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XferIt 1.5
Macintosh FTP Client User's Guide
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Introduction

XferIt is a Macintosh application which allows users to transfer files to and from computers which support the FTP (file transfer protocol) in the TCP/IP protocol stack. Through the use of a Finder-like interface, XferIt brings the ease of use associated with the Macintosh to the usually unfriendly world of TCP/IP networking. Folders and files are represented by multiple windows, and simultaneous connections to multiple transfer hosts are permitted, all with a consistent interface. Vax/VMS, UNIX, VM/CMS, and Macintosh FTP servers are recognized. Several different transfer modes are supported, including text, binary, MacBinary, and BinHex. All of the above features, in addition to integrated drag and drop interoperability with the Finder, combine to integrate XferIt seamlessly into both the Macintosh and TCP/IP worlds. XferIt is ShareWare. See the end of this document for payment details.

System Requirements

- MacTCP 1.0 or later (available from APDA (Apple Programmer's and Developer's Association
- A TCP/IP network connection plugged into the Macintosh
- A Macintosh Plus/Classic/SE or later computer with at least 2MB of RAM
- System 6.0 or later.
- System 7.0 is optional, but if available, XferIt will take advantage of AppleEvents and Balloon Help

Software Installation

The XferIt package contains the XferIt file transfer application, as well as the XferDrop System Extension (INIT). The XferDrop extension only works with System 7.0 and 7.0.1, and provides drag and drop functionality from the Finder into XferIt windows.

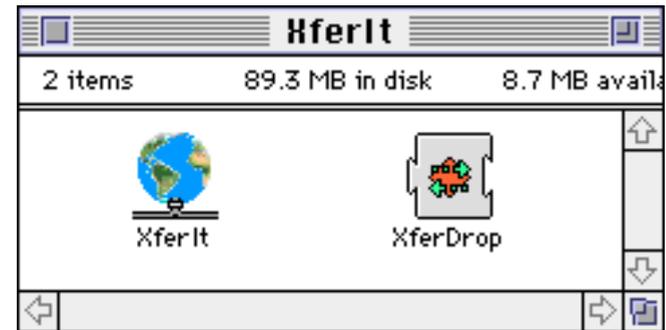


Figure 1 XferIt Distribution Files

To install the extension, you should drag it into the System Folder, and the Finder will put the file into the Extensions folder. The XferIt application can be placed anywhere on the hard drive. For MacTCP installation information, refer to the MacTCP Administrator's Guide which is included in the MacTCP package.

Typical Transfer Example

To quickly illustrate how XferIt can be used to send and receive files, this section takes a step by step look at the transfer process. More advanced features are described in later sections.

Launching XferIt

XferIt, like any other Macintosh application, is launched by double-clicking on its icon from the Finder.

Opening a Connection

The first step in the transfer process is the opening of a connection to an FTP server. This is usually done by selecting “New Connection...” from the “File” menu. In response to this menu command, the following dialog will be displayed:

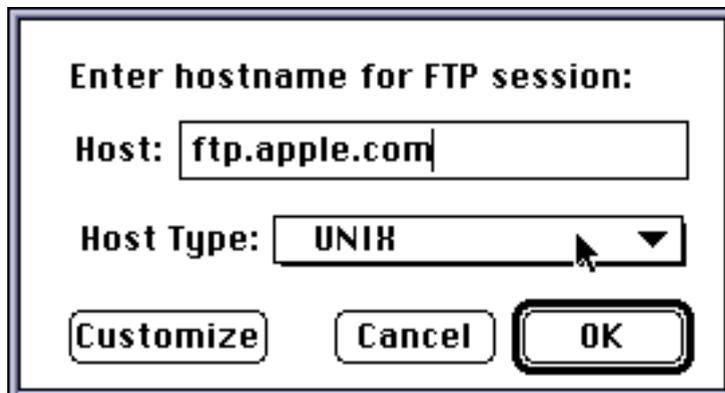


Figure 2 New Connection dialog

The domain name, or IP number, of the host to connect to should now be entered into the dialog. After entering the hostname, the pop-up menu labeled “Host Type” should be used to select the operating system which runs on the host being connected to. If you’re not sure of the operating system type, “Default” should be selected, although less information will be available during file browsing.

Once you dismiss the “New Connection” dialog by clicking “OK”, you will be prompted for your user name and password, as shown in the following dialog:



Figure 3 Authentication dialog

The authentication information in this dialog is used to confirm your identity on the host being accessed. If you are using a personal user name, your password will appear to be made up of bullet (•) characters. If, however, “anonymous” is used as the user name, XferIt will assume anonymous ftp mode, and the password field will not be blanked.

If you’re using a system with an additional account specifier, a dialog prompting you for your account name may be displayed at this point. If not, the initial directory of the host you’ve accessed will now be displayed, as described next.

Navigating Directory Windows

After a short delay, a scrollable list window should appear, with icons of files and folders located along the left side of the listing. This is a directory listing containing all of the files and folders located at the default log-in directory for that host:



Figure 4 Directory window

The title of the window indicates the name of the directory being browsed, and the icons to the left of the filenames indicate filetypes. Files are indicated by a document icon, directories are represented by a folder icon, and links are represented as a piece of chain. If you selected “Default” from the “New Connection...” dialog, you will see combination file/folder icons, indicating that XferIt doesn’t know if the item is a file or a folder.

To open sub-folders, simply click on the folder icon, and an additional directory window will be opened, slightly offset from the first, as shown in Figure 5.

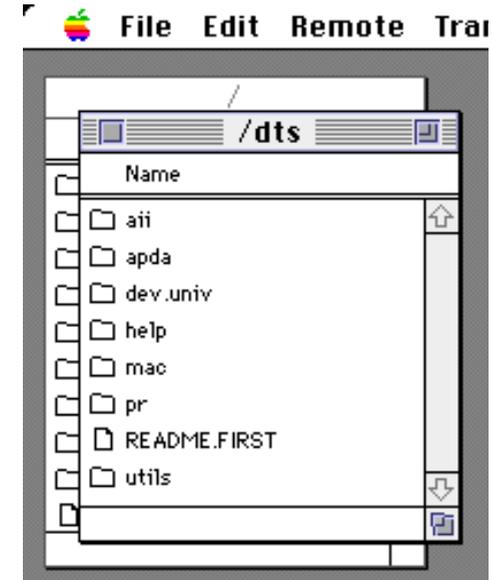


Figure 5 Multiple directory windows

Retrieving a File from the Remote Host

Before receiving any files, the transfer type should first be checked, to make sure it matches the file being transferred. To change transfer types, select a type from the “TransferType” menu. Current options are text, binary, MacBinary, BinHex, or Guess. Guessing mode uses filename extensions to pick a transfer type (“.hqx” translates to BinHex, etc...).

To get a file from the remote host, you can simply double-click the name of the file. A Standard File dialog will appear, prompting for a place to store the file, after which the file will begin transferring. XferIt is a fully background aware application, so if you’re running System 7 or MultiFinder, you can switch into another application while the file is transferred. A progress dialog, shown in Figure 6, will be displayed during the transfer.

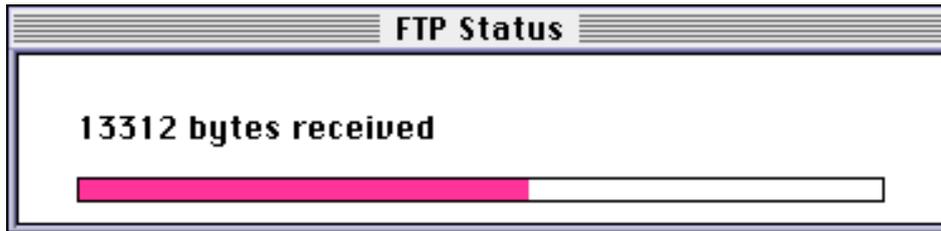


Figure 6 Progress dialog

To receive an entire directory of files, select the folder which you wish to receive, and select "Get Folder Tree" from the "Remote" menu. Each file and folder within the selected folder will be successively received.

If running System 7, the drag and drop functionality can also be used to get files from remote hosts. To use drag and drop, simply mouse down on a file (or folder) within an XferIt window, drag the mouse onto the content area of a visible Finder window, and release the mouse button. XferIt will retrieve the file, storing it inside the Finder window moused up in.

A final convenient aspect of receiving files is the view feature, which allows files to be viewed in scrolling text windows within XferIt. To view a file, select the file name by single-clicking and select the "View Selected File" from the "Remote" menu. The view window is limited to 32k of text, and is primarily meant for viewing short readme files or directory descriptions.

Sending Files to a Remote Host

Sending files works in much the same way as receiving. To send a file from the local computer to the remote host, first open a directory window, using the browsing methods described above, into which you wish to transfer the file. Once you've opened the target directory window, you should select the transfer type, as with receiving, by selecting the appropriate

transfer type from the "TransferType" menu.

To begin the data transfer, "Send File..." should then be selected from the "Remote" menu. After selecting the file to be sent via Standard File, the transfer will proceed in the same manner as receiving, with the progress dialog shown in Figure 6 being displayed.

Sending an entire folder is possible by using the "Send Folder Tree..." command. Each file and folder within the enclosing folder will be transferred to the remote host.

As with receiving, the System 7 only drag and drop feature is available to simplify the send process. The XferDrop System Extension must be installed in order for send dragging to be available. To use this feature, simply switch into the Finder's layer, mouse down on a file or folder, drag the icon into an XferIt window, and release the mouse button. The transfer will proceed as above.

Configuration Options

XferIt has several configurable options to ease integration into diverse computing environments and to streamline efficient use by experienced users.

Setting Preferences

XferIt has several global preferences that affect program operation. These settings are controlled from a central XferIt preferences dialog, which can be displayed by selecting the "Preferences..." item from the "File" menu. The dialog displayed

is shown in Figure 7, and an explanation of each of the dialog's fields follows.

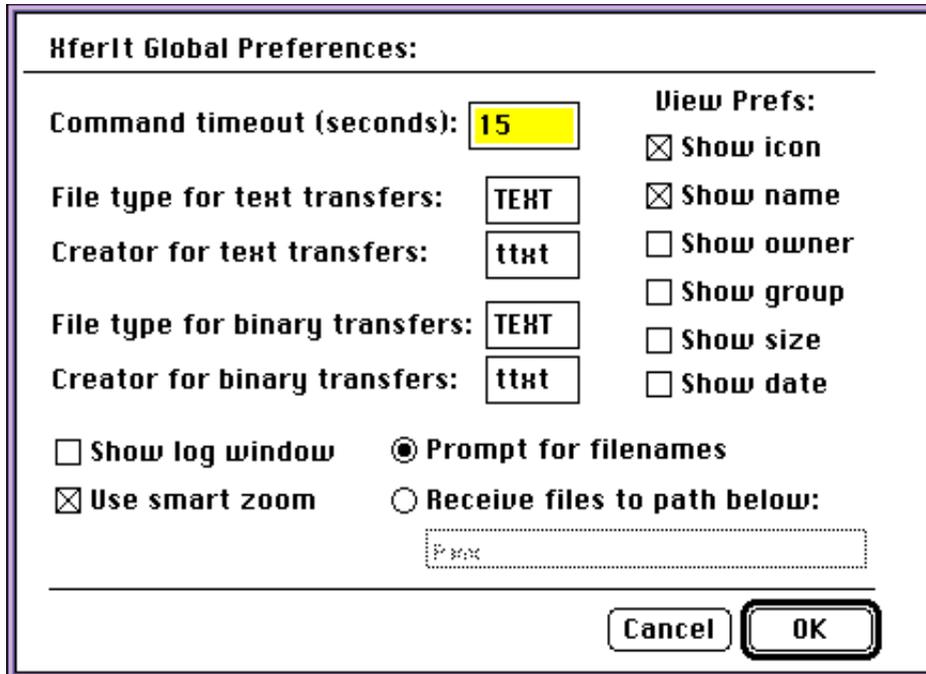


Figure 7 Preferences dialog

The command timeout setting is the maximum time in seconds that XferIt gives each individual FTP command to complete. For a typical configuration, 15 seconds is a normal value. For slower speed links, over SLIP, PPP, or Remote Access for example, you may wish to increase this value to prevent timeouts.

The type and creator for text transfers indicate the four letter filesystem signatures to be used when receiving a text file from a remote system.

Likewise, the type and creator for binary transfers are used when receiving a binary file from a remote system. Other transfer types (MacBinary and BinHex) have the file type and

creator to be used encapsulated within the transferred file.

If “Show Log Window” is checked, a scrollable window will be displayed which contains a constantly updated transcript of the FTP command stream between XferIt and remote hosts.

“Use Smart Zoom”, if checked, will automatically size windows to the minimum needed to fit all items without scrolling.

The “Show icon/name/owner/group/size/date” check boxes are used to configure the contents of directory browsing windows. For each checked box, that attribute will be shown in a column in each opened directory window.

Finally, the “Prompt for filenames” / “Receive to path” radio buttons are used to indicate whether or not files should be received without asking for a target filename. If the “Receive to path below” radio button is selected, a Standard File dialog will be displayed, and the location to store all subsequent received files should be selected.

Connection Alias Files

XferIt supports a connection aliasing feature, where the host, pathname, and other connection info for an XferIt directory window can be saved into a file which is openable from the Finder. This feature provides functionality akin to the “Make Alias...” feature in the System 7 Finder. Possible applications of this feature include placing XferIt alias files in the Apple Menu Items or Startup Items folder on a Macintosh with the XferIt software.

Creating an alias is as easy as under the Finder. To make an

alias to the frontmost directory window, select “Create Alias to this Host...” from the “Hosts” menu. You will be prompted for the username and password to save with the alias file, either of which may be left blank. Standard File is then displayed, and you can select a location on your local computer to store the alias file.

To open an alias file, either double-click it from the Finder, or select “Open Alias...” from the “Hosts” menu.

Preferred Hosts Menu

In addition to Finder-style aliasing, XferIt provides a frequently used hosts menu which can be used to store the names of FTP hosts which are accessed regularly. These hosts are displayed at the end of the “Hosts” menu, and can be selected to quickly initiate connections to preferred hosts. To add a host to this menu, select “Modify This Menu...” from the “Hosts” menu. The dialog shown in Figure 8 will be displayed.

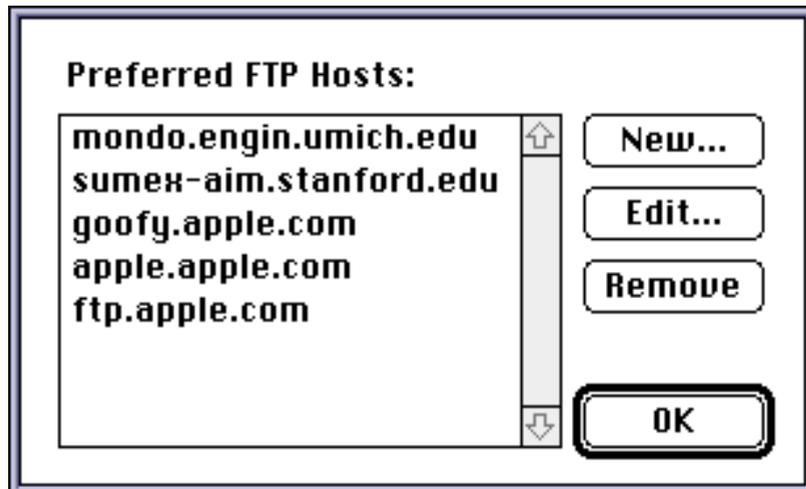


Figure 8 Preferred Hosts dialog

From this dialog, hosts can be added, removed, or edited.

Clicking “New...” will open a new host record for editing. Figure 9 shows the host editing dialog.

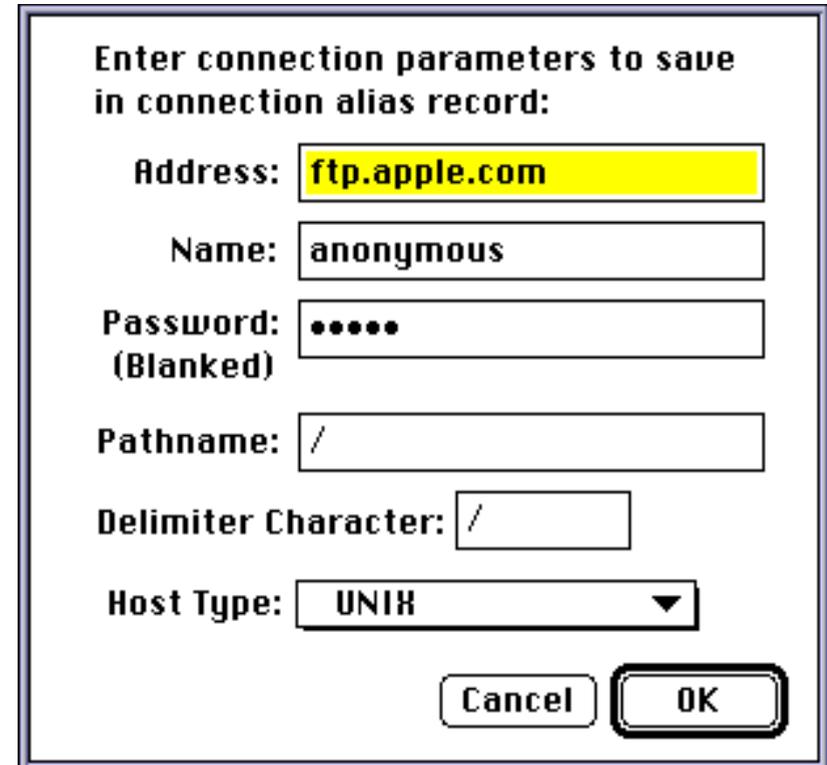


Figure 9 Preferred host editing dialog

The address field should contain the domain name of the host, the name and password fields specify the username and password to be used in connecting to this host, the pathname field specifies the directory mount point for the host, the delimiter character is used to delineate partial pathnames, and the host type is used to indicate the operating system of the host entry. Clicking OK will add the host record to the “Host” menu preferred list.

Other Remote Commands

In addition to the basic file transfer operations, several other commands are available once connected to an FTP server. All of these commands are available via menu items in the “Remote” menu. These commands are described in detail below.

“New Directory...”

Prompts for the name of a new directory to be created on the remote host.

“Change Directory...”

Opens a directory browsing window onto the remote pathname entered into a dialog.

“Change Directory to Parent”

Opens a directory browsing window onto the directory above the current window in the directory hierarchy.

“Verbose Directory Listing”

Opens a text viewing window containing a full listing of files and folders within a directory. The windows displayed in response to this command are for browsing purposes only.

“Get Named File...”

Prompts for the full pathname of a file to received from a remote connection. This is most often useful when receiving a file from a directory to which you do not have viewing permissions.

“Delete Selected File”

Permanently erases selected files from the remote host. If the option key is held during the selection of this command, the erase warning will be bypassed. This command is not undoable.

“Manually Enter FTP Command”

Allows the user to enter a command to be executed without parsing or translation on the remote FTP server. This is similar to the standard FTP command “quote”. An example of its use is shown in Figure 10.

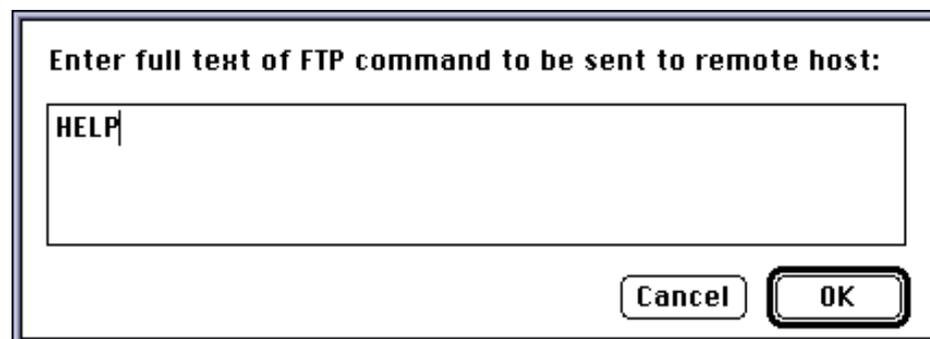


Figure 10 Manual FTP Command dialog

When the OK button is clicked, XferIt will send the command to the remote host, which in this case, produces the output shown in Figure 11.

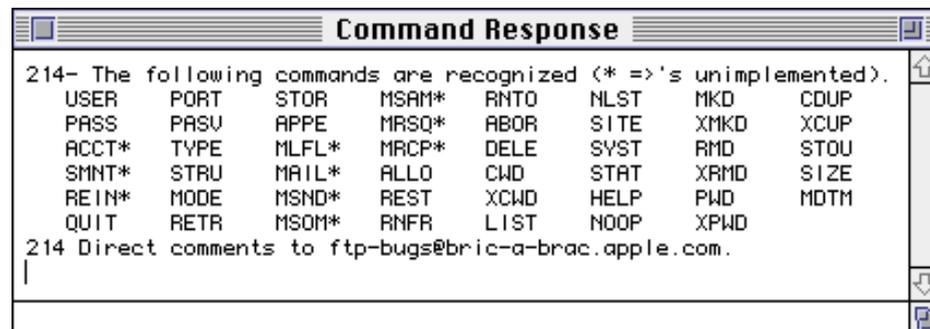


Figure 11 Manual FTP Command Response window

Advanced Features

XferIt provides several advanced features that, although not of

interest to the casual user, provide powerful functionality beyond that of most FTP clients.

Customizing Operating System Settings

The “New Connection...” dialog which allows the operating system for the connection to be specified also has a “Customize” button used to set individual aspects of the connection, overriding defaults from the operating system selection. This customization is currently limited to changing the directory delimiter character, and the dialog is shown in Figure 12.

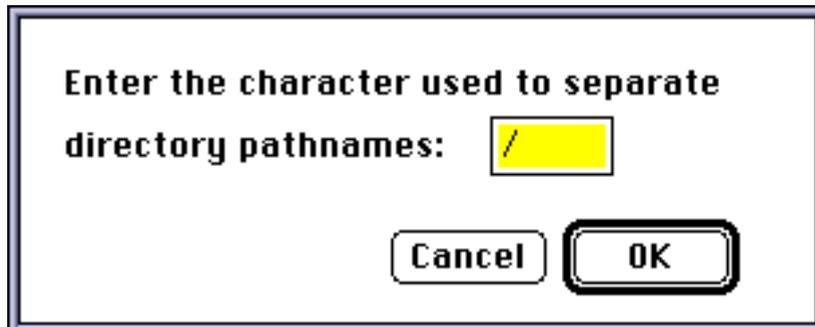


Figure 12 Customization dialog

The directory pathname separator is used to separate pathname parts. UNIX, for example, uses a “/” as the directory delimiter, while MS-DOS uses a “\” and the Macintosh uses a “.”. A pathname in UNIX may appear as “/files/reports/progress”, while it would be constructed as “files:reports:progress” on a Macintosh. As mentioned above, changing the operating system for a connection also sets the directory delimiter to the default for that system.

“Guess” Transfer Type

The “Guess” transfer type in XferIt is used to automatically set the transfer type depending on the extension of the file being transferred. The guess mode is useful particularly for receiving of directory trees. The default mappings are listed here:

Text:	.txt, .shar, .ps, .c, .p, .h, .cp, .conf, .abs, .ray
Binary:	.z, .tar, .rle, .tiff, .o, .gif, .pbm, .jpeg, .ras, .raw
MacBinary:	.bin, .sit, .pit, .sea, .cpt
BinHex:	.hqx

These mappings are located in ‘STR#’ resources 128-131 in the XferIt application. You can add additional mappings simply by adding additional strings to the four resources.

XferIt Scripting Language

XferIt has built-in scripting capability, which permits automated unattended file transfers. Transfer scripts are stored as text files and can be created by any text editor. Scripts are executed by selecting “Run FTP Script...” from the “File” menu, and text files can be converted into double-clickable scripts by using the “Convert Text File to Script” command also in the “File” menu. The XferIt scripting language is similar to the standard syntax used in UNIX-based FTP clients, and is described in detail below.

The scripting commands available are listed here. Required parameters are delimited by <param> and optional parameters by {param}. Where one setting must be picked from a list, the list is delimited by “|”. In the current scripting environment, no feedback is provided, aside from files received. If an error is encountered, the script execution is stopped.

open <hostname> <username> <password>

Opens a connection to the host specified by hostname, using the username and password parameters for authentication.

close

Closes a connection opened by the “open” command

quit

Quits the XferIt application

type text | binary | macbinary | binhex

Changes the transfer type for files received or sent during the execution of the script.

cd <remote-directory>

Changes the remote directory to the directory name specified by the remote-directory parameter. The remote directory name may be enclosed in double quotes.

cdup

Changes the remote directory to the parent of the currently selected directory.

lcd <local-directory>

Specifies a full pathname used as the default target for files received from remote hosts. The directory name may be enclosed in double-quotes.

get <remote-name> {local-name}

Retrieves a file from a remote host and stores the file on the local computer, optionally with the name specified in the local name parameter. Either parameter may be quoted to include spaces in the filenames.

put <local-name> {remote-name}

Sends a file from the local computer to the remote computer. This file is analogous in operation to “get” above.

delete <remote-name>

Erases a file on the remote host.

mkdir <remote-name>

Creates a new directory on the remote host.

asklocaldir

Prompts the user (using Standard File) for the destination directory to be used to receive files.

quote <remote-command>

Sends an untranslated command to the remote FTP server.

XferIt Example Script

A sample script illustrating a simple session is shown below. Note that lines beginning with semicolons are treated as comments.

```
; ftp script to get a list of the latest  
; files uploaded to Stanford's Mac archive  
;  
; XferIt is ©1991,1992 by Steven Falkenburg  
;
```

```
open sumex-aim.stanford.edu anonymous guest  
cd /info-mac/help  
asklocaldir  
type text  
get recent-files.txt  
close
```

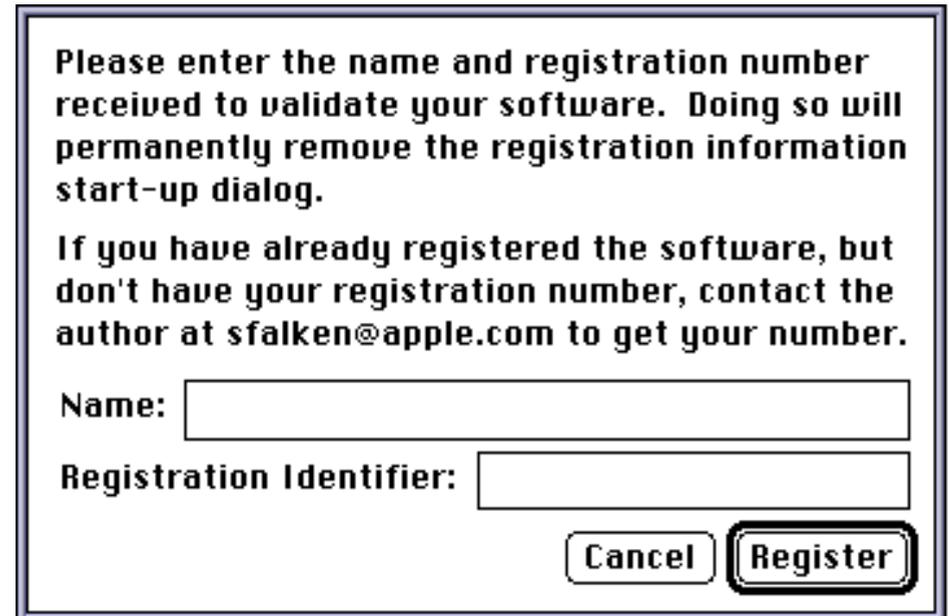
XferIt Registration Information

XferIt is a ShareWare product. This being the case, you have an opportunity to “test drive” XferIt for a 30 day period before deciding whether to keep using it and pay the license fee or discontinue use.

Unlicensed re-distribution by end-user sites, or the inclusion of the software with a commercial product without express permission of the author is prohibited. Re-distribution on public on-line services or by anonymous ftp is permitted.

I've included a license agreement below that should be sent with ShareWare payment to ensure proper tracking of your ShareWare license. Upon receipt of payment, I will respond by sending your registration number and registered user name to you, along with your ShareWare license.

Once you have your certified registration number, you can proceed to register your software by entering your approved organization name (included with the registration number) and your registration number into the registration dialog. This dialog is displayed in response to clicking the “Register” button from the unregistered copy splash screen. If you are using a copy of the software registered to another party, you must first unregister the software before re-registering in your name. To do this, select “About XferIt...” from the Apple menu, and click the “ShareWare Info” button followed by the “Un-Register” button. This will permit you to re-register the software in your name. The registration dialog appears as shown here.



Please enter the name and registration number received to validate your software. Doing so will permanently remove the registration information start-up dialog.

If you have already registered the software, but don't have your registration number, contact the author at sfalken@apple.com to get your number.

Name:

Registration Identifier:

Figure 13 Software registration dialog

XferIt License Agreement

This license allows the licensee to use XferIt in any way they see fit, except for resale of any kind. This license does not permit the licensee to sublicense the software to others, and forbids the licensee from selling the software to another party.

Unlicensed re-distribution by end-user sites, or the inclusion of the software with a commercial product without express permission of the author is prohibited. Re-distribution on public on-line services or by anonymous ftp is permitted.

All licensees will receive free upgrades to XferIt, and will be notified by electronic mail when a major revision is released.

Please mark the license you wish to purchase. All amounts are in U.S. dollars

Single User License (\$10)

A single-user license allows one single computer to use XferIt, and does not automatically license other users in a workgroup to use XferIt.

Workgroup License (\$45)

A Workgroup license allows all computers in a single department or workgroup to use XferIt. It does not license any other users outside of the workgroup to use XferIt. This license covers from 2 to 30 computers. These computers must be within a one mile radius.

Location-Wide Site License (\$175)

A location-wide site license allows all computers of a single company or other organization within a 15-mile radius to use XferIt. This license is generally meant for a single university campus or a company installation. This license is valid for between 30 and 500 computers. For additional computers at a site, another license may be necessary.

XferIt may be used for a trial period of 30 days, after which it should be registered.

Checks should be made payable to:

Steven Falkenburg
10270 Parkwood Drive, Apt #3
Cupertino, CA 95014

For questions or problems, please send mail to:

sfalken@apple.com

Please enter your contact information here to receive your registration number and information about software updates:

Organization Name: _____ (as you want
it _____ in about box)

Contact Name (if different): _____

Address: _____

City/State/Zip: _____

Phone: _____

E-Mail: _____

Version Registered: _____

Received XferIt From: _____

Upon sending of this license agreement with payment, you should receive your registration information within two weeks.