 1-2-3 (wk1 or wk3), HTML (htm), dBASE (III, IV, or 5), Microsoft FoxPro (2.0, 2.5, 2.6, or 3.0), Microsoft Word Merge, Rich Text Format, HTX, and ODBC Databases.

Save to HTML/Web Formats (On the File menu) Has options for converting an Access object to HTML or IDC/HTX; also can be used to start the Publish to the Web Wizard or change publishing defaults.


OfficeLinks (On the Tools menu and the OfficeLinks drop-down toolbar button) You can save data to a file and immediately start the appropriate Microsoft program. These options include Merge It with MS Word, Publish It with MS Word (as a Microsoft Word RTF file), and Analyze It with MS Excel.

Send (On the File menu) Converts an Access database object to an HTML, HTX, Microsoft Excel, Rich Text Format, or MS-DOS Text file, and then sends the file to someone else via electronic mail.

Exporting Objects

The basic steps for exporting objects are remarkably similar to those for importing objects:

1. Start from the database window that contains the object you want to export. If you want to export the entire object, click on the object's name on the database window. If you want to export selected records from a table or query, open the table or run the query and then select the records you want to export.
2. Choose File ► Save As/Export, or right-click on a gray area in the database window and choose Save As/Export.
3. Choose To An External File Or Database in the next dialog box and then click on OK. The Save Table dialog box will appear.
4. Choose the export format for the data in the Save As Type drop-down list. For example, click on the drop-down list button next to Save As Type and then scroll down to and click on Rich Text Format to copy the object to a Rich Text Format file.
5. Locate the folder that should contain your new file and then type a file name in the File Name text box, or accept the suggested file name.

 **TIP** The techniques for locating drives, folders, and files in the Save As dialog box are the same ones that work in the Open and File New Database dialog boxes (see Chapters 1 and 5, respectively).

6. If you chose Microsoft Excel 5-7, Text Files, or Rich Text Format, you also can choose one or more of these options:
 - Save Formatted** Select (check) this option (if it's available) to save the exported data with as much formatting as possible; deselect (clear) this option to omit formatting in the exported data.
 - AutoStart** Select (check) this option to immediately open the exported file for viewing in the appropriate program.
 - All or Selection** Choose All to save the entire file; or choose Selection to save records that you selected in step 1.
7. Click on the Export button. If the file name you chose already exists, you'll be asked if you want to replace the existing file; click on Yes to replace the file and continue with step 8, or click on No to leave the file alone and return to step 5.
8. Respond to any additional prompts and dialog boxes that appear.

Access will copy your Access object to the format you requested and save the results in the file you chose in step 5. If you chose AutoStart in step 6, the file will open in the appropriate program (click on the program window's Close button or choose File ► Exit to return to the Access database window).

For more help on exporting objects, go to the Access Help Contents, open the *Sharing Data And Pictures With Other Applications* book, open the *Exporting Data* book, and then double-click on an appropriate topic. You also can look up topics and subtopics under *Exporting Data* in the Access Help Index. The following sections show detailed procedures for exporting to different types of destination files.

Exporting to Text and Excel 5–7 Files

You can export Access tables, queries, forms, and reports to text files that are useful with word processing programs and to Excel version 5 through 7 worksheets. Here's how:

1. Follow steps 1 to 3 of the general "Exporting Objects" procedure, given in the previous section.
2. Choose one of these export formats for the data in the Save As Type drop-down list.
 - **To export Access data for use with text-based word processors** such as Windows Notepad or WordPerfect for DOS, choose Text Files.
 - **To export Access data as a delimited Microsoft Word for Windows mail merge data file**, choose Microsoft Word Merge.
 - **To export Access data as a formatted Rich Text Format file**, choose Rich Text Format. You can edit this type of file in Microsoft Word, WordPad, and other Windows word processors.
 - **To export Access data to an Excel version 5 through 7 worksheet**, choose Microsoft Excel 5 through 7.
3. Locate the folder that should contain your new file and then type a file name in the File Name text box (if necessary).
4. (Optional) Choose the Save Formatted, Autostart, All, or Selection options described in the general procedure for exporting objects. All of these options may not be available, depending on the type of file you are creating by doing the export.
5. Click on Export.

NOTE

If you chose Text Files and you did not choose Save Formatted, the Text Export Wizard will take over. The dialog boxes and options are similar to those described for the Text Import Wizard. See "Importing or Linking Text Files" and Figures 7.11 through 7.15, earlier in this chapter.

Access will save the data file in the format you chose. The first row of the spreadsheet or text file will contain the field names from the table or query. If you selected Autostart in step 4, the exported file will open in the appropriate program and you can view or change it as needed. (Click on the program window's Close button or choose File ► Exit to return to the Access database window.)

Exporting to Spreadsheets, Paradox, FoxPro, or dBASE

Use the following procedure to export Access tables and queries to Microsoft Excel, Lotus 1-2-3, Paradox, FoxPro, or dBASE files. Later sections explain how to export to other database formats.

1. Follow steps 1 to 3 of the general "Exporting Objects" procedure.
2. Choose one of the Microsoft Excel, Paradox, Lotus 1-2-3, dBASE, or Microsoft FoxPro export formats for the data in the Save As Type drop-down list.
3. Locate the folder that should contain your new file. If necessary, type a file name in the File name text box.
4. Click on Export.

The resulting database or spreadsheet file will contain all the data from your table or query. For spreadsheets, the first row will contain the field names from the table or query.

Exporting to a SQL Database

To export an Access table or query to a SQL database:

1. Follow steps 1 through 3 of the general "Exporting Objects" procedure.
2. Choose ODBC Databases in the Save As Type drop-down list. The Export dialog box appears.
3. Specify a name for the table in the ODBC database and then click on OK.
4. Double-click on the ODBC data source you want to export to in the SQL Data Sources dialog box. (If necessary, you can define a new data source for any installed ODBC driver by clicking on the New button and following the instructions that appear. After creating the new data source, you can double-click on it to continue.)
5. Enter whatever information your ODBC data source requires, clicking on OK as needed. As for importing ODBC data sources, you may need to enter a logon ID and password.

Access will connect to the ODBC data source and create the new table.

NOTE

When you export an Access table to an ODBC database, Access does not export the primary key and index information for the table. If you later link to your exported table without having modified its design in the ODBC database, Access will treat the table as read-only.

For more about exporting tables to ODBC data sources, look up *ODBC, Exporting Access Data* in the Access Help Index.

Exporting to Another Access Database

Earlier in this chapter, you learned how to import or link objects from another Access database to the open database. You also can perform the inverse operation: copy a table, query, form, report, macro, or module from your open database to another existing Access database. Here's how:

1. Follow steps 1 through 3 of the general "Exporting Objects" procedure.
2. Choose Microsoft Access in the Save As Type drop-down list.
3. Locate the folder that contains the Access database you want to export to and then click on the database name in the list below Save in.
4. Click on Export.
5. Specify the name for the object you're exporting in the Export dialog box or accept the suggested name. If you're exporting a table, choose whether to export the table's Definition And Data or its Definition Only. Then click on OK. If the database you're exporting to already has an object with the name you specified, you'll be asked whether to replace the existing database object with the one you are exporting.
6. Click on Yes if you want to replace the existing object with the one you're exporting; or click on No if you don't want to replace the original object (you'll be returned to step 5).

Access will copy the object to the other database.

Exporting to HTML or HTX Files

HTML is the system of coding that's used to prepare files for publication on the Internet. Special codes are used to reference graphic files for logos or other pictures, and other codes, or formatting tags, are used to indicate how data should be presented (as headers and footers, font size, bolding, etc.). An HTX file is part of a publication that has dynamic links to a database. For an HTX export, Access creates two files: an .htx file that refers to an HTML template and an .idc file that includes information on how to connect to the ODBC data source containing the data to be published.

To export an Access table or query to an HTML or HTX file:

1. Follow steps 1 to 3 of the general “Exporting Objects” procedure. (If you don’t need to change any of the publishing defaults, select the table you want to export in the Database window. Then use File ► Save to HTML/Web Formats ► Save to HTML, or File ► Save to HTML/Web Formats ► Save to IDC/HTX, and skip the rest of these steps.)
2. Choose HTML or HTX in the Save As Type drop-down list.
3. Specify a name for the new file in the Save As dialog box that appears and then click on OK.
4. If you chose HTX, Access will show you the Publish Defaults dialog box next. Use *HTML Template* to select a template file that may have specifications for a logo or certain types of headers and footers. The *Data Source Name* box is where you enter an ODBC connection used to get data for dynamic Web pages. *User to Connect As:* is for the ODBC user name and *Password for User* is for the password needed to log on to the ODBC data source. Click on OK to go ahead with the export after you make your entries.

If you want to change the publishing defaults before you do an export, use File ► Save to HTML/Web Formats ► Publish Defaults, fill in the Publish Defaults dialog box, and click on OK.

The next section, “Using the Publish to the Web Wizard,” explains more about HTML templates and the other settings in the Publish Defaults dialog box. Figure 7.20 shows the file *Cajun Products.htm* created by exporting the table *Cajun Products* to an HTML file. Notice that the information looks quite different from the HTML file the data was originally imported from as shown in Figure 7.18. The files vary because different HTML defaults were used to create them.

Using the Publish to the Web Wizard

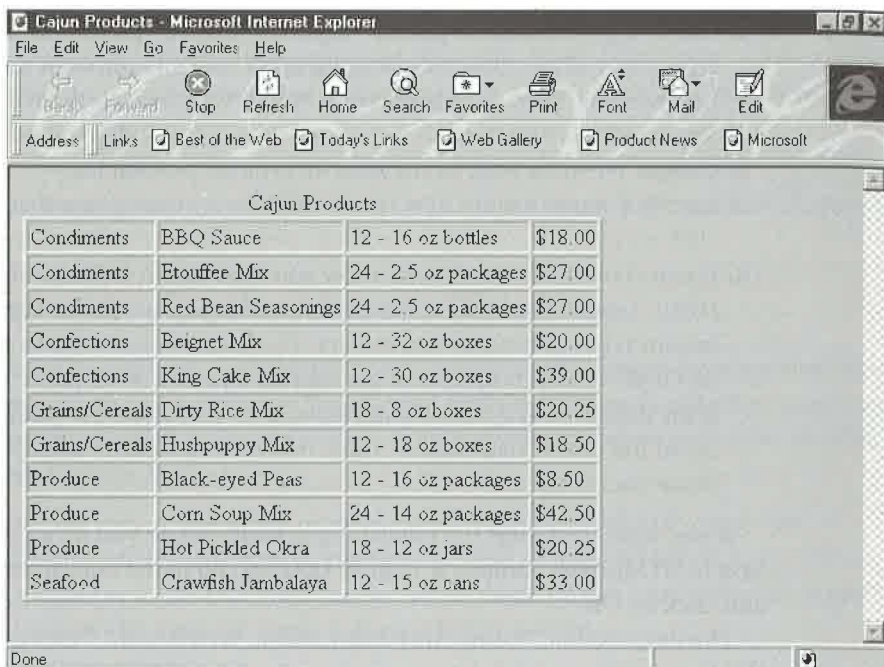
Access 97 can give you plenty of help preparing a document for publication on the Internet. The Publish to the Web Wizard guides you through the process of publishing Access objects including tables, forms, reports, or queries to the Web. The data that is published can be static (a “snapshot” of an Access object as it is at the time of publication) or dynamic. When a dynamic link to an Access object is published, a person browsing the data always sees the most up-to-date version of information.

To start the Publish to the Web Wizard, follow these steps:

1. Choose File ► Save to HTML/Web Formats ► Publish to the Web.
2. Check *I want to use a Web publication profile* if you’ve already used the Wizard and saved a Web publication profile that you’d like to use. Otherwise, this option will be dimmed.

FIGURE 7.20

The file *Cajun-Products.htm* is being viewed with the Microsoft Internet Explorer. This file was created by exporting the Access table *Cajun Products* to an HTML file using *File/Save As/Export*.



3. Click on Next to continue. The next dialog box resembles the Access Database window (see Figure 7.21) with tabs for Tables, Queries, Forms, Reports, and All Objects. You can select one or more objects to publish.
4. Select an object by clicking on its checkbox. Use the Select All or Deselect All buttons to check or uncheck all the objects on a tabbed page at once. Click on Next to continue. (As with the other Wizards, you can click on Finish at this point to bypass changing the publication defaults.)

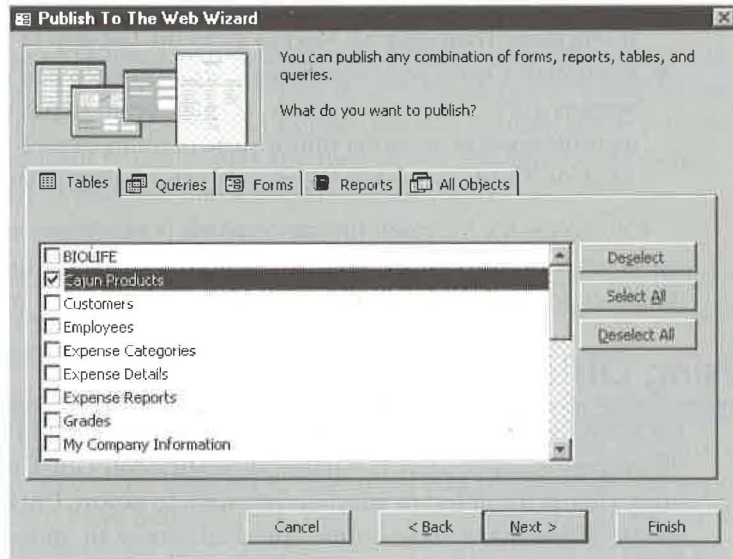
**NOTE**

The next step lets you choose an HTML template, a file with specifications for Web page elements like background, logos, navigation buttons, and text styles.

5. Leave this option blank or use the Browse button to select an existing .htm file or .html file. Use the checkbox under the template name box if you want to use different templates for some of the objects you are publishing. Click on Next to go on.

FIGURE 7.21

The Publish to the Web Wizard shows you a dialog box like a Database window that you use to select the objects you want to publish.



6. Click on Dynamic (HT) publications (in the next dialog box) if you want to create a publication with dynamic links to your Access objects. Otherwise leave Static selected. Mark the checkbox under Dynamic if you want to publish some static objects and some with dynamic links. After you make your choice, click on Next.

NOTE

The Publish to the Web Wizard can publish files to a folder on your computer (or network), or it can use the WebPost feature to publish pages directly to an Internet Server.

7. Do one of the following:

- **To publish locally**, enter a folder or use the Browse button to fill in a location under *I want to put my Web publication in this folder*.
- **To publish directly to the Web** (assuming you have an Internet connection established), select Yes, I want to run the WebPost Wizard to set up a new WebPost specification, or select Yes, I also want to use an existing WebPost server whose 'Friendly Name' has been set up previously. Select a location from the Friendly Name drop-down list before you click on Next.

8. (Optional) To use the Wizard to create a home page with links to all the objects you are publishing, select *Yes, I want to create a home page* and enter a file name for the home page. Then click on Next to go to the last step of the Wizard.
9. (Optional) Check *Yes, I want to save wizard answers* and enter a name to save your work as a Web publication profile. (Remember in step 2, you have the option to use a profile saved at an earlier time instead of filling in each Wizard step from scratch.) Click on Finish to publish the objects you selected in step 3.

You can use the Microsoft Internet Explorer to view your new publication as it will appear on the Internet. Just open the Windows 95 Explorer, find the new .htm file, and double-click it. Windows 95 will launch the Internet Explorer with the new .htm file open.

Using OfficeLinks

For some real razzle-dazzle, you can use OfficeLinks features to export Access data to a file and immediately start the appropriate Microsoft Office program. To use these features, choose the object or selection you want to export. Click on the drop-down arrow on the OfficeLinks toolbar button and then choose an option, or choose options from the Tools ► OfficeLinks menu. Here's an example of the OfficeLinks toolbar button after we clicked on its drop-down arrow:

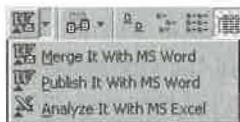


Table 7.2 briefly describes the OfficeLinks drop-down toolbar button options and the Tools ► OfficeLinks menu options you can use. The OfficeLinks toolbar button is available on the database window's toolbar and the print preview toolbar.

TABLE 7.2: OFFICELINKS DROP-DOWN TOOLBAR BUTTON OPTIONS

OPTION NAME	PROGRAM NAME
Merge It with MS Word	Microsoft Word for Windows (mail merge feature)
Publish It With MS Word	Microsoft Word for Windows
Analyze It With MS Excel	Microsoft Excel

To use OfficeLinks:

1. Go to the Access database window, click on the tab for the type of data you want to export (Tables, Queries, Forms, or Reports), and then select the object you want to export. Or open the table or run the query and select the rows you want to export. Or open an object in print preview (choose File ► Print Preview).
2. Choose Tools ► OfficeLinks and then choose the appropriate option. (The Merge It option is available for tables and queries only.)
3. Answer any prompts that appear.

Access will create the output file in the current folder and then open the file in the program you chose in step 2. When you're ready to return to Access, close the program by clicking on its Close button or choosing File ► Exit.

NOTE

What you see in Access isn't necessarily what you get in the program opened by OfficeLinks. *Examples:* Data on Access forms and reports that you export to Excel will appear in rows and columns. Data on forms that you export to Word is stored in Word tables. And graphics and OLE objects will be blank because they can't be exported.

Mailing an Access Object

You can use the Send feature to export Access objects to HTML (.htm, .html), HTX (.htx), Microsoft Excel (*.xls), rich text format (*.rtf), and MS-DOS text (.txt) format. Rather than creating an ordinary file (as the Export and OfficeLinks features do), Send embeds the data as an icon in an electronic mail (e-mail) message and then sends the message to your recipient list. To use Send:

1. Click on the tab in the Access database window for the type of object you want to send (Tables, Queries, Forms, Reports, or Modules and then click on the object you want to send.
2. Choose File ► Send.
3. Select the export format from the Send dialog box that you want to use. Click on OK.
4. For HTML and HTX files, you will see a Publish Defaults dialog box. Use HTML Template to select a template file that may have specifications for a logo or certain types of headers and footers. The DataSource Name box is where you enter an ODBC connection used to get data for dynamic Web pages. User to Connect As: is for the ODBC user name and Password for User is for the password needed to log on to the ODBC data source. Fill in the required information (if you need to change the defaults) and click on OK. If a Choose Profile dialog box appears, choose a profile and then click on OK. Your electronic mail program will take over.

5. Respond to any prompts that appear, sign on (if necessary), and send the message as usual.

NOTE

As for the OfficeLinks features, what you see in Access isn't necessarily what you get in your e-mail messages. *Examples:* Data on Access forms and reports that you mail in Excel format will appear in rows and columns on a spreadsheet. Data on forms that you mail in Rich Text Format is stored in tables. And graphics and OLE objects will be blank.

TIP

In most electronic mail programs, you can preview and even change the object before sending it to the recipient. When the e-mail message appears, just double-click on the object's icon within the message. For example, if you're sending a Customers table in Microsoft Excel format, double-click on the Customers.xls icon in your message to open the object in Excel. After viewing the object, close the program (File ► Exit), save your changes if necessary, and send the e-mail message normally.

To retrieve the file, the recipient must sign on to e-mail, open your mail message as usual, and double-click on the object's icon in the message file. This action will start the program that's associated with the file you sent and let the recipient read the file. For example, if the recipient double-clicks on an .xls file icon in the message, the file will open in Microsoft Excel.

NOTE

The File ► Send command is available only if your mail program is installed properly and it supports Messaging Application Programming Interface (MAPI). To use Access with an e-mail program that supports the Vendor Independent Mail (VIM) protocol, you must install and set up the dynamic-link library (named Mapivim.dll), which converts MAPI mail messages to the VIM protocol. You'll find information about installing and setting up VIM support in the Microsoft Office Resource Kit, available from Microsoft.

Importing and Exporting from Nonsupported Programs

If you want to import data from, or export data to, a program other than one that Access supports directly, you can use some intermediate format that Access does support.

For instance, most programs let you import and export data in delimited text format. Thus you could export data to a delimited text file from one program and then import that delimited text file into the other program.

Many programs also can use files that are in another program's format, either directly or after converting the file with some help from you. For example, Quattro Pro can open Lotus 1-2-3 .wk3 format files directly, and Access can create such files. Therefore, to export Access data to Quattro Pro, use the Export feature to export the Access table to Lotus 1-2-3 .wk3 format; then start Quattro Pro and open the exported .wk3 file normally. Similarly, both Microsoft Works and Microsoft Access can open and create dBASE files. So to export Access data to a Works database, use the Export feature in Access to export the Access table to dBASE format; then start Microsoft Works and open the existing dBASE file. No sweat!

For information on importing or exporting files in some other program, check that program's documentation. Be aware that delimited files often go by the name *ASCII delimited file*, *ASCII text file*, or simply *DOS text file*.

Where to Go from Here

If you took the hands-on lessons in Chapter 3, you already know the basic steps for adding, editing, and viewing data. In this case you can skip Chapter 8 and move on to Chapter 9, where you'll learn how to sort, search, and print your data. But if you skipped those lessons, or you just want to know some extra tricks and tips for entering data more efficiently, continue with Chapter 8 now.

What's New in the Access Zoo?

The biggest additions to the data-sharing features of Access 97 are Web related. You can now:

- Import data in HTML and HTX files
- Export Access objects (tables, forms, queries, and reports) to HTML or IDC/HTX files
- Use the Publish to the Web Wizard to publish static or dynamically linked data directly to the Internet



A black and white photograph of a mountain range. The mountains are covered in snow and have a rugged, layered appearance. In the foreground, there are dark, dense evergreen trees. In the upper right corner, a full moon is visible in the dark sky. The overall scene is serene and majestic.

Chapter

8

Adding, Editing, and
Viewing Data



FEATURING

Customizing a datasheet view 261

Navigating in datasheets and forms 267

Adding data to a table 269

Changing data in a table 271

Using OLE to store pictures, sounds, and other objects 284

Troubleshooting data entry problems 297

Changing a table's design from datasheet view 300
