Apple® SMB
File Transfer Utility
Working Draft #4

January 27, 1989

Apple Confidential

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About This User's Guide

THIS MANUAL CONTAINS INSTRUCTIONS FOR INSTALLING AND OPERATING THE Macintosh® SMB File Transfer utility, or SMB File Transfer, on a Macintosh II computer.

The SMB protocol is a widely-used IBM standard that consists of a set of data structures called **Server Message Blocks (SMB's)**. SMB's are designed to operate on an IBM PC Network®, connecting personal computers and resources such as printers and file servers.

If your token ring network includes an SMB file server, SMB File Transfer provides file transfer and translation between MS-DOS files on the SMB server and the Macintoshes on your network.

Here's what you'll find in this guide:

■ Chapter 1, "About SMB File Transfer," explains the components that you need, and introduces the Apple File Exchange application, which is required for running SMB File Transfer.

■ Chapter 2, "Getting Started," tells you how to install the necessary software and drivers, as well as the SMB File Transfer software, on your Macintosh II.

■ Chapter 3, "Using SMB File Transfer," explains the operation of SMB File Transfer—connecting to an SMB file server, adding and removing server volume names, disconnecting from servers, and using file translation.

■ The Appendix lists a number of currently available translators.

You'll find a glossary of network terms at the end of the manual. Inside the back cover, you'll also find a Tell Apple card. After you've installed SMB File Transfer and spent some time using it, be sure to fill out the Tell Apple card and send it in. We want to know what you think about Apple products and training materials.

About SMB File Transfer

S MB FILE TRANSFER ALLOWS YOU TO TRANSFER FILES BETWEEN an
SMB server and a Macintosh® II on a token ring network. Running under
Apple File Exchange (AFE), SMB File Transfer provides for file transfer
between MS-DOS files residing on an SMB server and Macintosh files residing
on a Macintosh, by means of the Apple TokenTalk NB card.
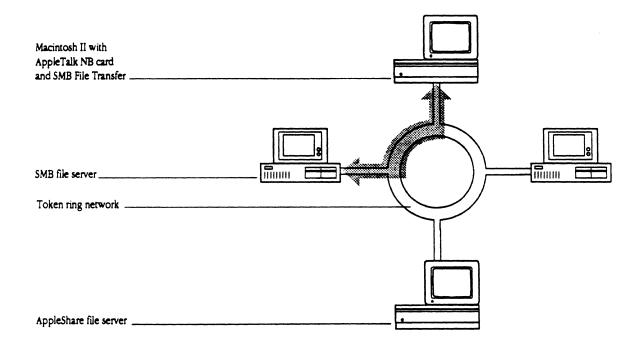
When Apple File Exchange is launched, SMB File Transfer is available in the Apple menu as a desk accessory (DA). It appears on screen as a dialog box through which you can connect to volumes on any SMB server on the network for simple and direct file transfer.

The files you transfer can be maintained in their original format (for file storage), or translated into an appropriate application format (using file translators) during the transfer.

SMB File Transfer implements IEEE 802.5, NetBIOS, and the SMB protocols on the Macintosh II.

Figure 1-1 shows the function of SMB File Transfer on a token ring network.

■ **Figure 1-1** Transferring files between a Macintosh II and an SMB server.

Macintosh II with
AppleTalk NB card
and SMB File Transfer

SMB file server

Token ring network

AppleShare file server

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Apple File Exchange

Apple File Exchange (AFE) is a Macintosh application that permits the transfer to a Macintosh of documents created on IBM-compatible computers using MS-DOS and on the Apple II using ProDOS® operating systems. For example, using AFE, you can transfer an MS-DOS file prepared with Word Perfect to the Macintosh, and at the same time convert the Word Perfect format to a Macintosh format (such as to MacWrite or Microsoft Word), using a translator. AFE also permits the transfer from MS-DOS or ProDOS files to a Macintosh.

Since SMB File Transfer runs under AFE, the AFE application must be installed and running before you can access the SMB File Transfer DA. The instructions for installing and operating these programs are included in Chapter 2, "Getting Started."

What you need

To operate SMB File Transfer, you must have a Macintosh II computer with an Apple TokenTalk NB card and software installed and connected to a token ring network.

In addition, you must have a copy of the Apple File Exchange application, which is included on a separate disk.

❖ *Note:* The version of Apple File Exchange that you use must be the one that is included with SMB File Transfer; older versions of AFE may lack enhancements that permit them to operate correctly with SMB File Transfer. (AFE is included on the Utilities disk that comes with every Macintosh; make sure you are using the SMB File Transfer version, not the version that came with your Macintosh II.)

△ **Important**   You must be using the Macintosh System file version 6.0.3 or later. △

The *SMB File Transfer Installation* disk installs files into your Macintosh System. Instructions for Installation are included in Chapter 2, "Getting Started."

Getting Started

U SING SMB FILE TRANSFER IS A STRAIGHTFORWARD TASK, MADE EASY BY THE Macintosh user interface. With your TokenTalk™ NB card installed, begin by installing the appropriate files into your Macintosh system.

Follow the instructions below to install SMB File Transfer on a hard disk. If you plan to install and operate SMB File Transfer on floppy disks, skip to the section "Installing SMB File Transfer Without a Hard Disk" for setup instructions.

❖ *Note:* It is recommended that you install SMB File Transfer on a hard disk, both for ease of installation and for performance. If you do not use a hard disk, you will need to install SMB File Transfer and its related files on a Macintosh II with two separate floppies. If your Macintosh II only has one floppy disk drive, when using SMB File Transfer, you will have to swap disks.

Installing SMB File Transfer on a hard disk

1. **Insert the *SMB File Transfer Installation* disk.**

   Insert the *SMB File Transfer Installation* disk into the internal disk drive of a Macintosh II.

2. **Restart.**

3. **Display the disk's contents.**
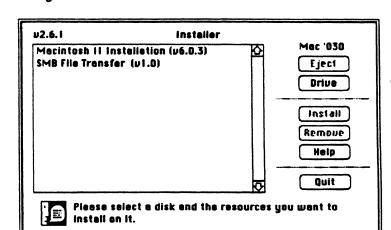
   Double-click the *SMB File Transfer Installation* disk icon to open the disk window.

4. **Open the SMB Setup folder.**

   In the SMB Setup folder, you will find the Installer icon.

5. **Open the Installer.**

   Double-click the Installer icon to display the window shown in Figure 2-1.

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■ **Figure 2-1**   The SMB File Transfer Installer window

```
┌─────────────────────────────────────────────────┐
│ v2.6.1                    Installer               │
│ ┌───────────────────────────────────┐┌──┐        │
│ │ Macintosh II Installation (v6.0.3)││◇ │  Mac '030│
│ │ SMB File Transfer (v1.0)          ││  │ ┌──────┐ │
│ │                                   ││  │ │ Eject│ │
│ │                                   ││  │ └──────┘ │
│ │                                   ││  │ ┌──────┐ │
│ │                                   ││  │ │ Drive│ │
│ │                                   ││  │ └──────┘ │
│ │                                   ││  │ ┌──────┐ │
│ │                                   ││  │ │Install││
│ │                                   ││  │ └──────┘ │
│ │                                   ││  │ ┌──────┐ │
│ │                                   ││  │ │Remove│ │
│ │                                   ││  │ └──────┘ │
│ │                                   ││  │ ┌──────┐ │
│ │                                   ││◇ │ │ Help │ │
│ └───────────────────────────────────┘└──┘ └──────┘ │
│  ┌──┐ Please select a disk and the resources you want to│
│  │▤ │ install on it.          ┌──────┐               │
│  └──┘                         │ Quit │               │
│                               └──────┘               │
└─────────────────────────────────────────────────┘
```

◆Note: SMB File Transfer requires system resource version 6.0.3 (or later).

If you do not currently have system resource version 6.0.3 or later, you must install it at this time, along with SMB File Transfer.

6. **Select the Macintosh II system resource, if necessary.**

To install the new System resource, click to select the System resource for the Macintosh II model that you are using. The Installer program figures the resource sizes for the installation (to make sure that there is adequate room in your System file).

7. **Select SMB File Transfer.**

If you are only installing SMB File Transfer, click to select it in the Installer window.

If you are selecting both the Macintosh II System resource, and SMB File Transfer, you can select both items by holding down the Shift key while clicking on each selection.

8. **Click Install.**

SMB File Transfer installation begins (and, if you selected the Macintosh II resource, that installation begins also). A message in the Installer window notifies you when installation has been successfully completed.

9. **Click Quit.**

   The installation is now complete.

10. **Choose Restart from the Special menu.**

Installing Apple File Exchange

1. **Open the disk which contains the Apple File Exchange application.**

2. **Display the disk's contents.**

   Double-click the disk icon for the disk that contains Apple File Exchange to open the disk window.

3. **Copy the Apple File Exchange application to a folder on your hard disk.**

   Copy the Apple File Exchange application into its own folder on your disk. It does not need to reside in the System Folder.

   ❖ *Note:* Any translators that you want to use must reside in the same folder where Apple File Exchange is located.

Contents of your hard disk System Folder

The files that you will now find in your System Folder on your hard disk are as follows:

- TokenTalk Prep
- PC Session Prep
- Apple IPC
- SMB File Xfer
- SMB Prefs

The Macintosh Installer program installs these files into your System. Once these files are installed, you can begin to use SMB File Transfer.

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Installing SMB File Transfer without a hard disk

You can operate SMB File Transfer without a hard disk. If you choose this configuration, use the following procedure to install SMB File Transfer on two 3.5-inch **floppy disks** in the Macintosh II.

To install on floppy disks, follow the directions in the previous section for installing on a hard disk, but when you open the Installer window (step 5), click the Drive button as necessary to select the floppy disk onto which you want to install SMB File Transfer.

■ **Make a backup copy of the *SMB File Transfer Installation* disk and the disk that contains the Apple File Exchange application.**

   Never use your original disk to run SMB File Transfer. Make a duplicate disk, referring to your Macintosh owner's guide if necessary, and store the original in a safe place.

Continue to follow the instructions in steps 6 through 9 of the section "Installing SMB File Transfer on a Hard Disk." You must then perform the following additional steps.

1. **Replace the *SMB File Transfer Installation* disk with your modified startup disk and restart your Macintosh II.**

   The Macintosh II restarts using your modified startup disk, with SMB File Transfer installed on it.

2. **Insert the Apple File Exchange disk into the other floppy disk drive; if your Macintosh II has only one floppy disk drive, click and drag the *SMB File Transfer Installation* disk to the trash.**

3. **Open the System Folder on your startup disk.**

4. **Click and drag the file named SMB File Xfer from the System Folder of your startup disk to the Apple File Exchange folder on the Apple File Exchange disk.**

   You can remove the SMB File Xfer file from your System Folder if you wish; it has been copied onto the Apple File Exchange disk, where it must reside in order for you to operate SMB File Transfer.

Contents of your floppy disk System Folder

The files that you will now find in your System Folder on your startup disk are as follows:

- TokenTalk Prep
- PC Session Prep
- Apple IPC
- SMB Prefs

The Macintosh Installer program installs these files into your System.

On the Apple File Exchange disk, the files in the Apple File Exchange Folder are as follows:

- Apple File Exchange
- SMB File Xfer

Once these files are installed, you can begin to use SMB File Transfer.

Using SMB File Transfer

W ITH SMB FILE TRANSFER INSTALLED ON YOUR MACINTOSH II, YOU CAN BEGIN
using it to transfer files between your SMB server and your Macintosh
computer. This chapter explains how to connect to and work with an SMB
server, operate Apple File Exchange (AFE), and disconnect from an SMB server.

SMB File Transfer runs under the Apple File Exchange application, but extends its usefulness by allowing you to connect to SMB servers. Under AFE, a desk accessory (DA) is available to connect to the server; the DA may be opened and closed as needed.

Unlike the **AppleShare®** user interface, which provides a list of available file servers through the **Chooser**, the SMB server interface requires that you know and enter the names of each SMB volume that you want to access.

Working with an SMB server

When you work with an SMB server, certain steps must be followed. These steps are as follows:

- Each time you open AFE, you must reestablish connection to the SMB server volumes you want to access. The connections, once established, are displayed in a sub-window in the SMB File Transfer dialog box.

- SMB File Transfer saves you the trouble of retyping volume names each time you connect to them. It does this by maintaining a list of the volume names you have entered in a file on the Macintosh disk (in the SMB Preferences file). These names are displayed in another sub-window in the SMB File Transfer dialog box.

   You can add and remove names from this list through the SMB File Transfer DA.

- To establish connection to a volume, select a volume name from the maintained volume list and connect to it.

Begin the process of accessing an SMB server volume by running the AFE application and opening SMB File Transfer.

1. Start the Apple File Exchange application.
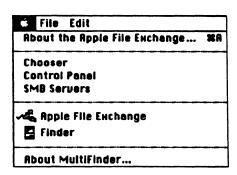
Open the folder that contains AFE, and double-click on the icon.

◆ *Note:* Instructions on operating the AFE application come at the end of this chapter (see the section "Using Apple File Exchange").

2. Open the SMB servers desk accessory.

With the AFE application running, an additional menu item titled SMB Servers appears in the Apple menu, as shown in Figure 3-1.

■ **Figure 3-1**   The SMB Servers DA under the Apple menu.

```
┌──────────────────────────────────────────┐
│ ● │ File  Edit                            │
├──────────────────────────────────────────┤
│ About the Apple File Exchange...   ⌘A     │
├──────────────────────────────────────────┤
│ Chooser                                   │
│ Control Panel                             │
│ SMB Servers                               │
├──────────────────────────────────────────┤
│ ⛏ Apple File Exchange                     │
│ ▤ Finder                                  │
├──────────────────────────────────────────┤
│ About MultiFinder...                      │
└──────────────────────────────────────────┘
```

Select the SMB Servers DA; a dialog box appears, with four button options for the access to SMB servers :
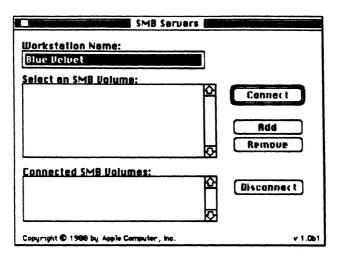
■ Connect (to an SMB volume that has already been added)

■ Add (an SMB volume name to the volume list)

■ Remove (an SMB volume name from the volume list)

■ Disconnect (from an SMB volume that is already connected)

In the same window, three sub-windows are displayed:

■ Workstation Name (to indicate the name of your workstation)

■ Select an SMB Volume (a listing of the SMB volumes you have already added)

■ Connected SMB Volumes (a listing of the volumes already connected)

Figure 3-2 shows the dialog box.

■ **Figure 3-2** The SMB Servers DA dialog box

```
┌─────────────────────────────────────────────────────┐
│ ░░░░░░░░░░░░░░░░░  SMB Servers  ░░░░░░░░░░░░░░░░░░░░  │
│                                                       │
│ Workstation Name:                                     │
│ ┌─────────────────────────────────┐                  │
│ │ Blue Velvet                     │                  │
│ └─────────────────────────────────┘                  │
│ Select an SMB Volume:                                 │
│ ┌───────────────────────────────┬─┐  ╭──────────╮    │
│ │                               │▲│  │ Connect  │    │
│ │                               ├─┤  ╰──────────╯    │
│ │                               │ │  ╭──────────╮    │
│ │                               │ │  │   Add    │    │
│ │                               ├─┤  ╰──────────╯    │
│ │                               │▼│  │ Remove   │    │
│ └───────────────────────────────┴─┘  ╰──────────╯    │
│ Connected SMB Volumes:                                │
│ ┌───────────────────────────────┬─┐                  │
│ │                               │▲│  ╭──────────╮    │
│ │                               ├─┤  │Disconnect│    │
│ │                               ├─┤  ╰──────────╯    │
│ │                               │▼│                  │
│ └───────────────────────────────┴─┘                  │
│ Copyright © 1988 by Apple Computer, Inc.   v 1.0b1    │
└─────────────────────────────────────────────────────┘
```

3. Enter a workstation name.

The workstation name simply tells the network administrator who you are. You must enter at least one character in this field; the limit is 14 characters.

You can change the workstation name at any time by double-clicking on the name field and typing a new name.
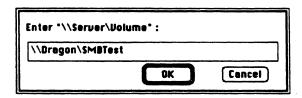
◆ *Note:* The workstation name is only saved when you close the SMB Server dialog box by clicking the close box.

Adding an SMB volume name

1. In the SMB Servers dialog box, click the Add button.

A dialog box appears, prompting you to enter the pathname to an SMB volume. See Figure 3-3.

■ **Figure 3-3** The Enter \\Server\Volume dialog box.

```
┌──────────────────────────────────────────────┐
│ Enter "\\Server\Volume" :                      │
│ ┌────────────────────────────────────────────┐ │
│ │ \\Dragon\SMBTest                           │ │
│ └────────────────────────────────────────────┘ │
│                      ┌────────┐   ┌────────┐   │
│                      │   OK   │   │ Cancel │   │
│                      └────────┘   └────────┘   │
└──────────────────────────────────────────────┘
```

2. Enter the volume name, and click OK.

❖ *Note:* SMB servers are case insensitive, so you can enter the volume name in either capital letters, lowercase, or any combination of both.

To obtain the names of servers and volumes to connect to, see your network administrator.

You may want to add the names of all the SMB volumes on your network at one time; later, when you want to access a different volume, its name will already be an option in the Select an SMB volume window.

❖ *Note:* For each connection, the SMB server and volume must be entered, and in the format specified: \\server\volume (note that the slashes are backslashes). Unlike AppleShare volumes, the SMB volumes are not displayed in a list that you can choose from until you have added the names by means of the SMB Server DA.

Once you have added the volume names, every time the SMB Servers DA is opened, the volume list is displayed in the middle window. This information is maintained in the SMB Preferences file in your System folder, so that the list is stored even when your Macintosh is turned off or the network is brought down.

If you attempt to add a name that already exists, you will see an error message.
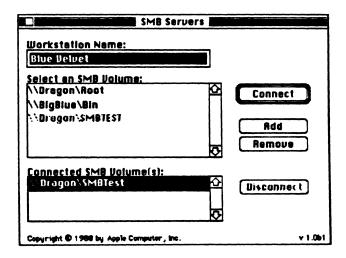
◆ *Note:* Any name can be added to the server list—it does not need to be valid. The validity of the server name is not verified until you attempt to connect to the server. Therefore, take care to add only valid server names. For information on invalid server names, see Chapter 4, "Troubleshooting."

Removing a volume entry

1. **In the SMB Servers dialog box, select the volume name that you want to remove from the list.**

2. **Click the Remove button.**

Connecting to an SMB volume

■ **Figure 3-4** The SMB Preferences list appears inside the SMB Servers DA dialog box

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Once you have entered the names of SMB volumes to the SMB Preferences list, you can connect to any of them (if they are valid names).

1. Select the volume name from the Select an SMB volume window.

If the volume is already connected, its name appears shaded, and it is listed in the Connected SMB Volumes window.

2. Click the Connect button.

A dialog box appears that displays the name of the volume that you are attempting to connect to, and prompts you for the password. See Figure 3-5.

■ **Figure 3-5**   The Enter Volume Password dialog box.

```
Connect To: \\Dragon\SMBTest

Enter Volume Password:

[                                    ]

                     [   OK   ]    [ Cancel ]
```
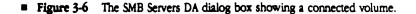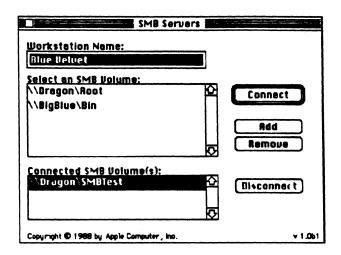
3. Enter the volume password.

If the volume is password protected, you must enter the password. If the volume is not password protected, leave this field blank.

4. Click the OK button.

The volume is then mounted; its name appears in the lower DA window. See Figure 3-6.

■ **Figure 3-6** The SMB Servers DA dialog box showing a connected volume.

```
┌──────────────────────────────────────────────────┐
│ ☐ ▤▤▤▤▤▤▤▤▤▤▤▤▤| SMB Servers |▤▤▤▤▤▤▤▤▤▤▤▤       │
│                                                    │
│ Workstation Name:                                  │
│ ┌──────────────────────────────────┐              │
│ │ Blue Velvet                      │              │
│ └──────────────────────────────────┘              │
│ Select an SMB Volume:                              │
│ ┌──────────────────────────────┬─┐    ╭─────────╮ │
│ │ \\Dragon\Root               │⬆│    │ Connect │ │
│ │ \\BigBlue\Bin               │ │    ╰─────────╯ │
│ │                             │ │                │
│ │                             │ │    ╭─────────╮ │
│ │                             │ │    │   Add   │ │
│ │                             │⬇│    ╰─────────╯ │
│ └──────────────────────────────┴─┘    ╭─────────╮ │
│                                        │ Remove  │ │
│ Connected SMB Volume(s):               ╰─────────╯ │
│ ┌──────────────────────────────┬─┐                │
│ │ \Dragon\SMBTest             │⬆│   ╭───────────╮ │
│ │                             │ │   │ Disconnect│ │
│ │                             │⬇│   ╰───────────╯ │
│ └──────────────────────────────┴─┘                │
│ Copyright © 1988 by Apple Computer, Inc.   v 1.0b1│
└──────────────────────────────────────────────────┘
```

You can use AFE to transfer files between your local volume and the server volume, or even between two different server volumes.

Up to six different volumes from one or more servers can be connected simultaneously. To connect additional volumes, repeat the previous steps 1 through 4.

Disconnecting from an SMB volume

1. Select the volume name from the Connected SMB Volumes window.

2. Click the Disconnect button.

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△ **Note** If you quit the Apple File Exchange at any time with any SMB volume mounted, SMB File Transfer disconnects them automatically. △

Using Apple File Exchange

This section explains how to launch AFE and how to use it with SMB File Transfer. For more information on using the AFE application, see Chapters 7 and 8 of the *Macintosh Utilities User's Guide.*

There are eight basic steps in using the AFE application with SMB File Transfer:

■ Open the Apple File Exchange application.

■ Use the SMB Server DA to connect to an SMB server volume.

■ In the AFE window, show the disk containing the files you want to transfer, and the disk you want to receive transferred files. Typically, one disk is on a Macintosh II computer (or peripheral), and the other is on an SMB file server; however, you can also translate files that are on the same disk.

■ Select a folder (or the disk-level directory) to receive the transferred files or create a new folder.

■ Select the files you want to transfer.

■ If you are doing file translation, select the necessary translators in the appropriate AFE menu.

■ Transfer the files (translation, if selected, is done simultaneously)

■ Close SMB File Transfer and AFE (closing AFE also disconnects any SMB servers connected by means of SMB File Transfer).

SMB File Transfer can perform file translation when it transfers files between an SMB server and a Macintosh II; however, this is done by means of separate translators (several of which are supplied with AFE—others may be obtained from third-party vendors).

To obtain file translators that work with the files you want to translate, see your network administrator. Examples of translators include

- PageMaker PC to PageMaker Mac
- Word Perfect PC to MicroSoft Word or MacWrite
- Dbase PC to Dbase Mac

Different translators handle different applications and file formats. For a list of some of the translators that are available, see Appendix A.

Starting with AFE

To open Apple File Exchange, follow these steps:

1. **Open the AFE folder.**

   Open the AFE folder by selecting its icon and choosing Open from the File menu, or by double-clicking the AFE folder icon.

2. **If you have other translator files, copy them into the AFE folder.**

   Some suppliers may package several translators together. Follow their instructions for placing the files in the folder.

3. **Open the AFE application.**

   Open the AFE application by selecting its icon and choosing Open from the File menu, or by double-clicking the AFE icon.

   The Apple File Exchange window appears. The directory list on the left shows files and folders on the disk containing Apple File Exchange.

   If you have more than one Macintosh disk connected or inserted, the AFE folder shows, in the directory list on the right, the files and folders on the second disk.

   You can display the directory list for an SMB server on either side of the AFE window.

Showing your disks

You use the AFE window to select the files you want to translate and to specify the folder or volume that you want to receive translated files. Begin by showing both your **source volume** and your **destination volume**.

1. **Click the Drive button (on either the left-side or right-side) until the source volume appears in on that side of the AFE window.**
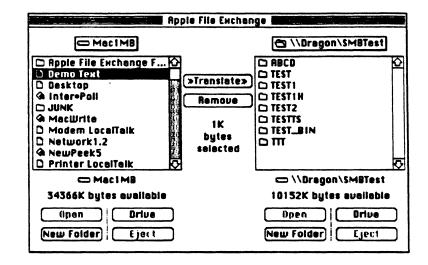
2. Click the other Drive button until the destination volume appears on that side.

If the volume is already shown, you can skip this step.
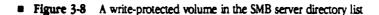
AFE displays, beneath the volume name, the space available on the volume. Figure 3-7 shows a typical AFE window showing an SMB volume and a Macintosh volume.
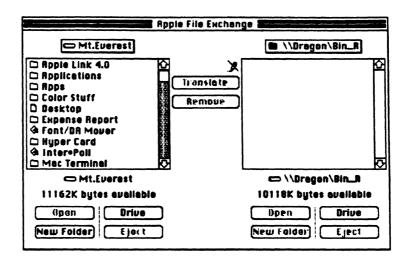
■ **Figure 3-7** The Apple File Exchange window

Within the directory list, an icon to the left of the item's name indicates whether it is a folder, a data file, or an application.

In various locations around the AFE window, icons may be displayed that indicate a selected volume's or folder's degree of accessibility. For example, a small slashed pencil next to the directory list of a volume indicates that the volume is **write-protected**, meaning you can read files on that volume, but you cannot copy files onto the volume. Figure 3-8 displays this icon.

■ **Figure 3-8** A write-protected volume in the SMB server directory list

Any write-protected volume, therefore, must have this security modified
before you can translate files in that volume. To unlock a volume, see your
system administrator.

If a volume is completely locked, a small padlock appears next to it.

A small drop folder next to the directory list of a volume indicates that files
on the volume (or within the folder) can be overwritten by a new version of
the file, but files on the volume (or within a folder) cannot be read. See figure
3-9.

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■ **Figure 3-9**   A read-protected volume in the SMB server directory list

See Figure 3-10 for all the possible icons.

■ Figure 3-10a Directory window icons

Folder	Document	Application	3 1/2" floppy disk
Binary file	Macintosh system file	Text document	Locked folder

■ Figure 3-10b AFE window icons

File server volume	Hard disk	Disk is locked	5 1/4" floppy disk
Displayed folder	3 1/2" floppy disk	Drop folder	Write protected

Specifying where to put translated files

Now you're ready to specify where AFE should put the translated file, or destination file. If you plan to place the destination file in the disk-level directory—that is, not in a folder—you can skip to the next section.
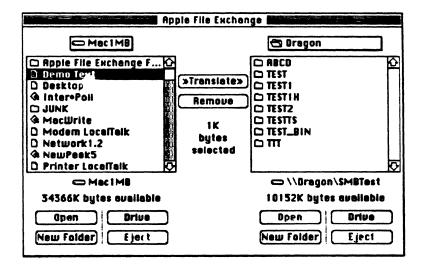
If you want a folder to receive the translated files, you select that folder and open it. Its name then appears as the directory title, just above the destination disk's directory list. As shown in Figure 3-11, the directory title and disk name are initially the same. You can specify an existing folder or create a new folder.

◆ *Note:* Apple File Exchange treats MS-DOS "directories" and ProDOS "subdirectories" as folders, but it does not recognize folders on 400K Macintosh disks. In that case, all files are simply listed in the directory list for the disk.

To specify an existing folder

You can specify an existing folder by moving through your file hierarchy. See the Appendix, "Moving Through the File System," in the *Macintosh Utilities User's Guide,* or your *Macintosh System Software User's Guide* for details.

■ **Figure 3-11** Dragon specified as the destination folder
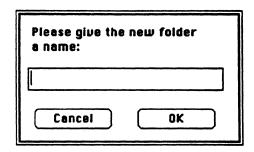
To create a new destination folder

Follow these three steps to create a new folder as the destination for your translated files:

1. **Click the New Folder button below the directory.**

   Apple File Exchange presents a dialog box shown in Figure 3-12.

■ **Figure 3-12** The dialog box for naming a new folder

```
┌─────────────────────────────────────┐
│ ┌─────────────────────────────────┐ │
│ │ Please give the new folder      │ │
│ │ a name:                         │ │
│ │                                 │ │
│ │ ┌─────────────────────────────┐ │ │
│ │ │I                            │ │ │
│ │ └─────────────────────────────┘ │ │
│ │                                 │ │
│ │ ( Cancel )      (    OK    )    │ │
│ └─────────────────────────────────┘ │
└─────────────────────────────────────┘
```

2. **Type a name for the new folder.**

   Apple File Exchange rejects folder names that are too long or that contain characters or sequences not acceptable in the destination disk's operating system.

   Use the mouse and keyboard to edit the folder name.

3. **Click OK.**

Selecting the files you want to translate

Next you need to specify which files you want to translate by displaying and selecting them from the source volume's directory list. You can select these files individually by their filenames, or you can select all the files in a folder by selecting the folder's name. This method copies the folder as well—that is, it creates a new sub-directory on the destination disk.

❖ *Note:* You can simply transfer files, without translating them, from the SMB server to your Macintosh II. If you also want to translate the files, you will need to obtain translators that run with SMB File Transfer. See the Appendix for a list of available translators.

1. **Display the directory list containing the files you want to translate.**

   A directory list contains the names of files or folders contained on the disk or in the folder that is named in the directory title.

   If the files you wish to translate are not shown in the disk directory because they are nested in folders, then open folders until the files are shown in the directory list.

2. **Select the file or folder that you want to translate by clicking their name in the directory list.**

   Whenever you select one or more source files, Apple File Exchange displays, in the center of the AFE window, the total disk space selected. If you're selecting a large number of files, it may take Apple File Exchange several seconds to complete this calculation.

   You can select as many files or folders as you want. Use the first method that follows to select any collection of files and folders. Use the second method to select adjacent files and folders.

■ **Method 1: Hold down the Command key and click the files or folders you wish to select.**

   All files or folders that you click remain selected.

■ **Method 2: Hold down the Shift key and click the first and last files or folders.**

   Those two files or folders, and all of those between them in the window, are selected.

❖ *Note:* If you've selected the entire contents of a disk or folder, you can remove the selection in one of three simple ways:

   ■ Select a file in the other directory—if one is shown—in the AFE window. All files in the first directory are deselected.

   ■ Type any keyboard character except Return. All files except one are deselected.

■ Deselect a single item by clicking it while holding down the Command key.

Making sure the translators you want are active

Apple File Exchange finds and uses the appropriate translators to translate the files you've selected, as long as the translators are in the appropriate translation menu and are active.

1. **Open the translation menu you need by pointing to its title in the menu bar and clicking the mouse button.**

   Each translation menu lists the applicable translators from your Apple File Exchange application and folder. Most translator files contain translators for taking a translation in both directions.

   One menu item, "Other translations," is not actually a translator, but a command that you use to call upon translators not shown in the menu. See "Translating Files on Your Macintosh Disk" in the *Macintosh Utilities User's Guide.*

   If you've copied into the AFE folder other translator files capable of converting files created with MS-DOS applications programs into Macintosh documents, they are listed alphabetically.

2. **Make sure that the translators you need are active; if not, select them.**

   Translators are active—that is, Apple File Exchange can call upon them to translate files—when they are preceded with a check mark or, in the case of the "Default translation," which is always active, a diamond. See "Selecting Translators" in *Macintosh Utilities User's Guide* to learn how to activate and deactivate translators.

   Any translator name that is followed by ellipsis points (...) is governed by an options dialog box. For more information, see "Setting Options" in the *Macintosh Utilities User's Guide.*

Translating files

Now you are almost ready to translate your files. First, however, you should make sure the translated files will fit on the destination disk.

1. **Compare the space selected, as shown in the center of the AFE window, with the space available in the destination disk.**

   The space selected gives you only an approximation of the space that the translated files will take up, since translations frequently alter the length of files.

2. **If there is not enough space, you can make any of the following adjustments:**

   ■ deselect some of your source files

   ■ use another destination disk

   ■ select unneeded files on the destination disk and click Remove to delete them

3. **When the space available is sufficient, click the Translate button.**

   If Apple File Exchange finds two or more active translators—other than Text or Default—capable of translating any source file, it presents an alert box.

   It is possible that more than one translator will be able to translate a given file. If two or more translators try to translate a file, even if they are listed with distinct source applications, Apple File Exchange opens the alert box.

   If the alert box appears, select the translator you want and click Continue. To learn other ways you can select translators, see "Selecting Translators" in the *Macintosh Utilities User's Guide*.

   If the names of destination files or folders conflict with existing files or folders, or with each other, Apple File Exchange warns you and allows you to change the destination names. (See "Resolving Filename Conflicts" in the *Macintosh Utilities User's Guide*.)

When there are no conflicting translators or filenames, Apple File Exchange translates the selected files. As each file is translated, the progress window shows the source filename, its destination filename, and the translator. For each file, the horizontal bar reports what percentage of the current translation is complete. Entries at the bottom of the window tell how many files you selected and how many files have been translated. The progress window closes shortly after Apple File Exchange is finished translating files.

If you click Cancel or type Command-period, translation is halted. Files that have already been translated remain in the destination folder or on the disk.

Viewing translated files

Now you can view the files that you have translated.

❖ *Note:* Macintosh file names can be 31 characters long; MS-DOS file names can only be 8 characters, plus a period and a three-character "dot extension." When you transfer a Macintosh file, AFE translates the Macintosh file name into the MS-DOS format in the following manner:

■ If the first character of the file name is a period (.), it is replaced by an exclamation mark (!)

For example, Macintosh file name .DATA becomes MS-DOS file name !DATA

■ A space anywhere in the file name is replaced by an underscore (_)

For example, Macintosh file name NEW DATA becomes MD-DOS file name NEW_DATA

■ If any period is found in the file name, the file name before the period is truncated to 8 characters

The file name after the period is truncated to 3 characters

For example, Macintosh file name CALCULATION.REVIEW becomes MS-DOS file name CALCULAT.REV

■ If additional periods appear in the file name, they are converted to exclamation marks.

For example, Macintosh file name .MANAGEMENT.2.1.4 becomes MS-DOS file name !MANAGEM.2!1

- Any special (non-alpha-numeric) characters are mapped to the equivalent MS-DOS special characters

For example, £POUNDS & ¥YEN becomes MS-DOS file name £POUNDS_.&_¥

Troubleshooting
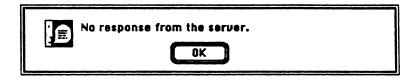
T HIS CHAPTER EXPLAINS ERROR MESSAGES AND HOW TO RESOLVE PROBLEMS
that may occur when you are running SMB File Transfer. For error messages
and solutions concerning AFE, see the *Macintosh Utilities User's Guide.*

Error messages

This section lists error messages that SMB File Transfer displays. File transfer over a network can lead to a variety of problems. Often, these problems are simply errors in entering the path name. If an error persists, see your network administrator.

❖ *Note:* Translators do not always respond to error messages if the server is down—for example, if the server is turned off, a Macintosh translator can still translate a file between the Macintosh and the server.

No response from the server

```
  ┌──────┐   No response from the server.
  │  ▤   │        ┌────────────┐
  └──────┘        │     OK     │
                  └────────────┘
```

The server may be disconnected; see your server administrator.

The server name entered may not be a valid server on the network. Check that the name is entered correctly.

A workstation name must be entered

```
┌─────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────┐ │
│ │  ▣  A workstation name must be entered.  │ │
│ │         ┌─────────────┐                  │ │
│ │         │     OK      │                  │ │
│ │         └─────────────┘                  │ │
│ └─────────────────────────────────────────┘ │
└─────────────────────────────────────────────┘
```

A workstation name must be entered, at least 1 character in length.

Workstation name is too long

```
┌─────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────┐ │
│ │  ▣  Workstation name is too long.        │ │
│ │         ┌─────────────┐                  │ │
│ │         │     OK      │                  │ │
│ │         └─────────────┘                  │ │
│ └─────────────────────────────────────────┘ │
└─────────────────────────────────────────────┘
```

A workstation name can be no longer than 14 characters.

Network path not found

```
┌─────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────┐ │
│ │  ▣  Network path not found.              │ │
│ │         ┌─────────────┐                  │ │
│ │         │     OK      │                  │ │
│ │         └─────────────┘                  │ │
│ └─────────────────────────────────────────┘ │
└─────────────────────────────────────────────┘
```
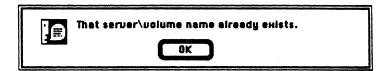
Make sure that you have entered the server\volume name correctly. Remove the entry from the list and add it again with a valid volume name. See your system administrator for a list of the shared volume names.

Even if you have already used the server name successfully, it could have been changed by the system administrator on the server end. See your system administrator.

The server\volume you attempted to mount cannot be reached. Make sure the server is up and running and on line.

That server\volume name already exists

```
┌─────────────────────────────────────────────┐
│  ┌──┐   That server\volume name already exists.  │
│  │▤ │                                          │
│  └──┘         ┌──────────────┐                 │
│               │      OK      │                 │
│               └──────────────┘                 │
└─────────────────────────────────────────────┘
```

The server\volume name you are adding already exists. Check the current list to verify that the name is there.

Since SMB servers are case insensitive, check to see if the name exists with a different combination of upper and lower cases.

Unable to open network connection

```
┌─────────────────────────────────────────────┐
│  ┌──┐    Unable to open network connection.   │
│  │▤ │                                          │
│  └──┘         ┌──────────────┐                 │
│               │      OK      │                 │
│               └──────────────┘                 │
└─────────────────────────────────────────────┘
```

The server\volume you are connecting to exists, but SMB File Transfer cannot establish a connection to it.

The problem may be that the number of current users on the network has exceeded the configured maximum. See your network administrator, or try again at another time.

Token ring interface driver could not be opened

| Token ring interface driver could not be opened. |
| OK |
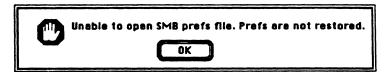
The token ring interface driver was not initialized on the card.

Be sure that the TokenTalk Prep, PC Session Prep, and Apple IPC files are all in your System Folder. You must restart your Macintosh after the file installation in order to complete the initialization.

Unable to open SMB Prefs file. Prefs are not restored

| Unable to open SMB prefs file. Prefs are not restored. |
| OK |

When you opened the SMB File Transfer DA, the SMB Prefs file could not be found in the System Folder. Any volume names that had previously been entered into the Prefs file cannot be accessed and are not shown in the DA window.

Move the SMB Prefs file into the System Folder, or install a new copy from the *SMB File Transfer Installation* disk.

Unable to open SMB Prefs file. Prefs will be lost

```
┌─────────────────────────────────────────────────────────┐
│  ╔═══╗                                                    │
│  ║ ✋ ║   Unable to open SMB prefs file. Prefs will be lost.│
│  ╚═══╝                                                    │
│              ┌──────────┐                                 │
│              │    OK    │                                 │
│              └──────────┘                                 │
└─────────────────────────────────────────────────────────┘
```

This message appears when you attempt to close the SMB File Transfer DA. Like the previous message, it indictates that the SMB Prefs file could not be found in the System Folder. Any changes you have made to the Prefs list cannot be saved.
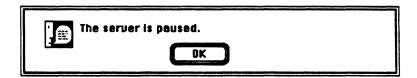
Move the SMB Prefs file into the System Folder, or install a new copy from the *SMB File Transfer Installation* disk.

Incorrect volume password

```
┌─────────────────────────────────────────────────────┐
│  ┌──┐                                                 │
│  │📄│  Incorrect volume password.                     │
│  └──┘        ┌─────────────┐                          │
│              │     OK      │                          │
│              └─────────────┘                          │
└─────────────────────────────────────────────────────┘
```

The volume you are trying to connect to is password-protected, and you have entered the password incorrectly (or not at all). Verify the password with your server administrator, and try again.

The server is paused

```
┌─────────────────────────────────────────────────────┐
│  ┌──┐                                                 │
│  │📄│  The server is paused.                          │
│  └──┘        ┌─────────────┐                          │
│              │     OK      │                          │
│              └─────────────┘                          │
└─────────────────────────────────────────────────────┘
```

The server you attempted to connect to is currently paused. See your server administrator regarding the server status.

\\Server\Volume
connection is lost

```
┌──────────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────────┐  │
│ │ ┌───┐                                         │  │
│ │ │ ▦ │   \\Server\uolume connection is lost.   │  │
│ │ └───┘                                         │  │
│ │            ┌─────────────┐                    │  │
│ │            │     OK      │                    │  │
│ │            └─────────────┘                    │  │
│ └─────────────────────────────────────────────┘  │
└──────────────────────────────────────────────────┘
```

The network link to this server volume has broken down or is paused. Check that the server is still running and that the volume is still shared. Check the network connections.

Note that the error message contains the actual name of the affected server\volume.

A maximum of six
connections is allowed

```
┌──────────────────────────────────────────────────┐
│ ┌─────────────────────────────────────────────┐  │
│ │ ┌───┐                                         │  │
│ │ │ ▦ │   A maximum of six connections is allowed. │ │
│ │ └───┘                                         │  │
│ │            ┌─────────────┐                    │  │
│ │            │     OK      │                    │  │
│ │            └─────────────┘                    │  │
│ └─────────────────────────────────────────────┘  │
└──────────────────────────────────────────────────┘
```

You may connect to a maximum of six volumes; you receive this message if you attempt to connect to a seventh.

The server\volume name is entered incorrectly

> **The server\volume name is entered incorrectly.**
>
> [**OK**]

You must enter a valid volume name, in addition to the server name.

The server\volume name must be entered in the correct format, which is:

\\server name\volume name

If the server \volume name is entered incorrectly, remove it from the Select an SMB Volume list, and add the correct name.

Appendix

T HIS APPENDIX CONTAINS A LIST OF TRANSLATORS WHICH ARE AVAILABLE

with MacLink Plus™/Translators by DataViz, Inc. These translators are recognized by the Apple File Exchange, and can be used with AFE to translate files between a Macintosh computer and an SMB server using SMB File Transfer.

■ **Table A-1** Translators available for Apple File Exchange

Source Application	Destination Application
Excel WKS	Comma values
Excel WKS	tab text
Microsoft Excel	Lotus 1-2-3
MacWrite	DCA-RFT
MacWrite	MultiMate
MacWrite	Word Perfect
MacWrite	WordStart
Microsoft Word	DCA-RFT
Microsoft Word	MultiMate
Microsoft Word	WordPerfect
Microsoft Word	WordSar
PageMaker Mac	PageMaker PC
Word "saved as MS-DOS"	Microsoft Word PC
dBase	for import to dBase Mac
dBase	for comma values
dBase	DIF
dBase	Excel WKS
dBase	SYLK "values"
dBase	tab text
dBase	tab values
DCA-RFT	MacWrite
DCA-RFT	Microsoft Word 3.0
Lotus "WKS"	comma values
Lotus "WKS"	DIF
Lotus "WKS"	SYLK "values"
Lotus "WKS"	tab text

■ **Table A-1** Translators available for Apple File Exchange (continued)

Source Application	Destination Application
Lotus "WKS"	tab values
Lotus 1-2-3	Excel
MultiMate	MacWrite
PageMaker PC	PageMaker Mac
Microsoft Word PC	import to Word 3.0
WordPerfect	MacWrite
WordPerfect	Word 3.0
WordStart	MacWrite
WordStart	Word 3.0

Appendix A   Apple Confidential

Glossary

AFE: See Apple File Exchange.

Apple File Exchange: An application that provides file transfer capability between the Macintosh HFS file system and MS-DOS format.

AppleTalk Network System: The system of network software and hardware used in various implementations of Apple's communications network. Compare **TokenTalk** and **EtherTalk**.

AppleShare file server: A combination of AppleShare File Server software, one or more hard disks, and a Macintosh that allows users to store and share documents, folders, and applications over the AppleTalk network system.

application: A computer program designed for a specific purpose, such as word processing, database management, graphics, or telecommunication.

Control Panel: A desk accessory that lets you change the network connection and other Macintosh features.

Chooser: A desk accessory that lets you activate and deactivate AppleTalk and lets you choose network services.

DA: See Desk accessory.

Desk accessory (DA): A small application that is available from the Apple menu regardless of the application that you are using.

Ethernet: A communications network widely used in the computer industry.

EtherTalk: An AppleTalk network connected by Ethernet cables. Compare **TokenTalk** and **LocalTalk**.

file: Any named, ordered collection of information stored on a disk. Documents, applications, and system files are all files.

file server: A device that allows users to store and share documents, folders, and applications over a network. See also **AppleShare file server**.

Finder: The standard application you use to open applications and documents and to manage disks, folders, and files on a Macintosh computer.

floppy disk: A flexible, easily removable plastic disk measuring 3.5 inches or 5.25 inches in diameter and having a hard-shell plastic jacket. Compare **hard disk**.

hard disk: A rigid, aluminum disk permanently sealed into a drive or cartridge. A hard disk can store very large amounts of information compared with a **floppy disk**.

IEEE 802.5: An industry standard for the logical data link level that corresponds to token ring, as defined by the Institute of Electrical and Electronic Engineers.

initialized disk: A disk that has been organized into tracks and sectors by the computer and is therefore ready to store information.

Installer: A utility program that lets you choose an Installation script for updating your system software or adding resources.

installation: The process of adding or changing information in the System Folder or System file of a disk. For example, the Installer on the *TokenTalk Installer* disk installs TokenTalk software and updates the system files.

LocalTalk: The AppleTalk network that is standard in Macintosh computers and connects the Macintosh to other computers and services in a local area network. Compare **TokenTalk** and **EtherTalk**.

locked disk: On a 3.5-inch **floppy disk**, there is a small tab; when this tab is slid toward the edge of the disk, it is in the open position and the disk cannot be copied. Closing the tab unlocks the disk.

MS-DOS: Abbreviation for Microsoft Disk Operating System. An operating system for a specific IBM or compatible computer.

NetBIOS: (Network Basic Input/Output System) a networking protocol, developed for IBM, that provides an interface for various levels of protocol to a host computer.

network: A collection of interconnected, individually controlled computers and peripheral devices, together with the hardware and software used to connect them. A network allows users to share peripheral devices such as printers and file servers, to exchange electronic mail, and so on.

operating system: A program that organizes the actions and the parts of the computer, and its peripheral devices.

peripheral device: A piece of hardware—such as a printer, modem, or disk drive—used in conjunction with a computer and under the computer's control.

preference list: A list, kept in the SMB Preferences file, of the volumes connected to an SMB server.

ProDOS: The Professional Disk Operating System. It's the operating system that controls most Apple II-family computers.

read-protected: The security status of a file that can modified by users other than the file's owner, but not written to. For example, a drop box permits new copies of an existing file to be written to the folder, but the folder cannot be opened and the files cannot be read.

server: A device that serves more than one user on a network. See also **file server.**

server message blocks: A set of data structures, designed to operate on an IBM PC Network, for connecting personal computers and resources.

Shift-click: To select additional items by holding down the Shift key while clicking.

SMB: See **server message blocks.**

slot: A narrow socket inside the computer where you can install cards. On a Macintosh II, slots are numbered from 1 to 6 starting at the power supply.

System file: A file that the computer uses to start up and to provide system-wide information.

token ring: A communications network widely used in the computer industry, compatible with the IEEE 802.5 standard.

TokenTalk: An AppleTalk network connected by token-ring wires or cables. Compare **LocalTalk** and **EtherTalk.**

TokenTalk NB: An Apple communications card that permits any Macintosh computer that supports the NuBus architecture to operate in a token ring environment.

translator: A program that changes the contents of a document created with an application in one operating system into a document that can be used with a similar application in another operating system.

troubleshoot: To locate and correct an error or the cause of a problem or malfunction in hardware or software.

volume: A hard disk or other disk whose drive is attached to a file server. A volume icon and a volume directory have the same name.

write-protected: The security status of a file that can read by users other than the file's owner, but not modified.

workstation: A computer that you can use to send or receive information on a network.