XEROX

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File Conversions

10

# Xerox ViewPoint

## File Conversions Reference

Volume 10

XEROX

# Xerox ViewPoint

## File Conversions Reference

VP File Conversion of ASCII Documents

VP File Conversion of Document Interchange Format

VP File Conversion of IBM DCA Documents

VP File Conversion of Lotus 1-2-3 Spreadsheets

VP File Conversion of VisiCalc Spreadsheets

VP File Conversion of Wang Documents

VP File Conversion of WordStar Documents

VP File Conversion of Xerox 860 Documents

VP File Conversion of Xerox 860 Record Files

VP Series Reference Library
Version 2.0

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# Introduction

This volume is part of the *VP Series Reference Library*, which is the encyclopedia for ViewPoint software. This library provides the most complete source of information on ViewPoint and VP Series applications for your 6085 Professional Computer System or 8010 Information System.

## Before you use this volume

Several separate volumes make up the *VP Series Reference Library*. Each volume provides information about a general category of applications, such as graphics, terminal emulation, or file conversion.

Before you refer to any VP Series reference application volume, you should become familiar with the following "core" documentation:

- *ViewPoint QuickStart Training*. Provides training and exercises for basic workstation operations as well as for creating, editing, printing, mailing, and filing documents.
- *General User Reference*. Describes the basic operations common to all ViewPoint and VP Series application software.
- *Document Editor Reference* volume 3. Provides complete information on creating and editing a document.

By mastering the ViewPoint and Document Editor basics, you will soon be able to use other VP

Series applications to perform important tasks quickly and confidently.

## About this volume

The *File Conversions Reference* volume describes the file conversion packages that enable you to exchange information with several popular systems, such as Wang, DEC, IBM, and others. Each application package supports one type of file conversion.

The *File Conversions Reference* volume consists of 11 chapters that are arranged as follows:

- Chapter 1, "Overview of ViewPoint file conversion," provides general file conversion information. This material is applicable to all types of data file conversions.
- Chapter 2, "Converter," describes the operation of the Converter icon, which is the interface between you and each of the different kinds of file conversions.
- Chapters 3 through 11 provide information on each of the specific conversion types.

### How chapters are organized

Reference material is rarely read through from cover to cover. Instead, you use it to look up specific information from time to time, much as you would use an encyclopedia.

To help you locate information, the major topics of most chapters are organized as follows:

- A key concepts section describes the principal elements of the application or feature. The key graphic illustrated at the left marks the beginning of such sections.

- A description of property sheets, option sheets, and windows provides detailed information about the properties and options related to the application.


- A procedures section provides step-by-step information on how to use the application. The 1-2-3 graphic illustrated at the left marks the beginning of such sections.

## Documentation conventions

The *VP Series Reference Library* uses the following conventions:

- Square brackets. Names of commands and property and option choices that you select with the mouse appear enclosed within brackets; for example, the [Close] command.

- Angle brackets. The names of workstation keys and alternate function keys are enclosed within angle brackets; for example, the <OPEN> key and the <PROP'S> key. This convention applies to alphabetic and numeric keys. It does not apply to words used to describe keys marked with arrow symbols, such as the tab key.

- Italics. Glossary words, VP application names, volume names, and the library name appear in *italics*.

- Bold. Names of properties, options, selections in the User Profile, information you must type, notes, and warnings appear in **bold**.

As often as possible, graphic images (such as pointer arrows) are printed in the text as they appear on the screen or on the keyboard.

## Hardware and software requirements

The application described in this volume runs on the 6085 Professional Computer System and the 8010 Information System.

The following 2.0 software must be installed, enabled, and running on the workstation:

- *Xerox ViewPoint*
- *VP NetCom, VP RemoteCom,* or *VP Standalone*
- *VP Document Editor*
- The conversion software for each kind of file you plan to convert is required.
- *VP Spreadsheet* is required for spreadsheet file conversion.
- *VP List Manager* is required for data-base type file conversion.
- *VP PC Emulation* (PCE) is optional. This software is for the 6085 only and runs with the PC Option (PCO) board. You can use this software for reading MS-DOS formatted floppies and MS-DOS files via the VP PCE virtual floppy disk.

The PC Option board is optional for this application.

## Related documentation

The following reference materials are recommended reading. You should be familiar with their contents before using any VP Series file conversion software.

- *ViewPoint QuickStart Training*
- *General User Reference*

## Information for VP CUSP Button programmers

If you are writing a CUSP program and want the program to refer to icons for the applications described in this volume, use the following as the icon types (case does not matter):

- Converter
- Document
- Doc860
- SimpleTextDoc

The icon type "Document" applies to a ViewPoint document.

# 1. Overview of ViewPoint file conversion

Different computer systems store data in different ways. Sometimes you may want to import data files from these other systems into your *VP Document Editor* or move ViewPoint data files to another type of computer. To do this requires that the data file be changed—or converted—into a different format than it was in previously.

ViewPoint file conversion software consists of two elements: the converter software (the Converter icon) and the specific conversion application software (the conversion). There is one conversion for each data file format (ASCII, WordStar, VisiCalc, and so on) that can be converted.

The Converter icon provides the interface between you and the file conversion process. The specific conversion receives the source file from the converter, converts the file, and passes the converted data file back to the converter. The converter completes the process by placing on the desktop a new icon that represents the converted data file.

## Key concepts of file conversion

*File conversion* consists of three basic elements:

- The data icon of the file to be converted
- The Converter icon
- The file conversion application software for the desired conversion

## Data icons

When possible, ViewPoint classifies files containing user-accessible information (*data files*) by *file type*. Some of these file types have ViewPoint icon shapes assigned to them.

Figure 1-1 shows three examples of files represented as *data icons*. A simple text file icon is a rectangle, and a ViewPoint document is a rectangle with a "dog-eared" corner. File types, such as file type 0, that do not have a shape assigned appear as a standard, unspecified data icon.

Figure 1-1 **ViewPoint data icons**

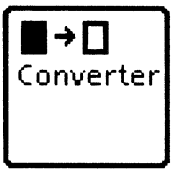

Data files from non-Xerox systems typically do not have ViewPoint-assigned file types. For this reason, many non-ViewPoint documents are grouped together into a single type. For example, if a VisiCalc spreadsheet and a Lotus spreadsheet are copied using PC Emulation, both will arrive on the ViewPoint desktop as file type 0.

The contents of each of these data files is drastically different; however, because of the complex and nonstandard transfer mechanisms, an *ambiguous file type* is assigned by ViewPoint. This file type ambiguity can make it impossible for the converter to determine which kind of file is to be converted. When this occurs, you can specify the file type for the Converter icon.

## Converter icon

The Converter Icon (Figure 1-2) must be on the desktop (either displayed or in a folder) before you can convert any file. You can use the Converter Icon properties sheet to set the various available converter properties to customize converter operations.

Figure 1-2 **Converter icon**




For added convenience, you can place multiple Converter icons on the desktop, each set up for specific conversion requirements. For example, you can set up three Converter icons: the first to do ASCII document conversions, the second for Lotus spreadsheets, and the third for 860 record files.

With this arrangement and various properties of each Converter icon appropriately set, you can simply copy or move each kind of source document to the appropriate Converter icon, and the correct conversion will be automatically invoked.

## Converter properties sheet

Use the Converter properties sheet to:

- Name the Converter icon.
- Customize the conversion operation.
- Choose the format and naming convention for the converted data file.

- Control the **Converter History** property.

Ordinarily, the properties that are selected when you close the properties sheet will be used to process the next data icon that is copied or moved to the Converter icon.

## Converter options sheet

The Converter options sheet appears when a data icon is copied or moved to the Converter icon if [Display Options] is selected in the Converter properties sheet or if certain other conditions are present.

Use the Converter options sheet to customize the conversion process, naming conventions, and **Converter History** options for a specific converted data file. The options sheet shows all the previously set properties sheet options and allows you to modify these options for each conversion process.

## Basic conversion process

A source data file appears on the desktop as an icon, or it can be contained in a folder. You can convert this icon to the desired format by copying or moving it to the Converter icon.

The resulting converted icon will appear on the desktop, in most cases, immediately to the left of the source icon. The source data file, if not moved and deleted, remains in its original location and format. A record of each conversion is filed in the Converter History log.

You can edit a data icon that has been converted to ViewPoint format in the same way as any other ViewPoint data icon. The conversion guides in the conversion chapters provide detailed information on specific conversion characteristics for each file type.

## Extended selection processing

Multiple icons can be copied or moved to a Converter icon. These data files are handled as if they were all contained in a single folder, except each converted data file is placed, as an individual icon, on the desktop as closely as possible to the left of the original icon.

If a data file in an extended selection cannot be converted, a message appears in the desktop message area giving you the choice of skipping the particular file or stopping the conversion process.

You cannot convert ViewPoint books and shared books. You can, however, convert the files within these containers.

## Folder processing

Folder processing provides you with two ways to convert data files contained in a folder: You can either convert them all at once by delivering the closed folder to the converter, or you can copy or move individual files from the open folder to the Converter icon.

A folder delivered to the converter can mean two different things: *one-to-one conversion* or *grouped conversion* (see below). If a data file in a folder cannot be converted, a message appears in the message area giving you the choice of stopping the conversion process or skipping the particular file.

## One-to-one conversion

If you convert a folder containing several data icons, a new folder containing the converted data icons will be created and placed on the desktop in the first available space to the left of the source folder. The icons within this folder will be sorted alphabetically.

The converted version of a file copied or moved to the converter from within a file container appears as close as possible to the lower right hand corner of the screen. If you move a data file to the converter and have the [Delete Source Icons After Conversion] option toggled off, the source file will be moved out of the container and will appear, along with the new converted file, near the lower right corner of the screen.

### Grouped conversion

The converter can also support the treatment of a folder (and its contents) as a single item. This capability is intended for advanced conversions that treat multiple groups of data files as single units.

### Document pagination

Each time you begin a session on the workstation, the Converter icon consults the User Profile to determine the type of pagination for conversions whose result is a ViewPoint document. This determines how the resulting document will be paginated at the time of conversion. (See the subsection titled "Setting automatic pagination" under "Performing file conversion" in Chapter 2.)

## Converter History log

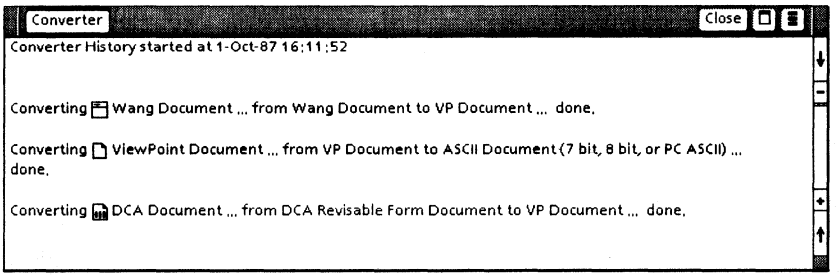
The Converter History log keeps a complete record of:

- All conversions
- Associated error messages
- Informational messages for each Converter icon

When folders of icons are converted, the conversion messages are indented in the log to show the locations of each icon within the folder. You can display the Converter History log in a read-

only window (Figure 1-3) by opening the Converter icon.

Figure 1-3 **Example of Converter History log**



# 2. Converter

The converter software provides the software interface between you and whichever specific conversion activity you wish to perform. You specify the details of each of these conversion processes by setting the options available on the Converter properties sheets and options sheets.

The selections you make in the properties sheets and options sheets control the functions of the Converter icon. The Converter options sheets are similar to the Converter properties sheets except that changes made on options sheets are for the current conversion activity only, while the settings on properties sheets generally remain the same until you change them again.

# Converter properties sheets

With the Converter properties sheet, you can label the Converter icon and permanently set the options for converting files that you copy or move to the Converter icon.

When you open the Converter icon properties sheet, the converter only displays information about the file conversion applications that are running in the Loader icon.

Information for a conversion that is not running is retained by the converter but is displayed only when the conversion is again running. However, properties for conversions that are not running are lost if you make any changes to the properties of the Converter icon holding those settings.

Figure 2-1 shows an example of the Converter properties sheet as it appears with the default settings selected and the ASCII conversion running.

The commands at the top of the Converter properties sheets work similarly to other such ViewPoint properties sheet commands, as described in the *General User Reference* volume.

**Icon Label**

This is the name (up to 100 characters) that you assign the Converter icon.

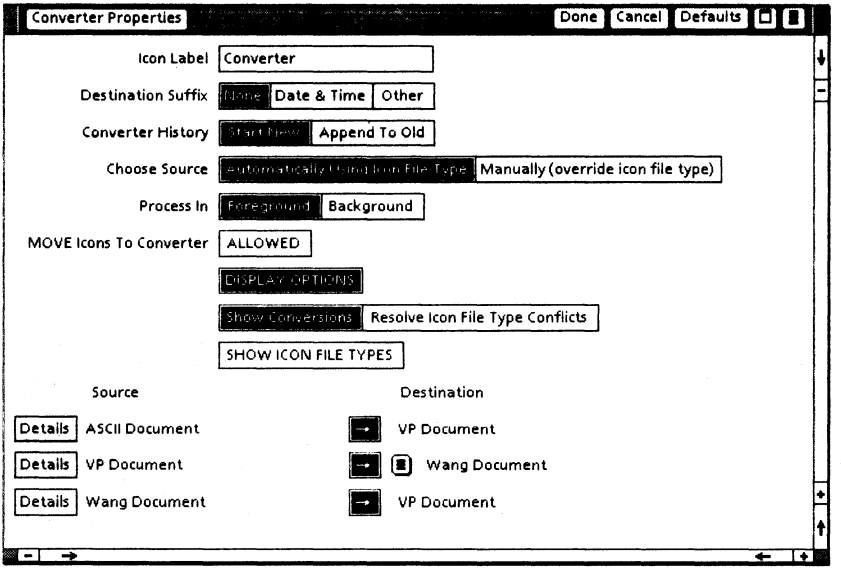
**Destination Suffix**

The destination suffix is a group of characters that follows the main file name of a converted (destination) file. The **Destination Suffix** property choices are [None], [Date & Time], and [Other].

[None]

When [None] is highlighted (default setting), the name of the converted file is

Figure 2-1 **Example of default Converter properties sheet**




exactly the same as the name of the source file.

[Date & Time]
When you choose the [Date & Time] option, the converted document will have a name consisting of the original document name, plus "CONVERTED," followed by the date and time of conversion. If you convert a folder of files, the time and date stamp of the converted files will be changed to the time and date that the files were converted.

[Other]
If you select [Other], another text box will appear on the properties sheet. This box will display the suffix, ".converted." You can delete ".converted" and furnish your own suffix.

The maximum complete file name length is approximately 100 characters. If the file name, with suffix, exceeds that, the name is truncated and an ellipsis is inserted. If you try to include a suffix that is more than 95 characters long, the suffix will be left off.

**Conversion History**

This option determines the duration of the current Converter History log.

[Start New]

If you select [Start New] (the default selection), the log is cleared and restarted every time a conversion *job* is performed.

[Append to Old]

If you select [Append to Old], new conversion messages are added to the end of the current file, the total size of which can be up to 65,534 characters. You can view this file by opening the Converter icon. You can also copy text from this file to a ViewPoint document.

**Choose Source**

When you want to use icon type for the source icon, you select [Automatically Using Icon File Type] (the default setting). All **Source** and **Destination** formats for the currently loaded conversions will be displayed in the lower area of the properties sheet (see Figure 2-1).

With [Automatically Using Icon File Type] selected, the converter uses the source-file icon type to determine the format of the file. For instance, if the icon shows the file to be a Type 4353 ViewPoint document, the Converter icon assumes it is a document. This is true for all files with specific icon types (for instance, spreadsheets, record files, and 860 documents).

The format and file type are not, however, always a reliable indication of the contents of a file. For example, file types 0 and 2 are used for many files.

Table 2-1 shows some of the *file type conflicts* that can occur between these types of files. Not only can a single file type represent multiple source formats, but a source can be represented by multiple file types.

Table 2-1 **Source file types**

| | **Type 0** | **Type 2** |
|---|---|---|
| Lotus 1-2-3 spreadsheets | x | — |
| ASCII document | x | x |
| WordStar document | x | x |

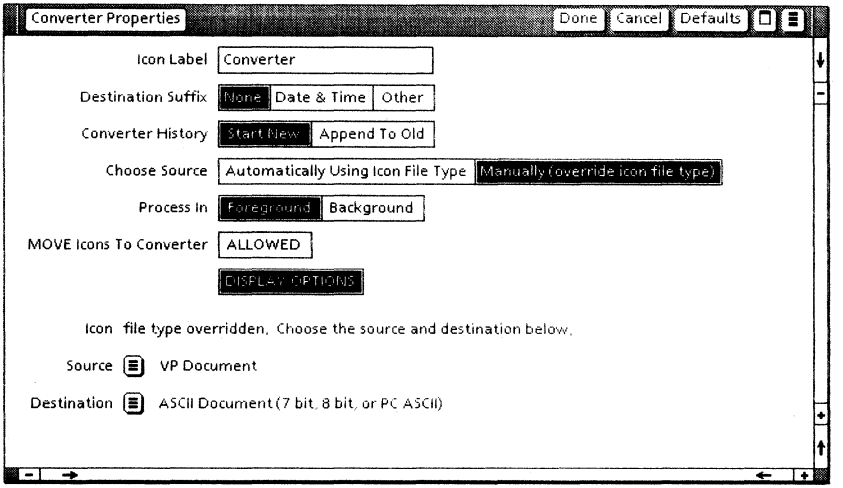
If a particular icon type can support more than one file format (for instance, both ASCII files and VisiCalc spreadsheets can be type 0 files), you must specify the format, because the converter uses only the file type to determine the correct conversion.

If the conversions for both kinds of files are running, the converter will not be able to determine which kind of file is to be converted. To further complicate matters, this situation can change from operating session to operating session, because different conversions may be running each time.

If you select [Manually (Override Icon File Type)] to override icon type, the [Show Conversions] mode display in the lower half of the sheet will be replaced with a simple multiple choice display (Figure 2-2).

Use [Manually (Override Icon File Type)] only if all of the files you convert with this icon are

Figure 2-2 **Properties sheet with Manually (Override Icon File Type) selected**




of the format you specified. Select one of the destination format choices that appears.

It is important that you specify the correct file type. If you specify the incorrect format, the results will be unpredictable.

**Process In**

This property allows you to select whether you want the conversion to be done as a background process or a foreground process. The choice labels for **Process In** are [Foreground] and [Background], with [Foreground] being the default selection.

If you allow the file conversion process to be done in the foreground, the hourglass will display until all of the selected icons are converted. If you select [Background], the converter will perform the file conversion in the background so you can continue using the workstation for other activities. (For more

information on background processing, see the *General User Reference* volume.)

Multiple background jobs can run sequentially in a single converter, and multiple converters can run background jobs at the same time.

Most types of conversions can be run in background. If a particular source icon that is part of a conversion group cannot be converted in the background, a message will display asking you to choose whether to allow the converter to immediately process the icon in the foreground or skip the icon.

If you choose to convert the icon in the foreground, only that icon will be converted in the foreground. After this foreground conversion, the rest of the background conversion jobs will continue normally, provided there are no further problems.

A confirmation message will be displayed for every icon (for instance, 860 record files) that cannot be converted in the background. If an unresolvable problem arises during background processing, the source icon responsible will be skipped and an error message entered in the Converter History log.

Background conversions are managed in exactly the same way as any other ViewPoint application that runs in the background. You can cancel these conversions via the background activities menu in the upper right corner of the screen. Background jobs are identified in the background activities menu with the name of the Converter icon that is running the conversion.

If you try to run a foreground job in a converter that is running one or more background jobs, the foreground job will be forced to wait until all background jobs running in the converter are completed.

A status message indicating how many background jobs are ahead of the foreground job is displayed in the message area. You can abort the foreground job by pressing <STOP>.

**Note:** Running a foreground job in a converter that is already running background jobs can tie up the workstation for a long time. If you have background jobs running on one Converter icon, it is usually a good idea to use a different Converter icon for the foreground jobs.

**Move Icons to Converter**

This option allows you to choose the method of delivering files to the converter. The **Move Icons to Converter** [Allowed] property defaults to off. When this option is off, files can only be copied to the converter. If you attempt to move a file to the converter with [Allowed] off, an error message displays.

An icon copied to the Converter icon is literally copied, and the conversion made from the copy. The temporary copy of the original is deleted after the conversion is completed, but the original data file remains untouched.

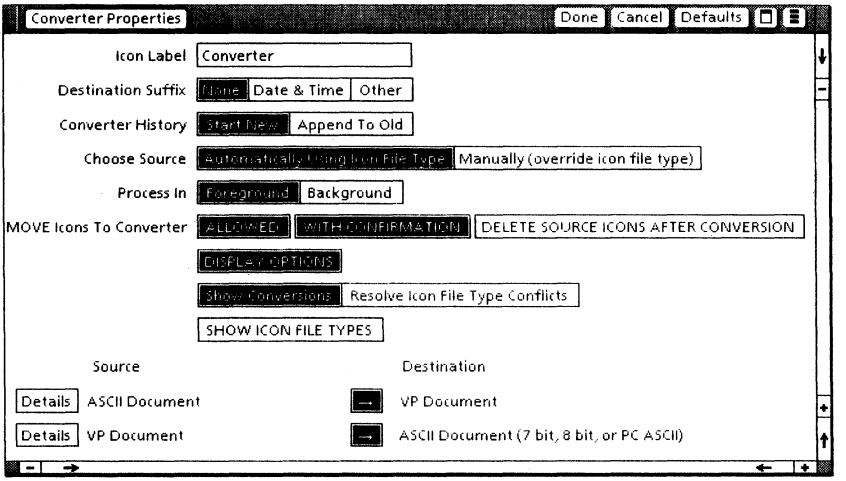
If you copy the source icon to the converter, the newly converted data file appears on the desktop in the first possible space to the left of the original data icon.

Because the converter works upon the copy of the source icon, there is a decrease in free hard disk pages while the conversion job is in progress. Some of these disk pages are reclaimed when the conversion is done.

If you want to move—instead of copy—a file to the converter, select the [Allowed] property. (You should have a backup of any file you move to the converter, because the source file could possibly be lost if a system problem occurs during the conversion process.)

With the [Allowed] property option selected, two other properties are displayed: [With Confirmation] and [Delete Source Icons After Conversion] (Figure 2-3).

Figure 2-3 **Converter properties sheet with Allowed property displayed**




[With Confirmation]

If you have [With Confirmation] selected (its default state), a confirmation message will be displayed in the message area when you move an icon to the converter. You may proceed with, or cancel, the move activity at that time.

If [With Confirmation] is off, the move will happen without your further involvement.

[Delete Source Icons After Conversion]

If [Delete Source Icons After Conversion] is selected, the icons that were moved to the converter will be deleted after the conversion is completed, leaving only the converted icons.

If [Delete Source Icons After Conversion] is off, the icons moved to the converter will disappear during conversion and be put back on the desktop after the conversion is completed. It is a good idea to have [With Confirmation] selected whenever [Delete Source Icons After Conversion] is selected. (See Table 2-2 for details about the disk-space usage of the various options.)

As with other ViewPoint activities, you can do a background icon move or copy to the converter by indicating the Converter icon destination with the right mouse button. This, when combined with the background processing option of the Converter icon, provides increased performance and flexibility.

If you make a background move or copy to a Converter icon with the **Process In** property set to [Foreground], the converter will display options sheet regardless of the [Display Options] property setting. You will need to indicate whether you want the conversion performed in background or foreground and then select [Start].

If the source data icon is moved from the desktop to the converter but not deleted, the converted data icon will be placed on the desktop in the first available space to the left of the source icon. If the source data icon is moved from the desktop to the converter and deleted, the converted icon will be placed where the source icon had been.

Depending on certain factors, if the conversion job is aborted, moved icons that have not yet been processed are returned to the desktop regardless of the setting of the [Delete Source Icons After Conversion] property. If you move a group of icons to a converter that has the [Delete Source Icons After Conversion] property selected and then

Table 2-2 **Effects of various Move options**

| Property choices | Move |
|---|---|
| [Allowed] off (default) | Icon move not allowed and error message displayed. Icons can only be copied to converter. |
| [Allowed] on [Confirm] on [Delete] off | Icon move accepted and confirmation message displayed. Conversion works directly on source icons, which are moved back to desktop after conversion job completes. There is no change to free disk pages after the move, but there is a net decrease in free pages after the conversion because of the creation of the converted file. |
| [Allowed] on [Confirm] off [Delete] off | Icon move accepted. Conversion works directly on source icons, which are moved back to desktop after conversion job completes. There is no change to free disk pages after move, but there is a net decrease in free pages after the conversion because of the creation of the converted file. |
| [Allowed] on [Confirm] off [Delete] on | Icon move accepted. Conversion works directly on source icon. There is no change to free disk pages after move, but there may be a net decrease in free pages, offset somewhat by source icons being deleted. |
| [Allowed] on [Confirm] on [Delete] on | Icon move accepted and confirmation message displayed. Conversion works directly on source icon. There is no change to free disk pages after move, but there may be a net decrease in free pages, offset somewhat by source icons being deleted. |

cancel the conversion, the source files that have already been converted will be deleted.

[Display Options]
If you select the [Display Options] property, the Converter options sheet appears when you copy or move a file to the Converter icon. This gives you the opportunity to change converter property choices before the conversion begins.

If [Display Options] is not selected, the Converter icon uses the current permanent settings and does not display the options sheet unless a problem is encountered.

[Treat Folder as a Unit]
Some conversions expect to take a group of icons as input and will handle the group as one document. Only if such a conversion is running will the Converter properties sheet include the [Treat Folder as a Unit] property choice. (This property choice is not shown in any illustrations in this document.) This type of conversion always converts a folder, which it treats as a single logical unit.

If the [Treat Folder as a Unit] property is selected, the converter will treat a folder as a group of related components or as a single unit, depending on the expectations of the running conversions.

If the [Treat Folder as a Unit] property is turned off (its default state), the converter will treat a folder of icons simply as an extended selection, and a folder of converted icons will be the result.

The behavior of the [Show Conversions] display changes depending on the status of the [Treat Folder as a Unit] option. When this option is off, you can turn the **Source-Destination** single-arrow boxes

on and off. These arrow boxes indicate those single-input conversions that treat a folder as an extended selection.

Double-arrow boxes indicate those conversions that treat a folder as a unit. If [Treat Folder as a Unit] is off and you try to select a double-arrow box, an error message displays. If the [Treat Folder as a Unit] box is selected and you try to change a single-arrow box, a similar message displays.

[Show Conversions] and [Resolve Icon File Type Conflicts]

The [Show Conversions] and [Resolve Icon File Type Conflicts] properties control the rest of the Converter properties sheet display. When [Show Conversions] is selected (default setting), the source and destination pairing of all possible (running) conversions is displayed. All possible source formats are listed alphabetically on the left side of the arrow (Figure 2-3).

On this properties sheet, a single arrow represents a single-input conversion, and a double arrow represents a grouped-input conversion. Only when an arrow box (single or double) is highlighted, is the corresponding source/destination conversion activated. This allows you to configure particular Converter icons to convert only specific types of files.

A source can be paired to only one destination at a time. If there is only one possible destination for a source, it appears in read-only format on the right side of the arrow. (See Figure 2-3.)

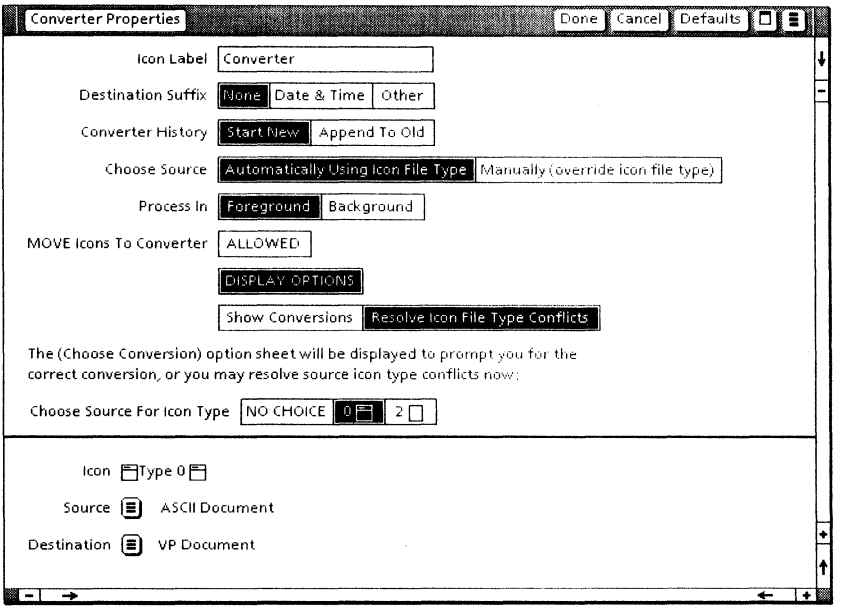
If more than one destination is possible, an auxiliary menu is displayed to the right of the arrow, followed by the default

destination choice. You may change the default destination through the menu.

If you expect a file type conflict, select [Resolve Icon File Type Conflicts]. If there are no type conflicts, a message displays.

If there is a conflict, the lower part of the properties sheet changes. Figure 2-4 shows the Converter properties sheet with [Resolve Icon File Type Conflicts] and file type 0 selected.

Figure 2-4 **Resolve Icon File Type Conflicts on and file type 0 selected**




The purpose of this complex view is to allow you to resolve file type conflicts and choose a single conversion for each

of the file types for which multiple conversions have been registered.

If you do not wish to deal with conflicts using the [Resolve Icon File Type Conflicts] option, you can confine yourself to the [Show Conversions] view (Figure 2-3) and simply start the conversion job. If file type conflicts are present, the converter will prompt you to resolve them at the time of the conversion.

When you have [Resolve Icon File Type Conflicts] selected (Figure 2-4), the **Choose Source for Icon Type** property is displayed at the bottom of the properties sheet. The first choice is [No Choice], which is the default setting.

The other choices vary depending upon which **Source-Destination** pairs are selected in the [Show Conversions] display. The property choices are the file types for which the currently active conversions have conflicts.

If a file type is selected, the area below the line displays the selected type number, a small representation of the icon for that file type, and **Source** and **Destination** choices. You can select the **Source** and **Destination** formats from the available choices in the auxiliary menus.

The values below the line show the selected **Source-Destination** pair associated with the icon type. If you select an option other than [No Choice], the settings of the current values below the line will be remembered. If you select [No Choice], no changes will be made to the active conversions.

When you are in the [Resolve Icon File Type Conflicts] mode and then select [Show Conversions], all of the settings

made earlier through **Choose Source for Icon Type** will affect the active conversions in the [Show Conversions] view.

The **Source-Destination** pairs that you defined in the **Choose Source for Icon Type** choices remain active, and those that were not selected are deactivated. Essentially, you are choosing the conversion pair simply by selecting **Choose Source for Icon Type**. Selecting [No Choice] allows you to avoid making a choice.

When you select [Show Conversions] from [Resolve Icon File Type Conflicts], the lists of icon file types associated with sources may be different if you previously changed the **Choose Source for Icon Type** property.

Some of the arrow boxes may be turned off, indicating that those conversions are not active. If [Show Icon File Types] is selected, the lists of icon file types may also be different.

[Show Icon File Types]

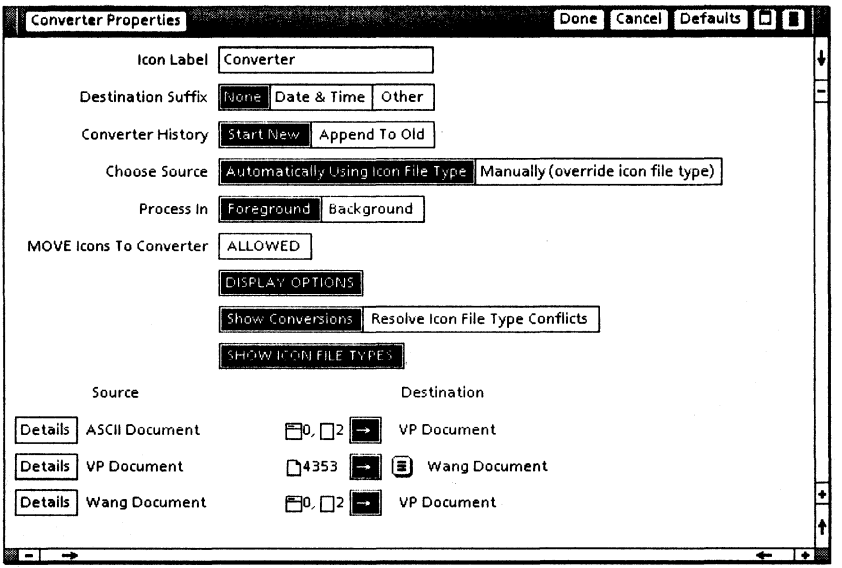
The file types listed below **Source** are those that are running in the Loader icon and that can be converted at the time. The file types listed in the **Destination** column are those that the source files can be converted to.

The [Show Icon File Types] choice only appears when [Show Conversions] is selected. If [Show Icon File Types] is selected, the list of icon file types associated with the source is displayed.

The list is composed of the small icons that represent file type, followed by the numeric value assigned to that type of data file (see Figure 2-5). A single source may accept more than one file type, so

several types may be listed. Only the source file names are shown unless you select [Show Icon File Types].

Figure 2-5 **Properties sheet with Show Icon File Types selected**




**Source** and **Destination**

The arrow box between each **Source** and **Destination** pair acts like a switch. If the arrow box is highlighted, the corresponding conversion is active. If the arrow is not highlighted, the corresponding conversion is not active.

The **Destination** file type and the [Details] box are shown only for arrow boxes that are selected. All arrow boxes default to on when a conversion is initially loaded, but thereafter, default to the last specified setting.

When you have multiple conversions that accept the same file type as input, you can set one of the arrow boxes on and the other

off, thereby resolving the possible conflict of how the converter is to determine the source format. This allows you to prevent conversion conflicts and to use multiple Converter icons to handle potentially conflicting source formats.

If all conversions were automatically restarted after a system boot (that is, set to **Auto Run** in the User Profile), the information retained in each Converter properties sheet would accurately reflect the previously set options for the available conversions. (For example, the specified **Source-Destination** options would be accurately displayed.)

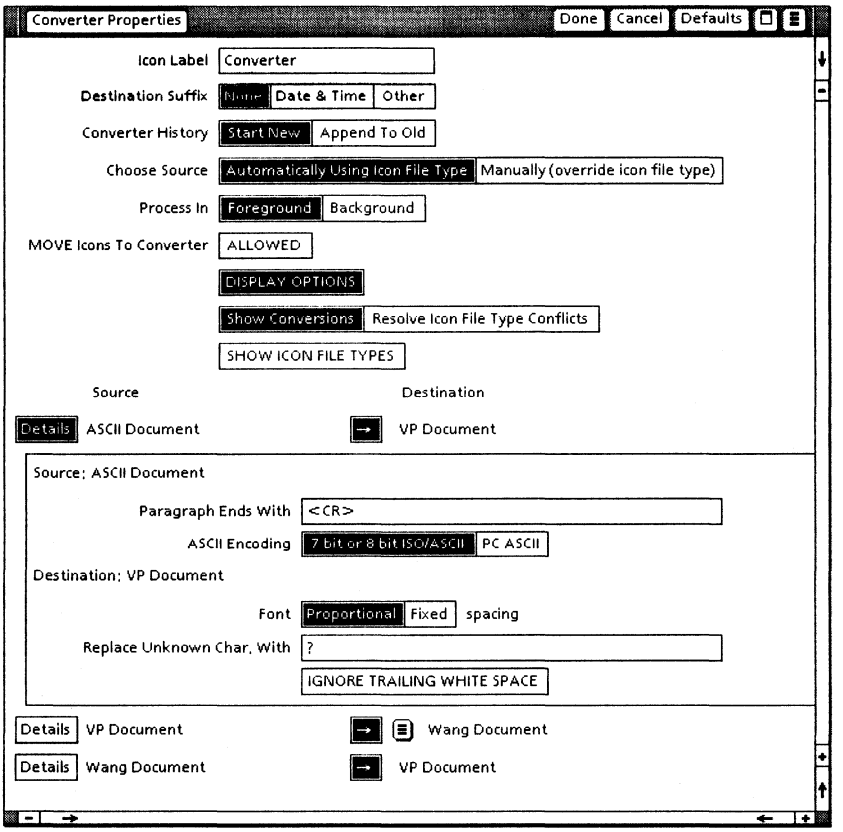
If, however, the conversions that were running during a previous operating session are not restarted when the workstation is rebooted, the settings shown in the properties sheet may not accurately represent the current settings. This is because the settings shown are based on the conversions that were running when the settings were originally made instead of on the conversions that are currently running.

Under these circumstances, the converter will restore the previous destination settings if the conversion is loaded before the Converter properties sheet is opened and then closed with the [Done] command. If the preferred destination conversion is not running when the converter is accessed, the converter will use the normal default to define a new destination.

[Details]
: This feature allows you to set options that are specific to each conversion. A [Details] box is displayed to the left of a **Source-Destination** pair if there are some conversion-specific options that you can select.

The settings are displayed when you select [Details]. Figure 2-6 shows the properties sheet [Details] box for ASCII conversion. (The settings displayed for the ASCII conversion are examples only.)

Figure 2-6 **Properties sheet showing Details display for ASCII conversion**




The displayed [Detail] properties are those applicable for the particular **Source-Destination** pair, so there may be different choices shown for different source files with the same destination file type.

**Note:** Selecting the [Defaults] command in the Converter properties sheet window header will change the properties only in [Details] displays that are open when you select [Defaults].

## Converter options sheets

The Converter options sheet will display when you copy or move a file to the Converter icon if you have [Display Options] selected in the Converter properties sheet. It will also appear if you background copy or move the source data icon to the converter when the **Process In** property in the properties sheet is set for [Foreground].

The Converter options sheet has the same items as the properties sheet except for the following properties and choices:

- **Icon Label**
- **Move Icons To Converter**
- [Display Options]

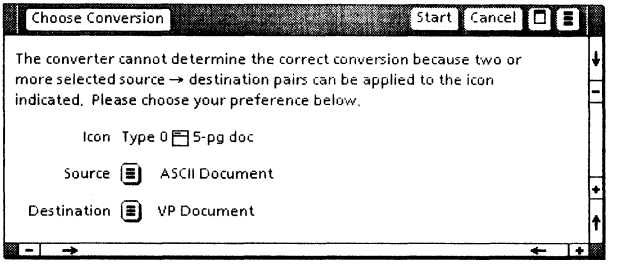
The arrow boxes on the options sheet will be set as they were on the properties sheet, but the [Details] boxes will be off, regardless of how they were set in the properties sheet.

The selections you make on the Converter options sheet will override the options set on the properties sheet. These changes apply only to the current conversion job.

## Choose Conversion options sheet

The Choose Conversion options sheet (Figure 2-7) displays when the file type that has been input to the converter can be accepted as more than one format, and the converter cannot determine what conversion to use.

Figure 2-7 **Choose Conversion options sheet**




The options sheet also lists a pair of choice items in the same way that [Manually (Override Icon File Type)] and [Resolve Icon File Type Conflicts] do on the properties sheet.

The possible source file types are listed alphabetically when you select the auxiliary menu to the right of the **Source** property. The first one in the list is the default. You may change the source and destination displayed by making new selections in the auxiliary menu.

If you select [Start], the displayed conversion will be used for the indicated icon. If you select [Cancel], you will be asked if you want to skip or quit. If you are converting a group of files and select [Skip], the named icon will be skipped and the conversion job will continue. If you select [Quit], the entire conversion job will be aborted.

A Choose Conversion options sheet will display for every unresolved conflict; therefore, you may need to supervise the conversion process for some time if the job contains many icons for which there are type conflicts. You can avoid this interaction by properly using the [Resolve Icon File Type Conflicts] mode of the properties/ options sheet.

# Performing file conversion


The actual activities that you perform to do file conversions are simple and straightforward once you have the Converter properties sheets and Converter icons configured as you want them. The basic conversion procedure then consists of getting the non-ViewPoint data file onto your desktop and moving or copying it to the converter.

## Obtaining data files for conversion

Before you can convert a data file, it must first be on your desktop.

**Note:** You cannot directly convert reference icons. To convert these files, simply make a local copy on your desktop, and then copy or move that icon to the Converter icon.

If the file you want to convert is a ViewPoint file, place it on your desktop in the same way as other ViewPoint icons. To bring in a non-ViewPoint data file, however, can be more complicated.

The methods of importing the other file types are described in the subject volumes in the *VP Series Reference Library* documentation.

You can import non-ViewPoint data files by:

- Retrieving files stored on the File Service
- Retrieving files stored or mailed by personal computers on the network
- Retrieving stored files through the Remote Batch Service running in transparent mode
- Copying files from a Xerox-format floppy disk to the ViewPoint desktop

- Retrieving files from MS-DOS floppy disks (6085 only)
- Retrieving files from *VP PC Emulation* emulated fixed disk (6085 only)
- Retrieving files from *VP PC Emulation* virtual floppy disk (6085 only)
- Retrieving files from the Xerox Development Environment
- Transferring files via IBM 3270 File Transfer

If the file is present on your remote file server, you can bring it in via Network. If the file exists on a floppy disk in Xerox format, it can be placed on your desktop the same as a ViewPoint data icon.

If the data file is on a floppy disk that is in MS-DOS format, you will first need to configure the system to read the disk:

1. Insert the floppy disk into the disk drive of the workstation, select the Floppy Drive icon, and press the <PROP'S> key.

   If your workstation is configured for Xerox-format disks, a message will display in the message area at the top of the screen. You will be given the choice of Xerox or MS-DOS format.

2. Select the [MS-DOS] format and close the properties sheet.

3. Open the Floppy Drive icon, and copy the files that you want to convert onto the desktop, into a container, or directly onto the Converter icon.

A more detailed discussion of using MS-DOS formatted floppy disks is given in the *VP PC Emulation and MS-DOS User Guide* volume of the *VP Series Reference Library* documentation.

## Retrieving the Converter icon

Before you can put the Converter icon on your desktop, the converter common software must be loaded and running. (See the *VP Series Reference Library* volume on software installation.)

1. Open the Directory icon, the Workstation folder, and the Office Accessories folder.

2. Copy the Converter icon to the desktop.

You can place multiple Converter icons onto your desktop, each configured for a specific type of conversion. Simply make as many Converter icon copies on the desktop as desired.

## Setting Converter icon properties or options

You will need to configure each Converter icon by setting the properties sheet options as needed. These options are explained in the preceding section on "Converter properties sheets."

## Setting automatic pagination

If you are converting non-ViewPoint document files to ViewPoint format, you can have the system automatically paginate the converted document. Set this property by entering the desired option into the [Conversion] section of the User Profile, as described in "Changing the User Profile" in the *General User Reference* volume of the *VP Series Reference Library* documentation.

You can set any of three pagination values:

- SIMPLE—Provides all of the visible signs of pagination but can leave the document fragmented on the disk. This means that the file may occupy more disk space than necessary,

and file access may be slowed. This type of pagination is faster than COMPRESS.

- COMPRESS—Provides all of the visible signs of pagination and stores the file in optimized form on the disk, which can speed up file access. This type of pagination takes the longest to execute.

- NONE—Provides no pagination at all. This provides the fastest conversion process, but can make subsequent document accessing very slow and could cause other problems.

If you make no valid entry in the User Profile, [Simple] is the default selection. With pagination included in the conversion process, file conversion to ViewPoint may take longer than a conversion from ViewPoint to another format.

## Basic conversion procedures

Once you have the converter properties set and the configured Converter icons on your desktop, the actual file conversion process is simple to initiate:

1. Verify that the conversion software you will need is loaded and running. To do this, open the Loader icon and check the specific conversion. If you attempt to convert a file of a type for which the conversion is not running, a message will appear indicating that the copy operation failed.

2. Copy or move the source data icon to the appropriate Converter icon, as discussed in the "Converter properties sheets" section, where the **Move Icons to Converter** property is described.

   If you want to convert multiple data icons, you can select them from the desktop individually or assemble them all in a folder and deliver the folder to the converter. Handling multiple data icons is discussed in

the "Basic conversion process" section, under "Key concepts of file conversion" in Chapter 1.

If it appears that source icons have been lost after a conversion, try ending the current session, logging on again, then opening the Converter icon that was last being used.

If there was an unrecoverable conversion error, the Converter icon may have been able to save the source icons that were being converted at the time.

If destination icons seem to be missing, it may be that the conversion did not complete successfully. Check the Converter History log of the Converter icon for an appropriate message.

If your workstation disk runs out of free disk pages during a conversion, a message will display, the operation will stop, and the resulting document will be discarded. This occurrence will be noted in the Converter History log.

## Halting a conversion job

You can stop a conversion job running in the foreground by pressing the <STOP> key. If you want to stop a job that is running in the background, select the [Cancel Current Activities] choice in the background activities menu. If you are converting multiple folders of files in the background, you must cancel the conversion for each folder that you do not want converted.

## Recovery and restart

Source icons are kept within the Converter icon. In this way, the source icons are protected if a system problem occurs while a conversion job is in progress.

When you access the Converter icon after a system reboot (by delivering an icon to the

Converter icon for conversion or by pressing <OPEN> or <PROP'S>), the converter searches for source icons that did not go through the complete conversion process. These icons are packaged in a folder named "Converter Input Icons for Job Started [time stamp]." The folder is copied onto the desktop, and a message is posted.

# 3. VP File Conversion of ASCII Documents

Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert ASCII files into ViewPoint files and ViewPoint files into ASCII files.

This chapter provides information on the ASCII conversion process. Complete information about the ASCII standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the basic hardware and software requirements listed in the "Introduction" chapter of this volume.

- The PC Option board is optional and for the 6085 only. It can be used for reading MS-DOS formatted floppy disks and MS-DOS files via VP PCO virtual floppy disk.
- *VP PC Emulation* is optional and for the 6085 only. It can be used for reading MS-DOS files via VP PCO virtual floppy disk and for MS-DOS formatted floppy disks.
- The *VP Document Editor* is required.

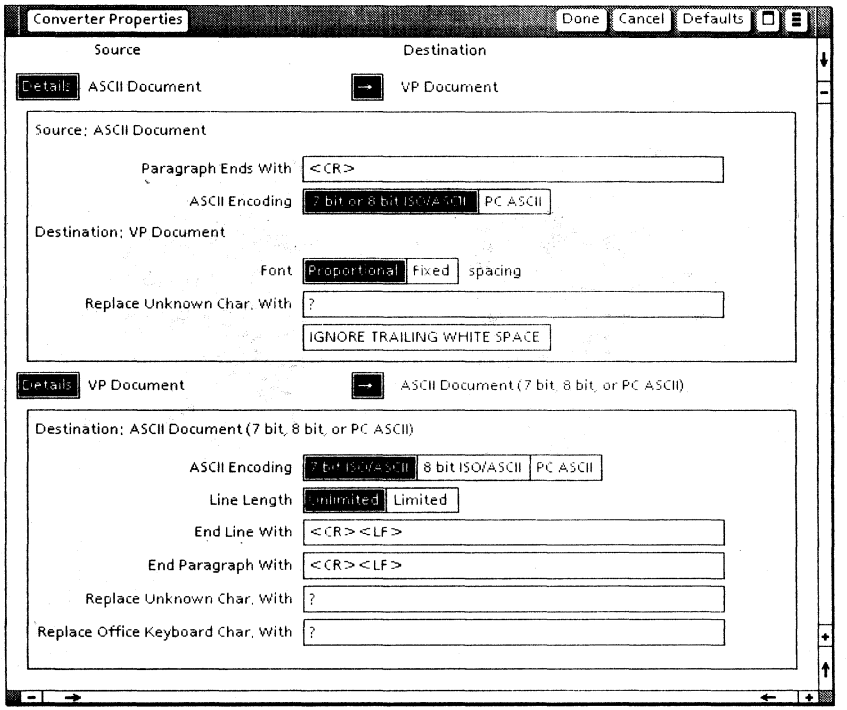
# Key concepts of ASCII file conversion

Because ASCII and ViewPoint files differ in function and restrictions, the conversion is not always exact. Use the conversion guide at the end of this chapter to help you predict conversion results.

# Properties and options sheets

The ASCII-specific section of the Converter properties sheet is shown in Figure 3-1. This illustration shows the [Details] displays for both the ASCII to ViewPoint and the ViewPoint to ASCII conversions. Refer to this illustration as you read the following description of the available options for this conversion.

Figure 3-1 **Converter properties sheet showing ASCII details**



## Details for ASCII file conversion to ViewPoint

Figure 3-1 shows the arrangement of the following options on the Converter properties sheet.

**Paragraph Ends With**

This option allows you to specify what characters or control codes the conversion will interpret as ends of paragraphs in the source ASCII document. When such symbols are detected in the ASCII document, the converter ends the current paragraph and starts a new one. The text is passed through to the ViewPoint document except for <CR> (carriage return) and/or <LF> (line feed).

For example, if you specify <CR><LF><TAB>, and these characters are detected in the ASCII document, a new ViewPoint paragraph will be started. The <TAB> character will be inserted into the destination document, and the <CR> and <LF> will be dropped. Typical settings for this parameter are <NL><NL> (new-line new-line) or <NL><TAB>.

If the item is left empty, paragraphs in the ViewPoint document will be terminated only when the maximum paragraph length of approximately 8160 characters is exceeded. The default for this property is <CR>.

**ASCII Encoding**

This property choice allows you to specify what character encoding is used in the ASCII document. The choices for this property are [7 Bit or 8 Bit ISO/ASCII] (the default) and [PC ASCII].

Use [7 Bit or 8 Bit ISO/ASCII] for files that come from remote hosts. Use [PC ASCII] for files that come from *VP PC Emulation* (the Xerox PC Option) or other MS-DOS compatible computers.

**Font Spacing**

This choice allows you to choose the font used in the converted document. The choices for this property are [Proportional] and [Fixed].

If you select [Proportional] spacing (the default), the default document font (typically Modern 12) will be used for the destination document. If you select [Fixed] and **ASCII Encoding** [7 Bit or 8 Bit ISO/ASCII], the Terminal 12 font will be used. The [Fixed] font for **ASCII Encoding** [PC ASCII] is PC-Terminal 12 (from the *VP PC Emulation* fonts).

If black rectangles appear in the document, either on the screen or when printed, it means that the specified font is not loaded on your workstation or printer.

**Replace Unknown Char. With**

When the conversion encounters an ASCII character that it cannot convert, a question mark (the default) or other characters that you specify instead will be inserted into the ViewPoint document. These characters will be inserted in place of the original character to indicate that a character was not translated correctly.

The text you substitute can be a single character or a string of characters. If this text field is empty, unknown characters will simply be dropped.

[Ignore Trailing White Space]

This property allows you to specify whether white space that follows standard characters and precedes the end-of-line in the ASCII document should be ignored or included in the destination document.

Some ASCII files contain text with lines of constant length. This format is achieved by padding lines out with spaces. These padding spaces will be ignored if you

have [Ignore Trailing White Space] selected. These spaces will be included if this property choice is not selected (the default condition).

## Details for ViewPoint file conversion to ASCII

Figure 3-1 shows the arrangement of the following options on the Converter properties sheet.

**ASCII Encoding**

This option allows you to specify what character encoding will be used in the destination ASCII document. The choices for this property are [7 Bit ISO/ASCII], [8 Bit ISO/ASCII], and [PC ASCII].

[7 Bit ISO/ASCII]
Seven-bit characters are generated with certain *digraph* and foreign characters simulated with two characters. This is the default setting.

[8 Bit ISO/ASCII]
Eight-bit characters are generated with the ISO 6937 special characters used for the digraphs and foreign characters.

[PC ASCII]
This character set, recognized by IBM PC and PC compatibles, is used to generate the destination ASCII document.

**Line Length**

This property allows you to control the length of the lines in the destination ASCII document. The choices for this property are [Unlimited] and [Limited].

[Unlimited]
ViewPoint document text will be inserted into the current ASCII line until a ViewPoint new-paragraph, new-line, or new-page character is encountered. This is

the default setting and will result in ASCII text lines of unlimited length.

[Limited]
This property choice allows you to specify the maximum allowable number of characters (80 is the default) that can be included in an ASCII text line. When the line length maximum is reached, the user-defined **End Line With** text (see below) will be inserted.

The length of the **End Line With** text is included in the line length count, except for the characters <CR>, <LF>, and <FF> (form feed). This will result in ASCII text lines whose lengths are equal to or less than the number specified. The minimum value for line length is 10; the maximum, 256.

[Word Wrap]
If you select [Limited] **Line Length**, the [Word Wrap] choice will display.

When [Word Wrap] is on (its default state) it allows lines of text to be broken between words. This means that the line will be broken at the nearest white space before the line limit, resulting in ragged right text.

When [Word Wrap] is off, lines of text will be broken at the line limit. This means that lines longer than the maximum number of characters are broken at the line limit, regardless of whether or not the line break occurs in the middle of a word.

**End Line With**
The text item that you specify here (the default is <CR><LF>) is inserted into the ASCII document whenever a line break is needed or when a ViewPoint new-line (<SHIFT><RETURN>) character is encoun-

tered. Ordinarily, you will probably want to specify <NL> (new line) or the default value. If you have no text for this item, no line endings will be inserted.

**End Paragraph With**

This is a special text item inserted into the ASCII document when the end of the current ViewPoint document paragraph is detected. The default entries are <CR><LF>.

Other suggested alternatives are <NL><NL> or <CR><TAB>. If you have no text for this item, no paragraph endings will be inserted, and all text will run together.

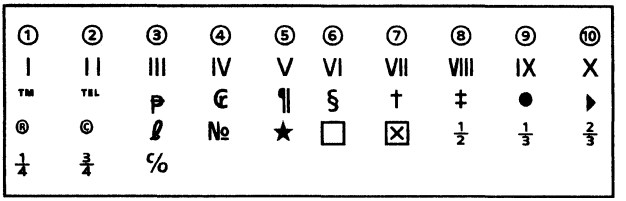
**Replace Unknown Char. With**

This text (a question mark is the default character) is inserted into the ASCII document in place of ViewPoint characters that cannot be converted. For this text item, you can specify a single character (such as @ or #) or a string of characters. If the text item is left empty, the characters that do not convert will be dropped.

**Replace Office Keyboard Char. With**

When the conversion detects a ViewPoint character from the Office keyboard that does not have an equivalent character in the destination ASCII encoding, the text that you specify (a question mark is the default character) in this field will be inserted into the ASCII document instead. If this text item is left empty, the Office keyboard characters (Figure 3-2) will be dropped.

Figure 3-2 **Office keyboard characters**




## Sources of data files

ASCII documents come from three major sources:

- Remote hosts, such as DEC VAXs
- PCs on the network or PC Emulation
- Xerox Developmental Environment

## Converting data files

To convert data files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

## Entering special text items

Some ASCII characters (for example, bell, form feed, and so on) cannot be typed in with any ViewPoint keyboard; however, you can specify any character in the [Details] text items section of the properties sheet. The text items will accept standard characters, control characters, and special characters.

Except for the white-space characters, a standard character is any character that can be typed on the English, ASCII, or ISO ViewPoint keyboards. Standard characters are interpreted as the corresponding ASCII characters. For example, the letter "A" on the ViewPoint English keyboard will be interpreted as the ASCII character "A."

A *control character* results in white space, including tab, paragraph tab, new paragraph, space, carriage return, line feed, and form feed. White-space characters in text items are significant and are interpreted as ASCII white-space characters.

Special characters are used to represent non-standard characters. A special character string is enclosed in left and right angle brackets (< >) and includes the brackets.

These special characters take two forms: octal form and abbreviated.

The octal form is "<nnn>." The "nnn" represents three octal digits in the range 000 through 377. For example, you can enter the bell character as "<007>." All 7-bit and 8-bit ASCII characters can be represented with this form. There must always be three octal digits.

The abbreviated form is "<xxx>." The "xxx" represents a one-, two-, or three-character predefined abbreviation:

- <CR> carriage return (octal 015)
- <LF> line feed (octal 012)
- <NL> new line (equivalent to <CR> <LF>)
- <FF> form feed (octal 014)
- <TAB> tab (octal 011)

- < < > less-than sign (escaped left angle bracket)

The octal form can be used to represent the same characters. The left angle bracket abbreviation is necessary to distinguish between the beginning of a special character and a standard less-than sign.

For example, suppose you want to type in the ASCII control sequence "carriage return/line feed." In the octal form, this would be "<015><012>." In the abbreviated form, it would be "<CR><LF>." (The abbreviated form of <NL> is the same as <CR><LF>.)

Suppose you want to enter the text "x < y." The letters x and y are standard characters, so you can type them from the English, ASCII, or ISO keyboard. The "<" in the text string is, however, a special character, and in octal form it would be "x <074> y." In the abbreviated form, it would be "x < < > y."

If there are errors, they will be deleted when you select [Done] or [Start] on the properties or options sheet, and a message will be displayed asking you to correct the problem. The text in error will be indicated.

## ASCII to ViewPoint conversion guide

Table 3-1 shows the octal codes for PC ASCII characters. Add the row and column numbers to get the PC ASCII code.

Table 3-2 lists how various document characteristics convert between ViewPoint and ASCII.

Table 3-1 **Octal codes for PC ASCII characters**

| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0 | ↑@ | ☺ | ☻ | ♥ | ♦ | ♣ | ♠ | • | ◘ | ↑I | LF | ♂ | FF | CR | ♫ | ☼ |
| 20 | ► | ◄ | ↕ | !! | ¶ | § | ▬ | ↨ | ↑ | ↓ | → | ← | ∟ | ↔ | ▲ | ▼ |
| 40 | | ! | " | # | $ | % | & | ' | ( | ) | * | + | , | - | . | / |
| 60 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | : | ; | < | = | > | ? |
| 100 | @ | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
| 120 | P | Q | R | S | T | U | V | W | X | Y | Z | [ | \ | ] | ^ | _ |
| 140 | ` | a | b | c | d | e | f | g | h | i | j | k | l | m | n | o |
| 160 | p | q | r | s | t | u | v | w | x | y | z | { | \| | } | ~ | ⌂ |
| 200 | Ç | ü | é | â | ä | à | å | ç | ê | ë | è | ï | î | ì | Ä | Å |
| 220 | É | æ | Æ | ô | ö | ò | û | ù | ÿ | Ö | Ü | ¢ | £ | ¥ | ₧ | ƒ |
| 240 | á | í | ó | ú | ñ | Ñ | ª | º | ¿ | ⌐ | ¬ | ½ | ¼ | ¡ | « | » |
| 260 | ▒ | ▓ | ▓ | │ | ┤ | ╡ | ╢ | ╖ | ╕ | ╣ | ║ | ╗ | ╝ | ╜ | ╛ | ┐ |
| 300 | └ | ┴ | ┬ | ├ | ─ | ┼ | ╞ | ╟ | ╚ | ╔ | ╩ | ╦ | ╠ | ═ | ╬ | ╧ |
| 320 | ╨ | ╤ | ╥ | ╙ | ╘ | ╒ | ╓ | ╫ | ╪ | ┘ | ┌ | ▓ | ▓ | ▌ | ▐ | ▀ |
| 340 | α | ß | Γ | π | Σ | σ | µ | τ | Φ | Θ | Ω | δ | ∞ | φ | ε | ∩ |
| 360 | ≡ | ± | ≥ | ≤ | ⌠ | ⌡ | ÷ | ≈ | ° | ∙ | · | √ | n | ² | ▪ | |

Special interpretations:

↑@ = null

↑I = tab

LF = line feed

FF = form feed

CR = carriage return

Table 3-2 **ASCII document conversions**

| Feature | After conversion to ASCII (7 bit and 8 bit) | After conversion to ViewPoint |
|---|---|---|
| Character | Characters that cannot be converted are replaced by question marks or other user-specified characters. | Characters that cannot be converted are replaced by question marks or other user-specified characters.<br><br>Line feed ($12_8$) = new line.<br><br>Form feed ($14_8$) = page break. |
| Fonts | — | Converts to 12-point Modern if proportional font.<br><br>Converts to 12-point Terminal if **Font** [Fixed] and **ASCII Encoding** [7 Bit or 8 Bit ISO/ASCII].<br><br>Converts to 12-point PC-Terminal if **Font** [Fixed] and **ASCII Encoding** [PC-ASCII]. |

Table 3-2 **ASCII document conversions (continued)**

| Feature | After conversion to ASCII (7 bit and 8 bit) | After conversion to ViewPoint |
|---|---|---|
| Formatting characters | Converted as follows:<br>New line = line feed ($12_8$)<br>Page break = form feed ($14_8$)<br>New paragraph = carriage return ($15_8$) | Converted as follows:<br>New line = line feed ($12_8$)<br>Page break = form feed ($14_8$)<br>New paragraph = carriage return ($15_8$) |
| Page format properties | No conversion. | — |
| Page labels (headings/ footings) | No conversion. | — |
| Page margins | No conversion. | 1″ margins (top, bottom, left, and right) |
| Paragraph properties | No conversion. | — |
| Tab settings | No conversion. | — |

Table 3-3 **VP document to 7-bit ISO/ASCII conversions**

| Character | Exceptions when converting to 7-bit ASCII |
|---|---|
| Lowercase ae digraph (æ) | Converts to ae |
| Uppercase AE digraph (Æ) | Converts to AE |
| Lowercase oe digraph (œ) | Converts to oe |
| Uppercase OE digraph (Œ) | Converts to OE |
| Lowercase ij digraph (ij) | Converts to ij |
| Uppercase IJ digraph (IJ) | Converts to IJ |
| Lowercase o with slash (∅) | Converts to o |
| Uppercase O with slash (∅) | Converts to O |
| Lowercase Greenlandic k (K) | Converts to K |
| Left double quote (") | Converts to " |
| Right double quote (") | Converts to " |
| Left single quote (') | Converts to ' |
| Right single quote (') | Converts to ' |

**Note:** Whenever the conversion finds an ASCII paragraph or line with an accent character, it will increase the line height in the destination ViewPoint document paragraph to allow correct display of the accent character. All the lines in the paragraph will have this line height.

# 4. VP File Conversion of Document Interchange Format

Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert Document Interchange Format (DIF) files into ViewPoint files and ViewPoint files into DIF.

This chapter provides information on the DIF conversion process. Information about the DIF standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the hardware and software listed in the "Introduction" chapter of this volume.

- The PC Option board is optional and for the 6085 only. It can be used for reading MS-DOS formatted floppy disks and MS-DOS files via VP PC Emulation (PCE) virtual floppy disk.
- *VP PC Emulation* is optional and for the 6085 only. It can be used for reading MS-DOS files via VP PCO virtual floppy disk and for MS-DOS formatted floppy disks.
- The *VP Document Editor* is required.

## Key concepts of DIF file conversion

Because DIF and ViewPoint files differ in function and restrictions, the conversion is not always exact. Use the conversion guide at the end of this chapter to help you predict conversion results.

## Properties and options sheets

The Converter properties and options sheets for DIF conversion are the same as those for the basic converter except:

- When [Details] for the DIF to VP conversion is selected, a **Font Spacing** choice of [Proportional] or [Fixed] is displayed.
- The DIF file types (0 and 2) are shown when [Show Icon File Types] is selected.

If you specify [Proportional] spacing (default), Modern font will be used in the resulting ViewPoint document. If you specify fixed spacing, the PC Terminal font will be used.

## Converting DIF files

You can transfer DIF files via the Network, Remote Batch Service, or floppies.

To convert files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

# DIF conversion guide

Use the following conversion guide to help you predict DIF conversion results.

Table 4-1 **DIF conversion guide**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Bar charts | No | — |
| Boldface | Yes | Converts to DIF emphasis. |
| Centered paragraphs | Yes | — |
| Character printing | Yes | An ASCII translation of the characters is attempted.<br>Only Code 0 is translated.<br>All accents are stripped from characters.<br>Characters that are not ASCII are printed as question marks(?). |
| Character properties:<br>bold<br>italics<br>underline<br>strikeout | <br>Yes<br>No<br>Yes<br>Yes | — |
| Diacritical marks | No | — |

Table 4-1 **DIF conversion guide (continued)**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Double columns | No | — |
| Equation frames | No | Text contained within a frame is lost. |
| Fields | No | — |
| Fonts | Yes | 10 and 12 pitch only; no proportional spacing. |
| Frames | No | — |
| Graphics | No | — |

Table 4-1 **DIF conversion guide (continued)**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Headings and footings | Yes | Only left heading/footing of first page format character is used.<br><br>Only 150 characters are converted to DIF heading/footing.<br><br>Heading/footing appears on the first page of DIF document.<br><br>Leading space of ViewPoint heading translates into DIF top margin.<br><br>Paragraph properties of first paragraph character are used when producing DIF heading/footing; any others are treated as new-line characters.<br><br>Heading/footing is centered if first paragraph of ViewPoint heading/footing was centered. Otherwise, it appears at left side of page.<br><br>Leading space of ViewPoint footing translates into DIF bottom margin.<br><br>All other paragraph properties of heading/footing are ignored. |
| Hyphens:<br>regular<br>non-breaking<br>discre-tionary | <br>Yes<br>Yes<br>Yes | Nonbreaking hyphen becomes DIF hard hyphen.<br><br>Discretionary hyphen becomes DIF soft hyphen. |

Table 4-1 **DIF conversion guide (continued)**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Italics | No | — |
| Justified paragraphs | Yes | Converts precisely. |
| Line spacing | Yes | ViewPoint line height is translated to closest approximation of single, double, and triple spacing. |
| Non-breaking space | Yes | — |
| Numbers | Yes | — |
| Overstrike | Yes | — |
| Page:<br>height<br>width | <br>Yes<br>Yes | — |
| Page break | Yes | Required page break converts to hard page end and hard page start.<br>No conversion of automatic page breaks. |
| Page break character | Yes | — |

Table 4-1 **DIF conversion guide (continued)**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Page margins | Yes | Top, bottom, left, and right margins and heading and footing convert closely to ViewPoint margins.<br><br>Page margins and paragraph margins are added together to produce equivalent DIF margins.<br><br>Top margin of DIF document is space between top of page and all text (including heading text).<br><br>Top margin is set to leading space if heading exists; if no heading exists, top margin is the same as ViewPoint top margin.<br><br>Bottom margin of DIF document converts to closest approximation of DIF lines.<br><br>DIF footing margin is set to the leading space of ViewPoint footing. |
| Page numbering | Yes | Page number delimiter is converted to its DIF equivalent (" # # # ").<br><br>Page numbering characteristics of first page format character are used (page numbering never changes in converted DIF document).<br><br>Page number format is ignored. |

Table 4-1 **DIF conversion guide (continued)**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Page size and page format | Yes | Only the first page format character is converted.<br><br>Text is single column only. |
| Paragraph properties | Yes | Center converts properly.<br><br>Right alignment converts to left alignment.<br><br>Text justification is preserved: line spacing of single, double, and triple chosen to most closely approximate the ViewPoint format; margins are converted as described in the Page margins part of this table.<br><br>New-paragraph character that begins a page is read only for its properties. It is not translated to hard new line in DIF document, unless new-paragraph character immediately follows a page break and new paragraph is centered. |
| Pitch | Yes | Pitch of first new paragraph determines document pitch.<br><br>Point sizes from 6 through 11, inclusive, convert to 12 pitch. Everything else converts to 10 pitch. |
| Record files | No | No conversion. |

Table 4-1 **DIF conversion guide (continued)**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Space and non-breaking space | Yes | Converts to space and hard space, respectively. |
| Strikeout | Yes | Translated to DIF overstrike. |
| Superscript and subscript | Yes | Any level of superscripting is converted to baseline up.<br><br>Any level of subscripting is converted to baseline down. |
| Tab motions | Yes | A tab or paragraph tab is converted according to an approximation of tab's position in ViewPoint document. Tab's type and/or setting may have to be changed to conform to ViewPoint document's appearance.<br><br>Paragraph tab is converted to normal tab if ViewPoint tab setting is a decimal tab.<br><br>Otherwise, paragraph tab temporarily changes left margin to paragraph tab's position until next new paragraph.<br><br>Normal tab is converted to DIF normal tab unless ViewPoint tab motion falls under decimal tab setting. |

Table 4-1 **DIF conversion guide (continued)**

| Feature | Conversion to DIF | Comments |
|---|---|---|
| Tab properties:<br>left<br>decimal<br>right<br>center | <br><br>Yes<br>Yes<br>No<br>No | Left and decimal tabs convert properly.<br><br>Right and center tabs are not converted. |
| Tables | No | No conversion. |
| Text frames | No | Text contained within a frame is lost. |
| Underline | Yes | Converts properly (underscore). |

# 5. VP File Conversion of IBM DCA Documents

Document Content Architecture (DCA) is IBM's file format standard for document interchange. Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert DCA files into ViewPoint files and ViewPoint files into DCA.

This chapter provides information on the DCA conversion process. Information about the DCA standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the hardware and software listed in the "Introduction" chapter of this volume.

- There is no additional hardware necessary for this type of conversion.
- The *VP Document Editor* is required.

## Key concepts of IBM DCA conversions

Currently, IBM systems supporting IBM DCA include DisplayWrite, PC, System/36, System/38 (final form only), 4700, and 5520. DCA is also supported by several non-IBM systems including the Data General Eclipse product line, DEC VAX VMS systems, and the HP 3000 series (revisable form only).

Because DCA and ViewPoint files differ in function and restrictions, the conversion is not always exact. Use the conversion guides at the end of this chapter to help you predict conversion results.

## DCA file types

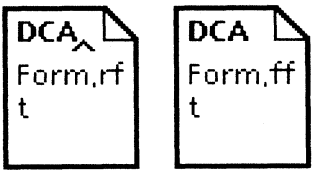
IBM's Document Content Architecture specifies two DCA file types:

- Revisable Form Text (RFT)
- Final Form Text (FFT)

After conversion, DCA files appear as documents with a DCA title. The RFT file has a caret immediately following the title (Figure 5-1).

Final Form DCA Text documents are not designed for editing; however, both RFT and FFT documents can be converted to ViewPoint, copied, filed, mailed, printed, and deleted.

Figure 5-1 **Converted DCA file icons**




## Obtaining data files

The primary method of importing DCA files to the ViewPoint environment is via 3270 file transfer. The various methods of obtaining non-ViewPoint data files are listed in Chapter 2 in the "Obtaining data files for conversion" subsection.

Any of these methods can be used to obtain DCA files.

When copying a DCA file from the desktop to an MS-DOS formatted floppy disk, you should ignore the "Transferring [filename] to MS-DOS may lose data" warning message. This message occurs whenever a foreign file type is copied to a PC Emulation (PCE) floppy disk.

## Possible conversion directions

DCA files can be converted in three directions:

- DCA Revisable Form Text to ViewPoint format
- DCA Final Form Text to ViewPoint format
- ViewPoint format to DCA Revisable Form Text

When you retrieve a DCA file, the data icon appears as a non-ViewPoint file and cannot be viewed or edited until it is converted. Similar characteristics convert, while dissimilar characteristics convert when possible. The conversion flags or ignores noncommon characteristics.

# Properties and options sheets

The properties and options sheets for DCA file conversion have no additional options to those explained in Chapter 2. The DCA file types (0, 2, and 4454) appear when you select [Show Icon File Types].

# Conversion characteristics

Various characters and formatting elements convert in different ways.

## Similar characteristics that convert

Similar characteristics that convert successfully include:

- Main body text
- Headings and footings
- Tabs (A tab aligned on any character except a period becomes a center tab.)
- Line endings
- Justification
- Page numbers (single increments only)
- Page breaks (Soft page breaks are dropped.)
- Fonts, upward to ViewPoint: Modern 6, 10, 14, 24; Titan 10 or 12; or Terminal 8
- Fonts, downward to Courier: 10, 12, 15; Modern 10; Essay italic; or a 17.1-pitch font, 8.5-pitch font, 5-pitch font

## Dissimilar characteristics that convert

Dissimilar characteristics that convert include:

- DCA columns convert to ViewPoint text (but not tables).
- DCA footnote text converts, but does not include location markers.
- DCA user prompts convert to fields, and fields convert user prompts.
- ViewPoint tables convert to a DCA listing of columns and contents.

The sample ViewPoint table in Table 5-1 would convert as shown in Figure 5-2. Notice, in Figure 5-2, that each table entry is given a line of its own.

Table 5-1 **Sample table**

| Cycle | Month | 12 Week | | Total |
|---|---|---|---|---|
| | | 1 | 2 | |
| 2nd qtr | Apr | 112 | 89 | 201 |
| | May | | | |
| | June | | | |
| 3rd qtr | July | 103 | 115 | 218 |
| | Aug | | | |
| | Sep | | | |

Figure 5-2 **Converted sample table**

ViewPoint Table Name: Sample table

Column name: Column1
Column header: CYCLE

Column name: Column2
Column header: MONTH

Column name: Column3
Column header: 12 WEEK

Column name: Column3.Column1
Column header: 1

Column name: Column3.Column2
Column header: 2

Column name: Column4
Column header: TOTAL

---

2ND QTR
APR
MAY
JUNE
112
89
201

---

3RD QTR
JULY
AUG
SEP
103
115
218

## Noncommon characteristics that are flagged or ignored

- Black boxes (DCA to ViewPoint and ViewPoint to DCA) appear for non-corresponding

characters such as Math, Logic, or Office symbols, Cyrillic letters, and Kana alphabet or Kanji characters.

- When graphic frames, equation frames, text frames, and frame captions are dropped, an error message displays.
- Post 1.0 ViewPoint document features, such as dot leaders and table of contents markers, are ignored.
- Line numbering is dropped.
- Align-text-field commands are converted to tabs, and their positions are inserted into the tab properties of the ViewPoint paragraph.

## Converting files

To convert files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

## DCA to ViewPoint conversion guide

Use the following conversion tables to help you predict DCA to ViewPoint conversion results.

Table 5-2 **DCA to ViewPoint contents**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Latin letters, punctuation, common symbols, required hyphen, discretionary hyphen, required space, numeric space | Mapped to the corresponding Xerox character.<br><br>Accented letters are mapped to an accent followed by a letter. | The fullest IBM Character Set (337) of code page 256 (manual number SC23-0759-0, Appendix D, Figure 25) and the fullest character set (340) of code page 259 (see the IBM DisplayWrite Manual, pp. 19-26) are used. |
| Cyrillic letters, Kana syllables, other letters, substitute symbol, other symbols | Mapped to a black box 360\|312 (▮). A count of such characters is printed in the conversion history. | — |
| Text from main body (both RFT and FFT) | Translated to main body text in ViewPoint document. | — |
| Text from headings and footings | Translated to text into headings or footings (left, right, or common, as appropriate). | — |

Table 5-2 **DCA to ViewPoint contents (continued)**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Text from external documents or external record files | Dropped. A count of the instances of discarded external text is printed in the conversion history. | The entire contents to be translated must be contained in a single DCA document. |
| Text from operator message | Dropped. Noted in the conversion history. | — |
| Text from automatic numbering templates or pagination identifiers | Dropped. A count of the instances of discarded line numbering is printed in the conversion history. | Automatic numbering of embedded paragraphs is not supported in ViewPoint documents. |
| Text from footnote identification, reference, and lineation (text preceding or following the footnote markers and references) | Dropped. The text of the footnotes is properly converted but will appear in an undefined location with respect to the main text that called out the footnote. | Footnote conversion is not supported in ViewPoint documents. |

Table 5-3 **DCA to ViewPoint fonts and character appearance**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| 1/10″ width font (Advocate, Courier 10, Pica) | Titan 12 point | — |
| 1/12″ width font (Scribe, Courier 12) | Titan 10 point | — |
| 1/15″ width font (Scribe 15, Courier 15) | Terminal 8 point | — |
| Proportional fonts (Modern, Title, Essay) | Modern 10 point | Proportional fonts in DCA all have implied font widths of 1/12″. |
| Proportional italic fonts (Essay italic and Boldface italic) | Italicized Modern 10 point | Proportional fonts in DCA all have implied font widths of 1/12″. |
| 1/10″ width italic font (Light italic 10, Courier italic 10) | Titan 10 italic | The only italic print-wheel font provided with ViewPoint is Titan 10 italic. |
| 1/12″ width italic font (Light italic 12, Courier 12 italic) | Titan 10 italic | The only italic print-wheel font provided with ViewPoint is Titan 10 italic. |

Table 5-3 **DCA to ViewPoint fonts and character appearance (continued)**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Superscript | Superscript | — |
| Subscript | Subscript | — |
| Bold | Bold | — |
| Underscoring (simple and double) | Underlining (simple and double) | — |
| Word underscoring | Simple underlining of word | — |
| Overstriking, with any over-striking character | Overstrike | — |
| Backspacing for accents | Converted to the Xerox accent followed by the character. | — |
| Backspacing for underscoring, bolding, over-striking, creating visual aspects on paper | Ignored. Since backspace codes are dropped, the codes following them will appear as ordinary text. | — |

Table 5-4 **DCA to ViewPoint line layout**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Line margins | Paragraph left and right margins computed from most recent line margins. | DCA text is line-oriented, i.e., margins, alignment, justification, height, etc. are attached to lines. In ViewPoint these attributes are attached to paragraphs. |
| Line ending made by software | Soft carriage return at line end is converted to new-line character. | — |
| Line ending made by user | Current ViewPoint paragraph is ended at that point. | — |
| Line justification | Paragraph justified if "justification percentage" > 50%; otherwise, ragged-right. | — |
| Line alignment | Paragraph made centered, left-aligned, or right-aligned according to most recent line alignment. | — |
| Line density and spacing | Paragraph line height computed from line density and line spacing. | — |

Table 5-4 **DCA to ViewPoint line layout (continued)**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Line numbering | Ignored. | Line numbering is not supported by ViewPoint documents. |
| Tabs:<br><br>left-aligned<br>right-aligned<br>centered<br>period-aligned<br>other character-aligned | Tabs set at requested position as:<br>left-aligned<br>right-aligned<br>centered<br>decimal<br><br>centered | — |
| Align text field | Mapped to tab stops in the ViewPoint paragraph. | — |
| Indent tabs | Become paragraph tabs. Paragraph properties may be changed to match the DCA indent tab behavior. | — |
| Left margin release | Current ViewPoint paragraph is ended at that point. Left margin of next paragraph is adjusted. | — |
| Conditional line break | Ignored. | Conditional line breaks are not supported in ViewPoint documents. |

Table 5-5 **DCA to ViewPoint page layout**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Page size | Set as specified. | — |
| Page margins:<br>left<br>right<br>top<br>bottom | Page left and right margins set to 0.<br><br>Top margin set according to DCA parameter, plus 2 points to prevent clipping at the top.<br><br>Bottom margin set according to DCA parameter. | Left and right margins are handled at the paragraph level. |
| Page division between main text and footnote text | Ignored. | — |
| Page headings and footings | Positioning and same/next page initiating are set as specified. | — |
| Page numbering | Page number placed in the heading or footing text, set to the specified initial value, and incremented in increments of 1 only. | Page number increments larger than 1 are not supported in ViewPoint documents. |

Table 5-5 **DCA to ViewPoint page layout (continued)**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Changes in page size, margins, numbering, headings, and footings | A Page Format Character (PFC) with the right size, margins, headings, footings, etc., is placed in the ViewPoint document when called for. | — |
| Page ending made by software | Soft page end is dropped. | — |
| Page ending made by user | Hard page end is translated into a page break. | — |
| Columns | Column markers are dropped. Text within columns correctly translated, but auto overflow in subsequent editing is not possible as it would be if text was placed in a ViewPoint table instead of in main body. | — |
| Keeping lines together on the same page | Paragraph will be kept on the same page as the next paragraph if possible. | — |

Table 5-6 **DCA to ViewPoint user interface**

| DCA feature | After conversion to ViewPoint | Comments |
|---|---|---|
| Print medium | Not converted. | ViewPoint icon interface is used to communicate with printer. |
| User prompting | Mapped to fields. | — |
| Operator message | Shown in conversion history. | — |
| Spelling control | Not converted. | — |
| Document profile | Not applicable. Some DCA documents do not have a profile, such as those appearing on the desktop from a floppy or from PC emulation. Other DCA documents have a profile, such as the ones entering the network through an SNA gateway. | — |

# ViewPoint to DCA conversion guide

Use the following conversion guides to help you predict ViewPoint to DCA conversion results.

Table 5-7 **ViewPoint to DCA contents**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Most Latin letters, most punctuation, most common symbols, required hyphen, discretionary hyphen, required space, numeric space | Mapped to corresponding EBCDIC character. Accents and cedilla plus the following letter are mapped to the corresponding accented letter, if it exists, or to an accent backspaced over a letter. | IBM codes are in character set 337 of code page 256. |
| Cyrillic and Kana, Greek, Arabic, Kanji, Math, Office, Logic, and other symbols | Not converted. Mapped to DCA substitute code (__). A count of such characters is printed in the conversion history. | — |
| Text from main body | Translated to text into main body of document. | — |

Table 5-7 **ViewPoint to DCA contents (continued)**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Text from headings and footings | Converted into headings or footings (left, right, common as appropriate). | — |
| Fields | Translated into user prompting. Evaluation rules and other properties are discarded without warning. | — |
| Text frames | Lost. Noted in the conversion history. | — |
| Equation frames | Lost. Noted in the conversion history. | — |
| Tables | Table name and description of columns printed. Table row entries printed on separate line. | — |
| Frame captions | Lost. | — |
| Cover sheet | Copied to the output DCA file. | — |

Table 5-7 **ViewPoint to DCA contents (continued)**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Other contents:<br>graphics<br>pie/bar charts<br>bit maps<br>scanned images<br>CUSP procedures | Lost. Count of discarded graphics frames, and CUSP buttons printed in Converter History log. | DCA does not support these document constructions. |

Table 5-8 **ViewPoint to DCA fonts and character appearance**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| 19-point fonts and above (fixed pitch and proportional) | 5-pitch font (GFID 240) | The layout of text will almost always look different in VP and DCA because of major differences in font metrics.<br><br>Proportional DCA fonts come in only 10 points (12-pitch). Size was considered more important than font spacing. |
| 14—18-pt fonts (fixed pitch and proportional) | 8.55-pitch font (GFID 260) | Same as above. |
| 12- and 13-point fonts (fixed pitch and proportional) | Courier 10 | Same as above. |
| 9-, 10-, and 11-point fixed-pitch fonts | Courier 12 | Same as above. |
| 9-, 10-, and 11-point proportional fonts | Modern 10 | Same as above. |
| 7- and 8-point fonts (fixed-pitch and proportional) | Courier 15 | Same as above. |

Table 5-8 **ViewPoint to DCA fonts and character appearance (continued)**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| 6-point fonts and below | 17.1-pitch font (GFID 250) | Proportional fonts come in only one size: 10 points. |
| 12-point and larger fixed-pitch fonts which have been italicized | Courier italic 10 | When printing a DCA document, a code to suspend the printing process is placed before each string of italics; an operator message requesting that the user change the printwheel, ball, or band appears after each string of italics. |
| 11-point and smaller fixed-pitch fonts which have been italicized | Courier italic 12 | |
| All proportional fonts which have been italicized | Essay italic 12 (all DCA proportional fonts are 12-pitch) | |
| Superscript (normal, subscripted, or superscripted) | Superscript | — |
| Subscript (normal, subscripted, or superscripted) | Subscript | — |
| Bold | Bold | — |
| Underline (simple and double) | Underscore (simple and double) | — |

Table 5-8 **ViewPoint to DCA fonts and character appearance (continued)**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Strikeout | Overstrike, using a hyphen for over-striking character | — |

Table 5-9 **ViewPoint to DCA paragraphs**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Paragraph | Paragraph is mapped into a set of lines. A soft carrier return is appended at the end of the line, taking into account the margins and font width. The last line of the set is ended by a hard carrier return rather than a soft one. New-line characters convert to hard returns followed by enough para-tabs to maintain indent level. | DCA text is line-oriented, i.e., margins, alignment, justification, height, etc., are attached to lines. In ViewPoint these attributes are attached to paragraphs. |
| Paragraph margins (left and right) | Added to left and right values of page margins, to become left and right margins of line. | — |
| Paragraph justification | Line "justification percentage" 100% if paragraph is justified; 0% otherwise. | — |
| Paragraph alignment | Line made centered, left-aligned, or right-aligned. | — |
| Paragraph pre- and post-leading | Simulated with blank lines. | — |

Table 5-9 **ViewPoint to DCA paragraphs (continued)**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Paragraph line height | Mapped to line height. | — |
| Tabs:<br><br>left-aligned<br>right-aligned<br>centered<br>decimal | Tabs set at requested position as:<br>left-aligned<br>right-aligned<br>centered<br>period-aligned | — |
| Paragraph tabs | Become indent tabs. | — |
| Paragraph keep | Mapped to line keep. | — |

Table 5-10 **ViewPoint to DCA page layout**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Page size | Mapped to page image width and depth. | — |
| Page margins: top, bottom | Mapped to last body text line and first body text line, respectively. | — |
| Page margins: left, right | Added to left and right line margins, respectively. | — |
| Page headings and footings | Vertical positioning, same/next page initiating, and same/different left/right are set as specified. | — |
| Page numbering | Page number placed in the heading or footing text, set to the specified initial value, with increment parameter of 1. | — |

Table 5-10 **ViewPoint to DCA page layout (continued)**

| ViewPoint feature | After conversion to DCA | Comments |
|---|---|---|
| Non-initial page format properties | Converted as specified above, except that the properties are applied to the DCA document only if a page break has just occurred. Otherwise, the page properties are saved and output after the next page break. | DCA allows page properties to change after hard page ends. |
| Page break | Mapped to hard page end. | — |
| Multiple columns per page, column break | Not converted. | Not supported by DCA. |
| Keeping paragraphs together on the same page | Mapped to line keep. | — |

# IBM EBCDIC Character Set to Xerox Character Set conversion

This section contains information relating to the translation of the IBM EBCDIC Character Set to the Xerox Character Set. (For information on the Xerox Character Set to IBM EBCDIC Character Set, refer to "Xerox Character Set 0 to IBM EBCDIC character conversion.")

Table 5-11 is presented in the following manner:

- The first column represents, if possible, graphic representation of the IBM characters.
- The second column is the IBM EBCDIC character code in hexadecimal. (All IBM codes are in character set 337 of code page 256.)
- The third column is the Xerox Character Code in octal.

Entries separated by a vertical bar (for example, 357|47) explicitly state the character set with the first number. The second number is the code. Nonexplicit entries are in XCharSet0. Some entries represent multiple characters (for accents) and are separated by a semicolon.

**Note:** An asterisk marking the character name indicates that the Xerox translation is an approximation.

Table 5-11 **IBM EBCDIC Character Set to Xerox Character Set conversion**

| Character | IBM code | Xerox code |
|---|---|---|
| Space | 40x | 40 |
| space (non-brk) | 41x | 357\|41 |
| â | 42x | 303;141 |
| ä | 43x | 340;141 |
| à | 44x | 301;141 |
| á | 45x | 302;141 |
| ã | 46x | 304;141 |
| å | 47x | 342;141 |
| ç | 48x | 343;143 |
| ñ | 49x | 304;156 |
| [ | 4Ax | 133 |
| . | 4Bx | 56 |
| < | 4Cx | 74 |
| ( | 4Dx | 50 |
| + | 4Ex | 53 |
| ! | 4Fx | 41 |
| & | 50x | 46 |
| é | 51x | 302;145 |
| ê | 52x | 303;145 |
| ë | 53x | 340;145 |
| è | 54x | 301;145 |
| í | 55x | 302;151 |
| î | 56x | 303;151 |
| ï | 57x | 340;151 |
| ì | 58x | 301;151 |
| ß | 59x | 373 |
| ] | 5Ax | 135 |
| $ | 5Bx | 44 |
| * | 5Cx | 52 |
| ) | 5Dx | 51 |

Table 5-11 **IBM EBCDIC Character Set to Xerox Character Set conversion (continued)**

| Character | IBM code | Xerox code |
|---|---|---|
| ; | 5Ex | 73 |
| ^ (circum. s.) | 5Fx | 136 |
| - (minus) | 60x | 55 |
| / | 61x | 57 |
| Â | 62x | 303;101 |
| Ä | 63x | 340;101 |
| À | 64x | 301;101 |
| Á | 65x | 302;101 |
| Ã | 66x | 304;101 |
| Å | 67x | 342;101 |
| Ç | 68x | 343;103 |
| Ñ | 69x | 304;116 |
| ¦ | 6Ax | 357\|153 |
| , (comma) | 6Bx | 54 |
| % | 6Cx | 45 |
| _ (low bar) | 6Dx | 137 |
| > | 6Ex | 76 |
| ? | 6Fx | 77 |
| ø | 70x | 371 |
| É | 71x | 302;105 |
| Ê | 72x | 303;105 |
| Ë | 73x | 340;105 |
| È | 74x | 301;105 |
| Í | 75x | 302;111 |
| Î | 76x | 303;111 |
| Ï | 77x | 340;111 |
| Ì | 78x | 301;111 |
| ` (grave) | 79x | 140 |
| : | 7Ax | 72 |

Table 5-11 **IBM EBCDIC Character Set to Xerox Character Set conversion (continued)**

| Character | IBM code | Xerox code |
|---|---|---|
| # | 7Bx | 43 |
| @ | 7Cx | 100 |
| ' | 7Dx | 47 |
| = | 7Ex | 75 |
| " | 7Fx | 42 |
| Ø | 80x | 351 |
| a | 81x | 141 |
| b | 82x | 142 |
| c | 83x | 143 |
| d | 84x | 144 |
| e | 85x | 145 |
| f | 86x | 146 |
| g | 87x | 147 |
| h | 88x | 150 |
| i | 89x | 151 |
| « (left quote) | 8Ax | 253 |
| » (right quote) | 8Bx | 273 |
| ð (lower eth) | 8Cx | 363 |
| ý | 8Dx | 302;171 |
| þ (lower thorn) | 8Ex | 374 |
| ± | 8Fx | 261 |
| ° (degree) | 90x | 260 |
| j | 91x | 152 |
| k | 92x | 153 |
| l | 93x | 154 |
| m | 94x | 155 |
| n | 95x | 156 |
| o | 96x | 157 |
| p | 97x | 160 |

Table 5-11 **IBM EBCDIC Character Set to Xerox Character Set conversion (continued)**

| Character | IBM code | Xerox code |
|---|---|---|
| q | 98x | 161 |
| r | 99x | 162 |
| ª | 9Ax | 343 |
| º | 9Bx | 353 |
| æ | 9Cx | 361 |
| ¸ | 9Dx | 313 |
| Æ | 9Ex | 141 |
| (currency) | 9Fx | 44* |
| µ | A0x | 265 |
| ~ | A1x | 176 |
| s | A2x | 163 |
| t | A3x | 164 |
| u | A4x | 165 |
| v | A5x | 166 |
| w | A6x | 167 |
| x | A7x | 170 |
| y | A8x | 171 |
| z | A9x | 172 |
| ¡ | AAx | 241 |
| ¿ | ABx | 277 |
| (D with stroke) | ACx | 342 |
| Ý | ADx | 302;131 |
| (upper thorn) | AEx | 354 |
| ® | AFx | 322 |
| ¢ | B0x | 242 |
| £ | B1x | 243 |
| ¥ | B2x | 245 |
| Pts (pesetas) | B3x | 357\|244 |
| *f* (florin) | B4x | 357\|242 |

Table 5-11 **IBM EBCDIC Character Set to Xerox Character Set conversion (continued)**

| Character | IBM code | Xerox code |
|---|---|---|
| § | B5x | 247 |
| ¶ | B6x | 266 |
| ¼ | B7x | 274 |
| ½ | B8x | 275 |
| ¾ | B9x | 276 |
| ¬ (not) | BAx | 357\|152 |
| \| | BBx | 174 |
| - (overline) | BCx | — |
| ¨ | BDx | 310 |
| ´ | BEx | 302 |
| _ (double low bar) | BFx | 357\|277 |
| { | C0x | 173 |
| A | C1x | 101 |
| B | C2x | 102 |
| C | C3x | 103 |
| D | C4x | 104 |
| E | C5x | 105 |
| F | C6x | 106 |
| G | C7x | 107 |
| H | C8x | 110 |
| I | C9x | 111 |
| - (syllable) | CAx | 357\|43 |
| ô | CBx | 303; 57 |
| ö | CCx | 340;157 |
| ò | CDx | 301;157 |
| ó | CEx | 302;157 |
| õ | CFx | 304;157 |
| } | D0x | 175 |

Table 5-11 **IBM EBCDIC Character Set to Xerox Character Set conversion (continued)**

| Character | IBM code | Xerox code |
|---|---|---|
| J | D1x | 112 |
| K | D2x | 113 |
| L | D3x | 114 |
| M | D4x | 115 |
| N | D5x | 116 |
| O | D6x | 117 |
| P | D7x | 120 |
| Q | D8x | 121 |
| R | D9x | 122 |
| ı (dotless) | DAx | 365 |
| û | DBx | 303;165 |
| ü | DCx | 340;165 |
| ù | DDx | 301;165 |
| ú | DEx | 302;165 |
| ÿ | DFx | 340;171 |
| \ | E0x | 134 |
| space (numeric) | E1x | 357\|56 |
| S | E2x | 123 |
| T | E3x | 124 |
| U | E4x | 125 |
| V | E5x | 126 |
| W | E6x | 127 |
| X | E7x | 130 |
| Y | E8x | 131 |
| Z | E9x | 132 |
| $^2$ (superscript) | EAx | 262 |
| Ô | EBx | 303;117 |
| Ö | ECx | 340;117 |

Table 5-11 **IBM EBCDIC Character Set to Xerox Character Set conversion (continued)**

| Character | IBM code | Xerox code |
|---|---|---|
| Ò | EDx | 301;117 |
| Ó | EEx | 302;117 |
| Õ | EFx | 304;117 |
| 0 | F0x | 60 |
| 1 | F1x | 61 |
| 2 | F2x | 62 |
| 3 | F3x | 63 |
| 4 | F4x | 64 |
| 5 | F5x | 65 |
| 6 | F6x | 66 |
| 7 | F7x | 67 |
| 8 | F8x | 70 |
| 9 | F9x | 71 |
| ³ | FAx | 263 |
| Û | FBx | 303;125 |
| Ü | FCx | 340;125 |
| Ù | FDx | 301;125 |
| Ú | FEx | 302;125 |
| Eight ones | FFx | — |

Table 5-12 is presented in the following manner:

- The first column represents the name of the IBM character (from the IBM DisplayWrite 3 User's Guide).

  **Note:** An asterisk marking the character name indicates that the Xerox translation is an approximation.

- The second column is the IBM EBCDIC character code in hexadecimal (all in character set 340 of code page 259).

- The third column is the Xerox character code in octal. The first number is the character set; the second (separated by a vertical bar) is the code.

- The fourth column is the name of the Xerox character translation.

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Space | 40 | 000\|40 | space |
| Required Space | 41 | 357\|41 | nonBreakingSpace |
| Equal Sign Superscript | 42 | 000\|75 | equals |
| Minus Sign Superscript | 43 | 000\|55 | minus |
| Plus Sign Superscript | 44 | 000\|53 | plus |
| Infinity Symbol Superscript | 45 | 041\|147 | infinity |
| Pi Superscript | 46 | 046\|123 | upperPi |
| Delta Superscript | 47 | 046\|105 | upperDelta |
| Right Arrow Superscript | 48 | 000\|256 | rightArrow |
| Slash Superscript | 49 | 000\|57 | slash |
| Left Bracket | 4A | 000\|133 | openBracket |
| Dagger | 4B | 357\|60 | dagger |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Less Than Sign | 4C | 000\|74 | lessThan |
| Left Parenthesis | 4D | 000\|50 | openParenthesis |
| Copyright Symbol | 4E | 000\|323 | copyright |
| Radical | 4F | 357\|174 | root |
| Less Than Or Equal Sign | 50 | 041\|145 | lessThanOrEqual-To |
| Macron Accent | 51 | 000\|40 | space, macronAccent |
| Left Angle Bracket Superscript | 52 | 357\|62 | bra |
| Right Angle Bracket Superscript | 53 | 357\|63 | ket |
| Prescription Symbol | 54 | 357\|251 | take |
| "Is Not an Element of" Symbol | 55 | 357\|113 | isNotAMemberOf |
| "Therefore" Symbol | 56 | 041\|150 | therefore |
| Increase | 57 | 357\|76 | neArrow |
| Decrease | 58 | 357\|75 | seArrow |
| Double Dagger | 59 | 357\|61 | doubleDagger |
| Right Bracket | 5A | 000\|135 | closeBracket |
| Middle Dot, Product Dot | 5B | 000\|267 | centeredDot |
| Not Equal Sign | 5C | 041\|142 | notEqual |
| Right Parenthesis | 5D | 000\|51 | closeParenthesis |
| Dieresis Accent | 5E | 000\|310 | dieresisAccent |
| Circumflex Accent | 5F | 000\|303 | circumflexAccent |
| Minus Sign, Hyphen | 60 | 000\|55 | minus |
| Greater Than Or Equal Sign | 61 | 041\|146 | greaterThanOr-EqualTo |
| Or Symbol | 62 | 357\|267 | or |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| And Symbol | 63 | 357\|266 | and |
| Parallel Symbol | 64 | 357\|110 | parallel |
| Angle Symbol | 65 | 357\|154 | angle |
| Left Angle Bracket | 66 | 357\|62 | bra |
| Right Angle Bracket | 67 | 357\|63 | ket |
| Minus or Plus Sign | 68 | 357\|175 | minusOrPlus |
| Lozenge * | 69 | 000\|52 | asterisk |
| Minute Symbol | 6A | 041\|154 | minutes |
| Female Symbol | 6B | 041\|152 | female |
| Male Symbol | 6C | 041\|151 | male |
| Underscore | 6D | 000\|137 | lowBar |
| Greater Than Sign | 6E | 000\|76 | greaterThan |
| Integral Symbol | 6F | 357\|165 | integral |
| Intersection, Logical Product | 70 | 357\|126 | intersection |
| Union, Logical Sum | 71 | 357\|127 | union |
| "Is Included In" Symbol | 72 | 357\|133 | containedIn2 |
| "Includes" Symbol | 73 | 357\|132 | contains2 |
| Circle Plus, Closed Sum | 74 | 357\|142 | abstractPlus |
| Right Angle * | 75 | 357\|262 | leftFloor |
| (Unassignable) | 76 | — | — |
| Circle x, Closed Product | 77 | 357\|144 | abstractTimes |
| Breve Accent | 78 | 000\|306 | breveAccent |
| Grave Accent | 79 | 000\|301 | graveAccent |
| Divide Sign | 7A | 000\|270 | divide |
| Plus Or Minus Sign | 7B | 000\|261 | plusOrMinus |
| Degree Symbol | 7C | 000\|260 | degree |
| Acute Symbol * | 7D | 000\|302 | acuteAccent |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Seconds Symbol | 7E | 041\|155 | seconds |
| Registered Trademark Symbol | 7F | 000\|322 | registered |
| Double Overline | 80 | 000\|75 | equals |
| Alpha Small | 81 | 046\|141 | lowerAlpha |
| Beta Small | 82 | 046\|142 | lowerBeta |
| Psi Small | 83 | 046\|174 | lowerPsi |
| Phi Small | 84 | 046\|172 | lowerPhi |
| Epsilon Small | 85 | 046\|146 | lowerEpsilon |
| Pi Small | 86 | 046\|163 | lowerPi |
| Lambda Small | 87 | 046\|156 | lowerLambda |
| Eta Small | 88 | 046\|152 | lowerEta |
| Iota Small | 89 | 046\|154 | lowerIota |
| Upper Left Box Corner * | 8A | 357\|260 | leftCeiling |
| Left Middle Box Side * | 8B | 357\|66 | leftPerp |
| Lower Left Box Corner * | 8C | 357\|262 | leftFloor |
| Vertical Bar | 8D | 000\|174 | verticalBar |
| Upper Left Parenthesis Section | 8E | — | — |
| Lower Left Parenthesis Section | 8F | — | — |
| Permille Symbol | 90 | 357\|101 | perThousand |
| Theta Small (Open Form) | 91 | 046\|153 | lowerTheta |
| Kappa Small | 92 | 046\|155 | lowerKappa |
| Omega Small | 93 | 046\|175 | lowerOmega |
| Mu Small | 94 | 046\|157 | lowerMu |
| Nu Small | 95 | 046\|160 | lowerNu |
| Omicron Small | 96 | 046\|162 | lowerOmicron |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Rho Small | 97 | 046\|165 | lowerRho |
| Gamma Small | 98 | 046\|144 | lowerGamma |
| Theta Small | 99 | 046\|153 | lowerTheta |
| Middle Box Top | 9A | — | — |
| Box Cross, Box Corner * | 9B | 357\|346 | thinIntersecting-Lines |
| Middle Box Bottom * | 9C | 357\|160 | perpendicular |
| Trademark Symbol | 9D | 000\|324 | trademark |
| Upper Right Parenthesis Section | 9E | — | — |
| Lower Right Parenthesis Section | 9F | — | — |
| "Congruent To" Symbol | A0 | 357\|170 | isomorphic |
| Tilde Accent | A1 | 000\|304 | tildeAccent |
| Sigma Small | A2 | 046\|166 | lowerSigma |
| Tau Small | A3 | 046\|170 | lowerTau |
| Xi Small | A4 | 046\|161 | lowerXi |
| Multiply Sign | A5 | 000\|264 | multiply |
| Delta Small | A6 | 046\|145 | lowerDelta |
| Chi Small | A7 | 046\|173 | lowerKhi |
| Upsilon Small | A8 | 046\|171 | lowerUpsilon |
| Zeta Small | A9 | 046\|151 | lowerZeta |
| Upper Right Box Corner * | AA | 357\|261 | rightCeiling |
| Right Middle Box Side * | AB | 357\|67 | rightPerp |
| Lower Right Box Corner * | AC | 357\|263 | rightFloor |
| Long Dash * | AD | 000\|320 | horizontalBar |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Lower Right/Upper Left Brace Section | AE | — | — |
| Upper Right/Lower Left Brace Section | AF | — | — |
| Zero Subscript | B0 | 000\|60 | digit0 |
| One Subscript | B1 | 000\|61 | digit1 |
| Two Subscript | B2 | 000\|62 | digit2 |
| Three Subscript | B3 | 000\|63 | digit3 |
| Four Subscript | B4 | 000\|64 | digit4 |
| Five Subscript | B5 | 000\|65 | digit5 |
| Six Subscript | B6 | 000\|66 | digit6 |
| Seven Subscript | B7 | 000\|67 | digit7 |
| Eight Subscript | B8 | 000\|70 | digit8 |
| Nine Subscript | B9 | 000\|71 | digit9 |
| Perpendicular Symbol | BA | 357\|160 | perpendicular |
| Total Symbol * | BB | 357\|315 | diamonds |
| Large Bullet | BC | 357\|146 | centeredBullet |
| Pound Sign | BD | 000\|243 | poundSterling |
| International Currency Symbol * | BE | 000\|44 | currency |
| Yen Sign | BF | 000\|245 | yen |
| Left Brace | C0 | 000\|173 | openBrace |
| Del * | C1 | 357\|271 | nabla |
| Infinity Symbol | C2 | 041\|147 | infinity |
| Psi Capital | C3 | 046\|134 | upperPsi |
| Phi Capital | C4 | 046\|132 | upperPhi |
| Left Arrow | C5 | 000\|254. | leftArrow |
| Pi Capital | C6 | 046\|123 | upperPi |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Lambda Capital | C7 | 046\|116 | upperLambda |
| Paragraph Symbol | C8 | 000\|266 | paragraph |
| Up Arrow | C9 | 000\|255 | upArrow |
| Syllable Hyphen | CA | 357\|43 | discretionary-Hyphen |
| Solid Diamond | CB | 042\|41 | blackDiamond |
| Caron Accent | CC | 000\|317 | hachekAccent |
| Bottle Symbol | CD | — | — |
| (Unassignable) | CE | — | — |
| Substitute Blank | CF | — | — |
| Right Brace | D0 | 000\|175 | closeBrace |
| Double Underscore | D1 | 357\|277 | doubleLowBar |
| Section Symbol | D2 | 000\|247 | section |
| Omega Capital | D3 | 046\|135 | upperOmega |
| Partial Differential Symbol | D4 | 357\|272 | partialDerivative |
| Sine Symbol * | D5 | 357\|276 | alternatingCurrent |
| Down Arrow | D6 | 000\|257 | downArrow |
| Liter Symbol | D7 | 357\|151 | litre |
| Gamma Capital | D8 | 046\|104 | upperGamma |
| Theta Capital | D9 | 046\|113 | upperTheta |
| Open Square | DA | 042\|42 | whiteSquare |
| Solid Square | DB | 042\|43 | blackSquare |
| Slash Square * | DC | 357\|140 | checketBallotBox |
| Overline * | DD | 000\|320 | horizontalBar |
| Upper Summation Section | DE | — | — |
| Lower Summation Section | DF | — | — |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Backslash | E0 | 000\|134 | backSlash |
| Numeric Space | E1 | 357\|56 | figureSpace |
| Sigma Capital | E2 | 046\|126 | upperSigma |
| Right Arrow | E3 | 000\|256 | rightArrow |
| Xi Capital | E4 | 046\|121 | upperXi |
| "Proportional To" Symbol | E5 | 357\|161 | isProportionalTo |
| Delta Capital | E6 | 046\|105 | upperDelta |
| Identity Symbol | E7 | 357\|162 | equivalent |
| Upsilon Capital | E8 | 046\|131 | upperUpsilon |
| "Approximately Equal To" Symbol | E9 | 357\|167 | approximately-Equal1 |
| "Equivalent To" Symbol, Cycle Symbol | EA | — | — |
| Logical Not | EB | 357\|152 | not |
| Arrow Indicator * | EC | 357\|270 | qed |
| Solid Triangle | ED | 042\|45 | blackUpTriangle |
| Upper Integral Section * | EE | SUB | — |
| Lower Integral Section * | EF | SUB | — |
| Zero Superscript | F0 | 000\|60 | digit0 |
| One Superscript | F1 | 000\|61 | superscript1 |
| Two Superscript | F2 | 000\|62 | superscript2 |
| Three Superscript | F3 | 000\|63 | superscript3 |
| Four Superscript | F4 | 000\|64 | digit4 |
| Five Superscript | F5 | 000\|65 | digit5 |
| Six Superscript | F6 | 000\|66 | digit6 |
| Seven Superscript | F7 | 000\|67 | digit7 |
| Eight Superscript | F8 | 000\|70 | digit8 |
| Nine Superscript | F9 | 000\|71 | digit9 |

Table 5-12 **IBM EBCDIC—Xerox Character Set conversion with Xerox character names (continued)**

| IBM character name | IBM code | Xerox code | Xerox character name |
|---|---|---|---|
| Zero Slash * | FA | 357\|141 | nullSet |
| One Eighth | FB | 000\|334 | oneEighth |
| Three Eighths | FC | 000\|335 | threeEighths |
| Five Eighths | FD | 000\|336 | fiveEighths |
| Seven Eighths | FE | 000\|337 | sevenEighths |
| (Unassigned) | FF | — | — |

# Xerox Character Set 0 to IBM EBCDIC Character Set conversion

This section contains information relating to Xerox Character Set 0 translation to IBM EBCDIC character conversion. (For information regarding IBM EBCDIC Character Set transfer to Xerox Character Set, refer to "IBM EBCDIC Character Set to Xerox Character Set conversion.")

Table 5-13 is presented in the following manner:

- The first column represents the Xerox character graphical representation.
- The second column is the Xerox character code in octal. All Xerox codes are in XChar-Set 0.
- The third column is the IBM EBCDIC character code in hexadecimal. All IBM codes are in character set 337 of code page 256 unless superscripted with 259, which represents character set 340 of code page 259.
- Information is presented in order of ascending Xerox code numbers.

Entries separated with a semicolon represent two IBM codes. Most comments are labeled with the IBM code.

**Note:** Entries in the tables that are followed by asterisks are explained below:

- 7D Apostrophe (SP05)
- 7F Quotation marks (SP04)
- Xerox Codes 301—317 The accents (301—317) accent the character they precede and do not stand alone. If an IBM character matches the Xerox accent-character pair, that IBM character is used. Otherwise, the IBM

codes are followed by a backspace to simulate the proper accented character. The accent table indicates accent mappings.

- 90 Degree symbol (SM19)
- D2 K capital (LK02)

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion**

| Character | Xerox code | IBM code |
|---|---|---|
| Space | 40 | 40 |
| ! | 41 | 4F |
| " | 42 | 7F* |
| # | 43 | 7B |
| $ | 44 | 5B |
| % | 45 | 6C |
| & | 46 | 50 |
| ' | 47 | 7D* |
| ( | 50 | 4D |
| ) | 51 | 5D |
| * | 52 | 5C |
| + | 53 | 4E |
| , (comma) | 54 | 6B |
| - (minus) | 55 | 60 |
| . | 56 | 4B |
| / | 57 | 61 |
| 0 | 60 | F0 |
| 1 | 61 | F1 |
| 2 | 62 | F2 |
| 3 | 63 | F3 |
| 4 | 64 | F4 |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| 5 | 65 | F5 |
| 6 | 66 | F6 |
| 7 | 67 | F7 |
| 8 | 70 | F8 |
| 9 | 71 | F9 |
| : | 72 | 7A |
| ; | 73 | 5E |
| < | 74 | 4C |
| = | 75 | 7E |
| > | 76 | 6E |
| ? | 77 | 6F |
| @ | 100 | C7 |
| A | 101 | C1 |
| B | 102 | C2 |
| C | 103 | C3 |
| D | 104 | C4 |
| E | 105 | C5 |
| F | 106 | C6 |
| G | 107 | C7 |
| H | 110 | C8 |
| I | 111 | C9 |
| J | 112 | D1 |
| K | 113 | D2* |
| L | 114 | D3 |
| M | 115 | D4 |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| N | 116 | D5 |
| O | 117 | D6 |
| P | 120 | D7 |
| Q | 121 | D8 |
| R | 122 | D9 |
| S | 123 | E2 |
| T | 124 | E3 |
| U | 125 | E4 |
| V | 126 | E5 |
| W | 127 | E6 |
| X | 130 | E7 |
| Y | 131 | E8 |
| Z | 132 | E9 |
| [ | 133 | 4A |
| \ | 134 | E0 |
| ] | 135 | 5A |
| ^ (circum. s.) | 136 | 4F |
| _ (low bar) | 137 | 6D |
| ` (grave s.) | 140 | 79 |
| a | 141 | 81 |
| b | 142 | 82 |
| c | 143 | 83 |
| d | 144 | 84 |
| e | 145 | 85 |
| f | 146 | 86 |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| g | 147 | 87 |
| h | 150 | 88 |
| i | 151 | 89 |
| j | 152 | 91 |
| k | 153 | 92 |
| l | 154 | 93 |
| m | 155 | 94 |
| n | 156 | 95 |
| o | 157 | 96 |
| p | 160 | 97 |
| q | 161 | 98 |
| r | 162 | 99 |
| s | 163 | A2 |
| t | 164 | A3 |
| u | 165 | A4 |
| v | 166 | A5 |
| w | 167 | A6 |
| x | 170 | A7 |
| y | 171 | A8 |
| z | 172 | A9 |
| { | 173 | C0 |
| \| | 174 | BB |
| } | 175 | D0 |
| ~ (tilde s.) | 176 | A1 |
| Reserved | 177 | — |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| Reserved | 240 | — |
| ¡ | 241 | AA |
| ¢ | 242 | B0 |
| £ | 243 | B1 |
| $ | 244 | 5B |
| ¥ | 245 | B2 |
| Reserved | 246 | — |
| § | 247 | B5 |
| Reserved | 250 | — |
| ‘ (left) | 251 | 7D* |
| “ (left) | 252 | 7F* |
| « (left quote) | 253 | 8A |
| ← | 254 | C5[259] |
| ↑ | 255 | C9[259] |
| → | 256 | E3[259] |
| ↓ | 257 | D6[259] |
| ° (degree) | 260 | 90 |
| ± | 261 | 8F |
| ² | 262 | EA |
| ³ | 263 | FA |
| × | 264 | A5[259] |
| µ | 265 | A0 |
| ¶ | 266 | B6 |
| ·(center) | 267 | 5B[259] |
| ÷ | 270 | 7A[259] |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| ’ (right) | 271 | 7D* |
| ” (right) | 272 | 7F* |
| » (right quote) | 273 | 8B |
| ¼ | 274 | B7 |
| ½ | 275 | B8 |
| ¾ | 276 | B9 |
| ¿ | 277 | AB |
| Reserved | 300 | — |
| ` | 301* | 79 |
| ´ | 302* | BE |
| ^ | 303* | 5F |
| ~ | 304* | A1 |
| ¯ | 305* | 51[259] |
| ˘ | 306* | 78[259] |
| ˙ | 307* | — |
| ¨ | 310* | BD |
| Reserved | 311* | — |
| ° | 312* | 90* |
| ¸ | 313* | 9D |
| — | 314* | — |
| ˝ | 315* | — |
| ˛ | 316* | — |
| ˇ | 317* | — |
| (bar) | 320 | AD[259] |
| (super 1) | 321 | F1[259] |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| ® | 322 | AF |
| © | 323 | $4E^{259}$ |
| ™ | 324 | $9D^{259}$ |
| (note) | 325 | — |
| Reserved | 326 | — |
| Reserved | 327 | — |
| Reserved | 330 | — |
| Reserved | 331 | — |
| Reserved | 332 | — |
| Reserved | 333 | — |
| (1/8 fraction) | 334 | $FB^{259}$ |
| (3/8 fraction) | 335 | $FC^{259}$ |
| (5/8 fraction) | 336 | $FD^{259}$ |
| (7/8 fraction) | 337 | $FE^{259}$ |
| Ω (ohms) | 340 | — |
| Æ | 341 | 9E |
| (D w. stroke) | 342 | AC |
| ª | 343 | 9A |
| (H w. stroke) | 344 | — |
| Reserved | 345 | — |
| IJ | 346 | — |
| (L w. dot) | 347 | — |
| (L w. stroke) | 350 | — |
| Ø | 351 | 80 |
| Œ | 352 | — |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| ǫ | 353 | 9B |
| (upper thorn) | 354 | AE |
| (T w. stroke) | 355 | — |
| (upper eng) | 356 | — |
| 'n | 357 | — |
| (k Greenland) | 360 | D2* |
| æ | 361 | 9C |
| (d w. stroke) | 362 | — |
| (eth Icelandic) | 363 | 8C |
| (h w. stroke) | 364 | — |
| ı (dotless) | 365 | DA |
| ij | 366 | — |
| (l w. dot) | 367 | — |
| (l w. stroke) | 370 | — |
| ø | 371 | 70 |
| œ | 372 | — |
| ß | 373 | 59 |
| (lower thorn) | 374 | 8E |
| (t w. stroke) | 375 | — |
| (lower eng) | 376 | — |
| (select code) | 377 | — |
| À | 301;101 | 64 |
| Á | 302;101 | 65 |
| Â | 303;101 | 62 |
| Ã | 304;101 | 66 |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| Ä | 340;101 | 63 |
| Å | 342;101 | 67 |
| Ç | 343;103 | 68 |
| È | 301;105 | 74 |
| É | 302;105 | 71 |
| Ê | 303;105 | 72 |
| Ë | 340;105 | 73 |
| Ì | 301;111 | 78 |
| Í | 302;111 | 75 |
| Î | 303;111 | 76 |
| Ï | 340;111 | 77 |
| Ñ | 304;116 | 69 |
| Ò | 301;117 | ED |
| Ó | 302;117 | EE |
| Ô | 303;117 | EB |
| Õ | 304;117 | EF |
| Ö | 340;117 | EC |
| Ù | 301;125 | FD |
| Ú | 302;125 | FE |
| Û | 303;125 | FB |
| Ü | 340;125 | FC |
| Ý | 302;131 | AD |
| à | 301;141 | 44 |
| á | 302;141 | 45 |
| â | 303;141 | 42 |

Table 5-13 **Xerox Character Set 0 to IBM EBCDIC character conversion (continued)**

| Character | Xerox code | IBM code |
|---|---|---|
| ã | 304;141 | 46 |
| ä | 340;141 | 43 |
| å | 342;141 | 47 |
| ç | 343;143 | 48 |
| è | 301;145 | 54 |
| é | 302;145 | 51 |
| ê | 303;145 | 52 |
| ë | 340;145 | 53 |
| ì | 301;151 | 58 |
| í | 302;151 | 55 |
| î | 303;151 | 56 |
| ï | 340;151 | 57 |
| ñ | 304;156 | 49 |
| ò | 301;157 | CD |
| ó | 302;157 | CE |
| ô | 303;157 | CB |
| õ | 304;157 | CF |
| ö | 340;157 | CC |
| ù | 301;165 | DD |
| ú | 302;165 | DE |
| û | 303;165 | DB |
| ü | 340;165 | DC |
| ý | 302;171 | 8D |
| ÿ | 340;171 | DF |

Table 5-14 is presented in the following manner:

- The first column represents the Xerox character name.
- The second column is the Xerox character code in octal. The first number is the character set; the second, separated by a vertical bar, is the code.
- The third column is the IBM EBCDIC character code in hexadecimal.

Table 5-14 **Xerox Character Sets 41 and 42 to IBM EBCDIC character conversion**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| notEqual | 41\|142 | 5C |
| lessThanOrEqualTo | 41\|145 | 50 |
| greaterThanOrEqualTo | 41\|146 | 61 |
| infinity | 41\|147 | C2 |
| therefore | 41\|150 | 56 |
| male | 41\|151 | 6C |
| female | 41\|152 | 6B |
| minutes | 41\|154 | 6A |
| seconds | 41\|155 | 7E |
| blackDiamond | 42\|41 | CB |
| whiteSquare | 42\|42 | DA |
| blackSquare | 42\|43 | DB |
| blackUpTriangle | 42\|45 | ED |

Table 5-15 is presented in the following manner:

- The first column represents the Xerox character name.

  **Note:** Entries with asterisks represent approximate translations.

- The second column is the Xerox character code in octal. ASCII Xerox codes are in XCharSet46.

- The third column is the IBM EBCDIC character code in hexadecimal. All IBM codes are in character set 340 of code page 259 unless superscripted with 256, which represents character set 337 of code page 256.

Table 5-15 **Xerox Character Set 46 to IBM EBCDIC character conversion**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| upperAlpha * | 101 | C1[256] |
| upperBeta * | 102 | C2[256] |
| upperGamma | 104 | D8 |
| upperDelta | 105 | E6 |
| upperEpsilon * | 106 | C5[256] |
| upperStigma | 107 | — |
| upperDigamma | 110 | — |
| upperZeta * | 111 | E9[256] |
| upperEta * | 112 | C8[256] |
| upperTheta | 113 | D9 |
| upperIota * | 114 | C9[256] |
| upperKappa * | 115 | D2[256] |
| upperLambda | 116 | C7 |
| upperMu * | 117 | D4[256] |
| upperNu * | 120 | D5[256] |

Table 5-15 **Xerox Character Set 46 to IBM EBCDIC character conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| upperXi | 121 | E4 |
| upperOmicron * | 122 | D6[256] |
| upperPi | 123 | C6 |
| upperKoppa | 124 | — |
| upperRho * | 125 | D7[256] |
| upperSigma | 126 | E2 |
| upperTau * | 130 | E3[256] |
| upperUpsilon | 131 | E8 |
| upperPhi | 132 | C4 |
| upperKhi * | 133 | E7[256] |
| upperPsi | 134 | C3 |
| upperOmega | 135 | D3 |
| upperSampi | 136 | — |
| lowerAlpha | 141 | 81 |
| lowerBeta | 142 | 82 |
| lowerBetaMiddleWord * | 143 | 82 |
| lowerGamma | 144 | 98 |
| lowerDelta | 145 | A6 |
| lowerEpsilon | 146 | 85 |
| lowerStigma | 147 | — |
| lowerDigamma | 150 | — |
| lowerZeta | 151 | A9 |
| lowerEta | 152 | 88 |
| lowerTheta | 153 | 99 |
| lowerIota | 154 | 89 |

Table 5-15 **Xerox Character Set 46 to IBM EBCDIC character conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| lowerKappa | 155 | 92 |
| lowerLambda | 156 | 87 |
| lowerMu | 157 | 94 |
| lowerNu | 160 | 95 |
| lowerXi | 161 | A4 |
| lowerOmicron | 162 | 96 |
| lowerPi | 163 | 86 |
| lowerKoppa | 164 | — |
| lowerRho | 165 | 97 |
| lowerSigma | 166 | A2 |
| lowerSigmaMiddleWord * | 167 | A2 |
| lowerTau | 170 | A3 |
| lowerUpsilon | 171 | A8 |
| lowerPhi | 172 | 84 |
| lowerKhi | 173 | A7 |
| lowerPsi | 174 | 83 |
| lowerOmega | 175 | 93 |

Table 5-16 is presented in the following manner:

- The first column represents the Xerox character name.

  **Note:** Entries with asterisks represent approximate translations.

- The second column is the Xerox character code in octal. All Xerox codes are in XCharSet357.

- The third column is the IBM EBCDIC character code in hexadecimal. All IBM codes are in character set 340 of code page 259 unless superscripted with 256, which represents character set 337 of code page 256.

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC character conversion**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| nonBreakingHyphen * | 42 | 60 |
| discretionaryHyphen | 43 | CA |
| enDash * | 44 | $60^{256}$ |
| emDash * | 45 | $60^{256}$ |
| figureDash | 46 | $60^{256}$ |
| neutralQuote * | 47 | $7D^{256}$ |
| loweredLeftDoubleQuote * | 50 | $7F^{256}$ |
| germanRightDoubleQuote * | 51 | $7F^{256}$ |
| guillemetLeftQuote * | 52 | 66 |
| guillemetRightQuote * | 53 | 67 |
| enQuad * | 54 | 40 |
| emQuad * | 55 | 40 |
| figureSpace | 56 | E1 |
| thinSpace | 57 | 40 |
| dagger | 60 | 4B |

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| doubleDagger | 61 | 59 |
| bra | 62 | 66 |
| ket | 63 | 67 |
| rightPointingIndex | 64 | — |
| leftPointingIndex | 65 | — |
| leftPerp | 66 | 8B |
| rightPerp | 67 | AB |
| left2Perp | 70 | — |
| right2Perp | 71 | — |
| leftWhiteLenticularBracket | 72 | — |
| rightWhiteLenticularBracket | 73 | — |
| nwArrow | 74 | — |
| seArrow | 75 | 58 |
| neArrow | 76 | 57 |
| swArrow | 77 | — |
| careOf | 100 | — |
| perThousand | 101 | 90 |
| muchLessThan | 102 | — |
| muchGreaterThan | 103 | — |
| notLessThan | 104 | — |
| notGreaterThan | 105 | — |
| divides | 106 | — |
| doesNotDivide | 107 | — |
| parallel | 110 | 64 |
| notParallel | 111 | — |
| isAMemberOf * | 112 | 85 |
| isNotAMemberOf | 113 | 55 |

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| suchThat | 114 | — |
| doubleBackArrow | 115 | — |
| doubleDoubleArrow | 116 | — |
| doubleRightArrow | 117 | — |
| reversibleReaction2 | 120 | — |
| reversibleReaction1 | 121 | — |
| doubleArrow | 122 | — |
| curlyArrow | 123 | — |
| contains1 | 124 | — |
| containedIn1 | 125 | — |
| intersection | 126 | 70 |
| union | 127 | 71 |
| containsOrEquals | 130 | — |
| containedInOrEquals | 131 | — |
| contains2 | 132 | 73 |
| containedIn2 | 133 | 72 |
| neitherContainsNorIsEqualTo | 134 | — |
| neitherContainedInNorIsEqualTo | 135 | — |
| doesNotContain | 136 | — |
| isNotContainedIn | 137 | — |
| checketBallotBox | 140 | DC |
| nullSet | 141 | FA |
| abstractPlus | 142 | 74 |
| abstractMinus | 143 | — |
| abstractTimes | 144 | 77 |
| abstractDivide | 145 | — |
| centeredBullet | 146 | BC |

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| centeredRing * | 147 | $90^{256}$ |
| plancksConstant | 150 | — |
| litre | 151 | D7 |
| not | 152 | $BA^{256}$ |
| brokenVerticalBar | 153 | $6A^{256}$ |
| angle | 154 | 65 |
| sphericalAngle | 155 | — |
| identifier | 156 | — |
| because | 157 | — |
| perpendicular | 160 | B |
| isProportionalTo | 161 | E5 |
| equivalent | 162 | E7 |
| equalByDefinition | 163 | — |
| questionedEquality | 164 | — |
| integral | 165 | 6F |
| contourIntegral | 166 | — |
| approximatelyEqual1 | 167 | E9 |
| isomorphic | 170 | A0 |
| approximatelyEqual2 | 171 | E9 |
| summation * | 172 | E2 |
| product * | 173 | C6 |
| root | 174 | 4F |
| minusOrPlus | 175 | 68 |
| shade | 176 | — |
| cruzeiro | 241 | — |
| florin | 242 | $B4^{256}$ |
| francs | 243 | — |

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| pesetas | 244 | B3[256] |
| europeanCurrency | 245 | — |
| milreis | 246 | — |
| genericInfinity | 247 | — |
| number | 250 | — |
| take | 251 | 54 |
| tel | 252 | — |
| yogh | 253 | — |
| complexNumber | 254 | — |
| naturalNumber | 255 | — |
| realNumber | 256 | — |
| integer | 257 | — |
| leftCeiling | 260 | 8A |
| rightCeiling | 261 | AA |
| leftFloor | 262 | 8C |
| rightFloor | 263 | AC |
| thereExists | 264 | — |
| forAll | 265 | — |
| and | 266 | 63 |
| or | 267 | 62 |
| qed * | 270 | EC |
| nabla * | 271 | C1 |
| partialDerivative | 272 | D4 |
| ocrHook | 273 | — |
| ocrFork | 274 | — |
| ocrChair | 275 | — |
| alternatingCurrent | 276 | D5 |

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| doubleLowBar * | 277 | BF |
| arc | 300 | — |
| romanNumeralI | 301 | — |
| romanNumeralII | 302 | — |
| romanNumeralIII | 303 | — |
| romanNumeralIV | 304 | — |
| romanNumeralV | 305 | — |
| romanNumeralVI | 306 | — |
| romanNumeralVII | 307 | — |
| romanNumeralVIII | 310 | — |
| romanNumeralIX | 311 | — |
| romanNumeralX | 312 | — |
| spades | 313 | — |
| hearts | 314 | — |
| diamonds * | 315 | BB |
| clubs | 316 | — |
| checkMark | 317 | — |
| xMark | 320 | — |
| circled1 | 321 | — |
| circled2 | 322 | — |
| circled3 | 323 | — |
| circled4 | 324 | — |
| circled5 | 325 | — |
| circled6 | 326 | — |
| circled7 | 327 | — |
| circled8 | 330 | — |
| circled9 | 331 | — |

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| circled10 | 332 | — |
| circledRightArrow | 333 | — |
| circledRightThenDownArrow | 334 | — |
| circledDownThenLeftArrow | 335 | — |
| peaceSymbol | 336 | — |
| smileFace | 337 | — |
| poison | 340 | — |
| thickVerticalLine * | 341 | $BB^{256}$ |
| thickHorizontalLine * | 342 | $AD^{256}$ |
| thickIntersectingLines * | 343 | 9B |
| thinVerticalLine * | 344 | $BB^{256}$ |
| thinHorizontalLine | 345 | AD |
| thinIntersectingLines | 346 | 9B |
| sun | 347 | — |
| firstQuarterMoon | 350 | — |
| thirdQuarterMoon | 351 | — |
| mercury | 352 | — |
| jupiter | 353 | — |
| saturn | 354 | — |
| uranus | 355 | — |
| neptune | 356 | — |
| pluto | 357 | — |
| aquarius | 360 | — |
| pisces | 361 | — |
| aries | 362 | — |
| taurus | 363 | — |
| gemini | 364 | — |

Table 5-16 **Xerox Character Set 357 to IBM EBCDIC conversion (continued)**

| Xerox character name | Xerox code | IBM code |
|---|---|---|
| cancer | 365 | — |
| leo | 366 | — |
| virgo | 367 | — |
| libra | 370 | — |
| scorpio | 371 | — |
| sagittarius | 372 | — |
| capricorn | 373 | — |
| telephone | 374 | — |
| oneThird | 375 | — |
| twoThirds | 376 | — |

# 6. VP File Conversion of Lotus 1-2-3 Spreadsheets

Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert Lotus 1-2-3 spreadsheet files into ViewPoint spreadsheet format, and ViewPoint spreadsheet files into Lotus 1-2-3 format.

This chapter provides information on the conversion process, with detailed conversion guides to help you identify and predict conversion results of Lotus 1-2-3 and ViewPoint spreadsheet conversions. Information about the Lotus 1-2-3 standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the basic hardware and software requirements listed in the "Introduction" chapter of this volume.

The PC Option board is optional and for the 6085 only. It can be used for reading MS-DOS formatted floppies and MS-DOS files via VP PCE virtual floppy disk.

- *VP File Conversion of Lotus 1-2-3 Spreadsheets* is required.
- *VP Spreadsheet* is required if you want to view or modify the converted spreadsheet.
- *VP PC Emulation* is optional and for the 6085 only. It can be used for reading MS-DOS files

via VP PCO virtual floppy disk and for MS-DOS formatted floppy disks.

# Key concepts of Lotus 1-2-3 file conversion

You can edit a spreadsheet that has been converted to ViewPoint format in the same way as any other ViewPoint spreadsheet. Because Lotus and ViewPoint spreadsheets differ in function and restrictions, the conversion is not always exact. Use the conversion guides at the end of this chapter to help you predict conversion results.

## Formula handling

Lotus spreadsheets store formula values in the file; therefore, when a Lotus spreadsheet is opened, formula values are read directly out of the file and displayed in cells. ViewPoint spreadsheets do not store formula values; instead, they recalculate all formulas when the spreadsheet is opened.

When a ViewPoint spreadsheet is converted to Lotus, formula values are not stored in the Lotus file. When you open the Lotus file, "ERR" sometimes appears in cells that have formulas. To display the correct cell values, you must make the Lotus spreadsheet recalculate all formulas.

## Supported formats

The following formats are supported for conversions from Lotus 1-2-3 to ViewPoint:

- Lotus 1-2-3 1.0
- Lotus 1-2-3 1A (WK files)
- Lotus 1-2-3 2.0 (WK1 files)
- Lotus 1-2-3 2.01

This conversion does not handle Lotus 1-2-3 graph/picture (.PIC) files or print (.PRN) files.

The following formats are supported for conversions from ViewPoint to Lotus 1-2-3:

- Lotus 1A (WK1 files, read by 1.0 and 1/A)
- Lotus 2.0 (WK1 files, read by 2.0 and 2.01)

## Properties and options sheets

The properties and options sheets for the Lotus 1-2-3 conversion have no additional options to those explained in Chapter 2. The possible file types of 0 and 4101 are displayed when [Show Icon File Types] is selected.

## Obtaining Lotus 1-2-3 files for conversion

You can get Lotus 1-2-3 files from:

- Files mailed over the network from other Xerox machines or from PCs
- $5\frac{1}{4}$-inch floppy disks
- PC Emulation Virtual Floppy icon and Emulated Fixed Disk icon

## Converting files

To convert files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

# Spreadsheet features conversion guide

This section can help you identify and predict the conversion results when Lotus 1-2-3 and ViewPoint spreadsheets are interchanged.

**Note:** A ViewPoint spreadsheet contains 255 rows (1 through 255) and 63 columns (A through BK). If you attempt a conversion that exceeds these limits, only the first 255 rows and the first 63 columns are converted. A message indicating this occurrence will be posted in the message area, and the action will be recorded in the Converter History log. Be sure to check the size of the spreadsheet before you convert it.

Table 6-1 **Lotus 1-2-3 spreadsheet conversion guide**

| Feature | After conversion to Lotus 1-2-3 | After conversion to ViewPoint |
|---|---|---|
| Calculation mode | Converts precisely. | Converts precisely. |
| Cells | — | Only cells in columns A through BK and rows 1 through 255 are converted. |
| Decimal to binary | Non-integers are translated using number conversion algorithm; therefore, number may not be same as original. | Non-integers are translated using number conversion algorithm; therefore, number may not be same as original. |
| Formula | Converts properly where possible. See tables 6-3, 6-4, 6-17, and 6-18. | Converts properly unless it contains operator or function that cannot be translated. In that case, formula is converted into a label. See tables 6-3, 6-4, 6-17, and 6-18.<br><br>Reference to illegal VP spreadsheet cell addresses are replaced by @ERROR. |
| Global cell protection | — | Cell protection is ignored. |

Table 6-1 **Lotus 1-2-3 spreadsheet conversion guide (continued)**

| Feature | After conversion to Lotus 1-2-3 | After conversion to ViewPoint |
|---|---|---|
| Global column width | (Lotus 1-2-3 Rel. 1) Converts properly if width is less than 72. If greater than 72, reset to 72.<br><br>(Lotus 1-2-3 Rel. 2) Converts properly if width is less than 240. If greater than 240, reset to 240. | Converts properly if width is greater than or equal to 3.<br><br>If less than 3, reset to 3. |
| Global label prefix | Always set to left-aligned (‘). | No conversion. |
| Graph settings and options | — | No conversion. |
| Integers | [-32767...32767] converts properly. | [-32767...32767] converts properly. |
| Iteration count | — | No conversion. |
| Label characters | Converts properly unless it contains non-standard ASCII characters. | Interpreted as defined by the ISO 6937 standard, Part 2, page 9, figure 3. |
| Label prefixes | — | Converts properly, except centering prefix (^) is ignored.<br><br>Centered labels convert left-aligned. |

Table 6-1 **Lotus 1-2-3 spreadsheet conversion guide (continued)**

| Feature | After conversion to Lotus 1-2-3 | After conversion to ViewPoint |
|---|---|---|
| Local cell protection | — | No conversion. |
| Local column width setting | (Lotus 1-2-3 Rel. 1) Converts properly if width is less than 72. If greater than 72, reset to 72.<br><br>(Lotus 1-2-3 Rel. 2) Converts properly if width is less than 240. If greater than 240, reset to 240. | Converts properly if width is greater than or equal to 3.<br><br>If less than 3, reset to 3. |
| Printer settings | No conversion. | No conversion. |
| Range | — | No conversion. |
| Recalculation order | Converts properly. | Converts properly, unless set to natural, which resets to column. |
| Split windows | No conversion. One window. Properties of first window are used. | No conversion. One window. Properties of first window are used. |
| Titles | No conversion. | No conversion. |

# Lotus to ViewPoint conversion guide

This section can help you predict the conversion results when Lotus 1-2-3 spreadsheets are converted to ViewPoint spreadsheets. Lotus 1-2-3 to ViewPoint global and local cell formats for non-text cells are converted as shown in Tables 6-2 through 6-11.

Table 6-2 **Lotus 1-2-3 to ViewPoint cell format conversion**

| Lotus 1-2-3 | | ViewPoint | |
|---|---|---|---|
| **Format** | **Description** | **Format** | **Description** |
| F0 | Fixed, 0 decimal places | /FI | Integer |
| F2 | Fixed, 2 decimal places | /F$ | Money |
| Cn | Currency, n decimal places | /F$ | Money |
| +/- | Horizontal bar graph | /F* | Graph |
| G | General | /FG | General |
| Other | All other formats | — | Default |

Lotus 1-2-3 to ViewPoint operators/functions are converted as shown in Tables 6-3 through 6-13. Instead of translating a Lotus @ function into a ViewPoint function, sometimes a LABEL replaces the function, as indicated in the following tables.

Table 6-3 **Arithmetical and logical operators**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| (unary) - | - |
| + | + |
| - | - |
| * | * |
| / | / |
| ^ | ^ |
| = | = |
| < > | < > |
| < = | < = |
| > = | > = |
| < | < |
| > | > |
| # AND # | @AND |
| # OR # | @OR |
| # NOT # | @NOT |
| (unary) + | + |

Table 6-4 **Mathematical functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @ABS | @ABS |
| @ACOS | @ACOS |
| @ASIN | @ASIN |
| @ATAN | @ATAN(X) |
| @ATAN2 | @ATAN ((X/Y)) |
| @COS | @COS |
| @EXP | @EXP |
| @INT | @INT |
| @LN | @LN |
| @LOG | @LOG10 |
| @MOD | LABEL |
| @PI | @PI |
| @RAND | LABEL |
| @ROUND | LABEL |
| @SIN | @SIN |
| @SQRT | @SQRT |
| @TAN | @TAN |

Table 6-5 **Special functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @NA | @NA |
| @ERR | @ERROR |
| @CHOOSE | @CHOOSE |
| @HLOOKUP | LABEL |
| @VLOOKUP | LABEL |
| @@ | LABEL |
| @CELL | LABEL |
| @CELL-POINTER | LABEL |
| @COLS | LABEL |
| @INDEX | LABEL |
| @ROWS | LABEL |

Table 6-6 **Date functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @DATE | LABEL |
| @DAY | LABEL |
| @MONTH | LABEL |
| @YEAR | LABEL |
| @TODAY * | LABEL |
| @NOW | LABEL |
| @DATE-VALUE | LABEL |
| @TIME | LABEL |
| @TIME-VALUE | LABEL |
| @HOUR | LABEL |
| @MINUTE | LABEL |
| @SECOND | LABEL |

* Specific to Lotus 1-2-3 1.0

Table 6-7 **Logical functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @FALSE | @FALSE |
| @TRUE | @TRUE |
| @IF | @IF |
| @ISNA | @ISNA |
| @ISERR | @ISERROR |
| @ISNUMBER | LABEL |
| @ISSTRING | LABEL |

Table 6-8 **Statistical functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @COUNT | @COUNT |
| @SUM | @SUM |
| @AVG | @AVERAGE |
| @MIN | @MIN |
| @MAX | @MAX |
| @STD | LABEL |
| @VAR | LABEL |

Table 6-9 **Financial functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @IRR | LABEL |
| @NPV | @NPV |
| @FV | LABEL |
| @PV | LABEL |
| @PMT | LABEL |
| @CTERM | LABEL |
| @DDB | LABEL |
| @RATE | LABEL |
| @SLN | LABEL |
| @SYD | LABEL |
| @TERM | LABEL |

Table 6-10 **Data base statistical functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @DCOUNT | LABEL |
| @DSUM | LABEL |
| @DAVG | LABEL |
| @DMIN | LABEL |
| @DMAX | LABEL |
| @DSTD | LABEL |
| @DVAR | LABEL |

Table 6-11 **String functions**

| Lotus 1-2-3 | ViewPoint |
|---|---|
| @CHAR | LABEL |
| @CODE | LABEL |
| @EXACT | LABEL |
| @FIND | LABEL |
| @LEFT | LABEL |
| @LENGTH | LABEL |
| @LOWER | LABEL |
| @MID | LABEL |
| @N | LABEL |
| @PROPER | LABEL |
| @REPEAT | LABEL |
| @REPLACE | LABEL |
| @RIGHT | LABEL |
| @S | LABEL |
| @STRING | LABEL |
| @TRIM | LABEL |
| @UPPER | LABEL |
| @VALUE | LABEL |

Tables 6-12 and 6-13 contain operators unique to Lotus 1-2-3 Rel. 2.0 and 2.01. These operators have no ViewPoint equivalents.

Table 6-12 **Lotus 1-2-3 2.0 operators**

| Function | Type | Function | Type |
|---|---|---|---|
| @@ | SPECIAL | @TERM | FINANCIAL |
| @CELL | SPECIAL | @CHAR | STRING |
| @CELL-POINTER | SPECIAL | @CLEAN | STRING |
| @COLS | SPECIAL | @CODE | STRING |
| @INDEX | SPECIAL | @EXACT | STRING |
| @ROWS | SPECIAL | @FIND | STRING |
| @ISNUMBER | LOGICAL | @LENGTH | STRING |
| @ISSTRING | LOGICAL | @LEFT | STRING |
| @DATEVALUE | DATE & TIME | @LOWER | STRING |
| @HOUR | DATE & TIME | @MID | STRING |
| @MINUTE | DATE & TIME | @N | STRING |
| @SECOND | DATE & TIME | @PROPER | STRING |
| @TIME | DATE & TIME | @REPEAT | STRING |
| @NOW | DATE & TIME | @REPLACE | STRING |
| @TIMEVALUE | DATE & TIME | @RIGHT | STRING |
| @CTERM | FINANCIAL | @S | STRING |
| @DDB | FINANCIAL | @STRING | STRING |
| @RATE | FINANCIAL | @TRIM | STRING |
| @SLN | FINANCIAL | @UPPER | STRING |
| @SYD | FINANCIAL | @VALUE | STRING |

Table 6-13 gives some examples of Lotus International Character Set (LICS) to Xerox Character Code Standard (XCCS) merged character translation. These examples apply to Lotus 2.0 and 2.01 files.

The left-pointing arrow represents the Lotus merge character.

Table 6-13 **Merged character translation examples**

| LICS codes | LICS display | XCCS codes | XCCS display |
|---|---|---|---|
| 128, 155, 120 | `←x | [0, 301B] [0, 170B] | x̀ |
| 120, 155, 128 | x←` | [0, 301B] [0, 170B] | x̀ |
| 192 | Ā | [0, 301B] [0, 101B] | Ā |
| 128, 155, 65 | `←A | [0, 301B] [0, 101B] | Ā |
| 65, 155, 128 | A←` | [0, 301B] [0, 101B] | Ā |
| 120, 155, 121 | x←y | [0, 170B] [0, 77B] [0, 171B] | x?y |
| 121, 155, 120 | y← x | [0, 171B] [0, 77B] [0, 170B] | y?x |
| 97, 144, 101 | a`e | [0, 141B] [0, 301B] [0, 145B] | aè |
| 65, 128, 69 | A`E | [0, 101B] [0, 301B] [0, 102B] | AÈ |

# ViewPoint to Lotus conversion guide

This section can help you predict the conversion results when ViewPoint spreadsheets are converted to Lotus 1-2-3 spreadsheets.

ViewPoint to Lotus 1-2-3 global and local cell formats for non-text cells are converted as shown in Table 6-14.

Table 6-14 **ViewPoint to Lotus 1-2-3 cell format conversion**

| ViewPoint | | Lotus 1-2-3 | |
|---|---|---|---|
| **Format** | **Description** | **Format** | **Description** |
| G | General | G | General |
| I | Integer | F0 | Fixed, 0 decimal places |
| $ | Money | F2 | Fixed, 2 decimal places |
| * | Graph | +/- | Horizontal bar graph |
| Other | Default | R | Default |

Table 6-15 **Arithmetical and logical operators**

| ViewPoint | Lotus 1-2-3 |
|---|---|
| - (unary) | - (unary) |
| + | + |
| - | - |
| * | * |
| / | / |
| ^ | ^ |
| = | = |
| < > | < > |
| < = | < = |
| > = | > = |
| < | < |
| > | > |
| + (unary) | + (unary) |

Table 6-16 **Mathematical functions**

| ViewPoint | Lotus 1-2-3 |
|---|---|
| @ABS | @ABS |
| @ACOS | @ACOS |
| @ASIN | @ASIN |
| @ATAN | @ATAN |
| @COS | @COS |
| @EXP | @EXP |
| @INT | @INT |
| @LN | @LN |
| @LOG10 | @LOG |
| @PI | @PI |
| @SIN | @SIN |
| @SQRT | @SQRT |
| @TAN | @TAN |

Table 6-17 **Logical functions**

| ViewPoint | Lotus 1-2-3 |
|---|---|
| @FALSE | @FALSE |
| @TRUE | @TRUE |
| @IF | @IF |
| @ISNA | @ISNA |
| @ISERROR | @ISERR |
| @AND | # AND # |
| @OR | # OR # |
| @NOT | # NOT # |

If the spreadsheet contains a range argument (for example, "@AND (A1..A5)"), it will not convert.

Table 6-18 **Miscellaneous functions**

| ViewPoint | Lotus 1-2-3 |
|---|---|
| @NA | @NA |
| @ERROR | @ERR |
| @CHOOSE | @CHOOSE |
| @LOOKUP | @VLOOKUP |
| @COUNT | @COUNT |
| @SUM | @SUM |
| @AVERAGE | @AVG |
| @MIN | @MIN |
| @MAX | @MAX |
| @NPV | @NPV |

# LICS, XCCS, and ASCII Character Set conversions

Lotus 1-2-3, Releases 1 and 1A, use the American Standard Code for Information Interchange (ASCII). Lotus 1-2-3, Release 2 and 2.01, use the Lotus International Character Set (LICS), which supports accented and international characters.

ViewPoint spreadsheets can contain any character in the Xerox Character Code Standard (XCCS).

Table 6-19 describes the relationships between LICS, XCCS, and ASCII and how the differences in character sets are handled.

**Notes:** A dash or small, black rectangle indicates that the character cannot be displayed in the available fonts. An asterisk indicates where an uppercase eth only exists in LICS. It will be mapped to XCCS lowercase eth.

Table 6-19 **LICS, XCCS, ASCII Character Set conversions**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 128 (200B) | [0, 301B] | ` | Uppercase grave | 96 (140B) | — |
| 129 (201B) | [0, 302B] | ´ | Uppercase acute | 39 (47B) | ' |
| 130 (202B) | [0, 303B] | ^ | Uppercase circumflex | 94 (136B) | ^ |
| 131 (203B) | [0, 310B] | ¨ | Uppercase umlaut | 34 (42B) | " |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 132 (204B) | [0, 304B] | ˜ | Uppercase tilde | 126 (176B) | ~ |
| 144 (220B) | [0, 301B] | ` | Lowercase grave | 96 (140B) | — |
| 145 (221B) | [0, 302B] | ´ | Lowercase acute | 39 (47B) | ' |
| 146 (222B) | [0, 303B] | ^ | Lowercase circumflex | 94 (136B) | ^ |
| 147 (223B) | [0, 310B] | ¨ | Lowercase umlaut | 34 (42B) | " |
| 148 (224B) | [0, 304B] | ˜ | Lowercase tilde | 126 (176B) | ~ |
| 149 (225B) | [0, 365B] | ı | Lowercase i without dot | 105 (151B) | i |
| 150 (226B) | [0, 314B] | — | Ordinal indicator | 95 (137B) | — |
| 160 (240B) | [357B, 242B] | *f* | Dutch Guilder | 102, 108 (146B, 154B) | fl |
| 161 (241B) | [0, 241B] | ¡ | Inverted exclamation mark | 33 (41B) | ! |
| 162 (242B) | [0, 242B] | ¢ | Cent sign | 99 (143B) | c |
| 163 (243B) | [0, 243B] | £ | Pound sign | 76 (114B) | L |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Cha rac- ter | Descrip- tion | ASCII code dec (oct) | AS- CII |
|---|---|---|---|---|---|
| 164 (244B) | [357B, 51B] | — | Low opening double quotes | 34 (42B) | " |
| 165 (245B) | [0, 245B] | ¥ | Yen sign | 89 (131B) | Y |
| 166 (246B) | [357B, 244B] | Pts | Pesetas sign | 80, 116 | Pt |
| 167 (247B) | [0, 247B] | § | Section sign | 83 (123B) | S |
| 168 (250B) | [0, 77B] | ? | General currency sign | 63 (77B) | ? |
| 169 (251B) | [0, 323B] | © | Copyright sign | 99 (143B) | c |
| 170 (252B) | [0, 343B] | — | Feminine ordinal | 97 (141B) | a |
| 171 (253B) | [0, 253B] | « | Angle quotation mark left | 60, 60 (74B, 74B) | < < |
| 172 (254B) | [46B, 105B] | Δ | Delta | 68 (104B) | D |
| 173 (255B) | [46B, 163B] | π | Pi | 112, 105 (160B, 105B) | pi |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 174 (256B) | [41B, 146B] | ≥ | Greater-than-or-equals | 62, 61 (76B, 77B) | > = |
| 175 (257B) | [0, 270B] | ÷ | Divide sign | 47 (57B) | / |
| 176 (260B) | [0, 260B] | ° | Degree sign | 111 (157B) | o |
| 177 (261B) | [0, 261B] | ± | Plus/minus sign | 43 (53B) | + |
| 178 (262B) | [0, 262B] | 2 | Superscript 2 | 50 (62B) | 2 |
| 179 (263B) | [0, 263B] | 3 | Superscript 3 | 51 (63B) | 3 |
| 180 (264B) | [357B, 50B] | „ | Low closing double quotes | 34 (42B) | " |
| 181 (265B) | [0, 265B] | μ | Micro sign | 117 (165B) | u |
| 182 (266B) | [0, 266B] | ¶ | Paragraph sign | 80 (120B) | P |
| 183 (267B) | [0, 267B] | · | Middle dot | 46 (46B) | . |
| 184 (270B) | [0, 324B] | ™ | Trademark sign | 84, 77 (124B, 115B) | TM |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 185 (271B) | [0, 321B] | ¹ | Superscript 1 | 49 (61B) | 1 |
| 186 (272B) | [0, 353B] | º | Masculine ordinal | 111 (157B) | o |
| 187 (273B) | [0, 273B] | » | Angle quotation mark right | 62, 62 (76B, 76B) | > > |
| 188 (274B) | [0, 274B] | ¼ | Fraction one quarter | 49, 47, 52 (61B, 57B, 64B) | 1/4 |
| 189 (275B) | [0, 275B] | ½ | Fraction one half | 49, 47, 50 (61B, 57B, 62B) | 1/2 |
| 190 (276B) | [41B, 145B] | ≤ | Less-than-or-equals | 60, 61 (74B, 75B) | < = |
| 191 (277B) | [0, 277B] | ¿ | Inverted question mark | 63 (77B) | ? |
| 192 (300B) | [0, 301B] [0, 101B] | À | Uppercase A with grave | 65 (101B) | A |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 193 (301B) | [0, 301B] [0, 101B] | Á | Uppercase A with acute | 65 (101B) | A |
| 194 (302B) | [0, 303B] [0, 101B] | Â | Uppercase A with circumflex | 65 (101B) | A |
| 195 (303B) | [0, 304B] [0, 101B] | Ã | Uppercase A with tilde | 65 (101B) | A |
| 196 (304B) | [0, 310B] [0, 101B] | Ä | Uppercase A with umlaut | 65 (101B) | A |
| 197 (305B) | [0, 312B] [0, 101B] | Å | Uppercase A with ring | 65 (101B) | A |
| 198 (306B) | [0, 341B] | Æ | Uppercase A with ligature | 65, 69 (101B, 105B) | AE |
| 199 (307B) | [0, 313B] [0, 103B] | Ç | Upper case C with cedilla | 67 (103B) | C |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Cha rac- ter | Descrip- tion | ASCII code dec (oct) | AS- CII |
|---|---|---|---|---|---|
| 200 (310B) | [0, 301B] [0, 105B] | È | Uppercase E with grave | 69 (105B) | E |
| 201 (311B) | [0, 302B] [0, 105B] | É | Uppercase E with acute | 69 (105B) | E |
| 202 (312B) | [0, 303B] [0, 105B] | Ê | Uppercase E with circumflex | 69 (105B) | E |
| 203 (313B) | [0, 310B] [0, 105B] | Ë | Uppercase E with umlaut | 69 (105B) | E |
| 204 (314B) | [0, 301B] [0, 111B] | Ì | Uppercase I with grave | 73 (111B) | I |
| 205 (315B) | [0, 302B] [0, 111B] | Í | Uppercase I with acute | 73 (111B) | I |
| 206 (316B) | [0, 303B] [0, 111B] | Î | Uppercase I with circumflex | 73 (111B) | I |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Cha rac- ter | Descrip- tion | ASCII code dec (oct) | AS- CII |
|---|---|---|---|---|---|
| 207 (317B) | [0, 310B] [0, 111B] | Ï | Uppercase I with umlaut | 73 (111B) | I |
| 208 (320B) | [0, 363B] | ð | Uppercase eth (Icelandic)* | 63 (77B) | ? |
| 209 (321B) | [0, 304B] [0, 116B] | Ñ | Uppercase N with tilde | 78 (116B) | N |
| 210 (322B) | [0, 301B] [0, 117B] | Ò | Uppercase O with grave | 79 (117B) | O |
| 211 (323B) | [0, 302B] [0, 117B] | Ó | Uppercase O with acute | 79 (117B) | O |
| 212 (324B) | [0, 303B] [0, 117B] | Ô | Uppercase O with circumflex | 79 (117B) | O |
| 213 (325B) | [0, 304B] [0, 117B] | Õ | Uppercase O with tilde | 79 (117B) | O |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 214 (326B) | [0, 310B] [0, 117B] | Ö | Uppercase O with umlaut | 79 (117B) | O |
| 215 (327B) | [0, 352B] | Œ | Uppercase O with ligature | 79, 69 (117B, 105B) | OE |
| 216 (330B) | [0, 351B] | Ø | Uppercase O with slash | 79 (117B) | O |
| 217 (331B) | [0, 301B] [0, 125B] | Ù | Uppercase U with grave | 85 (125B) | U |
| 218 (332B) | [0, 302B] [0, 125B] | Ú | Uppercase U with acute | 85 (125B) | U |
| 219 (333B) | [0, 303B] [0, 125B] | Û | Uppercase U with circumflex | 85 (125B) | U |
| 220 (334B) | [0, 310B] [0, 125B] | Ü | Uppercase U with umlaut | 85 (125B) | U |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 221 (335B) | [0, 310B] [0, 131B] | Ÿ | Uppercase Y with umlaut | 89 (131B) | Y |
| 222 (336B) | [0, 354B] | Þ | Uppercase thorn (Icelandic) | 80 (120B) | P |
| 223 (337B) | [0, 373B] | ß | Lowercase German sharp s | 115, 115 (163B, 163B) | ss |
| 224 (340B) | [0, 301B] [0, 141B] | à | Lowercase a with grave | 97 (141B) | a |
| 225 (341B) | [0, 302B] [0, 141B] | á | Lowercase a with acute | 97 (141B) | a |
| 226 (342B) | [0, 303B] [0, 141B] | â | Lowercase a with circumflex | 97 (141B) | a |
| 227 (343B) | [0, 304B] [0, 141B] | ã | Lowercase a with tilde | 97 (141B) | a |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Cha rac- ter | Descrip- tion | ASCII code dec (oct) | AS- CII |
|---|---|---|---|---|---|
| 228 (344B) | [0, 310B] [0, 141B] | ä | Lowercase a with umlaut | 97 (141B) | a |
| 229 (345B) | [0, 312B] [0, 141B] | å | Lowercase a with ring | 97 (141B) | a |
| 230 (346B) | [0, 361B] | æ | Lowercase ae with ligature | 97, 101 (141B, 145B) | ae |
| 231 (347B) | [0, 313B] [0, 143B] | ç | Lowercase c with cedilla | 99 (143B) | c |
| 232 (350B) | [0, 301B] [0, 145B] | è | Lowercase e with grave | 101 (145B) | e |
| 233 (351B) | [0, 302B] [0, 145B] | é | Lowercase e with acute | 101 (145B) | e |
| 234 (352B) | [0, 303B] [0, 145B] | ê | Lowercase e with circumflex | 101 (145B) | e |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 235 (353B) | [0, 310B] [0, 145B] | ë | Lowercase e with umlaut | 101 (145B) | e |
| 236 (354B) | [0, 301B] [0, 151B] | ì | Lowercase i with grave | 105 (151B) | i |
| 237 (355B) | [0, 302B] [0, 151B] | í | Lowercase i with acute | 105 (151B) | i |
| 238 (356B) | [0, 303B] [0, 151B] | î | Lowercase i with circumflex | 105 (151B) | i |
| 239 (357B) | [0, 310B] [0, 151B] | ï | Lowercase i with umlaut | 105 (151B) | i |
| 240 (360B) | [0, 363B] | ð | Lowercase eth (Icelandic) | 100 (144B) | d |
| 241 (361B) | [0, 304B] [0, 156B] | ñ | Lowercase n with tilde | 110 (156B) | n |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 242 (362B) | [0, 301B] [0, 157B] | ò | Lowercase o with grave | 111 (157B) | o |
| 243 (363B) | [0, 302B] [0, 157B] | ó | Lowercase o with acute | 111 (157B) | o |
| 244 (364B) | [0, 303B] [0, 157B] | ô | Lowercase o with circumflex | 111 (157B) | o |
| 245 (365B) | [0, 304B] [0, 157B] | õ | Lowercase o with tilde | 111 (157B) | o |
| 246 (366B) | [0, 310B] [0, 157B] | ö | lowercase o with umlaut | 111 (157B) | o |
| 247 (367B) | [0, 372B] | œ | Lowercase oe with dipthong | 111, 101 (157B, 145B) | oe |
| 248 (370B) | [0, 371B] | ø | Lowercase o with slash | 111 (157B) | o |
| 249 (371B) | [0, 301B] [0, 165B] | ù | Lowercase u with grave | 117 (165B) | u |

Table 6-19 **LICS, XCCS, ASCII Character Set conversions (continued)**

| LICS code dec (oct) | XCCS [set, code] | Character | Description | ASCII code dec (oct) | ASCII |
|---|---|---|---|---|---|
| 250 (372B) | [0, 302B] [0, 165B] | ú | Lowercase u with acute | 117 (165B) | u |
| 251 (373B) | [0, 303B] [0, 165B] | û | Lowercase u with circumflex | 117 (165B) | u |
| 252 (374B) | [0, 310B] [0, 165B] | ü | Lowercase u with umlaut | 117 (165B) | u |
| 253 (375B) | [0, 310B] [0, 171B] | ÿ | Lowercase y with umlaut | 121 (171B) | y |
| 254 (376B) | [0, 374B] | þ | Lowercase thorn (Icelandic) | 112 (160B) | p |
| 255 (377B) | — | — | — | — | — |

# 7. VP File Conversion of VisiCalc Spreadsheets

Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert VisiCalc spreadsheet files into ViewPoint spreadsheet format, and ViewPoint spreadsheet files into VisiCalc format.

This chapter provides information on the VisiCalc spreadsheet conversion process. Information about the VisiCalc standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the basic hardware and software requirements listed in the "Introduction" chapter of this volume.

The PC Option board is optional and for the 6085 only. It can be used for reading MS-DOS formatted floppy disks and MS-DOS files via VP PCE virtual floppy disk.

- *VP PC Emulation* is optional and for the 6085 only. It can be used for reading MS-DOS files via VP PCE virtual floppy disk and for MS-DOS formatted floppy disks.
- *VP File Conversion of VisiCalc Spreadsheets* application software is required.
- *VP Spreadsheet* is required.

# Key concepts of VisiCalc conversion

Because VisiCalc and ViewPoint spreadsheets differ in function and restrictions, the conversion is not always exact. The dollar sign will not translate properly with VisiCalc/ViewPoint conversions in either direction and may cause the spreadsheet to load incorrectly.

## Properties and options sheets

The properties and options sheets for the VisiCalc conversion have no additional options to those explained in Chapter 2.

## Obtaining VisiCalc files for conversion

You can get VisiCalc files from:

- Files mailed over the network from other Xerox machines or from PCs
- $5\frac{1}{4}$-inch floppy disks
- PC Emulation Virtual Floppy icon and Emulated Fixed Disk icon

## Converting VisiCalc files

To convert files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

# 8. VP File Conversion of Wang Documents

The Wang conversion application allows you to convert Wang documents into ViewPoint format and ViewPoint documents into Wang format. Information about the Wang system and software is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the basic hardware and software requirements listed in the "Introduction" chapter of this volume.

- There is no required hardware in addition to that mentioned in the "Introduction" chapter of this volume.
- The *VP Document Editor* is required.

## Key concepts of Wang conversion

The Wang to ViewPoint conversion application will convert Wang document content and format features produced by the Wang WP Editor running on Wang OIS, WPS, and Alliance systems. The ViewPoint to Wang conversion will convert ViewPoint document content and format features to Wang WP documents.

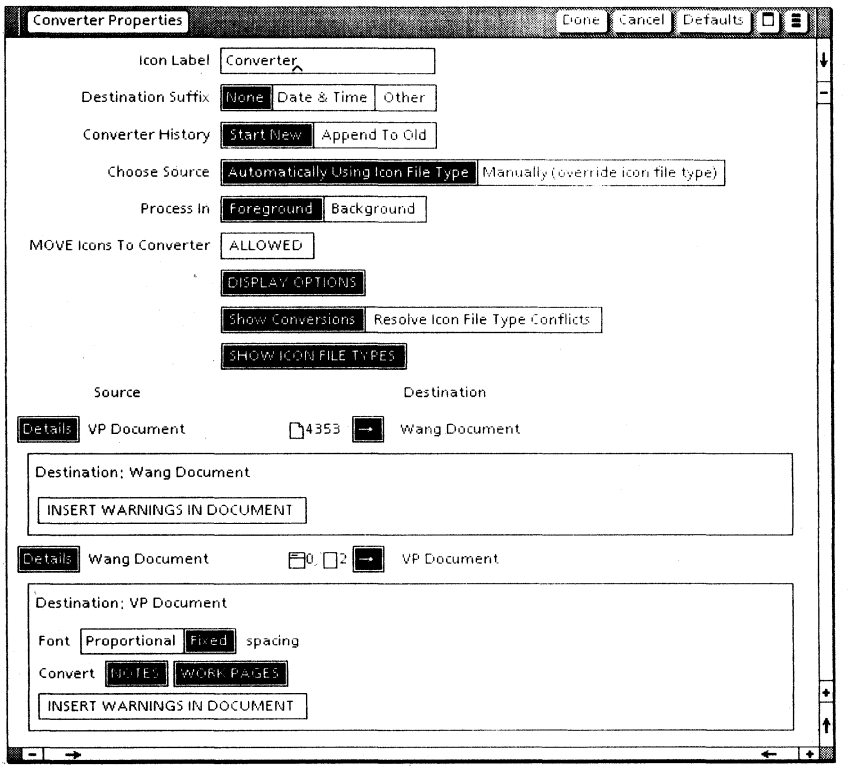
Wang provides conversion programs to convert documents from one Wang format to another. You can use these programs to convert your

Wang files into a Wang format that the Wang file conversion software can process.

# Properties and options sheets

The [Insert Warnings in Document] option choice is the only selectable option for conversions from ViewPoint to Wang. For Wang to ViewPoint conversions, the additional properties of **Font Spacing** and **Convert** [Notes] or [Work Pages] are also available. Figure 8-1 shows the Converter properties sheet with [Details] displayed for the Wang conversion.

Figure 8-1 **Wang Conversion properties sheet with Details displayed**



**Font** [Proportional] or [Fixed] **Spacing**

By selecting the appropriate **Font Spacing** option choices, you can convert a Wang document into a ViewPoint document with fixed- or proportional-space font. If you select [Fixed] (the default), the ViewPoint Titan 10 font will be used. If you select [Proportional] font, the ViewPoint Modern 12 font will be used.

**Convert** [Notes] and [Work Pages]

The Wang document [Notes] text and [Work Pages] text are not part of the main Wang document text; however, when the **Convert** [Notes] and [Work Pages] option choices in the properties sheet (Figure 8-1) are selected (the default settings), this text will be included in the text of the converted document.

[Insert Warnings in Document]

For conversions in both directions, you can have the conversion problem messages included in the text of the converted document by having the [Insert Warnings in Document] selected (default is off). Selecting this option, however, can result in some formatting options not converting precisely in the line or paragraph in which the warning text is inserted.

Conversion problems are always noted in the Converter History log, regardless of how this option choice is set.

# Obtaining data files

There are important Wang and Xerox network configuration requirements that must be satisfied to maintain the integrity of transferred Wang and ViewPoint documents. Wang documents can be transferred to and from the ViewPoint environment with the Xerox Remote Batch Service (RBS) running in 2780 or 3780 mode. Use the Wang

WPS protocol to maintain the internal structure of all Wang data.

## Converting Wang files

To convert files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

## Wang to ViewPoint conversion guide

Because Wang and ViewPoint environments have different features and document structure, some things will not convert precisely. For example, font sizes are different, so words may not always appear on the same line as in the original, and a document might not paginate into the same number of pages as the original document.

Use this conversion guide to help you predict conversion results.

### Character sets

Only the default English Wang Word Processing System Code (WWPSC) character set converts.

### Character enhancements

The Wang features of bold, underscore, double underscore, and overstrike convert directly into ViewPoint documents; however, if both underscore and overstrike are present, only overstrike will convert.

## Format lines

The Wang WP document format line controls the vertical spacing, tab settings, and line length of all text between that format line and the next format line. Wang format lines convert to ViewPoint new-paragraph characters.

To get the same text column width in the ViewPoint destination document as in the Wang source document, the conversion software adjusts the right margin in the ViewPoint document. For example, if the text column was centered and 50 columns wide in the Wang source document, it will be 50 columns wide in the ViewPoint destination document, but flush left instead of centered.

When text in a fixed-pitch font is converted from Wang to ViewPoint, and a variable pitch font is running in the Document Editor, the lengths of the lines will not appear to be the same. This is because, while the number of columns is correctly converted, the space that each column occupies is not the same.

## Tab, indent, and decimal tab positions

When a Wang tab setting is encountered in a format line, a ViewPoint new-paragraph character will be inserted into the text. This new-paragraph character will include a left-aligned tab set at the corresponding indent position.

If a Wang tab, decimal tab, or indent conflicts with the current ViewPoint new-paragraph character tab, the conversion software may add a ViewPoint new-paragraph character with the correct tab type and position.

## Decimal tab delimiters

Wang decimal tab delimiters include the decimal point, the asterisk, and the right parenthesis. In ViewPoint, decimal tabs align only on a decimal

point delimiter. If there is no decimal point in the text, ViewPoint decimal tabs will be right aligned, even if an asterisk or a right parenthesis Wang delimiter is present.

## Wang headers and footers

The Wang WP Editor provides primary and alternating headers or footers, which convert, respectively, to the ViewPoint [Same] and [Different] [Heading] or [Footing] option choices. These option choices are found in the Document Editor Page Format properties sheet.

Wang documents may also include a third header or footer specification, the text of which is appended to the end of both the [Same] and [Different] [Heading] or [Footing] text in the ViewPoint document.

All Wang headers and footers are positioned flush left in the destination ViewPoint document. Page number characters in Wang headers and footers will convert to the destination ViewPoint document.

## Notes

If you have the [Notes] option choice selected (the default setting) in the Wang Conversion properties sheet (Figure 8-1), the Wang Notes text will appear in the text of the converted document. This text will appear in the ViewPoint document with "<NOTE>" at the beginning and end of each Notes text block.

If the Notes text is not converted, a conversion problem will be noted in the Converter History log.

## Work Pages

You can convert Wang Work Pages text by selecting the [Work Pages] option choice (the default setting) in the Wang Conversion proper-

ties sheet (Figure 8-1). This text will appear on the first text page in the ViewPoint document.

If you do not convert the Work Pages text, a conversion problem will be recorded in the Converter History log. You can also have this message displayed in the text of the converted document by selecting the [Insert Warnings in Document] option.

## Merge documents

The Wang WP Editor can mark locations in a document where external text can be merged. These merge codes are not converted.

If you have [Insert Warnings in Document] selected, the Wang merge codes will be displayed in the text of the converted document at the locations where they appeared in the Wang document and will be recorded as conversion problems in the Converter History log.

If [Insert Warnings in Document] is not selected, the merge codes will be recorded as conversion problems in the Converter History log only.

The Wang documents with Merge specifications are not merged during conversion and will need to be converted separately.

## Wang to ViewPoint conversion tables

The following tables summarize some of the main Wang to ViewPoint conversion characteristics.

Table 8-1 **Wang to ViewPoint contents**

| Wang feature | After conversion to ViewPoint |
|---|---|
| Punctuation, common symbols, required space, text from main body | Mapped to the corresponding Xerox characters. |
| Accented characters | Mapped to the correct accent character followed by the corresponding Xerox character. |
| Underscored characters | Wang WWPSC underscored character code mapped to the corresponding Xerox character with the underline property.<br><br>If bold and underscore are both present, both will convert. |
| Characters with no accurate mapping | Wang WWPSC characters with no accurate ViewPoint representation are converted to the Xerox substitute code. |
| Text from headers and footers<br><br># indicates automatic page numbering | Translated to text into headings and footings.<br><br># mapped to the Page Number Delimiter in ViewPoint. The headings and footings will always be left aligned and start on the same page as the initial page format character. |
| Wang Merge control | Not converted. |
| Stop codes | Not converted.<br><br>A conversion problem message will be recorded. |

Table 8-1 **Wang to ViewPoint contents (continued)**

| Wang feature | After conversion to ViewPoint |
|---|---|
| Work Pages | Translated at user option:<br>If not converted, a conversion problem is noted in ViewPoint document.<br>If converted, text placed on first page of text of ViewPoint document. |
| Notes | Translated at user option:<br>If not converted, a conversion problem is noted in ViewPoint document.<br>If converted, text placed at immediate point in the ViewPoint document. |

Table 8-2 **Wang to ViewPoint fonts and character appearance**

| Wang feature | After conversion to ViewPoint |
|---|---|
| Superscript | Superscript |
| Subscript | Subscript |
| Bold | Bold |
| Double underline | Double underlining |
| Strike through | Strikeout |

Table 8-3 **Wang to ViewPoint line and page layout**

| Wang feature | After conversion to ViewPoint |
|---|---|
| Left margin | Page format character left margin set to 1. |
| Right margin | New-paragraph character right margin set to position specified.<br><br>The right margin in a Wang document is determined by the length of the Wang Format Line and stays in effect until a new Format Line length is set. |
| Top, bottom margins | Page format character's top and bottom margins set to one inch. |
| Hard return (line ending made by user) | A new-paragraph character is appended. |
| Line justification | Justified alignment is turned off for all ViewPoint paragraphs. |
| Hyphens generated with automatic hyphenation | Converted as regular hyphens. |
| Tabs that terminate line | Convert to ViewPoint carriage return. |

Table 8-3 **Wang to ViewPoint line and page layout (continued)**

| Wang feature | After conversion to ViewPoint |
|---|---|
| Tab align | Converted to a tab at position specified.<br><br>Tab is left aligned.<br><br>A mixture of left-oriented tabs and indents may not convert with absolute accuracy. |
| Indent | Converted to a para-tab at position specified, and text is aligned as necessary.<br><br>Para-tab is left aligned. A mixture of left-oriented tabs and indents may not convert with absolute accuracy. |
| Dec tab align | Converted to a tab at position specified.<br><br>Tab is decimal aligned. |
| Center | Break to new-paragraph character if necessary and change new-paragraph character alignment property to centered.<br><br>Line is centered within current margin settings.<br><br>Center + Page sequence in Wang will convert to a page break character. |

Table 8-3 **Wang to ViewPoint line and page layout (continued)**

| Wang feature | After conversion to ViewPoint |
|---|---|
| Line spacing<br>0,1,2,3,1/4,1/2, 3/2 | Paragraph line height computed from line spacing.<br>The 0 line spacing option results in multiple ViewPoint lines (both the original text and the "overstrike" text are converted). |
| Page break generated by automatic pagination | Converts to ViewPoint new-paragraph character.<br>Creates Wang format line, which converts to ViewPoint new-paragraph character. May result in paragraph being broken at page break. |
| Hard Page Control (page ending made by user, inserted in WP by center control and page control) | Hard Page Control is translated into a page break character.<br>ViewPoint pages might not correspond to Wang pages due to variations in font sizes and other layout conversion functionality. |

# ViewPoint to Wang conversion guide

Because Wang and ViewPoint environments have different features and document structure, some things will not convert precisely. Examples of this are:

- Graphics and equations frames exist in the ViewPoint environment but not in the Wang environment.
- Font sizes are different, so words may not always appear on the same line as in the original.
- A document might not paginate into the same number of pages as the original document.

Use this conversion guide to help you predict conversion results.

## Character sets

Many ViewPoint symbols and foreign characters will not convert to Wang, while others will convert and display correctly but cannot be printed with the available printwheels. Accented Latin characters that will not convert become the unaccented character. Other symbols that do not convert become the Wang substitute code.

## Character enhancements

The ViewPoint character features of bold, underscore, double underscore, and overstrike convert into the Wang document; however, if underscore and overstrike are both present, only overstrike will convert.

## Headings and footings

ViewPoint headings and footings are converted to the corresponding Wang primary and alternating headers and footers.

Because there are no accurate Wang equivalents for many of the ViewPoint heading and footing properties (for example, alignment), all ViewPoint headings and footings are converted to left-aligned headers and footers in the Wang document. Page number characters in the ViewPoint source document headings and footings will convert to the destination Wang document.

## Tab and para-tab

ViewPoint can specify left-aligned, center-aligned, right-aligned, and decimal-aligned tabs and para-tabs. There is no equivalent for center-aligned and right-aligned tabs in the Wang environment, so these characteristics convert to Wang left-aligned settings. ViewPoint default tabs are converted to three spaces in the Wang document.

## Tables

The sample ViewPoint table in Table 8-4 converts to Wang as shown in the "Converted sample table" (Figure 8-2). Notice that the contents of each cell are listed on a new line in the converted document and that the contents of the rows are separated by dashed lines.

Table 8-4 **Sample ViewPoint table**

| Left header | | Right header |
|---|---|---|
| **A** | **B** | |
| left1a | left1b | right1a |
| left2a | left2b | right2a |

Figure 8-2 **Converted sample table**

```
ViewPoint Table Name: VP Table
Column Name: LeftCol
Column Header: Left Header

Column Name: LeftCol.Column1
Column Header: A

Column Name: LeftCol.Column2
Column Header: B

Column Name: RightCol
Column Header: Right Header
-----------------------------------------------------------------
left1a
left1b
right1a
-----------------------------------------------------------------
left2a
left2b
right2a
-----------------------------------------------------------------
```

## Frames

The contents of ViewPoint equation, bitmap, and graphics frames are not converted. These dropped frames are recorded as conversion problems in the Converter History log and, if [Insert Warnings in Document] is selected, will also be displayed in the text of the converted document at the locations where the frames were dropped.

## Fields

ViewPoint field-bounding characters and associated properties (for example, field fill-in rules) are not converted, but the Field text is converted into Note text in the main body of the Wang document.

## ViewPoint to Wang conversion tables

The following tables summarize some of the main ViewPoint to Wang conversion characteristics.

Table 8-5 **ViewPoint to Wang contents**

| ViewPoint feature | After conversion to Wang |
|---|---|
| Most Latin letters, most punctuation, most common symbols, non-breaking space | Mapped to the corresponding Wang character. |
| Accented Latin characters | Accented Latin characters that will not convert become the unaccented character. |
| Cyrillic and Kana, Greek, Arabic, Kanji, Math, Office, Logic, and other symbols | Converted to the Wang substitute code (!!). |

Table 8-5 **ViewPoint to Wang contents (continued)**

| ViewPoint feature | After conversion to Wang |
|---|---|
| Text from headings and footings | Translated to text into headers or footers. |
| Fields | Textual content is translated to Wang Note text.<br>The field-bounding character and its properties are not converted. |
| Tables | Each cell of the table is converted to a separate line (followed by a hard return) in the Wang document. |
| Cover sheet | Not converted. |
| Text frames | Not converted. |
| Other contents:<br>graphics<br>pie and bar charts<br>bitmaps<br>scanned images<br>equation frames<br>CUSP procedures | Not converted. |
| ViewPoint document name | The first 20 characters of the ViewPoint document name (at the time of conversion) are converted to the name of the Wang document (not the name that appears on the converted icon, but the internal name of the document). |

Table 8-6 **ViewPoint to Wang fonts and character appearance**

| ViewPoint feature | After conversion to Wang |
|---|---|
| Font typeface and size | Not converted. Wang default pitch is set by the user in Wang Print Menu. |
| Superscript | Superscript<br>ViewPoint super-superscripts are not converted. |
| Subscript | Subscript<br>ViewPoint super-subscripts are not converted. |
| Bold | Bold |
| Underline (single) | Converted to a corresponding WWPSC character. |
| Underline (double) | Double underline |
| Overstrike | Strike through |

Table 8-7 **ViewPoint to Wang paragraphs**

| ViewPoint feature | After conversion to Wang |
|---|---|
| Paragraph right margin | Right margin property of page format character (PFC) and new-paragraph character converted to appropriate line length in Wang Format Line. A new Wang Format Line is appended if necessary. |
| Paragraph left margin | Not converted. Wang documents assume the default left margin. |
| Paragraph justification | Not converted. |
| Paragraph line height | Used to compute Wang vertical line spacing in Format Line. |
| Tab | Decimal- and left-aligned tabs are converted.<br>Right-aligned tabs not converted. |
| Paragraph tab | Decimal and left-aligned Para-tabs are converted.<br>Right-aligned para-tabs are not converted. |
| Default ViewPoint tabs | Convert to three spaces. |
| Paragraph alignment | Center alignment property is converted to Wang center for each line of paragraph.<br>Right alignment is not converted. |
| Text columns | Not converted. |

Table 8-7 **ViewPoint to Wang paragraphs (continued)**

| ViewPoint feature | After conversion to Wang |
|---|---|
| New-paragraph character | Not converted. |

Table 8-8 **ViewPoint to Wang page layout**

| ViewPoint feature | After conversion to Wang |
|---|---|
| Page break | Converted to a center + hard-page control in Wang document. |
| Page size | Not converted. |
| Top and bottom page margins | Not converted. |
| Keeping paragraphs together on the same page | Not converted. |
| Page format character | First one in document is converted. |

## Wang WWPSC Character Set conversion tables

In Table 8-9, the first column shows the Wang character graphical representation when possible. The second column is the WWPSC in hexadecimal. The third column is the Xerox character code in octal.

**Note:** Entries separated by a vertical bar (for example, 357|47) explicitly state the character set with the first number. The second number is the code. Inexplicit entries are in XCharSet0. Entries separated by a semicolon (for example, 340;141)

represent a conversion to multiple Xerox characters (for example, accents).

Table 8-9 **Wang WWPSC character conversion**

| Character | Wang code | Xerox code |
|---|---|---|
| â | 10x | 303;141 |
| ê | 11x | 303;145 |
| î | 12x | 303;151 |
| ô | 13x | 303;157 |
| û | 14x | 303;165 |
| ä | 15x | 310;141 |
| ë | 16x | 310;145 |
| ï | 17x | 310;151 |
| ö | 18x | 310;157 |
| ü | 19x | 310;165 |
| à | 1Ax | 301;141 |
| è | 1Bx | 301;145 |
| ù | 1Cx | 301;165 |
| Ä | 1Dx | 310;101 |
| Ö | 1Ex | 310;117 |
| Ü | 1Fx | 310;125 |
| space | 20x | 40 |
| ! | 21x | 41 |
| " | 22x | 42 |
| # | 23x | page num |
| $ | 24x | 44 |
| % | 25x | 45 |
| & | 26x | 46 |
| ' | 27x | 47 |
| ( | 28x | 50 |
| ) | 29x | 51 |
| * | 2Ax | 52 |
| + | 2Bx | 53 |

Table 8-9 **Wang WWPSC character conversion (continued)**

| Character | Wang code | Xerox code |
|---|---|---|
| , (comma) | 2Cx | 54 |
| - (minus) | 2Dx | 55 |
| . (period) | 2Ex | 56 |
| / | 2Fx | 57 |
| 0 | 30x | 60 |
| 1 | 31x | 61 |
| 2 | 32x | 62 |
| 3 | 33x | 63 |
| 4 | 34x | 64 |
| 5 | 35x | 65 |
| 6 | 36x | 66 |
| 7 | 37x | 67 |
| 8 | 38x | 70 |
| 9 | 39x | 71 |
| : | 3Ax | 72 |
| ; | 3Bx | 73 |
| < | 3Cx | 74 |
| = | 3Dx | 75 |
| > | 3Ex | 76 |
| ? | 3Fx | 77 |
| @ | 40x | 100 |
| A | 41x | 101 |
| B | 42x | 102 |
| C | 43x | 103 |
| D | 44x | 104 |
| E | 45x | 105 |
| F | 46x | 106 |
| G | 47x | 107 |
| H | 48x | 110 |

Table 8-9 **Wang WWPSC character conversion (continued)**

| Character | Wang code | Xerox code |
|---|---|---|
| I | 49x | 111 |
| J | 4Ax | 112 |
| K | 4Bx | 113 |
| L | 4Cx | 114 |
| M | 4Dx | 115 |
| N | 4Ex | 116 |
| O | 4Fx | 117 |
| P | 50x | 120 |
| Q | 51x | 121 |
| R | 52x | 122 |
| S | 53x | 123 |
| T | 54x | 124 |
| U | 55x | 125 |
| V | 56x | 126 |
| W | 57x | 127 |
| X | 58x | 130 |
| Y | 59x | 131 |
| Z | 5Ax | 132 |
| [ | 5Bx | 133 |
| space (req) | 5Cx | 357\|41 |
| ] | 5Dx | 135 |
| ß | 5Ex | 373 |
| ¶ | 5Fx | 266 |
| ° (degree) | 60x | 260 |
| a | 61x | 141 |
| b | 62x | 142 |
| c | 63x | 143 |
| d | 64x | 144 |
| e | 65x | 145 |

Table 8-9 **Wang WWPSC character conversion (continued)**

| Character | Wang code | Xerox code |
|---|---|---|
| f | 66x | 146 |
| g | 67x | 147 |
| h | 68x | 150 |
| i | 69x | 151 |
| j | 6Ax | 152 |
| k | 6Bx | 153 |
| l | 6Cx | 154 |
| m | 6Dx | 155 |
| n | 6Ex | 156 |
| o | 6Fx | 157 |
| p | 70x | 160 |
| q | 71x | 161 |
| r | 72x | 162 |
| s | 73x | 163 |
| t | 74x | 164 |
| u | 75x | 165 |
| v | 76x | 166 |
| w | 77x | 167 |
| x | 78x | 170 |
| y | 79x | 171 |
| z | 7Ax | 172 |
| § | 7Bx | 247 |
| £ | A3x | 243 |
| é | 7Cx | 302;145 |
| ç | 7Dx | 313;143 |
| ¢ | 7Ex | 242 |

## Wang WWPSC control characters

In Table 8-10, the first column gives the Wang WWPSC control character representation in hexadecimal. The second column gives a description of the function of the WWPSC control character.

Table 8-10 **Wang WWPSC control characters**

| Wang code | Function |
|---|---|
| 01x | Center text |
| 02x | Advance to next tab position |
| 03x | Carriage return |
| 04x | Indent paragraph |
| 05x | Align numbers at next tab position (decimal tab) |
| 06x | Start format line |
| 0Bx | Pause when printing document (Stop code) |
| 0Cx | Delimit notes |
| 0Dx | Merge with document |
| 0Ex | Superscript text |
| 0Fx | Subscript text |
| 82x | Start of work page block |
| 83x | Start of header page block |
| 84x | Start of footer page block |
| 86x | Start of new text page block |
| 8Dx | Do not merge with document |
| 8Ex | Bold text |
| 8Fx | Double underscore |
| 8Fx;8Fx | Strike through |

## Xerox Character Set to Wang WWPSC character conversion

In Tables 8-11 through 8-13, the first column represents the Xerox character graphical representation. The second column is the Xerox character code in octal. The third column is the Wang character code in hexadecimal.

Entries separated by a semicolon (for example, 340;141) represent a conversion to multiple Xerox characters (for example, accents). The second number is the code.

Entries separated by a vertical bar (for example, 357|47) explicitly state the character set with the first number. Inexplicit entries are in XCharSet0.

A blank Wang code entry indicates that an exact conversion of the corresponding Xerox code is not possible. In these cases, the Xerox code will be mapped to the Wang substitute code.

Accented Latin characters that will not convert become the unaccented character. Other symbols that do not convert become the Wang substitute code.

Table 8-11 **Xerox and Wang WWPSC character codes**

| Character | Xerox code | Wang code |
|---|---|---|
| space | 40 | 20x |
| ! | 41 | 21x |
| " | 42 | 22x |
| # | 43 | 23x |
| $ | 44 | 24x |
| % | 45 | 25x |
| & | 46 | 26x |
| ' | 47 | 27x |
| ( | 50 | 28x |
| ) | 51 | 29x |
| * | 52 | 2Ax |
| + | 53 | 2Bx |
| , (comma) | 54 | 2Cx |
| - (minus) | 55 | 2Dx |
| . | 56 | 2Ex |
| / | 57 | 2Fx |
| 0 | 60 | 30x |
| 1 | 61 | 31x |
| 2 | 62 | 32x |
| 3 | 63 | 33x |
| 4 | 64 | 34x |
| 5 | 65 | 35x |
| 6 | 66 | 36x |
| 7 | 67 | 37x |
| 8 | 70 | 38x |
| 9 | 71 | 39x |
| : | 72 | 3Ax |
| ; | 73 | 3Bx |
| < | 74 | 3Cx |
| = | 75 | 3Dx |

Table 8-11 **Xerox and Wang WWPSC character codes (continued)**

| Character | Xerox code | Wang code |
|---|---|---|
| > | 76 | 3Ex |
| ? | 77 | 3Fx |
| @ | 100 | 40x |
| A | 101 | 41x |
| B | 102 | 42x |
| C | 103 | 43x |
| D | 104 | 44x |
| E | 105 | 45x |
| F | 106 | 46x |
| G | 107 | 47x |
| H | 110 | 48x |
| I | 111 | 49x |
| J | 112 | 4Ax |
| K | 113 | 4Bx |
| L | 114 | 4Cx |
| M | 115 | 4Dx |
| N | 116 | 4Ex |
| O | 117 | 4Fx |
| P | 120 | 50x |
| Q | 121 | 51x |
| R | 122 | 52x |
| S | 123 | 53x |
| T | 124 | 54x |
| U | 125 | 55x |
| V | 126 | 56x |
| W | 127 | 57x |
| X | 130 | 58x |
| Y | 131 | 59x |
| Z | 132 | 5Ax |
| [ | 133 | 5Bx |
| \ | 134 | — |

Table 8-11 **Xerox and Wang WWPSC character codes (continued)**

| Character | Xerox code | Wang code |
|---|---|---|
| ] | 135 | 5Dx |
| ^ (circum. s.) | 136 | Ax |
| _ (low bar) | 137 | — |
| ` (grave s.) | 140 | 9x |
| a | 141 | 61x |
| b | 142 | 62x |
| c | 143 | 63x |
| d | 144 | 64x |
| e | 145 | 65x |
| f | 146 | 66x |
| g | 147 | 67x |
| h | 150 | 68x |
| i | 151 | 69x |
| j | 152 | 6Ax |
| k | 153 | 6Bx |
| l | 154 | 6Cx |
| m | 155 | 6Dx |
| n | 156 | 6Ex |
| o | 157 | 6Fx |
| p | 160 | 70x |
| q | 161 | 71x |
| r | 162 | 72x |
| s | 163 | 73x |
| t | 164 | 74x |
| u | 165 | 75x |
| v | 166 | 76x |
| w | 167 | 77x |
| x | 170 | 78x |
| y | 171 | 79x |
| z | 172 | 7Ax |
| { | 173 | — |

Table 8-11 **Xerox and Wang WWPSC character codes (continued)**

| Character | Xerox code | Wang code |
|---|---|---|
| \| | 174 | — |
| } | 175 | — |
| ˜ (tilde s.) | 176 | — |
| Reserved | 177 | — |
| Reserved | 240 | — |
| ¡ | 241 | — |
| ¢ | 242 | 7Ex |
| £ | 243 | A3x |
| $ | 244 | — |
| ¥ | 245 | — |
| Reserved | 246 | — |
| § | 247 | 7Bx |
| Reserved | 250 | — |
| ‘ (left) | 251 | — |
| “ (left) | 252 | — |
| « (left quote) | 253 | — |
| ← | 254 | — |
| ↑ | 255 | — |
| → | 256 | — |
| ↓ | 257 | — |
| ° (degree) | 260 | 60x |
| ± | 261 | — |
| ² | 262 | — |
| ³ | 263 | — |
| × | 264 | — |
| µ | 265 | — |
| ¶ | 266 | 5Fx |
| ·(center) | 267 | — |
| ÷ | 270 | — |
| ’ (right) | 271 | — |
| ” (right) | 272 | — |

Table 8-11 **Xerox and Wang WWPSC character codes (continued)**

| Character | Xerox code | Wang code |
|---|---|---|
| » (right quote) | 273 | — |
| ¼ | 274 | — |
| ½ | 275 | — |
| ¾ | 276 | — |
| ¿ | 277 | — |
| Reserved | 300 | — |
| ` | 301 | — |
| ´ | 302 | — |
| ^ | 303 | — |
| ~ | 304 | — |
| ¯ | 305 | — |
| ˘ | 306 | — |
| ˙ | 307 | — |
| ¨ | 310 | — |
| Reserved | 311 | — |
| ° | 312 | — |
| ¸ | 313 | — |
| — | 314 | |
| ˝ | 315 | — |
| ˛ | 316 | — |
| ˇ | 317 | — |
| bar | 320 | — |
| super 1 | 321 | — |
| ® | 322 | — |
| © | 323 | — |
| ™ | 324 | — |
| ♪ (note) | 325 | — |
| Reserved | 326 | — |
| Reserved | 327 | — |
| Reserved | 330 | — |
| Reserved | 331 | — |

Table 8-11 **Xerox and Wang WWPSC character codes (continued)**

| Character | Xerox code | Wang code |
|---|---|---|
| Reserved | 332 | — |
| Reserved | 333 | — |
| 1/8 frac. | 334 | — |
| 3/8 frac. | 335 | — |
| 5/8 frac. | 336 | — |
| 7/8 frac. | 337 | — |
| Ω (ohms) | 340 | — |
| Æ | 341 | — |
| Đ (D w. stroke) | 342 | — |
| a | 343 | — |
| H w. stroke | 344 | — |
| Reserved | 345 | — |
| IJ | 346 | — |
| L w. dot | 347 | — |
| L w. stroke | 350 | — |
| Ø | 351 | — |
| Œ | 352 | — |
| o | 353 | — |
| Þ (upper thorn) | 354 | — |
| T w. stroke | 355 | — |
| upper eng | 356 | — |
| 'n | 357 | — |
| k Greenland | 360 | — |
| æ | 361 | — |
| d w. stroke | 362 | — |
| ð | 363 | — |
| h w. stroke | 364 | — |
| ı (dotless) | 365 | — |
| ij | 366 | — |
| l· (l w. dot) | 367 | — |
| l w. stroke | 370 | — |

Table 8-11 **Xerox and Wang WWPSC character codes (continued)**

| Character | Xerox code | Wang code |
|---|---|---|
| ø | 371 | — |
| œ | 372 | — |
| ß | 373 | 5Ex |
| þ (lower thorn) | 374 | — |
| t w. stroke | 375 | — |
| lower eng | 376 | — |
| (select code) | 377 | — |
| À | 301;101 | — |
| Á | 302;101 | — |
| Â | 303;101 | — |
| Ã | 304;101 | — |
| Ä | 310;101 | 1Dx |
| Å | 342;101 | — |
| Ç | 343;103 | — |
| È | 301;105 | — |
| É | 302;105 | — |
| Ê | 303;105 | — |
| Ë | 310;105 | — |
| Ì | 301;111 | — |
| Í | 302;111 | — |
| Î | 303;111 | — |
| Ï | 310;111 | — |
| Ñ | 304;116 | — |
| Ò | 301;117 | — |
| Ó | 302;117 | — |

Table 8-11 **Xerox and Wang WWPSC character codes (continued)**

| Character | Xerox code | Wang code |
|---|---|---|
| Ô | 303;117 | — |
| Õ | 304;117 | — |
| Ö | 310;117 | 1Ex |
| Ù | 301;125 | — |
| Ú | 302;125 | — |
| Û | 303;125 | — |
| Ü | 310;125 | 1Fx |
| Ý | 302;131 | 7Fx |

Table 8-12 **Xerox to WWPSC conversions with multiple Xerox characters**

| Character | Xerox codes | Wang code |
|---|---|---|
| à | 301;141 | 1Ax |
| á | 302;141 | — |
| â | 303;141 | 10x |
| ã | 304;141 | — |
| ä | 310;141 | 15x |
| å | 342;141 | — |
| ç | 313;143 | 7Dx |
| è | 301;145 | 1Bx |
| é | 302;145 | 7Cx |
| ê | 303;145 | 11X |
| ë | 310;145 | 16x |
| ì | 301;151 | — |
| í | 302;151 | — |
| î | 303;151 | 12x |
| ï | 310;151 | 17x |
| ñ | 304;156 | — |
| ò | 301;157 | — |
| ó | 302;157 | — |
| ô | 303;157 | 13x |
| õ | 304;157 | — |
| ö | 310;157 | 18x |
| ù | 301;165 | 1Cx |
| ú | 302;165 | — |
| û | 303;165 | 14x |
| ü | 310;165 | 19x |
| ý | 302;171 | — |
| ÿ | 310;171 | — |

Table 8-13 **Xerox—WWPSC conversions with Xerox Character Set and code**

| Character | Xerox code | Wang code |
|---|---|---|
| ′ (minutes) | 41\|154 | — |
| ″ (seconds) | 41\|155 | — |
| space (non-break) | 357\|41 | 5Cx |
| - (non-break) | 357\|42 | — |
| - (discretionary) | 357\|43 | — |
| „ (German left) | 357\|50 | — |
| space (figure) | 357\|56 | — |
| ¬ (not) | 357\|152 | — |
| ¦ | 357\|153 | — |
| *f* (florin) | 357\|242 | — |
| Pts (pesetas) | 357\|244 | — |
| _ (double low bar) | 357\|277 | — |

# 9. VP File Conversion of WordStar Documents

Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert WordStar files into ViewPoint files and ViewPoint files into WordStar files. The WordStar conversion application will convert the standard 7-Bit ASCII characters (WordStar 3.3) as well as the 8-Bit ASCII characters.

This chapter provides information on the WordStar conversion process. Information about the WordStar standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the basic hardware and software requirements listed in the "Introduction" chapter of this volume.

- The PC Option board is optional and for the 6085 only. It can be used for reading MS-DOS formatted floppy disks and MS-DOS files via VP PCE virtual floppy disk.
- *VP PC Emulation* is optional and for the 6085 only. It can be used for reading MS-DOS files via VP PCE virtual floppy disk and for MS-DOS formatted floppy disk.
- The *VP Document Editor* is required.

## Key concepts of WordStar file conversion

Because WordStar and ViewPoint files differ in function and restrictions, the conversion is not always exact. Use the conversion guide at the end of this chapter to help you predict conversion results.

## Properties and options sheets

The Converter properties and options sheets for WordStar conversion are the same as those for the basic converter, except:

- When [Details] is selected, **Font** choices of [Proportional] and [Fixed] display.
- When you select [Show Icon File Types], the WordStar file types of "0" and "2" are shown.

If you specify proportional spacing (default) for the destination document, the conversion uses Modern 12 font in the resulting ViewPoint document. If you specify fixed pitch, the PC Terminal 12 font will be used.

The fixed-pitch font provides the most similar appearance to the original WordStar document. Using this font is especially important in documents with information in columns.

## Converting files

To convert files, you must have a Converter icon on the desktop and the *VP File Conversion of WordStar Documents* application running. (See Chapter 2.) You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

## WordStar conversion guide

Use the following conversion guide to help you predict conversion results when converting WordStar files into ViewPoint format and ViewPoint files into WordStar format.

Table 9-1 **WordStar conversion guide**

| Feature | After conversion to WordStar 3.3 and 3.4 | After conversion to ViewPoint |
|---|---|---|
| Bold | Converts precisely. | Converts precisely. |
| Hard carriage return | — | Converts to a new-paragraph character when followed by a line feed. |
| Soft carriage return | — | Not converted. |
| Characters | Characters that cannot be converted are replaced by question marks. | Characters that cannot be converted are replaced by question marks. |
| Accented characters (with PC Terminal 12 font available in ViewPoint) | — | Converted. Line height throughout paragraph changed from 12 to 14 points to accommodate extra character height. |
| Centering | Converts precisely. | Converted to a space. |
| Equation frame | No conversion. | — |
| Fields | No conversion. | — |

Table 9-1 **WordStar conversion guide (continued)**

| Feature | After conversion to WordStar 3.3 and 3.4 | After conversion to ViewPoint |
|---|---|---|
| Fonts | Style and size are ignored.<br>Size changes are ignored. | User selected. |
| Graphic frame | No conversion. | — |
| Headings and footings | Heading and footing (65 characters, maximum) of first page format character are converted.<br>Only characters in Character Set 0 are converted.<br>Heading and footing appear on left side of page. All other paragraph properties are ignored. | First heading and footing are converted. |
| Italics | Converts to double strike. | — |
| VP double strike in Modern 12 | Converts to WordStar double striking. | Converts to italics in proportional font. |

Table 9-1 **WordStar conversion guide (continued)**

| Feature | After conversion to WordStar 3.3 and 3.4 | After conversion to ViewPoint |
|---|---|---|
| Double strike with PC Terminal 12 font on 6085/8010 | — | Converts to double underline in fixed font. |
| Justified | No conversion. | Converts to a space. |
| Lines | No more than 65 characters, terminated by a carriage return; followed by new-line character. | — |
| Line heights | No conversion.<br>Single line spacing is used. | — |
| Multiple columns | No conversion. | — |
| New-paragraph character | Converted to carriage return, followed by line feed. | — |
| Non-breaking spaces | Converted to required spaces. | — |
| Page break | Page break character is converted to page break (.PA). | Page break (.PA) is converted to page break character. |

Table 9-1 **WordStar conversion guide (continued)**

| Feature | After conversion to WordStar 3.3 and 3.4 | After conversion to ViewPoint |
|---|---|---|
| Page format character | First page format character converted. | — |
| Page margins | No conversion.<br>All margins are 1 inch. | No conversion.<br>All margins are 1 inch. |
| Page numbers | No conversion. | No conversion. |
| Page size | Size 8½ by 11 inches<br>First page format character is handled.<br>Single column text | — |

Table 9-1 **WordStar conversion guide (continued)**

| Feature | After conversion to WordStar 3.3 and 3.4 | After conversion to ViewPoint |
|---|---|---|
| Paragraph properties | Single line spacing<br>New paragraph characters are converted to carriage return, plus new line.<br>Paragraph text is sliced into lines of not more than 65 characters. Paragraph is terminated by marked carriage return plus new line.<br>Center converts properly.<br>Right align converts to left align. | Only single line spacing<br>Carriage return plus new line is converted to new paragraph. |
| Pitch | No conversion. | No conversion. |
| Record files | No conversion. | — |
| Spaces and required spaces | Converts to space and hard space, respectively. | Converts to space and non-breaking space, respectively. |
| Strikeout | No conversion. | No conversion. |

Table 9-1 **WordStar conversion guide (continued)**

| Feature | After conversion to WordStar 3.3 and 3.4 | After conversion to ViewPoint |
|---|---|---|
| Subscripts and superscripts with Modern 12 font in ViewPoint | Any level of superscripting and subscripting is converted. | Superscript converts to normal superscript (smaller font).<br><br>Subscript converts to normal subscript (smaller font). |
| Superscript with PC Terminal 12 font in ViewPoint | Any level of superscripting and subscripting is converted. | Converts. Font size not reduced; line height throughout paragraph changed from 12 to 14 points to accommodate. |
| Tables | No conversion. | — |
| Tab settings and properties | Tab and para-tab convert to equivalent in spaces. Fixed pitch option must be selected for consistent indent distance.<br><br>No conversion for decimal tab, centering, margins, and justification. | WordStar tab character converts to ViewPoint tab character. |
| Text frames | No conversion. | — |

Table 9-1 **WordStar conversion guide (continued)**

| Feature | After conversion to WordStar 3.3 and 3.4 | After conversion to ViewPoint |
|---|---|---|
| Underline | Converts to intermittent underlining. | Converts to continuous underlining. |
| Double underline with PC Terminal 12 font in ViewPoint | Converts to single underline. | — |

# 10. VP File Conversion of Xerox 860 Documents

Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert 860 document files into ViewPoint document format, and ViewPoint document files into 860 format.

This chapter provides information on the 860 document file conversion process. Information about the 860 file standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the basic hardware and software requirements listed in the "Introduction" chapter of this volume.

- The PC Option board is optional and for the 6085 only. It can be used for reading MS-DOS formatted floppy disks and MS-DOS files via VP PCE virtual floppy disks.
- *VP PC Emulation* is optional and for the 6085 only. It can be used for reading MS-DOS files via VP PCE virtual floppy disk and for MS-DOS formatted floppy disks.
- The *VP Document Editor* is required.

# Key concepts of 860 documents file conversion

Because 860 document files and ViewPoint files differ somewhat in function and restrictions, the conversion is not always exact. Use the conversion guide at the end of this chapter to help you predict conversion results.

# Properties and options sheets

The properties and options sheets for 860 document conversion have no options in addition to those explained in Chapter 2. Only file type 5120 is displayed when [Show Icon File Types] is selected.

## Converted 860 text documents

The conversion of text documents is quite complete, although some documents may require editing. If the 860 document contains a format block in the middle of a paragraph and if that format block specifies changing margins, tabs, or line spacing, a new paragraph will begin at that point in the ViewPoint document.

## Converted 860 statistical documents

There are several things to keep in mind while editing converted statistical documents:

- Use the regular tab (as opposed to the para-tab) when adding tab motions to statistical documents.
- Manually retype any entries in which symbols (such as percent signs or right parentheses) should appear at the flush-right tab.
- With decimal tabs, the regular tab and the second special tab are eliminated. The first special tab is converted to a decimal tab.
- With right-flush tabs, the regular tab is eliminated, and the special tab is converted to a right-flush tab.

## ViewPoint to 860 document conversion characteristics

Reformatting a converted ViewPoint document will produce a format and layout resembling the original ViewPoint document, except:

- Extra tabs are inserted in the 860 document. (If the tabs are too close together, the conversion results will be unpredictable.)
- The regular tab setting added for a right-flush or decimal column may appear too far to the left. In these instances, you can move the tabs.

## Obtaining 860 spreadsheet files for conversion

You can get 860 files from:

- *VP PC Emulation* Virtual Floppy icon and Emulated Fixed Disk icon
- $5\frac{1}{4}$-inch floppy disks
- Files mailed over the network from other Xerox machines or from PCs

# Converting files

To convert files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

# 860 document conversion guide

Use the following conversion guide to help you predict conversion results.

Table 10-1 **860 document conversion guide**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Bold | Converts precisely. | Converts precisely. |
| Carriage returns | A single required carrier return is used to define a paragraph. | Non-required return converts to space.<br>Required return converts to new-paragraph character.<br>Following a statistical format, non-required return converts to line return. |
| Center (between margins) | — | Converts precisely to centered paragraph. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Center (over column-Code 5) | — | Creates paragraph with centered tab in appropriate place. Line spacing may need correcting. |
| Center (between points-Code 4) | — | Creates paragraph with centered tab in appropriate place. Some tab settings may be lost. Line spacing may need correcting.<br><br>Centering at left margin not supported.<br><br>Centers heading and footing on page, regardless of column type specified. |
| Characters, printing | Convert accurately, including accented characters needed for French, German, and Swedish. | Standard scientific and legal keyboard characters are converted exactly. All characters display correctly, provided they are present in font.<br><br>Accented characters needed for French, German, and Swedish convert correctly. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Character properties | On conversion, pitch is PS, printwheel is not identified, and keyboard is standard.<br><br>Bold, underscore, and overstrike convert precisely. Italics convert to underscore. | — |
| Code back-space and Code half backspace | — | Ignored at screen and when sent to printer |
| Equation frames | No conversion. | — |
| Fields | Field contents are converted like ordinary text, unless the field occurs inside a text, graphic or equation frame. | — |
| Graphics and graphic frames | No conversion. | — |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Headings and footings | After conversion, only left heading and footing is used.<br><br>Page number symbol in heading and footing is always translated to Code 2.<br><br>Heading and footing always appear on first page, whether or not this was true for 6085/8010 document.<br><br>Only first page format character is processed.<br><br>Changes in font properties within heading and footing are converted properly.<br><br>Total of 189 characters convert from ViewPoint page number pattern and headings and footings, including:<br><br>On and off commands for center, bold, underscore, and overstrike. | If 860 heading or footing contains a page number character, heading and footing as well as page number symbol (#) will appear in Page Number property sheet after conversion.<br><br>Heading and footing will be centered if 860 heading and footing was centered. Otherwise it will appear flush left on page.<br><br>Entire heading and footing will be bold, overstrike, and/or underscored, based on character set for 860 heading and footing. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Headings and footings (continued) | One character each for page label line and contents line.<br><br>Heading and footing will be centered if the ViewPoint heading and footing was centered. Otherwise, it appears at left side of page.<br><br>Tab settings in headings and footings are ignored. Tab settings of first paragraph in ViewPoint document are used in 860 heading and footing instead. | All tabs contained in headings and footings are ignored. |
| Hyphen, discretionary hyphen, and dash | Converts precisely. | Required hyphen and dash convert to mandatory hyphen.<br><br>Non-required hyphen converts to discretionary hyphen. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Index and reverse index | Subscript and superscript converts to index and reverse index. | Reverse index and index convert to superscript and subscript, respectively.<br><br>Combinations that would go beyond super-superscript or super-subscript are ignored. Line spacing may need correction.<br><br>Underlined text displaced downward displays, but does not print as overstrike. |
| Italics | Converts to underline. | — |
| Justify | Converts precisely. | Converts precisely. |
| Keyboard ID | — | See Characters, printing. |
| Line spacing | Line height converts to line spacing of single space, one-and-a-half space, double space, or triple space, whichever is closest approximation. | Converts precisely. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Margins | Page margins and paragraph margins are added together to produce equivalent 860 margins. | Paragraph margins are set to preserve original line length of 860 document.<br>Left paragraph margins are equivalent to corresponding 860 page margin. |
| Null code (Code 6) | — | No conversion. |
| Overstrike | See Strikeout. | Converts precisely. |
| Page break | Required page break converts to required page end code. Automatic page breaks do not convert. | — |
| Page end | — | Non-required page end does not convert.<br>Required page end converts to required page break character. |
| Page labels | See Headings and Footings. | See Headings and Footings. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Page layout | — | Top and bottom margins are equal to 860 margins. Margins containing page labels are increased 12 points for each line of text. |
| Page numbers | Converts precisely. (See Headings and Footings.) | If the 860 heading contains page numbering, 6085/8010 also contains page numbers.<br><br>Page numbers do not appear in page numbering property sheet. The same is true for footings. |
| Page size and page format properties | Page size converts to equivalent 6085/8010 page length and width.<br><br>Text is single column.<br><br>Top and bottom margins are converted precisely. | Page length is converted precisely.<br><br>Page width is converted according to smallest listed page width in User Profile into which 860 right margin will fit. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Paragraph properties | Text justification is preserved; line spacing of single, space and a half, double, or triple is chosen to most closely approximate format, and margins are converted as described in Margins. A single required carriage return is used to define a paragraph.<br><br>Centering converts accurately. | Paragraph margins are set to preserve original line length of 860 document. |
| Pitch | Always PS. | 10 pitch converts to Titan 12 point.<br><br>12 pitch converts to Titan 10 point.<br><br>PS pitch converts to Bold PS.<br><br>Scientific converts to Classic 10 point. |
| Reverse index and index | See Index and Reverse index. | See Index and Reverse index. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Right flush (Code 1) | No conversion. | Converted to line in its own paragraph with a right flush tab. Line spacing may need correction.<br><br>A right flush following a tab converts accurately. Additional right flushes do not convert. |
| Space, required space, and non-breaking space | Converts precisely. | Converts to space, required space, and non-breaking space, respectively. |
| Strikeout | Converts precisely. | See Overstrike. |
| Stop code (Code 3) | — | Converts to question mark. |
| Switch code (Code 7) | — | No conversion. |
| Tables | No conversion. | — |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Tab motions | For non-statistical block: para-tab converts to 860 lower tab motion; upper tab converts to 860 upper tab motion.<br><br>For statistical block: para-tab and upper tab both convert to 860 lower tab. | If it follows text format block, lower tab motion converts to paragraph tab on first line of a paragraph and is ignored on subsequent lines of paragraph.<br><br>If it follows statistical format block, lower tab motion converts to one, two, or three upper tabs, depending on current position in the line and type of next tab setting.<br><br>Upper tab motion converts to upper tab.<br><br>When a tab motion goes beyond right margin, 6085/8010 treats each tab motion outside right margin as new page. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Tab properties | Tab settings in 860 document are calculated, taking description in Margins into account.<br><br>All explicit left flush tab settings convert to regular tab stops.<br><br>Center tab settings convert to normal tab stop, followed by special tab stop. Each line in paragraph with center tab setting begins with center over column (Code 5).<br><br>All right flush and decimal tab settings convert to regular tab stops, followed by one (for right flush column data) or two (for decimal alignment) special tab stops.<br><br>Default tab settings convert to equivalent 860 explicit tab settings. | — |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Tab properties (continued) | Right-flush text requires changing column from regular tab, followed by special tab, to regular tab at position of special tab and Code 1. | — |
| Tab settings (regular) | — | Convert precisely to left tab stops. |
| Tab setting (special) | — | Special tab settings in 860 document convert as follows:<br><br>Decimal tabs—Regular tab and second special tab are eliminated. First special tab is converted to decimal tab.<br><br>Centered tabs—Code 5 and regular tab are eliminated; special tab is converted to centered tab.<br><br>Right flush tabs—Regular tab is eliminated, and special tab is converted to right flush tab. |

Table 10-1 **860 document conversion guide (continued)**

| Feature | After conversion to 860 | After conversion to ViewPoint |
|---|---|---|
| Text frames | No conversion. | — |
| Underscore | Converts precisely. | Converts precisely. |

# 11. VP File Conversion of Xerox 860 Record Files

Using the appropriate file conversion software and your 6085 Professional Computer System or 8010 Information System, you can convert 860 record files into ViewPoint format record files for *VP List Manager*.

This chapter provides information on the 860 record file conversion process. Information about the 860 standard is not included in this document.

## Additional hardware and software requirements

The following required or optional items are in addition to the basic hardware and software requirements listed in the "Introduction" chapter of this volume.

- There is no required hardware in addition to that mentioned in the "Introduction" chapter of this volume.
- *VP Document Editor* is required.
- *VP List Manager* is required.
- *VP File Conversion of 860 Record Files* is required.

# Key concepts of 860 record file conversion

Conversion between the 860 and 6085/8010 workstation is limited to the one-way transfer of 860 record files to 6085/8010 record files. Because 860 record files and ViewPoint files differ in function and restrictions, the conversion is not always exact. Use the conversion guide at the end of this chapter to help you predict conversion results.

## Properties and options sheets

The properties and options sheets for 860 record file conversion have no additional options to those explained in Chapter 2. File type 5125 is shown when [Show Icon File Types] is selected.

## Obtaining 860 record files for conversion

You can get 860 record files from:

- Files mailed over the network from other Xerox machines
- 860 workstations with network communication options

## Converting files

To convert files, you must have a Converter icon on the desktop and the necessary conversion software application running, as described in Chapter 2. You should also be familiar with the basic methods of conversion described in Chapter 2 and with the procedures given in the "Performing file conversion" section of that chapter.

## 860 record file conversion guide

Use the following conversion guide to help you predict conversion results.

Table 11-1 **860 record file conversion guide**

| Feature | After conversion to ViewPoint |
|---|---|
| Calc Field | No conversion.<br>Description field is left blank.<br>[Stop on Skip] is deselected.<br>Skip if field is left blank. |
| Length | Converts length. If multiline is greater than 1, then Length = Multiline X Length. |
| Multiline | Any 860 multiline field is converted into one field of Multiline X Length. |
| Multi-entry | Converts to one field; tabs are not converted. |
| Name | Converts precisely. ViewPoint records processing does not support duplicate field names. An 860 record file with duplicate field names must be edited to make each field name unique prior to conversion. |
| Range-high | Converts to high-end value for Range. |
| Range-low | Converts to low-end value for Range. |
| Record flag | No conversion. |
| Required | Converts to Required directly. |

Table 11-1 **860 record file conversion guide (continued)**

| Feature | After conversion to ViewPoint |
|---|---|
| Type: | Converts as follows: |
| Alphabetic | Alphabetic converts to text. |
| Alphanumeric | Alphanumeric converts to text. |
| Numeric | Numeric converts to amount. |
| | All numeric fields in 860 record files convert to amount fields in 6085/8010 record files. |
| | 6085/8010 amount fields can contain only numeric values or the following number-related characters: plus (+), minus (-), dollar sign ($), number sign (#), comma (,), and period (.). |
| | Plus and minus signs must relate to negative or positive numbers, and the comma and period can be used only as decimal or thousands delimiters. |
| | If an 860 numeric field contains non-numeric data, an error message is posted during conversion. |
| | Record fields designated as social security numbers or dates are possible sources of conversion failures. These fields must be changed to alphanumeric before conversion. |

# Index

# Reader's Comments

XEROX®

*VP Series Reference Library*
*File Conversions Reference* volume

**Your feedback will help us tailor our manuals to your needs.**

---

Name: _____ Company: _____

City: _____ State/Zip: _____

| | Excellent | Good | Adequate | Poor |
|---|---|---|---|---|
| 1. Is the organization suitable for your needs? | ☐ | ☐ | ☐ | ☐ |

Comments_____

_____

| | | | | |
|---|---|---|---|---|
| 2. Is the documentation written at an appropriate level? | ☐ | ☐ | ☐ | ☐ |

Comments_____

_____

| | | | | |
|---|---|---|---|---|
| 3. Are you able to find the information you need easily? | ☐ | ☐ | ☐ | ☐ |

Comments_____

_____

| | | | | |
|---|---|---|---|---|
| 4. Overall, how would you rate the documentation? | ☐ | ☐ | ☐ | ☐ |

5. How can we improve the documentation?

_____

_____

6. Did you find any errors?

| Page No. | Error |
|---|---|
| _____ | _____ |
| _____ | _____ |
| _____ | _____ |

7. How would you describe your position?

☐ Technical support ☐ Professional/managerial
☐ Document developer ☐ Other (explain)_____

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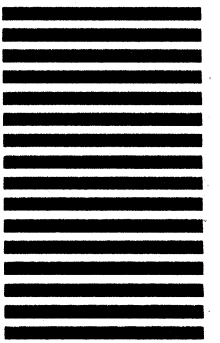

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