

CTOS

**OFIS® Graphics
Operations
Guide**

UNISYS

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CTOS[®]

OFIS[®] Graphics

Operations

Guide

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About This Guide

This guide contains procedural, reference, and installation information for OFIS Graphics 3.0 operations. OFIS Graphics software allows you to:

- Create and enhance drawings using mouse and keyboard input
- Create and enhance text with drawings or charts
- Use spreadsheet data to create a variety of charts
- Merge combinations of drawings, text, and charts

Who Should Use This Guide

This document will help you learn OFIS Graphics if you are:

- A new user of this product with no other graphics software experience
- An experienced user of another graphics product who is using this product for the first time
- An experienced user of an earlier version of OFIS Graphics and are upgrading to the 3.0 level

The information is easier to understand if you are familiar with the CTOS operating system. The procedures are easier to perform if you know how to use a mouse device. However, all necessary information (including how to install the application and configure applicable files and hardware) is included in this guide.

How to Use This Guide

You do not need to read this guide cover-to-cover. It contains procedural information on a wide range of features, and you may be interested in only some of them at this time.

If you review the topics shown in the contents before you start, you may find this guide easier to use. Also, if you are a user of another graphics product, reviewing the contents helps you identify the location of functions similar to those you currently use.

To find the definition of a word that is unfamiliar to you, check the glossary.

To locate specific information, turn to the index for an alphabetic list of topics.

Performing System Administration

If you are a system administrator or are otherwise responsible for installing OFIS Graphics, you should refer to Appendix B. It contains specific information you need to meet hardware and software requirements, install software, and configure necessary files, printers, and plotters.

Using the System

If you are using OFIS Graphics for the first time, please read Sections 1 through 3. They contain basic information you need to become familiar with OFIS Graphics and use the mouse device.

How This Guide is Arranged

This guide is divided into sections and appendixes, with related subjects grouped together. Section 1 provides an overview that describes the basic concepts involved in the operations. Thereafter, the general sequence of topics is in the order that a typical user might need them.

Sections throughout the guide contain procedures for using a mouse with OFIS Graphics operations. After Section 1, the guide is organized as follows:

Section 2	Managing OFIS Graphics files
Section 3	Using OFIS Graphics functions
Section 4	Common editing functions
Section 5	Using drawing tools
Section 6	Changing objects
Section 7	Using Palette tools
Section 8	Using Text tools
Section 9	Creating and modifying charts
Section 10	Printing picture files
Section 11	Customizing user profiles
Section 12	Using OFIS Graphics utilities
Appendix A	Status codes
Appendix B	Installing OFIS Graphics and configuring files
Appendix C	Transferring PIC files created on other products

Conventions

The following conventions are used throughout this guide:

- Names of volumes, directories, files, fields, and variables appear in italics. For example, *[/!Sys]<Sys>SysInit.jcl*, *[Overwrite OK?]*.
- Keys that you press are bold and all caps. For example, press **FINISH**, then **GO**.
- When two keys are used together for an operation, their names are separated with the plus sign. For example, **ACTION+GO** means you hold down **ACTION** and press **GO**. If one key follows another, you may see press **FINISH**, then **GO**, or **FINISH, GO**.
- Commands and information you type are bold with initial caps. For example, **Installation Manager**, type **Yes**.
- The term "character" includes spaces (blanks) you enter with the **SPACEBAR**.
- The term "click" describes the action of pressing then releasing a button on the mouse.
- The term "select" describes the action of moving the cursor to one of the tools or function menus and pressing **MARK**.
- The terms "pick" and "unpick" describe the action of picking or unpicking objects.

Related Product Information

For an explanation of CTOS Executive commands and procedures, refer to the *CTOS Executive Reference Manual* or *CTOS Executive User's Guide*.

While using OFIS Graphics, you may need to refer to the following documents:

- *CTOS Context/Window Manager Operations Training Guide*
- *CTOS Context/Window Manager Installation and Configuration Guide, Volume 1: Real Mode*
- *CTOS Context/Window Manager Installation and Configuration Guide, Volume 2: Protected Mode*
- *BTOS Draw Operations Guide*
- *BTOS Enhanced Multiplan Operations Guide*
- *CTOS OFIS Spreadsheet User's Guide*
- *CTOS OFIS Spreadsheet Reference Manual*
- *CTOS Generic Print System Administration Guide*
- *CTOS OFIS Document Designer / OFIS Document Writer System Administration Guide*
- *BTOS Graphics II Programming Reference Manual*

Section 1

Overview

This section provides an overview of OFIS Graphics 3.0 and describes the following:

- Capabilities of OFIS Graphics
- New features included in this release
- Getting started with OFIS Graphics
- Using the mouse and keyboard with OFIS Graphics
- Using OFIS Graphics tools

Capabilities of OFIS Graphics

With OFIS Graphics software you can:

- Create pictures on the workstation display by drawing and combining objects, such as lines and shapes
- Modify pictures or charts by changing, reshaping, copying, and deleting objects
- Enhance pictures or charts by adding colors, fill patterns, and different kinds of lines
- Select tools from various menus to draw, add and modify text, and modify charts
- Add a variety of styles and sizes of text to pictures or charts

- Convert text files into picture files
- Use Enhanced Multiplan and OFIS Spreadsheet data to create a variety of charts
- Merge drawings, charts, and text
- Print pictures or charts on a dot matrix printer, plotter, or laser printer

You can perform these tasks by using a variety of command menus, drawing tools, and system functions.

New Features

New features provided in CTOS OFIS Graphics 3.0 are described below.

3D Charts

You can choose a three-dimensional (3D) depth for your bar and pie charts. You can also select an angle of view for a pie chart.

Drawing Tools and Menu Enhancements

You can use the new **Curve Replace** tool in drawings to replace segments with curves. You can also control the direction of the **Curve** tool curvature with the new **CODE+C** accelerator. The Drawing Tools side menu now displays all the drawing tools.

Work Protect Feature

To lessen the impact of a system failure (where all your work is lost), you can now choose to let OFIS Graphics periodically save your work area images automatically.

User Profiles

You can change, save, and load OFIS Graphics settings in user profiles. This gives you the ability to set defaults or change current settings for your work area Set Up menu, Print menu, Drawing Tool menu, and Text Tool menu.

Picture File Migration

You can now migrate your **.pic** files to the industry standard Computer Graphics Metafile (CGM) format. Applications that recognize the **.cgm** format include Corel DRAW!, Hijaak, and Harvard Graphics.

Time-Saving Features

The **Quick Menu** feature provides you with access to six common editing tools if you use the mouse middle button or **CODE+M** accelerator. With the **Quick Access** feature, OFIS Graphics switches you to the appropriate Tools side menu when you select drawing, text, or chart objects. The **Quick Save** feature allows you to save a picture with the new **CODE+S** accelerator.

File Backups

You can configure OFIS Graphics to create backup files when saving pictures. This feature allows you to retrieve a backup copy of a newly modified or deleted picture at a later time.

Left-Handed Cursors

OFIS Graphics orients commonly used cursors such as the Arrow, Pick, Delete, and Pan cursors to represent left-handed use.

Getting Started with OFIS Graphics

If you review the basics of OFIS Graphics discussed in the following paragraphs, the instructions in later sections of this guide will be easier to understand.

Entering OFIS Graphics

After installing all necessary software (see Appendix B), you can begin using OFIS Graphics. You can enter OFIS Graphics numerous ways including using:

CTOS Executive

CTOS OFIS Spreadsheet

CTOS Context Manager

BTOS Enhanced Multiplan

CTOS OFIS Document Designer (ODD)

CTOS OFIS Paint

To enter OFIS Graphics from the Executive, use the following procedure:

1. At the Executive command line, type **OFIS Graphics**.
2. To enter OFIS Graphics with a picture file selected, type **Return** followed by the name of a picture file in the *[Picture file(s)]* parameter. A picture file name can be up to 46 characters long. You may specify up to two picture names.
3. Press **GO**.

The OFIS Graphics screen appears. If you entered a picture file name in the *[Picture file(s)]* parameter, the message:

```
"Getting picture..."
```

appears. The picture file then displays in the work area.

To enter OFIS Graphics from Context Manager, select **OFIS Graphics** and press **GO**.

See the appropriate user documentation for entering and exiting OFIS Graphic using the other applications.

Exiting OFIS Graphics

To exit OFIS Graphics from the Executive or Context Manager, use the following procedure:

1. Save any current pictures. See Section 2 on managing and saving OFIS Graphics files.
2. Press **FINISH**.

Caution:

If you don't save your work before pressing **FINISH**, then **GO**, it is lost and not recoverable.

Returning to Another Application

If you originally entered OFIS Graphics from another application (ODD, Spreadsheet, Enhanced Multiplan, or Paint), you can easily return to the original program as often as you want.

To return to the original application, use the following procedure:

1. Press **FINISH**.

If you have not saved since your last graphics operation, the following message is displayed:

Select **GO** to continue and lose modified picture, else **Cancel**.

2. Perform one of the following actions:

- If you want to save your chart and avoid losing the modifications made since the last time you saved, press **CANCEL**, then save your chart file.
- If you do not want to save, press **GO**.

Your application screen appears. Again, if you do not save before returning to the original application, your OFIS Graphics work is lost.

Using the Mouse

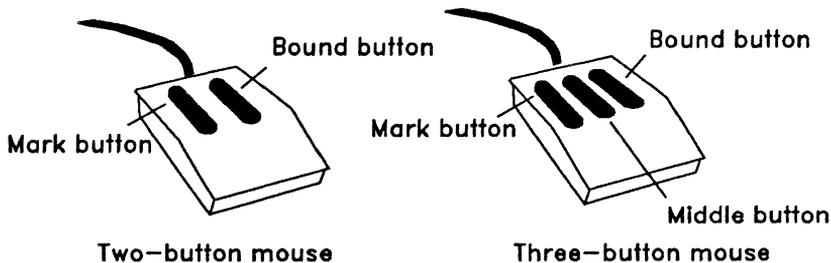
Although OFIS Graphics can be used by both the mouse and keyboard, Unisys highly recommends using the mouse with this product. Using the mouse and keyboard are described in this section.

Mouse Functions

The Mouse Service software must be installed for OFIS Graphics to work (see Appendix B). You can use all of the functions provided by OFIS Graphics by using the mouse.

The mouse is a mechanical device that attaches to your workstation. The mouse has **MARK** and **BOUND** buttons, and may have a third button for other functions. When you move the mouse over a surface, you move the cursor in the display as well. You can draw lines and shapes, point to command menus and drawing tools, and select objects. Figure 1-1 shows two devices, a two-button mouse and a three-button mouse.

Figure 1-1. A Two-Button Mouse and a Three-Button Mouse (Right Handed)



Moving the Cursor with the Mouse

If you do not have a mouse, refer to *Using the Keyboard for Drawing Instead of the Mouse*.

Mouse buttons have the following features:

- **MARK** button

This button picks an object, tool, or text, or displays a menu. It is equivalent to the **MARK** key on the keyboard.

You use the **MARK** button to pick objects and text in the work area, and select tools and menus. Pressing the **MARK** button surrounds the picked object with a highlighted box.

- **Middle** button

The middle button (on a three-button mouse), brings up the **Unpick** icon or the **Quick Menu** icon at the location of the cursor. With a two-button mouse, you press **CODE+M** on the keyboard to bring up these icons.

- **BOUND** button

This button unpicks an object or is used to change the size of a box cursor (see Section 6 for more details). It is equivalent to the **BOUND** key on the keyboard.

You use the **BOUND** button to unpick marked objects and text in the work area.

To move the cursor with the mouse, use the following procedure:

1. Ensure that OFIS Graphics is installed and loaded into memory and that the mouse device rests on a clean, smooth, firm surface.
2. Hold the mouse in your fingers with the cord going away from your hand.
3. Without lifting the mouse off the surface, move it around.

Note that the cursor on the screen matches the speed and direction that you move the mouse on the surface. If you move the cursor off of the right side of the screen using a right-handed mouse, a very small dot on the right side menu indicates the cursor position. Moving the mouse to the left returns the cursor to the screen. If you move the cursor off of the screen on the left side of the screen using a left-handed mouse, a very small dot on the left side edge indicates the cursor position. Moving the mouse to the right returns the cursor to the screen. With a right-handed or left-handed cursor, if you move it off the screen to the top, the cursor remains visible at the top edge. However, if you move it off to the bottom, a small dot at the bottom of the function menus indicates the cursor location. Moving the mouse up or down returns the cursor to the screen.

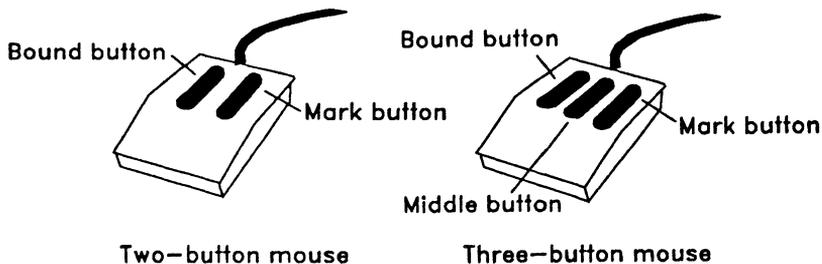
To select a menu, function, or tool "click" on the selection by pressing the **MARK** button.

For more information on picking and unpicking objects, refer to Section 5.

Using the Mouse with the Left Hand

If you prefer using your left hand, you can set up the mouse so that **MARK** is on the right, and **BOUND** is on the left. Figure 1-2 shows the mouse set up for left-handed use.

Figure 1-2. A Two-Button Mouse and a Three-Button Mouse (Left Handed)



To set up the mouse for left-handed operation, use the following procedure:

1. Select the Set Up function at the bottom of the screen.
2. Click **MARK**. The Set Up pop-up menu appears.
*Note: The default **MARK** button is the one on the left of the mouse.*
3. Under the Mouse Hand header, select **Left Handed**. Note that the default is **Right Handed**.
4. Click **MARK**. The system fills the selection box for the **Left Handed**.
5. Select **GO**.
6. Click **MARK**. The system reverses the order of buttons on the mouse for left-handed use. The right mouse button is now the **MARK**, and the left mouse button is now the **BOUND**. The middle button does not change on a three button mouse.

When you use the left-handed mouse option, the following cursors and corresponding icons also become left-handed:

- Arrow cursor (Arrow)
- Pick cursor (Pointing hand)
- Delete cursor (Lightning bolt)
- Pan cursor (Hand)

Using the Keyboard for Drawing Instead of the Mouse

If you do not have a mouse, OFIS Graphics allows you to draw and move the cursor, select command menus, and select tools by using your keyboard.

You can duplicate the function of the mouse buttons on the keyboard, as described below.

On the mouse:	On the keyboard:
hold MARK	press MARK
release MARK	press SHIFT+MARK
click MARK	press MARK , then press SHIFT+MARK
hold BOUND	press BOUND
release BOUND	press SHIFT+BOUND
click BOUND	press BOUND , then press SHIFT+BOUND

To select a function menu with the keyboard, use the following procedure:

1. Locate the function at the bottom of the display.
2. Press the appropriate function key on the keyboard (for example, to Redraw, you press the **F1** key).

To move the cursor using the keyboard, press the appropriate **ARROW** key to move the cursor on the display. The cursor moves slowly using this procedure.

To move the cursor quickly to the left, right, top, or bottom, press **SHIFT+ARROW**.

To move the cursor to the edge of the current work area, press **CODE+ARROW**.

***Note:** When the Text Input line is displayed at the bottom of the screen, only the **SHIFT+ARROW** key combinations can be used for moving the cursor. The **ARROW** and **CODE+ARROW** key combinations are used for moving the cursor in the highlighted Text Input line. When the Text Input line is cleared from the screen, all other key combinations such as **ARROW** and **CODE+ARROW** are restored.*

Caution:

While using the cursor keys, if the keyboard does not respond, press **SHIFT+MARK**. This is because the keyboard is locked-up in an operation which requires a complete mouse click, that is, a combination of **MARK** followed by **SHIFT+MARK** or a **BOUND** followed by **SHIFT+BOUND** using the keyboard.

Using OFIS Graphics

The following paragraphs briefly describe OFIS Graphics tools and functions. Each tool and function is described in more detail in the remaining sections of this guide.

Components of the OFIS Graphics Display

OFIS Graphics provides you with tools for drawing, adding text, and creating charts. You access these tools by using pop-up function menus located at the bottom of the display.

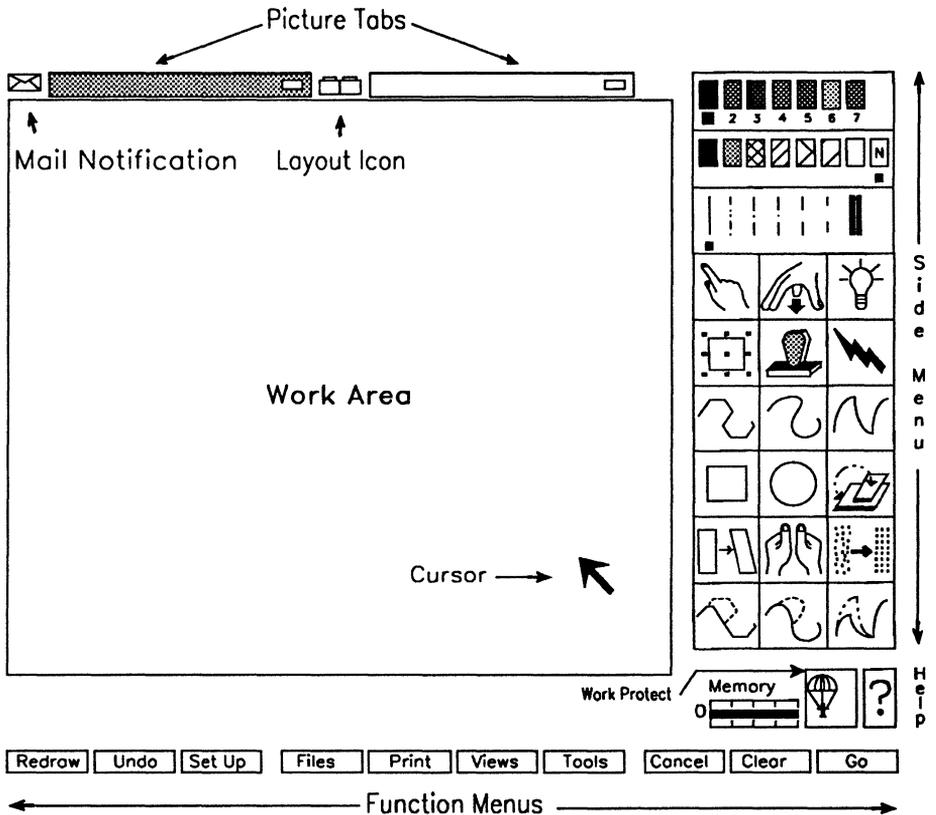
The OFIS Graphics display in Figure 1-3, shows the command menus, drawing tools, and system functions available with OFIS Graphics.

The display contains the following main parts:

- **Mail notification (top of the display)**
A mail notification icon displays at the top left corner of the display if you have received new mail.
- **Picture tabs (top of the display)**
This is the shaded area that displays the name of the file you have loaded or saved. If you are working on a new picture, the picture tab is blank until the picture is named and saved.
- **Layout icon (top of the display)**
This symbol allows you to choose between a single work area or a dual work area.
- **Work areas**
OFIS Graphics automatically displays one work area, but you can choose to see two work areas at the same time. You can copy items from one work area to the other; however, you can only work in one area at a time.

Figure 1-3 illustrates the components of an example OFIS Graphics display.

Figure 1-3. OFIS Graphics Display



- **Function menus (bottom of the display)**

These menus list several functions available with OFIS Graphics. For example, the Tools function menu displays a pop-up menu on the screen to select **Quick Access (On or Off)**, **Charts**, **Text**, **Drawings**, and **Palette**. You can select a function with the cursor, or press the appropriate function key on your keyboard.

Functions with pop-up menus are shown in Figures 1-4 through 1-8. Redraw, Undo, Cancel, and Go perform single functions not associated with a pop-up menu. See the Contents or Index to locate more information on these functions.

- **Color, Fill, and Line Type attributes, side menu, upper.**

These menus provide choices in creating drawings, text, or charts. For example, the fill menu contains eight variations of patterns to fill any object in your drawing.

- **Eighteen editing and drawing tools (side menu)**

With these tools, you can perform many functions on your drawings. The common editing tools are shown in Table 1-1 and are described in more detail later in this section. Drawing tools are described in Section 5, and tools that modify objects are described in Section 6.

- **Memory, Work Protect, and Help tools, side menu, lower.**

With these tools, you can monitor the amount of memory available to support a drawing, enable the automatic saving of your drawing to preserve it if your system crashes, and obtain help for any of the functions or tools. These tools are shown in Table 1-2 and are described in more detail later in this section.

Figure 1-4 illustrates an example of the OFIS Graphics display showing the Set Up pop-up menu.

Figure 1-4. OFIS Graphics Display with the Set Up Menu

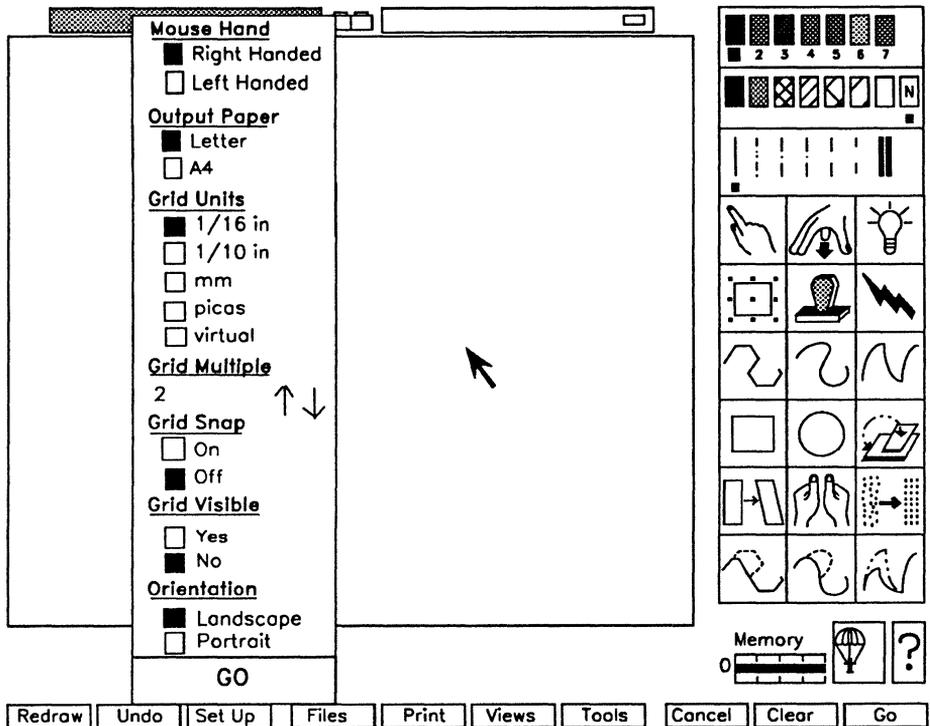


Figure 1-5 illustrates the OFIS Graphics display showing the Files pop-up menu.

Figure 1-5. OFIS Graphics Display with the Files Menu

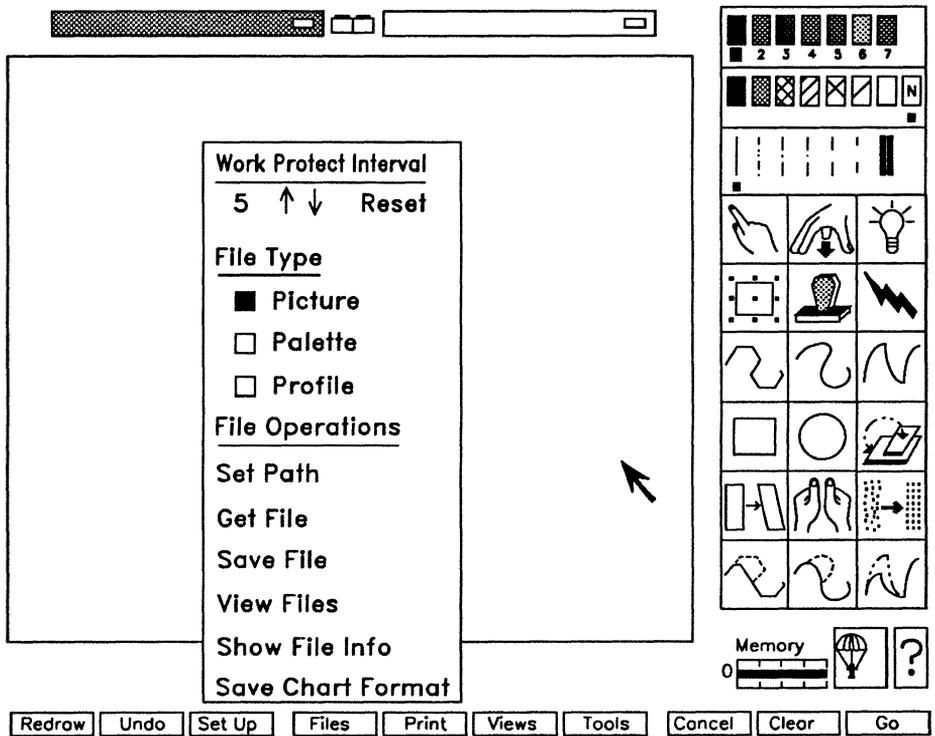


Figure 1-6 illustrates the OFIS Graphics display showing an example of the Print pop-up menu.

Figure 1-6. OFIS Graphics Display with the Print Menu

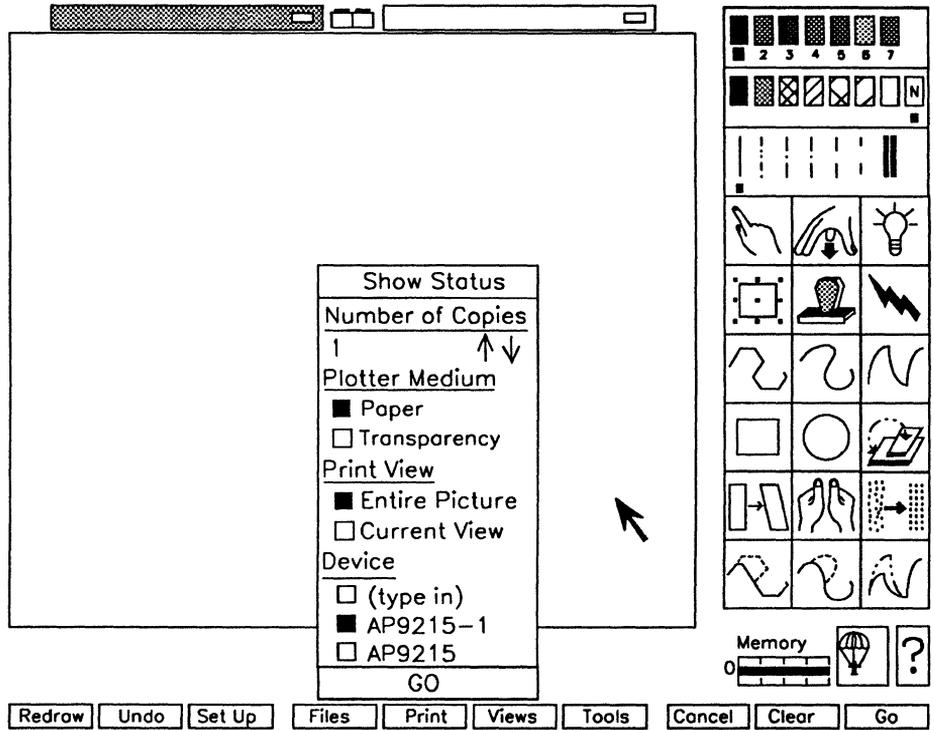


Figure 1-7 illustrates the OFIS Graphics display showing the Views pop-up menu.

Figure 1-7. OFIS Graphics Display with the Views Menu

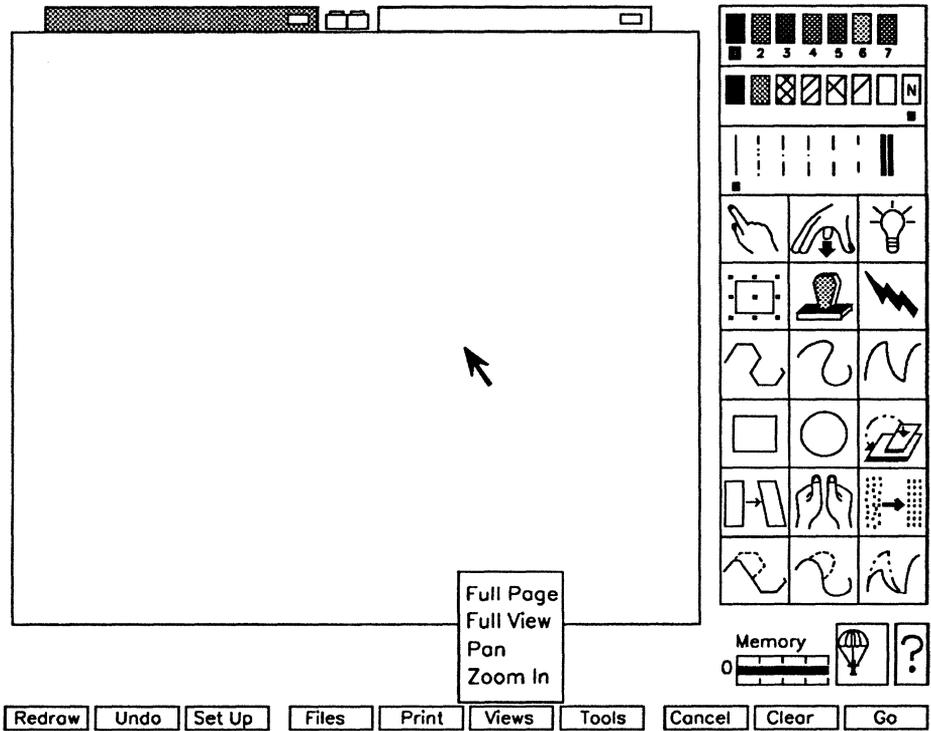
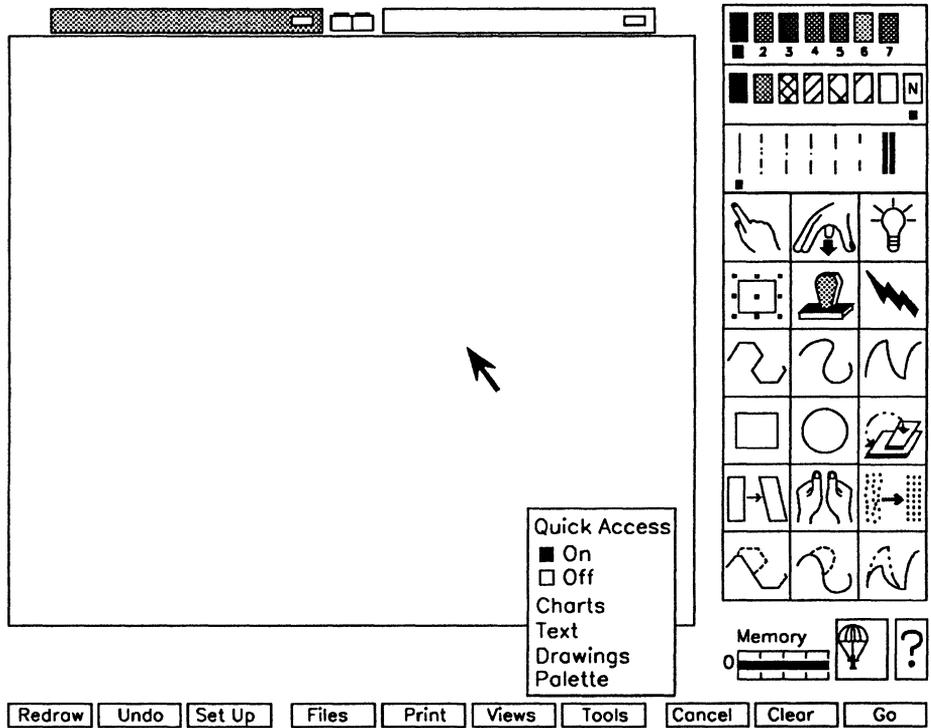


Figure 1-8 illustrates the OFIS Graphics display showing the Tools pop-up menu.

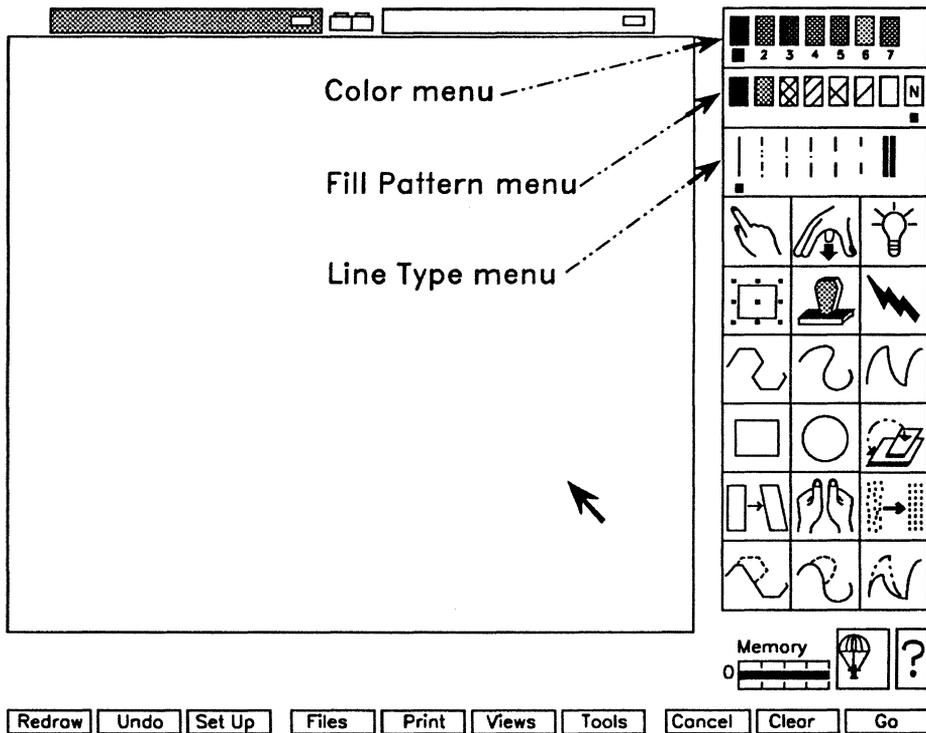
Figure 1-8. OFIS Graphics Display with the Tools Menu



Attribute Menu

Colors, fill patterns, and line types are all attributes of objects. You change and assign attributes by using the color, fill, and line menus (located above the drawing tools menu) as shown in Figure 1-9. (See Section 7 for more information.)

Figure 1-9. Attribute Menu Locations on the OFIS Graphics Display



Common Editing Tools

The following table shows the six common editing tools, briefly describes each tool, and tells you where to get more information.

Table 1-1. Common Editing Tools and Functions

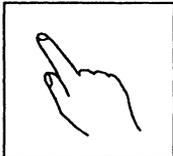
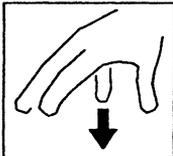
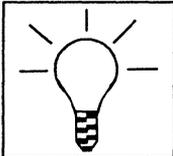
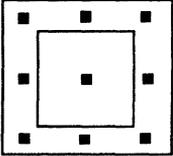
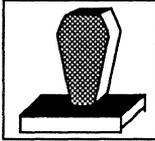
Tool	Function	Reference Section
	Pick Tool Picks one or more objects you want to modify.	Section 4
	Unpick Tool Unpicks one or more objects when you are finished modifying them.	Section 4
	Highlight Tool Shows currently picked objects as outlined figures.	Section 4
	Reposition Tool Moves, sizes, shapes, and rotates objects in the work area.	Section 4

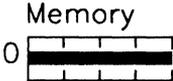
Table 1-1. Common Editing Tools and Functions (cont.)

Tool	Function	Reference Section
	<p>Copy Tool</p> <p>Makes an identical reproduction of any selection of one or more objects.</p>	Section 4
	<p>Delete Tool</p> <p>Deletes entire objects. Selecting Undo returns the objects as long as no other action was taken following the delete action.</p>	Section 4

Other Tools and Functions

The following table shows three other tools, briefly describes each tool function, and tells you where to get more information.

Table 1-2. Memory, Work Protect, and Help Functions

Tool	Function	Reference Section
	<p>Memory</p> <p>Monitors how much memory remains in the picture.</p>	<p>Later in this section</p>
	<p>Work Protect</p> <p>When enabled, saves your work periodically and automatically.</p>	<p>Section 2</p>
	<p>Help</p> <p>Provides a Help message when active and you click on a display item.</p>	<p>Later in this section</p>

Understanding Vector Graphics

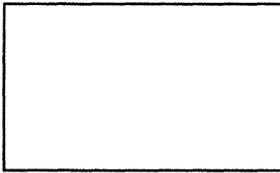
OFIS Graphics uses vector graphics to make objects. The term vector graphics describes how a system draws lines and curves from a set of points grouped in a predetermined order. For example, a rectangle has four points. A semicircle has many points along lines that are connected point-to-point to form the curve. See the *BTOS Graphics II Reference Manual* for more information on vector graphics.

Grouping Objects to Make Pictures

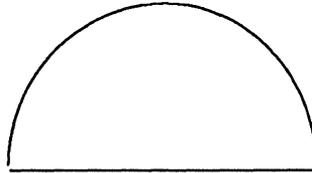
OFIS Graphics is an object-based program. You group objects (lines and shapes, text, and charts) as a unit. You can edit, shape, and move a group with tools from a menu. For example, with a drawing tool called **Square**, you can create a four-sided, single-object shape. However, no drawing tool exists to create a semicircle, so you make it with two different kinds of lines (one straight and one curved) for a two-object shape.

Figure 1-10 shows a single-object rectangle and a two-object semicircle.

Figure 1-10. Single-Object Rectangle and a Two-Object SemiCircle



One object, a rectangle



**Two objects, a curve and
a straight line**

Identifying Picture Files

The system adds to the file name the suffix **.pic** (for picture file) when you save the files created by OFIS Graphics.

You can see this suffix when you list the files through the Executive. However, you do not see this suffix when you view file names in the OFIS Graphics directory listing.

Monitoring the Memory Gauge

OFIS Graphics contains a Memory Gauge that lets you know approximately how much memory remains in the picture (see Figure 1-2). When the bar on the gauge is to the right, 100 percent of memory is available. As your picture uses up memory, the bar moves to the left.

If there is not enough memory for an operation, you can either rework your picture with simpler objects, or expand the memory allotted for OFIS Graphics (see Appendix B).

Accessing Help

OFIS Graphics provides a help function. There is a question mark icon on the lower right side of the display (see Figure 1-2).

When you select this icon, the cursor changes to a question mark. You can move this symbol to any item on the display. When you press **MARK**, OFIS Graphics displays a short explanation about that item.

See Section 5 for information about selecting items.

Mail Notification

OFIS Graphics displays an envelope in the upper left corner when a mail message arrives at your workstation (see Figure 1-3). This envelope is displayed in reverse video for Urgent mail.

Reverse Video

You can reverse the video display on color and grey-scale monitors, so that the background color is white instead of black or vice versa. To reverse the video, press **CODE+R**.

Section 2

Managing OFIS Graphics Files

This section addresses the Files pop-up menu, and describes the following:

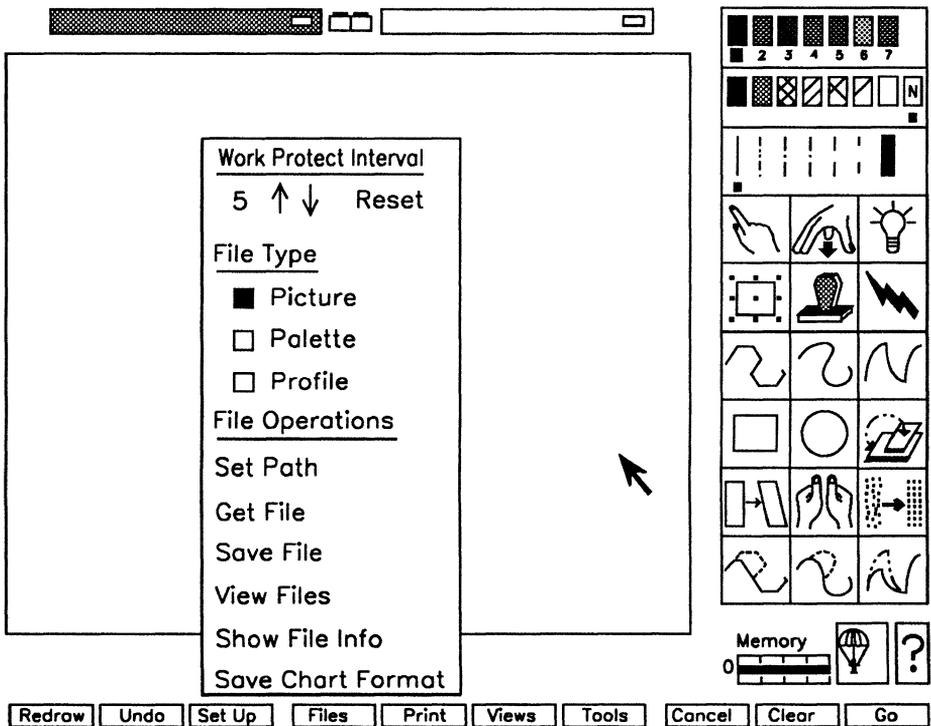
- Getting to the Files pop-up menu
- Setting the Work Protect interval
- Describing file types
- Using file operations

Getting to the Files Pop-Up Menu

To display the Files pop-up menu, select Files on the Function menu at the bottom of the OFIS Graphics screen.

Figure 2-1 shows the Files pop-up menu that contains the Work Protect feature, File Type selections, and the six File Operations options you can use to manage files and directories.

Figure 2-1. Files Pop-Up Menu



Work Protect Interval

For a detailed description of the Work Protect function and setting the Work Protect time interval, see Work Protect, later in this section.

File Type

The following paragraphs briefly describe the different file types.

Selecting Picture

Selecting **Picture** allows you to do file operations on picture files.

Picture file is the default selection when you initially load OFIS Graphics. This selection displays the OFIS Graphics work area and Drawing Tools side menu.

The contents of a work area become a picture file when it is saved to a disk. Each file contains one picture, that is, all the objects in one work area that have been saved and assigned a picture file name.

You can recognize these files, when listed through the Executive using the **Files** or **List** commands, because their names end with the suffix **.pic**.

See Section 5, Using Drawing Tools, for more information on using the **Picture** option.

Selecting Palette

Selecting **Palette** allows you to do file operations on palette files.

Color changes become a palette file when they are saved to a disk. Each file contains the set of colors prescribed for a picture.

You can recognize these files when listed through the **Files** or **List** commands, because their names include the suffix **.pl**.

See Section 7, Using Palette Tools, for more information on using the **Palette** option.

Selecting Profile

Selecting **Profile** allows you to do file operations on profile files.

OFIS Graphics provides you with the capability to load a user profile so that the settings of OFIS Graphics match your preferences. This profile can be loaded upon initialization or at any time during an OFIS Graphics session. Some of the user profile settings can be modified using OFIS Graphics (dynamic settings). Other settings can be modified by editing the contents of a profile configuration file (static settings).

If you select **Profile**, you can save a unique user profile file. This specifically named profile file has the suffix *FileNameOGConfig.sys*. See Section 11, Customizing User Profiles, for more information on using the **Profile** option.

File Operations

The six File Operations options designed specifically for managing files and directories are:

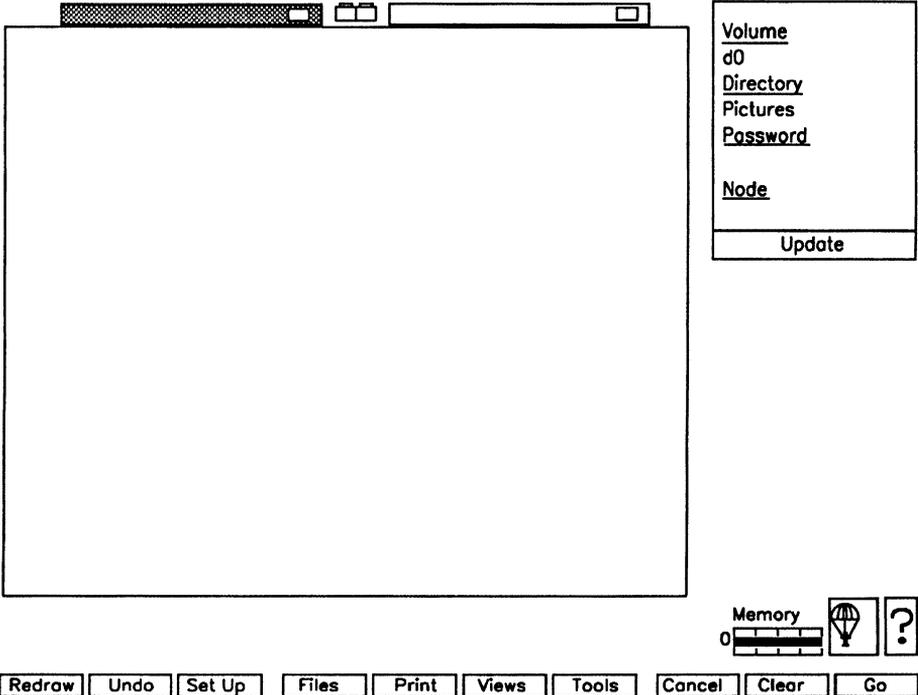
- Set Path
- Get File
- Save File
- View Files
- Show File Info
- Save Chart Format

Setting the Path

You use the **Set Path** option when you want to change the path to another directory, volume, and/or mode. The path is the specific volume and disk location of your files. Each disk, whether a hard disk or a floppy disk, is referred to as a volume. Each volume is divided into directories, which are collections of files. You can also set your password using this feature.

The default path, configured into your system, is the volume and directory in which you perform most of your work. This is the location where the majority of the files you are currently using are, or will be, stored. If you plan to work in that directory for some time, use the Path menu to change the default path (see Figure 2-2).

Figure 2-2. Path Menu



Note that this figure shows the path to be set at volume [d0], directory <Pictures>.

To set the Path, use the following procedure:

1. Select **Files** on the **Function** menu.
The **Files** pop-up menu appears.
2. Select **Set Path** on the pop-up menu.
The side menu is replaced by the **Path** side menu (Figure 2-2).
3. To change the volume, select the field under the **Volume** heading.
4. Use the **BACKSPACE** key to delete the current volume.
5. Type in the new volume name.
6. To change the directory, select the field under the **Directory** heading.
7. Use the **BACKSPACE** key to delete the current directory.
8. Type in the new directory name.
9. If necessary, change the **Password** and **Node** in the same way.
10. Select **Update** on the **Path** side menu.

The side menu changes to reflect the new path.

Retrieving a Picture File

You need to have File Type set to **Picture** for this operation.

Get File lets you retrieve into the current active work area a picture file you have previously saved (without viewing a list of files).

To get a picture or chart directly into the work area, use the following procedure:

1. Select Files on the Function menu.

The Files pop-up menu appears.

2. Select **Get File** on the pop-up menu.

3. Type the desired file name into the Text Entry Line.

The Tools side menu disappears and the Path side menu appears in its place.

4. Press **GO**.

If a picture that has not been saved is currently displayed in the work area, the following message appears:

Select **GO** to continue & lose modified picture, else
CANCEL.

If you select **GO**, the new picture is loaded into the work area, and the previously displayed picture is lost.

5. If you do not want to lose the current picture, press **CANCEL** and follow the steps for saving a picture.

When you press **CANCEL**, the following message appears:

Type a picture filename and press **GO** to execute.

6. Press **CANCEL** again and the message disappears.

You can retrieve a drawing or chart from a location other than the default path by including the volume and directory specification as part of the file name:

{node}[volume]<directory>picturename

Saving Picture Files

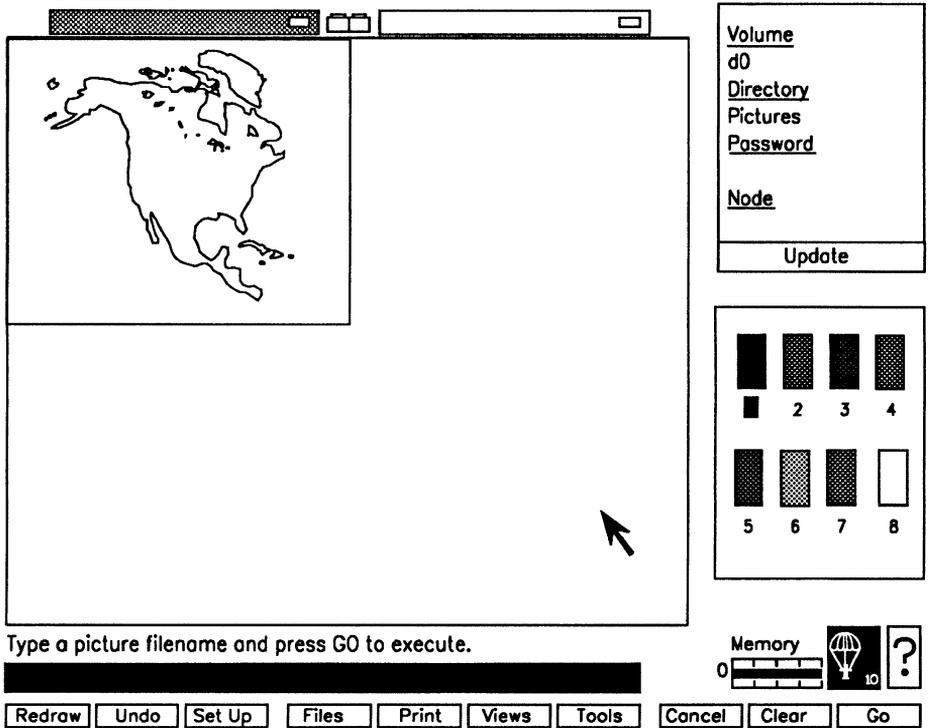
You need to have File Type set to **Picture** for this operation.

If you are working on a picture which has not yet been saved, there is no filename displayed in the picture tab at the top of the work area. Saving allows you to name the file and creates a permanent record of the picture on your disk. Figure 2-3 shows the Text Entry Line where you type in the name of the picture.

***Note:** Saving your picture occasionally, while you work on it, lessens the impact of an unexpected event such as a system crash or power failure, especially if you do not enable the Work Protect feature. See also Saving Files Quickly (Quick Save) for a timesaving way to save files.*

You can save a drawing or chart to a location other than the default path by including the volume and directory specification as part of the file name. The picture is saved to the specified path without altering the default path.

Figure 2-3. Text Entry Line



For example, suppose you are pathed to your workstation's hard disk and want to save a file to a diskette. You can include the node, volume, and directory specification as part of the file name when saving:

(node)[volume]<directory>picturename

You can use full file specifications any time you perform a onetime operation with a path other than the default path.

You can use up to 46 characters in a file name. A file name can contain letters, numbers, other keyboard symbols such as periods and hyphens, and the .pic suffix. Avoid using blank spaces as part of a file name.

To save an OFIS Graphics file, use the following procedure:

1. Select the Files function.

The Files pop-up menu appears. From the File Type section on the pop-up menu, select either the **Picture** or **Palette** option by moving the cursor to its location and pressing **MARK**. The **Picture** option is the default, and you need to select **Palette** only if you are saving the current palette.

2. If you are saving a picture, select the **Save File** option. Your picture is displayed in a temporary viewing area, along with a Text Entry Line (Figure 2-3). The Tools side menu disappears and the Path side menu appears in its place. The following message appears:

Type a picture filename and press **GO** to execute.

3. Type a filename into the Text Entry Line.
4. Press **GO**. If you have entered a filename that has already been used, the following message appears:

Select **GO** to overwrite existing file, else **CANCEL**.

If you are updating an existing file and select **GO**, the system overwrites it with the picture in the active work area. If you select **CANCEL**, the system returns to step 2 and requires a filename.

5. Type in a new filename and press **GO**. The picture is saved to the path displayed in the side menu.

Saving Files Quickly (Quick Save)

OFIS Graphics provides a **Save File** accelerator feature called **Quick Save**. For more information on time saving enhancements, see Section 3, *Using OFIS Graphics Functions*.

Press **CODE+S** to save the picture in the current work area without having to click the mouse at the **Save File** option in the **Files** pop-up menu. This keyboard interface performs the exact same function as **Save File** for a new file (that is, a file that does not yet have a name).

For an existing file, this feature automatically saves the file without any prompt. It creates the preview image and displays the message:

Saving ...

It overwrites any existing file using the current palette. It does not change the side menu like **Save File** does. When it is finished, operations resume where they were before the **Quick Save**.

If you are in the middle of a drawing operation (for example, **Connected Line**), the save will not occur and the following message will display:

Cannot save while drawing or replacing an object.

Creating a Backup File

The **File Backup** feature renames files by adding a "-old" suffix instead of overwriting them. For example, when saving *Hello.pic*, the previous version of it is renamed to *Hello.pic-old*. The creation of -old files is a new configuration static user profile option: *:BackupFiles:*. See Section 11, *Customizing User Profiles*, for more information on user profiles options.

Backed up files (-old files) do not display with **View Files** and cannot be accessed with **Get File**. You use the **CTOS Executive** to locate, copy, and rename the file to regain access.

Work Protect

OFIS Graphics 3.0 provides periodic, automatic work protection with the introduction of the Work Protect feature. The following paragraphs describe:

- The Work Protect icon
- Using Work Protect to save images
- Setting the Work Protect time interval
- Recovering a file
- OFIS Graphics sessions without Work Protect

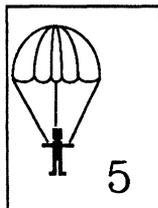
Work Protect Icon

The Work Protect icon (Figure 2-4) displays in reverse video if Work Protect is enabled, and as a normal icon if disabled.

You select the Work Protect icon to toggle its enabled or disabled state. When enabled, Work Protect saves the work areas periodically and automatically. Five minutes, as shown on the icon, is the default time interval.

If Work Protect is enabled and is then disabled, the countdown indicator halts and is no longer displayed. When Work Protect is reenabled, the countdown indicator resumes where it left off.

Figure 2-4. Work Protect Icon



Using Work Protect to Save Images

Work Protect keeps track of which work areas have been modified since the last **Save File** or Work Protect save. It then periodically saves a copy of each modified work area picture to a different temporary **.pic** file.

These temporary files are saved in either a directory you specified in the `:ArtChartWorkProtectPath:` string in your `.user` file or in the directory where the `OFISGraphics.run` file is located.

The time in minutes remaining until a Work Protect save is displayed by the number shown in the icon. This countdown indicator decrements until it reaches zero and the Work Protect save occurs. This lets you disable Work Protect ahead of time if you do not wish to be interrupted.

***Note:** A **Save File** operation resets the countdown indicator if the other work area is empty or not modified. The countdown indicator does not display until a work area is modified.*

When Work Protect is about to save the images, it checks to see if the system is quiescent and if so, starts saving drawings to temporary files. A quiescent system is one in which you are not typing on the keyboard, clicking a mouse button or a pen, moving the mouse or pen, or a different OFIS Graphics operation is not in progress. If the system is not quiescent, the Work Protect feature tries again every 4 seconds until it is successful.

When it finds that the system is quiescent, Work Protect changes the current pointing icon to an hourglass to indicate that you should wait. It also displays the following message:

Work Protection in progress, please wait.

When the Work Protect save is finished, it changes the hourglass icon back to the previous icon.

***Note:** If you are in the middle of a drawing operation (for example, **Connected Line**) and a Work Protect save occurs, portions of the image may not restore.*

If an error occurs, the message:

Work Protect Error:

Press **GO** to continue normal operations.

The responsible error message displays on the middle line (for example, `Directory Full (202)`).

Note: Work Protect does not save any user profile information. Only the images are saved.

Setting the Work Protect Time Interval

To set the time interval for Work Protect, use the following procedure:

1. Select **Files** on the **Function** menu.

The **Files** pop-up menu appears.

2. Select the **Up** or **Down** Arrows under the **Work Protect Interval** heading on the **Files** pop-up menu.

Each time you click **MARK**, the numeric work protect time interval increases or decreases accordingly.

You can also change the time interval by selecting the numeric field under the **Work Protect Interval** heading and typing in the desired interval when the field is highlighted.

3. Select the *Reset* field to set the new time interval.

If you made any modifications to either work area, resetting the **Work Protect Interval** forces a **Work Protect** to occur.

The time interval ranges from 1 minute to 99 minutes. If your input is invalid, the **Work Protect Interval** is forced to the closest valid interval, and the following message displays:

`Work Protect Interval forced to valid range.`

Recovering a Work Protected Picture

If OFIS Graphics terminates abnormally after a Work Protect save, the next use of OFIS Graphics for the same user detects the saved work.

OFIS Graphics displays the message:

Your last session was interrupted before normal completion.
Press **GO** to redisplay saved work, **CANCEL** to deny.

Caution: Pressing **CANCEL** destroys your unrecovered work.

If you press **CANCEL**, OFIS Graphics performs a normal start based on which application is chained to it. In other words, operations are resumed where they would have been if no files had been protected.

If you press **GO**, the data from the protected images is displayed. The message:

Recovering picture ...

displays at the bottom of the screen.

If one image had been protected, a single image is displayed at **Full Page** level in single work area layout. If two images were protected, two images are displayed at **Full Page** level in dual work area layout.

The left-hand work area on the screen is active in all cases. That is, if a single image is protected from the right hand work area, it redisplay in the left hand work area. The orientation and palette conform to the original image.

Note: *To save an image which has been recovered, you must use one of the standard save file operations.*

Sessions Without Work Protect

Work Protect distinguishes between different types of sessions (such as where OFIS Graphics is invoked by various applications, for example, OFIS Spreadsheet). Work Protect does not function with multiple sessions of the same type. If OFIS Graphics detects this condition, the following message displays:

```
OFIS Graphics cannot use the Work Protect feature for  
this session. Press GO to continue, CANCEL to exit.
```

For example, if you accessed OFIS Graphics from OFIS Document Designer, you cannot load OFIS Document Designer in another partition, access OFIS Graphics again, and have the second OFIS Graphics session use the Work Protect function.

If Work Protect cannot be used for any other reason, the same message appears during initialization with the last line displaying the responsible error. For example:

```
OFIS Graphics cannot use the Work Protect feature for  
this session. Press GO to continue, CANCEL to exit.  
Directory Full (202)
```

Viewing Files

The **View Files** option display allows you to list the files in the current directory. From this list you can select individual picture files for immediate viewing on the screen. This visual directory lets you find a specific picture quickly because you can see and identify the picture before actually loading it into the work area.

***Note:** The Preview function does not work with .pic files created by Draw, BGP, Text to Pic, or Graphics Library. To Preview these files, load the .pic files into the OFIS Graphics work area in the usual manner and save them. You can then see the new .pic files on the Preview screen.*

To view files, use the following procedure:

1. Select **Files** on the Function menu.

The Files pop-up menu appears.

2. Select **View Files** on the pop-up menu.

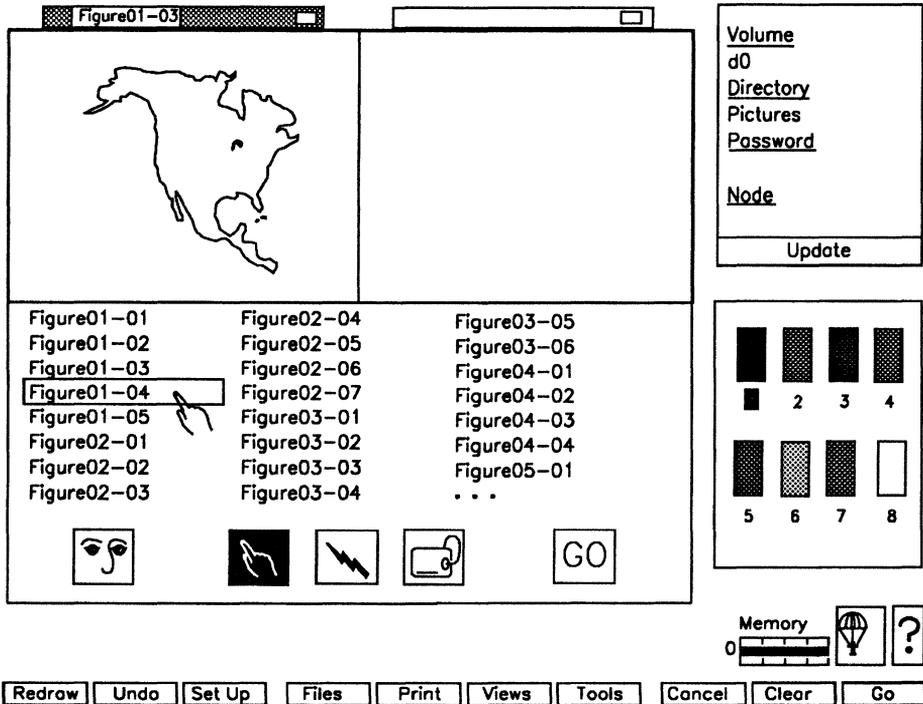
The list of picture files appears in the lower half of the screen above a series of five icons (see Figure 2-5). The Tools side menu disappears and the Path side menu with color palette is displayed in its place.

The file list is divided into pages; one full page displays at a time. Each page contains approximately 30 file names.

3. To page through the listing, select **More (...)** at the beginning or end of the displayed page.
4. Select the **Preview** tool (eyes icon), as shown in Figure 2-6.
5. Select the name of the picture you want to preview.

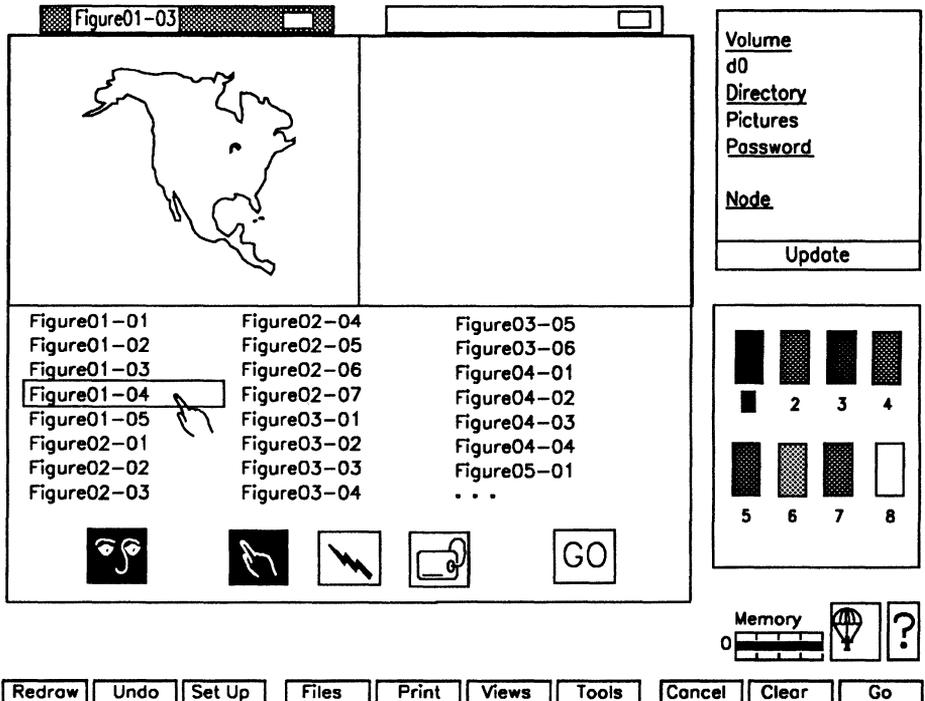
OFIS Graphics displays the picture in the active view area above the list of files. OFIS Graphics has two side-by-side viewing areas corresponding to the two work areas. You can activate the first one, then the other area to view two pictures at the same time (see Figure 2-7). If you have a picture in one or both of the work areas prior to selecting **View Files**, the picture is still open until you select **GO**. To return to the picture, select **CANCEL**.

Figure 2-5. View Files Menu



Note: Figure 2-5 indicates that you are working in the left area. It also shows you have been working on Figure 01-03 and are now about to select Figure 01-04. The **Pick** tool (which allows you to select a file) is selected automatically. Also, in this example you are pathed to [d0]<Pictures>, and Work Protect is turned off.

Figure 2-6. Preview Icon Selected

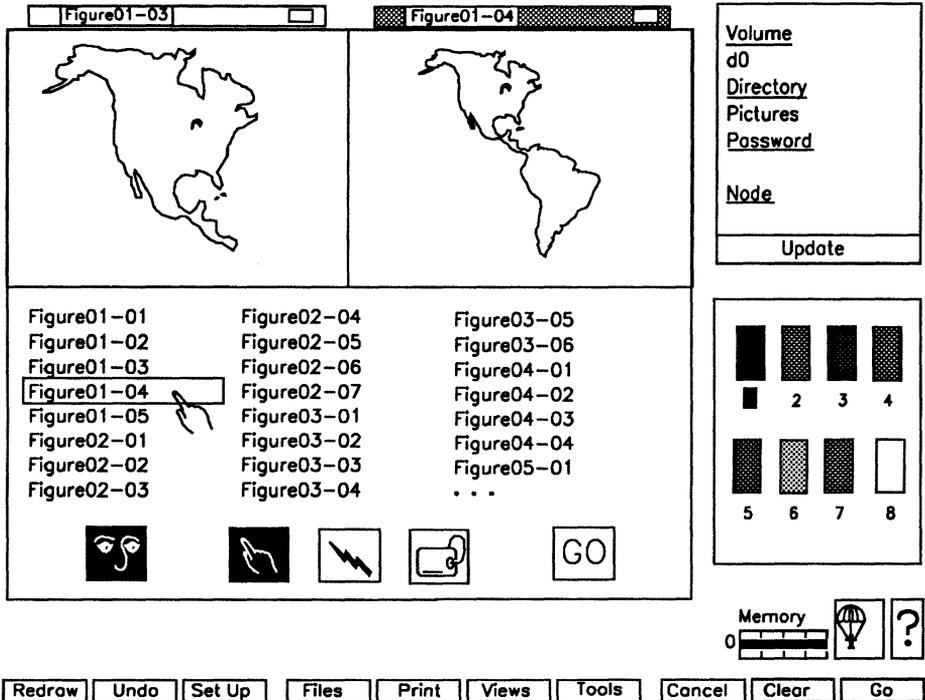


Note: This figure indicates that you selected the Preview icon and reviewed Figure 01-03. It also shows you are about to select and review Figure 01-04. In the Preview mode, you cannot work on files.

6. Select the other picture tab to activate its corresponding view area.
7. Select another picture file.

The picture displays in the active view area.

Figure 2-7. Viewing Two Pictures



Note: This figure indicates that you selected the Preview icon and reviewed Figure 01-03. It also shows that you then clicked on the right work area and selected Figure 01-04 to review. You are still in the Preview mode and pathed to [d0]<Pictures>.

You can continue to view pictures by selecting picture files. Each time a file is selected, the picture displays in the active (shaded) view area.

You can easily view the files in another directory. Select the Directory heading on the Path side menu to display a list of directories on the current volume. Select a directory name from the list to display the files it contains. See Viewing Directories in this section for more information.

If the directory you want is on another volume, use the Path side menu to change the path.

Note: *As a default, the **View Files** option is limited to 200 files (or less if the average file name length is more than nine characters) for each directory. If you exceed the limit, some file names do not appear on the View Files screen. They are not lost and can be recalled by using the **Get File** option and typing in the file name. If you forget the file name, use the Executive to path to the directory with the .pic files and list them. Note the file name(s) before returning to OFIS Graphics, then use the **Get File** option. You can also use the :ArtChartViewFilesMemory: entry in your .user file to increase the limit on the number of listed files.*

Getting Pictures from the Files List

When you select a picture from the file list, you can bring it up in the work area.

To load a desired picture from the viewing area into the work area, press **GO**.

If another, unsaved picture is already in the work area, OFIS Graphics displays the message:

Select **GO** to continue and lose modified picture, else **CANCEL**.

If you select **GO**, OFIS Graphics loads the new picture into the work area. The previously displayed picture is lost. If you want to save the first picture, press **CANCEL**. Then, follow the steps for saving a picture before returning to **View Files**.

Deleting Files from the Files List

When you display the file list, you can delete one or more files. However, you can only delete file names from one page of the file list at a time. Once you complete the delete operation, you cannot recover any deleted files from OFIS Graphics. If you accidentally deleted a file, see your administrator to undelete the file.

To delete a file, use the following procedure:

1. Select the **Delete** tool (lightning bolt icon), shown in Figure 2-5.

OFIS Graphics displays the message:

Select the files to delete, then select **GO** to execute.

2. Move the Delete cursor to the file you want to delete and press **MARK**.

If you want to delete more than one file, select and highlight each file. You can view the files by having the **Preview** tool activated.

3. Make certain that the highlighted files are the ones you want to delete.

Once you complete the delete operation, you cannot recover any affected files. If you decide against discarding a file, move the cursor to the file name and press **MARK** to deselect it.

4. Press **GO**. The highlighted file(s) disappears from the file list.

Renaming Files from the File List

You can rename a file whenever a file list is displayed on the screen.

To rename a file, use the following procedure:

1. Select the **Rename** tool (name tag icon), shown in Figure 2-5.

OFIS Graphics displays the message:

Select the file to rename.

2. Select the file you want to rename and press **MARK**.

The selected file name appears in the entry line above the function menu.

3. Type the new file name.

4. Press **GO**.

The old file name disappears from the file list and the new file name appears in the appropriate alphabetical position.

Viewing Directories

You can view a list of the directories on your system when you are in the **View Files** option.

To view a list of directories, use the following procedure:

1. Select the Directory heading on the Path side menu.

The list of directories appears in place of the file list and OFIS Graphics displays the message:

Select directory to list files, otherwise **CANCEL**.

2. To view the files in a particular directory, select the directory name from the list.

The list of files appears in place of the directory list and the following message is displayed:

Select **GO** to retrieve the selected file(s).

3. If you want to view any of the files listed, follow the steps for viewing files in this section.
4. If you want to display the directory list again, select the Directory heading on the Path side menu. The directory list appears once again in place of the file list.

The directory list includes all the directories on the current volume. Some of these directories may not have any files in them.

OFIS Graphics displays a message notifying you if no picture files exist in the directory. Select **CANCEL** to return to the work area, or select the Directory heading to display the directory list again.

Showing File Information

Show File Info displays a list of the fonts in a given picture that are unknown to your system. A font is unknown to your system when there is no entry in the `[sys]<sys>Graphics.fonts` file. The picture was either created on another system, or the font has since been removed from the system you are working on.

When you load a picture with unknown fonts, the following message is displayed:

```
Replaced unknown fonts, Refer to PICTURE INFO (101034).
```

The unknown fonts are replaced with the Standard (default) font. If the Standard font is larger in size than the font it is replacing, the text in the picture is scaled down so that the picture fits inside the bounds of the work area.

To display the list of replaced fonts, use the following procedure:

1. Select **Files** on the function menu.

The **Files** pop-up menu appears.

2. Select **Show File Info** on the pop-up menu.

The **Tools** side menu disappears and the list of replaced fonts is displayed in its place.

To display the picture with its original fonts, install the font or fonts listed in **Show File Info** onto your system and make the appropriate entries in `[sys]<sys>Graphics.fonts`.

If you load a picture with unknown fonts when you do not have enough memory available, the following message is displayed:

```
Unknown fonts and can't display all fills. REFER TO  
PICTURE INFO.
```

As before, the unknown fonts have been replaced with the **Standard** font; however, some of the filled objects may not show filled on the screen due to the shortage of memory. This applies only to the way the objects are displayed. When the picture is printed, all the filled objects are filled.

Saving a Chart Format

Save Chart Format saves the format of a graph without saving its numeric data. The format includes any chart attributes that you can modify with OFIS Graphics. See Section 9 for more information.

To save a chart format, use the following procedure:

1. Pick the chart.
2. Select **Files** on the **Function** menu.
The **Files** pop-up menu appears.
3. Select **Save Chart Format** on the pop-up menu.
The **Tools** side menu disappears and the **Path** side menu appears in its place.
4. Type a format file name into the text entry line.
5. Press **GO**. The chart format is saved to the default path.

If you want to save the chart format to a different location other than your current path, include the volume and directory specification as part of the file name when saving:

{node}[volume]<directory>chartformatname

Managing Picture Files that have Different Palettes

If you select the **Save File** option with the **Palette** tool displayed, the palette in the color display is saved. The current palette for the active work area remains unaffected.

If you select the **View Files** option with the **Palette** tool displayed, the system requires your confirmation before updating the palette for the active work area with the palette in the color display of the **Palette** menu. Otherwise, you can press **CANCEL** and the current palette of the active work area then displays.

When you change from the Palette Tools menu to another menu, the system requires your confirmation before updating the palette for the work area with the current colors in the Palette menu. Otherwise, you can press **CANCEL** and the work area palette remains unchanged. In either case, your Tools menu selection replaces the Palette menu and the display reflects the current palette for the active work area.

With the Palette Tools menu displayed, the system requires your confirmation if a current palette is subject to updating when you perform any of these actions:

- Use file options such as **Get File**, **Save File**, and **View Files**
- Decide to print a picture file
- Change from one work area to another

Otherwise, you press **CANCEL** and the work area palette remains unchanged.

Next, the Set Path menu and a color display appear. The color display has the current palette for the work area. The system again requires your confirmation, this time to use the work area's current palette instead of the picture's own palette. Otherwise, press **CANCEL** and the picture file comes into the work area with its own palette; this palette becomes the current palette for the work area.

When printing, the different palettes remain unchanged.

Section 3

Using OFIS Graphics Functions

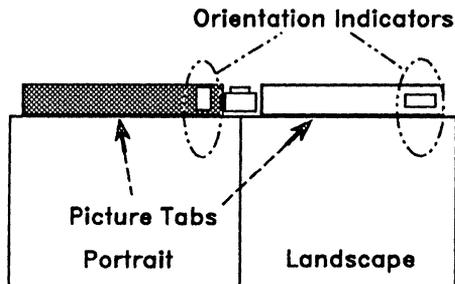
This section describes the following OFIS Graphics functions:

- Establishing and changing picture orientation
- Setting up the grid
- Redrawing and updating files
- Changing the views of pictures
- Using the work areas
- Setting the Quick Access function

Establishing Picture Orientation

You must assign picture orientation before you create a new picture. Orientation determines whether the picture is Portrait or Landscape (the default). Figure 3-1 shows the two orientation options.

Figure 3-1. Two Picture Orientations

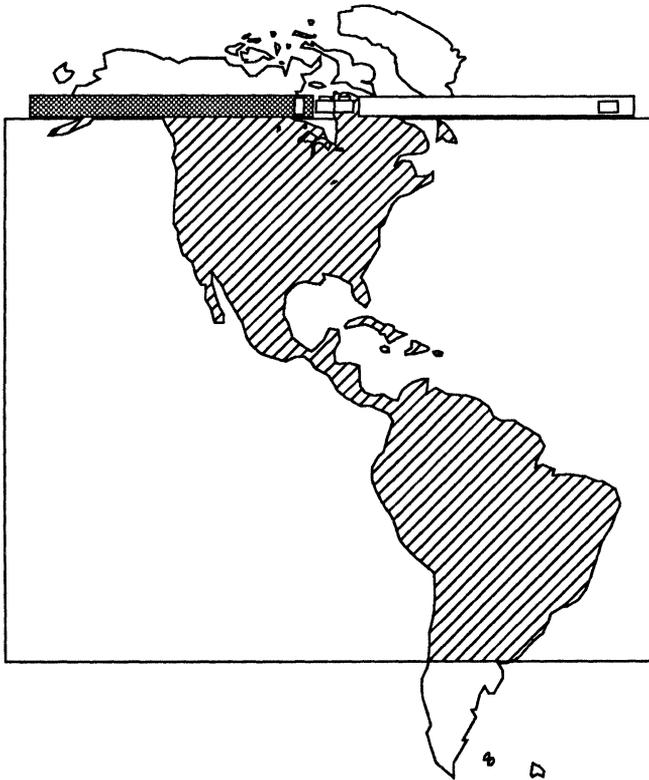


Picture tabs appear at the top of the work area. Each picture tab contains a small, rectangular icon which is the orientation indicator. This indicator shows the orientation (Landscape or Portrait) of the picture in that work area.

If you select the Landscape orientation, the entire picture is displayed in the work area.

If you select the Portrait orientation, the center portion of the picture displays. The top and bottom portions of the picture are beyond the edges of the work area, as shown in Figure 3-2.

Figure 3-2. Portrait Orientation in Full View Option



You can change your views as displayed in the work area. For information on viewing your picture, see *Changing the Views of the Picture* in this section.

You can change Picture Orientation to suit your output device, or when you bring a **.pic** file created in another graphics application. For more information about changing orientation, see *Changing Picture Orientation* in this section.

To establish Picture Orientation, use the following procedure:

1. Select the **Set Up** function at the bottom of the screen (see Figure 3-3).
2. Under the **Orientation** header, select your choice; **Landscape** (the default) or **Portrait**.
3. Select **GO**.

The system sets up the orientation you selected.

Changing Picture Orientation

You can change Picture Orientation to suit your output device, or when you load a **.pic** file created in another graphics application. Since you cannot change the established orientation, you must combine two procedures. You must establish orientation in another work area and copy the picture into it.

To change Picture Orientation, use the following procedure:

1. Save your files and clear both work areas using the **Clear** function.
2. Bring up the file by selecting the **Get File** option under the **Files** pop-up menu. Type its name in the text entry line and press **GO**.
3. Select the **Copy** tool by moving the cursor to the rubber stamp icon and pressing **MARK**.

The Pick cursor (pointing finger icon) appears.

4. Pick all of the objects in the work area.
5. Activate the second work area by moving the cursor to its picture tab and pressing **MARK**.

The copy box moves from the first work area to the second.

6. Set the new orientation in the empty work area.
You must use the **Set Up** pop-up menu and select the desired option under the **Orientation** header.

7. Press **GO**. The orientation indicator in the picture tab changes to show the new orientation.
8. Position the copy box in the second work area and press **MARK**.

The objects from the old picture in the first work area appear in the second work area with their new orientation.

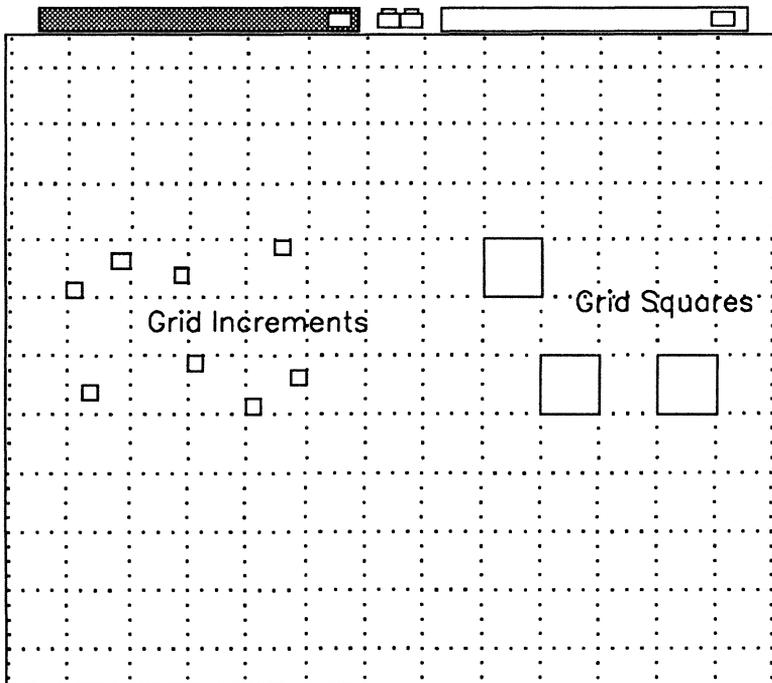
Setting Up the Grid

To help you accurately measure objects and distances, OFIS Graphics provides a grid. The Grid is a series of dots that overlay the work area. It is divided into Grid Squares, which are measured by Grid Increments (see Figure 3-4).

You can use the Grid to help you draw straight lines more accurately, make different objects the same size, or align ranks and files of objects.

You can turn on the Grid before you start working in your file by using the Set Up pop-up menu on the function display.

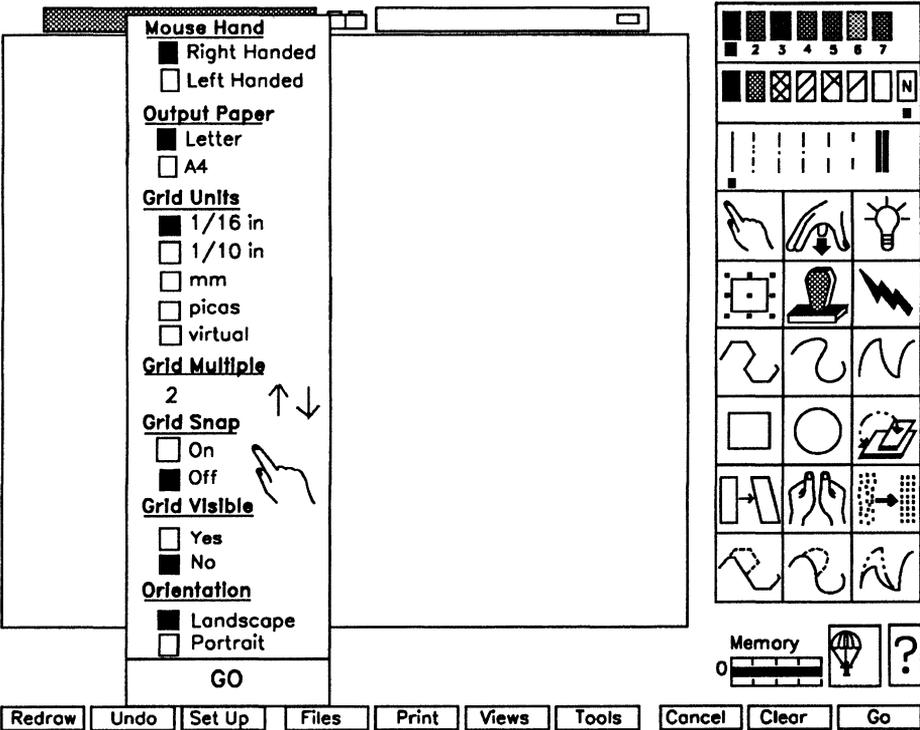
Figure 3-4. Grid, Increments, and Squares



The Set Up pop-up menu contains the options you use to set up the Grid. You can select the options individually or all at once.

To display the Set Up pop-up menu, select Set Up on the Function menu. See Figure 3-5 for an illustration of the Set Up menu and the Grid options.

Figure 3-5. Set Up Menu with Cursor Pointing to Grid Fields



Four options for setting up the Grid are provided:

- **Grid Units**
This option allows you to set the unit of measure.
- **Grid Multiple**
This option allows you to mark a set number of Grid Units between grid dots.
- **Grid Snap**
This option allows you to align objects to the Grid.
- **Grid Visible**
This option allows you to see the Grid.

Both the number of increments per square and the size of the squares depends on the Grid Unit and Grid Multiple that you set up.

Seeing the Grid

Grid Visible gives you the option of seeing the grid points on the screen. The grid points serve as a visual drawing guide, unless you use **Grid Snap**, described under Aligning Objects with the Grid in this section.

Aligning Objects with the Grid

If your objects must align to the grid points exactly, turn **Grid Snap** on before drawing.

When **Grid Snap** is on, anything you draw in the work area aligns with the points on the Grid. You can use **Grid Snap** whether or not the Grid is visible. **Grid Snap** works well with all the drawing tools except **Sketch** and **Sketch Replace**.

Specifying the Unit of Measure

You can establish the measurement of the grid by setting the **Grid Units**. You can match the unit of measure to that used for art from other graphics software or a specified picture or page width.

You can specify any of the following units of measurement:

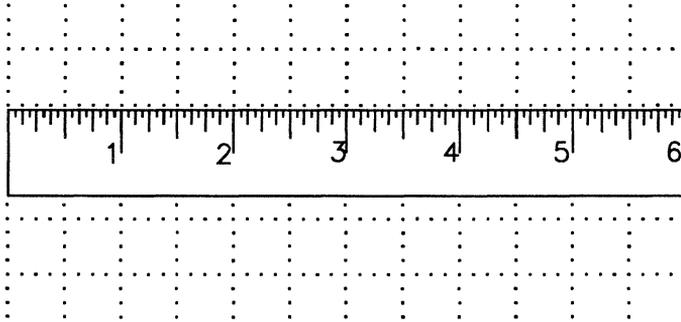
- 1/16 inch (default)
- 1/10 inch
- millimeters
- picas (1/6 inch)
- virtual (grid units used internally in OFIS Graphics)

Incrementing the Unit of Measure

You can increment the grid by establishing how many units of measurement are marked by grid dots. You use **Grid Multiple** to specify any number from 1 to 30 of specified units per grid increment (2 is the OFIS Graphics default).

For example, with a default **Grid Multiple** setting of 2, each grid increment represents two 1/16-inch Grid Units; therefore, each grid increment has a space between the dots that is 1/8-inch wide. See Figure 3-6 for an illustration.

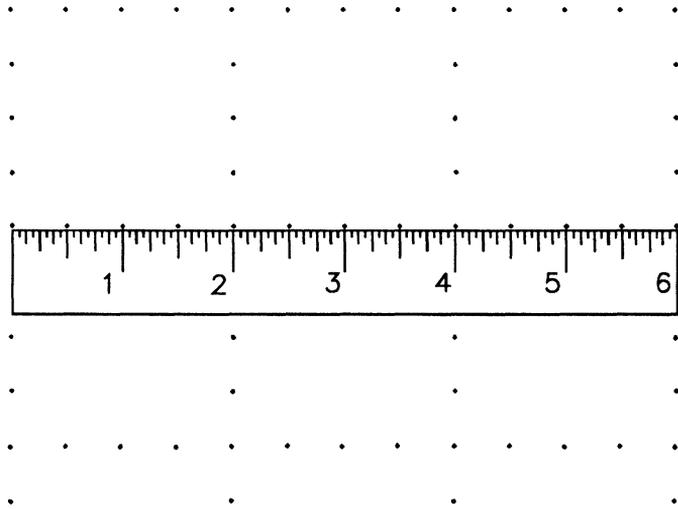
Figure 3-6. Grid with 2/16-inch (1/8-inch) Increments



If you change the **Grid Multiple** setting to eight, each grid increment represents eight 1/16-inch Grid Units; therefore, each grid increment has a space between the dots that is 1/2-inch wide. See Figure 3-7 for an illustration.

For each **Grid Unit** setting, you can set the **Grid Multiple** so that all grid points appear; that is, a grid square equals one grid increment.

Figure 3-7. Grid with 8/16-inch (1/2-inch) Increments



The number of increments per grid square varies according to the selected unit of measure. The number of increments per grid square for each of the units is shown in Table 3-1.

Table 3-1. Increments Per Grid Square Per Unit of Measure

Grid Unit	Number of Increments per Grid Square
1/16 inch (default)	4
1/10 inch	5
millimeters	5
picas	6
virtual	5

For each **Grid Unit** setting, you can set the **Grid Multiple** so that all grid points appear, that is, one grid square equals one grid increment (see Table 3-2). Incrementing the **Grid Multiple** beyond this point has no effect.

Table 3-2. Settings for Grid Squares to Equal Grid Increments

Grid Unit	Grid Multiple Setting at which All Grid Points Appear
1/16 inch (default)	6
1/10 inch	4
millimeters	10
picas	3
virtual	8

To set up the Grid, use the following procedure:

1. Select the Set Up function at the bottom of the screen and press **MARK**.

The Set Up pop-up menu appears.

2. To make the Grid visible, select the **Visible** option under the Grid Visible heading and press **MARK**.
3. To turn on **Grid Snap**, select the **On** option under the Grid Snap heading by moving the cursor to it and pressing **MARK**.
4. To change the unit of measure, select a unit under the Grid Unit heading.
5. To change the units per increment, select the **Up** or **Down Arrow** under the Grid Multiple heading.

Each time you click **MARK**, the numerals in the numeric display change accordingly.

You can also change the units per increment by selecting the numeric field under the Grid Multiple heading and typing the number into the highlighted field.

6. Select **GO** on the pop-up menu. The Grid, now visible, overlays the work area, **Grid Snap** is on, and **Grid Unit** and **Grid Multiple** reflect your selections.

Redrawing an Edited Picture

While working on a picture, you can overlay objects. If you remove one object from another, a portion of the bottom object appears to be missing. However, the missing part is still in memory. To update the picture display and fill in the missing area, you must perform a Redraw function. Redraw updates the screen image but does not change or alter the picture in any way.

Figure 3-8 shows an object removed from another and the redrawn objects with all parts visible.

Figure 3-8. How Redrawing an Object Fills in an Invisible Part



You can redraw an edited picture in two ways: by using either the mouse or the keyboard.

To update an edited picture, use the following procedure:

1. Select Redraw at the left of the function menu.
2. Press **GO**.

OFIS Graphics clears the work area momentarily, then fills in all objects, outlines, and fills.

You can also press the **F1** key to update an edited picture,

Changing the View of the Picture

You can change the view of your picture to work on detail or see a portion outside the work area.

Working on Picture Detail

To work on a detailed area of your picture, you can use the **Zoom In** option to enlarge a portion of the work area.

When you zoom in on an object, its details become larger and clearer. This action makes editing and shaping objects much easier. Zoom is also useful when drawing small objects.

To work on detailed portions of a picture, use the following procedure:

1. Select Views on the Function menu.
2. Press **MARK**.

The Views pop-up menu appears.

3. Move the cursor until it highlights the **Zoom In** option on the pop-up menu.
4. Press **MARK**.

The Zoom cursor and Zoom box appear.

The size of the Zoom box determines the amount of enlargement. A small Zoom box enlarges a small area with a maximum amount of detail. A larger Zoom box enlarges a bigger area so the amount of detail is moderate.

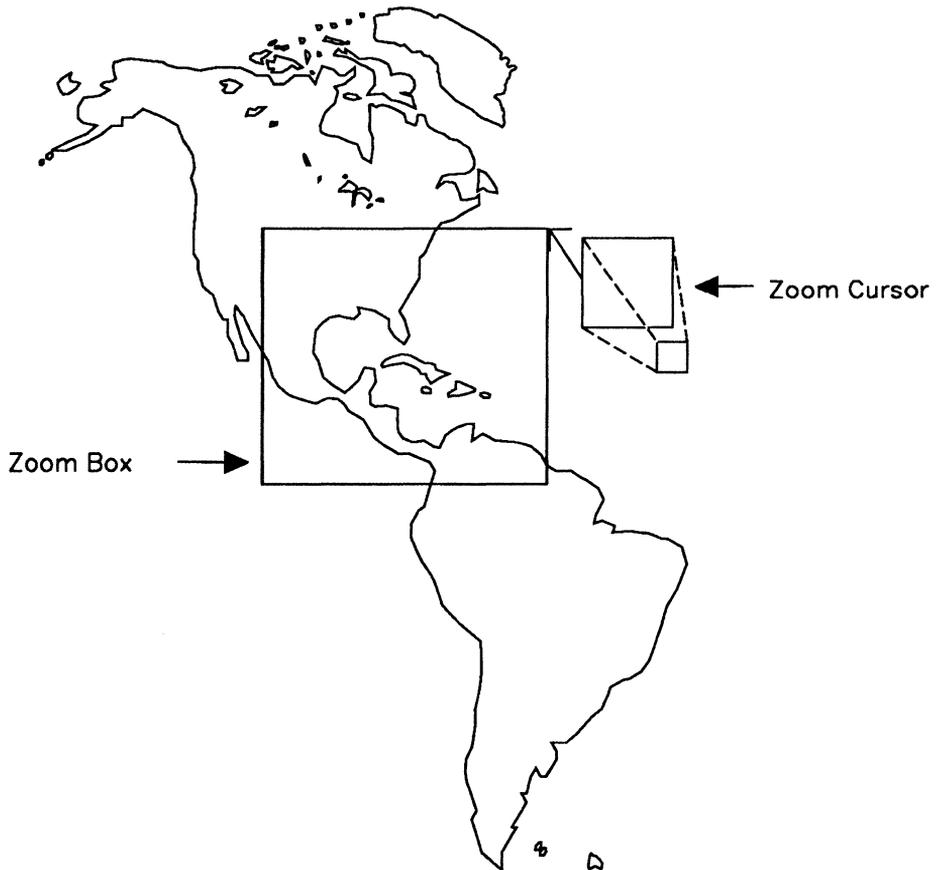
If you want to change the size of the Zoom box, press and hold the **BOUND** button and move the cursor until the box is the desired size. Then release the **BOUND** button.

Note: *To easily obtain the proper size box, put the bottom left corner of the box at the bottom left corner of the area you want to zoom before changing the size of the box.*

5. Move the **Zoom** box over the area you want to enlarge, as shown in Figure 3-9.
6. Press **MARK**. The portion of the work area surrounded by the **Zoom** box redraws, filling the entire work area.

You can **Zoom** again, enlarging the detail more each time. To **Zoom** again, follow steps 1 through 6.

Figure 3-9. Zoom Box over Area to be Enlarged



To exit the **Zoom In** option, use the following procedure:

1. Select **Views** on the Function menu.
2. From the pop-up menu, select **Full View** (or **Full Page**) to display an entire picture (Landscape orientation).
3. Press **MARK**. OFIS Graphics redraws the picture at full size.

You can perform all functions and use all tools when zoomed in on a portion of the work area.

You can work in other portions of a zoomed-in picture by using the **Pan** option under the Views pop-up menu. See **Panning Through Picture Detail** in this section.

***Note:** When you zoom in on a portion of the work area with **Grid Visible** on, the appearance of the Grid changes.*

Panning Through Picture Detail

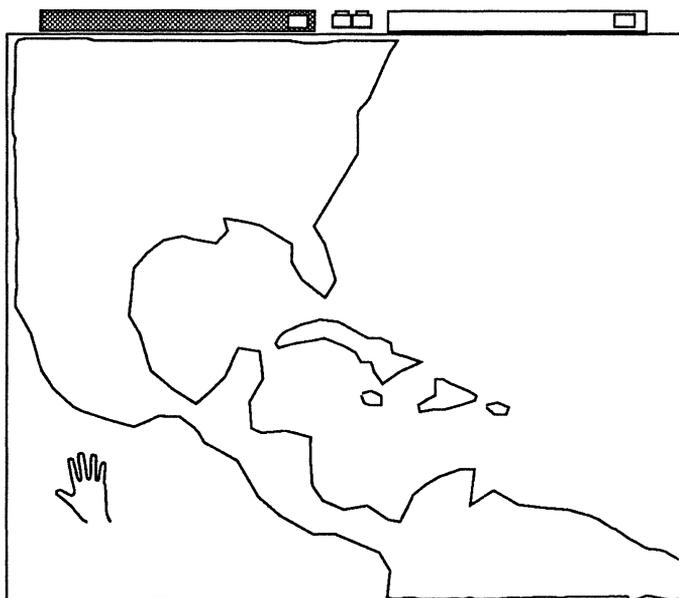
When you have a portrait orientation or are zoomed into your picture, you can see only a part of it. The rest is beyond the edges of the work area. The **Pan** option lets you move the picture in any direction so that you can bring other parts into the Zoom view of the work area.

To see parts of a picture beyond the work area boundaries, use the following procedure:

1. Select the **Views** selection on the function menu.
2. Press **MARK**.
The Views pop-up menu appears.
3. Move the cursor until it highlights the **Pan** option on the pop-up menu.
4. Press **MARK**.
The Pan cursor (open hand icon) appears.
5. Move the Pan cursor into the work area and place it at the edge of the picture detail you want to view (see Figure 3-10).

6. Press and hold **MARK** and move the cursor away from the edge of the work area. For example, if you want to view the image to the left of the current view, place the Pan cursor to the left side of the work area. Then, press and hold **MARK** and move the cursor to the right.
7. Release **MARK**. OFIS Graphics redraws the work area with the new portion displayed.

Figure 3-10. Pan Cursor on Left Side of the Work Area



To cancel the **Pan** option, select **Cancel** or any other function, or select any tool from the **Tools** menu (except **Unpick** or **Highlight**).

Using the Work Areas

When you first enter OFIS Graphics, only one of two work areas is displayed in a single-layout format; the second work area is not displayed.

You can choose to see both work areas in a dual layout, but only one work area can be active at one time.

Picture tabs show the name of the picture in their corresponding work area. You can always see both picture tabs at the top of the work area.

Displaying One or Both Work Areas

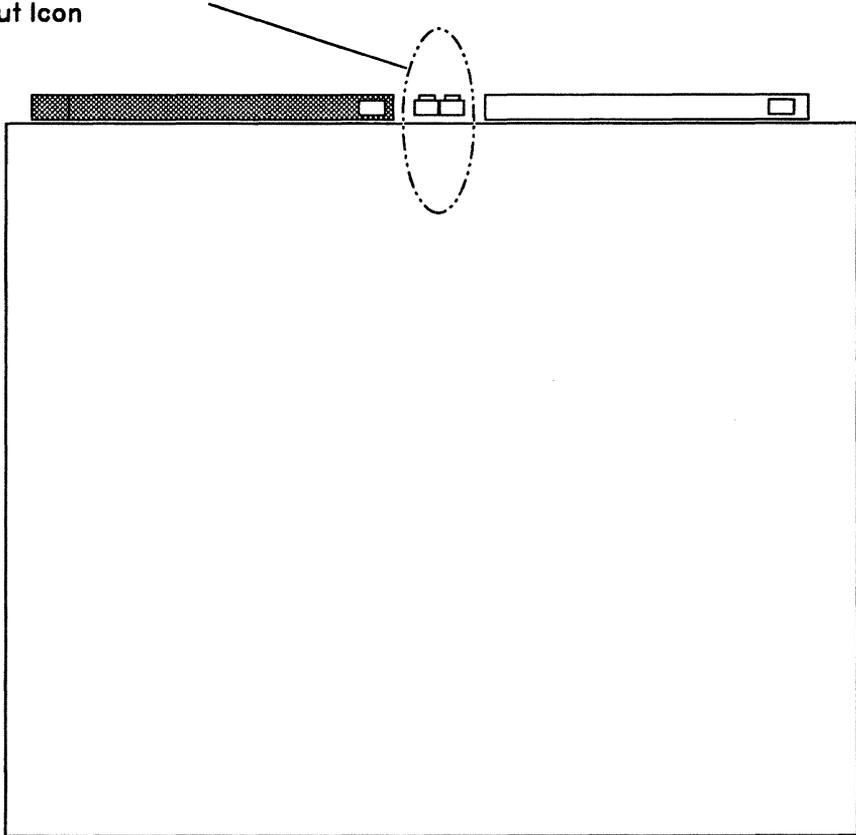
You use the layout icon at the center-top of the display to choose either single-layout or dual-layout format (see Figure 3-11).

As an alternative to the single layout, the dual layout displays both work areas side-by-side. You can find this layout helpful when copying from one work area to the other.

In the dual layout, the system displays portrait pictures in **Full Page** view. Both work areas have all the features of the larger, single work area (the system suppresses the visible grid). Since the screen is divided in two, both work areas are reduced in size.

Figure 3-11. Work Area with Layout Icon

Layout Icon



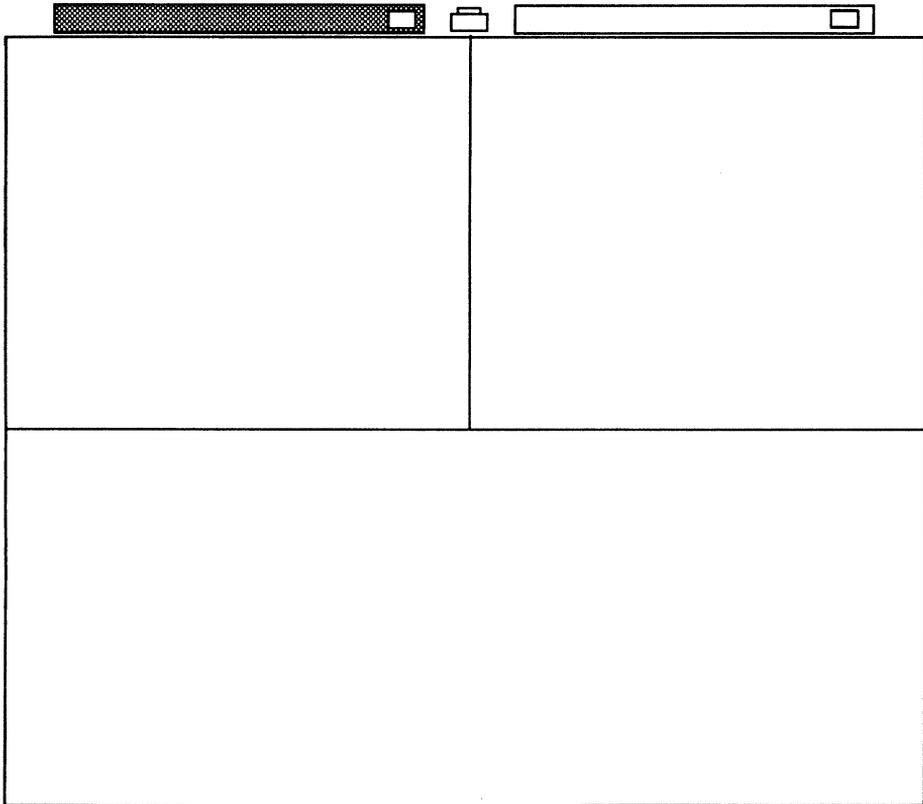
To change the work area format to either single or dual layout, use the following procedure:

1. Move the cursor to the top of the display so that it points to the layout icon.

When one work area is visible, you see a double box, which indicates that selecting it will give you a dual layout. When both work areas are visible, you see a single box, which indicates that selecting it will give you a single layout. In other words, the layout icon shows what you can go to, not what mode you are currently in (see Figure 3-12).

2. Press **MARK**. OFIS Graphics clears the display and presents the work areas in their new format. The appearance of the layout icon changes slightly depending on which layout you are in.

Figure 3-12. Dual Layout



Activating the Work Areas

One of the two work areas is always active. OFIS Graphics highlights the picture tab at the top of the active work area. You can use both work areas by switching from one to the other.

To activate the other work area, use the following procedure:

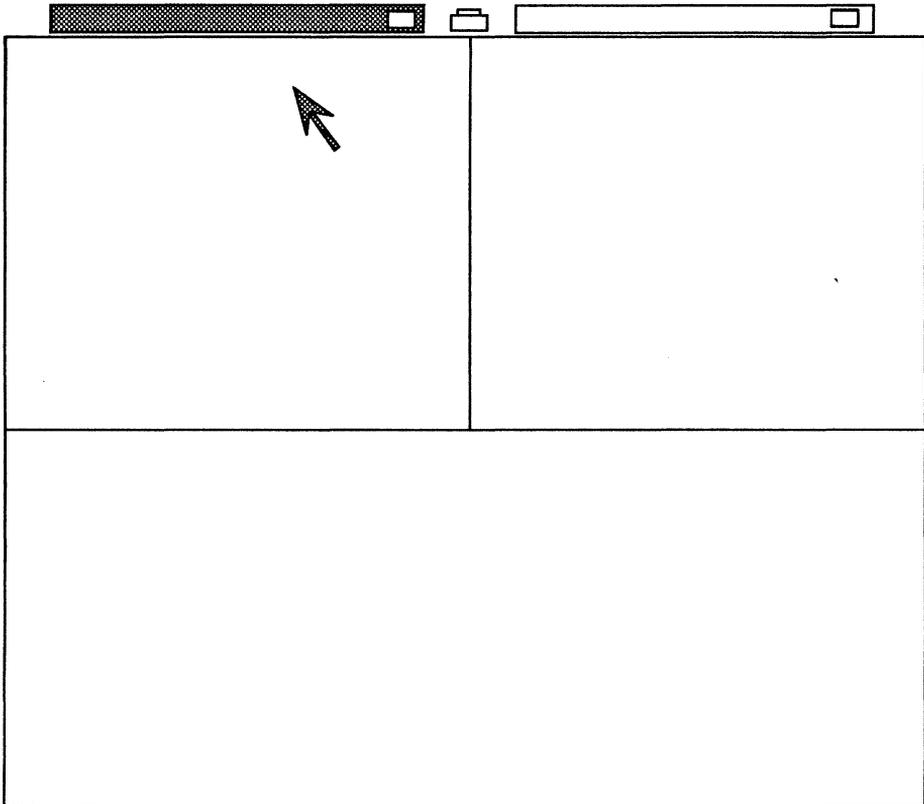
1. Move the cursor to the top of the display so that it points to the empty picture tab (without highlight fill).
2. Press **MARK**.

The selected work area becomes active.

In the single layout, the new, active work area and its picture are displayed. In the dual layout, the highlighted picture tab indicates the active work area, as shown in Figure 3-13.

You can switch back and forth between the two work areas as often as you want.

Figure 3-13. Active Work Area Indicated with Highlighted Tab



Setting the Quick Access Function

The purpose of the Quick Access feature is to allow you quick access to the various tool menus to reduce the need to have to manually switch between the **Charts**, **Text**, and **Drawing** tools using the Tools function key.

To select or unselect the Quick Access function, use the following procedure:

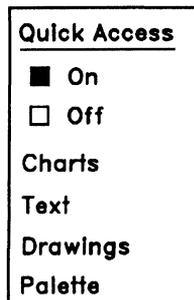
1. Select Tools on the Function menu.

The Tools pop-up menu appears (see Figure 3-14).

2. Move the cursor until it highlights Quick Access **On** or **Off**. Default is **On**.
3. Press **MARK**.

The menu disappears, and Quick Access is enabled or disabled according to your selection.

Figure 3-14. Tools Menu with Quick Access



Note: The Quick Access feature can also be controlled by configuring the :QuickAccess: entry in the user profile file. See Saving the User Profile in Section 11 for details.

Quick Access Behavior

When the Quick Access feature is turned on:

- If you select (that is, use **Pick** or **Reposition**) one or more objects of the same kind, OFIS Graphics switches to the appropriate tool side menu, if not already in that menu. Charts are considered as selected only if their vectors are selected.
- After the switch to a different tool side menu, the objects remain selected, so that they can be modified.

For example, if you are currently in the Drawing tools side menu and select one or more text objects, OFIS Graphics automatically switches to the Text tools side menu.

If you select two or more objects of different kinds, OFIS Graphics does not automatically switch to a different tools menu. In addition, if nontext objects and text objects are both picked while in the Text tools, the result is that only the text objects are picked.

If you unpick a picked object (by using **BOUND** drag), the same rules apply to the remainder of the picked objects.

For example, if you are currently in the Drawing tools side menu, and select one or more text objects and one drawing object by mistake, all of the objects are picked and no tool switch takes place. If the drawing object is then unpicked, OFIS Graphics automatically switches you to the Text tools side menu.

When the Quick Access feature is turned off, you have to switch between tool menus manually.

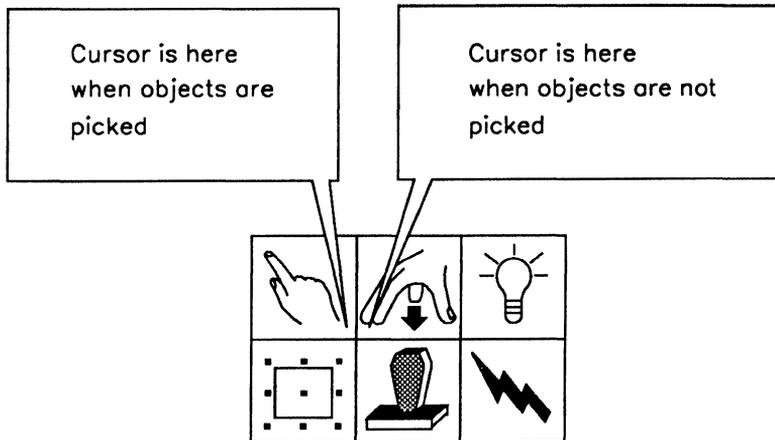
Quick Menu

The purpose of the Quick Menu feature is to allow you quick access to the standard editing functions. It is accessed by clicking on the middle mouse button.

The Quick Menu is positioned so that the cursor is located as shown in Figure 3-15. At screen boundaries, the cursor is moved if necessary to position it at the correct location.

Note: *Typing CODE+M is equivalent to clicking on the middle mouse button. This is generally used on a system with a two button mouse.*

Figure 3-15. Quick Menu



Note: *The Quick Menu feature can also be controlled by configuring the :QuickMenu: entry in the user profile file. See Saving the User Profile in Section 11 for details.*

Selecting a tool in the **Quick Menu** is equivalent to selecting the tool from the **Tools** side menu. When you select a tool from the **Quick Menu**, the **Tools** side menu is also updated.

The **Quick Menu** is available when the **Drawing Tools**, **Text Tools**, or **Chart Tools** side menus are displayed.

When the **Quick Menu** option in the static user profile is turned off, only the **Unpick** icon pops up when you click on the middle mouse button.

Accelerator Keys

The following keys provide shortcuts in OFIS Graphics 3.0:

Press ...	To ...	For details, see section on ...
CODE+C	Change curve orientation	Curve Orientation Control (Section 6)
CODE+M	Access the standard editing icons	Quick Menu (Section 3)
CODE+P	Access the default palette	Palette (Section 7)
CODE+R	Switch between Foreground or Background palette	Palette (Section 7)
CODE+S	Save the current work area to a file	Quick Save (Section 2)

Section 4

Common Editing Functions

Before reading this section, you should be familiar with Section 1, Overview. This section covers the following:

- Changing object attributes
- Picking objects
- Unpicking objects
- Highlighting picked objects
- Repositioning objects
- Copying objects
- Deleting objects
- Reviewing the Quick Menu

There are several attribute functions and drawing tools that are common to most of the side menus. OFIS Graphics 3.0 groups these tools into common editing functions and discusses them in this section. At the same time, OFIS Graphics includes the new Quick Menu function to help you use the product more efficiently. This function is reviewed at the end of this section.

Changing Object Attributes

This section describes adding colors and fills and changing lines and covers the following areas:

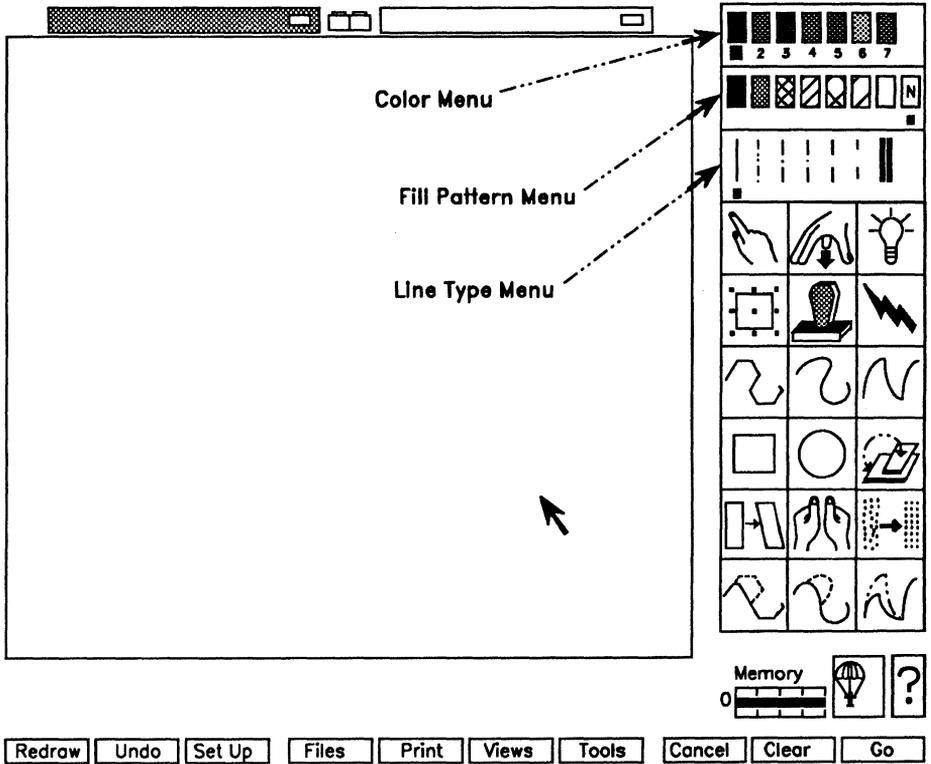
- Attribute menu locations
- Coloring objects
- Filling objects with patterns
- Assigning different line types

Attribute Menu Locations

Colors, fill patterns, and line types are all common attributes of objects. You change and assign attributes by using the color, fill, and line menus located above the drawing tools menu as shown in Figure 4-1.

Each menu has several attributes. The current attribute is indicated by a solid box underneath it. For example, the default line is solid, and the small box showing the line selection appears underneath it.

Figure 4-1. Attribute Menu Locations



Coloring Objects

You change the color of objects by using the Color menu. It contains the selection of colors used for objects. You can assign colors whether your monitor is color or monochrome.

Before coloring objects, you must also consider your printer. For example, with plotters, each color icon on the screen corresponds to a pen. Moving from left to right, each color icon corresponds to pens 1 through 7 on your plotter. As another example, on color dot matrix printers, the printer driver assigns a closest color match by mixing red, green, and blue values.

See Section 7, Using Palette Tools, for information on changing the shades (red, green, or blue) of the various colors.

To tell what color (or pen number) is assigned to an object on the screen, pick the object. When a single object is selected, its attributes are reflected by the Color, Fill, and Line menus on the Tools side menu.

***Note:** When a group of objects is picked, none of the attributes on the Tools menu change, even if none of the objects have the current attributes.*

To create an object with a particular color, use the following procedure:

1. Move the cursor under the desired color on the palette.
2. Press **MARK** to select the attribute.
3. Create the object.

Objects are created with the selected color until a new one is selected. See Section 5, Using Drawing Tools, for drawings and Section 8, Using Text Tools, for text.

To change the color of an existing object, use the following procedure:

1. Select one or more objects you want to modify with the Pick cursor.
See Section 9, *Creating and Modifying Charts*, on how to select a bar legend, line in a chart, or pie segment.
2. Move the cursor under the desired color on the menu.
3. Press **MARK** to select the attribute.
The color of the picked object changes to reflect your selection (if highlight is on, you do not see the new color until the object is unpicked.) You can change the color of an object as often as you want.
4. Use the **Unpick** tool to unpick all objects when your modifications are finished.
5. Use Redraw if necessary.

Filling Objects with Patterns

You can fill objects with different patterns by using the Fill Pattern menu. It contains the selection of fill patterns used for objects. For example, you can make an object with no fill (the default), or one that is crosshatched.

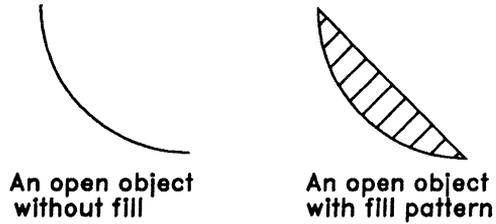
To draw an object with a particular fill pattern, use the following procedure:

1. Move the cursor under the desired fill pattern on the palette.
Note that the default, no fill, is a box with an N inside it.
2. Press **MARK** to select the attribute.
3. Draw the object. See Section 5 on using drawing tools.

Objects are drawn with the selected fill pattern until a new one is selected.

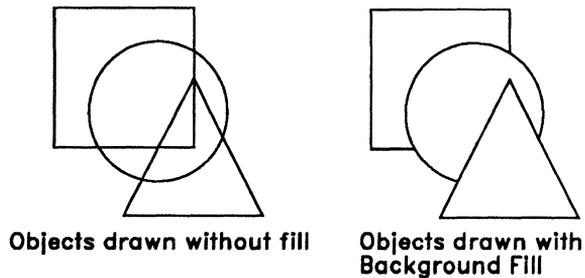
If you fill an open object (such as a curve where the first and last points of the object are separate), OFIS Graphics fills the object by creating a boundary between the first and last points, as shown in Figure 4-2.

Figure 4-2. Open Object with Fill Pattern



You can use one of the fill patterns, **Background Fill**, as a fill without pattern. This pattern has the color of the screen. You can use **Background Fill** to make an overlaying object solid, so others are hidden behind it, as shown in Figure 4-3.

Figure 4-3. Objects with Background Fill



To change the fill pattern of an existing object, use the following procedure:

1. Select one or more objects you want to modify with the Pick cursor.
2. Move the cursor under the desired fill pattern icon on the menu.

The No Fill selection and the Background Fill selection create different results. No Fill has an "N" inside of it and creates transparent objects. Background Fill has nothing inside of it and creates solid, unpatterned objects.

3. Press **MARK** to select the attribute.

The fill pattern of the picked object changes to reflect your selection. If **Highlight** is on, you do not see the new fill pattern until the object is unpicked.

You can change the fill pattern of an object as often as you want.

4. Use the **Unpick** tool to unpick all objects when your modifications are finished.
5. Use **Redraw** if necessary.

Assigning Different Line Types

You assign different line types by using the Line Type menu. It contains the selection of line types used for objects. For example, you can make an object with a solid line (the default), or one that is made up of dashes.

You can use one of the line types, Background Line, to draw objects inside a fill pattern. This line has the color of the screen and is invisible without a fill pattern around it. You can also use Background Line as an invisible boundary around a filled object.

To draw an object with a particular line type, use the following procedure:

1. Move the cursor under the desired line type on the menu.
2. Press **MARK** to select the attribute.
3. Draw the object. See Section 5 on using drawing tools.

Objects are drawn with the selected line type until a new one is selected.

To change the line type of an existing object, use the following procedure:

1. Use the Pick cursor to select one or more objects you want to modify.
2. Move the cursor under the desired Line Type on the menu.
3. Press **MARK** to select the attribute.

The Line Type of the picked object changes to reflect your selection. If **Highlight** is on, you won't see the new line type until the object is unpicked.

You can change the line type of an object as often as you want.

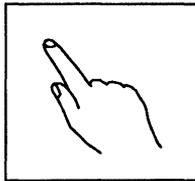
4. Use the **Unpick** tool to unpick all objects when your modifications are finished.
5. Use Redraw if necessary

Picking Objects

Picking one or more objects identifies that selection as the one or more you want to modify. You pick one or more objects by dragging the end of the finger of the Pick cursor (pointing finger icon) across any edge of each object.

Figure 4-4 shows the **Pick** tool.

Figure 4-4. Pick Tool



Picking One Object

To pick one object, use the following procedure:

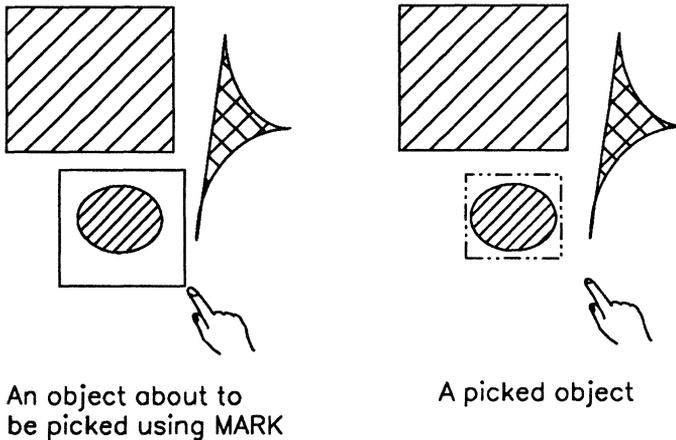
1. Select the **Pick** tool.
The Pick cursor (pointing finger icon) appears.
2. Move the Pick cursor near the edge of an object you want to modify.
3. Press and hold **MARK**.
4. Drag the Pick cursor by holding down **MARK** and moving the mouse in any direction. A highlighted box appears.
5. Move the highlighted box across any edge or completely over an object, as shown in Figure 4-5.
6. Release **MARK**. A broken-line box surrounds the object; it is now picked and ready to be modified. If an edge of an object is within the box, that object is picked. Figure 4-5 also shows a picked object.

If you failed to cross an edge of an object, the following message displays at the top of the display:

No edge found. (Move across edge with button down.) (7720)

Repeat the steps above to pick the object.

Figure 4-5. Picking an Object



When a single object is picked, OFIS Graphics displays its attributes (color, fill pattern, and line types) on the palettes on the Tools side menu. For more information about object attributes, see Section 7.

Picking Two or More Objects

There are two ways to pick a group of objects, one object after another (an additive group pick) or all objects at once (a simultaneous group pick).

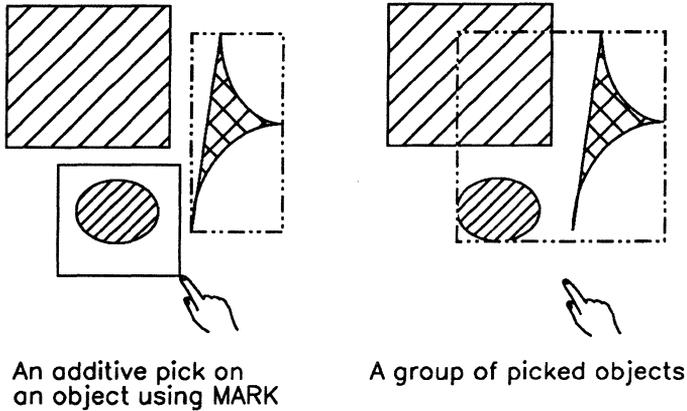
All objects remain picked until you unpick them. This means that you can perform more than one task on a selection. For example, once you have picked a selection, you can change its size, then copy it without having to pick it again.

Additive Group Pick

You use the **Pick** tool to perform an additive pick. You pick each object in the group individually. This makes it easy to collect a group of objects from various places on the screen or to pick out a few objects from an area that has many objects drawn close together.

To do an additive group pick, select the **Pick** tool, then follow the steps for picking an object. Pick one object after another until you have picked a whole group of objects. You are then ready to modify the group. Figure 4-6 shows an additive group pick.

Figure 4-6. Additive Group Pick

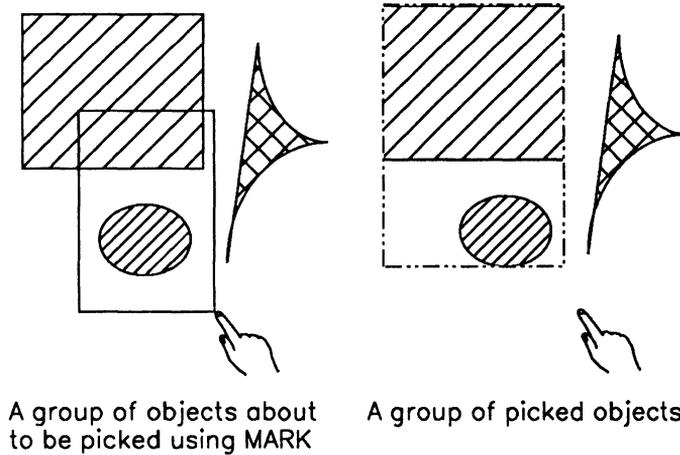


Simultaneous Group Pick

If nothing is picked, and the Pick cursor is displayed, you can pick an object or group of objects. When an editing tool is the active tool, a simultaneous group pick is the only kind of group pick you can do. You pick all the objects together in one motion. This makes it easy to pick your whole picture or to pick all the objects in one part of the work area.

To do a simultaneous group pick, select **Pick** or the appropriate editing or shaping tool, then follow the steps for picking an object. Figure 4-7 shows how to enclose an edge of each desired object inside the box cursor. You are then ready to modify the group.

Figure 4-7. Simultaneous Group Pick



Additive Unpick

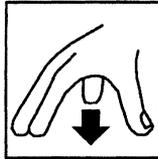
You can use the **Pick** tool together with the **BOUND** button to selectively unpick objects from a group of picked objects. This method of unpicking works only when **Pick** is the active tool. If an editing tool is currently active, select the **Pick** tool before using **BOUND** to unpick.

For steps on using **Pick** and **BOUND** to selectively unpick objects, see Unpicking Objects later in this section.

Unpicking Objects

Figure 4-8 shows the **Unpick** tool.

Figure 4-8. **Unpick** Tool



When you finish working with a selection, you have to **unpick** it to work on others. There are two ways to **unpick** a selection of objects:

- Use the **Unpick** tool
- Use the **BOUND** button together with the **Pick** tool

Unpicking All Picked Objects

You use the **Unpick** tool when you want to deselect all picked objects.

You can select the **Unpick** tool one of three ways:

- Move the cursor to the open hand icon on the Tools menu and press **MARK**.
- Press **CODE+M** on your keyboard and press **MARK**.

This action brings up the **Quick Menu** tool at the location of the cursor. (You can avoid moving the cursor across the screen to the Tools side menu.)

- Click the middle button of a three-button mouse, which brings up the **Quick Menu** tool at the location of the cursor, and then press **MARK**.

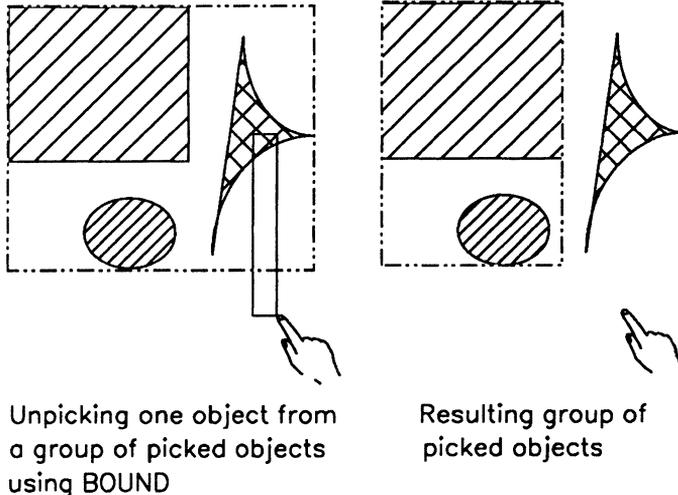
When you unpick a selection, the box surrounding it disappears. If **Highlight** is on, the objects return to their previous fill and color.

After using the **Unpick** tool, the **Pick** cursor (pointing finger icon) remains ready to pick another object.

Unpicking One or More Objects from a Picked Group

You can use **BOUND** together with the **Pick** tool to selectively unpick objects from a group of picked objects (see Figure 4-9). This method of unpicking works only when **Pick** is the active tool. If an editing tool is currently active, select the **Pick** tool before using **BOUND** to unpick.

Figure 4-9. Unpicking One or More Objects



To unpick only one of a group of objects, use the following procedure:

1. Pick a group of objects (either surrounded by a box or highlighted).
2. If not already active, select the **Pick** tool.

The Pick cursor appears.

3. To unpick one object from the group, press and hold **BOUND**.

A highlighted box appears at the cursor.

4. Move the highlighted box across the edge (the same motion you use to pick an object) of that object you want to unpick.

A message informs you if you failed to cross an edge.

5. Release the **BOUND** button. All other objects remain picked.

Highlighting Picked Objects

Figure 4-10 shows the **Highlight** tool.

Figure 4-10. Highlight Tool



By default, OFIS Graphics highlights any currently picked selection by surrounding it with a box. You have the alternative of using the Highlight function (the light bulb icon). The Highlight icon shows currently picked selections by displaying them as outlined figures (on a color monitor, magenta-outlined figures).

On both color and monochrome monitors, Highlight is particularly useful when modifying filled objects. With the fill temporarily removed, your editing process goes faster.

You can use any tool or function when Highlight is on. When Highlight is on, you can work with object edges that are not otherwise visible (due to colors and fill patterns).

To highlight objects in a selection, use the following procedure:

1. Pick one or more objects you want to modify (if not already picked).

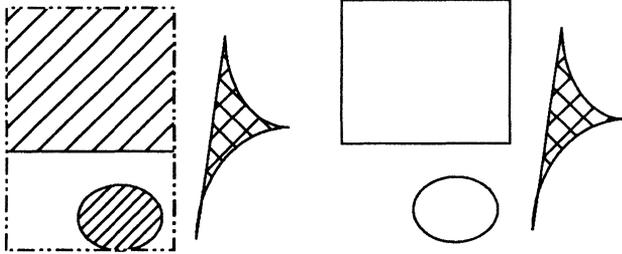
You can see the selection surrounded by a box.

2. Select **Highlight** by moving the cursor to the light bulb icon and pressing **MARK**.

Any fill disappears and only the outlines remain in the selection (see Figure 4-11).

3. Perform any editing or shaping operations.
4. Select **Highlight** again to turn it off.

Figure 4-11. Picked Group with Highlight Off and On



A group of picked objects
with Highlight off

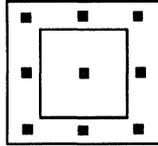
A group of picked objects
with Highlight on



Repositioning Objects

Figure 4-12 shows the **Reposition** tool.

Figure 4-12. **Reposition Tool**



You use the **Reposition** tool to pick, move, change length and width, rotate, size, and mirror objects.

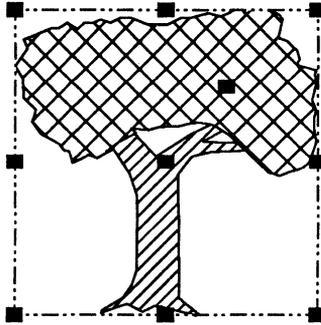
Picking an Object

To pick one or more objects, use the following procedure:

1. Select the **Reposition** tool.
The Pick cursor (pointing finger icon) appears.
2. Cross the edge(s) with the cursor to pick one or more objects you want to work on.

Ten small squares, called handles, appear over the selection. You use these handles to grab and reposition the selection. Figure 4-13 shows picked objects with the ten handles.

Figure 4-13. Objects Picked with Reposition Tool



Objects picked with the Reposition
Tool with ten handles

Moving and Rotating Objects

The following paragraphs describe how to move and rotate objects using the **Reposition** tool.

Moving Objects

You move objects around the work area by using the **Reposition** tool.

To move one or more objects around the work area, use the following procedure:

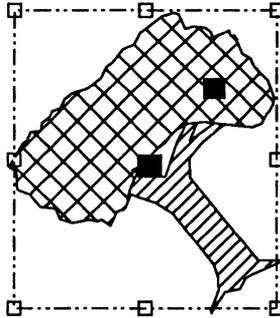
1. Select the **Reposition** tool.

The Pick cursor (pointing finger icon) appears.

2. Pick one or more objects you want to work on.

The ten small squares appear over the selection. Figure 4-14 shows the handles with the center and eccentric handles enlarged as if they were picked for moving or rotating.

Figure 4-14. Moving and Rotating Objects



Use center and eccentric handles
to move and rotate picked objects

3. Place the cursor on the center handle. The handle enlarges when the cursor is on it.
4. Press and hold **MARK**. The handles and the object-fill disappear, and the outline of the selection appears. When you use the **Reposition** tool on texts, a box representing the selection appears.
5. While holding down **MARK**, move the selection to the desired location.
6. Release **MARK**. The object, handles, and fill reappear.

If this operation moves an overlaying object off another beneath it, a portion of that bottom object may seem to disappear. OFIS Graphics holds that missing part in memory. To update the picture, select the Redraw function (see Section 3).

Rotating Objects

You rotate objects by using the **Reposition** tool.

To rotate one or more objects, use the following procedure:

1. Select the **Reposition** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick one or more objects you want to work on.
The ten small squares appear over the selection.
3. Place the cursor on the eccentric handle (see Figure 4-14). The handle enlarges when the cursor is on it.
4. Press and hold **MARK**. The handles and the object-fill disappear, and the outline of the selection appears. When you use the **Reposition** tool on texts, a box representing the selection appears.
5. While holding down **MARK**, rotate the selection in the desired direction. As you move the cursor, the box rotates in the direction the cursor moves.
6. Release **MARK**. The object, handles, and fill reappear in a rotated position. You may want to repeat the rotation until the object fits the desired angle.

Use **Redraw** if necessary.

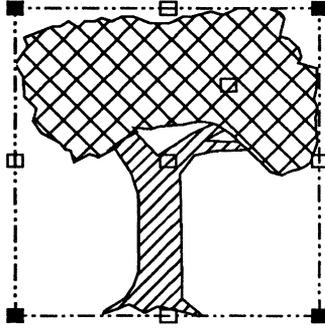
Changing the Proportions of Objects

You change the proportion (size) of objects by using the **Reposition** tool. You can enlarge or reduce an object, and all of its measurements remain in proportion.

To change the proportion of one or more objects, use the following procedure:

1. Select the **Reposition** tool.
The Pick cursor (pointing finger icon) appears.
2. Select one or more objects you want to work on.
3. Place the cursor on any corner handle (see Figure 4-15).
4. Press and hold **MARK**.
The handles and the object-fill disappear. When you use the **Reposition** tool on text, a box representing the selection appears.
5. While holding down **MARK**, scale the selection to the desired size by moving the cursor diagonally up or down.
6. Release **MARK**. The handles and fill reappear.
Use Redraw if necessary.

Figure 4-15. Reposition Tool - Corner Handles



Use corner handles to size and scale picked objects

Changing the Size and Mirroring Objects

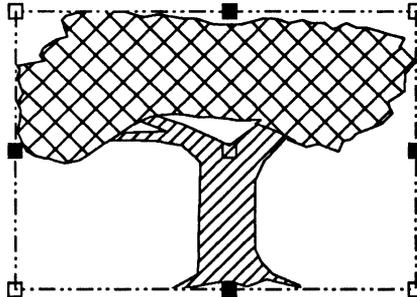
You change the length and width of objects by using the **Reposition** tool. For example, you can make an ellipse into a circle, or a circle into an ellipse. You also use the Reposition tool to mirror items.

Changing the Size of Objects

To change the length or width of one or more objects, use the following procedure:

1. Select the **Reposition** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick one or more objects you want to work on.
The ten small handles appear.
3. Place the cursor on one of the side handles (see Figure 4-16).

Figure 4-16. Reposition Tool - Side Handles



Use side handles for stretching, sizing,
and mirroring picked objects

4. Press and hold **MARK**.

The handles and the object-fill disappear. When you use the **Reposition** tool on text, a box representing the selection appears.

5. While holding down **MARK**, move the cursor away from or towards the selection.
6. Release **MARK**. The handles and fill reappear.

Use **Redraw** if necessary.

Mirroring Objects

You flip over objects (except charts or text) so that they are mirror-images of themselves by using the **Reposition** tool, shown in Figure 4-13. For example, you can make a right-facing arrow into a left-facing arrow, or an up arrow into a down arrow.

To mirror one or more objects, use the following procedure:

1. Select the **Reposition** tool.

The Pick cursor (pointing finger icon) appears.

2. Pick one or more objects you want to work on.

The ten small handles appear.

3. Place the cursor on one of the side handles (see Figure 4-16). The handle gets slightly bigger indicating it can be picked.

4. Press and hold **MARK**.

The handles and the object-fill disappear. When you use the **Reposition** tool on text, a box representing the selection appears.

5. While holding down **MARK**, flip the selection over itself by moving the cursor inwards toward the center and then over the opposite side of the selection.

You can use **Grid Visible** and **Grid Snap** to ensure the mirrored selection will have the same dimensions of the original drawing.

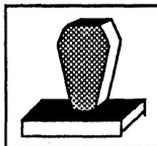
6. Release **MARK**. The picture, handles, and fill reappear, and the picture reflects a mirror image of the original drawing.

Use **Redraw** if necessary.

Copying Objects

Figure 4-17 shows the **Copy** tool.

Figure 4-17. Copy Tool



You copy objects by using the **Copy** tool. For example, you can make an identical reproduction of any selection of one or more objects.

To copy one or more objects, use the following procedure:

1. Select the **Copy** tool.

The Pick cursor (pointing finger icon) appears.

2. Select one or more objects you want to duplicate.

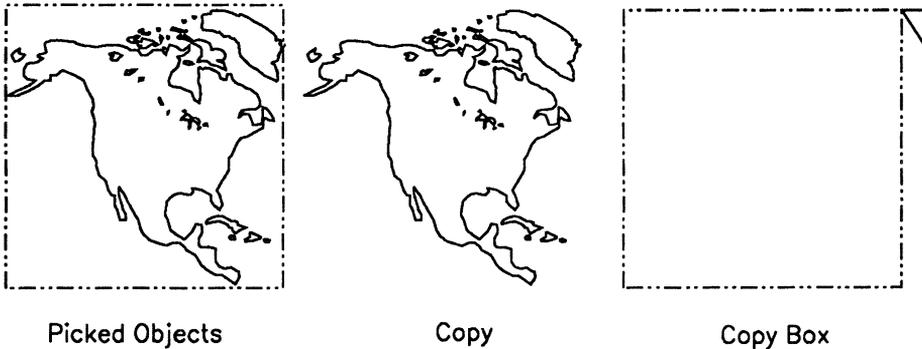
A rectangular copy box the size of the selection appears. It represents the selection waiting to be copied, as shown in Figure 4-18.

You can change the size of the copy by pressing and holding **BOUND** and moving the cursor until the copy box is the size you want. Changing the size does not alter the object proportions.

Common Editing Functions

3. To place the copy, move the cursor to the desired location in the work area. You can copy to the other work area by highlighting its picture tab to activate it.
4. Click **MARK**. A copy of the original selection appears and your cursor is ready to make another copy.
5. To make more copies of the selection, repeat steps 3 and 4.
6. When you have made the desired number of copies, unpick the selection by using the **Unpick** tool.

Figure 4-18. Picked Objects, Copy, and Copy Box



Deleting Objects

You delete objects by using the **Delete** tool shown in Figure 4-19. OFIS Graphics recognizes objects; therefore, erasing an object means deleting it entirely. For example, you cannot delete one side of a rectangle drawn with the **Square** tool. A rectangle drawn with the **Square** tool is a single object.

Figure 4-19. Delete Tool



To delete entire objects, use the following procedure:

1. Select the **Delete** tool.

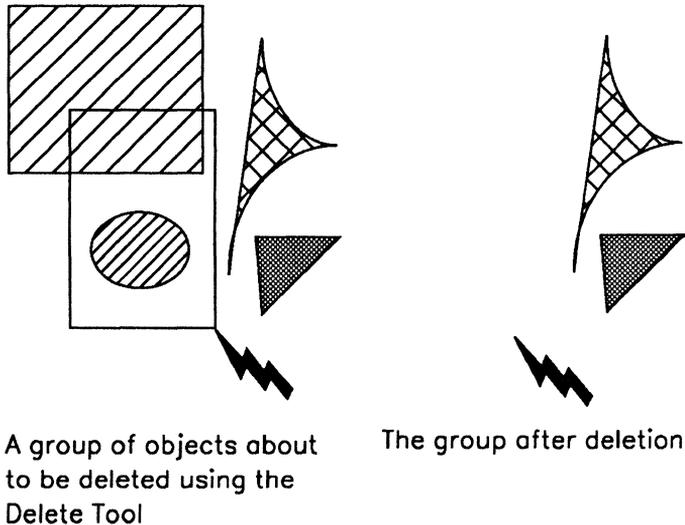
The cursor is replaced by the lightning bolt icon.

2. Move the Delete cursor near the edge of the object you want to delete.
3. Hold down **MARK** and move the mouse in any direction. As you drag the cursor, a box grows on the screen.
4. Move the cursor so that the delete box crosses over an edge of the object.

You can cross the edges of several objects as well, as shown in Figure 4-20.

5. Release **MARK**. The screen redraws and immediately deletes any and all objects within or partially within the delete box. Everything else remains intact.

Figure 4-20. Deleting Objects



Canceling a Delete Function with Undo

If you delete an object (other than a chart) by mistake, you can bring it back by immediately performing an Undo function.

Ensure that no other operations have been performed since the Delete function occurred. Undo restores the object only if it is selected immediately after the object is deleted.

To bring back objects accidentally deleted, do the following:

- Select the Undo function. OFIS Graphics clears the work area momentarily, then restores any deleted objects.

You can also press the **F2** key to cancel the Delete function.

Note: *The bounds of a text object is defined by the box displayed when the text is selected. If the delete box overlaps this box area, text may be accidentally deleted even though the delete box did not overlap the visible portion of the text object. If used as the very next operation, Undo can be used to recover any text accidentally deleted.*

Deleting All Objects by Clearing the Work Area

You can delete all the objects by clearing the work area. You accomplish this by selecting Clear from the function key display. When you click on or press the **CLEAR** key, **No**, **Yes** confirmation boxes appear. Select **Yes** to clear the screen. Select **No** to cancel the Clear operation.

Caution:

If you do not save before using the Clear function, you lose any changes that you made and cannot recover them using Undo.

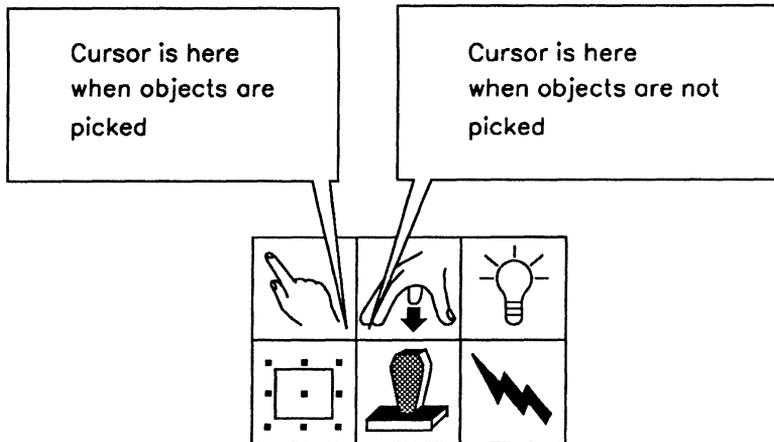
Reviewing the Quick Menu

In review, the purpose of the Quick Menu feature is to allow you quick access to the standard editing functions. Again, it is accessed by clicking on the middle mouse button. See Section 3, Quick Menu, for more details on this operation.

Quick Menu

The Quick Menu is shown in Figure 4-21 to review its functions which have been described in this section.

Figure 4-21. Quick Menu



Note: *Typing **CODE+M** is equivalent to clicking on the middle mouse button. This is generally used on a system with a two button mouse.*

Section 5

Using Drawing Tools

Before reading this section, you should be familiar with the OFIS Graphics display and how to use a mouse (see Section 1). This section describes the functions and tools used for creating and deleting objects in a picture file and covers the following subjects:

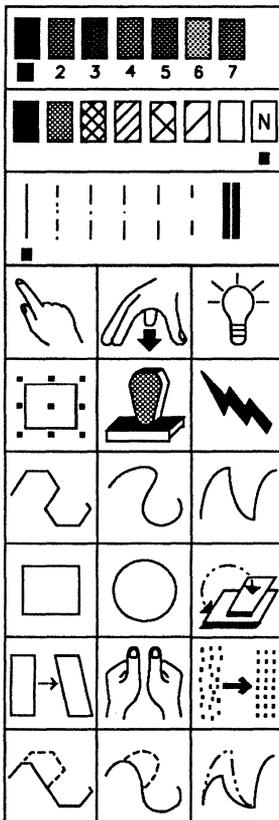
- Creating a drawing object
- Drawing straight lines
- Drawing freehand lines
- Drawing curves and arcs
- Drawing squares and other rectangles
- Drawing circles and ellipses

Creating an Object

An object (drawing, chart, text) is a collection of one or more connected line segments.

When you create an object with OFIS Graphics, you select drawing tools from the Drawing Tools side menu. All of the basic drawing tools create objects composed of line segments or different shapes using the current color, fill pattern, and line type. Figure 5-1 shows the Drawing Tools side menu.

Figure 5-1. Drawing Tools Side Menu



The first six side menu tools are defined as editing functions and were described in Section 4, Common Editing Functions.

The tools listed below (and described later in this section) create new objects:

- **Connected Line**
You use this tool to draw straight lines.
- **Sketch**
You use this tool to draw freehand lines.
- **Curve**
You use this tool to draw curves and arcs.
- **Square**
You use this tool to draw squares and rectangles.
- **Circle**
You use this tool to draw circles and ellipses.

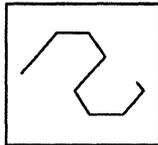
The system uses vector graphics to make objects. Vector is a term that describes how a system draws lines and curves from a set of points grouped in a predetermined order.

Note: *Selecting any of these tools unpicks all currently picked objects.*

Drawing Straight Lines

You draw objects composed of straight line segments by using the **Connected Line** tool shown in Figure 5-2 .

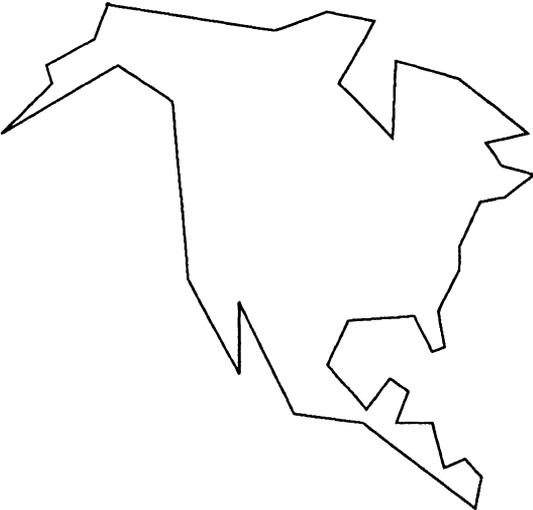
Figure 5-2. Connected Line Tool



To draw with straight lines, use the following procedure:

1. Select the **Connected Line** tool.
2. Move the cursor to the place in the work area where you want to begin your drawing.
3. Click **MARK**.
When you click **MARK** you define the starting point. The starting point is the point where the object you are about to draw begins. With all of the five basic drawing tools, the object begins at and grows from the starting point.
4. Move the cursor to move the straight line that originates from the starting point, drawing this line any length and in any direction you wish.
5. Click **MARK**.
A line segment connects the starting point and the second point. Each click of **MARK** on the mouse anchors one segment and begins another.
6. Move the cursor again and click **MARK** as needed until your object is complete.
7. To make the final line segment disappear (to end your object), press **BOUND** or select **CANCEL** from the Function menu. See Figure 5-3 for an example of an object drawn with straight lines.

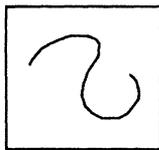
Figure 5-3. Connected Line Segments



Drawing Freehand Lines

You draw freehand objects in which the accuracy of the shape is not critical by using the **Sketch** tool shown in Figure 5-4. Though a sketched object may appear to be smooth, it is actually composed of tiny line segments.

Figure 5-4. Sketch Tool



To draw a freehand, sketched line, use the following procedure:

1. Select the **Sketch** tool.
2. Move the cursor to the starting point in the work area.
3. Press and hold down **MARK** and move or draw with the cursor.

As long as you continue to hold down **MARK**, a line follows the movement of the cursor. The speed at which you move the Mouse affects the smoothness of the line.

4. To stop drawing, release **MARK**. See Figure 5-5 for an example of a sketched object.

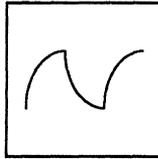
Figure 5-5. Sketched Object



Drawing Curves and Arcs

You draw objects composed of curved line segments, or arcs, by using the **Curve** tool shown in Figure 5-6. The **Curve** tool is an alternative to the **Connected Line** tool for drawing controlled curves.

Figure 5-6. Curve Tool



The arc that originates from the starting point moves with the cursor. Each click of **MARK** anchors the arc and begins another. By moving the cursor you determine the length, shape, and direction of the curve.

To draw curves and arcs, use the following procedure:

1. Select the **Curve** tool.
2. Move the cursor to the starting point in the work area.
3. Click **MARK**.
4. Move the cursor to the second point.

The arc that originates from the starting point moves with the cursor. You can draw this arc any length and in any direction.

5. Click **MARK**. An arc connects the starting and the second point.

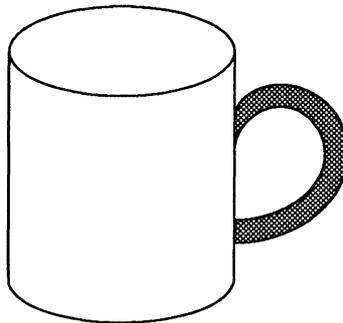
An arc can be either concave or convex. Moving the cursor slightly up or down as you begin an arc determines the curve of the arc. You can change the direction of an arc that has not yet been anchored by pressing **CODE+C** or by bringing the cursor back to the starting point and then moving the cursor along the axis on the concave side of the original curve.

The **Curve** or **Curve Replace** tool must be selected to use the **CODE+C** function.

Each click of **MARK** on the mouse anchors one arc and begins another.

6. Move the cursor again, clicking **MARK** to anchor each arc until your object is complete.
7. To make the final arc disappear (to end your object), press the **BOUND** button or select **CANCEL** from the Function menu. See Figure 5-7 for an example of an object drawn using the **Curve** tool. Note the handle includes a fill pattern.

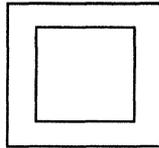
Figure 5-7. Curved Object



Drawing Squares and Other Rectangles

You draw squares and rectangles by using the **Square** tool shown in Figure 5-8.

Figure 5-8. Square Tool

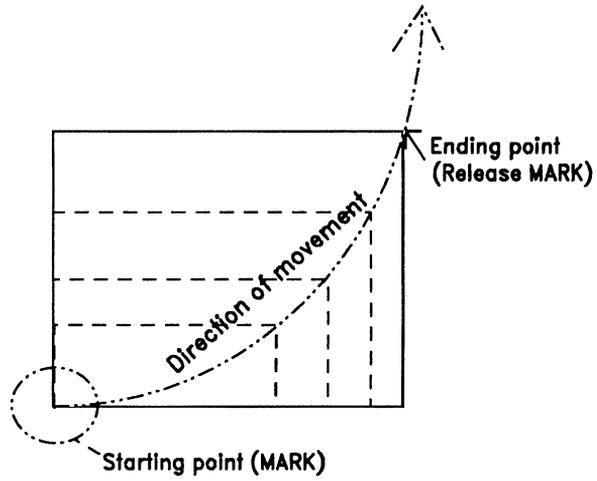


To draw a square or rectangle, use the following procedure:

1. Select the **Square** tool.
2. Move the cursor to a starting point in the work area.
The starting point defines a corner of the rectangle, not the center.
3. Press and hold **MARK**.
4. Move the cursor diagonally, toward any corner of the screen.
As you move the cursor, a box grows on the screen. Size and shape are determined by the movement of the cursor, as shown in Figure 5-9. You can move the cursor in any direction.
5. Release **MARK**. A square or rectangle appears on the screen.

To make a square, ensure that **Grid Snap** is on before starting this procedure. You then move the cursor horizontally and vertically the same number of grid units

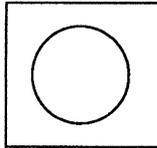
Figure 5-9. Drawing a Square or Rectangle



Drawing Circles and Ellipses

You draw circles and ellipses by using the **Circle** tool, shown in Figure 5-10.

Figure 5-10. Circle Tool



To draw a circle or ellipse, use the following procedure:

1. Select the **Circle** tool.
2. Move the cursor to a starting point in the work area.
3. Press and hold **MARK**.
4. Drag the cursor diagonally, toward any corner of the screen.

The ellipse is represented by a box. The starting point defines the corner of the box surrounding the ellipse.

As you drag the cursor, the box that represents the ellipse grows on the screen. The size and shape are determined by the movement of the cursor.

5. Release **MARK**.

The box is replaced by an ellipse of the same dimensions as the box that represented it.

To make a circle, ensure that **Grid Snap** is on before starting this procedure. You then move the horizontally and vertically the same number of grid units

Section 6

Changing Objects

This section describes how to change objects and covers the following subjects:

- Editing and shaping tools
- Editing tools

Editing and Shaping Tools

The Drawing Tools side menu contains the tools used to edit and shape objects (see Figure 6-1). To use these tools, you must pick an object. If you have not already learned how to pick and unpick objects and use the common editing tools, see Section 4, Common Editing Functions.

The tools designed specifically for additional editing and shaping objects and pictures include:

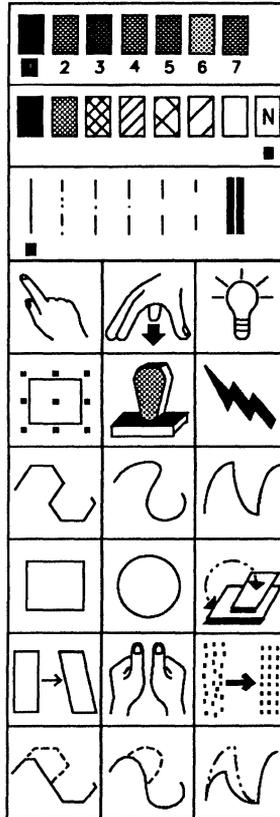
- **Reorder**
You use this tool to move picked objects above or below other overlaid objects in a picture.
- **Connected Move**
You use this tool to pull one or more points of an object while the rest stay in one place.
- **Sculpt**
You use this tool to push portions of objects.

Changing Objects

- **Align to Grid**
You use this tool to line up objects with the current grid.
- **Connected Line Replace**
You use this tool to modify an object by making new straight lines along its shape.
- **Sketch Replace**
You use this tool to modify an object by making new freehand lines along its shape.
- **Curve Replace**
You use this tool to modify an object by making new curve lines along its shape.

Some editing tools are more effective on objects with straight lines and less effective on freehand and curved lines and circles, which are composed of many small line segments.

Figure 6-1. Drawing Tools Menu



The tools described in this section are located toward the bottom of the Drawing Tools side menu.

Editing Tools

The following two tools are general editing tools and are in addition to the common editing tools described in Section 4.

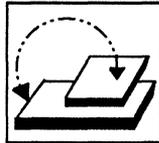
These tools include:

- Reorder
- Align to Grid

Overlaying Objects in a Different Sequence

Figure 6-2 shows the **Reorder** tool.

Figure 6-2. Reorder Tool



OFIS Graphics overlays objects according to the order in which they are drawn. The **Reorder** tool lets you change that order by moving a selection above or below the other objects in the picture.

If you use Reorder on a group of picked objects, the order of the objects within the group remains the same. You only change the group's order relative to the rest of the picture. Text is always above other objects. Reorder does not work on charts.

To reorder objects in a different sequence, use the following procedure:

1. Select the **Reorder** tool.

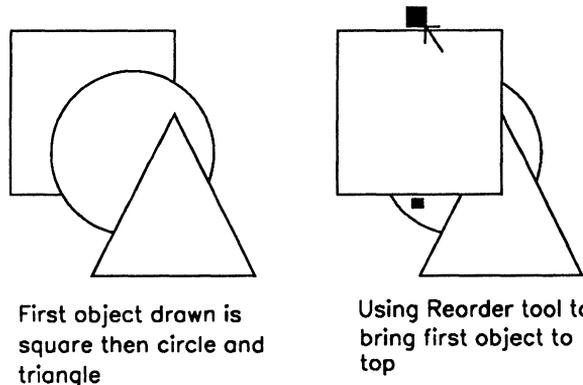
The Pick cursor (pointing finger icon) appears.

2. Pick one or more objects you want to move on top or bottom of other objects.

Two small squares, called handles, appear. One is at the top of the selection and the other is at the bottom. You use these handles to reorder the selection to the top or bottom of the other objects.

3. Pick the top button to place the object at the top of other objects. Or, pick the bottom handle to place the selection at the bottom of other objects. Note that the handles enlarge when the cursor is on them, as shown in Figure 6-3.
4. Click **MARK**. OFIS Graphics redraws the objects in the new order.
5. When you have finished, unpick the selection by using the **Unpick** tool.

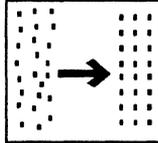
Figure 6-3. Objects Overlaid in Drawing Order and Reordered



Aligning Objects to the Grid

Figure 6-4 shows the **Align to Grid** tool.

Figure 6-4. Align To Grid Tool



You align objects with the current grid by using the **Align To Grid** tool. You can align objects drawn after you set up the Grid, as well as objects drawn with a different **Grid Unit** and **Grid Multiple** setting. **Grid Snap** must be on. This tool is most useful if **Grid Visible** is also on. For more information on setting up the grid, see Section 3.

To align one or more objects to the current grid, use the following procedure:

1. Select the **Align to Grid** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick one or more objects you want to align to the Grid.
Nine small diamonds, called handles, appear over the selection. You use these handles to determine Grid alignment. Although the handles are not numbered on the screen, for reference they are assigned numbers 1 through 9, as shown in Figure 6-5.
3. To align the selection along one of its sides, click on one of the side handles (2, 4, 6, 8).

Figure 6-5. Align To Grid Tool Handles



4. To align the selection at one of its corners, click on one of the corner handles (1, 3, 7, 9).
5. To align the center of the selection on the grid, click on the center handle (5).
The object lines up to the Grid on your picked handle.
6. Unpick the selection when it is aligned to the Grid.

Shaping Tools

You can use the shaping tools to change and refine the actual shape of objects without deleting or redrawing them.

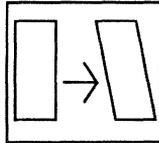
The shaping tools include:

- Connected Move
- Sculpt
- Connected Line Replace
- Sketch Replace
- Curve Replace

Moving Selected Points of Objects

Figure 6-6 shows the **Connected Move** tool.

Figure 6-6. Connected Move Tool

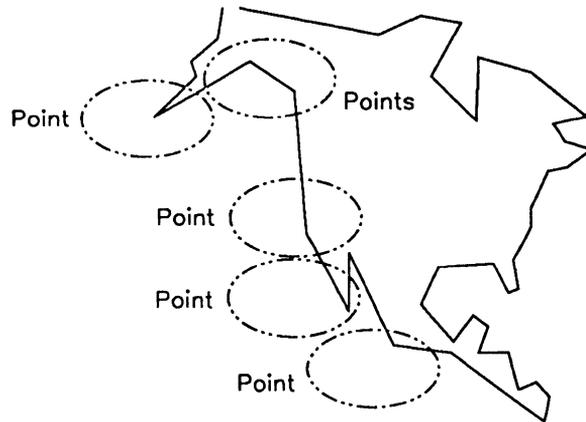


You move a point of an object in any direction without affecting the rest of the selection by using the **Connected Move** tool. You surround specific points on objects with a Box cursor and lock on to them.

Connected Move is most effective on objects drawn with the **Connected Line** and **Square** tools because they consist of straight line segments. Objects drawn with the **Sketch**, **Circle**, and **Curve** tools have many, small line segments and are more difficult to manipulate with this tool. Before using Connected Move, it may help to zoom in on an object (see Section 3).

You can find points at the end of line segments (for example, the corners of a square or the joints between two connected line segments). See Figure 6-7.

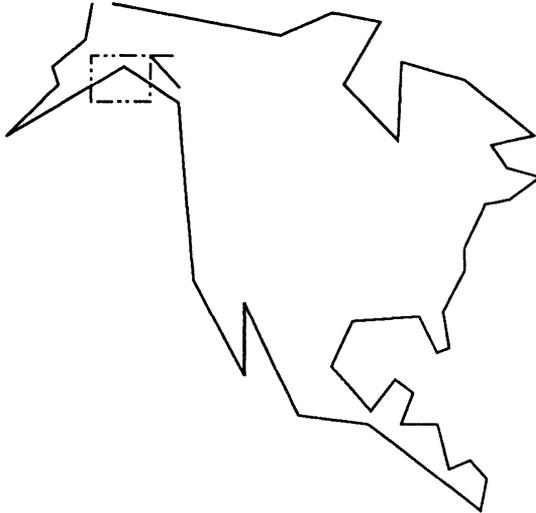
Figure 6-7. Points on an Object



To move selected points of one or more objects, use the following procedure:

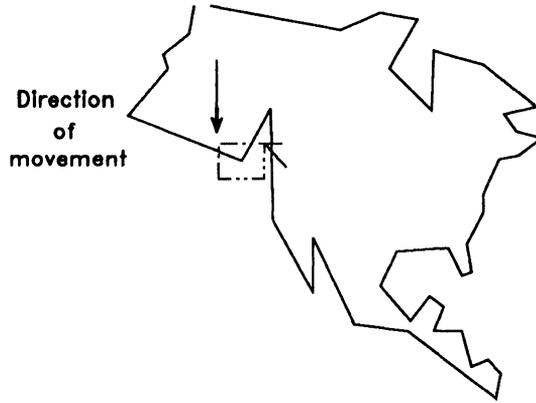
1. Select the **Connected Move** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick one or more objects you want to modify. An Arrow cursor appears, attached to a highlighted box.
3. You can enlarge or shrink the box by holding down **BOUND** and moving the mouse. This may be necessary if you want to surround and move two or more points together.
4. When the box is the right size, release **BOUND**.
5. Position the box so that it surrounds one or more points you want to move (for example, the corner of a square or two adjacent corners of two squares), as shown in Figure 6-17.

Figure 6-8. Box Cursor Surrounding a Point Selection



6. Hold down **MARK**. The object-fill disappears.
7. While holding down **MARK**, move the box to the desired location, as shown in Figure 6-9. Note how your point selection contained in the box moves in any direction.
8. Release **MARK**. The fill reappears.
9. To modify another part of the object selection, repeat steps 3 through 7.
10. Unpick the object when you finish the modifications.

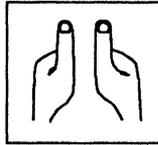
Figure 6-9. Moving a Point Selection



Pushing the Edges of Objects

Figure 6-10 shows the **Sculpt** tool.

Figure 6-10. Sculpt Tool



You smooth and push the line portions of objects by using the **Sculpt** tool.

Sculpt is most effective on objects drawn with the **Connected Line** and **Square** tools because they consist of straight line segments. Objects drawn with the **Sketch**, **Circle**, and **Curve** tools are composed of many, small line segments and are more difficult to sculpt. Before using Sculpt, you may wish to see detail of the object by using the zoom-in function. This way, you can find lines between the points of line segments (for example, between corners of a square or between joints in a connected line).

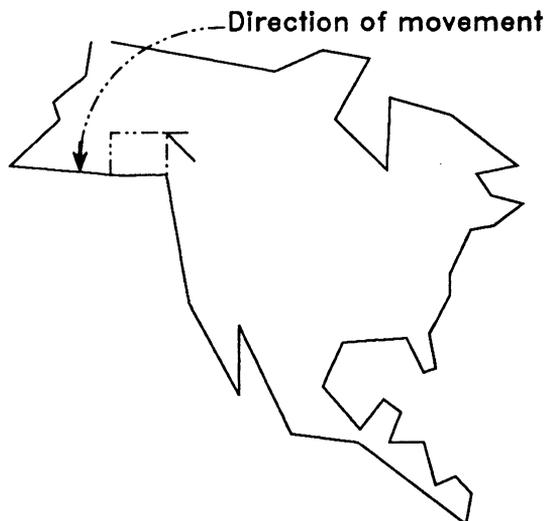
To push the edges of objects, use the following procedure:

1. Select the **Sculpt** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick one or more objects you want to modify. Once picked, an Arrow cursor appears, attached to a box.
3. You can change the size and shape of the box by holding down **BOUND** and moving the mouse. This may be necessary if you want to sculpt a particularly large or small area.
4. When the cursor is the right size and shape, release **BOUND**.
5. Move the cursor to the area you want to sculpt.
6. Hold down **MARK**. The object-fill disappears.

7. While holding down **MARK**, push the box against the edge of the object. See Figure 6-11.
8. Release **MARK**.
9. To sculpt another part of the object, press **MARK** and push against the edge of the object.
10. Use the **Unpick** tool to unpick the object when you are finished sculpting. The fill reappears.

You should use Sculpt carefully; you may want to practice using it on a copy of an object before making final changes.

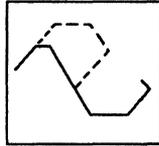
Figure 6-11. Sculpting with the Box Cursor



Reshaping with Straight Lines

Figure 6-12 shows the **Connected Line Replace** tool.

Figure 6-12. **Connected Line Replace Tool**



You modify the shape of an object by replacing the closest matching piece of a single object. You use the **Connected Line Replace** tool to replace part of an object with straight lines.

Connected Line Replace works much like Connected Line, except that it replaces a portion of an existing object rather than creating a new object.

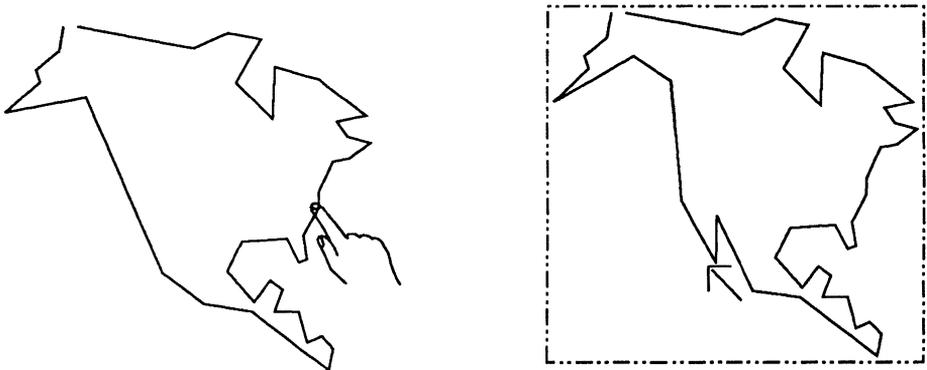
To reshape objects, use the following procedure:

1. Select the **Connected Line Replace** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick the object you want to modify. Once picked, the Arrow cursor appears.
3. Move the cursor to the starting point of the replacement line.
4. Click **MARK**, by pressing and releasing it.
5. Move the cursor to the second point. A straight line that originates from the starting point moves with the cursor.
6. Click **MARK**.

A line segment connects the two points. Your replacement line can contain one segment or many. You can move and click the cursor as many times as needed before ending the line.

7. To make the final segment disappear (to end the replacement line), click **BOUND**. The object is redrawn incorporating the new line. The replaced line disappears.
8. Repeat steps 3 through 7 as needed.
9. Use the **Unpick** tool to unpick the object when you have finished your modifications. See Figure 6-13.
10. Also, use Redraw if necessary.

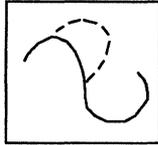
Figure 6-13. Before and After Replacing a Line



Reshaping with Freehand Lines

Figure 6-14 shows the **Sketch Replace** tool.

Figure 6-14. Sketch Replace Tool



You modify the shape of an object by replacing the closest matching piece of a single object. You use the **Sketch Replace** tool to replace part of an object with freehand lines.

Sketch Replace works much like Sketch, except that it replaces a portion of an existing object rather than creating a new object.

To reshape objects, use the following procedure:

1. Select the **Sketch Replace** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick the object you want to modify.
3. Move the cursor to the starting point of the replacement line.
4. Press and hold **MARK**.
5. Draw with the cursor. A sketched line that originates from the starting point follows the cursor.
6. To end the replacement line and stop drawing, release **MARK**. The object is redrawn incorporating the new line. The replaced line disappears.

7. Repeat steps 3 through 6 as needed.
8. Use the **Unpick** tool to unpick the object when you have finished your modifications. See Figure 6-15.
9. Use Redraw if necessary.

Figure 6-15. Object Modified with Sketch Replace



Reshaping with Curves

Figure 6-16 shows the **Curve Replace** tool.

Figure 6-16. Curve Replace Tool



You modify the shape of an object by replacing the closest matching piece of a single object. You use the **Curve Replace** tool to replace part of an object with curved lines.

Curve Replace works much like Curve, except that it replaces a portion of an existing object rather than creating a new object.

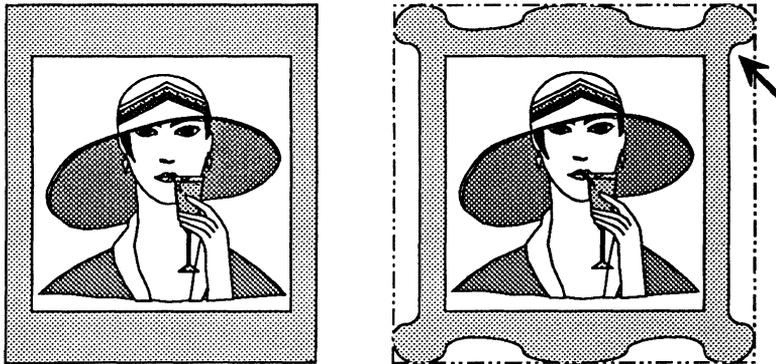
To reshape objects, use the following procedure.

1. Select the **Curve Replace** tool.
The Pick cursor (pointing finger icon) appears.
2. Pick the object you want to modify. Once picked, the Arrow cursor appears.
3. Move the cursor to the starting point of the replacement line.
4. Click **MARK**, by pressing and releasing it.
5. Move the cursor to the second point. A curve that originates from the starting point moves with the cursor. To change the orientation of the curve, use **CODE+C**.
6. Click **MARK**.

A curve segment connects the two points. Your replacement curve can contain one segment or many. You can move and click the cursor as many times as needed before ending the curve.

7. To make the final segment disappear (to end the replacement line), click **BOUND**. The object is redrawn incorporating the new curve. The replaced curve disappears.
8. Repeat steps 3 through 7 as needed.
9. Use the **Unpick** tool to unpick the object when you have finished your modifications. See Figure 6-17.
10. Use Redraw if necessary.

Figure 6-17. Before and After Replacing with Curves



Section 7

Using Palette Tools

This section describes the Palette Tool menu and covers the following:

- Getting to the Palette tools menu
- Changing color values

Getting to the Palette Tools Menu

The Palette menu contains the tools you use to change the palette colors, particularly for pictures you may have brought in from other applications. In addition, you can copy a single palette to different files.

To display the Palette Tools menu, use the following procedure:

1. Select **Tools** on the function key display.

The Tools pop-up menu appears.

2. Move the cursor so that it highlights the **Palette** option, as shown in Figure 7-1.
3. Press **MARK**.

The Palette Tools menu replaces the previous menu, as shown in Figure 7-2.

Using Palette Tools

Figure 7-1. Tools Pop-Up Menu with Cursor Pointing to Palette

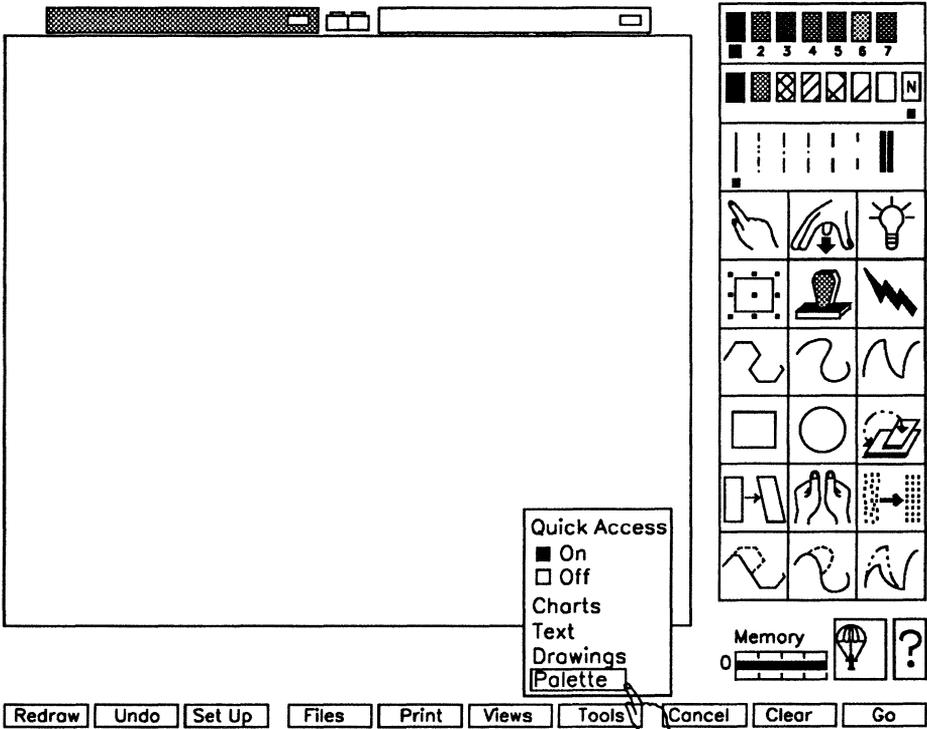
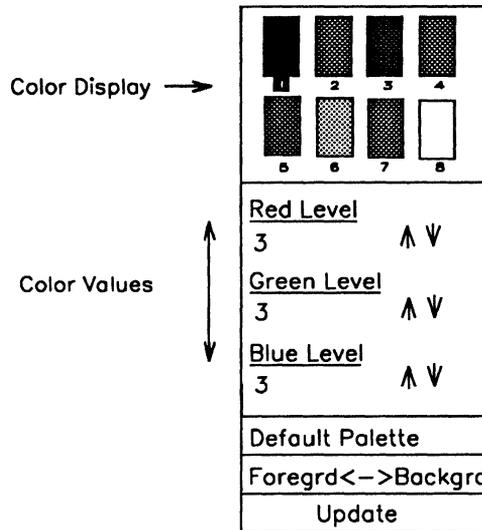


Figure 7-2. Palette Tools Menu



Palette Tools Menu Functions

The Palette Tools menu appears displaying the current palette of the menu's work area. You can use the following tools to manipulate palette files:

- **Color Display**

Each color box has a number below it corresponding to its position in the palette. The display of the background color is distinguished by a rectangle whose sides are drawn in color 1 (the default, white). A solid-filled rectangle highlights the number of the current color.

- **Color Values**

You use this tool to change the Red, Green, Blue (RGB) values of a specific color along with arrow keys that increment or decrement each RGB value.

Using Palette Tools

- **Default Palette**

You use this tool to bring in the default colors.

Note: Accelerator for the default palette is **CODE+P**.

- **Foreground/Background Palette**

You use this tool to switch the values of Color One and Color Eight. This reverses the video display on color and grey-scale monitors.

Note: Accelerator for reversing the Foreground/Background is **CODE+R**.

- **Update**

You use this tool to affect the palette file with your changes.

You can also use the Files selection from the function key display to access palette change features.

Accessing Palette Files

To access palette files, use the following procedure:

1. Select **Files** on the Function menu.

The Files pop-up menu appears.

2. Select **Palette** from the File Types on the pop-up menu.

After selecting the palette file type, all the file operations apply to your palette files (see Section 4 for more details).

The **View Files** option allows you to preview a palette's color from a selected file.

Note: *OFIS Graphics displays all menus and border areas in color 1. Any change you make to this color affects the appearance of menus and border areas.*

Changing Color Values

To change a color in a palette, use the following procedure:

1. Select a color box by moving the cursor to the desired color and press **MARK**.

That color becomes current and the **Color Values** tool reflects its RGB values.

2. To change one of the RGB values, choose one of the following actions:

- Move the cursor to one of the arrow marks that control a color level and press **MARK**.
- Select the RGB number value itself. Then, type over the number with another number and press **GO** or **RETURN**.

If the selected value is invalid, the following message displays:

```
The selected RGB value is out of range (7736)
```

The system displays the message if the new number is outside the range of the palette file.

Altering RGB levels changes the color in the palette and the display. All objects of that color are affected by the change.

To alternate between the changed and original palettes, press **UNDO** from the function key display. The palette that existed in the color display prior to changing RGB values redisplay in the color display; selecting **UNDO** a second time again swaps the color display with the changed palette.

Section 8

Using Text Tools

Before using the information in this section, you should be familiar with Section 1, Overview.

This section describes how to use text tools and covers the following:

- Accessing the text tools menu
- Using text creation tools and functions
- Using text attribute tools and functions

Getting to the Text Tools Menu

The Text Tools side menu contains the tools you use to add text to pictures in the size, font, color, and position of your choice. When the Text Tools side menu is displayed, you can pick and modify only text.

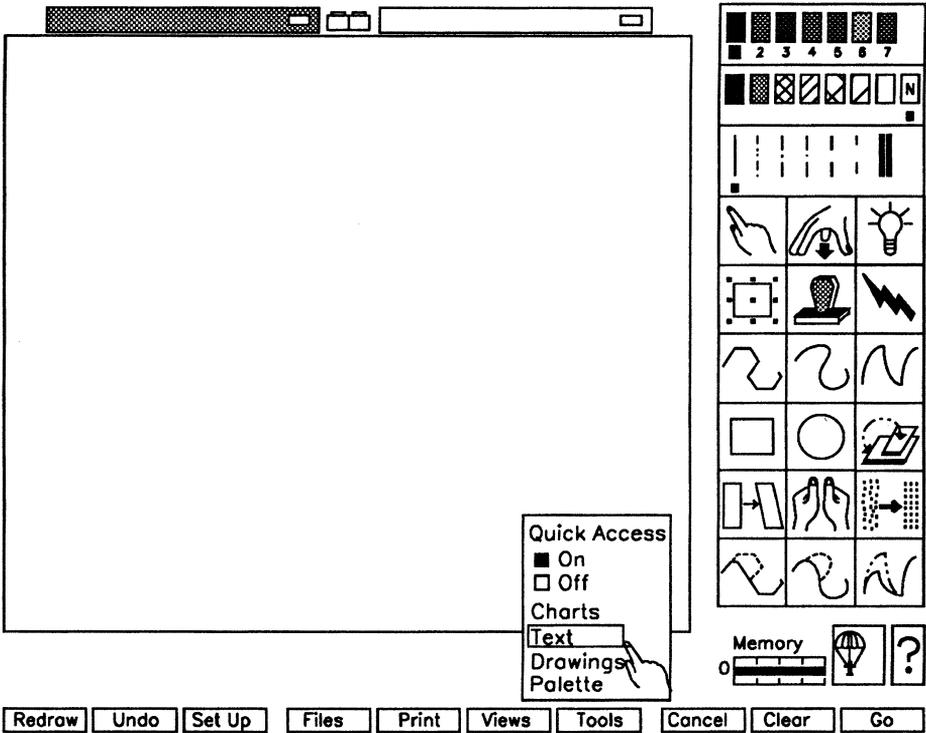
To display the Text Tools menu, use the following procedure:

1. Select the Tools function.
2. Press **MARK**.

The Tools pop-up menu appears.

3. Move the cursor so that it highlights the **Text** option, as shown in Figure 8-1.

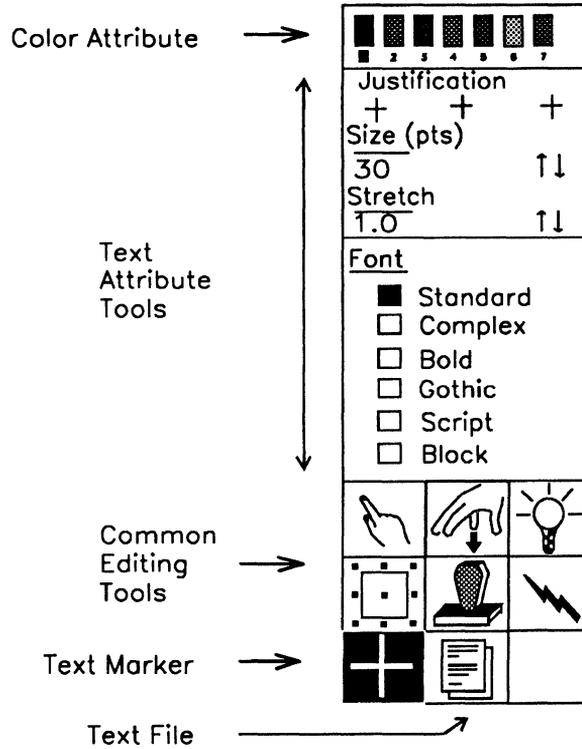
Figure 8-1. Tools Pop-Up Menu with Cursor Pointing to Text



4. Press **MARK**.

The Text Tools menu replaces the previous menu, as shown in Figure 8-2.

Figure 8-2. Text Tools Menu



Using Text Tools

You can use the following tools to create and edit your text:

- **Text Marker**

You use this tool to set the text's location in the work area.

- **Text File**

You use this tool to read-in lines of text from a file.

When the Text Tools side menu is displayed, you can create, modify, and delete only text objects.

See Section 7 for information on using the color attributes.

See Section 4 for information on the Common Editing Tools.

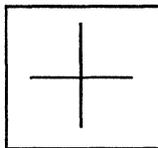
Using Text Creation Tools

The following paragraphs describe the two text creation tools.

Placing Text in the Picture

You can use the **Text Marker** tool, shown in Figure 8-3, to place new text in the work area.

Figure 8-3. Text Marker Tool



To place text in a picture, use the following procedure:

1. From the Text Tools menu, select the **Text Marker**.
2. Move the cursor to the desired text location.
3. Press **MARK**.

The **Text Marker** jumps to the location of the cursor each time you press **MARK**.

Entering Text

When you select the **Text Marker**, the Text Entry Line line displays beneath the OFIS Graphics work area.

To enter text, use the following procedure:

1. Select where you want the text by using the procedure under Placing Text in the Picture.
You can use **Grid Snap** to precisely line up text.
2. Type the text in the Text Entry Line. You can key in a maximum of 60 characters.
***Note:** Text does not wrap around automatically. You must enter one line at a time if there is more than one line in the text.*
3. Press either **GO** or **RETURN** when you want a line of text to end.

The system places your text at the location of the **Text Marker**.

As you type into the entry line, a box with handles grows on the screen where the text Marker is located. You can use the handles to scale, stretch, or move the text after you have typed it but before you enter it in the work area.

A message informs you if the text is too long to fit in the work area. To make the text fit, try one of the following options:

- Shorten the line of text.
- Reduce the text size.
- Reduce the text width (decrease stretch).
- Use the center handle to move the text away from the edges of the work area.
- Use the other handles to reduce the text proportionally.

When you use the handles to modify text size or width, the numeric indicator on the Tools side menu changes to reflect the new size or stretch factor.

***Note:** Section 4, Common Editing Function, describes using the **Reposition** tool to rotate objects. This same tool can be used to rotate text to fit a desired design or position on your drawing.*

See Setting the Text Size in this section to learn about changing size and stretch factor.

OFIS Graphics sets the line spacing automatically. Each time you enter a line of text, the **Text Marker** moves down, ready to place another line of text with identical attributes. You can use **Grid Snap** to ensure an exact alignment (see Section 3).

You can change the size of existing text with the **Reposition** tool (See Section 4).

When you size text with the **Reposition** tool, OFIS Graphics only approximates a given size. There is a slight size range within which manually scaled text can fall and still be considered a particular size.

When it is critical that text sizes are accurate and consistent throughout a picture, use the Text Tools menu to set (or change) text size directly.

Editing Text Characters

You can only create and edit text using the Text Tools side menu. With the other Tools side menus, you can modify text as an object by changing its color or size, but you cannot change the text itself.

To edit text, use the following procedure:

1. From the Text Tools menu, select either the **Pick** or **Reposition** tool.

The pointing finger icon appears.

2. Pick the text you want to edit.

The Text Entry Line displays showing the text to be modified.

3. Delete unwanted text and insert the new text. In the work area, the text is replaced by a box that changes size as you modify the text.

Note: *Text does not wrap around automatically. You must enter one line at a time if there is more than one line in the text.*

4. Press either **GO** or **RETURN** when you are finished editing.

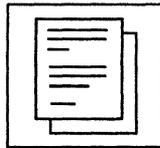
The system places your text in the box at the location of the original text.

Text is edited as a single object, called a block. Each line of text typed into the Text Entry Line composes a block. When a block of text is picked, the Text Tools side menu changes to reflect the picked text's attributes (justification, size, color, font, and stretch factor) The stretch factor is the length of the text. These attributes can also be changed using the Text Tools side menu.

Adding Text from a File

You can use the **Text File** tool (see Figure 8-4) to add the text contents of an ASCII file to the picture in your work area. The text is added using the current text attributes. This operation fits one text file into a single **.pic** file.

Figure 8-4. Text File Tool



To add text from a file, use the following procedure:

1. From the Text Tools menu, select the **Text File** tool.
The Text Marker appears in the work area. The Text Entry Line appears with the message:
Type a text file and press **GO** to execute.
2. Locate the cursor where you want the new text to be positioned, press **MARK**. The Text Marker moves to that location.
3. Review the attributes settings on the Text Tools menu; revise them if necessary.
4. Make sure you are pathed to the directory containing the file you want to copy. Type the file name in the Text Entry Line and press **GO**.

The text is copied to the location of the Text Marker symbol.

See Section 12, *Using OFIS Graphics Utilities*, for more information on converting text to **.pic** files.

The **Text File** tool imports as much text as it can fit into the picture file and drops any leftover text.

If text does not fit, delete text that may be imported (if necessary), revise attribute settings, and attempt again.

Using Text Attribute Tools

The following paragraphs describe using the text attribute tools.

Setting Justification

Justification refers to the position of the text relative to the **Text Marker**. Small crosses under the **Justification** heading on the **Text Tools** menu, shown in Figure 8-5, specify the following:

- The OFIS Graphics default is center-justified text. It is divided into two equal portions, with the **Text Marker** as the midpoint.
- Left-justified text moves out from the **Text Marker** from left to right.
- Right-justified text moves out from the **Text Marker** from right to left.

Figure 8-5. Left, Center, Right Justification Tool

Justification
+ + +

To set justification, select the appropriate cross (left, center, or right) by moving the cursor under the **Justification** heading on the **Text Tools** menu and pressing **MARK**.

To change the justification of existing text, pick the text first, then follow the procedure above to specify the new justification.

Setting the Text Size

You set the text size by using the Text Tools menu. OFIS Graphics text sizes are equivalent to standard typographic point sizes. The default size is 30 point, as shown in Figure 8-6.

Figure 8-6. Default Text Size of 30 Point

30 point text size

***Note:** You can also change the text size by using the four corner handles of the **Reposition** tool.*

When it is critical that text sizes are accurate and consistent throughout a picture, use the Text Tools menu to set (or change) text size directly.

There are two ways to set the text size:

- First, select the Up or Down Arrow under the Text Size heading on the Text Tools menu. Each time you click **MARK**, the numeric size indicator increases or decreases accordingly.
- Second, you can also change the size indicator by selecting the numeric field under the Text Size heading, typing in the desired size when the field is highlighted, then press **GO** or **RETURN**.

To change the size of existing text, select the text first, then follow one of the procedures above to specify the new text size.

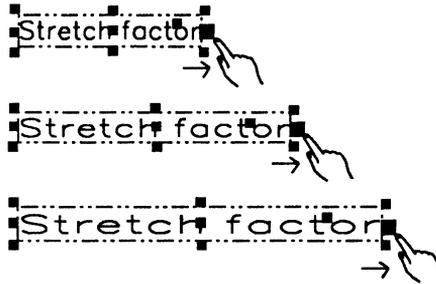
Stretching Text

You can lengthen or condense a block of text so that it fills a given area by using the **Reposition** tool to stretch the text both horizontally and vertically.

As you stretch the text, the number under the Stretch heading on the Tools menu changes accordingly. This number is the stretch factor. The stretch factor is a decimal ratio that tells you how much the text has been stretched from its original size. The stretch factor remains unaffected when you scale text proportionally.

A stretch factor of 1.0 is the normal factor for text of a given size. Text with a stretch factor of 2.0 is twice as wide as normal text of that size. Figure 8-7 demonstrates changing the Stretch factor using the **Reposition** tool.

Figure 8-7. Stretching Text Horizontally



When changing the stretch factor, you can enter the text into the work area, then use the **Reposition** tool to stretch the text manually. However, you can also use the Text Tools menu to change the stretch factor of existing text directly.

To stretch text using the Text Tools menu, use the following procedure:

1. Pick the text you want to modify.
2. Select the Up or Down Arrows under the Stretch heading on the Text Tools menu.

Each time you click **MARK**, the numeric stretch factor increases or decreases accordingly.

You can also change the stretch factor by selecting the numeric field, typing in the number you want when the field is highlighted, and pressing **GO** or **RETURN**.

If you want to increase or decrease the stretch factor and keep the text centered, use the Stretch function (change the number or use Up or Down arrows) with center justification.

Assigning a Text Font

A font is a complete assortment of a given size of type including capital and lowercase letters, punctuation marks, and commonly used symbols.

OFIS Graphics has six fonts to choose from:

- Standard, sans serif (default)
- Complex, serif
- Bold, sans serif
- Gothic, also known as Old English
- Script, a style of calligraphy
- Block, sans serif

Figure 8-8 shows the different fonts.

Figure 8-8. OFIS Graphics Fonts

Standard

ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789
 abcdefghijklmnopqrstuvwxyz

Complex

ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789
 abcdefghijklmnopqrstuvwxyz

Bold

ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789
 abcdefghijklmnopqrstuvwxyz

Gothic

ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789
 abcdefghijklmnopqrstuvwxyz

Script

ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789
 abcdefghijklmnopqrstuvwxyz

Block

ABCDEFGHIJKLMNOPQRSTUVWXYZ 0123456789
 abcdefghijklmnopqrstuvwxyz

You can also add your own tpestyles in the *[Sys]<Sys>Graphics.fonts* file. The Text Tools menu can contain a maximum of six fonts at a time.

To set the font, before creating text, select the desired font under the Font heading on the Text Tools menu and press **MARK**.

To change the font of existing text, pick the text first, then follow the procedure above to specify the new font.

If you bring in a file from another graphics program that contains unknown fonts, use the **Show Picture Info** option under the Files pop-up menu. For more information, refer to Section 3.

Changing Text Attributes

You can select blocks of text as a group, but no text appears in the Text Entry Line. The Text Tools menu changes to reflect the attributes of the last (most recently entered) block in that group.

Text is considered as a single object, called a block. Each line of text typed into the Text Entry Line composes a block. When a block of text is picked, the Text Tools menu changes to reflect the picked text's attributes (justification, size, color, font, and stretch factor) The stretch factor is the length of the text.

To change text attributes, use the following procedure:

1. From the Text Tools menu, select either the **Pick** or **Reposition** tool.

The pointing finger icon appears.

2. Pick the text block or blocks where you want to change the attributes.

The picked text is surrounded by a box (**Pick** tool) or box with handles (**Reposition** tool).

3. Select the new attribute(s) on the Text Tools menu.

The new attributes are changed on the selected text and displayed by the Text Tools menu.

4. When finished, unpick the text block(s).

You can change the text attributes at any time. You can easily assign identical attributes to more than one block of text by picking and modifying the blocks as a group. You can change text attributes as often as you like.

Section 9

Creating and Modifying Charts

This section describes the types of charts that you can create and modify with OFIS Graphics. It describes how to do the following:

- Understand the chart as an object
- Find and use the Chart Tools menu
- Choose bar chart attributes
- Choose line chart attributes
- Choose pie chart attributes
- Save chart formats
- Understand standard chart format files

Sample worksheets are provided on the OFIS Graphics release diskette, and should be located in *[Sys]<Sys>Sales.mp* and *[Sys]<Sys>Budget.wkt* on your system.

Refer to your spreadsheet program documentation for:

- Instructions on creating worksheets to be used as data for charts and for information about which chart format best represents different kinds of data
- Detailed information on spreadsheet program commands

You can put up to six charts in a picture file plus any other graphics or text. In addition, you can use up to six labels on bar and line charts.

The Chart as an Object

With OFIS Graphics, you can create and modify a chart from a spreadsheet program, either Enhanced Multiplan or OFIS Spreadsheet. You must have one of these spreadsheet programs installed on your system. Once you create or load a worksheet, you can go directly from the spreadsheet to OFIS Graphics. To change a chart's data values, you return to the spreadsheet program and modify the worksheet.

OFIS Graphics translates data from a spreadsheet program worksheet into one of the following chart types:

- Bar charts
 - Vertical or Horizontal
 - Comparative or Stacked
 - Flat or 3D
- Line charts
 - Standard, Scatter, or Scatter Line
- Pie charts
 - Flat or 3D

When you enter OFIS Graphics from your spreadsheet program, OFIS Graphics automatically selects whichever chart is displayed. OFIS Graphics regards the entire chart as one object; as a result, you can easily manipulate the chart as a whole.

You can select some chart text independently.

- In a bar chart, you can pick and modify the X-axis labels, legends, and title as separate objects. You can also select and modify the Y-axis label independently.
- In a pie chart, you can select and modify all of the labels and the title as separate objects.
- In scatter and line charts, you can select and modify the legends, title, and Y-axis label as separate objects, but not the X-axis values.

OFIS Graphics does not recognize any added objects as an inherent part of the chart. To work with a chart to which you added text or drawings, use the Pick cursor (pointing finger icon) to pick all objects that are related or belong to the chart.

To edit text, use the Text Tools menu, discussed in Section 8.

To select the chart as a whole, you must select an edge of an axis, legend box, or data. Picking a chart label alone is not enough to cause the entire chart to be picked.

Note: *To use any of the chart tools, you must have the chart picked with the **Reposition** tool.*

You can select and modify charts individually, or as a group.

Undo does not restore a chart that has been deleted; although its data still resides in your spreadsheet program.

Like drawings, charts can be saved, viewed, loaded, deleted, and renamed. Refer to Section 2 for specific information on OFIS Graphics file operations.

Data Requirements for Charts

To chart data meaningfully from a spreadsheet, the following requirements must be met:

- Bar and Line Charts require:
 - X axis data (or labels) in alphanumeric format
 - Y axis data in numeric format
- Pie Charts require:
 - Segment data in numeric format

Note: *If these requirements are not met, unpredictable results can occur.*

Getting to the Chart Tools Menus

The three menus for bar, line, or pie charts contain the basic tools used to modify each type of chart.

Whether you create a bar, line, or pie chart from your spreadsheet program, the appropriate menu displays automatically.

Each of the three Chart Tools menus contains the **Pick, Unpick, Highlight, Reposition, Copy, and Delete** tools, which function exactly as they do on the Drawing Tools menu. They also contain the Color menu and either the Fill Pattern or Line Type menu. See Section 4, Common Editing Tools, for more information on changing attributes.

If one of the Chart Tools menus is not already displayed, you select Tools on the function menu. You select **Charts** from the pop-up menu that appears, as shown in Figure 9-1. If you are already in the Chart Tools menu, pick one chart with the **Reposition** tool. Figure 9-2 shows the three types of charts

Figure 9-1. Tools Pop-Up Menu with Cursor Pointing to Charts Option

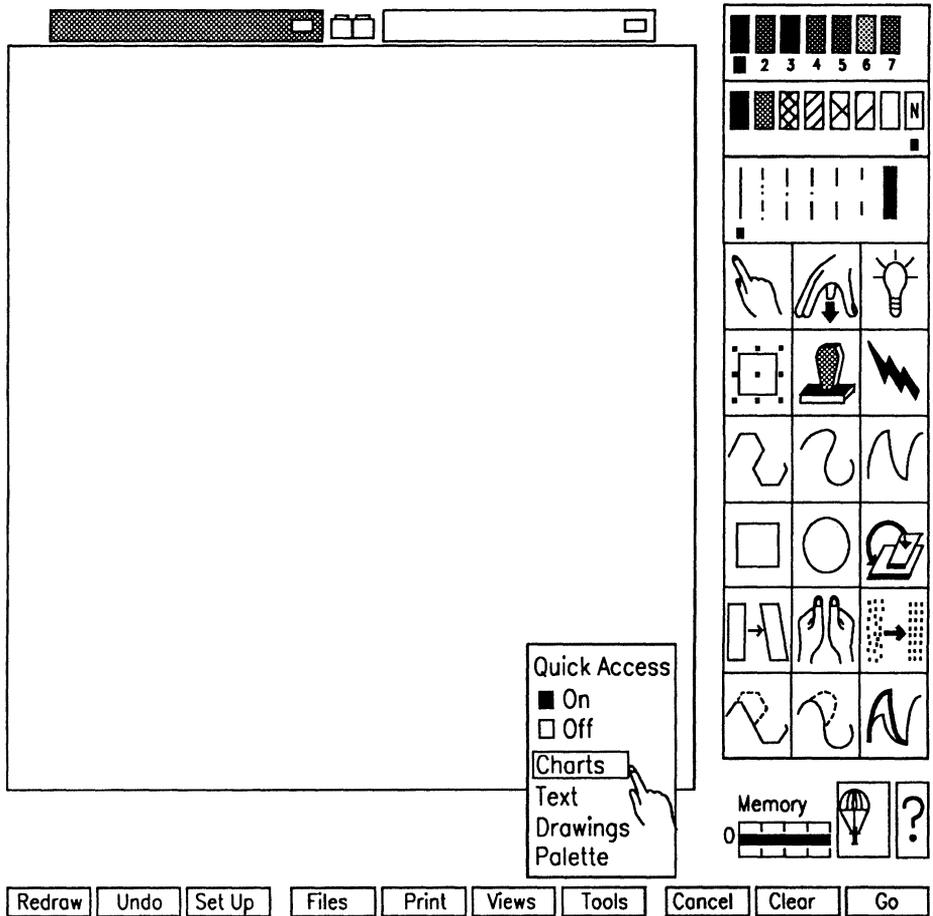
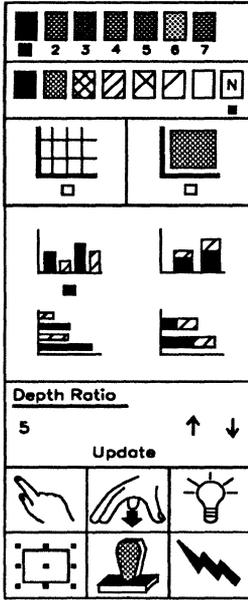
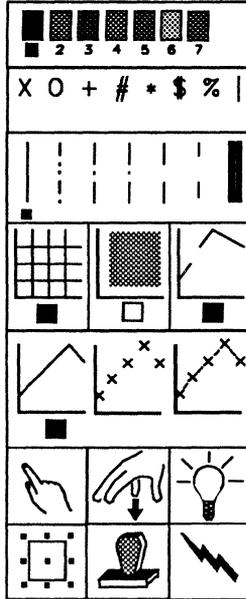


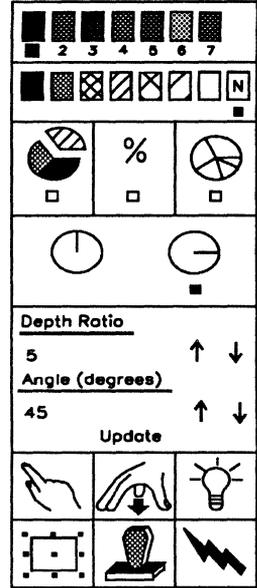
Figure 9-2. Chart Tools Menus



Bar charts



Line Charts



Pie Charts

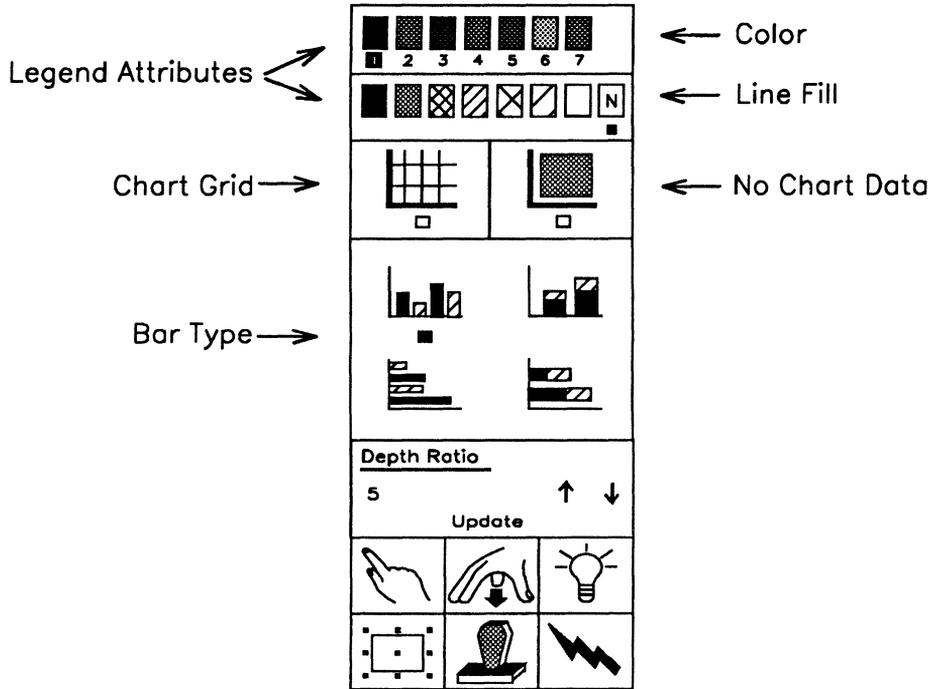
Choosing Bar Chart Attributes

The following four tools, discussed in this section, modify the attributes of bar charts:

- **Chart Grid**
You use this tool to provide horizontal measurement lines.
- **No Chart Data**
You use this tool to suppress data.
- **Bar Type**
You use this tool to pick a bar type.
- **Depth Ratio**
You use this tool to display 2D (flat) or 3D bar charts.

Figure 9-3 shows the Bar Charts menu and identifies the various tools.

Figure 9-3. Bar Chart Tools Menu Menu=Bar Chart Tools



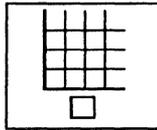
Legend Attributes

Each chart tool menu includes legend attributes at the top of the menu.

Adding a Grid to the Bar Chart

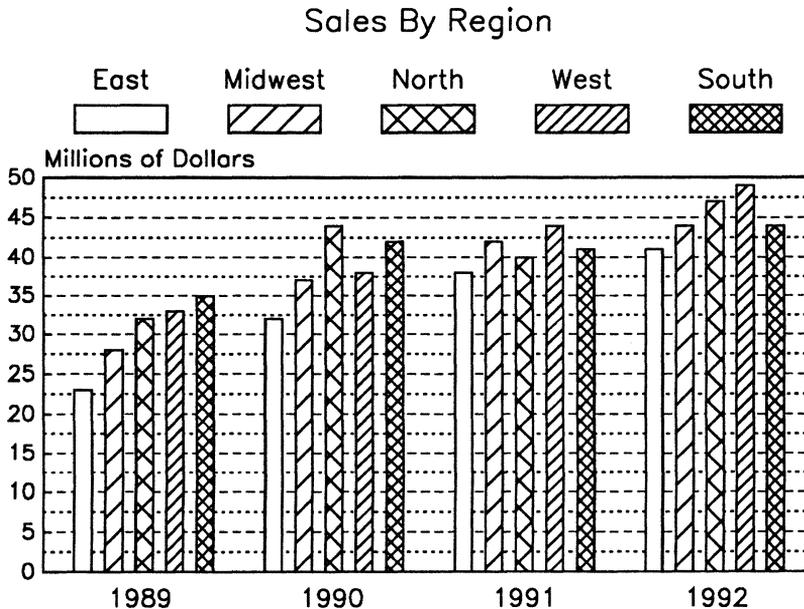
To provide reference lines across from the Y-axis, you can choose whether or not to add a grid to a bar chart by using the Chart Grid tool, shown in Figure 9-4.

Figure 9-4. Chart Grid Tool



When the indicator box below the tool icon is filled, OFIS Graphics displays thin lines to define the Y-axis increments (see Figure 9-5). When the box is empty, OFIS Graphics suppresses the grid. The X-axis increments are not defined by the grid.

Figure 9-5. Chart Grid On (Bar Chart)



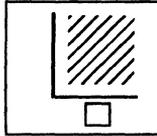
To add or remove a grid of horizontal lines on a chart, use the following procedure:

1. Pick the chart with the **Reposition** tool.
2. Select or unselect the **Chart Grid** tool.

Suppressing Chart Data

You can suppress the bar or line chart data, which represent the worksheet data, by using the **No Chart Data** tool shown in Figure 9-6. The information is not removed, it is merely suppressed so that you can replace it with other objects.

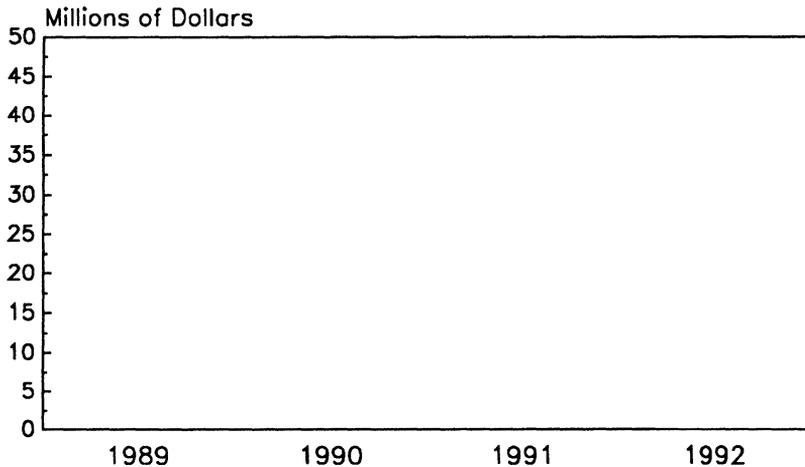
Figure 9-6. No Chart Data Tool



When the indicator box below the tool is filled, OFIS Graphics suppresses chart data as shown in Figure 9-7. When the box is empty, OFIS Graphics displays chart data.

Figure 9-7. No Chart Data

Sales By Region



To display or suppress the chart data that appear inside the X-axis and Y-axis use the following procedure:

1. Pick the chart with the **Reposition** tool.
2. Select or unselect the **No Chart Data** tool.

Choosing a Bar Chart Type

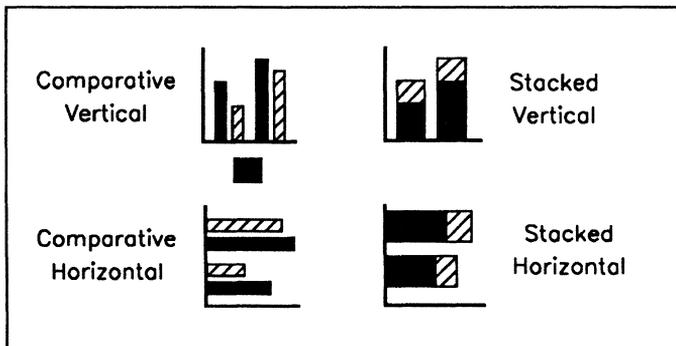
The Bar Chart menu contains the following tools to modify bar charts:

- **Comparative Bar**
You use this tool to display side-by-side or cumulative data either vertically or horizontally.
- **Stacked Bar**
You use this tool to show stacked data either vertically or horizontally.

***Note:** See *Changing Axis Menus* in this sections for details on modifying axes.*

You select one of two ways to display your bar chart data by using the **Bar Chart Type** tool, shown in Figure 9-8.

Figure 9-8. Bar Chart Type Tool



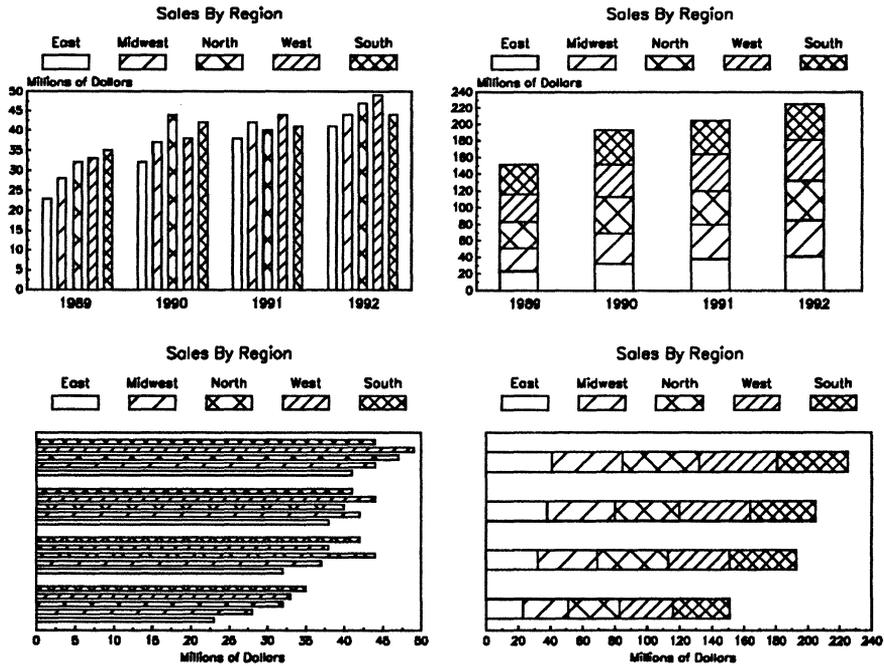
You choose to display your bar chart as a standard (comparative) bar or as a stacked bar, both shown in Figure 9-9, in either horizontal or vertical display.

A comparative bar chart displays data as groups of side-by-side bars. A stacked bar chart displays data as single bars of stacked segments. The vertical display provides increasing values going up the page. The horizontal display provides increasing values going across the page to the right.

To change from one type of bar chart to the other, use the following procedure:

1. Pick the chart with the **Reposition** tool.
2. Select the desired Bar Chart Type tool (Figure 9-8).

Figure 9-9. Comparative and Stacked Bar Charts



A 2D bar chart can display a maximum of 36 groups of bars, with each group containing a maximum of six bars. Negative data values can be expressed in a bar chart.

Setting 2D or 3D Bar Chart Depth

You can now choose a two-dimensional (2D) or three-dimensional (3D) look for your bar charts. Earlier versions of OFIS Graphics supported only 2D (flat) charts.

Changing the Depth Ratio

You can vary the depth of bar and pie charts by using a new menu item in the current bar and pie charts menus. This menu item is titled **Depth Ratio** (review Figure 9-3) and allows the depth of the chart effect to vary from 0.0 to 10.0. Choosing a depth of 0 produces flat charts.

The 3D depth can be enabled or updated by clicking on the arrows with the mouse or by typing in a new value after clicking on the numeric field. Select **Update** to reflect the 3D value, and the chart is redrawn. The 3D depth is stored in the chart format by selecting **Save Chart Format**.

Earlier OFIS Graphics versions ignore this depth information and present the chart with a depth ratio of 0 (flat).

Surfaces added for the 3D effect are filled with the background and lightly shaded fill and have the same color as the object being shown (bar or pie segment).

To switch the shading between all background fills and a combination of background and lightly shaded fills (default), use the `:Shade3DCharts:` entry in the user static profile. See Section 11, Customizing User Profiles, for more information on shading 3D charts.

Note: *Since plotters plot polygons with background fills using pen #8, these surfaces do not look as good as they do on laser printers or paint jets.*

3D Bar Chart Limitations

A 3D bar chart can display a maximum of 33 groups of bars (with each group containing up to six bars), or a maximum of 35 groups of bars (with each group containing up to five bars).

If you try to convert groups and legends that do not meet these restrictions, two conditions may result:

- If you enter OFIS Graphics using a 3D bar chart format in OFIS Spreadsheet, you will be notified of a fatal error with the message:
`Number of groups and legends do not allow 3D charting.`
- If you use the depth ratio in OFIS Graphics, you will get the same message, and the depth is forced to 0.

Also, if there are very few groups and legends, large depth ratios can cause a 7646 (Bad parameter given for graphics operation) error condition which can be corrected by reducing the depth ratio.

3D Bar Charts

The 3D depth is supported for all types of bar charts:

- With and without grids
- Vertical and horizontal
- Stacked and comparative

The 3D depth is depicted using an angle of 45 degrees. Positions of chart titles and legends do not change for different depth ratios.

Figure 9-10 shows a Vertical Comparative Bar Chart with a grid and a 3D depth of 2.0.

Figure 9-10. 3D Vertical Bar Chart

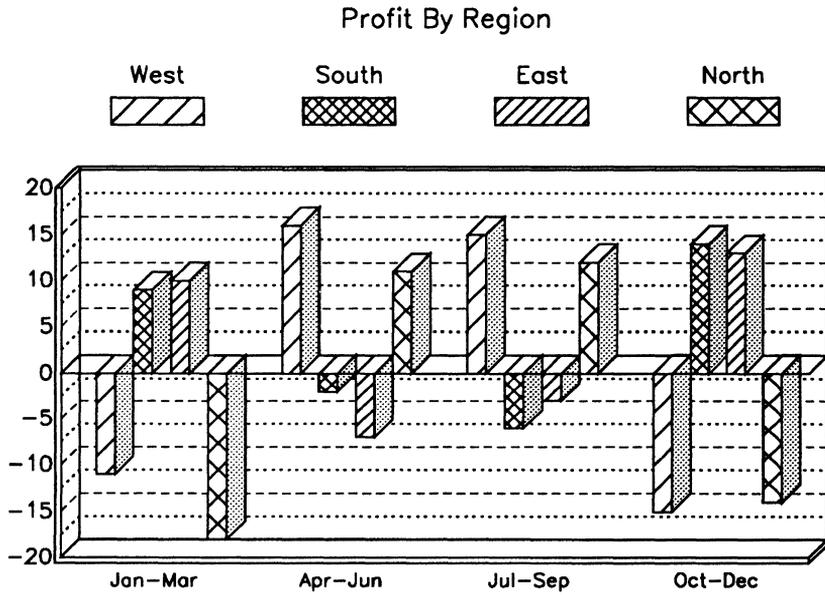
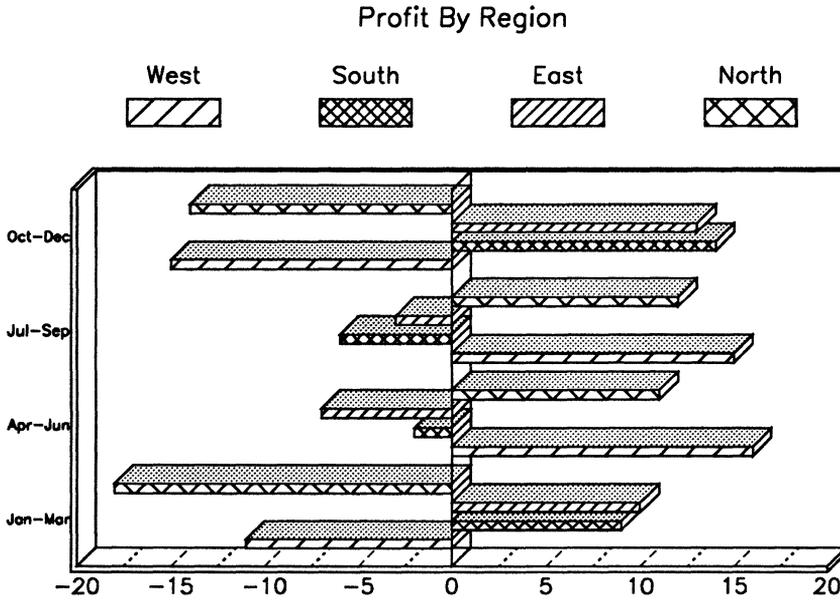


Figure 9-11 shows a Horizontal Stacked Bar Chart (without a grid) and a 3D depth of 4.0.

Figure 9-11. 3D Horizontal Bar Chart



Changing Bar Chart Legends

Legends, which represent the bar groups, appear in a row across the top of a bar chart. Each legend has a handle centered inside it. You use the handles to change the legend attributes (color or fill pattern).

To change a legend attribute, use the following procedure:

1. Pick the handle of the legend you want to work with.

The legend's current attributes are reflected on the Bar Chart Tools menu.

2. Select the desired color or fill pattern from the attribute menus on the menu.

The legend changes to reflect your selection.

3. Select **Cancel** to deselect the legend when you have no further changes.

Shading 3D Bar Chart Sides

The static user profile entry (see Section 11) includes the parameter *:Shade3DCharts:* (default is **Yes**).

Selecting **Yes** shades the side of the vertical bars parallel to the Y axis, and shades the sides of the horizontal bars parallel to the X axis.

If you select **No**, all side have a background color fill.

Changing Bar Chart Axis Menus

OFIS Graphics has two axis menus that contain the options used to change the attributes of the axes on a bar chart, as shown in Figure 9-12.

Figure 9-12. X-Axis and Y-Axis



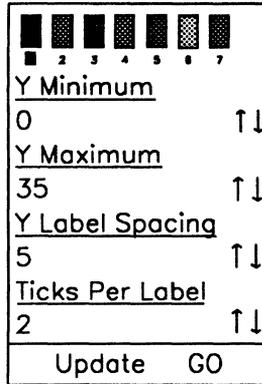
On bar charts, you can modify the attributes of the Y-axis only.

Each axis has a handle associated with it. To display the axis menu (see Figure 9-13), pick the appropriate handle.

You can define the following:

- Color of the axes
- Minimum (or starting) value
- Maximum value
- Spacing between labels
- Number of ticks between labels

Figure 9-13. Axis Menu for Bar Charts



The minimum value is the lowest number on the axis scale. Usually the scale starts at zero, but you can set it as high as you want within the range of the data values. By setting a higher minimum value, you avoid wasting space on the chart, especially when you have chart information with similar numerical values. Y-axis data values can only be numbers.

You define the maximum value in the same way. If you define a maximum value that is smaller than the largest data value, the top of the chart is not shown.

You also define the space between the labels using the Axis menus. You can specify any number as the interval between labels.

In addition to labels, you can specify a certain number of ticks to appear between each label. A tick is a small mark that designates a defined interval. The numbers do not appear, just the tick marks.

You can then enter Minimum, Maximum, and Label Spacing numeric values as real decimal numbers or in scientific notation with six significant digits. You must enter the Tick numeric value as a whole number.

To change the Y Axis menu fields, use the following procedure:

1. Select the desired Y axis setting and press **MARK**.
2. Press the appropriate Up or Down Arrow keys.

The numeric value changes accordingly.

3. When you have specified the required axis information, perform one of the following actions:
 - Press **UPDATE** to redraw the chart with the new fields and keep the Axis menu displayed.
 - Press **GO** to redraw the chart with the new values and display the Bar Chart Tools menu.

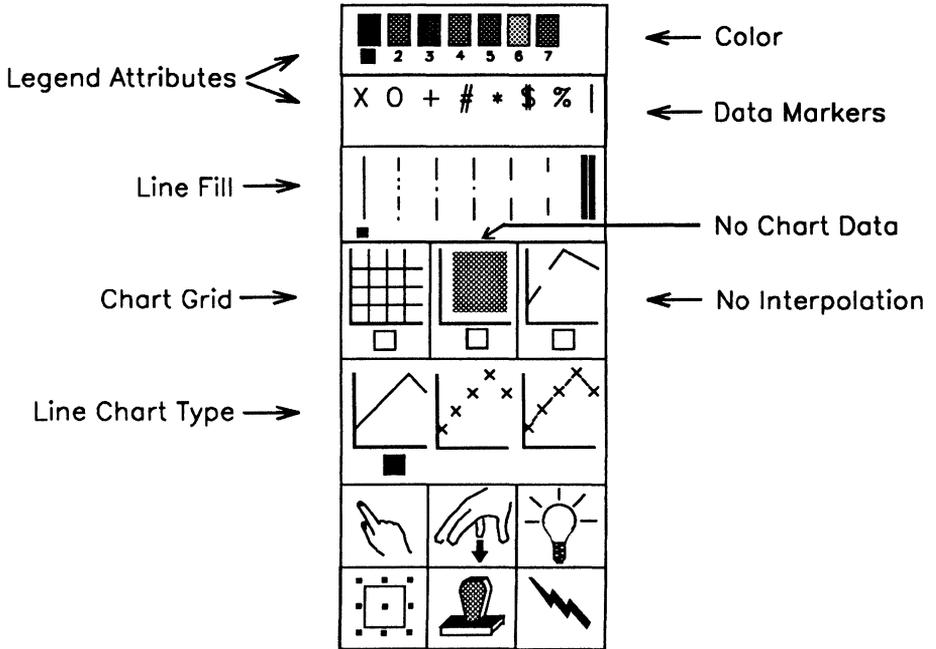
If you decide not to make any changes, press **CANCEL** and the Bar Chart Tools side menu displays again.

Using Line Charts

The Line Chart menu (Figure 9-14) contains the following tools used for modifying a line chart:

- **Chart Grid**
You use this tool to provide measurement lines.
- **No Chart Data**
You use this tool to suppress data.
- **No Interpolation**
You use this tool to leave blank cells in columns where data is absent.
- **Line Chart Type**
You use this tool to display data with lines, points, or both lines and points.

Figure 9-14. Line Chart Tools Menu



This section describes the various tools unique to the Line Chart tools menu.

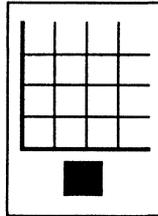
Data Marker Palette

The Data Marker Palette is shown under the color attributes at the top of the menu. These marker attributes are used to identify the unique symbols when you use the Scatter or Scatter Line charts as shown later in Figure 9-??.

Adding a Grid to the Line Chart

Use the **Chart Grid** tool, shown in Figure 9-15, to either display or suppress dotted lines to define the X-axis and Y-axis increments.

Figure 9-15. Chart Grid Tool

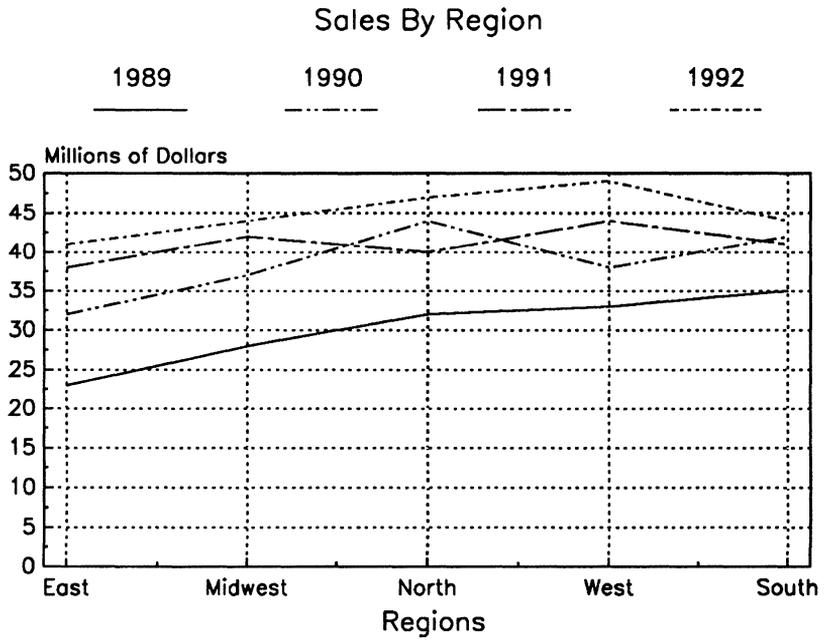


When the indicator box below the tool is filled, OFIS Graphics displays a line chart grid. When the box is empty, the grid is suppressed.

To add or remove a grid of horizontal and vertical lines on a scatter or line chart, select the **Chart Grid** tool on the Tools menu, and press **MARK**.

Figure 9-16 shows an example of the chart grid on a line chart.

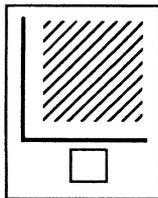
Figure 9-16. Chart Grid On (Line Chart)



Suppressing Line Chart Data

You can replace the lines and data markers, which represent the worksheet data, with text or art objects by using the **No Chart Data** tool, shown in Figure 9-17. The information is suppressed so you can replace it with other objects.

Figure 9-17. No Chart Data Tool

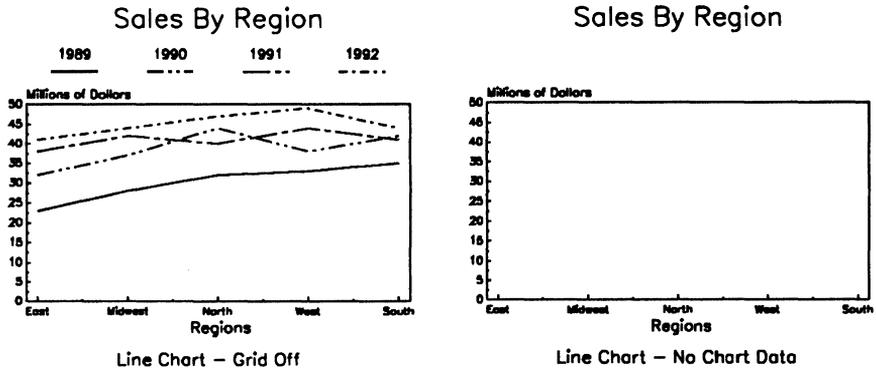


When the indicator box below the tool is filled, OFIS Graphics suppresses line chart data. When the box is empty, the chart data displays.

To suppress the chart data that appears inside the X-axis and Y-axis so that it is invisible, select the **No Chart Data** tool and press **MARK**.

Figure 9-18 shows the Line Chart with the grid turned off, then with the chart data (and grid) turned off.

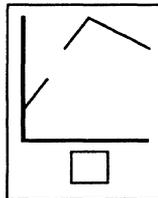
Figure 9-18. Line Chart - Grid Off/Data Off



Representing a Blank Cell

You can represent a blank cell from your spreadsheet program by selecting the **No Interpolation** tool, shown in Figure 9-19.

Figure 9-19. No Interpolation Tool

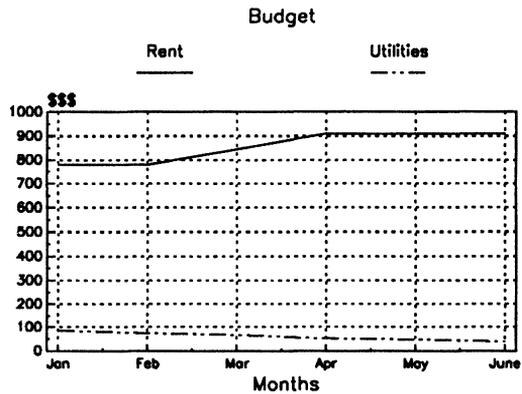
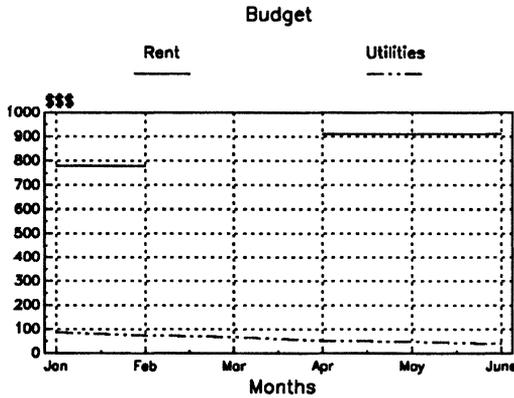


When the indicator box below the tool is filled, OFIS Graphics displays a break representing the empty cell along the line on the graph, as shown in Figure 9-20. If the blank cell is at one of the ends of the chart, the line begins or ends at an inner data point.

When the indicator box is empty, OFIS Graphics interpolates data by locating the next cell with a value and drawing an unbroken line from that point.

To leave a blank cell or interpolate data on a line chart, select the **No Interpolation** tool and press **MARK**.

Figure 9-20. Charts with No Interpolation and with Interpolation

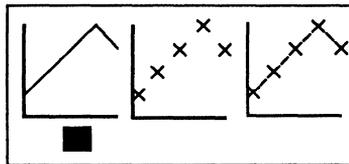


Using the Line Chart Type Tool

You use the **Line Chart Type** tool, shown in Figure 9-21, to choose one of three ways to display line chart data as a:

- Standard (line) chart
- Scatter (data points) chart
- Scatter line (both line and data points) chart

Figure 9-21. Line Chart Type Tool



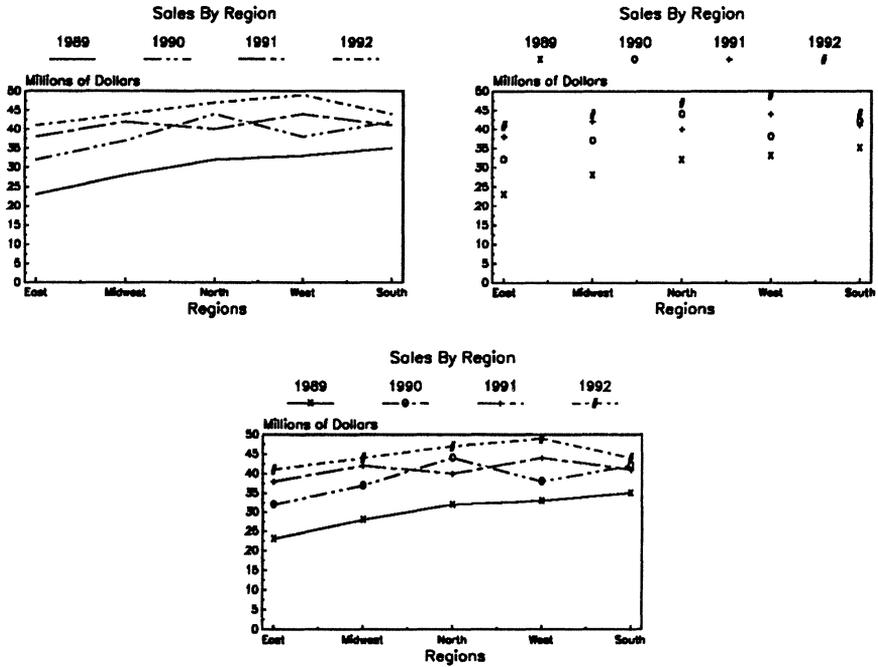
The three types of line charts do the following:

- A Line chart draws a line connecting specified data points.
- A Scatter chart marks specified data points with data markers.
- A Scatter Line chart marks specified data points with data markers and draws a line to connect them.

Refer to Figure 9-22 for examples of these charts.

To change from one type of line chart to another, select the appropriate **Line Chart Type** icon on the Line Chart Type tool menu, and press **MARK**.

Figure 9-22. Line, Scatter, and Scatter Line Charts



Changing Line Chart Legend Attributes

Legends which represent the different lines or data markers appear in a row across the top of a line chart. Each legend has a handle centered on top of it (on a Scatter or Scatter Line chart the handle is slightly to the left). You use the handles to change the legend attributes (color, line type, or data marker type).

To change a legend attribute, use the following procedure:

1. Pick the handle of the legend you want to work with and press **MARK**.
2. Select the desired color, data marker, or line fill from the attributes part of the Line Chart tools menu by moving the cursor to each and pressing **MARK**.

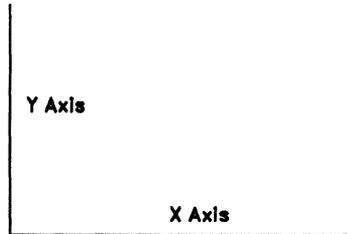
The legend changes to reflect your selection.

3. Select **CANCEL** to unpick the legend when you have no further changes.

Changing Line Chart Axis Menus

OFIS Graphics has two axis menus that contain the options used to change the attributes of the axes on a line chart, as shown in Figure 9-23.

Figure 9-23. X-Axis and Y-Axis



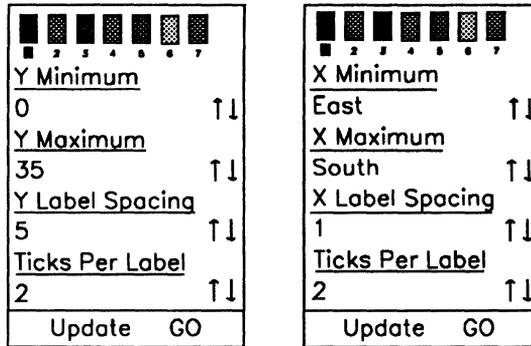
On line charts, you can modify the attributes of both the X-axis and Y-axis.

Each axis has a handle associated with it. To display the X-axis or Y-axis menu, you select the appropriate handle. See Figure 9-24.

From each menu, you can define the following:

- Color of the X-axis and Y-axis
- Minimum (or starting) value
- Maximum value
- Spacing between labels
- Number of ticks between labels

Figure 9-24. Axis Menus for Line Charts



The minimum value is the lowest number on the axis scale. Usually the scale starts at zero, but you can set it as high as you want within the range of the data values. By setting a higher minimum value, you avoid wasting space on the chart, especially when you chart information with similar numerical values. X-axis data values can be numbers or text. Y-axis data values can only be numbers.

You define the maximum value in the same way. If you define a maximum value that is smaller than the largest data value, the top of the chart is not shown.

You also define the space between the labels using the Axes menus. You can specify any number as the interval between labels.

In addition to labels, you can specify a certain number of ticks to appear between each label. A tick is a mark that designates a defined interval. The numbers do not appear, just the tick marks.

You can then enter Minimum, Maximum, and Label Spacing numeric values as real decimal numbers or in scientific notation with six significant digits. You must enter the Tick numeric value as a whole number.

Depending on the values specified for X Minimum, X Maximum, X Label Spacing, and Ticks Per Label, the chart may not be shown in its entirety.

For example, if your 5 X-axis labels are East, Midwest, North, West, and South, you modify the parameters so that X Minimum is East, X Maximum is West, X Label Spacing is 2, and Ticks Per Label is 1.

When you update the chart, only two labels display, East and North. Because you set X Label Spacing to 2, every second label displays (in this case East and North). If X Maximum is South instead of West, then East, North, and South display.

To change the axis menu fields, use the following procedure:

1. Move the cursor to the appropriate heading and highlight the desired axis, then press **MARK**.
2. Press the appropriate Up or Down Arrow keys.
The numeric or text value changes accordingly.
3. When you have specified the required axis information, perform one of the following actions:
 - Press **UPDATE** to redraw the chart with the new files and keep the axis menu displayed.
 - Press **GO** to redraw the chart with the new values and display the Chart Tools menu.

If you decide not to make any changes, press **CANCEL** and the Chart Tools menu displays again.

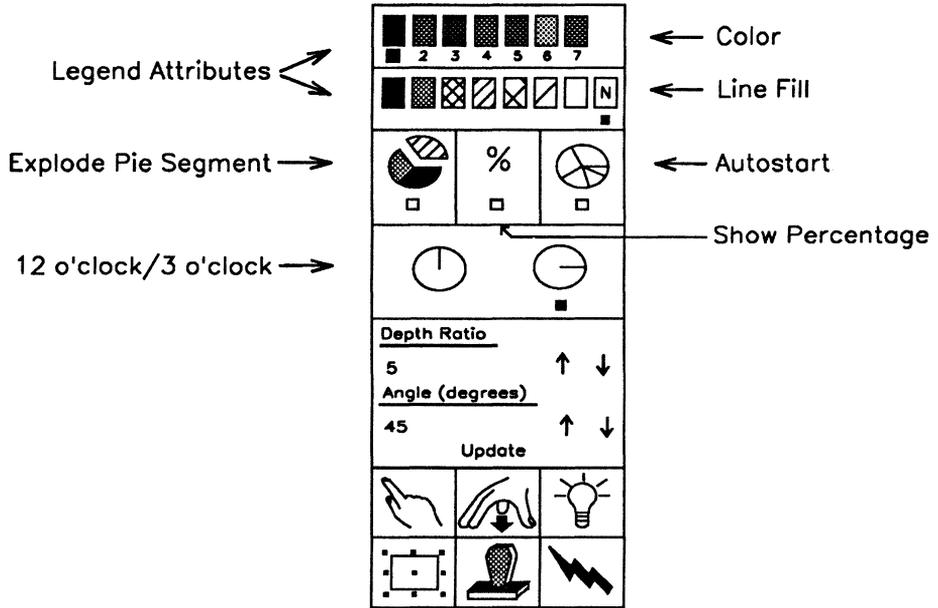
Using Pie Charts

The Pie Chart menu contains the following tools used for modifying a pie chart:

- **Explode Pie Segment**
You use this tool to emphasize a segment on a pie chart.
- **Show Percentages**
You use this tool to display the percentile of all chart segments.
- **Autosort**
You use this tool to order segments either by percentile or by their order in the worksheet.
- **12 o'clock/3 o'clock**
You use this tool to start the pie picture drawing at 12 o'clock or at 3 o'clock.
- **Depth Ratio**
You use this tool to display 2D (flat) or 3D pie charts.
- **Angle (degrees)**
You use this tool to set the angle of depth of the pie chart.

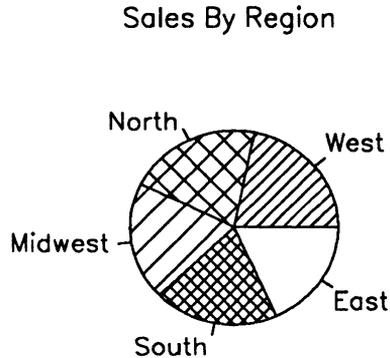
Figure 9-25 shows the Pie Chart tools menu.

Figure 9-25. Pie Chart Tools Menu



You can display pie chart data as shown in Figure 9-26. A pie chart can have a maximum of 16 segments.

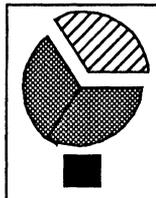
Figure 9-26. Pie Chart



Emphasizing a Pie Chart Segment

A default pie chart has all of its segments joined at the center point. One or more sectors can be pulled out from the center, or exploded, for emphasis, using the **Explode Pie Segment** tool, shown in Figure 9-27.

Figure 9-27. Explode Pie Segment Tool



To emphasize a segment on a pie chart, use the following procedure:

1. Pick the segment you want to change by moving the cursor to its handle and pressing **MARK**.
2. Move the cursor to the **Explode Pie Segment** tool and press **MARK**.

The segment moves away slightly from the center of the pie.

3. Select **CANCEL** to deselect the segment when you have no further changes.

Although the exploded segment may look like an individual object, it is still part of the chart as a whole. You cannot pick a pie segment as a separate object.

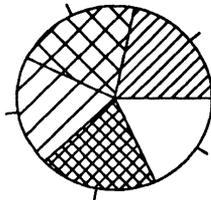
To move the segment back into the pie, ensure that segment is picked and select the **Explode Pie Segment** tool again.

Figure 9-28 shows examples of a regular pie chart and a chart with an emphasized (exploded) segment.

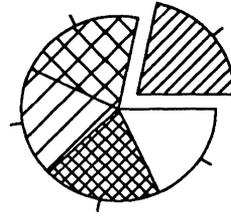
Note: *When Pie segments are very narrow, segment labels tend to overlap. To correct this problem, and at the same time maintain a uniform appearance for all labels, do the following:*

1. *Pick all of the Pie segment labels.*
2. *Set them to the appropriate size using the Text Tools side menu.*
3. *If the problem still persists, reposition individual labels.*
4. *Save the chart format if you anticipate data changes.*

Figure 9-28. Pie Chart with Exploded Segment



Default pie chart with all segments joined in middle

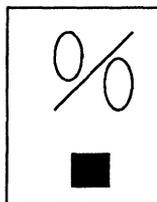


One segment exploded for emphasis – you can also do more than one

Showing Percentages

You can choose whether or not to include the percentage data in chart labels by using the **Show Percentages** tool, shown in Figure 9-29.

Figure 9-29. Show Percentages Tool



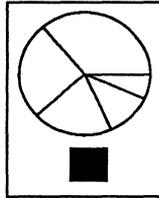
When the indicator box below the tool is filled, OFIS Graphics displays pie chart percentages. When the box is empty, OFIS Graphics suppresses the percentage information.

To show or suppress percentage data from the pie chart labels, select the **Show Percentages** tool and press **MARK**.

Sorting Pie Chart Segments

To arrange the pie segments in the order of the worksheet information, select the **Autosort** tool, shown in Figure 9-30.

Figure 9-30. Autosort Tool

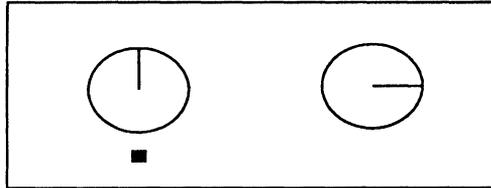


When the indicator box below the tool is filled, OFIS Graphics displays segments from the lowest to highest percentage, beginning at either the twelve o'clock or three o'clock position. When the box is empty, OFIS Graphics displays segments in the order of the worksheet information.

To sort the segments of a pie chart, select the **Autosort** tool and press **MARK**.

To select beginning the drawing of a pie chart at the 12 o'clock or 3 o'clock position, select the appropriate tool in the Pie Chart tools menu and press **MARK**. These tools are shown in Figure 9-31.

Figure 9-31. 12 O'clock 3 O'clock Tool



Setting 2D or 3D Pie Chart Depth

You can now choose a two-dimensional (2D) or three-dimensional (3D) look for your pie charts. Earlier versions of OFIS Graphics supported only 2D (flat) charts.

Changing the Depth Ratio

You can vary the depth of pie charts by selecting a new menu item in the current chart menu. This menu item is titled **Depth Ratio** (review Figure 9-25) and allows the depth of the chart effect to vary from 0.0 to 10.0. Choosing a depth of 0 produces flat charts.

The 3D depth can be enabled or updated by clicking on the arrows with the mouse or by typing in a new value after clicking on the numeric field. Select **Update** to reflect the 3D value, and the chart is redrawn. The 3D depth is stored in the chart format by selecting **Save Chart Format**.

Earlier OFIS Graphics versions ignores this depth information and presents the chart with a depth ratio of 0 (flat). A chart format saved with a 3D depth of 0 can be used in earlier OFIS Graphics products.

Surfaces added for the 3D effect are filled with the background fill and have the same color as the object being shown.

Angle of View

You can vary the angle of view for pie charts by selecting a new menu item added to the current pie chart menu.

This menu item is titled **Angle (degrees)** and allows the viewing angle for a pie chart to be changed.

The angle of view can be changed by clicking on the arrows with the mouse or by typing in a new value after clicking on the numeric field. The chart is redrawn when you click on the **Update** option.

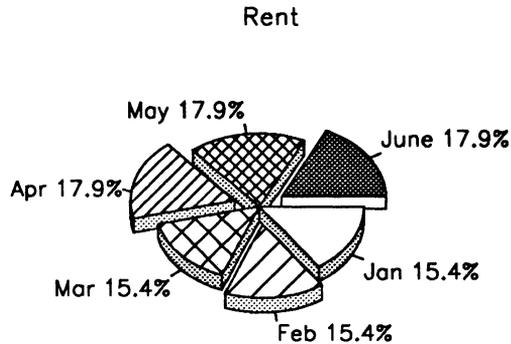
Selecting **Save Chart Format** saves the desired angle of view. Earlier versions of OFIS Graphics treat the angle of view as flat.

Figure 9-32, shows a pie chart with a 3D depth of 2 and an angle of 45 degrees. The thickness of the segments is approximately 30 percent of radius when viewed at 45 degrees.

For a given depth ratio, increasing the angle of view increases the visible thickness of the pie. At a viewing angle of 0 degrees, the value of the depth ratio does not influence the appearance of the pie chart. Smaller angles of view expose more of the pie top surface, and larger angles expose less of the pie top surface and more of the sides.

The pie segment labels and arrows for the half of the pie closest to you are located on the bottom plane of the pie for increased readability.

Figure 9-32. Pie Chart (Depth Ratio = 2, Angle = 45)



To switch the shading between all background fills and a combination of background and lightly shaded fills (default), use the `:Shade3DCharts:` entry in the user static profile. See Section 11, Customizing User Profiles, for more information on shading 3D charts.

Changing Pie Chart Segment Attributes

Each segment has a handle centered inside it. You use the handles to change the segment attributes (color, fill pattern, or exploded segment).

To change a segment attribute on a pie chart, use the following procedure:

1. Select the segment you want to change by moving the cursor to its handle and pressing **MARK**.
2. Select the desired color or fill pattern from the attributes by moving the cursor to them and pressing **MARK**.

The segment changes to reflect your selection.

3. Select **CANCEL** to deselect the segment when you have no more changes.

Shading 3D Pie Chart Curved Sides

The static user profile entry (see Section 11) includes the parameter *:Shade3DCharts*: (default is **Yes**).

Selecting **Yes** shades the curved sides of 3D pie charts. Other sides have background color fill.

If you select **No**, all sides have a background color fill.

If you create a pie chart on a system which has a setting of "Yes", and send the picture to another system with a setting of "No", the shades disappear.

Saving the Chart Format

The chart format consists of everything in the chart except the specific data contained in your spreadsheet program. It includes the colors, fill patterns, text attributes, and any special attributes you specify. It excludes text or art objects that you add to the chart using the Text or Drawing Tools menus.

You can save a chart format and use it again to create similar graphs. Your numeric information is placed into the form specified by this saved chart format file. For example, if you have four worksheets containing quarterly sales reports, you can create four charts identical in format, but different in content.

See Section 2, for more information on file operations.

To save a chart's format, use the following procedure:

1. Select the entire chart by using the Pick cursor.
2. Select Files on the Function menu.
3. Select **Save Chart Format** on the pop-up menu.
4. Type whatever format file name you choose into the text entry line.
5. Press **GO**.

The file is saved with a **.fm** suffix. You cannot use **Get File** or **View Files** to load a **.fm** file. You can only use **.fm** files with spreadsheet information.

Standard Chart Format Files

Unisys provides a standard set of chart format files (located in *[Sys]<Sys>*) that are installed with the OFIS Graphics product. These chart formats include the following:

Noncolor Charts

Bar.fm
HzBar.fm
HzStacked.fm
Line.fm
LineInterp.fm
Pie.fm
Scatter.fm
ScatterLine.fm
SLInterp.fm
Stacked.fm
3DPie.fm
(3D pie chart format with a depth ratio of 2 and angle of view of 45 degrees)
3DBar.fm
(3D bar chart format with depth ratio 2. Same comment applies to the .fm files below.)
3DHzBar.fm
3DStacked.fm
3DHzStacked.fm

Color Charts

ColorBar.fm
ColorHzBar.fm
ColorHzStacked.fm
ColorLine.fm
ColorLnInterp.fm
ColorPie.fm
ColorScatter.fm
ColorScatterLine.fm
ColorSLInterp.fm
ColorStacked.fm
Color3DPie.fm
(3D pie chart format with a depth ratio of 2 and angle of view of 45 degrees)
Color3DBar.fm
(3D bar chart format with depth ratio 2. Same comment applies to the .fm files below.)
Color3DHzBar.fm
Color3DStacked.fm
Color3DHzStacked.fm

Chart Format Keys Definitions

Key	Meaning
Color	Colored charts with solid fill patterns
3D	Three-dimensional charts with Depth Ratio = 2 and Angle = 45 degrees
Bar	Vertical bar chart
Hz	Horizontal bar chart
Stacked	Stacked bar chart
Pie	Pie chart
Line	Line chart
Ln	Line chart
Interp	Chart with interpolation
Scatter	Scatter chart
ScatterLine	Scatter line chart
Sl	Scatter line chart

Section 10

Printing Picture Files

This section tells you how to print picture files using OFIS Graphics and describes the following:

- OFIS Graphics printer devices
- Considering picture orientation
- Using a plotter
- Using a laser printer
- Using a dot matrix printer
- Printing to spooled output devices
- Bringing up the Print menu
- Printing your drawing

OFIS Graphics Printer Devices

OFIS Graphics can print to any graphics printers supported by GPS. These can include:

- A plotter
This device draws a picture using one or more interchangeable pens in multiple colors.
- A dot matrix printer
This device prints drawings as a field (or matrix) of small dots in color or black and white.
- A laser printer
This device produces high-resolution drawings in black and white, similar to some copiers.

For information about configuring your system to use an output device, see Appendix B.

Considering Picture Size and Orientation

You can change Picture Orientation to suit your output device, or when you work with .pic file created in another graphics system. For more information about changing orientation, see Section 3.

You use the Set Up pop-up menu to select the size of the output paper (Letter or A4) and orientation of the picture (Landscape or Portrait). Letter is the output paper default setting, and Landscape is the orientation default setting. Figure 1-4, Section 1, shows the Set Up pop-up menu and the paper size and orientation options.

Using a Plotter

When using a plotter, there are some special considerations regarding:

- Overlaying objects
- Pen assignment

Understanding How Plotters Overlay Objects

When you display one or more filled objects that overlay each other, you cannot see through the top object to the objects below. When you output your picture to a plotter, each object is plotted in full. The overlaid objects and their fill patterns are physically drawn on top of each other, so you cannot see objects printed beneath others. For this reason, 3D charts do not print well on plotters.

Assigning Plotter Pens

Moving from left to right on the display, each color icon corresponds to pens 1 through 7 on your plotter. Pen colors can be different from the colors on the display, depending on how the plotter is set up.

When you assign a particular color to several objects, you actually group them to a particular pen number. The plotter puts them on paper as a group.

If you have overlapping objects, you must consider the following points when printing on a plotter:

- Place darker colors on top.

The plotter draws objects in the order they appear on the screen. You can use the **Reorder** tool (see Section 6) to move lighter objects underneath darker objects. Or, you can use the Color attributes to make lighter objects darker and then place them on top of other objects.

- Use more solid fills on top.

If an unfilled object overlays a solid one, the solid object shows through.

- Background Fill appears as a solid fill when plotted.
- Objects that share edges should align with each other exactly.

If the shared edges are not perfectly aligned, they will appear blurred or fattened.

Using a Dot Matrix Printer

Unlike plotters, dot matrix printers print objects as they appear on the screen. Overlaid objects remain blocked out and do not show through the objects on top of them.

A dot matrix printer can print in color or black and white. The color dot matrix printer combines red, green, and blue to best match the color assigned in the file. If you have a black and white dot matrix printer, you can use fill patterns as a distinguishing element in your drawing.

Note: Most dot matrix printer do not print the Landscape orientation.

Using Laser Printer

Like a dot matrix printer, a laser printer prints objects as they appear on the screen. Overlaid objects remain blocked out and do not show through the objects on top of them.

A laser printer prints drawings in black and white only. You can use fill patterns as distinguishing elements in a drawing destined for a laser printer.

When you use a laser printer, the line types you select from the Line Type attribute may appear differently than they do on the screen.

Printing to Spooled Output Devices

Workstations often share output devices with other workstations. A spooler controls the order in which jobs are printed.

The procedure for printing to a spooled device is the same as it is for printing to any other printing device. OFIS Graphics, however, offers additional features for those who have spooled output devices. See *Determining Device Status*.

Bringing Up the Print Menu

The Print pop-up menu (see Figure 10-1) contains the information used to print a picture.

You can see the following options on the Print pop-up menu:

- Show Status
- Number of Copies
- Plotter Medium
- Print View
- Device
- Type In Device (for selecting a printer)

To display the Print pop-up menu, select Print on the Function menu at the bottom of the OFIS Graphics screen. Remember, you use the Set Up pop-up menu to select the size of paper and picture orientation.

Determining Device Status

OFIS Graphics provides status messages to tell you what actions to perform to print out your picture. For example, a message might tell you to load a piece of paper into a plotter. By selecting a particular printer from the menu, you can get status for that printer.

If there is a status message waiting, the Print function label highlights. If the status requires you to restart the printer, make certain you select that printer from the menu before pressing GO.

To display the status message, use the following procedure:

1. Select the Print function menu and press **MARK**.
2. Pick the **Show Status** option and press **MARK**.

If several workstations share output devices, any message is always from the last spooled device that was used to print.

***Note:** The **Show Status** option enables the Generic Print System to give the user printer information. To access additional printer information use the GPS Print Manager operation.*

Number of Copies

You can use the **Number of Copies** option under the Print pop-up menu to indicate the number of printouts you want of a single picture. You can use either the Arrow keys to change the default, or key in a number directly. The default is one copy.

Printing to Paper or Transparency on a Plotter

You can plot pictures on either paper or transparency film when printing to a plotter. Plotter Medium applies only to pictures that you output to a plotter. This function works through the inbuilt driver only and is not used for Generic Print System output. For GPS output, configure these settings through Print Manager.

When **Transparency** is selected, the plotter draws more slowly than when **Paper** is selected. This slower speed allows the ink to dry more thoroughly throughout the plotting process, which produces a cleaner, better quality picture.

Printing Different Views of the Picture

You can print a portion of your picture or all of it. You do this action by using **Print View**. Its options are:

- **Current View** to print the picture exactly as it appears in the work area at the time of printing
- **Entire Picture** to print the whole picture regardless of how it appears in the work area at the time of printing

For example, if you are zoomed in on a picture and you decide to print it, you can select **Current View** to print the zoomed portion of the picture as it is currently displayed on the screen. Or, you can select **Entire Picture** to print the picture as it appears on a full page.

Indicating the Output Device

You select which output device to use from those available under the **Device** option. See Appendix B for information about configuring printers.

If you use the **(type in)** option, enter in a GPS device in square brackets ([]) or a file name in the Text Entry Line. Without the brackets, the picture file is copied to a file and not to a printer.

Printing Your Drawing

To print a picture, use the following procedure:

1. Select **Print** on the function menu and press **MARK**.
2. To specify the number of copies, perform one of the following actions:
 - Move the cursor to the **Up** or **Down Arrows** under the **Number of Copies** heading on the **Print** menu. Each time you press and release **MARK**, the numeric size indicator changes accordingly.
 - You can also specify the number of copies by selecting the numeric display, then typing in the number you want when the display highlights.
3. Select **Plotter Medium** heading if applicable.
4. Specify the view you want to print by selecting the desired option from under the **Print View** heading.
5. Specify the type of output device by selecting the device name from those available under the **Device** heading.
6. Press **GO**.

Choose one of the following:

- If you use a plotter, OFIS Graphics displays the message:

Checking device....

You then put a piece of paper into the plotter, and press **GO** to continue. You load the paper and follow any further instructions that appear on the screen.

- If you use a printer, OFIS Graphics displays the message:

Printing... Press **CANCEL** to stop.

You can press **CANCEL** to stop printing at any time.

Section 11

Customizing User Profiles

This section tells you how to customize OFIS Graphics user profiles and describes the following:

- User profiles
- User profile operations
- User profile configuration and contents
- Default user profile
- Editing user profiles

User Profiles

OFIS Graphics provides you with the capability to load a user profile so that the settings of OFIS Graphics match your preferences. This profile can be loaded upon initialization or at any time during an OFIS Graphics session. Some settings can be modified only by editing the contents of a profile file (static settings). Other user profile settings can also be modified while using OFIS Graphics (dynamic settings).

Static User Profile

You can modify the following static profile settings by editing the profile file:

- All Print menu options (Number Of Copies, Plotter Medium, Print View, Device)
- Starting Tools
- Drawing Tool Attributes
- Text Tool Attributes
- File Backups
- Quick Menu
- 3D Chart Shading

A new File Type called **Profile**, allows you to load, save, and view profile files. Profile files are suffixed with "OGConfig.sys".

You must edit these settings in your user profile file to change them.

The static user profile is used when applicable. Tool menu preferences are applied when you switch between tool side menus.

Earlier versions of OFIS Graphics always come up in the Drawing tools side menu, and the **Text Add** icon is always activated when you switch to the Text tools side menu. These can now be changed so that OFIS Graphics comes up in the Text tools side menu, and **Text Pick** is chosen whenever you switch to the Text tools side menu.

***Note:** The Starting Tool menu preference is used when OFIS Graphics is invoked from a nonspreadsheet application. When invoked from a spreadsheet application, you start off in the Charts tool side menu.*

Dynamic User Profile

The following dynamic user profile settings can be modified using OFIS Graphics:

- All Set Up menu options (Mouse Hand, Output Paper, Grid settings, Orientation)
- Work Protect settings (Yes or No), Time interval)
- Color palettes
- Quick Access (Yes or No)
- Highlight (Yes or No)
- Layout (one or two work areas)

User Profile Operations

The standard file operations (**Set Path, Get File, Save File, View Files**) can be used with profile files.

Initial User Profile

You can set your OFIS Graphics user profile preferences as follows:

1. You can specify any *OGConfig.sys* file as your initial user profile by entering its full file specification as an *:ArtChartUserProfile:* entry in your .user file.
2. Or, you can customize your user profile preferences in *UserNameOGConfig.sys* in the path of the OFIS Graphics run file.
3. Or, you can customize your user profile preferences in *DefaultOGConfig.sys* in the path of the OFIS Graphics run file.

If a profile exists but cannot be opened, or if the *:ArtChartUserProfile:* is blank, OFIS Graphics resorts to hardcoded defaults.

Note *User profile entries take precedence over user file entries.*

Examples of User Profile Configurations

The following information describes four approaches to developing and using user profiles. In several examples, the term "User" means your or some other unique name, and the example assumes that you are running OFIS Graphics off of the `[/!Sys]<OG>` directory.

If you prefer to use:	Ensure that:	As a result:
The default user profile	There is no <code>:ArtChartUserProfile:</code> entry in your <code>.user</code> file, and there is no file named <code>[/!Sys]<OG>UserDefaultOGConfig.Sys</code>	When you load OFIS Graphics, the file <code>[/!Sys]<OG>DefaultOGConfig.Sys</code> is automatically loaded as the initial user profile
A customized user profile which is on the server	There is no <code>:ArtChartUserProfile:</code> entry in your <code>.user</code> file and a file named <code>[/!Sys]<OG>UserOGConfig.Sys</code> contains your user profile	When you load OFIS Graphics, the file <code>[/!Sys]<OG>UserOGConfig.Sys</code> is automatically loaded as the initial user profile
A customized user profile which is on a local hard disk	There is an <code>:ArtChartUserProfile:</code> entry in your <code>.user</code> file that provides a full file specification of your user file For example, <code>[/Sys]<User>MyOwnOGConfig.Sys</code>	When you load OFIS Graphics, the file <code>[/Sys]<User>MyOwnOGConfig.Sys</code> , shown in the example) is automatically loaded as the initial user profile
OFIS Graphics defaults and not load an initial profile	There is a blank <code>:ArtChartUserProfile:</code> entry in your <code>.user</code> file	No initial user profile is loaded when you load OFIS Graphics

Loading User Profiles

You load a user profile using a **Get File** operation (see Section 2). The *OGConfig.sys* suffix is assumed.

Loading your user profile does not affect your current pictures' orientations, palettes, or paper sizes.

Invalid entries found in the profile are ignored.

When a profile is loaded, valid entries change the current settings. Settings for which there are no entries in the profile are maintained.

For example, if your user profile does not have a *:GridVisible:* entry, the current visibility of the grid is maintained when that profile is loaded.

When you initiate a **Get File** operation for profiles, OFIS Graphics prompts you with the name of the currently loaded profile, if any.

Note: When you load a user profile, OFIS Graphics may need to redraw the screen several times to activate various settings.

Viewing User Profiles

You can view a list of user profiles using the **View Files** operation. Profile files are displayed without the *OGConfig.sys* suffix.

Note: Profile files cannot be previewed. If you try to preview a profile file, the following message displays:

You cannot preview profile files.

Saving User Profiles

You can save the current dynamic user profile using the **Save File** operation (see Section 2). When you save a user profile, an *OGConfig.sys* suffix is appended (if required).

When you initiate a **Save File** operation for profiles, OFIS Graphics prompts you with the name of the currently loaded profile, if any.

User Profile Configuration

This section describes user profile static and dynamic contents (including options and default settings) and the OFIS Graphics default user profile. It also describes editing user profiles. The keywords in the user profile match the OFIS Graphics screen menu options (excluding spaces) wherever applicable.

Static User Profile File Settings

OFIS Graphics considers current settings for the following as the static part of the user profile. It allows you to change and save the settings by editing an *OGConfig.sys* file.

<u>Keyword</u>	<u>Options</u>	<u>Description</u>
:BackupFiles:	Yes No	Whether or not to save "-old" files. Default: Yes
:Color:	1 to 7	Initial drawing or text color. Default: 1
:DrawFill:	1 to 8	Initial fill pattern. Default: 8
:LineType:	1 to 7	Initial line type. Default: 1
:Font:	Font name	This one has to be a valid font name listed in [Sys]<Sys>Graphics.fonts Default: The first font name in [Sys]<Sys>Graphics.fonts
:Justification:	Left Center Right	Initial text justification. Default: Center
:Device:	Device name	Valid GPS device name Default: from user file
:NumberOfCopies:	1 to 100	Default: 1

<u>Keyword</u>	<u>Options</u>	<u>Description</u>
:PlotterMedium:	Paper Transparency	Default: Paper
:PrintView:	Entire Picture Current View	Default: Entire Picture
:QuickMenu:	Yes No	Whether or not quick menu is turned on Default: Yes
:Shade3DCharts:	Yes No	Whether or not shading for 3D bar or pie charts is turned on Default: Yes
:Size:	5 to 100	Initial text size. Default: 30
:StartingTools:	Drawings Text	The set of tools in which OFIS Graphics starts when invoked from CM or Exec. Default: Drawings
:Stretch:	0.5 to 2.0	Initial text stretch. Default: 1.0

Dynamic User Profile File Settings

OFIS Graphics considers current settings for the following as the dynamic part of the user profile. It allows you to change and save the settings within the product.

***Note:** In the following file settings, **Yes** means On and **No** means Off.*

<u>Keyword</u>	<u>Options</u>	<u>Description</u>
:GridMultiple:	1 to 30	Default: 2
:GridSnap:	Yes No	Default: No
:GridUnits:	1/16 in 1/10 in mm picas virtual	Default: 1/16 in
:GridVisible:	Yes No	Default: No
:Highlight:	Yes No	Whether the highlight (bulb icon) is active. Default: No
:Layout:	Single Dual	To allow the display of two pictures simultaneously. Default: Single

<u>Keyword</u>	<u>Options</u>	<u>Description</u>
:MouseHand:	Right Handed Left Handed	Default: Right Handed
:Orientation:	Landscape Portrait separated by a comma for each work area	Only applies to newly created pictures when invoked from CM or the Executive Default: Landscape, Landscape
:OutputPaper:	Letter A4 separated by a comma for each work area	Only applies to newly created pictures Default: Letter, Letter
:Palette:	8 contiguous trios of RGB values for each palette RGBRGB...RGB RGB...RGBRGB where each R, G, and B has a range of 0 to 3. The values are input from first color through eighth (or background) separated by a comma for each work area.	Only applies to newly created pictures Default: OFIS Graphics default palette for each work area
:QuickAccess:	Yes No	Whether or not quick access is turned on. Default: Yes
:WorkProtect:	Yes No	Default: Yes
:Work Protect Interval:	1 to 99	Default: 5

Note: *If you need the second work area to have a :Palette:, :Orientation:, or :Output Paper: other than the default, then each of these profile entries must have two values separated by commas.*

Default User Profile

The contents of the default file *[Vol]<Dir>OGConfig.sys*, shown below, match the current OFIS Graphics defaults:

Static Settings:

```
:QuickMenu:           Yes
:BackupFiles:         Yes
:StartingTools:       Drawings
:Shade3DCharts:       Yes
:Color:               1
:DrawFill:            8
:LineType:            1
:Justification:       Center
:Size:                30
:Stretch:             1
:Font:
:PlotterMedium:       Paper
:PrintView:           Entire Picture
:NumberofCopies:      1
:Device:
```

Dynamic Settings:

```
:MouseHand:           Right Handed
:GridUnits:           1/16 in
:GridMultiple:        2
:GridSnap:            No
:GridVisible:         No
:QuickAccess:         Yes
:Layout:              Single
:Highlight:           No
:WorkProtect:         Yes
:WorkProtectInterval: 5 (minutes)
:OutputPaper:         Letter,Letter
:Orientation:         Landscape,Landscape
:Palette:
333020003303300320210000,333020003303300320210000
```

Editing User Profiles

Details on user profile entries can be obtained from *OGConfig.sys.Ref* installed in the same directory where OFIS Graphics is installed. These instructions list all available options for each keyword.

To ensure a default option for a keyword, the keyword can be commented out or deleted. Leading spaces, trailing spaces, and spaces within a value are ignored. For example, "1/16 in" is equivalent to "1/16in" for *:GridUnits:*.

Section 12

Using OFIS Graphics Utilities

This section provides information on various utilities supported by OFIS Graphics and describes the following:

- Migrating Pic to CGM
- Using Pretty Print
- Using Text to Pic

Migrating Pic to CGM

OFIS Graphics includes a utility which allows you to convert **.pic** files into **.cgm** files. A migration path for the data contained with **.pic** files is created for applications such as CorelDRAW which run under VPC and/or Presentation Manager. The following paragraphs describe how to transfer **.pic** files to **.cgm** files:

- Command form
- Files information
- Raster fonts
- Line types and fill patterns
- Color palettes

The CGM format created by this utility corresponds to the ANSI x3.122-1986 standard.

Command Form

The command interface for this utility is shown in Figure 12-1.

```
Pic To CGM
  Picture file(s)
  [File prefix to]
  [Overwrite OK?]
  [Confirm each?]
  [Vector text?]
  [Font config file]
  [Palette file]
```

Figure 12-1. Pic To CGM Command

Command Parameters

Picture file(s)	A required parameter field. You must supply on this parameter line a list of one or more file names of .pic files to be converted.
[File prefix to]	An optional parameter field which enables you to specify the node, volume, directory, and file prefix of the created .cgm files. Default: Current node, volume, directory, and prefix
[Overwrite OK?]	An optional parameter field which allows you to either overwrite or not, any .cgm files in the current or specified directory. Default: No.
[Confirm each?]	An optional parameter field which allows you to confirm creating or overwriting .cgm files in the current or specified directory. Default: No.

- [Vector text?] An optional parameter field which allows you to create **.cgm** files with the vectors that make up the OFIS Graphics text. The default is to use the text capabilities of the CGM format to have nice raster fonts in the **.cgm** file.
- Default:** No.
- [Font config file] An optional parameter field which allows you to specify a raster font configuration file.
- If the Vector text parameter is set as **Yes** and a font configuration file is specified, the utility will error out and display the message:
- The font configuration file cannot be used with vectorized text.
- Default:** None.
- [Palette file] An optional parameter field which allows you to specify a color palette file.
- Default:** Palette of **.pic** file.

Files Information

The name of the **.cgm** file corresponds to the name of the **.pic** file. For example, a **.pic** file of `[d2]<Pictures>abc.pic` converted with the Pic To CGM utility with a file prefix of `[d3]<Pics>New>` results in the creation of a file called `[d3]<Pics>New>abc.cgm`.

If an error is encountered, it is reported and conversion continues with the next file.

Note: *If you plan to use the **.cgm** files in a DOS environment, the file names must be restricted to eight characters followed by ".cgm". You should copy or rename long **.pic** file names before converting to **.cgm**.*

Pic to CGM displays appropriate status and confirmation messages as it processes the parameters and the **.pic** files.

Examples:

```
Creating [Vol]<Dir>abc01.cgm ... done.
Creating [Vol]<Dir>abc02.cgm ... done.
Creating [Vol]<Dir>abc03.cgm ...
File [Vol]<Dir>abc03.cgm already exists. Overwrite?
(Press GO to confirm, CANCEL to deny, FINISH to exit)
Creating [Vol]<Dir>abc04.cgm ... done.
```

Raster Fonts

You can specify a raster font configuration file for inclusion within the **.cgm** file. This enables an application which imports the **.cgm** file to know which raster fonts to use for the vector fonts of the original **.pic** file.

An example raster font configuration file (*PTC.Fonts*), is included on the release disks and copied to the directory where Pic To CGM is installed. This file contains the names of some standard Windows True Type fonts.

The format for the raster font configuration file is the font name of the raster font followed by the graphics internal vector font name from the *Graphics.Fonts* file, for example:

Arial:	SimplexRoman
Courier New:	ComplexRoman
Symbol:	DuplexRoman
Times New Roman:	Gothic
Wingdings:	Block
Courier New:	Script

Note: *Some applications, especially those that default to a certain font or set of fonts, may not correctly interpret the included raster font names in the .cgm file. If your application fails to import a .cgm file created with a font configuration file, recreate the .cgm file without a font configuration file specified and import it again.*

The display of the width of the raster fonts within the application importing the .cgm file will often not correspond exactly to the original vector fonts. This is due to the varying widths of nonproportional raster fonts. You must manually correct any such discrepancies manually within the given application if possible.

Line Types and Fill Patterns

The .pic file format contains different line types and fill patterns than the .cgm standard. An effort has been made to match them as closely as possible. However, pictures converted to .cgm may contain line types or fill patterns which are unexpected or undesired. You must manually correct any such discrepancies manually within the application importing the .cgm file if possible.

Color Palettes

Many applications which import *.cgm* files do not allow the palette inside it to change the background color. Since many *.pic* files have black background colors and white as color one in their palettes, they would show up in some Windows, Mac, or Presentation Manager applications with white color one on white or light grey background and would be hard to see.

The file *Windows.pl* which resolves this problem in many cases is included on the release disks (placed in the directory where Pic to CGM is installed) to enable you to quickly convert your *.pic* files without the need to create a *.pl* file.

Using Pretty Print

OFIS Graphics provides a Pretty Print utility so you can take advantage of the range of typefaces available through GPS and the Font Database. (See Appendix B for more details about software requirements.)

The utility extracts all the graphics text labels from a picture file, then transforms the labels to fonts available to the printer. The font transformation is based on format files that you specify. After this transformation, the system sends both the graphics and translated text data to a GPS device.

On GPS printers that support the PostScript page description language (such as the AP9415 and AP9210 printers), Pretty Print supports:

- Rotated, high-quality text
- Scaled, high-quality text

To use the Pretty Print utility, use the following procedure:

1. At the Executive command line, type **Pretty Print** and press **RETURN**; the following form appears:

```
Pretty Print
Picture File Name(s)
Print Device/File Name (eg: [Devicename])
[Format File (default = [Sys]<Sys>Cgi.Fonts)]
[PostScript Device (default = no)]
[Number of copies (default = 1)]
```

2. In the *Picture File Name (s)* field, type the identifying name for your file, including the volume and directory if necessary. You can include the **.pic** file extension, or you can use a wildcard asterisk (*).
4. In the *Print Device /File Name* field, type the identifying device name or a file name.

If you use the **(type in)** option, enter in a GPS device in square brackets ([]) or a file name in the Text Entry Line. Without the brackets, the picture file is copied to a file and not to a printer.

4. In the optional *Format File* field, you can type your own filename that determines the font translation from the Graphics Library Vector Fonts to the GPS Font Database or to the PostScript resident fonts.
5. In the optional *PostScript Device* field, type **Yes** if the printer used for Pretty Print output is a PostScript device.

A PostScript device can print the text as it is oriented and scaled in the picture file translating it according to the format file.

6. In the optional *Number of copies* field, type the number of hard copies for output. The default is one copy.

Setting Up a Pretty Print Translation Format File

When using a PostScript printer, the utility uses *[Sys]<Sys>Cgi.fonts* as the default format file for font translation. You can create your own format files. Here is an example default file for a PostScript printer:

```
Courier:SimplexRoman
Times-Roman:ComplexRoman
Helvetica:DuplexRoman
ZapfChancery-MediumItalic:Gothic
Times-Bold:Block
Palatino-Roman:Script
```

The entries on the left are the resident fonts of the PostScript type printer. The entries on the right are the Graphics Library font names; The above example replaces all occurrences of SimplexRoman in the picture file with Courier font. The other specified fonts replace the indicated vector fonts. The output text would be the same size, stretch, and rotation as the vector text is in the picture file.

Table 12-1 lists the OFIS Graphics fonts and printer or GPS Font Database name available to use with OFIS Graphics, using nonPostScript printer words.

Table 12-1. OFIS Graphics Fonts and Recommended Printer Fonts

SIMPLEX ROMAN	COMPLEX ROMAN	DUPLEX ROMAN	GOTHIC	BLOCK	SCRIPT
<u>PostScript</u>					
Courier	Times-Roman	AvantGarde-demi	Zapfchancery-mediumitalic	Helvetica	Palatino-Roman
<u>AP1324</u>					
Courier	Prestige	Roman	Prestige	SansSerif	Script
<u>AP9206</u>					
Courier	Times	Orator	Gothic	Helvetica	Prestige
<u>AP9215</u>					
Courier	Prestige	Orator	Gothic	Orator	Prestige
<u>APDMatrix</u> or <u>Epx286</u>					
Courier	Courier	Courier	Courier	Courier	Courier
<u>HPLaserJet</u>					
Courier	Times	Prestige	Gothic	Presentation	Prestige
<u>Imagen</u>					
Courier	Times	Helvetica	Times	Helvetica	Greek

Note: For any printer, other than PostScript, you must match the screen size of the character closely with the available font size on the printer. If the match is off, the formatting may be unsatisfactory.

Using Text to Pic

The Text to Pic utility converts text files (unformatted text file or DEF word processed file) into a picture file.

You must first create a text file for the program to convert by using a word processing application or the Editor. You can do this by:

- Transferring a word processed file using the **Document Exchange Format (DEF)** option (DEF files)
- Using the word processed file directly without transferring it to the DEF format (Non-DEF files)
- Typing the text file directly using the Editor

Text files that the Text to Pic utility can convert to picture files should include only small amounts of text, such as in short presentations.

***Note:** The first option, DEF files, must be used to retain word processed formatting information. Use the Non-DEF files option for unformatted word processed or Editor files where formatted information is not necessary.*

To create a text file with a word processing application in the DEF option, use the following procedure:

1. In your word processing application, transfer the file you want converted to a DEF file, using the **Document Exchange** option of the word processor.

***Note:** See your word processor's operations or administration guide to get more information on using the **Document Exchange** utility.*

2. Type in a DEF file name that you determine.
3. Select the direction "**To DEF**".
4. Press **GO**.

Converting Text to Picture Objects

The following paragraphs describe DEF files.

DEF File

If no configuration file is specified, the program uses a default picture configuration file to set up the converted text's color, font, and orientation. See Appendix B, *Installing OFIS Graphics and Configuring Files*, for default details.

The WP file that is transferred to a DEF file retains its paragraph and page attribute format information. When the Text To Pic utility is run for the first time, it creates a character width table and saves it in a file called: *[Sys]<sys>GrfxFontWidth.Tbl*. Each time the utility is run, it loads this file rather than create a new one.

The default font and point size are used whenever there is no font specified in the DEF file or the font(s) specified has no equivalent graphics font entry in the configuration file.

Selection of large point sizes or small pitch values could result in overlapping text. You can fix this by using larger line spacing in the WP file.

For example, for a 15 point (8 pitch) font, select 1.5 as the **Other** line spacing. (From **Home**, press **Paragraph**, **LinSpac**, **Other**.) You can also divide the required point size by 12 to estimate the minimum line spacing (see Table 12-2).

Table 12-2. Pitch to Point Conversion

Word Processor (pitch equals characters per inch)	OFIS Graphics (point equals 1/72 of an inch)
8 pitch	15 point
10 pitch	12 point
12 pitch	10 point
15 pitch	8 point

The number of text lines usually corresponds with that in the WP file. Exceptions are:

- When the page orientation is landscape
- When the point/pitch size selected for the text is larger than the default for the font

In case all the lines do not fit in the first picture file, the page is continued in a second picture file.

Left Tabs are supported. However, text aligned using spaces (Spacebar) instead of tabs, are not likely to line up in the picture file due to unequal character widths. For best results, you should align text only with tabs.

With DEF text files you have the ability to select additional graphic attributes such as fonts and different character sizes while using up to four colors on a single page.

The color entry specifies text color in the picture file. The entry for this field has to be one of the color names defined in the picture configuration file.

You can change the fonts and character sizes by changing the appropriate name or number (point or pitch size) in the input file or by using the defaults in the configuration file.

Each color represents a named text attribute in the picture file.

For example: *Text Attribute:ColorN*

This means that the text attribute is represented by color N in the picture file.

The *:Font:* entry in the configuration file has the following format.

:Font:WPFontName:GraphicsFontName:Pitch:nn

or,

:Font:WPFontName:GraphicsFontName:Point:nn

For *:Pitch:nn*, the entries are 8, 10, 12, and 15.

For *:Point:nn*, the entries can be 1 through 99.

WPFontName refers to the word processor font names such as Courier 10. *GraphicsFontName* refers to one of the graphics fonts (for example, Complex). *Point/Pitch* specify whether a Pitch or a Point size value follows. The *nn* refers to the Pitch/Point size desired. You can change the size of the text with this value. It also affects spacing (see Table 12-3).

Table 12-3. Spacing Measurements

Pica	Point	Centimeter	Millimeter	Inch
0.0833	1.0000	0.0352	0.3515	0.0138
0.2371	2.8453	0.1000	1.0000	0.0394
1.0000	12.0000	0.4218	4.2175	0.1660
2.3720	28.453	1.0000	10.0000	0.3937
6.0240	72.288	2.5400	25.400	1.0000

You can choose up to four text attributes per page represented by the colors that you select. Examples:

NormalTextColor:Color1

BoldTextColor:Color2

AlternateRibbonColor:Color3

BoldAlternateRibbonColor:Color4

Normal text uses the default color specified in the command form or the picture configuration file. Similarly, the normal text uses the font specified in the command form or the picture configuration file.

Any character which is in bold in the document would be represented in the color specified in the picture configuration file for the bold text.

The corresponding entry in the picture configuration file is *:BoldTextColor:ColorN* where N is the color number worth a value from 1 to 7.

Non-DEF Files

The program uses a picture configuration file (TTPConfig.sys) to set up the converted text's color, font, and orientation (see Appendix B for default details).

The program scans the text file and determines the widest possible line for that orientation. The program then sets the character size and number of lines per page. Depending on the orientation set up in the picture configuration file, the program sets the largest point size that will fit.

The program can convert up to 60 characters per line for landscape page orientation and 40 characters per line for portrait page orientation. If more characters exist on a line beyond the limit, the program places these characters on the next line.

As the number of characters in the widest line decreases below the 60 or 40 maximum, the program sets a larger character point size. The program cannot convert a file with only one character.

All carriage returns and line feeds result in a new line in the picture file. Further, the program discards any invalid vector font characters.

To create picture file objects from DEF and Non-DEF text files, use the following procedure:

1. At the Executive command line, type **Text to Pic**.
2. Press **RETURN**.

The following form appears:

```
Text to Pic
  Text file(s)
  [Picture prefix]
  [Font]
  [Color]
  [Overwrite ok?]
  [Picture config file name]
```

3. In the *Text File(s)* field, type the file names(s) of the document you want converted.

You can process more than one file by typing their names sequentially, separating each with a space. You may use the wildcard (*) or specify a file list (@).

Note: *If you specify a text file in another directory (for example, [Green]<Work>file1), the program creates the .pic file in the current, working directory.*

4. The program uses the text file name as a prefix (up to 40 characters) for its appended string of *mm/nn.pic*; but you may type any prefix you desire.

For example, a text file called *Sales* will have a sequence of picture files named *Sales mm/nn.pic*. The program truncates any prefix over 40 characters.

The *mm* refers to the page number of the text file. The *nn* refers to the picture file number. Both have a range from 01 to 99. If a document is longer, the program converts as many pages as it can before exiting with a message.

5. The picture configuration file provides a font for the *Font* field; but you may type another supported font:

- Standard
- Complex
- Bold
- Gothic
- Script
- Block

6. The picture configuration file provides a default of the *Color* field; but you may type one of the colors defined in your picture configuration file.
7. The program displays a confirmation message before overwriting any file with the same name. You can avoid the message by typing **Yes** in the *[Overwrite ok?]* field.
8. The *[Picture config file]* field has the picture configuration file, *[Sys]<Sys>TTP.Config.Sys* as a default. If you have a special file, type its name in this field.

For more information about the picture configuration file, see Appendix B, Installing OFIS Graphics and Configuring Files.

Note: You can exit the program at any time by pressing **FINISH**.

Panning Through Portrait Files

If your picture configuration file generates a portrait orientation **.pic** file, some text may fall outside the work area in the standard **Full View**.

Using the Views functions, you can either **Pan** from top to bottom or use the **Full Page** option to see the entire picture.

Changing the Size of Converted Text

The program converts each page of a text file into one or more **.pic** files. You may desire to change the size of the text.

Using the **Reposition** tool, you can scale the text object up or down to change the text size. See *Stretching Text* in Section 8, *Using Text Tools* for text stretching procedures.

Appendix A

Status Codes

This appendix lists OFIS Graphics status codes and their meanings. OFIS Graphics 3.0 introduces no new status codes.

Consult your current BTOS/CTOS System Status Codes Reference Manual for information concerning codes that apply to the BTOS/CTOS Executive.

- | | |
|-------------|--|
| 7602 | Graphics system error

An internal graphics library error has occurred. Consult your system administrator. |
| 7613 | File is not a picture file

You have tried to load in a file that is not a chart or picture. Make sure you are referring to the right file. |
| 7614 | I/O error while reading picture file

A read error occurred while OFIS Graphics was reading a .pic file. This error could indicate a bad spot on the disk or corrupted data in the file. |
| 7644 | Label would extend out of bounds

The text you are entering is too large or long for the work area. Make the text smaller or break it into shorter lines. |
| 7646 | Bad parameter given for graphics operation

Bad data was passed to a graphics operation. Parts of the file may have been overwritten or wrongly calculated. |

- 7649** Not enough memory for last graphics operation
- The system does not have sufficient memory to complete the last command you gave OFIS Graphics. Save your current file and exit OFIS Graphics. Reenter OFIS Graphics and repeat the graphics operation you previously attempted. You can simplify the chart or drawing you are working with by eliminating multiple fonts, sketched lines, and so on. The long-term solution is to add more memory to your system. You can also change the memory requirements in the Context Manager configuration file.
- 7670** Format file and data inconsistent
- You have specified a chart format file that is inconsistent with the data file. For example, you may have specified a line chart format file with pie chart data. Change the format file or go back to OFIS Spreadsheet or Extended Multiplan and change the data. For instance, if you have created a bar graph, the format file must be *filenamebar.fm*.
- 7671** Max number of legends for bar chart exceeded
- A maximum of five legends are allowed in a bar chart. Reformat the bar chart using five or fewer legends.
- 7672** Max number of groups for bar chart exceeded
- A maximum of thirty-six groups are allowed in a bar chart. Reformat the bar chart using thirty-six or fewer data groups.
- 7673** Max number of segments for pie chart exceeded
- A maximum of sixteen segments are allowed in a pie chart. Reformat the pie chart using sixteen or fewer pie segments.
- 7674** Max number of legends for line chart exceeded
- A maximum of five legends are allowed in a line chart. Reformat the line graph using five or fewer line legends.
- 7675** Negative number incorrect with pie chart
- A negative number cannot be used in a pie chart. Remove the negative data in the OFIS Spreadsheet or Extended Multiplan worksheet or specify another graph type.

- 7677** Need at least two data points for a line chart
- A line containing only one data point cannot be displayed. Modify your worksheet or use another type of graph.
- 7678** Unrecognized message type passed in
- OFIS Graphics has received an indecipherable message from the Inter-Context Message Service (ICMS). Consult the manual accompanying the application that is sending OFIS Graphics the message.
- 7679** No graphics devices were found on the system
- The output device you specified to print to is not configured on your system. Either ask the system administrator to configure the device or specify another output device.
- 7680** Plotter configuration file was not found
- A configuration file is needed to interface OFIS Graphics with a plotter. If this file is missing, contact your system administrator.
- 7681** No spooler found for this device
- Pertinent data in the spooler file for the selected printer/plotter is missing. Contact your system administrator.
- 7682** No picture files in this directory
- This message is displayed when you use the **View Files** option and OFIS Graphics finds no files with a .pic file name extension.
- 7683** Bad input value
- An incorrect entry was made in a field; for example, an alphabetic character was typed in a field requiring a number. Correct your entry.
- 7684** Chart minimum value is out of range
- The number entered for the minimum value in a chart exceeds the acceptable limit. Correct your entry.

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- 7685** Chart maximum value is out of range
- The number entered for the maximum value in a chart exceeds the acceptable limit. Correct your entry.
- 7686** Chart label spacing value is out of range
- The number entered for the label spacing value in a chart exceeds the acceptable limit. Correct your entry.
- 7687** Chart ticks value is out of range
- The number entered for the chart ticks value in a chart exceeds the acceptable limit. Correct your entry.
- 7700** No graphics devices were found on the system
- There are no graphics hard copy devices recognized on the system. Enter the appropriate entry for a graphics hard copy device in the *Sys.printers* file.
- 7701** Plotter configuration file was not found
- There was no *[Sys]<Sys>Sys.printers* file on the system. Create the *[Sys]<Sys>Sys.printers* file using the Editor.
- 7702** No spooler found for this device
- There is no spooler defined for the selected hard copy device. Create spooler entry in the *SpoolerCnfg.sys* file.
- 7703** No picture files in this directory
- There are no picture files in the current directory. Make certain your path is correct.
- 7704** Bad input value
- An incorrect entry was made in a menu field; for example, an alphabetic character was typed in a field requiring a number. Correct your entry.

- 7705** Chart minimum value is out of range
- An incorrect axis minimum value was given. Check the chart's data value range and the difference between the minimum and maximum values. The minimum axis value cannot exceed (present minimum value) + [maximum - minimum] x 100.
- 7706** Chart maximum value is out of range
- An incorrect axis maximum value was given. Check the chart's data value range and the difference between the minimum and maximum values. The maximum axis value cannot exceed (present maximum value) + [maximum - minimum] x 100.
- 7707** Chart label spacing is out of range
- An incorrect value was specified for axes label spacing. Labels could not be included at specified spacing. Enter a positive integer for the label space.
- 7708** Chart ticks value is out of range
- An incorrect value was specified for the number of axes ticks. Be sure the value you enter can be accommodated by the limited space between labels.
- 7709** Bad format for charting parameters
- An unrecognized signature was in the parameter file passed in from the spreadsheet application to OFIS Graphics.
- 7710** No more charts can be added to the picture
- The maximum number of six charts allowed in an OFIS Graphics picture file was exceeded.
- 7711** Too many points drawn
- A connected line or sketched line was drawn with too many points. Draw the picture again with more than one object.
- 7712** No changes made, grid multiple must be between 1 and 30
- Make certain that the grid multiple entered is between 1 and 30, inclusive.

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- 7713** Chart label would be out of bounds
- A chart label which was to be drawn would have gone outside of the chart's boundaries. Replace the label if it is to be moved outside of the chart's limits.
- 7714** Cannot pick that much at one time
- The maximum number of picked objects allowed at one time was exceeded. Select only a few at a time.
- 7716** Grid is suppressed when both work areas are displayed
- Grid is displayed only when one work area is displayed in a single layout.
- 7717** No chart picked in this work area
- A chart operation was attempted when no chart was selected. Pick a chart before performing the operation.
- 7718** Can only save one chart format file at a time
- A chart format file can only contain the format of one chart. Make sure only one chart is picked before saving the chart format file.
- 7719** No text found. (Can only pick text here.)
- No text was found in the pick box. Be sure to pull the icon across the text. When using Text Tools, only text labels can be picked. Use Drawing or Charts Tools to pick other objects.
- 7720** No edge found. (Move across edge with button down.)
- No objects were found in the pick box. Pick box must include an edge or surround an object. Select object again. Be sure to pull the icon across at least one edge of the object.
- 7722** Cannot zoom in any more
- Already zoomed in as far as possible.

- 7723** Bad Icon Library file
- Data in the file *720x348 80LocSys.Icon* or *102x768 80LocSys.Icon* is not in *[Sys]<Sys>* or is bad. Recopy the file from OFIS Graphics distribution disk #1 into *[Sys]<Sys>*.
- 7724** Bad Icon Library format
- Data in the file *720x348 ArtCharticons.lib* or *1024x768 ArtCharticons.lib* is bad. Recopy the file from the distribution disk #1 into *[Sys]<Sys>*.
- 7725** Bad Locator Cursor file
- The file *720x348 80LocSys.Icon* or *1023x768 80LocSys.Icon* is not in *[Sys]<Sys/* or is bad. Recopy the file from OFIS Graphics distribution disk #1 into *[Sys]<Sys>*.
- 7726** Too many charts in picture. Excess charts deleted.
- A maximum of six charts can be included in a single picture. The picture being read in had more than six charts so the extra charts were excluded from the picture.
- 7727** Bad System Font file
- Depending on the resolution of the monitor being used, the file *[Sys]<Sys>720x348 80Sys.font* or *[Sys]<Sys>102x768 80Sys.font* could not be read by the application.
- 7728** Bad Format file
- The application was unable to read the format file specified in making the chart.
- 7729** Only one page of files can be deleted at a time
- You can only select files to be deleted from a single page at a time.
- 7730** **Warning:** copy box was reduced to fit
- The size of the copy box was adjusted to fit within the selected viewing area. If necessary, change views.
- 7731** Grid display is simplified for this size and view
- To prevent overcrowding of the display, the grid may be simplified to show less detail (for example, after returning to **Full View**).

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- 7732** **Warning:** only 200 names can be listed
- The directory contains more than 200 files and only the first 200 can be displayed.
- 7733** Not enough memory to display all fills
- Too little memory exists for the work area to display some of the fills in the picture on the screen.
- 7734** Replaced unknown fonts, see PICTURE INFO
- There are unknown fonts in the picture and so the font was displayed using the standard font. Select **Show Picture Info** in the Files pop-up menu to display a list of the unknown fonts which must be entered in the [sys]<sys>Graphics.fonts file to be displayed properly.
- 7735** Unknown fonts and cannot display all fills. See **Show File Info**.
- Unknown fonts were displayed using the standard font in addition to too little memory to display some of the fills. Select **Show File Info** in the Files pop-up menu to display a list of the unknown fonts which must be entered in the [Sys]<Sys>Graphics.fonts file to be displayed properly.
- 7795** No picture information to report
- Show File Info** was selected in the Files pop-up menu for an empty .pic file.
- 7796** No printing status to report
- Show Status** was selected in the Print pop-up menu when printing activity is absent.
- 7799** Feature not implemented
- Displays when any selected feature is not coded into the current release of the run file.
- 12002** Only one graphics context allowed
- The Context Manager will only allow one graphics context on B26 or B28 graphics workstations.

- 12098** Parent application was terminated
- OFIS Designer or OFIS Document Designer was terminated before OFIS Graphics transferred back the object being edited. Restart OFIS Designer/OFIS Document Designer and try again.
- 13503** No Message
- OFIS Graphics did not find the desired message in the [Sys]<Sys>ArtChartMsg.bin file.

Appendix B

Installing OFIS Graphics and Configuring Files

This section provides applicable descriptions and procedures for:

- Hardware requirements for workstations, memory, mouse devices, printers, and plotters
- Software requirements
- Installing both OFIS Graphics and a picture library of artwork
- Installing a mouse
- Configuring files necessary for printing
- Setting up picture configuration files

Hardware Requirements

Hardware requirements for OFIS Graphics include a graphics-capable workstation, a mouse, and approximately the following amounts of free disk space:

- 1700 sectors for OFIS Graphics
- 600 sectors for the Text to Pic utility
- 550 sectors for the Pretty Print utility
- 500 sectors for the PIC to CGM utility
- 4000 sectors for the optional picture library
- 200 sectors for the sample chart files

Workstation Requirements

OFIS Graphics requires a graphics slice and monitor which are compatible with your workstation selection. The monitor can be a color, monochrome, or gray scale monitor.

Note: OFIS Graphics displays eight shades of gray when used on the B25-GS1 gray-scale monitor.

OFIS Graphics 3.0 supports the following workstations:

- CP001, CP002, CP003, 286i, and 386i CPUs
- B26, B28, B38, and B39 CPUs
- SuperGen Series 2000, 2300, 3000, and 5000

Your system must have access to a hard disk, either locally or at the cluster server, to store the OFIS Graphics software.

Your system requires a 3-1/2 inch or 5-1/4 inch diskette drive for installing the software from the distribution diskettes.

Memory Requirements

OFIS Graphics requires a minimum of 650KB of memory.

Mouse Requirements

A two-button or three-button mouse makes OFIS Graphics much easier to use. Unisys strongly recommends you use one.

OFIS Graphics 3.0 supports the following pointing devices: PD001, B25-MOU, B25-MO3, SG 100-U, SG-101-U.

Printer Requirements

You can use any graphics-capable printer listed in the *CTOS Generic Print System Administration Guide*.

Plotter Requirements

You can use any graphics-capable plotter listed in the *CTOS Generic Print System Administration Guide*.

You can also choose any one of the following plotters to use with OFIS Graphics:

- Hewlett-Packard Model HP 7470A, 2-pen plotter
- Hewlett-Packard Model HP 7475A, 6-pen plotter
- Hewlett-Packard Model HP 7220C, 8-pen plotter
- Hewlett-Packard Model HP 7550A, 8-pen plotter
- Hewlett-Packard Model HP 7440A ColorPro, 8-pen plotter

Note: *These plotters are not marketed by Unisys Corporation. Unisys does not warrant their suitability of performance in customer applications.*

Software Requirements

OFIS Graphics requires the following cooperating software:

- One of the following operating systems:
 - BTOS II, level 3.2 or higher and Standard Software 12.0
 - CTOS I, level 3.3 or higher and Standard Software 12.1
 - CTOS II, level 3.3 or higher and Standard Software 12.1
 - CTOS III, level 1.0 or higher and Standard Software 12.2
- The Mouse Service which is packaged with your Standard Software

You must load the Mouse Service (called Mouse Server on earlier operating systems) supplied with your Standard Software before you load OFIS Graphics. See the *BTOS Standard Software Operations Guide* or the *CTOS Executive User's Guide* for more information about the Mouse Service.

Optional Software Requirements

You can also install any of the following optional software to use in conjunction with OFIS Graphics:

- **CTOS Generic Print System (GPS), level 2.5 or higher**
GPS is an integrated CTOS printing subsystem which provides local and remote printing, control over network printers, queue management, and font service.
- **CTOS Context/Window Manager, level 4.0 or higher**
This application allows you to run OFIS Graphics concurrently with other software, such as word processing and spreadsheet applications.
- **Enhanced Multiplan, level 2.2 or higher, or OFIS Spreadsheet, level 1.3 or higher**
These spreadsheet applications allow you to create charts and graphs in OFIS Graphics.
- **CTOS OFIS Document Designer, level 3.0 or higher**
This word processing application enables you to include OFIS Graphics pictures in word-processed documents.
- **CTOS OFIS Paint, level 1.0 or higher**
This image editing application enables you to edit images, including OFIS Graphics pictures.

Installing OFIS Graphics

OFIS Graphics software is supplied on 3-1/2 inch or 5-1/4 inch diskettes. The diskettes are write-protected; you should not write-enable them or use them as working copies. Instead, use the **Floppy Copy** command to make copies of the diskettes, and install OFIS Graphics from the copies. Store the originals in a safe place.

You use one of the following Executive commands to install the software: **Software Installation**, **Floppy Install**, or **Installation Manager**.

If you use the **Floppy Install** or **Installation Manager** commands to install OFIS Graphics on a server, cluster workstations can install OFIS Graphics locally by downloading OFIS Graphics software from the server using the **Installation Manager** command. For the procedure to install OFIS Graphics at a cluster workstation using this method, you can refer to **Installing OFIS Graphics from a Server** in this section.

When you activate a software installation command, the system:

- Displays instructions which guide you through the installation process
- Copies executable and data files from the installation diskettes to a hard disk either on your workstation or on the server
- Adds OFIS Graphics Executive commands to a command file on your workstation or on the server, depending on the installation parameters you choose

The software installation procedure automatically updates the configuration files of cooperating applications and gives you the option to update your Context Manager configuration file. (If you need information on manually configuring cooperating applications and Context Manager, see **Configuring Context Manager for Use with OFIS Graphics and Configuring Cooperating Applications for Use with OFIS Graphics** in this section.).

You can refer to the *BTOS II Standard Software Operations Guide* for details about the **Software Installation** command, and to the *CTOS Executive Reference Manual* for details about the **Floppy Install** and **Installation Manager** commands.

Installing OFIS Graphics from the Installation Diskettes

To install OFIS Graphics onto a system, use the following procedure:

1. Power up the workstation and complete the Signon form.
2. Insert your working copy of the first installation diskette in the appropriate drive, for example, **F0**.
3. Type **Floppy Install** in the Executive command field and press **GO**.
4. The system processes several files and displays the Installation Defaults menu. Choose one of the following actions:
 - To install OFIS Graphics on the local workstation, select the **Continue Installation** option and press **GO**.
 - If you are at a workstation and want to publicly install OFIS Graphics onto a server, select the **Examine/Change Defaults** option and press **GO**. On the Installation Parameters menu, select **Yes** for the *Public* parameter value and press **GO**.
5. Follow the displayed instructions to enter parameters, make selections, and change diskettes. When installation is complete, Installation Manager prompts you to exit or continue and install another application.
6. Press **FINISH** to exit Installation Manager.
7. Remove the last diskette from the drive and store your diskettes in a safe place.

OFIS Graphics includes a Picture Library that contains artwork you can use. It is not required to run OFIS Graphics. During software installation, you can choose not to install the Picture Library. This saves space on your local disk. Your server should have the Picture Library installed, and you can copy selected *.pic* files to your disk for local use.

Installing OFIS Graphics from a Server

If OFIS Graphics has been installed publicly on a server using the **Floppy Install** or **Installation Manager** commands, you can use the following procedure to download OFIS Graphics software from the server and install it on a cluster workstation.

To download OFIS Graphics software from a server to a cluster workstation, use the following procedure:

1. Power up the cluster workstation and complete the Signon form.
2. Type **Installation Manager** at the Executive command line, then press **GO**. The system displays the Software Operation menu.
3. Select the **Install New Software** option and press **GO**. The Install Media menu displays the following choices to install from: **Floppy**, **Tape**, or **Server**.
4. Select the **Server** option and press **GO**. The system displays all the software that has been publicly installed.
5. Select the **OFIS Graphics** option, then press **GO**. Installation Manager installs OFIS Graphics on the cluster workstation. When installation is complete, Installation Manager prompts you to exit or continue and install another application.
6. Press any key to exit Installation Manager.

Configuring the User File

Table B-1 describes the keywords and values you can add or edit in your user file to customize OFIS Graphics to suit your preferences. Table B-2 lists keywords that affect OFIS Graphics and its interoperability with other CTOS OFIS applications. See Section 11 for customizing user profiles.

Note: *User profile entries take precedence over user file entries.*

Table B-1. OFIS Graphics User File Keywords

Keyword	Description
:ArtChartDefaultOutputPaper:	Defines a default paper size. The default value is Letter (letter-size paper, 8.5" by 11"). You can also specify A4.
:ArtChartDefaultPrinter:	Defines the device name of a default print device. Specifying a device name causes that device name to be already selected when OFIS Graphics displays the device list, which saves you from having to select the device every time you want to print an OFIS Graphics picture. You can specify the device name of any device capable of printing OFIS Graphics pictures. Note: <i>If you specify a value for this keyword, it overrides (in OFIS Graphics) a value for the similar keyword :GPSDefaultPrinter:.</i>
:ArtChartLeftHanded:	Defines the operation of the left and right buttons on the mouse. The default, No , causes the left mouse button to select tools, menus, and objects, and the right button to deselect them, or to enlarge a box cursor. If you prefer to use the mouse with your left hand, you may want to reverse the functioning of the mouse buttons by specifying Yes to this keyword. Note: <i>If you specify a value for this keyword, it overrides (in OFIS Graphics) a value for the similar keyword :LeftHanded:.</i>

Table B-1. OFIS Graphics User File Keywords (cont.)

Keyword	Description
:ArtChartMouseSpeed:	<p>Defines the speed of the cursor relative to that of the mouse. You can specify a value from 1 to 10. The default is 4.</p> <p>Higher values cause the cursor to move more closely to the speed you move the mouse; lower values cause the cursor to move less quickly than the mouse.</p> <p>Note: <i>If you specify a value for this keyword, it overrides (in OFIS Graphics) a value for the similar keyword :MouseSpeed:.</i></p>
:ArtChartSkipGfxPtrCheck:	<p>Specifying Yes to this keyword causes OFIS Graphics to omit checking a device (a printer or plotter) to make sure it can print OFIS Graphics pictures before listing it in the device list.</p> <p>If you are certain about which devices in your device list can print OFIS Graphics pictures, you can specify Yes to this keyword to speed up printing from OFIS Graphics.</p> <p>If you specify Yes and inadvertently send an OFIS Graphics picture to be printed by a device that cannot print OFIS Graphics pictures, there will be no output.</p> <p>The default for this keyword is No, which causes OFIS Graphics to check a device for graphics capability before displaying it in the device list.</p>
:ArtChartUserProfile:	<p>A complete file specification that identifies a customized <i>OGConfig.sys</i> user profile. See Section 11, Customizing User Profiles, for more information on user profiles.</p>
:ArtChartViewFilesMemory:	<p>Defines the amount of memory in bytes used by View Files for the file list. Default is 2048 bytes.</p> <p>To increase the memory (view more files), specify a value greater than 2048 in increments of 512 bytes. Maximum is 65536 bytes.</p> <p>If you specify a value inconsistent with a multiple of 512 bytes, OFIS Graphics rounds down the number to the nearest value divisible by 512.</p>

Table B-2. Related User File Keywords

Keywords	Description
:ArtChartWorkProtectPath:	Defines the path in your .user file where temporary files are saved by the Work Protect function. See Section 2 for more information on Work Protect.
:OFISGrfxDefPalette:	Defines the color palette file OFIS Graphics uses. The default palette file is <i>[Sys]<Sys>XPalette.pl</i> .
:SysPrinters: :DDConfig.Sys:	See your word processor documentation
:MouseSpeed: :LeftHanded: :MouseAcceleration:	See your Standard Software documentation, under Mouse Service
:GPSDefaultPrinter:	See your Generic Print System (GPS) documentation
:GraphicsFonts:	Allows you to specify a filename for the graphics font file. The default is <i>[Sys]<Sys>Graphics.fonts</i> .

Configuring Context Manager for Use with OFIS Graphics

The software installation process offers you the option of updating your Context Manager configuration file. However, if you install Context Manager after you have installed OFIS Graphics, you must update your Context Manager configuration file manually. Table B-3 contains the information you need to enter in your Context Manager configuration file.

To install OFIS Graphics with Context Manager, use the following procedure:

1. At the Executive command line, type **CM Editor**.
2. Press **GO**. Follow the instructions on the screen to enter the CM Editor.
3. Press **F9** to access the ICMS function.
4. Enter **[Sys]<Sys>ICMS.run**.
5. Press **GO**. The system displays the CM Editor fields.
6. In the *Run File Name* field, type **[Sys]<sys>OFISGraphics.run**.
7. In the *Memory* field, type **650**.

***Note:** 650 kilobytes is the minimum recommended memory allocation; enter a larger figure if you expect to edit pictures with many objects.*

8. In the *Abbreviation* field, type **O Grfx**
9. In the *Command Case* field, type **00**
10. In the *Needs Exec Screen* field, type **N**
11. Press **F10** to access the More function.
12. Type the following keywords and values:
:OFdObjectEdited:257
:XMpGraphics:1
13. Press **FINISH**, then **GO** to save your changes and exit the CM Editor.

Table B-3. Application Information for Context Manager

Run file name	[Sys]<Sys>OFISGraphics.run
Run file version	6
Runs in Protected Mode	yes
Minimum memory required	650KB
Maximum memory required	
Able to be swapped	yes
Needs Executive screen	no
Loads own font	no
Loads own keyboard translation table	no
Directly manipulates the video	no
Keywords and values you enter in the <i>More</i> field	:OFdObjectEdited:257 :XMpGraphics:1

For more information about Context Manager, refer to the *CTOS Context/Window Manager Installation and Configuration Guide Volume 1: Real Mode*, and the *CTOS Context/Window Manager Installation and Configuration Guide Volume 2: Protected Mode*.

Configuring Cooperating Applications for Use with OFIS Graphics

If you want to transfer objects (pictures) between OFIS Graphics and OFIS Designer or OFIS Document Designer, you can either use Context Manager to switch between contexts, or you can chain from one application to the other.

The advantages of transferring objects by each method are:

- Using Context Manager is faster, but requires more memory. See *Configuring Context Manager for Use with OFIS Graphics* earlier in this section.
- Chaining from one application to another requires less memory, but is slower. See the documentation for the appropriate cooperating application.

Either method requires that information identifying OFIS Graphics as a cooperating application be placed in configuration files. The installation process normally adds the information automatically. However, if the information is absent (for example, because you installed OFIS Graphics before OFIS Designer or OFIS Document Designer), you can add it manually.

Configuring the OFIS Designer and OFIS Document Designer Chaining Configuration File (DDConfig.Sys)

The procedure for editing the OFIS Designer and OFIS Document Designer chaining configuration file is described in the *CTOS OFIS Document Designer / OFIS Document Writer System Administration Guide*.

The chaining configuration file must contain the following information identifying OFIS Graphics as a cooperating application:

:CommandName:OFIS Graphics

:RunFileName:[Sys]<Sys>OFISGraphics.run

:OFdObjectEdited:257

:XMPGraphics:1

Note: *If you have installed OFIS Graphics on a path other than [Sys]<Sys>, specify that path in place of [Sys]<Sys>.*

Configuring for Plotting

You have the option of using a plotter directly through OFIS Graphics. This requires configuration files, which you access through the Executive.

Setting Up for a Plotter

Your plotter must have the following hardware settings to print an OFIS Graphics file.

Direct Plotting Configuration

The switch settings on the plotter must correspond to the entries in this file.

To set your plotter for direct plotting, use the following procedure:

1. At the Executive command line, type **Create Configuration File**.
2. Press **RETURN**. The system displays the *Create Configuration File* fields.
3. In the *Configuration file name* field, type **[sys]<sys>plotterconfig.sys**
4. In the *Device type* field, type **comm**.
5. Press **GO**. The system displays the Communications Parameters form.
6. In the *Data bits* field, type **7**.
7. In the *Parity* field, type **0**.
8. In the *Baud rate* field, type **2400**.
9. In the *Stop bits* field, type **1**.
10. In the *Transmit time out* field, type **60**.
11. In the *Receive time out* field, type **60**.
12. In the *CR/LF Mapping Mode* field, type **binary**.
13. In the *New line mapping mode* field, type **binary**.
14. In the *Line control* field, type **XON/XOFF**.
15. In the *EOF byte* field, type **04**.
16. Press **GO**.

Spooled Plotting Configuration

The switch settings on the plotter must correspond to the entries in this file.

To set your plotter for spooled plotting, use the following procedure:

1. At the Executive command line, type **Create Configuration File**.
2. Press **RETURN**. The system displays the Create Configuration File fields.
3. In the *Configuration file name* field, type **[sys]<sys>HPplotterconfig.sys**.
4. In the *Device type* field, type **serial**.
5. Press **GO**. The system displays the Serial Line Printers Parameters form.
6. In the *Data bits* field, type **7**.
7. In the *Parity* field, type **0**.
8. In the *Baud rate* field, type **2400**.
9. In the *Stop bits* field, type **1**.
10. In the *Transmit time out* field, type **60**.
11. In the *New line mapping mode* field, type **binary**.
12. In the *Line control* field, type **XON/XOFF**.
13. In the *Tab expansion size* field, type **8**.
14. In the *Number of characters per line* field, type **132**.
15. In the *Translation* field, type **none**.
16. Press **GO**.

Configuring a Plotter for Direct or Spooled Output

To plot an OFIS Graphics file, you must have specific plotter configuration files installed on your system. You need only those files that correspond to your particular plotter. If the correct files are not already present on your system, you can create them using the CTOS Editor.

The following instructions describe how to configure your system for direct and/or spooled plotting. The appropriate *Sys.printers*, *Queue.Index*, and *SplCnfg.sys* sample configuration files are listed after the configuration directions.

Direct Plotting (without Generic Print System)

To configure a server or cluster workstation for a plotter that is connected directly to that workstation, use the following procedure.

1. Set the path to *[Sys]<Sys>* at your workstation.
2. On the Executive command line, type **Type**.
3. Press **RETURN**. The system displays the Type fields.
4. In the *File list* field, type **Sys.printers**.
5. Press **GO**. The system displays entries similar to the following:

Sys.printers:

Laser:

```
[Laser], [Ptr]B&[Sys]<Sys>LaserConfig.Sys:  
APLaser
```

Parallel:

```
[Spl], [Lpt]&[Sys]<Sys>LptConfig.sys:  
Draft
```

HP7470A:

```
[Comm]A&[Sys]<Sys>PlotterConfig.Sys, [HP7470A]:  
HP7470A
```

Typed Sys.printers

6. Be sure an entry exists in this file for each plotter that is connected directly to the workstation.

7. If no entry exists, use the **Edit** command to edit *[Sys]<Sys>Sys.printers* using the appropriate entry listed under *Sample Sys.printers Entries*.
8. After adding the appropriate plotter entry, press **FINISH**.
9. Press **GO** to save your changes and exit the Editor.

Spooled Plotting (without Generic Print System)

To configure your system for a plotter that is available to several workstations, check and append the *Queue.Index* and *Splcnfg.sys* files using the **Type** and **Edit** commands, as described in this section for the *Sys.printers* file under Direct Plotting.

Examples of Configuration Files

The following configuration files correspond only to the Hewlett-Packard plotters listed previously. Be sure you have installed or created the correct file for your plotting device, and that the different files correspond to each other. For example, if you have an entry for the HP 7470A plotter in the *Queue.Index* file, you must also have an entry for that plotter in the *Sys.printers* and the *SplCnfg.Sys* files.

You should use these example entries for reference only. Do not copy them to your system.

Example of Sys.printers Entries

Entries in the *Sys.printers* file use the following format:

Friendly name:Device specification:Text type:Graphics type

Friendly name: Any nickname or alias for your plotter or printer. The friendly name can be any character or character string you want, for example, Spooler B or Ruth.

Device specification: Specifies a direct and/or spooled output device. If your printer or plotter is directly connected to your workstation, the device specification is a configuration file (for example, *[Comm]A&[SYS]<sys>PlotterConfig.sys*).

If your printer or plotter is spooled, the device specification is a queue name, for example, *[HP7475A]* or *[SPL]*. You can enter both specifications in one *Sys.printers* entry if your device can operate either directly or spooled; OFIS Graphics determines the entry to read for appropriate commands.

Text type: Used by applications that read text, such as a word processor or Multiplan. The field enables applications to distinguish the type of text printer. (Note that this field is empty in the following sample *Sys.printers* entries, because OFIS Graphics plots only to a graphics output device.)

Graphics type: Used by graphics applications to determine the type of graphics formatting information it must send to the printer or plotter. This field is empty for any output device that recognizes only text. Note, however, that some output devices recognize both graphics and text, and have entries for both the *Text type* and *Graphics type* fields.

The following *Sys.printers* entries are correct entries for both direct and spooled plotting.

```
HP7475A: [Comm]A&[SYS]<sys>  
PlotterConfig.sys, [HP7475A]::HP7475A
```

```
HP7470A: [Comm]A&[SYS]<sys>  
PlotterConfig.sys, [HP7470A]::HP7470A
```

```
HP7220C: [Comm]A&[SYS]<sys>  
PlotterConfig.sys, [HP7220C]::HP7220C
```

```
HP7220T: [Comm]A&[SYS]<sys>  
PlotterConfig.sys, [HP7220T]::HP7220T
```

```
HP7550A: [Comm]A&[SYS]<sys>  
PlotterConfig.sys, [HP7550A]::HP7220C
```

```
HP7440A: [Comm]A&[SYS]<sys>  
PlotterConfig.sys, [HP7440A]::HP7220C
```

Example of Queue.Index Entries

Entries in the *Queue.Index* file use the following format:

Queue name/File specification/# sectors per entry/Queue type

Queue name: A unique, user-defined name for the print queue. This name must not exceed 50 characters.

File specification: Refers to the file that stores the queue entries when several devices are queued for printing or plotting.

sectors per entry: Specifies the size of a queue entry field in 512byte units. The standard entry size is 1.

Queue type: Specifies the type of queue; for example, 1 refers to a printer/plotter spooler queue, and 2 refers to an RJE queue.

The following *Queue.index* entries correspond to the HP plotters listed in this section.

You must have the SPOOLERSTATUS entry of this file as well as both *Queue.Index* entries that correspond to your plotter.

```
SPL/[SYS]<spl>SPL.QUEUE/1/1
PARALLELCONTROL/[SYS]<Spl>
PARALLELCONTROL.QUEUE/1/1
SERIALCONTROL/[sys]<Spl>
SERIALCONTROL.QUEUE/1/1
SPLB/[SYS]<SPL>SPLB.QUEUE/1/1
SPOOLERSTATUS/[SYS]<spl>
SPOOLERSTATUS.QUEUE/1/1

HP7475A/[SYS]<spl>HP7475A.queue/1/1
HP7475ACONTROL/[SYS]<spl>
HP7475ACONTROL.queue/1/1

HP7470A/[SYS]<spl>HP7470A.queue/1/1
HP7470ACONTROL/[SYS]<spl>
HP7470ACONTROL.queue/1/1

HP7220C/[SYS]<spl>HP7220C.queue/1/1
HP7220CCONTROL/[SYS]<spl>
HP7220CCONTROL.queue/1/1
```

continued

Queue.Index entries (cont.)

```
HP7220T/[SYS]<spl>HP7220T.queue/1/1  
HP7220TCONTROL/[SYS]<spl>  
HP7220TCONTROL.queue/1/1
```

```
HP7550A/[SYS]<spl>HP7550A.queue/1/1  
HP7550ACONTROL/[SYS]<spl>  
HP7550ACONTROL.queue/1/1
```

```
HP7440A/[SYS]<spl>HP7475A.queue/1/1  
HP7440ACONTROL/[SYS]<spl>  
HP7440ACONTROL.queue/1/1
```

Example of SplCnfg.Sys Entries

Entries in the *SplCnfg.Sys* file use the following format:

Channel/Friendly nm./Queue nm./Ptr.config.file/Priority/Banner

Channel: Specifies the port to which the plotter is connected. Enter either **A**, **B**, or **0** in this field, depending on the specific serial (A, B) or parallel (0) port used.

See the definitions of **Friendly name** and **Queue name** in this section.

Printer configuration file: Refers to the configuration file that contains the specific configuration settings (for example, baud rate and parity) for your plotter. Because your plotter is spooled, this entry reads *HPPlotterConfig.sys*.

Priority: Value set between 129 and 254.

Banner: Determines if a banner page is to be printed at the beginning of each file. The default for this entry is **N** (no).

The following sample *SplCnfg.sys* entries correspond to the HP plotters listed in this section.

```
A/HP7475A/HP7475A/[SYS]<sys>HPPlotterConfig.sys/130/n  
B/HP7470A/HP7470A/[SYS]<sys>HPPlotterConfig.sys/130/n
```

A variety of combinations exists for these entries, only two sample entries are included here.

Text to PIC Configuration Files

If no configuration file is specified, the Text to Pic utility uses a default picture configuration file, named *[Sys]<Sys>TTPConfig.Sys* to control how a generated **.pic** file appears.

The picture configuration file defines the:

- Color selections of the palette
- Normal text color for the converted text
- Default font (that is, the typeface and pitch size)
- Default point size
- DEF file character attributes
- DEF file equivalent vector fonts for the converted text with specified point size
- Orientation of the work area

You can modify this file if you want. You can use your own files, with special names, that have specific combinations of color, font, and orientation.

Structuring the Picture Configuration File

You structure the picture configuration file with text strings to specify the formatting parameters of the picture file.

In the *NormalTextColor* parameter, you can type any defined color number (for example, Color1...Color7) for the text.

In the *DefaultFont* parameter, you can type one of the available user-friendly font names (in the first column below, such as Standard) found in *[Sys]<Sys>Graphics.fonts*:

Standard:	SimplexRoman:	[Sys]<Sys>Graphics.fonts:
Complex:	ComplexRoman:	[Sys]<Sys>ComplexRoman.font
Bold:	DuplexRoman:	[Sys]<Sys>DuplexRoman.font
Gothic:	Gothic:	[Sys]<Sys>Gothic.font
Block:	Block:	[Sys]<Sys>Block.font
Script:	Script:	[Sys]<Sys>Script.font

In the *TextAttribute:ColorN* parameter you can define attributes like normal, bold, alternate ribbon and bold alternate ribbon. The named text attribute is represented by color N in the picture file.

Any occurrence of a word processor font in the document is replaced by the user-specified equivalent vector font name. The entry format is as follows:

```
Font:WpFontName:EquivalentVectorFontName:Pitch:# or Point:#
```

A maximum of 20 such entries are allowed. The remaining entries are discarded, and any of these fonts found in the DEF file are replaced by the default font and point size.

Since the orientation of a picture must be set before objects go in the work area, you must set the orientation in the picture configuration file first.

A typical configuration file looks like the following:

```
:Color1:White:R3G3B3
:Color2:Green:R0G3B0
:Color3:Blue:R0G0B3
:Color4:Magenta:R3G0B3
:Color5:Red:R3G0B0
:Color6:Orange:R3G2B0
:Color7:Brown:R2G1B0
:NormalTextColor:Color1
:BoldTextColor:Color2
:AlternateRibbonColor:Color3
:BoldAlternateRibbonColor:Color4
:DefaultFont:Standard

:Font:Courier 72:Block:Pitch:12
:Font:Elite 12 ASCII:Complex:Point:12
:Font:Scientific 10:Bold:Point:10
:Font:Letter Gothic 12:Gothic:Pitch:12
:Orientation:Landscape
:TextTabWidth:8
:DefaultPointSize:12
```

You must specify the font point or pitch and the value of each, for all font entries.

For text attributes, use the exact field names as given above and in the default configuration file.

If you make a special picture configuration file, you can put the parameters in any order. You must put a line feed (that is, a standard carriage return in the Editor) at the end of each line.

Though you may enter the parameters in any order, the left-most field names (for example, Color1) must appear exactly as they do in the default configuration file. You may change the red-blue-green values (R3G3B3), but you must use the range 0-3.

Note: *You may put spaces between field names (first entries) and values, but not within the value or field name itself.*

For more information, refer to the *CTOS Generic Print System Administration Guide*.

Appendix C

Transferring PIC Files Created on Other Products

This appendix describes how to transfer files created by other applications into OFIS Graphics.

Transferring Earlier Graphics Files

OFIS Graphics lets you load **.pic** files created with:

- BTOS Draw 2.1 or higher
- BTOS Business Graphics Package (BGP) 5.2 or higher
- BTOS Graphics II 2.1 or higher

Once you save these files in OFIS Graphics, you cannot reopen that file in BGP. To reopen the file in the other application. Therefore, you must make a copy of that file and rename it before you open it in OFIS Graphics.

Note: If you use a BGP chart format with OFIS Graphics, the charts you create may have misplaced labels. *Reposition those labels using the OFIS Graphics Text tools, and save the chart format file.*

Screen Color and Color Palette

In each CTOS graphics package (BGP, Draw, and OFIS Graphics), the screen is drawn in color #1 from the color palette. For example, in OFIS Graphics, color #1 is white; therefore, the screen appears white. You can modify the color palette in Draw, and the Draw screen displays whichever color you designate as color #1 in the color palette.

When the file is loaded, OFIS Graphics uses the current palette. The screen displays the same color as the previous application screen (in this case, color #1 from the Draw palette). The screen defaults to its own screen color (white) and color palette when another **.pic** file is opened in the alternate work area. See Section 7, Adding Colors and Fills and Changing Lines, for palette tools.

Making Color #8 Visible

Objects created in BGP or Draw using color #8 are invisible when their file is opened in OFIS Graphics. These objects still exist. To make them visible, you must change their color to one of the seven colors available in OFIS Graphics.

Try to remember the approximate position of the objects using color #8 as they existed in BGP, since they are invisible in OFIS Graphics.

To make color #8 objects visible, use the following procedure:

1. Use the **Pick** tool to select the approximate position of the missing objects in the work area.

You can locate the missing object when it is surrounded by a highlighted box.

2. Select one of the available colors.

The object is displayed in the work area in the color you selected.

Glossary

A

active.

Describes work areas and tools. An active work area is the one in which you are working; an active tool is the icon you can currently use to add or modify objects.

application.

A software program that accepts information as input. The application then provides processed data as output.

arrow keys.

Move the cursor in the direction of the arrow when the key is pressed. In OFIS Graphics, this alternative to using a mouse, requires you to hold the **SHIFT** key and press an **ARROW** key.

attribute.

A quality added to an object, text, or a chart such as fill pattern and line type or size.

B

BGP.

An acronym for Business Graphics Package.

block.

A line of text which OFIS Graphics considers a single object.

Business Graphics Package (BGP).

A BTOS application that creates charts from Enhanced Multiplan data. A BGP .pic file can be transferred to OFIS Graphics; however, once you open it in OFIS Graphics, that file cannot be transferred back to BGP.

BTOS.

A Unisys workstation/server/cluster operating system.

C

cell.

An entry in a line chart along the X-axis.

CGM.

See Computer Graphics Metafile

character.

Any alphanumeric or punctuation symbol entered from a workstation's keyboard.

chart.

The graphic representation of numerical information.

chart format.

The design (line, stacked or comparative bar, or pie format) without any numerical information.

clear.

A function that removes all shapes, fills, and text from the work area. If you clear the work area, any changes from the last save are lost and unrecoverable.

click.

The act of selecting an icon or function. The click action requires you to press and release the **MARK** button.

cluster workstation.

A workstation that is connected to a server (formerly master) in a cluster configuration.

color palette.

Displays the colors you can assign to objects, charts, or text.

comparative bar chart.

Has all information displayed side-by-side.

Computer Graphics Metafile.

A set of basic elements for a computer graphics data interface usable by many graphics-producing systems and applications

Context Manager.

An application that enables OFIS Graphics to run concurrently with other software, such as word processing and OFIS Spreadsheet applications.

CTOS.

A Unisys workstation/server/cluster operating system.

cursor.

The symbol in the display which moves when keys are pressed or the mouse is moved across a surface. In OFIS Graphics, a variety of icons represent the cursor.

D

default.

The attribute to which OFIS Graphics is already set. You can specify the values of some defaults.

deselect.

The action of removing an object from being affected by OFIS Graphics functions. This action is accomplished by using the **Unpick** tool.

directory.

Where a group of files are kept. It is an area on your workstation's designated hard disk drive.

disk.

A magnetic medium that stores electromagnetic signals. Your picture files are stored on a disk, either a hard disk in your workstation or a diskette which you insert into the workstation's diskette slot.

diskette.

A diskette is a reusable magnetic storage device that records and stores information.

document exchange format (DEF).

An intermediary file format that facilitates the transfer of files between various word processing applications while preserving the formatting information in the document.

dot matrix printer.

A machine that forms images with dots by impacting paper with a series (matrix) of styluses to transfer ink.

Draw.

A graphics application that creates .drw files that can be transferred to BGP. Once in BGP, a Draw file can be transferred to OFIS Graphics.

drawing tools.

Tools that can create new lines or shapes. The actual tools are called **Connected Line, Sketch, Curve, Square, and Circle.**

dual layout.

Allows you to see both work areas.

E

editing tools.

Tools that can reposition and copy lines or shapes. The actual tools are called **Reposition, Copy, Reorder, and Align to Grid.**

Enhanced Multiplan.

A BTOS spreadsheet application that enables you to create charts and graphs. You can then modify them in OFIS Graphics.

Executive.

The CTOS program that controls access to other applications and information on a workstation.

exploded.

A pie chart segment that is pulled away from the main chart to emphasize it.

F

file.

Exists in a directory on a disk. When you save a picture, a file stores all objects and attributes put into that single work area.

fill palette.

Displays the patterns that you can assign to fill drawings and charts.

font.

A type style, that is, the size and appearance of the characters in an alphabet.

format file.

A file that contains data specific to chart formats. Format data includes color, fill patterns, text attributes, and any special attributes that you specify. It does not include text or graphics objects that are added to the chart.

function keys.

Located at the top of the keyboard (labelled **F1** through **F10**) and correspond to the Function menu in the OFIS Graphics display.

Function menu.

Located at the bottom of the OFIS Graphics display. It shows the screen functions, pop-up menus, and a Help menu corresponding to the function keys on the keyboard.

G

Generic Print System (GPS).

Installed as a system service for OFIS Graphics printing. GPS is a set of interrelated programs and library routines, which together provide device independence for printing and procedures for tracking and controlling hard-copy output in a CTOS network.

grab.

The action of selecting a handle on an object when the **Reposition**, **Reorder**, or **Align to Grid** tools are active.

Graphics Library.

An application programming library that allows you to create files.

grid.

An optional network of dots that overlay the work area to help in alignment and size estimates.

GPS.

See Generic Print System.

H

handles.

Appear on a selected object when you use the **Reposition**, **Reorder**, and **Align to Grid** tools. You grab these handles to perform some operations on an object.

Highlight.

Highlight distinguishes or emphasizes data on a screen by changing the light intensity. In OFIS Graphics, highlighting shows what object is currently picked.

I

icon.

A symbol representing an OFIS Graphics tool or function. For example, a pointing finger is the **Pick** icon, which you use to select objects.

increment.

Refers to what multiple of units of measurement are indicated by grid dots.

J

justification.

Refers to how text is lined up. This lining up can be center with equal amounts of letter on both sides of a central point, left with all letters lined up on the left side, and right with all letters lined up on the right side.

L

landscape.

A horizontally oriented picture on a page when printed. See portrait.

laser printer.

A machine that forms images with a beam of light on a light-sensitive field and then transfers the images to paper one page at a time.

layout.

Can be either single, where one work area fills the display, or dual, where both work areas are visible in the display.

Layout icon.

The symbol, in the OFIS Graphics display, that you select to see only one or both work areas.

legend.

Any descriptive text or symbols used on a chart.

line chart.

A chart with lines that show information.

line palette.

Displays the line types that you can assign to objects and charts.

M

memory gauge.

The area, in the OFIS Graphics display, that shows approximately how much memory remains for the current picture file.

menu.

A portion of the screen that contains icons or function labels. You select OFIS Graphics functions from a menu. There are three types of menus: pop-up menus, tools menus, and the Function menu.

mouse.

A mechanical pointing device which you move over a surface to move the cursor in the OFIS Graphics display. You can then select objects, text, and menus, and use the selected tools.

O

object.

Any line, shape, line of text, or chart entered in an OFIS Graphics file.

OFIS Document Designer.

A comprehensive document design application that enables you to merge text with OFIS Graphics pictures.

OFIS Spreadsheet.

A CTOS spreadsheet application that enables you to create charts and graphs. You can then modify them in OFIS Graphics.

operating system.

The software program that provides the computer's basic operating instructions.

orientation.

How the work area is set up. It can be landscape (wider than it is tall) or portrait (taller than it is wide).

orientation indicator.

Located inside the upper picture tab. This icon indicates the orientation of the corresponding picture (landscape or portrait).

P

palette.

The area, in the OFIS Graphics display, that shows tools for drawing, text, or charts and for selecting colors, lines, and fill patterns.

path.

The specific node, volume, and disk location of your picture files.

.pic file.

The suffix .pic stands for picture file.

pica.

A pica is a text size measurement that equals approximately 1/6 inch, or 12 points.

pick.

The action of selecting a tool, work area, object, or file name to activate it for use.

picture configuration file.

Contains text strings which specify the characteristics of a generated picture file.

picture (.pic) file.

Created using OFIS Graphics or Business Graphics Package. For example, an OFIS Graphics file called *Figure 2-1* appears as *Figure 2-1.pic* when listed through the Executive.

picture library.

A collection of online pictures included with the Art Designer software, located in *[sys]<pictures>* (unless otherwise specified during installation).

picture tab.

The area in the OFIS Graphics display that shows the name of the file which appears in the work area.

pitch.

A text size measurement that equals the number of characters per inch (cpi).

pie chart.

A circular chart with all segments joined in the middle as wedges of the pie.

plotter.

A machine that prints and forms images by moving mechanical arms with pens to lay down ink.

point.

1. A text size measurement that equals approximately 1/72 of an inch.
2. The location where two line segments meet; for example, the corner of a rectangle.

pop-up menu.

A menu that is accessed through the Function menu on the OFIS Graphics display. The pop-up menu shows options for various screen functions.

portrait.

A vertically oriented picture on a page when printed. See landscape.

Q

Quick Unpick.

A tool that appears at the location of the cursor when either the middle mouse button is pressed or **CODE+M** is pressed on the keyboard. Choose it to deselect an object.

S

scatter chart.

A chart with symbols showing information instead of lines.

scatter line chart.

A chart with both symbols and lines to show information.

segment.

1. A sector-shaped portion of a pie chart.
2. A straight line between two points. For example, the left side of a rectangle between both upper-left and lower-left corners.

select.

The action of choosing a tool, work area, object, or file name to activate it for use.

server workstation.

Provides a file system, queue management facility, and other services to all cluster workstations that are connected to it. In addition, it supports its own interactive programs and application systems.

shaping tools.

The four tools used to change and refine the shape of objects. They are: **Connected Move**, **Sculpt**, **Connected Line Replace**, and **Sketch Replace**.

single layout.

Displays one of the work areas at a time.

spooler.

A system that controls the order in which files are printed. A spooler enables several workstations to share one output device.

stacked bar chart.

All information displayed one on top of the other.

starting point.

The beginning point for the object about to be drawn. With each of the five basic drawing tools, the object begins at and grows from the starting point.

suffix.

Added by the system to the end of a file name as an identifier. For example, an OFIS Graphics file called *Figure 2-1* appears as *Figure 2-1.pic*.

T

text file.

An unformatted, word processed file or a file typed directly through the CTOS Editor. OFIS Graphics can convert text files to picture (.pic) files.

text to pic.

A program that creates charts from text.

Tool Palette.

Displays the tools to create and modify drawings, text, and charts. A different tool palette is displayed for each of these three tasks.

U

unit.

Refers to what unit of measurement is set up on a grid.

unpick.

The action of removing an object from being affected by OFIS Graphics functions. This action is accomplished by using the **Unpick** tool.

V

vector.

A term that describes how a system draws lines and curves from a set of points grouped in a predetermined order.

vector fonts.

A graphics font type where the character size can be varied.

view.

That portion of a picture you can see, which may differ depending on whether you zoom in for detail or have a picture in full view.

view areas.

Appear when you select **View Files**. The view areas are side-by-side areas in which you view pictures. While the view areas are displayed, the Tools menu is replaced by the Path menu.

W

work area.

That portion of the display screen in which you create drawings, charts, and text. You can choose to use one or both work areas (one at a time).

workstation.

The display screen, central processing unit, and keyboard with or without local file storage. This term describes any Unisys BTOS/CTOS workstation such as B26, B28, B38, B39, and SuperGen Series 2000, 3000, and 5000.

WP file.

A text file created using a CTOS word processing application such as OFIS Writer, OFIS Designer, and OFIS Document Designer.

Z

Zoom.

Allows you to expand a portion of an object to work on its detail.

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43933902-000



Product Information Announcement

New Release Revision Update Errata

Title:

CTOS® OFIS® Graphics 3.0 Operations Guide

This Product Information Announcement (PIA) announces the release and availability of the *CTOS OFIS Graphics Operations Guide*, release 3.0, part number 4393 3902-000.

This guide contains instructions, procedures, and examples on how to install and use CTOS OFIS Graphics. It also contains features new to this release and corrections to the 2.2 release of the *CTOS OFIS Graphics Operations Guide*.

To order additional copies of this document:

- Customers in the United States can call Unisys Direct at 1-800-448-1424
- All other customers can contact their Unisys representative
- Unisys personnel can order through the Electronic Literature Ordering (ELO) system

Please address all technical and documentation comments relative to this release to:

Unisys Corporation
Product Information
5155 Camino Ruiz
Camarillo, CA 93012

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SRA Announcements only:
BT012, BT014, BT016,
BT114, BT144, SW

All Announcements:
BT011, BT013, BT015,
BT113, BT143, SW

System: CTOS
Release: OFIS Graphics 3.0
 (July 1993)
Part Number: 4393 3902-000

UNISYS

Dear Customer,

This cover letter contains valuable inventory information to help you verify that you have received all product components that you ordered. If you have any questions about the completeness or condition of this package, please call your Unisys representative.

Thank you for choosing Unisys.

System:	CTOS[®]
Product Name:	CTOS OFIS[®] Graphics
Release Level:	3.0.0
Date:	July 1993
Media:	3 1/2-inch diskette

Product Styles:	NP25-OG3
	UP25-OG3

Workstation/Server Types:	B26, B28, B38, B39, SG2000, SG3000, SG5000, XE520, XE530
---------------------------	---

The following product component table contains:

- Name and part number for each product component
- Checklist boxes you can use to confirm that the shipment is complete

Information on the new features of Unisys CTOS OFIS Graphics can be found in the *CTOS OFIS Graphics 3.0.0 Software Release Announcement*.

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Product Components Checklist

Note: Part numbers are for verification of shipment only. Refer to the CTOS OFIS Graphics 3.0.0 Software Release Announcement for ordering information.

Part Description	Part Number	✓
Documentation		
<i>CTOS OFIS Graphics 3.0.0 Cover Letter</i>	4393 4710-000	✓
<i>CTOS OFIS Graphics 3.0.0 Software Release Announcement</i>	4393 3639-000	<input type="checkbox"/>
<i>CTOS OFIS Graphics 3.0.0 Operations Guide</i>	4393 3902-000	<input type="checkbox"/>
1 1/2-inch binder and slipcase	—	<input type="checkbox"/>
Software		
CTOS OFIS <i>Graphics 3.0.0</i> 3 diskettes, 3 1/2-inch, for styles NP25-OG3 or UP25-OG3	3765 2617-000	<input type="checkbox"/>
1 vinyl diskette holder	—	<input type="checkbox"/>

UNISYS

Software Release Announcement

CTOS® OFIS® Graphics 3.0.0

product acronyms:

OFIS Graphics

product aliases:

NP25-OG3
ML25-OG3
UP25-OG3
UL25-OG3

You can order additional copies of this document through your branch representative or from Unisys Corporation, Corporate Software and Publications Operations, 13250 Haggerty Road North, Plymouth, Michigan 48170.

Distribution lists:

UML: BT011, BT012, BT015, BT016, BT113,
BT114, BT143, BT144, SW

URC: 114, 120, 122, 224, 225, 228, 231,
307, 502

System:

CTOS

Release

3.0.0

July 1993

Part Number:

4393 3639-000

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Section 1

General Description

This section contains:

- An introduction to the Software Release Announcement (SRA)
- A concise description of CTOS OFIS Graphics 3.0.0 software, including major options and important new or existing features, and information on related families of products
- CTOS OFIS Graphics 3.0.0 product style names and available distribution media you can order

Introduction

Unisys uses a Software Release Announcement (SRA) to announce a new product release. An SRA:

- Provides you with technical details about the release
- Describes interdependencies with other software and hardware products
- Describes migration considerations
- Provides you with ordering information
- Complements marketing, sales, and other customer product information and lists additional sources of information

You can order extra copies of this SRA. You can also subscribe to Universal Mailing List (UML) codes to receive future Software Release Announcements automatically as they become available.

Product Description

CTOS OFIS Graphics 3.0.0 is part of the CTOS and OFIS families of integrated and cooperating products. It is a two-dimensional vector graphics drawing package that enables you to create business charts, freehand drawings, and text and combine them into pictures. These pictures can be integrated into word-processed documents and migrated to the CGM format.

How to Order OFIS Graphics

Section 10 contains complete ordering information.

Note: *CTOS OFIS Graphics 3.0.0 is available on both 5 1/4-inch and 3 1/2-inch media.*

Section 2

Release Functionality

This section describes the new and enhanced features in CTOS OFIS Graphics 3.0.0.

New Features

New features provided in CTOS OFIS Graphics 3.0.0 are described below.

3D Charts

You can choose a three-dimensional (3D) depth for your bar and pie charts. You can also select an angle of view for a pie chart.

Drawing Tools and Menu Enhancements

You can use the new Curve Replace Tool in drawings to replace segments with curves. You can also control the direction of the Curve Tool curvature with the new CODE+C accelerator. The Drawing Tools side menu now displays all the drawing tools within a single menu.

Work Protect Feature

To lessen the impact of a system failure (where all your work is lost), you can now choose to automatically let OFIS Graphics save your work area images periodically.

User Profiles

You can change, save, and load OFIS Graphics settings in user profiles. This gives you the ability to set defaults or change current settings for your work area Set Up menu, Print menu, Drawing Tool menu, and Text Tool menu.

Picture File Migration

You can now migrate your .pic files to the industry standard Computer Graphics Metafile (CGM) format. Applications that recognize the .cgm format include (but are not restricted to): CorelDRAW!, HiJaak for Windows, Microsoft PowerPoint, Microsoft Excel, Microsoft Word for Windows, and Harvard Graphics for Windows.

Time Saving Features

The Quick Menu feature provides you with access to six common editing tools if you use the mouse middle button or CODE+M accelerator. With the Quick Access feature, OFIS Graphics switches you to the appropriate Tools side menu when you select drawing, text, or chart objects. The Quick Save feature allows you to save a picture with the new CODE+S accelerator.

File Backups

You can configure OFIS Graphics to create -old backup files when saving pictures. This feature allows you to retrieve a modified or deleted picture at a later time.

Left-Handed Cursors

OFIS Graphics orients commonly used cursors such as the Arrow, Pick, Delete, and Pan cursors for left-handed users.

New User File Keywords

OFIS Graphics 3.0.0 now includes the following three new keywords for your .user file:

Keyword	Description
:ArtChartUserProfile:	Sets the user profile filename.
:ArtChartWorkProtectPath:	Sets the path where the Work Protect files are saved.
:ArtChartViewFilesMemory:	Sets memory used for viewing files.

Section 3

Product Improvements

This section describes corrections to certain restrictions, limitations, and operational conditions found in the releases of CTOS OFIS Graphics preceding 3.0.0. Corrections are described relative to the operating environment, including a brief description of the original symptoms, if necessary.

Viewing Large Numbers of Filenames

Previously, when viewing filenames in a path which contained a large number of files, OFIS Graphics could not display all the files. This has been corrected by providing the `:ArtChartViewFilesMemory:` user file keyword which allows you to specify more memory for viewing filenames.

Printing to a (Type In) Device

When you choose the (Type In) option to print to a device, it is not necessary to enclose the device name within square brackets ([]). OFIS Graphics now checks for a device with a matching name and automatically prints to that device. If no matching device is found, OFIS Graphics prints to a file with the typed name.

Importing Text

OFIS Graphics can now handle text imported from an Editor file when in the dual layout mode.

Deleting Text

When text was deleted, the attributes of the deleted text were used when adding text to a picture (contrary to the text menu attributes). OFIS Graphics now handles this correctly.

Text To Pic and DEF Files

Text To Pic can now process DEF files from OFIS Document Designer 2.0 and higher.

Invalid Inputs No Longer Cause Fatal Errors

If you enter OFIS Graphics with an invalid filename, the error reported is not a fatal error, and you are allowed to continue.

Get File on Nonexistent Files Returns ERC 203

Previously, for a Get File operation on a picture that did not exist, OFIS Graphics cleared the current work area and used the nonexistent file name in the work area. Now, if you do a Get File on a file (of any type) that does not exist, an error is reported.

Getting a Picture with a Different Orientation and Paper Size

Getting a picture which has an orientation and paper size different than the current work area, previously scaled the picture incorrectly. OFIS Graphics now scales such pictures correctly.

Updating an Axis Menu Does Not Return You to Previous Menu

An Axis menu update with two or more charts in the work area, took you back to the Chart menu. OFIS Graphics now updates the display and stays in the Axis menu.

Saving a Picture During Drawing

When you were in the middle of drawing an object or replacing segments of a object, OFIS Graphics previously allowed you to save the picture. After the picture was saved, if you clicked on the BOUND key to complete the drawing, OFIS Graphics would crash.

OFIS Graphics now does not allow you to save while drawing or replacing segments.

Chart Menu Displays

When entering chart tools, OFIS Graphics previously displayed the Bar Chart menu unnecessarily before switching to either of the other chart menus. OFIS Graphics now displays the relevant chart menus first.

Removing Software

You can now remove most of the OFIS Graphics components using the Remove Installed Software option in Installation Manager.

Note: To remove the picture library, you have to manually delete the pictures from the directory in which they are installed.

Using the VM003 monitor with VGA

You can now use the VM003 monitor with a VGA graphics module.

Section 4

Product Interdependencies

This section contains:

- Information on interdependent software (including releases levels) and hardware you need to use with CTOS OFIS Graphics 3.0.0
- Random-access memory (RAM) and media sizing requirements
- Information on the supported software release levels of all required products

You can use the information in this section to configure your system. A suggested configuration for minimal input/output functionality includes:

- Your CTOS workstation, including a hard disk and printer or plotter
- Your CTOS operating system, including the Mouse Service
- Your networking software and the appropriate printer driver
- CTOS Generic Print System (GPS)

Interdependent Software

The following table describes the interdependent software releases you need to use CTOS OFIS Graphics 3.0.0 and lists the style IDs and release levels.

Older releases of interdependent software may work with CTOS OFIS Graphics 3.0.0, but Unisys may not fully support them. If you require a correction to an older release, Unisys may ask you to upgrade to a newer release.

As new releases become available, Unisys may no longer offer certain ordering and support services for older releases. Review the applicable Software Release Announcement (SRA) for future compatibility and service information. See Section 10, Ordering Procedure, for part number information to order an SRA.

Description	Style ID	Release	Standard Software
BTOS II	(see note)	3.2 or greater	12.0 or greater
CTOS I	(see note)	3.3 or greater	12.1 or greater
CTOS II	(see note)	3.3 or greater	12.1 or greater
CTOS III	(see note)	1.0 or greater	12.2 or greater
CTOS/XE	XE530-MOS	3.0 or greater	12.0 or greater
CTOS Generic Print System	B25-GP2	2.5 or greater	
CTOS Context/Window Manager	B25-CM6	1.3.5 or greater	
CTOS OFIS Document Designer	B25-DD3	3.0 or greater	
CTOS OFIS Spreadsheet	B25-OL1 B25-OL2	1.0 or greater	
BTOS Enhanced Multiplan	B20-EM2	2.2 or greater	

Note: *Style IDs vary according to CPU type (B26 through B39, SG2000 through 5000) and Operating System type (Server, Cluster, or Stand-alone workstations). For more information on equipment configurations, software, and Style IDs, contact your Unisys representative.*

Additional information is also available in the SRAs associated with the various products.

Interdependent Hardware

This section provides information on the hardware products you can use with CTOS OFIS Graphics 3.0.0. Hardware includes workstations, modules, monitors, and keyboards.

Workstations and Graphics Modules

CTOS OFIS Graphics 3.0.0 requires one of the following workstations:

B26	SG2000
B28	SG3000
B38	SG5000
B39	

The OFIS Graphics software can be installed onto a Shared Resource Processor server (XE520 or XE530).

The workstation must include one of the following graphics modules in conjunction with the appropriate monitors:

GC-001	B25-GRA	SG-501
GC-x03	B25-GRE	CTOS Video Card
	B25-GPP	
	B25-VG1	
	B25-VG2	
	B25-VG3	
	B25-VG4	

Monitors

CTOS OFIS Graphics 3.0.0 requires one of the following monitors:

VM-003	B25-D1	EVG100-COL
	B25-D2	VGA200-MON
	B25-D3	VGA400-COL
	B25-D5	SVG100-COL
	B25-CD3	
	B25-PD7	
	B25-PD8	
	B25-CA1	
	B25-GS1	
	B25-VDM	
	B25-VDC	

Keyboards and Pointing Devices

You can use CTOS OFIS Graphics 3.0.0 with the following keyboards:

B25-K1	SG101-K
B25-K2	SG102-K
B25-K3	
B25-K5	

You can use CTOS OFIS Graphics 3.0.0 with the following pointing devices (mice), which require the Mouse Service included with your Standard Software:

B25-MOU B25-MO3 SG100-U SG101-U

Printers and Plotters

You can use CTOS OFIS Graphics 3.0.0 with any graphics printer listed in the *CTOS Generic Print System Installation and Configuration Guide*.

You can use CTOS OFIS Graphics with any of the following Hewlett-Packard plotters:

HP7470A 2-pen plotter

HP7475A 6-pen plotter

HP7220C 8-pen plotter

HP7550A 8-pen plotter

HP7440A Color Pro 8-pen plotter

These plotters are not marketed by Unisys Corporation. Unisys Corporation does not warrant their suitability of performance in customer applications.

Disk Drives

CTOS OFIS Graphics requires a hard disk drive and either a 5-1/4 or 3-1/2 inch drive for software installation.

Media Sizing

The following table lists approximate media sizing considerations for all required and optional installation files.

Description	Sectors
For OFIS Graphics Installation:	
OFISGraphics.run	1222
ArtChartMsg.bin	37
Block.font	28
ComplexRoman.font	28
DuplexRoman.font	30
Gothic.font	49
Script.font	36
SimplexRoman.font	15
Graphics.fonts	1
720x348_80Sys.font	13
720x348_80LocSys.icon	1
720x348_ArtChartIcons.lib	73
1024x768_80LocSys.icon	1
1024x768_ArtChartIcons.lib	119
OGConfig.Sys.Ref	8
DefaultOGConfig.Sys	2
Total required disk space	1663
For Pretty Print Installation:	
PrettyPrint.run	466
PrettyPrint.bin	1
Cgi.fonts	1
Total required disk space	468

continued

Media Sizing (cont.)

Description	Sectors
For Text To Pic Installation:	
TextToPic.run	579
TextToPicMsg.bin	4
TTPConfig.sys	2
Total required disk space	585
For Pic To CGM Installation:	
PicToCGM.run	473
PicToCGMMsg.bin	1
PTC.fonts	1
Windows.pl	1
Total required disk space	476
For Chart Files Installation:	
3DBar.fm	3
3DHzBar.fm	3
3DHzStacked.fm	3
3DPie.fm	3
3DStacked.fm	3
Bar.fm	3
Color3DBar.fm	3
Color3DHzBar.fm	3
Color3DHzStacked.fm	3
Color3DPie.fm	3
Color3DStacked.fm	3
ColorBar.fm	3
ColorHzBar.fm	3
ColorHzStacked.fm	3
ColorLine.fm	2
ColorLnInterp.fm	2
ColorPie.fm	2
ColorScatter.fm	2
ColorScatterLine.fm	2
ColorSLInterp.fm	2
ColorStacked.fm	3
HzBar.fm	3

continued

Media Sizing (cont.)

Description	Sectors
HzStacked.fm	3
Line.fm	2
LineInterp.fm	2
Pie.fm	2
Scatter.fm	2
ScatterLine.fm	2
SLInterp.fm	2
Stacked.fm	3
Budget.wkt	5
Budget.mp	6
Sales.mp	5
SalesByRegion.Bar.pic	35
SalesByRegion.Line.pic	14
SalesByRegion.Pie.pic	16
Total required disk space	159
For Picture Library Installation:	
Airplane.pic	33
Arrows1.pic	16
Arrows2.pic	22
Arrows3.pic	86
ArtDrawScreen.pic	26
ArtFigure.pic	37
Beach.pic	73
Birthday.pic	41
Blades.pic	11
BlockFont.pic	32
Borders.pic	102
Boxes.pic	96
Bugs.pic	10
CartoonFace.pic	15
CartoonMen.pic	46
CartoonWomen.pic	30
ChessKnight.pic	20
Clocks.pic	31
Clocks2.pic	100
CoffeePots.pic	112
Color&Magic.pic	50
Communication.pic	23

continued

Media Sizing (cont.)

Description	Sectors
Components.pic	21
Computers.pic	69
Cooks.pic	46
Devil.pic	14
Dinosaur.pic	28
Dragon.pic	39
Dreamhome.pic	105
Drinks.pic	22
Duck.pic	94
ElectronicSymbols1.pic	17
Faces.pic	21
Firmware.pic	28
Flora.pic	48
FlowChartSymbols1.pic	36
Flowers.pic	29
Food&Drink.pic	75
FrameFamily.pic	27
FrenchPainter.pic	18
Gun.pic	11
HandyPeople.pic	57
Hardware1.pic	24
Hardware3.pic	9
Horizon.pic	32
HotTub.pic	14
IsoHardware1.pic	30
IsoHardware2.pic	42
IsoHardware3.pic	63
IsoHardware4.pic	57
IsoHardware5.pic	28
IsoHardware6.pic	22
IsoHardware7.pic	38
Jester.pic	28
KeyboardDetail.pic	116
Knight.pic	33
MiscSymbols1.pic	33
Money1.pic	21
Money2.pic	59
Negotiation.pic	51
Nuts&Bolts.pic	61
OctoberFest.pic	15
OfficeMachines.pic	75
OfficeObjects1.pic	81

continued

Media Sizing (cont.)

Description	Sectors
OfficeObjects2.pic	43
OfficeObjects3.pic	28
OfficeObjects3a.pic	51
OfficeObjects4.pic	52
OfficeObjects5.pic	42
OfficeObjects6.pic	34
Outdoors.pic	82
Pads.pic	13
People1.pic	28
People2.pic	16
PowerSupplies.pic	21
PresentationSymbols.pic	43
RaceCar.pic	17
Rodents.pic	18
Ruler-Inch.pic	8
Ruler-Metric.pic	6
SeaScene.pic	30
Sombrero.pic	9
StreetSigns.pic	15
Sunrise.pic	25
Tanker.pic	56
Technology1.pic	12
Technology2.pic	15
Tiger.pic	48
Transportation1.pic	76
Transportation2.pic	39
UnisysLogo.pic	23
USFlag.pic	18
USMap.pic	57
Vacation.pic	51
WeatherSignals.pic	15
Wine&Grapes.pic	25
World.pic	18
World2.pic	37
Zoo1.pic	48
Zoo2.pic	48
Zoo3.pic	41
Total required disk space	3957

Random-Access Memory (RAM) Sizing

The following table lists the approximate RAM required to use the components of OFIS Graphics 3.0.0, and the memory mode the components use. Your particular use will determine your exact RAM needs.

Description	Memory Mode	KBytes RAM
OFIS Graphics	Protected	650 K
Pretty Print	Protected	400 K
Pic To CGM	Protected	500 K
Text To Pic	Real	400 K

Section 5

Support

This section provides support categories and warranties information. It also provides information about any discontinuance of support for previous release levels (or features in those releases) and the effective date for support discontinuance. Unisys may also provide you with information about support discontinuance in a Discontinuance Announcement.

The CTOS OFIS Graphics 3.0.0 software is in Support Category A and Warranty Class 1. It is fully supported and enhanced, and is warranted for 90 days to conform to Unisys published specifications.

Support Type	Description
Support Category A	fully supported and enhanced
Support Category B	supported only, with no enhancements
Support Category C	neither supported nor enhanced

Warranty Type	Description
Warranty Class 1	warranted for 90 days to conform to Unisys published specifications
Warranty Class 2	not warranted and is provided "as is"

Support Discontinuance

Effective with the release of CTOS OFIS Graphics 3.0.0, update maintenance support for all prior releases of CTOS OFIS Graphics is discontinued. If you are currently using a prior release level, you should consider migrating to release level 3.0.0 at the earliest opportunity. If you require a correction to a prior release level, Unisys may ask you to upgrade to release 3.0.0.

Section 6

Migration Requirements

This section describes the tasks required to migrate from prior releases of CTOS OFIS Graphics.

Delete Obsolete Files

If you are upgrading from OFIS Graphics 2.x and you are installing OFIS Graphics 3.0.0 to a directory other than [Sys]<Sys>, you can delete the following files from your system:

[Sys]<Sys>1024x768_ArtChartIcons.Lib
[Sys]<Sys>720x348_ArtChartIcons.Lib
[Sys]<Sys>ArtChartMsg.Bin

Restoring Your Current OFIS Graphics CM Configuration

The OFIS Graphics installation process forces the OFIS Graphics partition size to <650 in your CM configuration file. If you wish to restore the size of the OFIS Graphics partition after installing OFIS Graphics, use the CTOS Context Manager CM Editor utility or the CTOS Editor to edit the CM configuration file.

Section 7

Restrictions and Known Limitations

The following restrictions and known limitations exist for CTOS OFIS Graphics 3.0.0:

Text To Pic Width Table

The following applies to the Text To Pic width table:

1. When you use Text To Pic for the first time, it may require several minutes to create the width table file ([Sys]<Sys>GrfxFontWidth.Tbl).
2. If Text To Pic is interrupted while it is creating the width table file, the file may be invalid, and Text To Pic may return Status Code 7644 or 7645 when you use it. If this happens, delete [Sys]<Sys>GrfxFontWidth.Tbl and invoke Text To Pic so that it creates a new width table file.
3. If you add or modify any fonts in the [Sys]<Sys>Graphics.fonts file, delete [Sys]<Sys>GrfxFontWidth.Tbl and invoke Text To Pic so that it creates a new width table file.

Tabs in Picture Files Created with Text To Pic

When using the Text To Pic utility on an ASCII text file (not a DEF-format file), tabs have the same length as spaces. If you want to use tabs to format columns of text, place three or more spaces between the last character of one column and the start of the next column.

Accessing Copies of Objects in Picture Files

The following applies to copies of objects placed directly over their originals:

1. If you place a copy of an object directly over the original, modifications to the original also affect the copy.
2. If you highlight both objects, they change to the background color and cannot be seen on the screen.
3. Identical text cannot be modified, since the system cannot identify which text to modify.

Mirroring Text

Creating a mirror image of a group of objects containing both text and graphics may require that you reposition each individual line of text, depending on its original location. A mirrored text line consists of a repositioned and reshaped line of text, not individual characters.

CGM files

The CGM files generated by Pic to CGM may be interpreted differently by different applications that can import CGM. The interpretation of line types, fill patterns, fonts, and colors varies in range. Some applications may ignore these attributes in the CGM file and substitute them, whereas other applications may attempt to map them as closely as possible to a set of attributes they can handle. If the pictures rely heavily on the use of these attributes for their visual impact, then you may have to modify the pictures to get satisfactory results from the CGM format.

Saving Pictures to Password Protected Directories

Use the following procedures to successfully save the appropriate types of files to directories protected by passwords:

For pictures: Use the Save File operation, and append the picture file names with a "^" character followed by the password. Once this is done, you can use Quick Save successfully.

Note: Setting the password using the Set Path operation will not accomplish the same result.

For palettes and profiles: Use Set Path to set the password.

Objects Created with BTOS Draw

OFIS Graphics does not recognize objects in picture files created using BTOS Draw.

Previewing Pictures Created with Other Drawing Packages

The Preview function does not display picture files created by BTOS Draw, BTOS Graphics Package (BGP), the Text To Pic utility, or Graphics Library.

However, you can convert these files to OFIS Graphics format by opening them in OFIS Graphics, and saving them. You can then use the Preview function to display them.

Screen Refreshes Several Times When Loading Profile

If your default profile contains orientation or output paper settings that differ from the defaults, the screen will refresh a number of times when OFIS Graphics initializes.

Accelerator Keys Do Not Work with CAPS LOCK On

Depending on your operating system, your CODE+Key accelerators will not work if you have your CAPS LOCK key on.

Color Printouts

If you use the default OFIS Graphics color palette (white on black), and print on a color printer, the results may not be as expected for the colors white or black, because black is always the foreground color and white the background color for the color printer. The easiest way to ensure that the colors you see are the colors you get is to:

1. use the reverse video color palette (black on white) before you create the picture, or
2. modify the colors, fills, and linetypes of the objects in the picture after you use the reverse video color palette (black on white)

Getting or Saving a Palette File Disables Quick Save

If you get or save a palette file, the Quick Save feature (CODE+S) becomes disabled.

Workaround: To enable Quick Save again, initiate a Get File or Save File operation for any file type, then CANCEL it.

Lengthy Pie Segment Labels Cause Error Conditions

Under certain conditions, if a pie chart with labels long enough to touch the boundaries of the chart is sized and its attributes are modified, the segment labels get distorted. The labels may either grow or shrink disproportionately, or lose some text. As a consequence error codes such as ERC 7713 may be reported.

Chaining Configuration File Has Incorrect Run File

The OFIS Graphics installation process adds an OFIS Graphics entry to the beginning of the OFIS Document Designer chaining configuration file [Sys]<Sys>DdConfig.Sys. For this entry, OFIS Graphics uses the default run file name [Sys]<OFISGraphics>OFISGraphics.run. If you have installed OFIS Graphics on a path other than [Sys]<OFISGraphics>, edit this configuration file, and specify that path in place of [Sys]<OFISGraphics>.

Cannot Remove Pictures with Installation Manager

If you remove OFIS Graphics software using Installation Manager, the picture library does not get removed. To remove the installed picture library, you have to manually delete the picture files from the directory where the pictures are installed.

Saving Profiles to OGConfig.Sys

OFIS Graphics requires that profile file names have at least one character before the suffix OGConfig.Sys. Therefore, if you do a Save File operation on the Profile file type, OFIS Graphics correctly does not allow you to save your profile with a zero length filename (that is, to a file named OGConfig.Sys in the current directory).

However, if you input a directory name in the input line, OFIS Graphics erroneously saves the profile to a file named OGConfig.Sys in that directory. This file will not be listed if you use View Files, and you cannot do a Get File operation on this file if you have set your path to that directory.

Work Area Vanishes for A4 Paper

While in the dual layout mode, and both your areas are set to the A4 output paper size, if you save one of the workareas, the other workarea appears to be cleared.

Workaround: Select and redraw the "cleared" work area.

Missing Axis Numbers After Update

Under certain situations, an update of Bar chart or Line chart axis menus, causes some numeric axis labels to vanish.

Workaround: Select Update in the Axis Menu to correct this problem.

X Axis Numbers Incomplete

Sometimes, if you enter OFIS Graphics from Enhanced Multiplan, not all the X Axis labels are displayed. If you select the X Axis handle, and do an Update on the X axis menu, the numbers may be restored.

GPS Request Codes Required for OFIS Graphics

You are not required to have GPS installed on the system; however, you must have the GPS request codes in your Request.Sys to run OFIS Graphics.

Workaround: Install GPS request codes.

Text to Pic [Font] Parameter

The [Font] parameter for Text To Pic does not work for Editor files.

Verbose Installation Not Supported

OFIS Graphics installation ignores the Verbose setting from Installation Manager.

Section 8

List of Files on the Distribution Media

This section lists the files on the software distribution media. The files are listed by product and available media. CTOS OFIS Graphics 3.0.0 is supplied on seven 5-1/4 inch or three 3-1/2 inch diskettes.

The following tables list the files on each diskette according to directory.

Files on 5¼-inch Diskettes

Location	File names
B25OG3-1	
<Sys>:	Install.ctrl Install.jcl Install>English.cmds SMS.Registration
<OGFiles>:	ArtChartMsg.Bin 720x348_ArtChartIcons.Lib 1024x768_80LocSys.Icon Block.font DuplexRoman.font Graphics.fonts Script.font OGConfig.Sys.Ref OfisGraphics>OGFiles.flc 1024x768_ArtChartIcons.Lib 720x348_80LocSys.Icon 720x348_80Sys.font ComplexRoman.font Gothic.font OGDDConfig.tmp SimplexRoman.font DefaultOGConfig.Sys
<PP>:	CGI.fonts PrettyPrint.run PrettyPrint.bin
<Unisys>:	OG.01
B25OG3-2	
<Sys>:	OFIS Graphics 2 of 7
<Unisys>:	OG.02

continued

Files on 5¼-inch Diskettes (cont.)

Location	File names
B25OG3-3	
<Sys>	OFIS Graphics 3 of 7
<PTC>	PicToCGM.run PTC.Fonts PicToCGMMsg.bin Windows.pl
<TTP>	TextToPic.run TTPConfig.Sys TextToPicMsg.bin
B25OG3-4	
<Sys>	OFIS Graphics 4 of 7
<ChartFiles>	3DBar.fm 3DHzStacked.fm 3DStacked.fm Budget.mp Color3DBar.fm Color3DHzStacked.fm Color3DStacked.fm ColorHzBar.fm ColorLine.fm ColorPie.fm ColorScatterLine.fm ColorStacked.fm HzStacked.fm LineInterp.fm Sales.mp SalesByRegion.line.pic Scatter.fm SLInterp.fm OfisGraphics>ChartFiles.fls 3DHzBar.fm 3DPie.fm Bar.fm Budget.wkt Color3DHzBar.fm Color3DPie.fm ColorBar.fm ColorHzStacked.fm ColorLnInterp.fm ColorScatter.fm ColorSLInterp.fm HzBar.fm Line.fm Pie.fm SalesByRegion.bar.pic SalesByRegion.Pie.pic ScatterLine.fm Stacked.fm
<Unisys>	PL.01
B25OG3-5	
<Sys>	OFIS Graphics 5 of 7
<Unisys>	PL.02

continued

Files on 5¼-inch Diskettes (cont.)

Location	File names
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B25OG3-6

<Sys>:	OFIS Graphics 6 of 7
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<Unisys>	PL.03
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B25OG3-7

<Sys>:	OFIS Graphics 7 of 7
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<Unisys>:	PL.04
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Files on 3½-inch Diskettes

Location	File names
B25OG3-1	
<Sys>:	Install.ctrl Install.jcl ThreeInchDisk Install>English.cmds SMS.Registration
<OGFiles>:	ArtChartMsg.Bin 720x348_ArtChartIcons.Lib 1024x768_80LocSys.Icon Block.font DuplexRoman.font Graphics.fonts Script.font OGConfig.Sys.Ref OfisGraphics>OGFiles.flc 1024x768_ArtChartIcons.Lib 720x348_80LocSys.Icon 720x348_80Sys.font ComplexRoman.font Gothic.font OGDDConfig.tmp SimplexRoman.font DefaultOGConfig.Sys
<PP>:	CGI.fonts PrettyPrint.run PrettyPrint.bin
<Unisys>:	OG.01

continued

Files on 3½-Inch Diskettes (cont.)

Location	File names
B25OG3-2	
<Sys>:	OFIS Graphics 2 of 3
<PTC>:	PicToCGM.run PTC.Fonts PicToCGMMsg.bin Windows.pl
<TTP>:	TextToPic.run TTPConfig.Sys TextToPicMsg.bin
<ChartFiles>:	3DBar.fm 3DHzStacked.fm 3DStacked.fm Budget.mp Color3DBar.fm Color3DHzStacked.fm Color3DStacked.fm ColorHzBar.fm ColorLine.fm ColorPie.fm ColorScatterLine.fm ColorStacked.fm HzStacked.fm LineInterp.fm Sales.mp SalesByRegion.line.pic Scatter.fm SLInterp.fm OfisGraphics>ChartFiles.flb 3DHzBar.fm 3DPie.fm Bar.fm Budget.wkt Color3DHzBar.fm Color3DPie.fm ColorBar.fm ColorHzStacked.fm ColorLnInterp.fm ColorScatter.fm ColorSLInterp.fm HzBar.fm Line.fm Pie.fm SalesByRegion.bar.pic SalesByRegion.Pie.pic ScatterLine.fm Stacked.fm
<Unisys>	PL.01
B25OG3-3	
<Sys>:	OFIS Graphics 3 of 3
<Unisys>	PL.02 PL.03

Section 9

Customer Product Information

This section contains the names of all product information you can use with CTOS OFIS Graphics 3.0.0.

See Section 10, Ordering Procedure, for part number information. Unisys includes all applicable errata and updates with each part number. Updates contain any preceding errata.

OFIS Graphics Product Information

The following table lists CTOS OFIS Graphics product information you can order for the 3.0.0 release.

If you subscribe to the Universal Mailing List (UML) codes for OFIS Graphics, you will automatically be notified of or receive future updates for OFIS Graphics product information, depending on the UML code you subscribe to.

Description	Release Level
Software Release Announcement	3.0.0
<i>CTOS OFIS Graphics Operations Guide</i>	3.0

Section 10

Ordering Procedure

The ordering procedure is described on the update service request (USR) letter that is included with this document. The USR letter includes:

- Available product style numbers
- Your order number
- Toll-free phone number for calling in orders
- Address for mailing in orders

For further assistance call your Unisys representative. United States customers call Unisys direct at 1-800-448-1424.

Part Numbers

You can use the style ids or part numbers in the following table if you want to order CTOS OFIS Graphics 3.0.0 components, including:

- Software media (distribution diskettes)
- The SRA (this document)
- Product Information

OFIS Graphics Components You Can Order

Style ID	OFIS Graphics Media	Release Level
NP25-OG3	5¼-inch diskettes or 3½-inch diskettes	3.0.0
	New Package License	
	<i>CTOS OFIS Graphics Software Release Announcement (SRA)</i>	3.0.0
	<i>CTOS OFIS Graphics Operations Guide</i>	3.0
	1 1/2-inch binder with slipcase	
UP25-OG3	5¼-inch diskettes or 3½-inch diskettes	3.0.0
	Upgrade Package License	
	<i>CTOS OFIS Graphics Software Release Announcement (SRA)</i>	3.0.0
	<i>CTOS OFIS Graphics Operations Guide</i>	3.0
	1 1/2-inch binder with slipcase	
ML25-OG3	New Package License only	3.0.0
UL25-OG3	Upgrade Package License only	3.0.0

continued

OFIS Graphics Components You Can Order (cont.)

Documentation Description	Release Level	Part Number
CTOS OFIS Graphics Operations Guide Literature Set	3.0	4393 4819-000
Which includes:		
<i>CTOS OFIS Graphics Operations Guide</i>	3.0	
1 1/2-inch binder with slipcase		
To Order Individual Items	Release Level	Part Number
<i>CTOS OFIS Graphics Software Release Announcement (SRA)</i>	3.0.0	4393 3639-000
<i>CTOS OFIS Graphics Operations Guide</i>	3.0	4393 3902-000





43933639-000