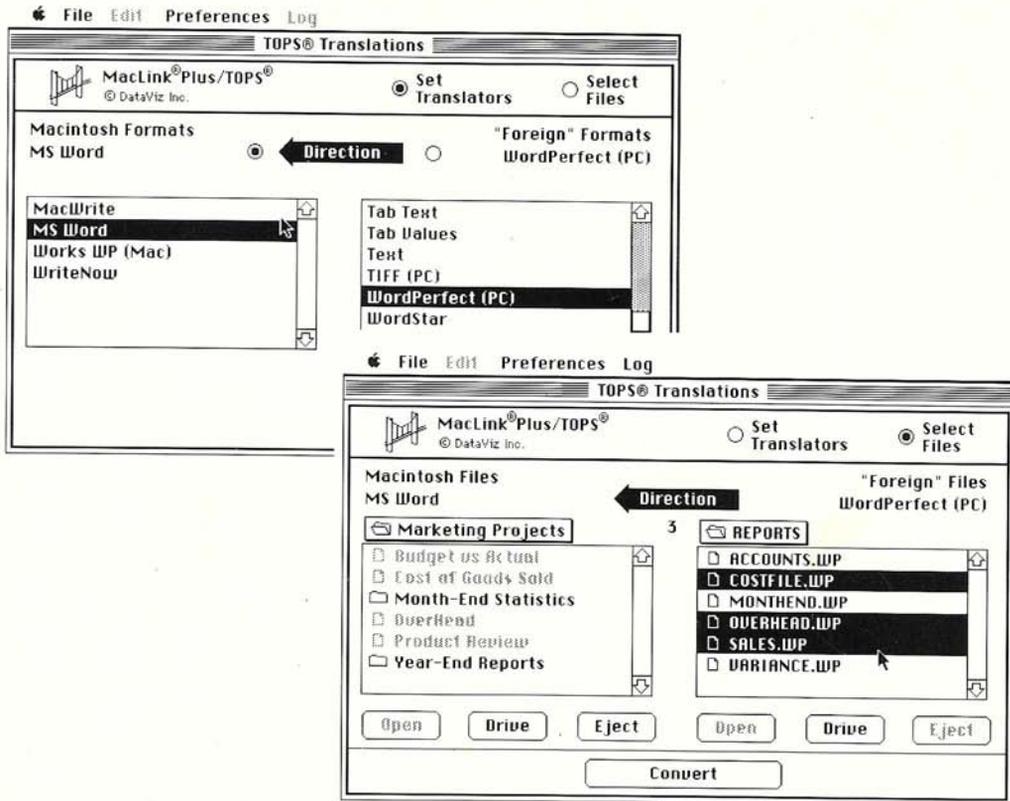


MAC *Plus!* TOPS



DATA*VIZ*TM
THE DATABRIDGE SPECIALISTS



MacLink[®] Plus/TOPS[®]

file translation software for TOPS[®]

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Trumbull, Connecticut U.S.A.

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Expert's Quick Start ...

To Use MacLink® Plus/TOPS® Software with TOPS® to a PC ...

❑ Publish and Mount a TOPS volume (follow the TOPS Manual)

- ① **Publish** a TOPS directory on the PC
- ② **Mount** the volume on the Macintosh



*TOPS must be installed in your Macintosh for MacLinkPlus/TOPS to operate.
If TOPS has not been installed, see the installation instructions in your TOPS Manual.*

❑ On the Macintosh ...

- ① Double-Click



TOPS Translations

to Start

*Click the Direction Arrow or buttons
if you want to change direction*

- ② Click **Clear Selection** to see all Translators

- ③ Scroll and Select in each File Window

*Remember! Macintosh Window on the Left,
TOPS MS-DOS Window on the Right*

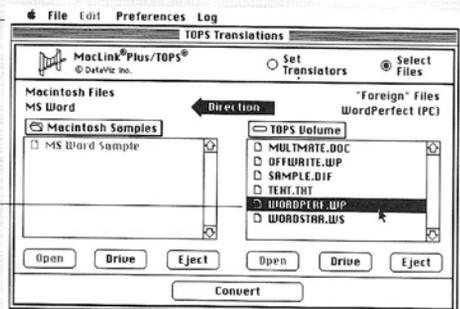
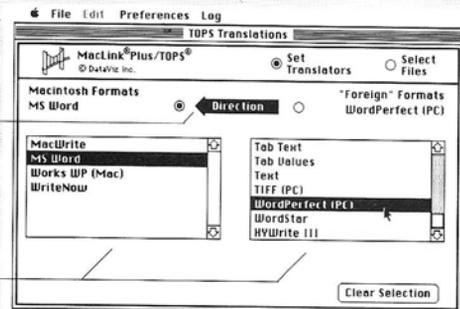
- ④ Click **Select Files** for this Window

- ⑤ Click **Drive** button under "Foreign" Files Window to access MS-DOS files over TOPS

- ⑥ Select a file in the "From" Window

- ⑦ Click **Drive** button under Macintosh Files Window to select a destination

- ⑧ Click **Convert** to do it



Macintosh
Files

MS-DOS
Files

About MacLinkPlus/TOPS

MacLink®Plus/TOPS® is a specially adapted version of the MacLink®Plus **file translation** software for the Apple Macintosh. It is designed to work with TOPS®, the MS-DOS and Macintosh network provided by Sun Microsystems, Inc., for the purpose of **file sharing**.

- File translation** is handled by MacLinkPlus/TOPS, which provides automatic conversion of data files from the format used by one application or software package to that of another.
- File sharing** is handled by TOPS which allows a Macintosh computer to link directly to an MS-DOS computer.

Together, these capabilities allow you to exchange word processing documents, spreadsheets, data bases, and other files between Macintosh and MS-DOS computers.

MacLinkPlus/TOPS has all of the file translation capabilities of the MacLinkPlus family, but is designed to operate with TOPS and can only work when TOPS is installed on your Macintosh.

MacLinkPlus/TOPS has been designed to operate with most Macintosh applications. It has been tested using Excel, Lotus, Multiplan, MultiMate, MacWrite, Microsoft Word, PageMaker, WordPerfect, and others. For a complete list of compatible applications, please refer to Appendix A.

MacLinkPlus is a family of translation products which allow file transfer and translation via cable, modem, or PBX in several environments. Several MacLinkPlus models deal with IBM PCs and compatibles, the NeXT computer, Sun Workstations, Wang VS and OIS systems, Wang PCs, NBI word processors, remote Macintoshes, and various other devices.

MacLinkPlus/TOPS translation software upgrades and other support are provided by DataViz, Inc., for registered users. Please be sure to complete the registration card included with the MacLinkPlus/TOPS diskette and mail it to DataViz.

Upgrades and Support

About This Manual

This guide contains: a set of **Quick Start** instructions for experts, the **MacLinkPlus/TOPS User's Guide**, and various **Reference Materials**.

Expert's Quick Start - Provides the experienced user with a summary of how to use *MacLinkPlus/TOPS*.

Chapter 1

Using MacLinkPlus/TOPS - Includes detailed step-by-step instructions that show you how to translate files. You will learn how to select the *translators* (the applications you will be going to and from), select the *direction* you wish to translate to (Macintosh to MS-DOS or MS-DOS to Macintosh), and save these settings so you can use them again.

Chapter 2

Reference Guide - Covers all of the options of menus, commands, and windows, in detail.

Chapter 3

Translator Characteristics - Describes the operation of the translators and how to choose the proper translator for a particular situation

Appendix A

File Formats - Provides a definition of all file formats available in *MacLinkPlus/TOPS*.

Appendix B

List of Translators - Provides a complete list of all translation paths available to you when you use *MacLinkPlus/TOPS*.

Appendix C

Difficulties, What to Do? - Provides answers to common problems encountered while using *MacLinkPlus/TOPS*.

Appendix D

Error Messages and Codes - Contains a list of error messages encountered while using *MacLinkPlus/TOPS* with specific translators.

Index

Information in this *MacLinkPlus/TOPS* Guide is indexed at the end of the manual.

What Next?

If you are familiar with TOPS, the Macintosh and Macintosh applications, refer to Expert's Quick Start. If you would like a more detailed explanation of how to use *MacLinkPlus/TOPS*, start with Chapter 1, **Using MacLinkPlus/TOPS**.

Chapter 1:

Using MacLink*Plus*/*TOPS*

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Introduction to **MacLinkPlus/TOPS**

MacLinkPlus/TOPS allows you to translate or convert files from one file format to another. Specifically, it is used to convert MS-DOS files to Macintosh or Macintosh files to MS-DOS. **MacLinkPlus/TOPS** is a conversion utility used with **TOPS** only.

TOPS allows MS-DOS files to appear on your Macintosh desktop as if they were Macintosh documents. When you create a spreadsheet in Lotus1-2-3, save it to an MS-DOS disk, access the file over TOPS, and open it on the Macintosh in Microsoft Excel, you are *sharing* files between MS-DOS and Macintosh environments with compatible applications. Sometimes, however, the file formats between MS-DOS files and Macintosh files are not compatible. You need to *translate* the file first before you can *share* it.

This chapter will show you how. You may follow all the steps and read the detailed discussion for each step, or if you prefer, just follow the items printed in boldface type.

What's Needed for MacLinkPlus/TOPS

Before you begin, you should make sure you have all the hardware and software you need to use MacLinkPlus/TOPS and TOPS.

First, you will need the **MacLinkPlus/TOPS Software package** that contains this manual and a 3.5-inch Macintosh disk. This disk contains:

- the MacLinkPlus/TOPS software,
- a TOPS Translations settings document (translators may be pre-set and ready to be used with TOPS), and
- some sample files for you to practice with.

To use MacLinkPlus/TOPS Software on the Macintosh, you must have:

- a Macintosh Plus, SE, II with two disk drives, or
- a Macintosh Plus, SE, II with one drive and a hard disk or Server, and
- TOPS installed on your Macintosh.

Note: *MacLinkPlus/TOPS must have the TOPS network installed on the Macintosh to operate.*

MacLinkPlus/TOPS is a version of MacLinkPlus that expects to run with TOPS and can not operate unless TOPS is installed on your Macintosh.

See your TOPS Manual for proper installation and operation of your TOPS network.

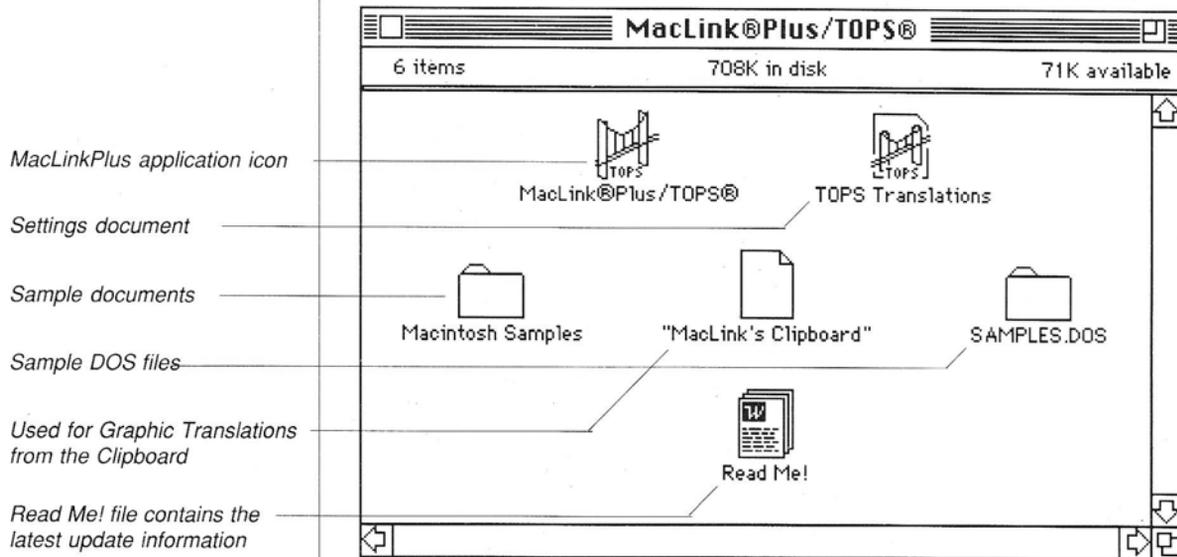
MacLinkPlus/TOPS on the Macintosh

This section explains how to use MacLinkPlus/TOPS to translate files from MS-DOS format to Macintosh. The following topics are covered in this section:

- Starting MacLinkPlus/TOPS
- Setting the Translator
- Selecting and Translating a File

Insert and Open the MacLinkPlus/TOPS Software Disk

Here's what you'll see when you open the MacLinkPlus/TOPS disk.



The disk contains the MacLinkPlus/TOPS application. It also contains a TOPS Translations settings document especially tailored for use with TOPS, and Samples folders containing Macintosh and MS-DOS sample files and documents for you to practice with.

Make a Backup

Copy MacLinkPlus/TOPS to the Hard Disk or Backup Disk

The MacLinkPlus/TOPS disk is double density (800K). It contains MacLinkPlus/TOPS and TOPS Translations folders and files. It should be copied to your own floppy disk or hard disk and then stored in a safe place. The original disk can be used to re-load your working copy. Also, the original disk is required for MacLinkPlus upgrades.

If your Macintosh has a hard disk you should copy all of the MacLinkPlus/TOPS files to it. Just drag the icons from the MacLinkPlus/TOPS disk to the hard disk icon or to a TOPS Translation Software folder on your hard disk.

If you use floppy disks, copy the MacLinkPlus/TOPS files to your own formatted diskette by dragging all of the MacLinkPlus/TOPS icons to it.

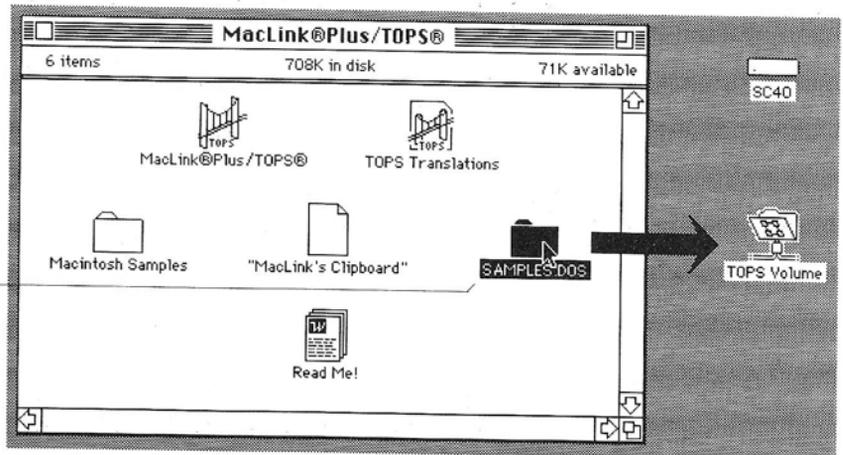
Sample Files

Copy SAMPLES.DOS to an MS-DOS Disk over TOPS

To copy the folder of MS-DOS sample files to an MS-DOS disk over TOPS, just do the following:

1. On the PC: **Publish** a DOS directory to TOPS. In this example, give it an alias name of 'TOPS Volume.'
2. On the Macintosh: **Mount** the volume.
3. Drag the SAMPLES.DOS folder to the TOPS Volume icon.

Drag the Samples files to a TOPS Volumn



Starting MacLinkPlus/TOPS

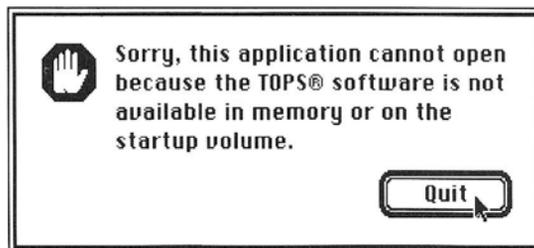
❑ Open the “TOPS Translations” Settings Document

Opening the TOPS Translations settings document opens the MacLinkPlus/TOPS application. It initializes the translator settings (MultiMate, MacWrite, etc.) to the conditions that existed when the document was last saved. The MacLinkPlus/TOPS disk contains one settings document, “TOPS Translations.” You can add your own later.

The **TOPS Translations** document is set to start MacLinkPlus/TOPS and place you at the Set Translators menu with no translators set. You can change the translator settings and save your own settings later.

Regardless of how you start MacLinkPlus/TOPS, from its icon or from a settings document, once it has been started, any or all of the settings can be reviewed and changed.

Note: If TOPS is not operating properly on your system, MacLinkPlus/TOPS will fail to start and will send the following message.

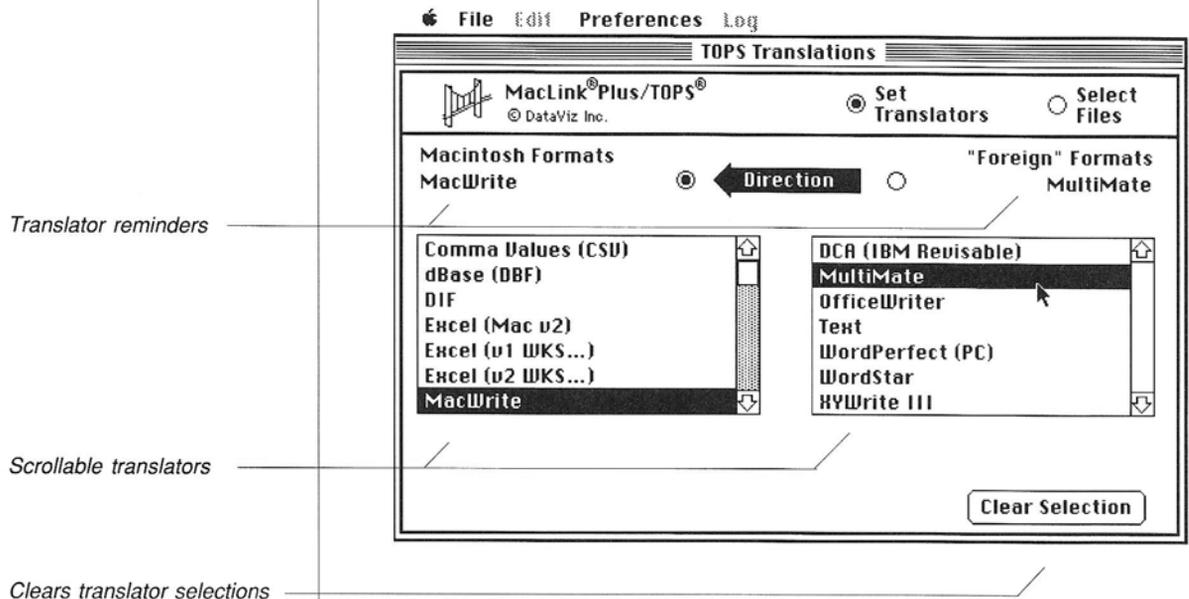


If this happens, see your TOPS Manual for proper installation and operation of your TOPS network.

Setting the Translators

MacLinkPlus/TOPS will open on the **Set Translators** window if translators have not been set. If you start from a settings document such as TOPS Translations, which already has a translator pair set, MacLinkPlus/TOPS will open on the **Select Files** window.

This is the Set Translators window which allows you to review and change the file translation settings and the translation direction. This screen may be viewed and changed at any time during a MacLinkPlus/TOPS session by clicking the Set Translators button.



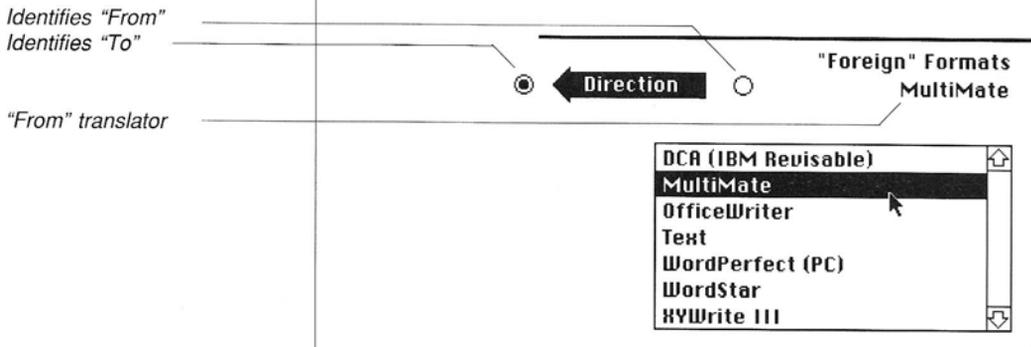
The two scrollable windows allow you to review and change the file translation settings. The arrow controls the direction.

The left window is for Macintosh file formats and the right window is for MS-DOS file formats.

Before any selection is made, the scrollable windows show the applications or file formats that are supported between the Macintosh and the "Foreign" files. If a Settings Document (either TOPS Translations or one you have created and saved yourself) has been opened, the selections reflect the ones that were in effect when the document was saved.

When an application is selected in one window, the choices in the other window are reduced to only those that are supported for the selected application and direction. Try it! Click the Clear Selection button, then select MacWrite in the left window. Notice there are now fewer choices in the right window.

In general, an application selection for the "From" window tells MacLinkPlus/TOPS how to read and interpret the file that is being translated. The application selection for the "To" window indicates the format in which the file is to be written.



Proper selection of the "From" translator is critical since it indicates to MacLinkPlus/TOPS the kind of formatting and control codes to expect in the file.

For our example, we will translate a MultiMate (PC) word processing document into the MacWrite (Macintosh) format, so we can use it in MacWrite, Microsoft Word, PageMaker or any other product that accepts the MacWrite format. By selecting MultiMate as the "From" format, we are telling MacLinkPlus/TOPS to read the file as a MultiMate file. Thus, it will look for all of the MultiMate formatting codes and it will convert them along with the text into the format used by MacWrite.

Set the Translator Direction

The direction arrow indicates the direction for file translations. If the arrow is pointing from the “Foreign” window (right side) to the Macintosh window (left side) like this,



the file translations are from the “Foreign” format to the selected Macintosh format. Of course, the translation direction is reversed if the arrow is pointing to the “Foreign” side from the Macintosh side of the window, like this:



To change direction, click on the arrow, or on the button at the tail end of the arrow. Try it, but reset the translate direction from “Foreign” to *Macintosh* before going on.

Clear the Translator Selection

The Clear Selection button clears the selection from each of the scrollable windows and returns all of the available choices to both windows.

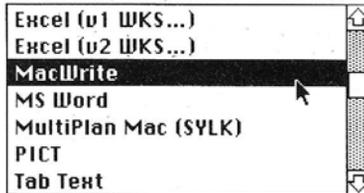
Clear Selection

The settings document you originally opened had settings choices of MultiMate for the “Foreign” Files and MacWrite for the Macintosh. To clear these selections, and see all available choices, click the Clear Selection button and use the scroll bars for each window.

Note: The MacLinkPlus/TOPS window 'Select Files' for selecting and translating files remains inaccessible until a Translator Selection has been made in both Macintosh and “Foreign” sides of the Set Translators window.

Select the MacWrite Format for the Macintosh Window

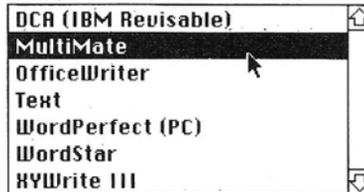
Macintosh Formats
MacWrite



For our example, we want to work in MacWrite format on the Macintosh, select MacWrite in the Macintosh window (left side). Take note that the right window immediately reduces down to the "Foreign" choices that MacWrite can accept.

Select MultiMate Format for the "Foreign" File Window

"Foreign" Formats
MultiMate



Click the MultiMate selection in the "Foreign" application window. This tells MacLinkPlus to expect a file in the MultiMate format. As such, it will read the file and look for MultiMate format codes.

Saving the Settings

- Pull Down “Save Settings As...” on the File Menu



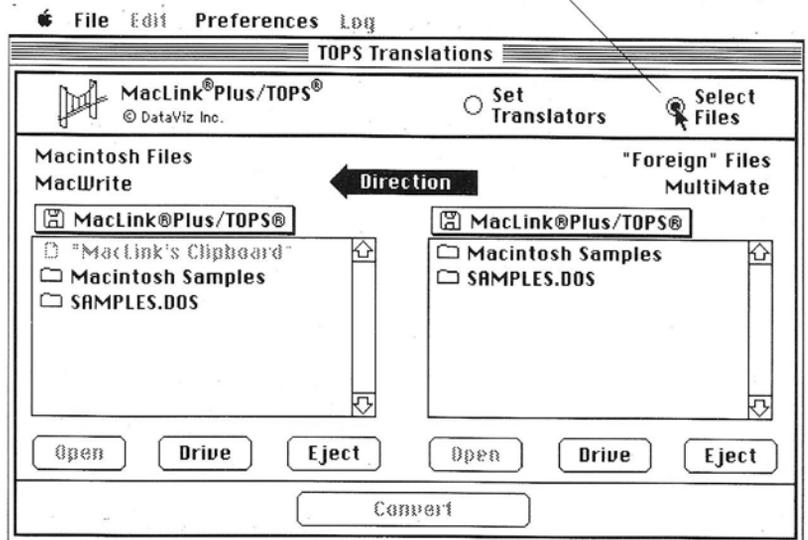
This is a good time to name and save your own Settings Document. To do so, pull down the File Menu and use “Save Settings As...”

Remember, most of the prior steps are required only the first time you use MacLinkPlus/TOPS.

Selecting a File

Select Files button

- Click the Select Files Button

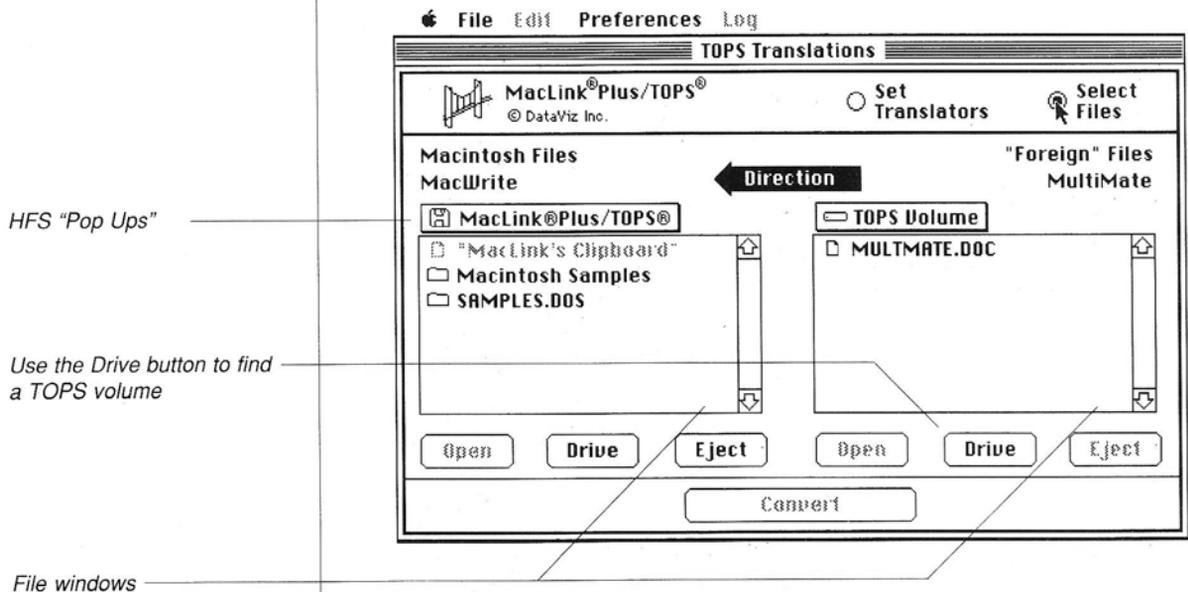


Note: The Select Files button becomes active after file formats have been selected for both sides of the Set Translators window. If it is not active, make sure a selection is made in both sides of the Set Translators window.

Select Files Window

The Select Files window provides the two familiar file windows, one for Macintosh files, and one for "Foreign" files. These windows can be controlled using the buttons and scroll bars in the same manner as any Macintosh file window.

Use the right **Drive** button to find a volume which has been published to the TOPS network, shown here as "TOPS Volume."



The HFS "Pop Ups" allow you to select the disk, folder or directory without having to click the drive button. If you are operating on a Macintosh with HFS (Hierarchical File System), as most Macintoshes do, you will see folders as shown above. You can use the HFS "Pop Up" at the top of the window to view and change the position in the hierarchy of folders and files.

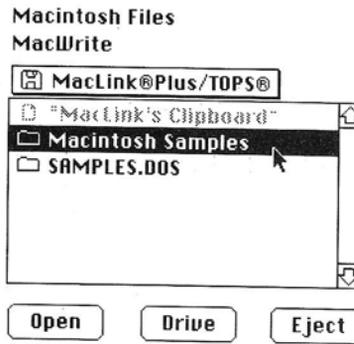
On the "Foreign" Files side, the HFS "Pop Up" shows your position in the disk directory.

If your Macintosh does not have HFS, you will only see the files that are in the folders and you can skip this step.

The Macintosh Files Window

- Open the Macintosh Samples Folder in the Macintosh Files Window

HFS "Pop-Up"



Opens selected folder

For next drive or volume

Ejects disk

The window for pointing to the Macintosh files operates in the same way as any standard file window. The Open, Drive and Eject buttons are used to control the Macintosh folders, disks and volumes. To open a folder or disk, simply select one you wish to open, then either click on it or select the **Open** button.

The "Pop Up" at the top of the window is used under HFS to review and change the position in the hierarchy of files.

The "Foreign" Files Window

The **Drive** button will find any mounted volume

To Translate a File over TOPS:

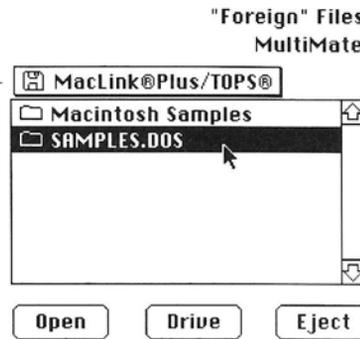
Use the **Drive** button to find a mounted TOPS volume.



To Translate a File that is already on your Macintosh:

The file window for selecting the "Foreign" files operates in the same way as the window for the Macintosh files. Select the SAMPLES.DOS folder from your MacLinkPlus/TOPS release disk.

HFS "Pop Up"



Opens selected folder

For next drive or volume

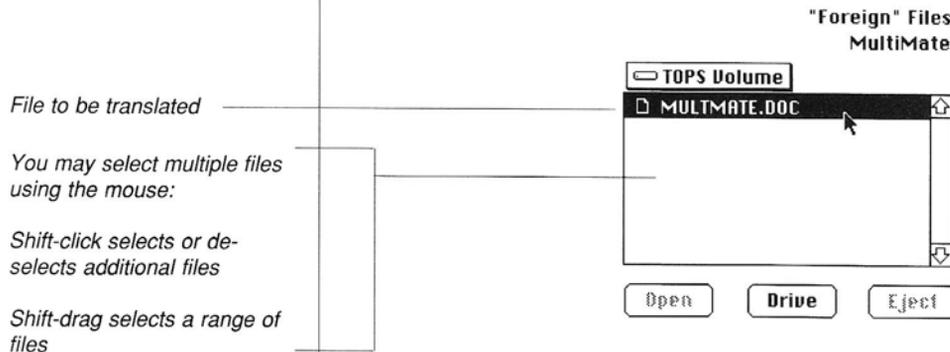
Ejects disk

The "Pop Up" at the top of the window shows your position in the disk directory. If you are at the top of the hierarchy, it will show a disk icon and volume label, if any. If you are viewing the contents of a folder, it will show a folder icon and name.

Selecting a File

Select the MULTIMATE.DOC (MultiMate) File

Once positioned in the proper volume or subdirectory, a number of files will be shown. Selecting the MultiMate MULTIMATE.DOC file will highlight the file name and make the **Convert** button available.



The sample files which are provided in the SAMPLES.DOS subdirectory are from various MS-DOS applications. They contain all their original MS-DOS file contents and formats and can be used as samples either via the TOPS network or accessed directly on the Macintosh.

***Note:** MS-DOS files are not as closely tied to an application as Macintosh files are. In general, you must know which application a file was created in before you attempt to translate it. Some file types are relatively safe because the application automatically creates the filename extension (MultiMate/DOC, dBase/DBF, Lotus 1-2-3/WKS, Symphony/WRK, Word/DOC, etc.). But, this is not totally safe since anyone can create or change a filename extension.*

Translating a File

- Click the Convert Button



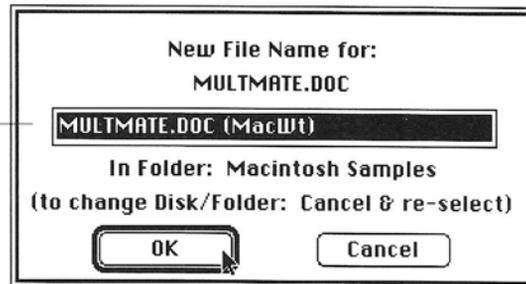
Convert

This initiates the file translation and opens the New File Name dialog box, shown below.

- Review the New File Name and OK the Translation

MacLinkPlus/TOPS suggests a file name and gives you the opportunity to accept it, change it or cancel the conversion.

Suggested name



When files are being converted, the suggested name is the original filename followed by the new format in parenthesis.

When you accept the "MULTIMATE.DOC (MacWt)" suggestion by clicking OK or by pressing the Return key, MacLinkPlus/TOPS will begin translating the file.

Wait While MacLinkPlus/TOPS Translates the File

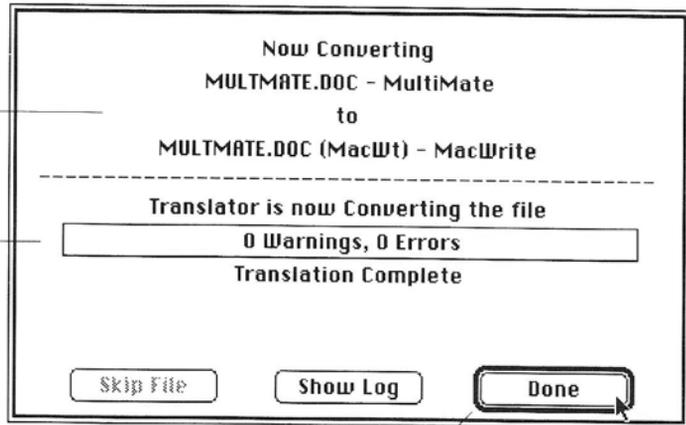
MacLinkPlus/TOPS provides continuous status during the translation. If a problem should occur, an appropriate error message is displayed. Upon completion, a completion message is displayed.

To **Cancel** during the translation, use the Cancel button, or use the Command (⌘) key simultaneously with the Period key as in other applications.

Reminders for file and translator selections

Status during and after translation

Cancel button during translation, Done button upon completion



Click Done to Complete the Translation

Click the **Done** button to complete the file translation and return to the Select Files window.

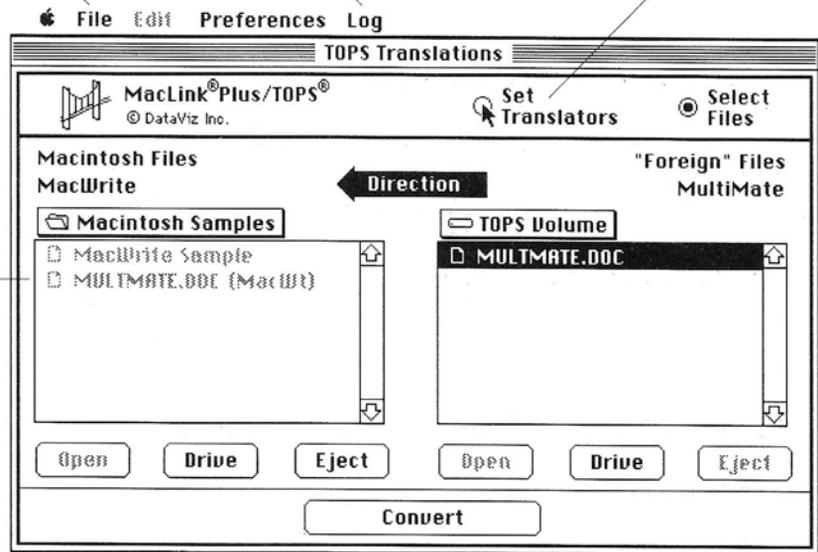
Where to go from Here

Use the Log Menu to show, print, save or clear the log

Use the File Menu to save the settings or to quit

Click here to change direction or select different translators

This is the file that you translated



Notice that the new file is shown in the Macintosh File window in the Select Files window.

To translate other sample files, or your own files, use the Set Translators window and the Select Files window.

To view, print or clear the MacLinkPlus/TOPS error and activity log, use the Log Menu. If there were translation errors, these would be identified in the log.

To quit MacLinkPlus/TOPS, select **Quit** from the File Menu.

What Next?

Now that you have completed this Using MacLink*Plus*/*TOPS* chapter, you are ready to translate your own files.

Additional sample files are provided on the MacLink*Plus*/*TOPS* disk. These can be used for testing or experimenting. The files are named as follows:

Files in the SAMPLES.DOS Folder	
Name	Contents
DBASE.DBF	dBase File
DW3.RFT	DCA from DisplayWrite
LOTUS.PIC	Lotus Graphic Image
LOTUS.WKS	Lotus 1-2-3 Spreadsheet
LOTUS2.WK1	Lotus 1-2-3 Version 2
MULTMATE.DOC	MultiMate Document
MULTPLAN.SYL	MultiPlan SYLK Spreadsheet
OFFWRITE.WP	OfficeWriter Document
PCPAINT.PCC	PC PaintBrush Graphic
SAMPLE.DIF	DIF Spreadsheet
SYMPHONY.WRK	Symphony Spreadsheet
TEXT.TXT	ASCII Text File
WORDPERF.WP	WordPerfect Document
WORDSTAR.WS	WordStar Document

Once you are using MacLink*Plus*/*TOPS* on your own, you will want to refer to the reference chapter, the appendices and possibly back to the details in these step-by-step instructions.

Chapter 2:

MacLink*Plus*/*TOPS* Reference Guide

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38	Clear Selection
39	Select Files Window
40	Scrollable File Windows
42	Right File Window to a TOPS Volume

MacLinkPlus/TOPS Menus

File Menu

File	
New Settings...	⌘N
Open Settings...	⌘O
Close Settings	⌘W
Save Settings	⌘S
Save Settings As...	
Quit	⌘Q

This chapter describes all of the MacLinkPlus/TOPS Menus in detail in the order that they appear in the Macintosh Menu bar.

The **File Menu** contains commands for controlling settings documents and for quitting the MacLinkPlus/TOPS application. Settings documents contain the MacLinkPlus/TOPS translator settings and Preferences.

New Settings

Opens a new untitled settings document with the settings initialized to the MacLinkPlus/TOPS defaults. There are default settings for Preferences, but translators default to blank (no translators set).

Open Settings

Opens a settings document that was previously stored on disk. Initializes MacLinkPlus/TOPS to the settings that existed when the document was saved.

Close Settings

Closes the active Settings Document. If the settings have changed, a dialog appears to provide the opportunity to save the settings.

Save Settings

Saves the present settings in a settings document. If a named settings document is open, they are saved in that document. If the open document is untitled, a dialog box provides the opportunity to name a document.

Save Settings As ...

Saves the present settings in a settings document that is named in the "Save As ..." dialog box.

Quit

Closes the open settings document and quits the application. If the settings have changed, a dialog box provides the opportunity to save them.

Edit Menu

The **Edit Menu** is not used in MacLinkPlus/TOPS and is always inaccessible.

Preferences Menu



Special...

The **Preferences Menu** contains commands for controlling the optional foreign character set feature and for showing filenames, application types and status messages.

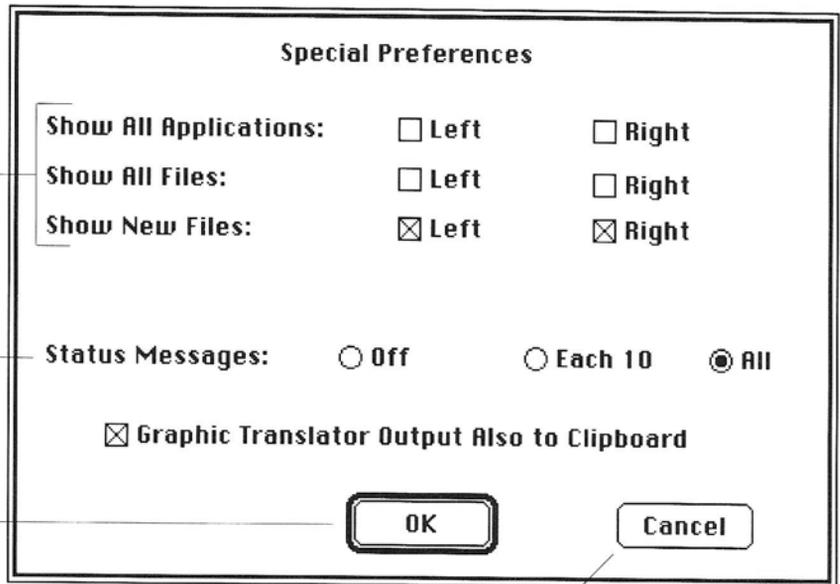
Special... Presents a dialog box containing special preference items:

Controls contents of left and right file and translator windows

Controls frequency of status messages during transfer and/or translation

Accepts preferences as shown

Cancels dialog without changing preferences



Show All Applications:

This preference controls the applications and/or file formats shown in the left and right scrollable windows in the Set Translators window. Normally, only relevant formats are shown in each window. Thus, the left window shows only formats that are likely on the Macintosh, and the right window shows only those that are relevant for the "Foreign" format selected. Your "X" selection for a window indicates that you prefer to override the relevance feature and wish to show all applications in that window.

Show All Files:

This preference controls the files shown in the left and right scrollable windows in the Select Files window. Whenever possible, only relevant files are shown in each window. Thus, the left window shows only files that are relevant to the application and/or format selected for the left window, and the right window shows only those that are relevant for the right window's selection. Your "X" selection for a window indicates that you prefer to override the relevance feature and wish to show all files in that window.

Note: It may be necessary to select this preference to show all files for the MS-DOS files on the PC. Quite often, the three character filename extensions used to identify MS-DOS files are not consistent or unique. Thus, to see the file(s) you wish to translate, you may find it necessary to select this preference for the right file window.

Show New Files:

This preference controls whether or not new files are shown in a file window immediately after they have been created by MacLinkPlus/TOPS. Normally, after creating a file, MacLinkPlus/TOPS obtains new directory information for the target disk and refreshes the display in the target file window. If the disk in question is on a remote system accessed through a network and has a very large directory, this could take a while. If you click to remove the "X" in a window, the directory will not be retrieved after each translate and new files will not be shown in the file window until some other action causes the directory to be retrieved.

Status Messages:

This preference sets the frequency of status messages during translation.

Localize...

Localize... Controls the Foreign Character Set Feature. This feature automatically compensates for the difference in internal character codes between the Macintosh and IBM compatible computers for the entire national character set of many European countries. In versions of MacLinkPlus/TOPS containing this optional feature, the Localize Preference is available.

Foreign Character Sets

A dialog box titled "Localize..." with a double-line border. Inside, the text "Select the options you want:" is centered. Below it are two columns of radio button options. The first column contains: U.S.A., United Kingdom, France, French Canada, and Spain/Latin America. The second column contains: Germany, Italy, Sweden, Netherlands, and Belgium. At the bottom right are two buttons: "OK" and "Cancel".

Select the options you want:	
<input checked="" type="radio"/> U.S.A.	<input type="radio"/> Germany
<input type="radio"/> United Kingdom	<input type="radio"/> Italy
<input type="radio"/> France	<input type="radio"/> Sweden
<input type="radio"/> French Canada	<input type="radio"/> Netherlands
<input type="radio"/> Spain/Latin America	<input type="radio"/> Belgium
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

The Localize option that you set is stored in the Settings Document and is recalled whenever you Open a Settings Document.

Localize defaults to U.S.A.

File Control...

File Control... controls your preferences for assignment of file names and how to handle conflicting file names and translation errors. It is particularly useful when doing multi-file transfers and translations.

File Control Preferences

For New File Names:

- Prompt Me to assign all file names**
- Let MacLink Plus/TOPS assign all file names**

In Case of File Name Conflicts:

- Notify Me, I will resolve conflicts**
- Let MacLink Plus/TOPS resolve conflicts**
 - OK to Over-Write files**

In Case of Translation Error, Log the error and:

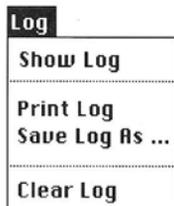
- Stop & Notify Me**
- Skip the file & Continue processing**

New File Names: You may do all the file name assignments yourself, or you can let *MacLinkPlus/TOPS* assign the file names.

File Name Conflicts: If you let *MacLinkPlus/TOPS* assign file names, you may choose to resolve the conflicts (e.g. file already exists, duplicate file name in list) yourself, or to let *MacLinkPlus/TOPS* do it. *MacLinkPlus/TOPS* will resolve conflicts by adjusting the file name or, if you prefer, by overwriting the output file.

In case of **Translation Error** (e.g. trying to run a conversion on the wrong file type) you can choose to have *MacLinkPlus/TOPS* stop immediately and notify you, or to simply skip the file with the error and continue processing all other files in the list. In any case, the error will be reported in the Log. This feature is particularly useful for multi-file translations.

Log Menu



The **Log Menu** contains commands for controlling the MacLinkPlus/TOPS activity and error log. Entries are automatically posted to this log by the translators.

Each activity posted to the log contains time, date, file names and translators used.

Errors posted to the log normally contain a description and a reference to a location in the original file.

If, at the end of a file translation, there is an indication that there were translation errors, the log should be checked for details.

Show Log

Displays the log in a scrollable window on the Macintosh. The log can also be displayed from the Show Log button in the Transferring & Converting dialog box.

Print Log

Prints the log to the ImageWriter or LaserWriter printer.

Save Log As ...

Saves the present log to the text file that is named in the "Save As ..." dialog box.

Clear Log

Clears the present log.

Set Translators Window

The Set Translators window is used to review and change the file translation settings, and the file transfer direction. This screen may be viewed and changed at any time during a MacLinkPlus/TOPS session by clicking the Set Translators button.

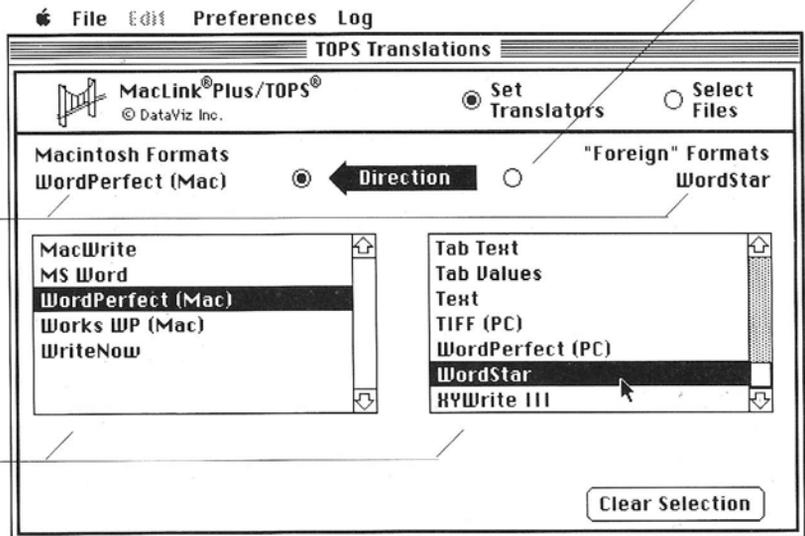
The two scrollable windows provide the ability to review and change the file translation settings. The arrow controls the file transfer direction.

Sets transfer direction

Translator reminders

Scrollable translator windows

Clears translator selections



Prior to any selection being made, the scrollable windows show the applications and file formats that are supported. If a Settings Document is opened, the selections reflect those that were in effect when the document was saved.



Clear Selection

When an application is selected in one window, the choices in the other window are reduced to only those that are supported for the selected application and direction. For example, selecting MacWrite in the left window reduces the available choices in the right window.

In general, an application selection for the “From” format tells MacLinkPlus/TOPS how to read and interpret the file that is being transferred. The application selection for the “To” format indicates the format the file is to be written in.

Proper selection of the “From” translator is critical since it indicates to MacLinkPlus/TOPS the kind of formatting and control codes to expect in the file.

Transfer Direction

The direction arrow indicates the direction for file transfer(s). If the arrow is pointing from the right window to the left window, file transfers and translations are from the right side of the window to the left. To change the direction, click on the arrow or on the button at the tail end of the arrow.

Clear Translator Selection

The Clear Selection button clears the selection from each of the scrollable windows and returns all of the available choices to both windows.

Note: The Select Files window for transferring and translating files remains inaccessible until an application or format has been selected in both Set Translators windows.

Select Files Window

The Select Files window is activated by clicking on the Select Files button.

Note: The Select Files button only becomes available after file formats have been selected for the left and right Set Translator windows.

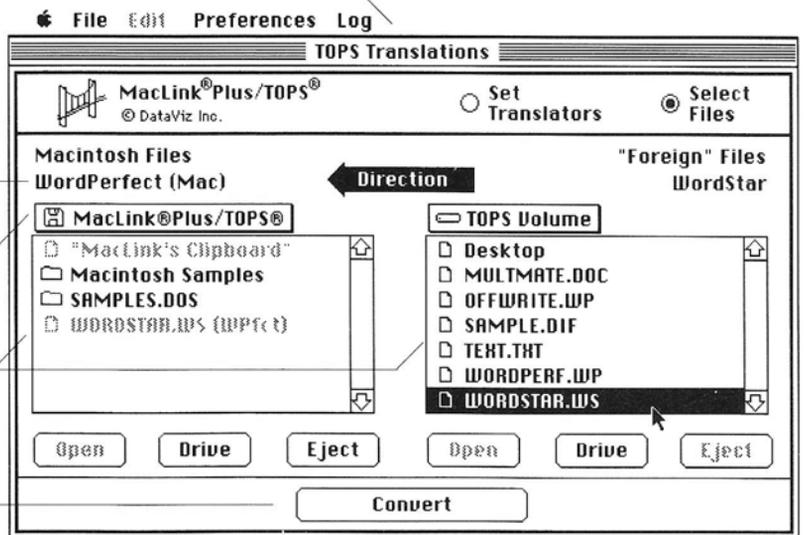
Settings document reminder

This line provides translator and transfer direction reminders

HFS window control

File windows

Initiates file translation



The Select Files window provides two familiar file windows, the left one for the Macintosh, and the right one for "Foreign" files on the PC visible over TOPS. These windows can be controlled using the buttons and scroll bars in the same manner as any Macintosh file window.

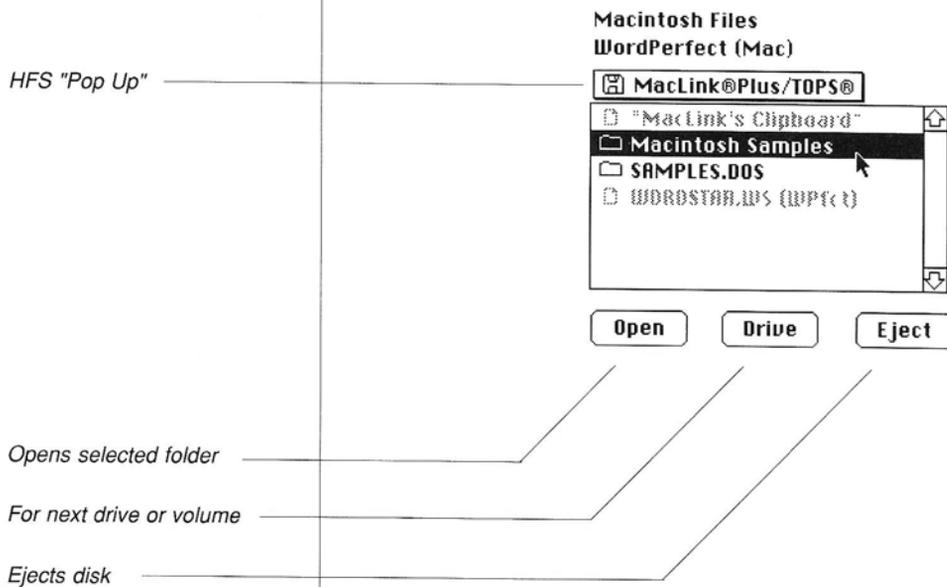
□ Scrollable File Windows

A copy of the file is translated from one window to the other in the direction of the arrow by selecting the file in the “from” window and clicking the **Convert** button.

If the file window is pointing to an HFS diskette or a volume on an HFS hard disk, the window operates in the same way as any standard HFS window. The “Pop Up” (or “Pull Down”) at the top of the window is used to review and change the position in the hierarchy of folders and files. The Open, Drive and Eject buttons are used to control the Macintosh disks and volumes.

If the diskette or volume is not HFS, folders will not be shown and all files will appear as if they are on the desktop.

MacLink*Plus*/*TOPS* normally shows only files that are relevant to the selected application/format in the Macintosh window. To cancel this feature, and see all files, use Special on the Preferences menu.



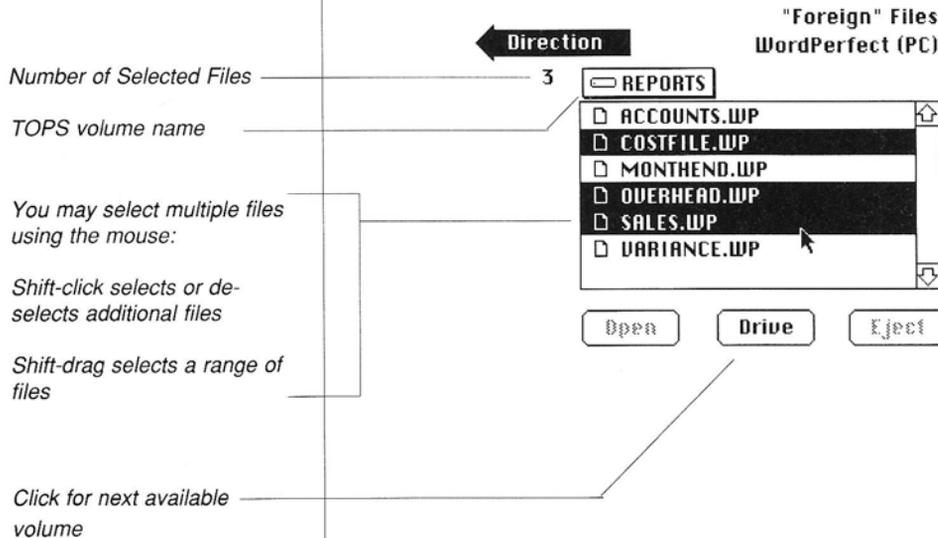
Multiple files may be selected for translation using Macintosh-standard mouse selection. Shift-clicking with the mouse selects (or de-selects) an additional file. Shift-dragging the mouse selects a range of files.

The right file window operates in the same way as the left one. It is also HFS and can be pointed to any disk or volume that is visible on the Macintosh. This can be the same one being viewed in the left window, or a different one that is actually on the Macintosh.

❑ Right File Window to a TOPS Volume

The "Pull Down" or "Pop Up" at the top of the window shows position in the MS-DOS file hierarchy. When positioned at the top of the hierarchy (root directory), it shows a disk icon and the MS-DOS disk name, if any. When viewing the contents of a subdirectory, it shows a folder icon and the subdirectory name.

Within the file window, files are shown with document icons and subdirectories with folder icons. To navigate the hierarchy, use the icons and the "Pop Up" in the same manner they are used on the Macintosh.



The drive button changes the position to the next available disk unit which has a mounted disk. This could be a Macintosh disk or another TOPS volume. Hard disks operate in the same way as floppy drives.

MacLinkPlus/TOPS normally shows only files that are relevant to the application or format selected for the MS-DOS disk. To do so, it uses the three character extension on the MS-DOS filename. For example, if MultiMate is chosen as the application for the "Foreign" file, only documents ending in DOC are shown (DOC is MultiMate's official filename extension, just as Lotus 1-2-3 uses WKS and dBase uses DBF). In general, for applications that have clearly defined filename extensions, MacLinkPlus/TOPS will show only relevant files. For applications that don't have extension standards (WordStar, WordPerfect, etc.) MacLinkPlus/TOPS shows all files. To see all files in all cases, use Special under the Preferences menu.

Note: MS-DOS files are not as closely tied to an application as on the Macintosh. In general, you must know which application created a file before you attempt to translate it. Some file types are relatively safe because the application automatically creates the filename extension (MultiMate/DOC, dBase/DBF, Lotus 1-2-3/WKS, Symphony/WRK, Word/DOC, etc.). But, this is not totally safe since anyone can create or change a filename extension. When MacLinkPlus shows relevant files, it is showing those files with the correct filename extension. Since MS-DOS has no control over extensions, the files listed may be from the desired application or they may just have extensions that match those of the desired application.

Chapter 3:

Translator Characteristics

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Transfers and Translations

MacLinkPlus/TOPS offers a full range of file translation functions that are controlled from the Set Translators Window of MacLinkPlus/TOPS.

File translations ... provide automatic conversion of the contents of a file from the format and codes used by one application product to those of another.

File transfers ... provide error-free movement of files from one machine to another.

When using MacLinkPlus/TOPS, Transfer and Translation are done in a single step. Translation is handled by MacLinkPlus/TOPS. Transfers to and from remote PCs on the TOPS network are handled by TOPS.

Note: New translator features are continually being added to MacLinkPlus/TOPS. As such, the only way to be sure of all the available options is to use the Set Translators Window in MacLinkPlus/TOPS.

Readers and Writers

Most of the translators in MacLinkPlus/TOPS exist as a matched pair of Readers and Writers. That is, there is a translator to read a given format and another to write that format. For example, there is a reader for MultiMate files and a writer for MultiMate files. The same is true Lotus, Multiplan, MS Word, WordPerfect and many other formats. Selection of the proper pair is done for the user when the file is analyzed.

A **Reader** is capable of reading a file, identifying all the text, formatting, formulas, values and control information, and storing it in a standard way that can be used to build many types of files.

Conversely, a **Writer** can use information stored in a standard way to build a specific type of file with the appropriate text, formatting, formulas, values and control information.

So, when you make a request to translate a file from MultiMate to MacWrite, the MultiMate reader is used to read the file, and the MacWrite writer to write the file.

With **MacLinkPlus/TOPS** the file will be read from and written to the appropriate disks or volumes and folders as identified by the left and right Select Files windows, and written with the new file name as suggested by MacLinkPlus/TOPS, or as overridden by the user.

Word Processing Documents

MacLink*Plus/TOPS* contains readers and writers for the most popular word processing formats. Among these are DCA, MacWrite, Microsoft Word and Works, MultiMate, WordPerfect, WriteNow, and WordStar. Furthermore, many other formats are available through these. For example, files created for Microsoft Word on the Macintosh may be used in other products such as Interleaf or PageMaker and other page processing products, or any other product that can read the MS Word format. The MacWrite format can be read by almost any word processor on the Macintosh.

Where a translator pair is available, always convert from the proprietary format of one word processor to the proprietary format of the other, such as from WordPerfect to MS Word.

On the other hand, if a specific translator is not offered, a number of word processors offer a utility or an alternate format to read or write WordStar, MultiMate, DCA or Text files in addition to their own proprietary format. Files going to, or coming from, these products can be processed through MacLink*Plus/TOPS* by converting the file to one of the formats supported by the translators.

When it is necessary to convert to an external format, choose the format which is richest in word processing features. For instance, DCA is usually a better vehicle than WordStar. If multiple external formats are available, you may wish to try more than one and use the one which produces the best results.

If possible, ASCII Text output should be the last choice since, although the text of a document is retained, the controls and features of the document (bold, underline, special margins, etc.) will be lost.

The word processing translators identify and translate the following:

- | | | |
|----------------|----------------|------------------|
| ■ rulers | ■ margins | ■ paragraphs |
| ■ indents | ■ tabs | ■ tabular tables |
| ■ bold | ■ underline | ■ centering |
| ■ print styles | ■ superscripts | ■ subscripts |

Since **Italics** on a PC usually causes or simulates a print wheel change, italics are handled only in special cases (e.g. WordStar and XYWrite). See the notes about these specific formats in Appendix A.

In general, the translators ignore page breaks and footnotes, although these are being added to some specific translators.

Page breaks are not translated since the conversion of the document's type size and pitch, and changes caused by fixed-to-proportional spacing changes, kerning, and margins cause most word wrapping and page breaks to fall at different points in the document. New page breaks will be set by the repagination facility of the target word processor.

Footnotes are generally not translated because footnotes are handled in radically different manners by various word processors.

Conversion between the Macintosh and the IBM PC will usually involve a conversion between fixed-space characters on the IBM PC and the proportional spacing prevalent on the Macintosh. This will generally give the converted document a slightly different 'look,' and columns separated by spaces (rather than tabs) may appear misaligned.

A word of caution about WordStar ... Although WordStar supports many of the features of newer word processors, it does so in a unique way. For example, use of the tab key in many word processors results in a tab control code in the document. This code can be identified by a translator and properly expressed on a ruler or otherwise in the new file. As such, items aligned with tabs will continue to be aligned in the new document. In WordStar, use of the tab key does not put tab indicators in the document. Instead, WordStar counts character positions and adds spaces to force the alignment. This character counting does not work on the Macintosh. In most fonts, characters are different widths. Thus, columns or items that were aligned with character counting will no longer align. To avoid this, MacLink*Plus*/*TOPS* uses the Monaco mono-spaced font (where possible) for documents that are translated from the WordStar format.

The sample word processing documents provided on the diskettes have examples and descriptions of these features. They can be used with MacLink*Plus*/*TOPS* and your word processor(s) to experiment with and to review the before and after images of the documents.

Spreadsheets

MacLink*Plus*/*TOPS* contains readers and writers for popular spreadsheet formats. Among these are: WKS, as used by the original Lotus 123 (version 1A) and a number of other products; WRK, as used by Lotus Symphony; WK1, as used by Lotus version 2; and MultiPlan SYLK which is also accepted by other products.

In very general terms a spreadsheet is a grid of cells that may contain formulas, format, specifications and numeric values or text. The MacLink*Plus*/*TOPS* spreadsheet readers decode this information and organize it in a way that can be used by the MacLink*Plus*/*TOPS* writers to build spreadsheets or other files that may use all or some of the information from the original spreadsheet.

Most spreadsheets use their own proprietary internal format, but deal with one or more external formats for import and export of data (and sometimes formulas, formats, and specifications). Typical external formats are:

■ WKS, etc.	Formulas and Values
■ MultiPlan SYLK	Formulas and Values
■ DIF	Values Only
■ Comma Values (CSV)	Values Only
■ Tab Values (TSV)	Values Only
■ Tab Text	Values Only

For example, from a Lotus spreadsheet (WKS) you can create another spreadsheet that has the same formulas, formats and values either by transferring to another product which reads the Lotus format, or by converting to MultiPlan SYLK format which supports both formulas and values.

Or, if needed by your application, you could create a file type such as DIF that deals only with the values (not the formulas) of your spreadsheet.

Or, you can "unload" your Lotus file into one of the Text-Delimited formats such as Comma Separated Values (CSV) or Tab Separated Values (TSV) for import into other spreadsheets or data bases.

Or, if you wish to use the displayable "results" of the Lotus spreadsheet in a desktop publishing project, you could do so by requesting a Tab Text output. When you do this, MacLink*Plus*/*TOPS* uses its Tab Text writer to take the Lotus values and place them in a tabbed text file in the same format that would be visible on the Lotus screen.

In general, when using translated files with text output (e.g. DIF, SYLK, Text-Delimited) in Macintosh application products such as Excel, FileMaker, Omnis, or 4th Dimension, the application must be opened first and then the file must be opened from within the application.

A word about Multiplan and SYLK. Microsoft's Multiplan on the Macintosh and the PC use an external format called Multiplan SYLK, which is a text file format that supports not only data but also formulas and formats. While many software products support "SYLK," they are not all equal and not always interchangeable. Some support the data features only (Values), not the formulas and formats; this is typical of databases. Others support "extensions" or "variations" of SYLK and as such are not compatible with other products. For instance, Excel and Multiplan use slightly different variations of the SYLK format, but the data is usually interchangeable.

When exchanging SYLK between the PC and the Macintosh, move the SYLK file as text.

When moving SYLK from one product to another, check the results carefully and be aware that incompatibilities may exist.

Data Bases

Data bases are generally record oriented. They contain text and numeric values, format specifications, and structure information that identifies relationships between data items and/or records, etc.

MacLink*Plus/TOPS* contains readers for the dBase format. It also contains a number of writers that are capable of producing the text and numeric values, and the format specifications from the data base, while ignoring the structure information. Using this approach, values and formats from dBase files can be used to build data bases in spreadsheets or in other data base products, all of which provide their own structure information.

Most databases use their own proprietary internal format, but deal with one or more external formats for import and export of data. Typical external formats are:

- dBase (DBF)
- DIF
- WKS
- SYLK (Values only)
- Comma Values (CSV)
- Tab Values (TSV)
- Tab Text

For database processors, find which external formats are supported and select the format which is most convenient. Translations between spreadsheet products and database products are also available.

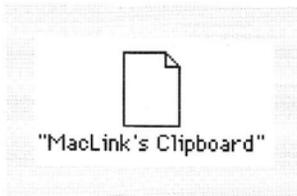
For example, to use dBase information in an Excel spreadsheet, select dBase as the input format and Excel (WKS) as the output format. To use the same information in another data base product, select dBase input and CSV, TSV, DIF or Multiplan SYLK output.

dBase (PC) files may also be transferred to the Macintosh for use in dBase (Mac), FoxBase, or McMax. FoxBase and McMax files on the Macintosh may also be moved back to the PC.

When using this approach, be sure to open the Macintosh application, then open the translated file using the proper commands from within the application.

Graphic Images

Clipboard Graphics



MacLink*Plus/TOPS* supports several varieties of graphic image translations between the PC and the Macintosh. The most universal graphic format on the Macintosh is PICT (and PICT2). This is the QuickDraw format and consists of a series of QuickDraw commands which are recognizable by most graphic programs on the Macintosh, including most word processors which accept graphics.

Since the translators are file oriented, the result of a translation is always a file containing the translated graphic image. The image can also be put on the Macintosh Clipboard. If the Special Preference item "Also Put Graphic Translator Output on Clipboard" is turned on, the graphic image will be automatically placed on the Clipboard (in addition to the file). (For multi-file selections, the last graphic image translated is left on the Clipboard.)

At times, particularly while using Multi-Finder, it may be desirable to translate a graphic image which is on the Clipboard to the PC. To do this, select the file "MacLink's Clipboard" as the source file for the translation. ("MacLink's Clipboard" is on your MacLink*Plus/TOPS* release disk.) This will tell the graphic translator to look at the Clipboard for the source image.

There are two basic forms of graphic images: Bit-Mapped format and Vector (or Object) format.

Bit-Mapped format stores the graphic image as a series of dots (bits) such as the Macintosh screen display.

Vector (Object) format stores the image as a series of lines by specifying the end-points of the lines and their characteristics (line width, shading, etc.)

Graphic image conversions which are supported by MacLink*Plus/TOPS* should be moved using the appropriate translator. Appendix A contains a list of the currently supported file formats and Appendix B contains a list of all the possible translators.

Other images which are in a standard format can be moved from one machine to another by dragging them over the TOPS network. Provided that the software on both machines supports the same graphic image standard, these

images can be moved from one machine to the other provided that it is moved intact, without changes. Fortunately, there are some standards for graphic image files and these standards are often implemented on both the PC and the Macintosh.

The most popular graphic formats are:

- **Lotus (PIC)** The format used for Lotus or Symphony graphs on the PC.
- **PAINT** The MacPaint format. This supports low-resolution (72 dpi) Bit-Mapped images as used by MacPaint.
- **PaintBrush** This full-color format is used by PC PaintBrush on the PC. Its files use the extension .PCC or .PCX.
- **TIFF** Tag Image File Format. TIFF is a high-resolution, grey-scale, Bit-Mapped graphic image format which is used by many scanners. It is a fairly standard format and can be read by many products on the PC and Macintosh.
- **RIF** Raster Image File Format. RIF is a TIFF extension which supports multiple machine types as well as RGB color.
- **PICT** Format for QuickDraw Object images supported by most Macintosh graphic applications.
- **PICT2** A PICT extension format which supports QuickDraw Color Object images.
- **PostScript** A standard format for graphics and printer drivers. PostScript files are actually text-format files and can be moved as text to text.
- **EPS** Encapsulated PostScript (or Compiled PostScript) format allows individual applications to embed PostScript code and move it with the application. For example, Page-Maker uses EPS.
- **IGES** Initial Graphics Exchange Standard is a format developed under the National Bureau of Standards for exchanging files between different CAD systems.

Text Reader

There are occasions where there is no translator available to do the job. For instance, the data may already be in text format, or the word processor might be very unusual. It is still possible to get your document back into basic word processing format using the Text Reader.

The Text Reader is used in a number of 'translators', such as Text to MacWrite and Text to MS Word, which convert the text information back into paragraph format and create a real word processing document. Because text format is devoid of formatting information, it will be necessary to clean up the document after translation.

Other Formats

A number of general purpose file formats are supported in MacLink*Plus*/*TOPS*. General formats are formats such as the Text-Delimited formats (CSV and TSV), DIF, Multiplan SYLK, WKS (and its variations), and Text to Text (ASCII). These are provided to allow you to import foreign data into your word processor, page processor, spreadsheet or data base application.

To use one of these features, check the manual for your application to see which format(s) it supports.

Signatures and Icons

MacLink*Plus/TOPS* can recognize the type of file which is selected for translation. It does this in two ways, first by examining the "Signature" of the (Macintosh) file and second, by examining an initial block of the file.

Macintosh applications all recognize their associated documents by the file's "Signature" which is included in the header information of the file. It is this Signature which causes the Macintosh operating system to display the file with the appropriate icon on your Macintosh desktop.

The approximate equivalent of a signature on the PC is the filename "Extension" (the three-character filename suffix which appears after the period in the filename). For instance, in the PC file MONTH.WKS, WKS is the Extension which denotes a Lotus 1A format file. The extension is helpful but not reliable for identification.

On the Macintosh, MacLink*Plus/TOPS* produces Signatures and uses them to help identify file types. When a specific output format is selected (such as MS Word, PageMaker, WordPerfect) the proper Signature is produced when the file is written.

On the PC, the proper extension is added to the filename when it is appropriate to do so.

When general file formats (such as Text-Delimited, SYLK, or DIF) are produced, there is no specific Signature or Extension to write. The file will be written correctly, but it is the user's responsibility to use the file with the appropriate application. On the Macintosh, it will be necessary to open the application first and then open the file from within the application.

How to Select a Translator

Analyzing the Problem

First

Where are you going TO

Most people who need translators face a very specific problem:

**“How do I move my data
from the product or format it happens to be in now
and put it into the new format that I want?”**

Translators are available for many of the popular products. For instance, if a word processing document is in one of the popular PC products (such as WordStar or MultiMate) and you want to move it to a popular Macintosh product (such as MacWrite or Microsoft Word) there are translators available to handle your specific problem. However, you may be dealing with an unusual product, a special-purpose application, or even a new product for which translators have not yet been written. There are some simple steps that you can follow to determine which translators to use to accomplish your goals.

First: You should have a basic understanding of what translators are, what they do, and what file formats are available. You don't need to be an expert, but you do need to know your way around the world of file types and formats.

Second: Look at the application that you will be moving the data **TO**. Find out what types of files (file formats) the application can read. Every application can read its own format, but most applications can also read other types of files, and you need to find out which.

There are several ways to do this, but the best way is to read the documentation for the product. You don't have to read the whole manual. Just look in the index or table of contents for subjects such as: Reading, Input, Import, Open, Retrieve, Conversion, External or Foreign Files, or File Formats. This should tell you what input file format(s) that your target product can handle.

For instance, MacWrite can read MacWrite files and Text; Microsoft Word can read its own format plus MacWrite, Text, and Microsoft Word files from the PC.

Where are you coming FROM

Third: Look at the application that you want to move data **FROM**. Find out what types of data the product is capable of writing. Of course, it can write its own format, but most applications can write files in other formats too, and you need to know which ones are available.

Again, the documentation can tell you, and this information is often referenced as: Writing, Output, Export, Conversion, External or Foreign Files, or File Formats.

You can also “shop” through the menus, particularly if the source of the data is on a Macintosh. In particular, look for the “Save as...” File dialog to see if there are any output file format options.

For instance, MacWrite can output in MacWrite or Text format. Microsoft Word can output files as Word, MacWrite, Word for MS-DOS, MS Works, RTF, two different types of text, and also has a separate DCA converter.

Now you know what output formats are available.

Match them Up!

Fourth: Match your list of input formats with the list of possible output formats to determine a translation path. You are looking for a path that retains the most formatting information and which has the least steps.

If there is a translator available from the source format to the target file format, use it. For instance, if your source file is MultiMate and your target word processor is MacWrite, use the direct MultiMate to MacWrite translator to do the job.

If the target application can read the format of the source application, drag the file over the TOPS network, open the target application, and directly read the file. For instance, Microsoft Word on the Macintosh can read MS Word files from the MS-DOS environment.

If the source application can write the file format of the target, export the file from the source application using the target format, drag it over the network, open the target application, and read the file. For instance, WordPerfect on the Macintosh can read and write WordPerfect 4.2 file for the PC.

If no common format can be found, look for a combination of formats for which a translator exists. For instance, there are no translators for MultiMate to PageMaker, but there is a MultiMate to MS Word translator and PageMaker can read MS Word. To translate DisplayWrite to PageMaker, use DisplayWrite's Convert utility to export the document to DCA-RFT format, translate DCA to MS Word, and Place the document into PageMaker.

The Last Resort

'Translator' of Last Resort: If you are unable to find any translation path, most products allow some kind of text output and input. Word processing documents can be written as text; spreadsheets and databases can be written in ASCII text format (Comma Separated Values or Tabbed Values).

Although text moves lose all formatting of a document, the text of the document or the data in the file are retained. The Text Reader can reconstruct many of the paragraphs, margins, and rulers, but the document will need to be cleaned up manually.

Some Hints

Some Hints about selecting translation paths:

MacWrite - Almost every Macintosh word processor can read MacWrite files and most of them can write MacWrite. Therefore, to translate to or from an apparently unsupported word processor use the MacWrite translator to read or write the file, and the MacWrite import or export facility of the word processor.

DeskTop Publishers - Most of them, including PageMaker and Ready,Set,Go can read either MacWrite or MS Word.

Multiple Choice - If you have several choices of translation paths, choose the path with the least number of format changes. e.g. WordPerfect (PC) to DCA to MacWrite to MS Word involves three format changes while WordPerfect (PC) to MS Word involves only one change.

Document Formatting - If you have several choices of translators or paths, choose the one that carries the most formatting information. For instance, DCA-RFT carries more word processing format information than does WordStar. Lotus (WKS) format carries formulas while DIF or Tab Values carry only data.

Text Formats - ASCII Text Documents and Comma or Tab Separated Value spreadsheets and databases are 'universal' formats. They are recognized by a wide variety of products but allow you to retain no formatting.

Appendix:

MacLink*Plus*/TOPS Appendix

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Appendix A: File Formats

This section describes each of the specific file formats which are supported by *MacLinkPlus/TOPS*. Other formats, such as general text format and graphic images may be moved, but no facilities for internal format changes are provided.

Comma Values (CSV)

A Comma Separated Values (CSV) file contains ASCII text records with all values separated by commas, text values surrounded by double quotes, and a carriage return at the end of each record. One such record is created for each row or record in the original input file. The format of the text or numeric values within each record matches the format specifications from the original input file. This file format is accepted by many newer application packages. It is an easy way to bring data from an existing spreadsheet or data base into a new one.

dBase (DBF)

A file in the proprietary format of Ashton-Tate's PC dBase products. This file contains the database structure (dictionary), as well as text and numeric values. The dBase reader can read files used by dBase II, III, and III Plus as well as other database products, such as Foxbase, which use the dBase file structure. Note that there is no dBase writer since there is no way to create a correct data dictionary from raw data. To send data to a database, use CSV, TSV, WKS, Multiplan SYLK, or DIF as appropriate. DBase files on a PC normally have a .DBF extension.

DCA (IBM Revisable) - DCA-RFT

A word processing document in the DCA (Document Content Architecture) format - IBM's Revisable Form Text (RFT). This format can be created and read with utilities provided with a number of products including IBM's DisplayWrite (3, 4, 370), SamnaWord, VolksWriter, and WordStar 2000. Revisable Form Text, abbreviated RFT, should not be confused with Microsoft Word's RTF (Rich Text Format). MS-DOS DCA files normally have a .RFT extension. Most word processors that support DCA-RFT, including DisplayWrite, require a separate conversion step to import or export DCA files.

DIF

Data Interchange Format (DIF) files contain ASCII text records that express a row and column grid of numeric and text values without format specifications. DIF files are data-only files and can be read by many spread sheet and data base products such as Omnis.

A word of caution... Some products, such as SuperCalc on the PC, have their own extended DIF formats which are not recognized by other products. DIF files on the PC often have a .DIF extension, but it is not generally required.

Excel (Mac)

A Macintosh file in the internal format of Microsoft Excel, version 2, or created by Excel version 2. These files are movable to Excel (PC).

Excel (PC)

A PC file in the internal format of Microsoft Excel, version 2, or created by Excel version 2 on the PC. These files are movable to Excel (Mac), version 2.

Excel (v1 WKS...)

A Macintosh file in the WKS format of Lotus 123 (any version) that can be opened from Microsoft Excel, version 1.5 or earlier, or created by Excel using the "Save As..." dialog with the WKS or WK1 format specified. Jazz can also read WKS files, but can not create them.

Excel (v2 WKS...)

A Macintosh file in the WKS format that can be opened from Microsoft Excel, version 2, or created by Excel version 2 using the "Save As..." dialog with the WKS or WK1 format specified.

Lotus (PIC)

A Lotus graph file. These files are created when any version of Lotus creates a graph. These files must have an extension of .PIC. *MacLinkPlus/TOPS* can read these files, but they can only be written by Lotus.

Lotus-123 (WKS...)

A binary spreadsheet of formulas, formats, text, numeric values, etc., in the internal format used by Lotus 123 and supported as an alternative by other products. Files from Lotus 123 version 1A carry the .WKS extension on the PC, those from version 2 carry .WK1, and Symphony files use .WRK or WR1.

MacWrite

A word processing document in the format of MacWrite that can be used in MacWrite, Microsoft Word, Microsoft Works, or any product that accepts the MacWrite format. This includes most word processing and desktop publishing products on the Macintosh. MacWrite versions 4.5, 4.6, and 5.0 are supported.

MS Word

A word processing document in Microsoft Word format on the Macintosh. Versions 3 and 4 are supported.

MultiMate

A binary word processing document in the MultiMate format from the IBM PC. The PC file extension .DOC is required. MultiMate versions including version 3.4 and Advantage II are supported.

MultiPlan (SYLK)

An ASCII file in the standard SYLK format containing spreadsheet formulas, formats, text, and numerics. It is an alternate (external) form used by MultiPlan and a number of other products including several databases.

A word of caution... Some products produce output files that use extensions or variations of SYLK and these extensions may not be usable in other products. For example, MultiPlan and Excel use different variations of SYLK. Database applications that allow SYLK use the SYLK values without the formulas.

There is no standard PC extension for these files, but .SYL, .SLK, and .SK are common.

OfficeWriter

A binary word processing document in the OfficeWriter format from the IBM PC. The PC file extension .WP is required. OfficeWriter version 5.0 is supported for output and both 5.0 and 6.0 are supported for input.

PC PaintBrush

A graphic file in the format used by PC PaintBrush. These files may be in full color and will have extensions of either .PCC or .PCX. *MacLinkPlus/ TOPS* can both read and write these files.

PICT

A Macintosh file in QuickDraw format (including color QuickDraw). PICT (and PICT2) files are usable in most Macintosh graphic applications and in most other Macintosh applications that can read graphic images (such as word processors).

Symphony

A binary spreadsheet file in the format of Lotus Symphony. Its filename extension on the PC is .WRK. The Lotus-123 (WKS...) reader can read any Symphony files and the writer can write the WKS file format which can be read by Symphony.

Tab Text

A file of ASCII text records that contain ready-to-display values separated by tabs with a carriage return at the end of each record. One such record is created for each row or record in the original input file. The format of the text or numeric values within each record matches the format specifications from the original input file (commas, dollar signs, etc.) and provides a convenient way to bring existing spreadsheet or database data into tabbed table format for Macintosh word processing or publishing projects.

Tab Values

A Tab Separated values (TSV) file contains ASCII text records with all values separated by tabs, and a carriage return at the end of each record. One such record is created for each row or record in the original input file. Numeric values are pure numbers without formatting. Text values are surrounded by double quotes if necessary. Most Macintosh and PC data base and spreadsheet products can read Tab Values and often calls this format "Text Input", "ASCII Data" or "Standard text". The Tab Values format is closely related to Comma Separated Values.

Text

A file of ASCII text records containing strings of text without format information. Each line ends with a carriage return. This format is acceptable as an alternate input or output for most word processors. ASCII text consists only of the upper and lower case letters A-Z, 0-9, special characters (e.g. ,%*&), line breaks, and tabs. Text files do not contain rulers, formatting, bold, underlines, margins, or any word processing controls.

TIFF (PC) and TIFF (Mac)

A scanned image in the Tag Image File Format (TIFF). This format is the same on the PC and the Macintosh except for the signatures and extension (.TIF). *MacLinkPlus/TOPS* can properly handle TIFF files.

A Word of Caution... Although TIFF files are 'Standard', there are many variations to the standard. This can cause difficulties between various processors which use TIFF.

WordPerfect (Mac)

A binary word processing document in the WordPerfect (Macintosh) format. Level 1 of WordPerfect is supported on the Macintosh. Use WordPerfect (Mac) when you are translating files from WordPerfect to other formats.

WordPerfect (PC)

A binary word processing document in the WordPerfect (PC) format. Levels 4.2 and 5.0 of WordPerfect are supported on the PC. Use WordPerfect (PC) when you are translating files from WordPerfect to other formats.

WordStar

A binary word processing document in the WordStar format. WordStar version 3.4 is supported for reading and writing. MacLink*Plus/TOPS* can read WordStar versions 4 and 5, but will always write a file which is compatible with 3.4, 4, or 5. WordStar 2000 is not directly supported. (WordStar 2000 files must be converted to WordStar or DCA-RFT before translation.)

Italics are supported using the alternate ribbon color convention ^Y.

Works SS (Mac)

A binary spreadsheet file in the format used by Microsoft Works on the Macintosh.

Works WP (Mac)

A binary word processing document in the format used by Microsoft Works word processing on the Macintosh.

WriteNow

A binary Macintosh word processing document in the format used by WriteNow.

XYWrite III

A binary PC word processing document in the format used by XYWrite III. The standard features of XYWrite are supported, but not the optional extensions.

Italics are supported using the XYWrite Mode Command MDBR.

Other version of MacLink*Plus* support additional translators including:

NBI
Wang VS WP
Wang OIS WP
Wang PC WP

**Appendix B:
List of
Translators -**

MacLinkPlus/TOPS

<i>From</i>	<i>To</i>
dBase	Comma Values ¹ dBase DIF Excel (WKS) Lotus MultiPlan (SYLK) Symphony Tab Text ² Tab Values ¹
DCA-RFT ³	MacWrite MS Word WordPerfect Works WP (Mac) WriteNow
DIF	Comma Values ¹ DIF Excel (WKS) Lotus MultiPlan (SYLK) Symphony Tab Text ² Tab Values ¹
Excel	Excel
Excel (WKS)	Comma Values ¹ DIF Lotus MultiPlan (SYLK) Symphony Tab Text ² Tab Values ¹
Lotus (PIC)	PICT

(Continued)

<i>From</i>	<i>To</i>
Lotus & Symphony	Comma Values ¹ DIF Excel (WKS) MultiPlan (SYLK) Tab Text ² Tab Values ¹ Works SS (Mac)
MacWrite	DCA-RFT ⁴ MultiMate OfficeWriter Text WordPerfect WordStar XYWrite III
MS Word	DCA-RFT ⁴ MacWrite MS Word MultiMate OfficeWriter Text WordPerfect WordStar Works WP (Mac) WriteNow XYWrite III
MultiMate	MacWrite MS Word WordPerfect Works WP (Mac) WriteNow

(Continued)

<i>From</i>	<i>To</i>
MultiPlan (SYLK)	Comma Values ¹ DIF Lotus MultiPlan (SYLK) Symphony Tab Text ² Tab Values ¹
OfficeWriter	MacWrite MS Word WordPerfect Works WP (Mac) WriteNow
PC PaintBrush	PICT
PICT	PC PaintBrush
Text ⁵	MacWrite MS Word Text ⁵ WordPerfect Works WP (Mac) WriteNow
TIFF	TIFF
WordPerfect	DCA-RFT ⁴ MacWrite MS Word MultiMate OfficeWriter Text WordStar Works WP (Mac) WriteNow XYWrite III

(Continued)

<i>From</i>	<i>To</i>
WordStar	MacWrite MS Word WordPerfect Works WP (Mac) WriteNow
Works SS (Mac)	Lotus Symphony
Works WP (Mac)	DCA-RFT ⁴ MacWrite MS Word MultiMate OfficeWriter Text WordPerfect WordStar WriteNow XYWrite III
WPS-Plus/VMS	MacWrite MS Word WordPerfect Works WP (Mac) WriteNow
WriteNow	DCA-RFT ⁴ MacWrite MS Word MultiMate OfficeWriter Text WordPerfect WordStar Works WP (Mac) XYWrite III

(Continued)

<i>From</i>	<i>To</i>
XYWrite III	MacWrite MS Word WordPerfect Works WP (Mac) WriteNow

- ¹ For importing into data bases and other applications.
- ² Values are tab aligned for publishing projects.
- ³ From DisplayWrite or any product that creates DCA/RFT.
- ⁴ For DisplayWrite or any product that accepts DCA/RFT.
- ⁵ Includes conversion of formatted text: Comma Values, Tab Text, Tab Values, DIF and SYLK.

Appendix C: Difficulties, What To Do?

This section describes the most common difficulties encountered with MacLinkPlus/TOPS.

Problem: Unrecognizable Translated File or Characters

If you've translated a file, and there are special or unrecognizable characters being displayed by the target application, or the target application doesn't recognize the file, you have probably made a procedural error. Some questions to consider are:

Did you use the correct translator? ... The format of the input file and the "From" translator selection must match. If you selected WordStar, the file must be WordStar. If you selected DCA, the file must be in DCA format. Double check to see that you have used the correct translator.

Did you run the required utilities? Correctly? ... If you were supposed to run a conversion utility, before or after using MacLinkPlus/TOPS, check to see that it was run correctly. This includes Microsoft's Word Convert (versions 1 and 2) and IBM's DisplayWrite 3 or 4 conversion utility. Also, if you were supposed to save the file from the original application using some alternate save option, such as Multiplan's SYLK or Excel's WKS, make sure it was saved as such.

Problem: MacLinkPlus/TOPS Does Not Start

Is TOPS installed properly? ... MacLinkPlus/TOPS requires that it is installed on the host Macintosh. This is true even if you plan to translate files which are already on your Macintosh or which are to be accessed via a server. If TOPS is not installed, MacLinkPlus/TOPS will not run.

Using the TOPS installation manual, make sure that the TOPS has been properly installed and turned on. Then restart your Macintosh.

Appendix D: Error Messages and Codes

This appendix contains a list of MacLink*Plus*/*TOPS* error messages. Normally, an error condition causes a numbered message to be displayed. This number should be used to locate the message in the following tables.

Errors logged by the Lotus to Multiplan translator

The text for each Lotus to Multiplan translator message begins with E: or W:. The E: indicates that the condition is an error that must be researched and the cell corrected in the new spreadsheet. The W: indicates that the condition is a warning that should be researched but may not require adjustment.

- 017 E: Cell reference greater than maximum R256 C64**
The referenced cell is beyond the Multiplan maximum of 256 rows and 64 columns. If your intent is to use the output spreadsheet in a product other than Multiplan, you should not use this translator.
- 018 W: Date format used, moved numeric value of day only**
A cell or cells in the Lotus spreadsheet used a date format specification that is not supported by Multiplan. The numeric value in the cell was moved to the new spreadsheet but no date format was specified for the cell. Locate the cell and add your own format.
- 029 W: Not enough memory for range name reference**
The translator ran out of memory while trying to create the referenced range name.
- 055 Stack overflow at reference with reference**
This is a program error that should be reported to DataViz.
- 056 Stack underflow**
This is a program error that should be reported to DataViz.

Each of the following messages identify a cell that could not be fully recognized and/or translated.

- 057 E: Cell reference: UNKNOWN code reference**
058 E: Cell reference: Can not convert reference, edit
059 W: Cell reference: Warning reference found, edit
064 E: Cell reference: <UNKNOWN: reference>

Errors logged by Multiplan to Lotus translator

The text for each Multiplan to Lotus translator message begins with E: or W:. The E: indicates that the condition is an error that must be researched and the cell corrected in the new spreadsheet. The W: indicates that the condition is a warning that should be researched but may not require adjustment.

- 074 E: **Illegal character** as shown at cell reference
- 077 E: **Missing reference** in cell reference
- 078 E: **Undefined function** in cell reference
- 079 E: **Illegal function** in cell reference
- 080 E: **UNKNOWN name** in cell reference
- 086 E: **Name reference NOT UNDERSTOOD**, contains
- 087 W: **Not enough memory** for shared cell reference

Errors Reported by MacLinkPlus/TOPS File System

Messages identified as **Internal Errors** should not occur and should be reported to DataViz if they persist.

- 101 **Internal Error - File System Function Not Allowed**
This could be caused by an invalid file format.
- 102 **Internal Error - Invalid Function to File System**
- 104 **Internal Error - Invalid Target**
- 105 **Cancelled at your request**
- 107 **Internal Error - Bad Sequence**
- 108 **Internal Error - Invalid Write to File**
- 109 **Internal Error - Invalid Disk Drive specified**
- 110 **Memory is Full on the Macintosh**
- 111 **Internal Error - Invalid File Specified to File System**
- 112 **Internal Error - Invalid Working Directory to File Sys**
- 114 **Internal Error - Invalid Folder Specified**
- 115 **Internal Error - File Specified does Not Exist**
- 116 **Internal Error - File Open Failed**
- 119 **Internal Error - Bad Response from File System**
- 123 **Internal Error - Not Supported**
- 125 **Macintosh Disk I/O Error**
- 126 **Macintosh Disk is full**
- 127 **Macintosh Disk is Write Protected**

Errors Reported by the Translation Subsystem

- 199 There's not enough room on the Target disk for the file
 - 200 Internal Error - Invalid Translator
 - 201 Cannot Open Input File
 - 202 Cannot Open Output File
 - 203 Output File Write Error (Is Disk Full ?)
 - 204 Cancelled by Operator
 - 205 Input File Read Error (Is Source Application Correct ?)
 - 206 Input File Format Error (Is Source Application Correct ?)
 - 207 Memory is Full
 - 208 Unsupported Software Version (Is it really a *name* File?)
 - 209 Input File Format Error (Is it really a *name* File?)
-
- 6001 **MS Word file is a Fast Save file**
MacLinkPlus/TOPS can only translate a Normal Save MS Word file, and has encountered a MS Word file in "Fast Save" format. To fix this problem, open the file in MS Word, select "Save As ..." from the File Menu, turn off the "Fast Save" CheckBox, and Save the file as itself. This will force MS Word to use the Normal Save format.
 - 6004 **Improper Format in a dBase file**
A dBase file has a problem in its internal structure, such as an invalid record or a null record.

Errors Reported by the Macintosh File System

Macintosh File System Errors are errors detected by the Macintosh System (not by MacLinkPlus/TOPS). They are passed thru by MacLinkPlus/TOPS and can be recognized by the leading minus (-) sign.

- 33 **File Directory Full**
There are too many files in this folder or too many files on this disk.
- 34 **Insufficient Space (Disk Full)**
This is a simple out-of-space error. This error can also be caused by exceeding partition size on a partitioned hard disk.
- 36 **I/O Error**
A Macintosh Input/Output error was detected.

- 39 Logical End-of-File Reached During a Read Operation**
This error could be caused by an incorrect file format, wrong version of a file, or a damaged file.
- 42 Too Many Files Open**
Macintosh limit of the number of files allowed to be open has been exceeded. This error could occur in MultiFinder.
- 44 Volume Locked by Hardware Setting**
Locked Disk error.
- 45 File is Locked**
Either the disk is locked OR the file has a software lock set.
- 46 Volume Locked by Software Setting**
Locked disk error, but the file is protected by a software lock.
- 47 File is Busy**
File is in use in MultiFinder, OR file was in use during a program failure and has not been reset by rebooting the system.
- 49 Attempt to Write to a Locked File**
Unlock the file and retry.
- 51 Path Reference Number Specified Non-existent Path**
Possibly caused by the operating system losing track of its position in the file system while swapping disks.
- 53 Volume Not On-line**
Possibly caused by the operating system losing track of its position in the file system while swapping disks.
- 54 Attempt to Open a Locked File for Writing**
Unlock the file and retry.
- 54 Attempt to Open a Locked File**
Unlock the file and retry.
- 60 Bad Master Directory Block**
Error in Disk Directory; Re-initialize Disk.
- 61 Read/Write Permission Doesn't Allow Writing**
You do not have permission to write to this file.

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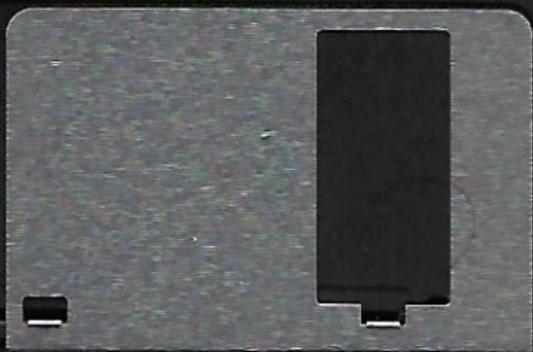
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