GIGI™

digital

DIGITAL EQUIPMENT CORPORATION

GIGI™ Slide Projection System Manual

Graham REES.

Order No. AA-J943A-TK

To order additional copies of this document, contact the Software Distribution Center, Digital Equipment Corporation, Maynard, Massachusetts 01754
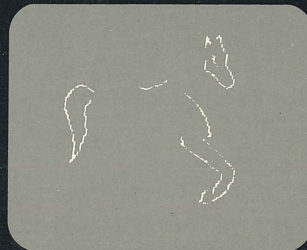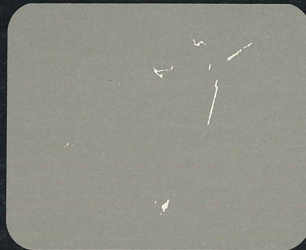
GIGI™ Slide Projection System Manual

DIGITAL EQUIPMENT CORPORATION

DEC	FOCAL
DECnet	IAS
DECsystem-10	PDP
DECtape	RSX
DECUS	UNIBUS
DIBOL	VAX
DIGITAL	VMS

CONTENTS

PREFACE

GIGI (Graphics Image Generator and Interpreter) is a micro-processor based keyboard that functions as a graphics terminal when connected to either a color or a black and white monitor. The GIGI Slide Projection System is supported by three operating systems: VAX/VMS, TOPS-20, and RSTS/E.

GIGI includes several firmware and software components to complement its hardware facilities. A set of manuals describes the use of these components and their interfaces. These manuals are:.

DOCUMENTATION

GIGI BASIC Manual
(AA-K335A-TK)

GIGI/ReGIS Handbook
(AA-K336A-TK)

GIGI Graphics Editor Manual
(AA-J942A-TK)

GIGI Character Set Editor Manual
(AA-K337A-TK)

GIGI Slide Projection System Manual
(AA-J943A-TK)

GIGI COMPUTER ASSISTED INSTRUCTION MATERIALS

VAX/VMS GIGI/ReGIS CAI Primers
(BE-K391A-BC TU58)
(AS-K327A-BE Floppy)

RSTS/E GIGI/ReGIS CAI
(BC-K346A-BC RL02)
(AP-K392A-BC Magtape 9 track 800 BPI)
(BB-K393A-BC Magtape 9 track 1600 BPI)

GIGI/ReGIS CAI Primers
(AA-K329A-TE)

VAX/VMS GIGI/REGIS CAI Primers Course Administrator's Guide
(AA-K328A-TE)

RSTS/E GIGI/REGIS CAI Primers Course Administrator's Guide
(AA-K347A-TC)

Introduction to GIGI
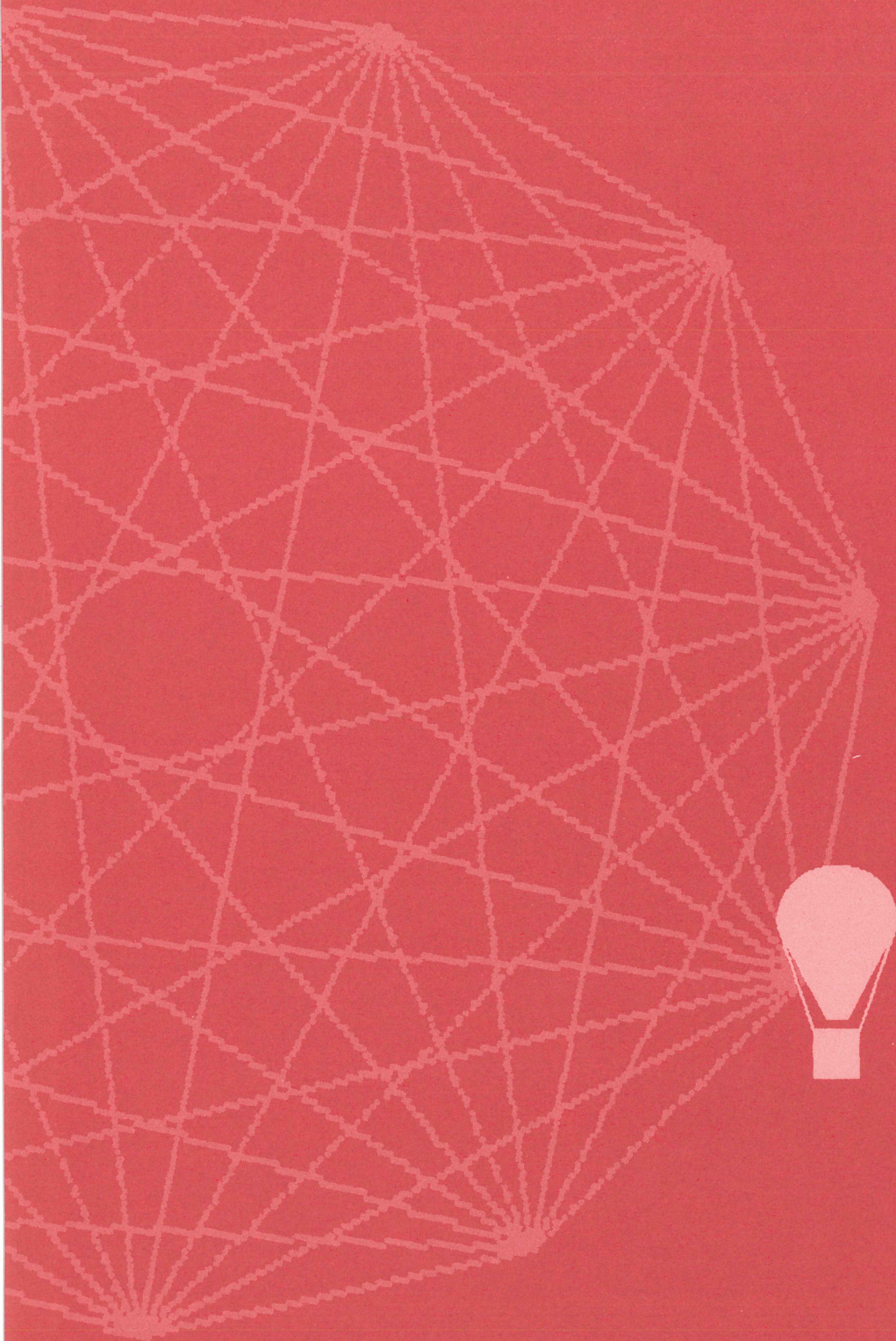
1 INTRODUCTION TO GIGI

The GIGI Slide Projection System is a software tool designed to allow you to easily use the graphics capabilities of GIGI. With the Slide Projection System, you can create and modify pictures, read and write files containing picture descriptions, and display pictures.

INTRODUCTION TO THE SLIDE PROJECTION SYSTEM
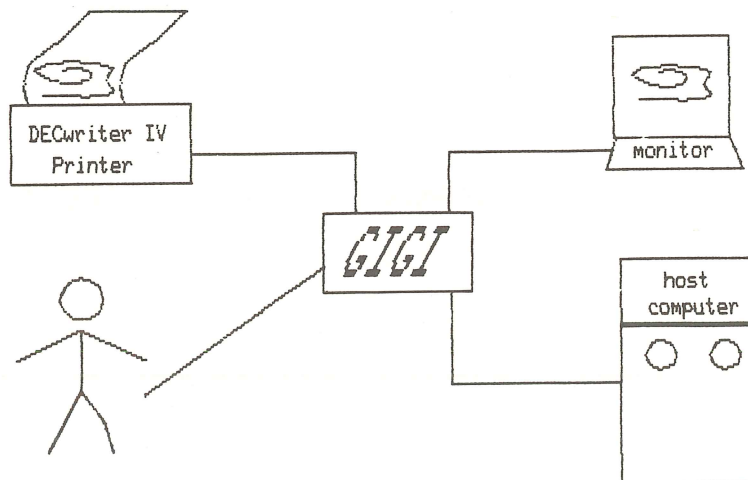
The Slide Projection System allows you to specify sequences of pictures, rearrange these sequences, and display pictures. Pictures can be displayed in a manual mode or an automatic mode. The manual mode allows you to control the display of each picture as it is displayed. The automatic mode allows you to set parameters which control the display of sequences of pictures.

To run the Slide Projection System, you need a GIGI (Graphics Image Generator and Interpreter), the Slide Projection System program residing on a host computer, and a black and white or a color monitor. The host computer must run TOPS-20, VAX/VMS, or RSTS/E. The Slide Projection System will not run under any other operating system. You also need files that contain the ReGIS commands to draw pictures. You create picture files with the Graphics Editor. You do not need to know ReGIS to use the Graphics Editor to draw pictures.

The Slide Projection System is a software package that utilizes the graphics capabilities of GIGI, the Graphics Image Generator and Interpreter terminal. The Slide Projection System can run under any of three operating systems:

- VAX/VMS
- TOPS-20
- RSTS/E

GIGI and a monitor are necessary to use the Slide Projection System. The Slide Projection System supports both color and black and white monitors. For hardcopy displays, the Slide Projection System supports the DECwriter IV Graphics Printer, the LA34-VA. The diagram below represents a GIGI configuration under which the Slide Projection System runs.

Slide Projection System Capabilities

The Slide Projection System is an interactive software package used to display sequences of pictures created with the Graphics Editor. With the Slide Projection System, you can arrange series of pictures into sequences and display these in a manner similar to using a film slide projector.

OTHER GIGI SOFTWARE

GIGI supports other software that is compatible with the Slide Projection System. These packages are described briefly below.

Character Set Editor

The Character Set Editor is an interactive software package used to create character sets. The Character Set Editor can be used in applications where Greek or APL fonts are necessary. It can also be used to create special figures, such as arrows, molecules, and math symbols.

Character sets created with the Character Set Editor can be loaded into the GIGI and accessed and displayed with the Graphics Editor. For more information about the Character Set Editor, refer to the Character Set Editor Manual.

Graphics Editor

The Graphics Editor provides programmed keys and typed commands to use its many features. These features include:

- functions with which you can draw objects
- functions that allow you to manipulate screen objects
- attributes with which you can enhance your drawings: colors, blinking, patterns, shading
- use of character sets created with the Character Set Editor or ReGIS
- text modification attributes including spacing, italics, height, width

The graphics in this manual have been created using the Graphics Editor and the DECwriter IV Graphics Printer. These provide an indication of the capabilities of the Graphics Editor.

INVOKING THE SLIDE PROJECTION SYSTEM

The GIGI Slide Projection System is available for use on three operating systems:

- VMS on VAX systems
- RSTS/E on PDP-11 systems
- TOPS-20 on TOPS-20 systems

Each of these operating systems displays a prompt on the command line and unique methods of logging into the system. The following paragraphs list manuals containing information on how to log on and describe how to invoke the Slide Projection System on each of these systems.

These sections below show command lines that may be modified by your system manager. If you have problems invoking the Slide Projection System on your system, ask your system manager for help.

Invoking the Slide Projection System on VAX

The document VAX/VMS Primer, order number AA-D030A-TE, provides information on how to log on to the VMS operating system and get started using the system. This document also references other information you may need to get started using VMS.

VMS prompts you with a dollar sign on the command line. To invoke the Slide Projection System, type RUN SYS$SYSTEM:SP and press the RETURN key:

$RUN SYS$SYSTEM:SPS RETURN

The Slide Projection System then displays the screen and prompts you for a command.

Invoking the Slide Projection System on RSTS/E

The document RSTS/E System User's Guide, order number AA-5133B-TC, provides information on how to log on to the RSTS/E operating system and get started using the system. This document also references other information you may need to get started using RSTS/E.

RSTS/E prompts you with "Ready". To invoke the Slide Projection System, type RUN $SP and press the RETURN key:

Ready

RUN $SPS RETURN

The Slide Projection System then displays the screen and prompts you for a command.

Invoking the Slide Projection System on TOPS-20

The document Getting Started with TOPS-20, order number AA-4187D-TM, provides information on how to log on to the TOPS-20 operating system and get started using the system. This document also references other information you may need to get started using TOPS-20.

TOPS-20 prompts you with an at-sign (@) on the command line. To invoke the Slide Projection System, type RUN PS:<SUBSYS>SP and press the RETURN key:

@RUN PS:<SUBSYS>SPS RETURN

The Slide Projection System then displays the screen and prompts you for a command.

HOW TO USE THE SLIDE PROJECTION SYSTEM MANUAL

This manual contains four chapters. They are described below.

Chapter 1, Introduction to the Slide Projection System, describes how to run the Slide Projection System and what the Slide Projection System does.
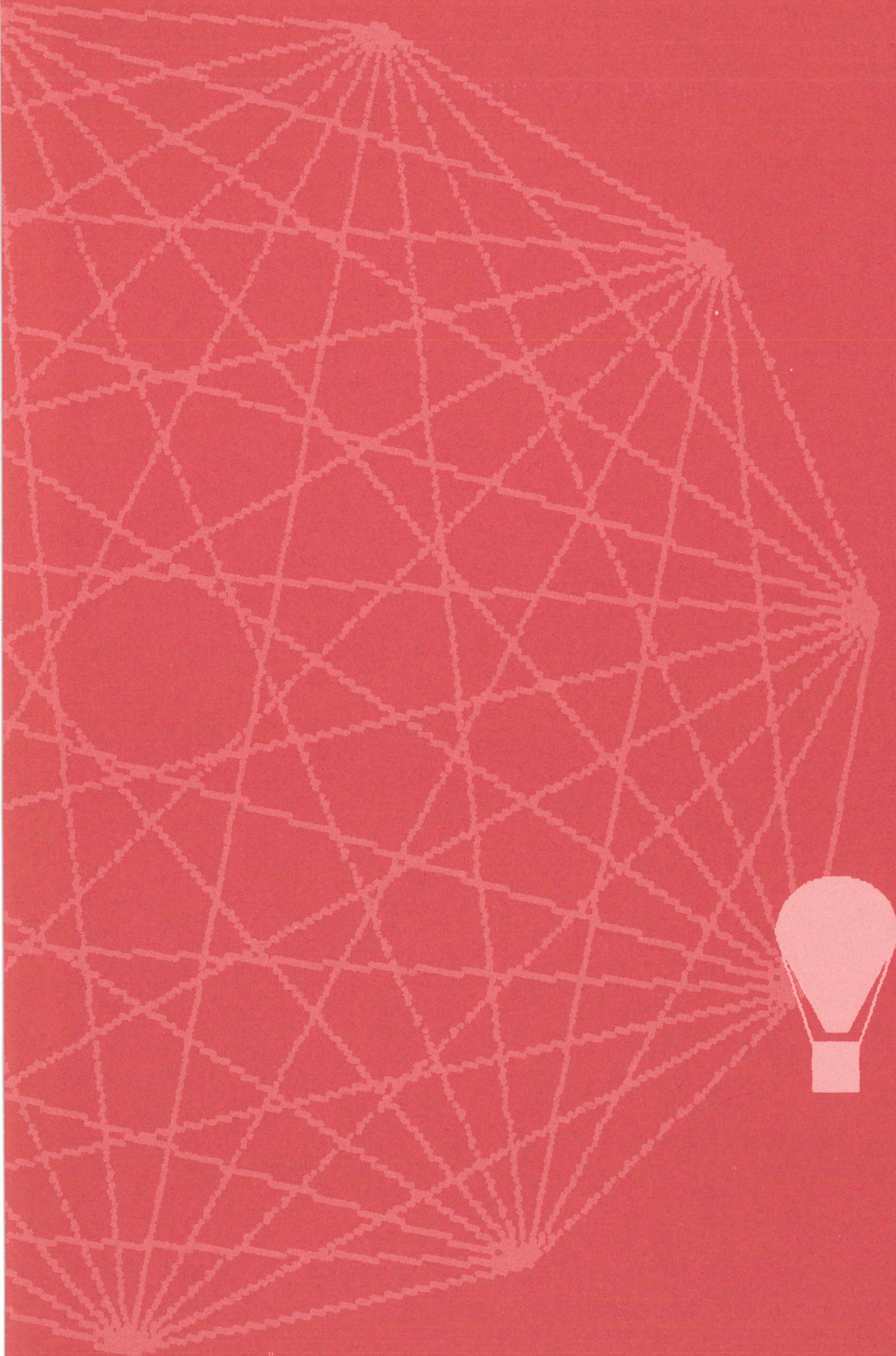
Chapter 2, Slide Projection System File Formats, describes the formats of the picture and tray files that are used by the Slide Projection System. This chapter also describes how you create these files.

Chapter 3, Using the Slide Projection System, provides usage information about the Slide Projection System commands. It also describes how to run the Slide Projection System in both the automatic and manual modes.

Chapter 4, Slide Projection System Commands, describes each of the Slide Projection System commands, which are listed in alphabetical order.

2

Slide Projection
System File Formats
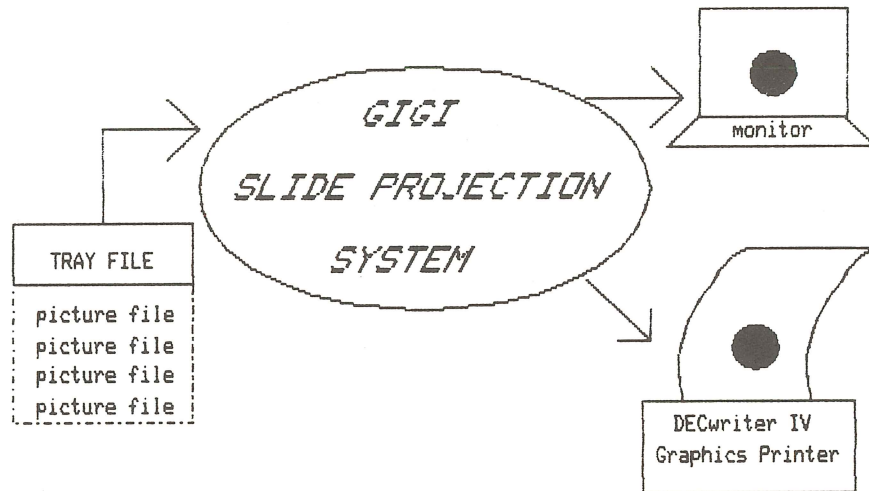
2 SLIDE PROJECTION SYSTEM FILE FORMATS

The GIGI Slide Projection System is comparable to a slide projector. The GIGI Slide Projection System, like a slide projector system, uses slides, a slide tray, a projector, and a screen. The Slide Projection System uses picture files for slides, tray files for a slide tray, the GIGI as a projector, and the black and white or color monitor or the DECwriter IV Graphics Printer as the screen.

The diagram below shows this arrangement.
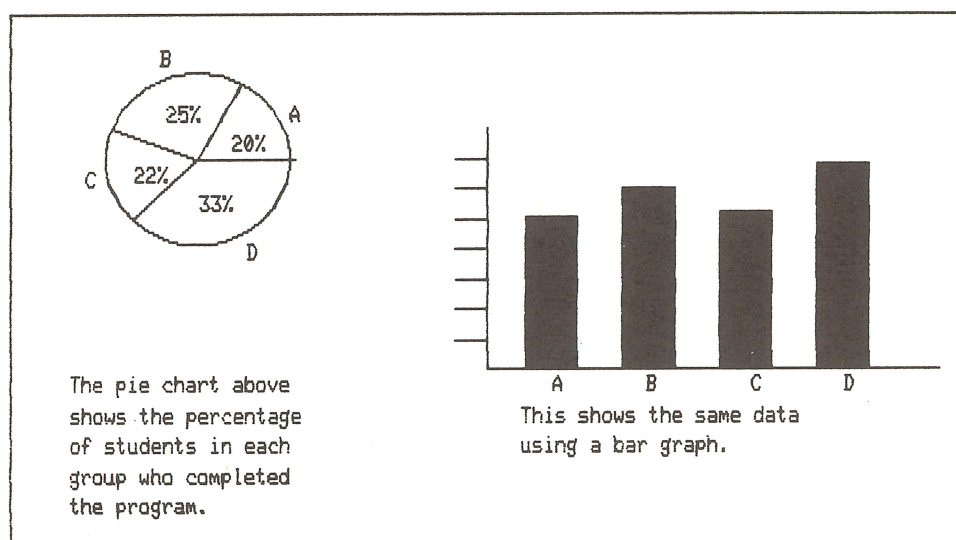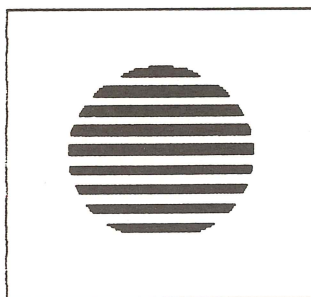
THE SLIDE PROJECTION SYSTEM AND REGIS

A picture file is the simplest element used by the Slide Projection System. A picture file is an ASCII formatted file that contains the ReGIS (Remote Graphics Instruction Set) statements to describe a picture. To understand how the Slide Projection System uses picture files, it is helpful to understand pictures in terms of GIGI and the way GIGI uses ReGIS to describe pictures. These concepts are briefly described in the following two sections.

Pictures

A picture is a display on the monitor screen. Pictures can include such elements as circles, boxes, lines, curved lines, and text. The entire screen display is referred to as a picture. The example below shows two pictures. The first picture is a very simple picture and contains only one object, a circle. The second picture is a more complex picture and includes several objects.

The pie chart above shows the percentage of students in each group who completed the program.

This shows the same data using a bar graph.

ReGIS

The Graphics Editor uses ReGIS (Remote Graphics Instruction Set) to draw pictures. ReGIS is an instruction set that includes commands to represent screen, writing, and text functions. Screen functions affect the overall appearance of the screen, such as screen color and timing parameters. Writing functions affect the objects drawn on the screen, such as lines, curves, and circles. Writing functions have attributes that you can define, such as blinking, line patterns, and shading. Text functions allow text to be included in the picture. Text can be either the standard ASCII character set or character sets that you can design with the Character Set Editor or directly with ReGIS.

Picture files are ASCII formatted files that contain the ReGIS descriptions for pictures. Picture files can be created with the Graphics Editor. A picture file is the simplest element used by the Slide Projection System.

You do not need to know ReGIS to run the Slide Projection System. For more information about ReGIS, refer to the GIGI/ReGIS Handbook.
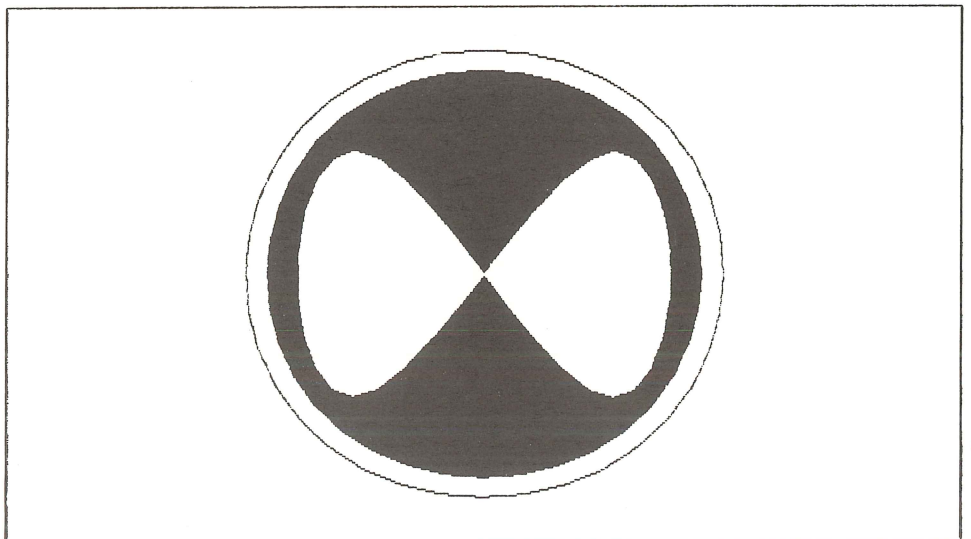
FILE FORMATS

The Slide Projection System uses two types of files: picture files and tray files.

The Slide Projection System displays picture files, which are standard ASCII text files, as pictures. The example below has two parts: a file listing and a picture. The listing below is of a picture file and can be generated by using the TYPE command when you are logged into your operating system and are at system command level.

```
w(r,n1,p11111111(m1),s1[,260],m1,a0,i2)
t(a0,d0,s1,h2,i0)
w(v,n0,p1(m2),s0,i7)s(i0)
p[1,-1]c[0,0]
p[0,0]s(i0,e)
w(r,p11111111(m1),i4)
p[380,260]c[600,260]
w(s1[,260],i2)
p[380,260]c[580,260]
w(n1)
p[260,140]c(b)
  [500,380]
   [500,140]
  [260,380](e)
```

The picture below shows the graphic display of the same file. This is generated by using the Slide Projection System to display the file shown above.

Tray files are standard ASCII text files that contain the names of picture files. The Slide Projection System displays pictures in the same sequence as they appear in the tray file. The example below is a listing of a tray file.

```
INTRO.PIC
GRAPH.PIC
CHART.PIC
 +GOTO 2
CIRCLE.PIC
LIST1.PIC
 +PAUSE 15
LIST2.PIC
LIST3.PIC
```

It is useful, although not required, to always use the same filename extension for each type of file. In this manual picture files are always identified by the extension, .PIC, and tray files are always identified by the extension, .SHO. For example, when you see the file name DUCK.PIC in the manual, this indicates that the file is a picture file. When you see the name SAMPLE.SHO, this indicates that the file is a tray file.

Picture File Formats

Picture files contain ReGIS statements that describe pictures. The ReGIS commands describe the pictures that appear on the screen. The commands describe the shape and arrangement of objects on the screen, the writing attributes (such as color and blinking), and any text that may be in the picture.

Pictures are made up of objects. An object is the smallest element that you can manipulate. An object can be as simple as a line, or it could be as complex as the floor plan of a building. The Slide Projection System has the functionality to delimit objects within pictures.

Labeling Objects

You can define labels and delimit objects using the Slide Projection System. To specify an object within a picture file, you must name the object and delimit the ReGIS commands that define the object. The name that you apply to the object is called a label. To specify an object, use the following syntax:

;":label{"ReGIS command string;"}"

where:

;": is the label prefix

label is the name you assign to the object

{" is the object prefix

ReGIS command string is one or more ReGIS commands that define the object

;"}" is the object terminator

An example of an object within a file is shown below.

;":CIRCLE{"S(IB)C[+50];"}"

In this example, the object name is CIRCLE and the delimited string, S(IB)C[+50], contains two ReGIS commands to change the screen color to blue, and to draw a circle. When running the Slide Projection System, you can display the delimited object. This causes only the the specified object to be displayed. In this example, this would cause the screen color to be changed to blue and a circle would be displayed.

A label can include from 1 to 10 alphanumeric characters, of which the first character must be a letter.

Animated Pictures

A picture file can contain a picture that appears to be animated. The simplest example of this is to draw an object, erase the object, and redraw the same object in a different location. By continuing this process, you can create the appearance of animation. The Slide Projection System would display this picture file in the same way. The object would be displayed, erased, and redrawn and would appear to be animated. Such a picture file can be created either with the Graphics Editor or with ReGIS statements and a standard text editor.

Tray File Formats

With the Slide Projection System, you can arrange groups of pictures into tray files. The example below shows the format of the tray file SAMPLE.SHO.

PLANET
TREE
FLOWER

The tray file SAMPLE.SHO contains three picture files. Each of those picture files could contain one or more pictures. The Slide Projection System assumes a default extension of .PIC. If the file has the extension .PIC, you do not need to include the extension. If you have used another extension, you must then include the extension as part of the file name.

Embedded Statements

With the Slide Projection System, you can insert embedded statements into the tray file. Embedded commands modify the performance of the Slide Projection System as it displays pictures. Embedded commands are always prefaced by a " + " (plus sign). The same tray file that was shown above is shown below. The example below also contains an embedded command, + PAUSE 25. This causes the Slide Projection System to wait 25 seconds before showing the next picture.

```
PLANET.PIC
+ PAUSE 25
TREE.PIC
FLOWER.PIC
```

3

Using the Slide Projection System

3 USING THE SLIDE PROJECTION SYSTEM

This chapter describes the Slide Projection System commands and modes of operation. The commands are described functionally. The modes of operation are the manual mode and the automatic mode.

SLIDE PROJECTION SYSTEM FUNCTIONS

The Slide Projection System allows you to perform the following functions:
- create a tray file
- edit a tray file
- edit picture files
- display pictures
- print pictures with the DECwriter IV Graphics Printer

These functions are described in the following sections.

Creating a Tray File

To create a tray file with the Slide Projection System, use the EDIT-TRAY command. Type the EDIT-TRAY command, and then type the name of the file you are creating. If the file does not exist, the Slide Projection System displays a message that you have created a new file. To end the editing level, type the END command. The Slide Projection System saves your file and any changes you have entered under the name you specified.

Editing a Tray File

Use the EDIT-TRAY command to edit tray files. Using the EDIT-TRAY command puts you at an edit level within the Slide Projection System. At the edit level, a subset of editing commands is available. These commands are:
- COPY
- DELETE
- END
- FIND
- INSERT-AFTER
- MOVE
- REPLACE
- SHOW-SLIDE

COPY

COPY moves a copy of a specified range to another location in the file. For example, a tray file might have a set of two pictures at the beginning of the file. To display this set of two pictures at the end of the file also, use the COPY command to copy and move the lines of text that name the pictures. The example below shows two listings. The first listing shows a tray file. The second listing shows the same tray file after using the COPY command to copy and move two pictures.

Before using the COPY command

BOX.PIC
CHART.PIC
CIRCLE.PIC
CURVES.PIC

After using the COPY command

BOX.PIC
CHART.PIC
CIRCLE.PIC
CURVES.PIC
BOX.PIC
CHART.PIC

DELETE

DELETE deletes one or more lines from the file. The example below shows two listings. The first listing is of a tray file. The second listing is of the same file after a range of lines is deleted.

Before using the DELETE command

INTRO.PIC
GRAPH.PIC
LIST.PIC

After using the DELETE command

INTRO.PIC
GRAPH.PIC

END

END terminates the editing session. It takes you from edit level to the Slide Projection System command level.

FIND

FIND is used to display various parts of the file. FIND locates a line in the file and displays it at the line position you specify. When the EDIT-TRAY command is used, only the first 22 lines of the file are displayed. Use the FIND command to display the remaining file. The example below shows two listings. The first listing is of a tray file. The second listing is of the same file after the FIND command was used to locate line 34.

Before using the FIND command

```
1
2    INTRO.PIC
3    GRAPH.PIC
4    CHARTA.PIC
5    CHARTB.PIC
6    CHARTC.PIC
7    +GOTO 2
8    CIRCLE.PIC
9    CURVES.PIC
10   ANGLES.PIC
11   STAR.PIC
12   LIST1.PIC
13   +PAUSE 15
14   LIST1.PIC
15   LIST2.PIC
16   LIST3.PIC
17   BUDGT1.PIC
18   BUDGT2.PIC
19   BUDGT3.PIC
20   BUDGT4.PIC
21   PIE.PIC
Edit command: FIND 34
```

After using the FIND command

```
34   NEWLST.PIC
35   FORCST.PIC
36   GOALS1.PIC
37   GOALS2.PIC
38   GOALS3.PIC
39   PLANS1.PIC
40   PLANS2.PIC
41   PLANS3.PIC
42   DREAMS.PIC
43   FUN.PIC
44   END.PIC
End




Edit command:
```

INSERT-AFTER

INSERT-AFTER enters strings after the specified line number. This is useful for including new picture files in existing tray files. The example below shows two listings. The first listing is of a tray file. The second listing shows the same file after new file names have been inserted with the INSERT-AFTER command.

Before using the INSERT-AFTER command

INTRO.PIC
GRAPH.PIC
LIST.PIC

After using the INSERT-AFTER command

INTRO.PIC
GRAPH.PIC
CHART.PIC
BOX.PIC
LIST.PIC

MOVE

MOVE moves the specified lines to the specified location. This is useful for re-arranging existing tray files. The example below shows two listings. The first listing is of a tray file. The second listing shows the same file after lines were moved.

Before using the MOVE command

INTRO.PIC
GRAPH.PIC
CHART.PIC
LIST.PIC

After using the MOVE command

LIST.PIC
INTRO.PIC
GRAPH.PIC
CHART.PIC

REPLACE

REPLACE deletes the specified lines in the file and enables you to insert new lines. This is useful to redo part of a tray file. The example below shows two listings. The first listing shows a tray file. The second listing shows the same file after lines were replaced.

Before using the REPLACE command

INTRO.PIC
GRAPH.PIC
CHART.PIC

After using the REPLACE command

NEWINT.PIC
NEWGRA.PIC
CHART.PIC

SHOW-SLIDE

SHOW-SLIDE displays the specified pictures. This is useful while editing a tray file, as it allows you to see the graphic display of a picture. The example shows a listing and a picture. The listing is of a tray file. The picture is of one picture in the listing.

LIST.PIC
INTRO.PIC
GRAPH.PIC
CHART.PIC

Display generated with the
SHOW-SLIDE command
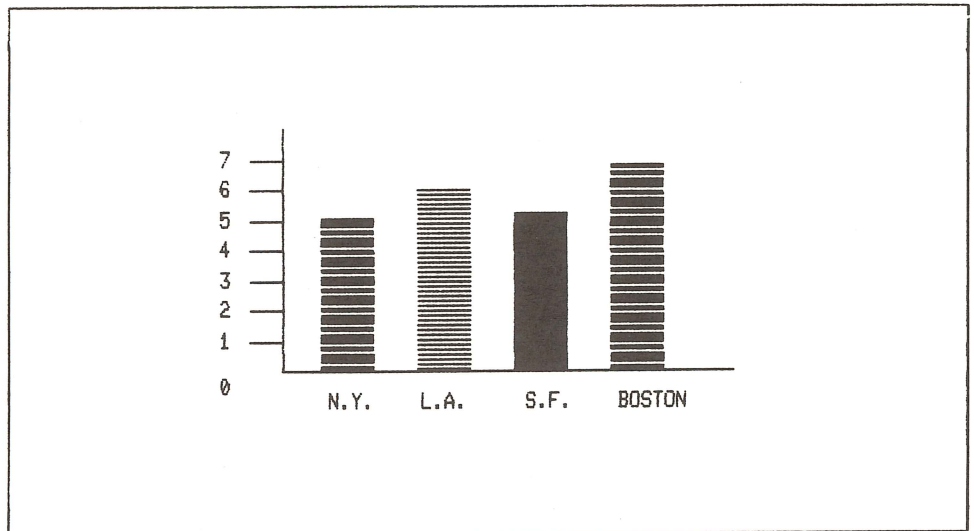
Editing A Picture File

You can use the EDIT-TRAY command and the subset of edit commands to modify picture files. This can be useful for including labels or for making small modifications, such as color changes.

Modifying descriptions of pictures requires changing the ReGIS statements in the picture file. Simple changes, such as adding labels or changing colors, can easily be done with the Slide Projection System using the EDIT command. However, to make extensive changes to a picture file, the Graphics Editor should be used. For information about the Graphics Editor, refer to the Graphics Editor Manual. For information about ReGIS, refer to the GIGI/ReGIS Handbook.

Displaying Pictures

Two subsets of commands are available to control the display of pictures. The first subset of commands is used at the command level of the Slide Projection System. The second subset of commands is made up of embedded commands; these commands are embedded into the tray files.

The command level commands provide two types of functions: the first type sets parameters that affect the screen display; the second type control and change the screen display. These commands are in the following table.
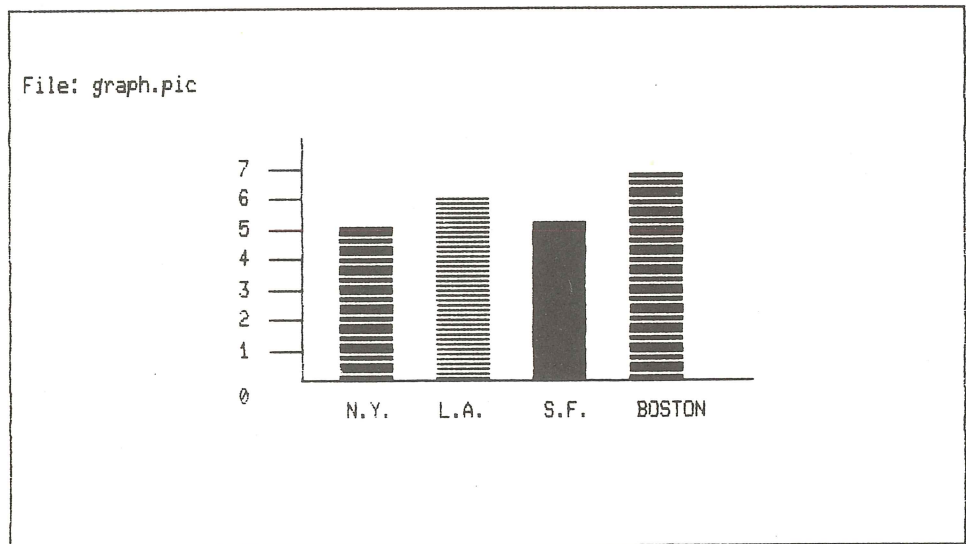
Command Level Commands

Parameter Setting Commands	
Description	**Function**
(DONT) IDENTIFY-SLIDES	Displays (or stops displaying) the name of the picture file on the specified line
IGNORE-EMBEDDED-COMMANDS (DONT)	Ignores (or stops ignoring) all embedded commands in the picture files
WAIT-AFTER-SHOWING	Causes the Slide Projection System to wait the specified number of seconds between displaying slides when in automatic mode
Screen Display Commands	
Description	**Function**
CLEAR-SCREEN	Clears the screen display
ReGIS	Allows you to enter a ReGIS text string and then display the string graphically
SHOW-SLIDES	Displays graphically the specified slide or the pictures in a tray file that has been loaded with the TRAY or EDIT-TRAY command
TRAY	Loads a tray file that can be displayed with the SHOW-SLIDES command

The parameter commands set parameters that provide additional options when displaying pictures.

Parameter Setting Commands

(DONT) IDENTIFY-SLIDES displays the name of the picture file at the same time the picture is displayed. You can specify the line on which the name is to be displayed. Typing DONT before IDENTIFY-SLIDES disables the IDENTIFY-SLIDES option. Below is an example of a picture displayed with the IDENTIFY-SLIDES option. The file name is printed on the fifth line.

(DONT) IGNORE-EMBEDDED-COMMANDS causes the Slide Projection System to ignore embedded commands in picture files. After typing IGNORE-EMBEDDED-COMMANDS, the option remains enabled until DONT IGNORE-EMBEDDED-COMMANDS is typed.

WAIT-AFTER-SHOWING causes the Slide Projection System to wait the specified number of seconds before displaying the next slide.

Control Screen Display Commands

CLEAR-SCREEN clears the screen display. Use CLEAR-SCREEN to clear the screen between showing slides or or between tray files.

The REGIS command provides a facility to display a ReGIS statement graphically. You can enter a ReGIS string and then display the string graphically. This is useful when making minor modifications to picture files. However, to make extensive changes to picture files, it is suggested that you use the Graphics Editor.

SHOW-SLIDES displays picture files graphically. You can specify the following options: manual or automatic mode, an individual slide, a range of slides, or an entire tray file. The mode, either manual or automatic, determines whether each slide display is initiated by pressing a key, or whether it is generated automatically by the Slide Projection System. You can specify a single slide or a tray file already loaded with the TRAY or EDIT-TRAY command. Once a tray file has been loaded with the TRAY or the EDIT-TRAY command, you can show the entire file or a specified range of pictures within the file.

TRAY makes available all the pictures in the specified tray file. After naming a tray file with the TRAY command, you can display either a range of pictures or the entire file with the SHOW-SLIDES command. The named file also becomes the default file for the EDIT-TRAY command. For example, if you specify TRAY DEMO.SHO, the tray file DEMO.SHO becomes the default file for SHOW-SLIDES and EDIT-TRAY. If you then type SHOW-SLIDES, the Slide Projection System will display all the pictures in DEMO.SHO. If you type EDIT-TRAY, the Slide Projection System will enter edit mode and will use DEMO.SHO as the default file to be edited.

Embedded Commands

The embedded commands are included in tray files and set options that affect the display of the pictures. Embedded commands are prefaced with a plus (+) sign.

Embedded Commands

Command	Function
+CHAIN	Links together tray files for display purposes
+GOTO	Changes the sequence in which picture files are displayed
+NEXT	Sets parameters for the specified number of slides
+PAUSE	Sets a time interval before displaying the next slide
+STOP	Ends the display of pictures

The following example shows a tray file with two embedded commands: +GOTO and +PAUSE.

```
INTRO.PIC
GRAPH.PIC
CHART.PIC
+GOTO 2
CIRCLE.PIC
LIST1.PIC
+PAUSE 15
LIST2.PIC
LIST3.PIC
```

+CHAIN allows the Slide Projection System to display multiple tray files in a specified sequence. Optionally, the name of a slide within the tray file can be specified as the starting point.

The following example shows a tray file, DEMO.SHO, that contains a +CHAIN command. When the Slide Projection System reaches the +CHAIN command, all pictures in the tray file MAGIC.SHO will be shown. If the file MAGIC.SHO contains a +CHAIN command that specifies DEMO.SHO, the Slide Projection System will return to DEMO.SHO and will display the remaining pictures in that file. If MAGIC.SHO does not contain a +CHAIN command to return to DEMO.SHO, the display will end when MAGIC.SHO ends.

```
INTRO.PIC
GRAPH.PIC
CHART.PIC
CIRCLE.PIC
+CHAIN MAGIC.SHO
LIST1.PIC
LIST2.PIC
LIST3.PIC
```

+GOTO causes the Slide Projection System to take the specified slide as the next slide. In the following example, +GOTO will cause the Slide Projection System to go back to slide number 1 (INTRO.PIC), and display that slide again. In this particular example, the Slide Projection System displays each picture in the picture file. The +GOTO 1 statement sends the Slide Projection System back to the first picture file, and the Slide Projection System cycles through the entire tray file again. This continues until the Slide Projection System is stopped manually. This can be useful to generate an ongoing graphics display.

```
INTRO.PIC
GRAPH.PIC
CHART.PIC
LIST1.PIC
+GOTO 1
```

SLIDE PROJECTION SYSTEM MODES

You can use the Slide Projection System either interactively or automatically to show pictures or slide trays once they have been prepared. Using the Slide Projection System interactively allows you to control the display of each slide. Using the Slide Projection System automatically allows you to set parameters before displaying the slides and to show the pictures automatically.

DISPLAYING PICTURES

The Slide Projection System has two modes: interactive and automatic. In interactive mode the Slide Projection System responds to key strokes to display slides. You can direct the Slide Projection System to go forward or backward within a slide tray. In automatic mode the Slide Projection System displays each slide in the slide tray automatically with no intervention.

Interactive Use of the Slide Projection System

The interactive mode can be used when displaying entire tray files. To do this, first specify the tray file with the TRAY command. You then use the SHOW-SLIDES command with the MANUAL argument. The Slide Projection System prompts you to use the keypad to display the pictures. The functions of the keys are described in Chapter 4, Slide Projection System Commands.

Automatic Use of the Slide Projection System

The automatic mode can be used to display ranges of files or entire files. To do this, first specify the tray file with the TRAY command. You then use the SHOW-SLIDES command. To display the entire tray file, do not use any arguments. To display a range of pictures, specify the range with the SHOW-SLIDES command.

Modifying the Display

You can specify the name of the tray file with either the TRAY command or the SHOW-SLIDES command. You can set various options that modify the display of the pictures for both manual and automatic displays. The parameters you can set are:

- the use of embedded commands
- screen color between slides
- timing delays between slides
- identification of slides as they are displayed

The timing parameters are effective only in the automatic mode.

4

Slide Projection
System Commands:
Reference
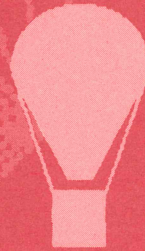
4 SLIDE PROJECTION SYSTEM COMMANDS: REFERENCE

This chapter provides reference material for the Slide Projection System commands in alphabetical order. It will be helpful if you have already read Chapter 2, Slide Projection System File Formats, and Chapter 3, Using the Slide Projection System, before using this chapter.

The command descriptions contain the following:
- description
- format
- examples

The description contains the following information: a functional description of the command, the use of the command, and its use with other Slide Projection System commands.

The format shows the syntax: the command, its arguments, and any optional arguments to the command. Optional arguments are shown in parentheses.

Examples show the use of the command.

The commands are:

CLEAR-SCREEN
DISPLAY-SETTINGS
DONT
EDIT-TRAY
IDENTIFY-SLIDES
IGNORE-EMBEDDED-COMMANDS
PRINT-SLIDES
QUIT
REGIS
SHOW-SLIDES
TRAY
WAIT-AFTER-SHOWING

The subset of edit commands are:

COPY
DELETE
END
FIND
INSERT-AFTER
MOVE
REPLACE
SHOW-SLIDES

When typing these commands, they can be abbreviated to the smallest number of unique characters. For example, you can type C for the CLEAR-SCREEN command, or P for the PRINT-SLIDES command. If more than one command starts with the same letter, type enough characters to identify the command. For example, you can type ID for the IDENTIFY-SLIDES command, and IG for the IGNORE-EMBEDDED-COMMANDS command.

CONVENTIONS

The conventions used in the format section are:

Format	Explanation
UPPERCASE	command name
lowercase	a required argument
[arg]	one of the enclosed must be specified
(arg)	an optional argument
RETURN	the RETURN KEY

CLEAR-SCREEN

CLEAR-SCREEN causes the Slide Projection System to clear the screen. The screen is set to the specified color. The default color is dark.

Format   CLEAR-SCREEN *(color)*

where:

(color) can be one of the following:

- dark (default)
- blue
- red
- magenta
- green
- cyan
- yellow
- white

DISPLAY-SETTINGS

DISPLAY-SETTINGS prints the current settings for the Slide Projection System. The settings are:

- tray file name
- clear-screen
- identify-slides
- ignore-embedded-commands
- wait-after-showing

Use the following commands to set these settings:

tray file name	TRAY
clear-screen	CLEAR-SCREEN
identify-slides	(DONT) IDENTIFY-SLIDES
ignore-embedded-commands	(DONT) IGNORE-EMBEDDED-COMMANDS
wait-after-showing	WAIT-AFTER-SHOWING

Format   DISPLAY-SETTINGS

Example

```
Tray file:    show.sho
Clear-screen: black
Process embedded commands
Wait 5 seconds
Identify slides on line 1




















Command:
```

DONT

DONT reverses the effect of the command that is used as an argument.

The DONT IDENTIFY-SLIDES causes the Slide Projection System to stop showing the name of the picture file as the picture is displayed. To resume showing the name of the picture file use the IDENTIFY-SLIDES command.

The DONT IGNORE-EMBEDDED-COMMANDS causes the Slide Projection System to resume processing any of the embedded commands in a picture file. To stop processing of the embedded commands type IGNORE-EMBEDDED-COMMANDS.

Format   DONT $\begin{bmatrix} \text{IDENTIFY-SLIDES} \\ \text{IGNORE-EMBEDDED-COMMANDS} \end{bmatrix}$

Example 1   DONT IGNORE RETURN

Example 2   DONT IDENTIFY RETURN

EDIT-TRAY

EDIT-TRAY sets a mode in which tray and picture files can be edited. After giving the EDIT-TRAY command, a subset of edit commands is available. The edit commands are:

EDIT Commands	Function
COPY	places a copy of the specified lines at the specified place in the file
DELETE	deletes the specified lines from the file
END	removes you from the EDIT-TRAY level, optionally saves any changes, and places you at Slide Projection System command level
FIND	scrolls the screen
INSERT-AFTER	inserts new lines after a specified line number
MOVE	moves a given range to a location beginning with the specified line number
REPLACE	replaces the designated line(s) with a new line(s)
SHOW-SLIDE	displays the specified picture

Two methods can be used to specify the name of the tray or picture file to be edited. The first method is to use the EDIT-TRAY command and to specify the filename. The second method is to use the TRAY command to specify the filename followed by the EDIT-TRAY command. If you do not specify a filename with the TRAY command or the EDIT-TRAY command, the Slide Projection System prompts you for the filename.

Using the EDIT-TRAY command to load a file has the same effect as using the TRAY command to load a file. The file then becomes the default file for the Slide Projection System.

After the EDIT-TRAY command is given, the Slide Projection System clears the screen, displays the first 21 lines of the tray file, and displays a prompt at the bottom of the screen. The Slide Projection System displays a line number for each line of the file.

Format 1   TRAY-NAME *filename* RETURN
EDIT

Format 2   EDIT-TRAY *filename*

where:

filename is the name of the file to be edited

After issuing the EDIT-TRAY command, you can use the edit commands. These commands are described on the following pages.

Example 1   TRAY DEMO.SHO RETURN
EDIT RETURN

Example 2   EDIT DEMO.SHO RETURN

EDIT-TRAY: COPY

COPY copies the line or lines in the specified range and inserts this range at the specified location. The range that is copied remains at the same location. After the lines are inserted at the new location, the Slide Projection System renumbers those lines and the successive lines sequentially.

Format

COPY *number1 (-number2) number3*

where:

number1 is the sequential number of the first picture in the range
(-number2) is the sequential number of the last picture in the range
number3 is the sequential number where the copied lines will begin

You can specify the last line of the file by typing a dollar sign ($).

Example

In this example lines 2 through 4 are copied and are placed beginning at line 6.

COPY 2-4 6 RETURN

This shows the screen display before the lines are copied.

```
1   INTRO.PIC
2   GRAPH.PIC
3   LIST1.PIC
4   +PAUSE 15
5   LIST1.PIC
6   MAP.PIC
7   UPDATE.PIC
8   PLANS1.PIC
9   END.PIC
End




Edit command: copy 2-4 6
```

This shows the screen display after the lines are copied.

```
 1  INTRO.PIC
 2  GRAPH.PIC
 3  LIST1.PIC
 4  +PAUSE 15
 5  LIST1.PIC
 6  MAP.PIC
 7  GRAPH.PIC
 8  LIST1.PIC
 9  +PAUSE 15
10  UPDATE.PIC
11  PLANS1.PIC
12  END.PIC
End




Edit command:
```

EDIT-TRAY: DELETE

DELETE deletes a line or a range of lines from the tray file. If you specify a line number that is not in the file, the Slide Projection System displays an error message.

After deleting the range, the Slide Projection System renumbers the lines following the deleted range.

Format   DELETE *line1 (-line2)*

where:

line1 is the first line to be deleted
(-line2) is the last line of the range to be deleted

Example   The following example shows the range of lines 4-6 being deleted.

DELETE 4-6 RETURN

The following shows the screen display before the lines are deleted.

```
 1   INTRO.PIC
 2   GRAPH.PIC
 3   LIST1.PIC
 4   +PAUSE 15
 5   LIST1.PIC
 6   MAP.PIC
 7   UPDATE.PIC
 8   PLANS1.PIC
 9   END.PIC
End




Edit command: delete 4-6
```

The following shows the screen display after the lines are deleted.

```
 1   INTRO.PIC
 2   GRAPH.PIC
 3   LIST1.PIC
 4   UPDATE.PIC
 5   PLANS1.PIC
 6   END.PIC
End




Edit command:
```

EDIT-TRAY: END

END terminates the editing session and returns you to the Slide Projection System command level. Any changes made to the file are saved unless you have specified the "dont-save-changes" option, in which case the tray file is left unchanged. The "dont-save-changes" option can be abbreviated to "D".

Format   END (DONT-SAVE-CHANGES)

or

END D

Example 1   END RETURN

Example 2   END D RETURN

EDIT-TRAY: FIND

FIND locates a line that you specify and displays that line at the screen position that you designate.

You can specify either a line number or a label as an argument. If you specify a line number that is out of range or a label that does not exist, the Slide Projection System displays an error message.

The default location for displaying the line is the line at the top of the screen.

Format   FIND *label/line (screen position)*

where:

label/line is either the label name or the line number that you want to see displayed

(screen position) indicates the number of lines from the top of the screen

Example   This example displays line 24 in the file on the top line of the screen display.

FIND 24 1 RETURN

```
 1   INTRO.PIC
 2   GRAPH.PIC
 3   CHARTA.PIC
 4   CHARTB.PIC
 5   CHARTC.PIC
 6   +GOTO 2
 7   CIRCLE.PIC
 8   CURVES.PIC
 9   ANGLES.PIC
10   STAR.PIC
11   LIST1.PIC
12   +PAUSE 15
13   LIST1.PIC
14   LIST2.PIC
15   LIST3.PIC
16   BUDGT1.PIC
17   BUDGT2.PIC
18   BUDGT3.PIC
19   BUDGT4.PIC
20   PIE.PIC
21   MAP1.PIC
Edit command: find 24 1
```

```
24  MAP4.PIC
25  NEW.PIC
26  UPDATE.PIC
27  COUNT.PIC
28  REPRT1.PIC
29  REPRT2.PIC
30  REPRT3.PIC
31  RERUN.PIC
32  OLDLST.PIC
33  NEWLST.PIC
34  FORCST.PIC
35  GOALS1.PIC
36  GOALS2.PIC
37  GOALS3.PIC
38  PLANS1.PIC
39  PLANS2.PIC
40  PLANS3.PIC
41  DREAMS.PIC
42  FUN.PIC
43  END.PIC
End
Edit command:
```

EDIT-TRAY: INSERT-AFTER

INSERT-AFTER inserts new lines at the specified location. The Slide Projection System displays a prompt and a line number on the right side of the screen after the INSERT-AFTER command is typed. The line number is the line number specified with the command.

Type in the first line to be inserted and press the RETURN key. Continue typing lines, ending each line by pressing the RETURN key, until all the new lines have been entered. To insert the new lines into the file, press the RETURN key twice. The Slide Projection System then inserts the new lines into the existing file.

To insert lines at the beginning of the file, use 0 for line number. To insert lines at the end of the file, use $ (dollar sign).

Any lines that follow the newly inserted lines are renumbered sequentially.

Format   INSERT-AFTER *line-number*

where:

line-number is the number of the line after which the additional lines are inserted

Example   The following example shows five lines being inserted into the file.

INSERT-AFTER 3 RETURN

The display below shows the screen after typing the lines to be inserted.

```
 1   INTRO.PIC
 2   GRAPH.PIC
 3   LIST1.PIC
 4   +PAUSE 15
 5   LIST1.PIC
 6   MAP.PIC
 7   UPDATE.PIC
 8   PLANS1.PIC
 9   END.PIC
End




Edit command: insert-after 3
```

```
 1   INTRO.PIC              To stop, type empty line
 2   GRAPH.PIC             4 CHART1.PIC
 3   LIST1.PIC             5 CHART2.PIC
 4   +PAUSE 15             6 NEW.PIC
 5   LIST1.PIC             7 OLDMAP.PIC
 6   MAP.PIC              8 CHANGES.PIC
 7   UPDATE.PIC           9
 8   PLANS1.PIC
 9   END.PIC
End




Edit command: insert-after 3
```

Example   The following example shows five lines being inserted into the file.

INSERT-AFTER 3 RETURN

The display below shows the screen after typing the lines to be inserted.

```
1   INTRO.PIC
2   GRAPH.PIC
3   LIST1.PIC
4   +PAUSE 15
5   LIST1.PIC
6   MAP.PIC
7   UPDATE.PIC
8   PLANS1.PIC
9   END.PIC
End




Edit command: insert-after 3
```

```
1   INTRO.PIC              To stop, type empty line
2   GRAPH.PIC              4 CHART1.PIC
3   LIST1.PIC              5 CHART2.PIC
4   +PAUSE 15              6 NEW.PIC
5   LIST1.PIC              7 OLDMAP.PIC
6   MAP.PIC               8 CHANGES.PIC
7   UPDATE.PIC            9
8   PLANS1.PIC
9   END.PIC
End




Edit command: insert-after 3
```

```
24  MAP4.PIC
25  NEW.PIC
26  UPDATE.PIC
27  COUNT.PIC
28  REPRT1.PIC
29  REPRT2.PIC
30  REPRT3.PIC
31  RERUN.PIC
32  OLDLST.PIC
33  NEWLST.PIC
34  FORCST.PIC
35  GOALS1.PIC
36  GOALS2.PIC
37  GOALS3.PIC
38  PLANS1.PIC
39  PLANS2.PIC
40  PLANS3.PIC
41  DREAMS.PIC
42  FUN.PIC
43  END.PIC
End
Edit command:
```

EDIT-TRAY: INSERT-AFTER

INSERT-AFTER inserts new lines at the specified location. The Slide Projection System displays a prompt and a line number on the right side of the screen after the INSERT-AFTER command is typed. The line number is the line number specified with the command.

Type in the first line to be inserted and press the RETURN key. Continue typing lines, ending each line by pressing the RETURN key, until all the new lines have been entered. To insert the new lines into the file, press the RETURN key twice. The Slide Projection System then inserts the new lines into the existing file.

To insert lines at the beginning of the file, use 0 for line number. To insert lines at the end of the file, use $ (dollar sign).

Any lines that follow the newly inserted lines are renumbered sequentially.

Format INSERT-AFTER *line-number*

where:

line-number is the number of the line after which the additional lines are inserted

The display below shows the screen after pressing the **RETURN** key twice to insert the lines into the file.

```
1   INTRO.PIC                         To stop, type empty line
2   GRAPH.PIC                         4 CHART1.PIC
3   LIST1.PIC                         5 CHART2.PIC
4   CHART1.PIC                        6 NEW.PIC
5   CHART2.PIC                        7 OLDMAP.PIC
6   NEW.PIC                           8 CHANGES.PIC
7   OLDMAP.PIC                        9
8   CHANGES.PIC
9   +PAUSE 15
10  LIST1.PIC
11  MAP.PIC
12  UPDATE.PIC
13  PLANS1.PIC
14  END.PIC
End




Edit command:
```

EDIT-TRAY: MOVE

MOVE moves the designated range to the specified position. The designated range is deleted from the current location when it is moved. Each line in the file is renumbered sequentially to reflect the new sequence.

Format   MOVE *line1 (-line2) line3*

where:

line1 is the first line of the range
(-line2) is the last line of the range, if more than one line is specified
line3 is the first line of the range at the new location

Example   The following example shows lines 4 through 6 being moved from their current location to a new location beginning at line 8.

MOVE 4-6 8 RETURN

The display below shows the screen after typing the lines to be moved.

```
1   INTRO.PIC
2   GRAPH.PIC
3   LIST1.PIC
4   CHART1.PIC
5   CHART2.PIC
6   NEW.PIC
7   OLDMAP.PIC
8   CHANGES.PIC
9   +PAUSE 15
10  LIST1.PIC
11  MAP.PIC
12  UPDATE.PIC
13  PLANS1.PIC
14  END.PIC
End




Edit command: MOVE 4-6 8
```

The display below shows the screen after pressing the RETURN key twice to move the lines.

```
1   INTRO.PIC
2   GRAPH.PIC
3   LIST1.PIC
4   OLDMAP.PIC
5   CHANGES.PIC
6   CHART1.PIC
7   CHART2.PIC
8   NEW.PIC
9   +PAUSE 15
10  LIST1.PIC
11  MAP.PIC
12  UPDATE.PIC
13  PLANS1.PIC
14  END.PIC
End




Edit command:
```

EDIT-TRAY: REPLACE

REPLACE deletes the specified range and enables you to insert a new range. The REPLACE command has the same effect as using both the DELETE and the INSERT-AFTER commands.

If the number of lines being inserted differs from the number of lines deleted, the Slide Projection System renumbers the following lines.

After typing the range to be inserted, press the RETURN key twice. This positions the new range at the specified location.

Format

REPLACE *line1 (-line2)*

where:

line1 is the first line that is to be replaced
(-line2) is the end of the range to be replaced

Example

The following example shows lines 2 through 4 being replaced by one new line.

REPLACE 2-4 RETURN

The display below shows the screen display before typing the new line to be inserted.

```
 1  INTRO.PIC
 2  GRAPH.PIC
 3  LIST1.PIC
 4  CHART1.PIC
 5  CHART2.PIC
 6  NEW.PIC
 7  OLDMAP.PIC
 8  CHANGES.PIC
 9  +PAUSE 15
10  LIST1.PIC
11  MAP.PIC
12  UPDATE.PIC
13  PLANS1.PIC
14  END.PIC
End



Edit command: REPLACE 2-4
```

The display below shows the screen display after typing the new line and pressing the **RETURN** key twice to enter the new line.

```
 1  INTRO.PIC                          To stop, type empty line
 2  GRAPH.PIC                          2 CHART.PIC
 3  LIST1.PIC
 4  CHART1.PIC
 5  CHART2.PIC
 6  NEW.PIC
 7  OLDMAP.PIC
 8  CHANGES.PIC
 9  +PAUSE 15
10  LIST1.PIC
11  MAP.PIC
12  UPDATE.PIC
13  PLANS1.PIC
14  END.PIC
End



Edit command: REPLACE 2-4
```

```
 1  INTRO.PIC                          To stop, type empty line
 2  CHART.PIC                          2 CHART.PIC
 3  CHART2.PIC                         3
 4  NEW.PIC
 5  OLDMAP.PIC
 6  CHANGES.PIC
 7  +PAUSE 15
 8  LIST1.PIC
 9  MAP.PIC
10  UPDATE.PIC
11  PLANS1.PIC
12  END.PIC
End



Edit command:
```

EDIT-TRAY: SHOW-SLIDE

SHOW-SLIDE displays the specified picture. After the picture is displayed, press the RETURN key for the Slide Projection System to prompt you for the next edit command.
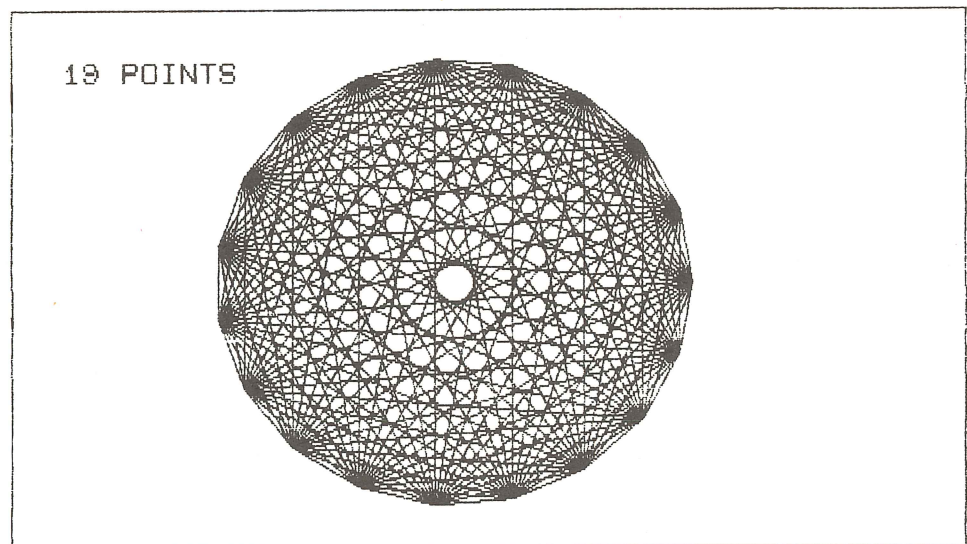
Format

SHOW-SLIDE *filename (object)*

where:

filename is the name of the picture file to be displayed
(object) is the name of the object to be displayed

Example

The example below shows the use of and the display generated by the SHOW-SLIDE command.

SHOW-SLIDE ROSM19.PIC RETURN

HELP

HELP displays a list of the commands available with the Slide Projection System. Typing a question mark (?) also displays a list of available commands.

Format

HELP

Example

HELP RETURN

IDENTIFY-SLIDES

IDENTIFY-SLIDES causes the Slide Projection System to display the filename of a picture that is being shown on the screen. You can specify the screen position where the name of the picture is displayed. The default for line-number is line 24.

When the Slide Projection System displays the filename, it erases any part of the picture in the specified or default line.
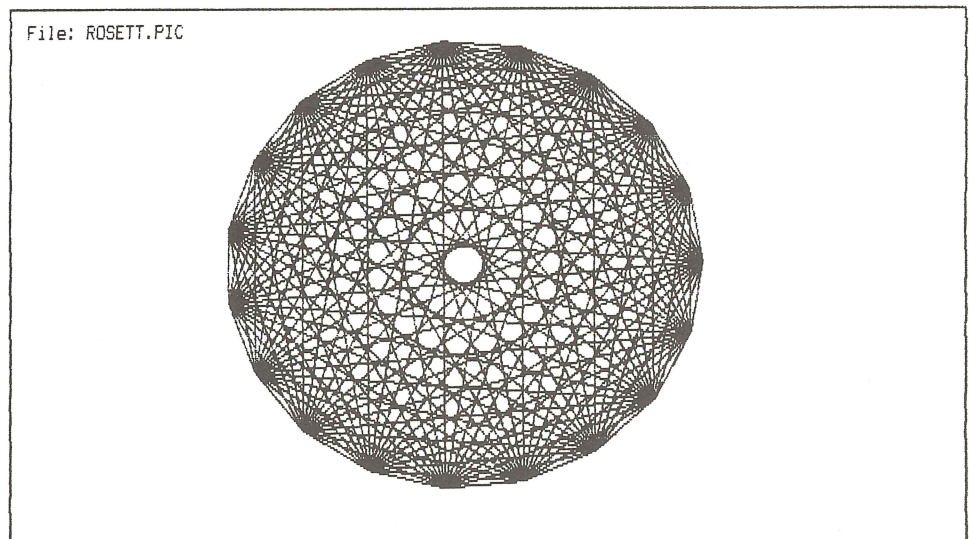
To discontinue use of the IDENTIFY-SLIDE command, use the DONT IDENTIFY-SLIDE command.

Format   IDENTIFY-SLIDES *(line-number)*

where:

(line-number) must be a number between 1 and 24

Example   IDENTIFY-SLIDES 1 RETURN


```
File: ROSETT.PIC
```

IGNORE-EMBEDDED-COMMANDS

IGNORE-EMBEDDED-COMMANDS causes the Slide Projection System to ignore any embedded commands that have been entered in a tray file.

To resume the use of any embedded commands, use the DONT IGNORE-EMBEDDED-COMMANDS command.

Format   IGNORE-EMBEDDED-COMMANDS

Example   IGNORE-EMBEDDED-COMMANDS RETURN

PRINT-SLIDES

PRINT-SLIDES prints pictures on the DECwriter IV Graphics Printer. It can print and display a single slide, a range of slides in a tray file, or all the slides in a tray file. PRINT-SLIDES uses the tray file specified with the last use of the TRAY or EDIT-TRAY command.

To print a single picture, type PRINT-SLIDE, type the SLIDE argument, and specify the file name.

To print a range of pictures in a tray file, type PRINT-SLIDE, type the RANGE argument, and specify the range.

To print all pictures in a tray file, type PRINT-SLIDE. If a file name is not specified, the Slide Projection System will print all the pictures in the file last specified with the TRAY or the EDIT-TRAY command. If a tray file has not previously been used, specify the tray file name with the PRINT-SLIDE command.

The default is no option, which shows all pictures in the tray.

PRINT-SLIDES displays the pictures on the monitor screen, just as the SHOW-SLIDES command does. However, PRINT-SLIDES ignores any embedded commands in the tray file. The picture continues to be displayed on the screen until the picture has been printed. When the picture has been printed, the next picture in the tray file is displayed, until the end of the tray file is reached.
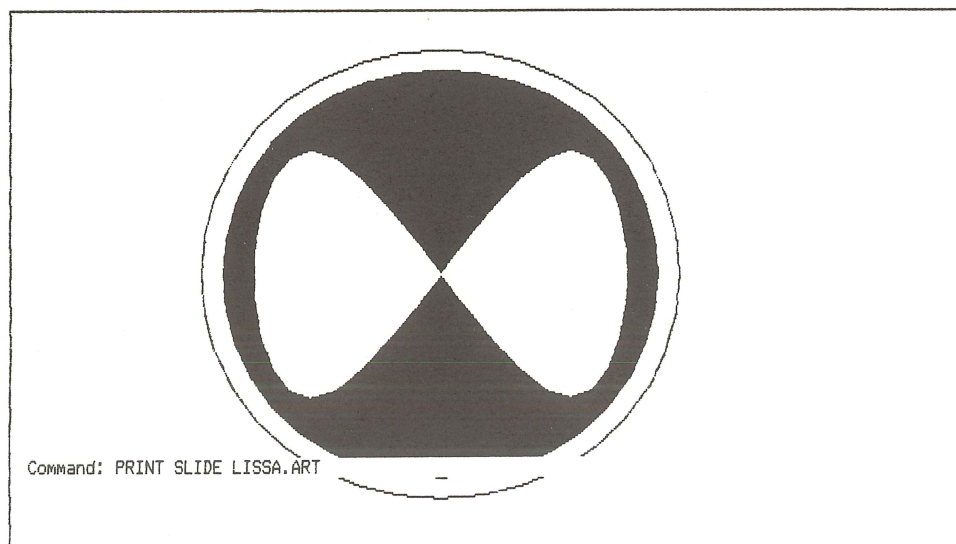
Format

PRINT-SLIDES $\left(\begin{array}{l} \textit{number1 (-number2)} \\ \textit{filename (object)} \end{array} \right)$

where:

number1 is the first slide in the range
(-number2) is the last slide in the range
(filename) is the name of a picture file
(object) is a label in the picture file

Example
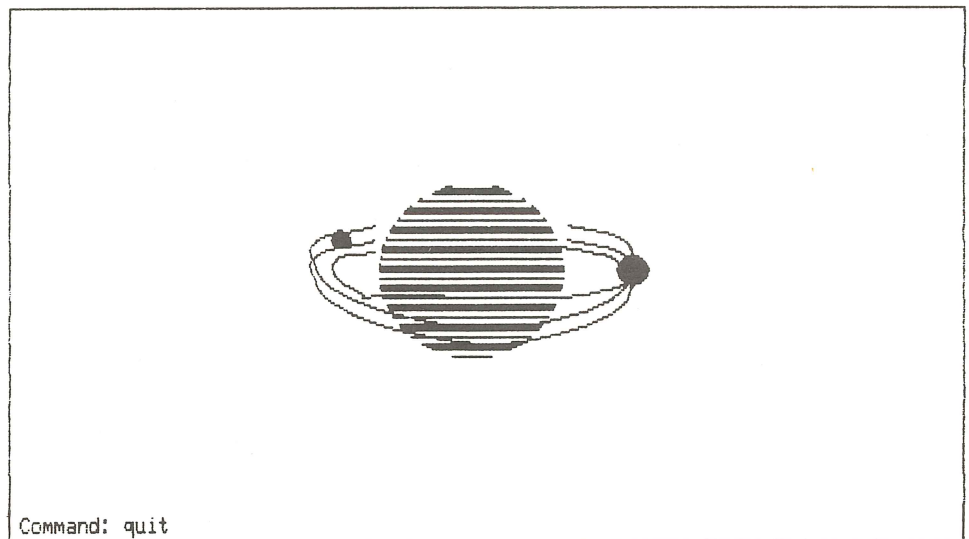

Command: PRINT SLIDE LISSA.ART

QUIT

QUIT causes the Slide Projection System to return control to the operating system. After returning to command level of the operating system, it displays the system level prompt.

Format   QUIT

Example


```
Command: quit
```

REGIS

REGIS allows you to enter a ReGIS string and to later display that command string graphically. The REGIS command enables you to use ReGIS directly while using the Slide Projection System.

To do this, type the REGIS command with the ReGIS command string to be displayed. To see the ReGIS string displayed graphically, type the REGIS command again, but with no argument. The Slide Projection System then displays the last ReGIS string that was specified.

Question marks inserted into the ReGIS string cause the Slide Projection System to stop the display at the point of the question mark and to prompt you. At that point, you can give additional ReGIS commands to be displayed. When you have completed typing the additional ReGIS commands, press the RETURN key. If you are at the end of the ReGIS string originally specified with the REGIS command, you are returned to command level. If additional ReGIS commands follow the inserted question mark, the Slide Projection System resumes processing the ReGIS string. You can insert multiple question marks into the ReGIS string.
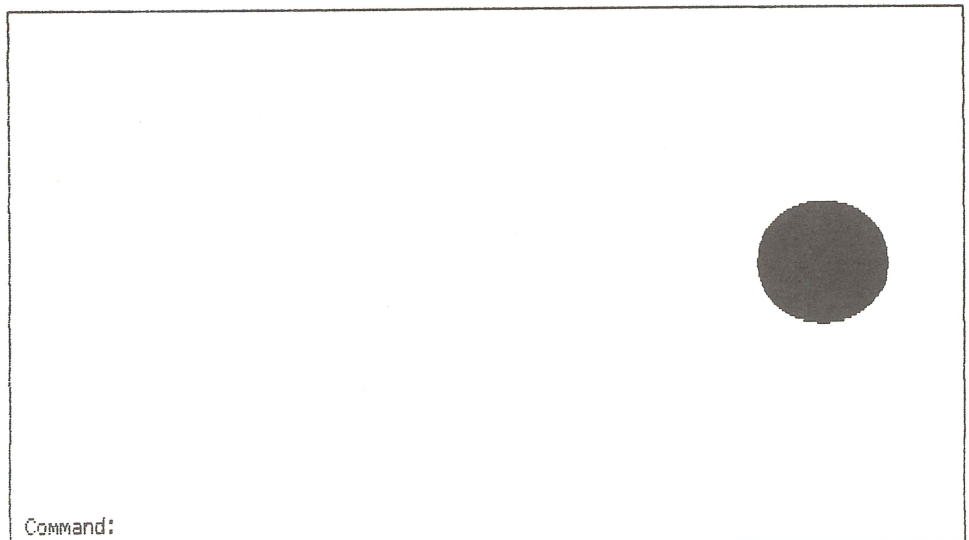
Format   REGIS *string* RETURN

REGIS

where:

string is one or more ReGIS statements

Example   The following example shows a ReGIS string with statements to clear the screen and draw a shaded circle that is green. The display below the typed example is generated by this example.

REGIS S(E);W(S1)(IG);C[+50]; RETURN

Command:

SHOW-SLIDES

SHOW-SLIDES displays pictures. The Slide Projection System displays pictures according to any embedded commands and any other options that have been set with the Slide Projection System commands. You can display various combinations of pictures by specifying different arguments.

Displaying Pictures

To display a single slide, use the SLIDE argument with SHOW-SLIDES and specify the picture file name. If a label is specified, only the part of the picture to which the label applies is displayed.

To display a range of pictures, first use the TRAY command to load a tray file. Then use the RANGE argument with the SHOW-SLIDES command to specify the range within the tray file.

To display an entire tray file, first use the TRAY command to load a tray file. Then type the SHOW-SLIDES command. The Slide Projection System will then display all pictures in the tray file.

Manual and Automatic Modes

The default is for the Slide Projection System to show slides automatically. When slides are displayed automatically, the Slide Projection System displays each slide in order, unless embedded commands indicate other sequences. The Slide Projection System also recognizes any options set with the IDENTIFY-SLIDES, IGNORE-EMBEDDED-COMMANDS, and WAIT-AFTER-SHOWING commands.

To show slides manually, specify the MANUAL argument with the SHOW-SLIDES command. The table below shows the keys and the commands used to control the display of slides.

Key/Command	Function
left arrow key	back up to the previous picture
right arrow key	advance to the next picture
GOTO picture RETURN	go to the specified picture, where picture is either a picture number or a label in the tray file
ADVANCE number RETURN	advance the specified number of pictures
BACK-UP number RETURN	back up the specified number of pictures
SHIFT key-PF1 key	print the current contents of the screen on the DECwriter IV Graphics Printer
RETURN key	return to the main Slide Projection System System command level

Format

$$\text{SHOW-SLIDES} \begin{pmatrix} \textit{number1 (-number2)} \\ \text{(SLIDE } \textit{filename (object)} \text{ (MANUAL)} \end{pmatrix}$$

where:

number1 is the first slide in a range
(-number2) is the last slide in a range
filename is the name of a picture file
(object) is a label in the picture file

Example 1   This example displays all slides in the tray file DEMO.SHO

TRAY DEMO.SHO RETURN
SHOW RETURN

Example 2   This example displays the first five slides in the tray file DEMO.SHO.

TRAY DEMO.SHO RETURN
SHOW-SLIDES 1-5 RETURN

Example 3   This example displays one part of the picture in the slide file SCENE.PIC.

SHOW-SLIDES SLIDE SCENE.PIC TREE RETURN

Example 4   This example shows the slides in the tray file DEMO.SHO in manual mode.

TRAY DEMO.SHO RETURN
SHOW MANUAL RETURN

Example 5   This example ignores all embedded commands in the tray file DEMO.SHO.

TRAY DEMO.SHO RETURN
IGNORE-EMBEDDED-COMMANDS RETURN
SHOW RETURN

TRAY

TRAY specifies the name of the tray file to the Slide Projection System.

The other commands that take the file name you specify with TRAY are:

- EDIT-TRAY
- PRINT-SLIDES
- SHOW-SLIDES

Format   TRAY *filename*

where:

filename is the name of a tray file

Example   TRAY DEMO.SHO RETURN

WAIT-AFTER-SHOWING

WAIT-AFTER-SHOWING causes the Slide Projection System to wait the specified number of seconds after displaying a picture before showing the next picture. When the Slide Projection System is started, it is set to wait five seconds.

Format   WAIT-AFTER-SHOWING *seconds*

where:

seconds is an integer between 0 and 1000

Example 1   WAIT-AFTER-SHOWING 3 RETURN

Example 2   WAIT 20 RETURN

SLIDE PROJECTION SYSTEM EMBEDDED COMMANDS

Embedded commands are commands that you can insert in tray files. When the Slide Projection System displays a tray file with the SHOW-SLIDES command, the embedded commands in the file are executed.

If a tray file has embedded commands that you don't want to use, use the IGNORE-EMBEDDED COMMANDS. To resume use of the embedded commands, type the DONT IGNORE-EMBEDDED-COMMANDS command.

A " + " (plus sign) in front of the command indicates an embedded command. The " + " sign must be included as part of the embedded command. You can insert embedded commands with EDIT-TRAY.

The embedded commands are shown in the following sections.

+ CHAIN

+ CHAIN chains together multiple tray files for display purposes. The + CHAIN command causes the Slide Projection System to display the pictures in the specified tray file. After displaying those pictures, the Slide Projection System does not return to the original file, unless you have inserted another + CHAIN command.

You can optionally specify the picture within a tray file at which the Slide Projection System will begin showing pictures. If a slide is specified, the Slide Projection System will not display any pictures in the file that come before the specified picture.

Format + CHAIN *filename (slide)*

where:

filename is the name of a tray file
(slide) is the name of a picture file within the specified tray file

Example INTRO.PIC
GRAPH.PIC
CHART.PIC
CIRCLE.PIC
+ CHAIN MAGIC.SHO
LIST1.PIC
LIST2.PIC
LIST3.PIC

+ GOTO

+GOTO causes the Slide Projection System to jump to the specified picture and then to display that picture. The picture must be in the same tray file as the +GOTO command.

Format   +GOTO *slide*

where:

slide is the name of the picture file

Example
```
INTRO.PIC
GRAPH.PIC
CHART.PIC
CIRCLE.PIC
LIST1.PIC
LIST2.PIC
LIST3.PIC
+GOTO LIST1
```

+ NEXT

+NEXT causes different settings to be used for the following pictures that are in the tray file. You specify the number of pictures that will use these different settings. After the specified number of slides are processed, the Slide Projection System returns to the settings used before the +NEXT command.

The settings are:
- CLEAR-SCREEN: sets the screen color to be one of the following: dark, blue, red, magenta, green, cyan, yellow, or white
- DONT-CLEAR-SCREEN: does not change screen color between slides
- WAIT-BEFORE-SHOWING: sets a time interval before showing the next slides

Format

+NEXT *number*
$$\begin{bmatrix} \text{CLEAR-SCREEN } (color) \\ \text{DONT-CLEAR-SCREEN} \\ \text{WAIT-AFTER-SHOWING } seconds \end{bmatrix}$$

where:

number is the number of pictures that will use settings that you are specifying
(color) is: dark, blue, red, magenta, green, cyan, yellow, or white
seconds is the number of seconds before displaying the next slide

Example
```
INTRO.PIC
GRAPH.PIC
CHART.PIC
CIRCLE.PIC
+NEXT 3 CLEAR-SCREEN BLUE
LIST1.PIC
LIST2.PIC
LIST3.PIC
```

+PAUSE

+PAUSE causes the Slide Projection System to wait before displaying the next slide. If a time limit is not specified, the Slide Projection System waits for you to press the RETURN key before displaying the next slide. If a time limit is specified (in seconds), the Slide Projection System pauses for that amount of time before displaying the next slide.

Format   +PAUSE *seconds*

where:

seconds is the number of seconds the Slide Projection System will pause

Example
```
INTRO.PIC
GRAPH.PIC
CHART.PIC
+PAUSE 25
CIRCLE.PIC
LIST1.PIC
LIST2.PIC
LIST3.PIC
```

+STOP
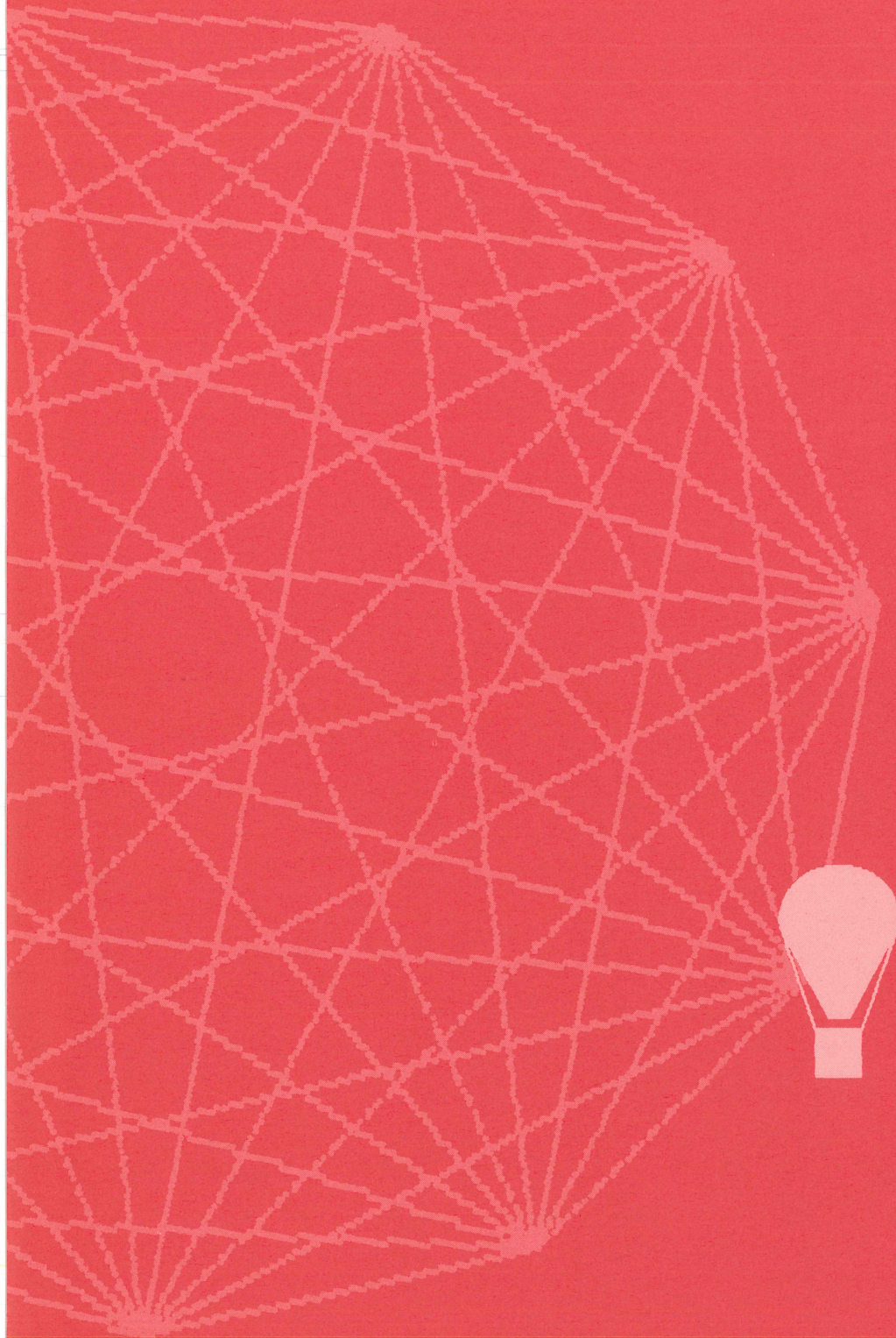
+STOP terminates the picture display.

When the Slide Projection System gets to a +STOP command in a tray file, it stops processing the tray file and returns you to Slide Projection System command level.

Format   +STOP

Example
```
INTRO.PIC
GRAPH.PIC
CHART.PIC
CIRCLE.PIC
+STOP
LIST1.PIC
LIST2.PIC
LIST3.PIC
```

Glossary

GIGI GLOSSARY

This glossary includes a list of terms used in reference to GIGI. For more information about particular subjects, refer to the manuals described in the preface.

alternate character set: one of the three user-definable character sets in GIGI; character sets can be loaded into the alternate character sets.

arrow keys: keys at the right of the main keypad marked with arrows and used, in general, to move the graphics cursor.

ASCII character set: the ASCII characters that are always loaded into GIGI. This is the default character set for GIGI.

attributes: a characteristic or distinctive feature; GIGI has screen, writing, and text attributes.

automatic mode: a level at which the Slide Projection System displays a tray file automatically.

auto-repeat: the terminal feature that causes the continuous transmission of the character for as long as you press the key for that character.

auxiliary keypad: the section of the keyboard to the right of the main keypad consisting of the numeric keypad and the program function keys. The Graphics Editor and Character Set Editor each use an overlay to indicate the key functions when the Graphics Editor or the Character Set Editor is used.

auxiliary keypad overlay: a plastic cover for the auxiliary keypad which you use to relabel the keys.

BASIC interpreter: the firmware in GIGI that processes GIGI BASIC statements.

brightness: monitor control used to adjust the intensity of the screen.

character: an 8-bit ASCII code; displayable characters are represented by an eight-by-ten dot pattern that is the basic unit in any of GIGI's character sets.

character cell: an eight-by-ten cell which contains a character pattern.

character pattern: the dot pattern contained in a character cell.

character set: a group of characters (up to a maximum of 128) of which 95 are displayable.

character size: the attributes defining the width and height of a character.

color: an attribute that defines the screen or writing color.

commands: words that can be typed when the Graphics Editor is at command level.

complement writing: the writing mode in which the writing color is complemented. The writing color is changed to the background color. The use of a pattern causes the background-colored part of the pattern to assume the writing color.

computer assisted instruction (CAI): use of a computer to augment the individual instruction process by providing the student with programmed sequences of instruction under computer control, permitting students to progress at their own rate.

current character set: the most-recently specified alternate character set.

current location: a location, maintained internally in GIGI, which is a pointer to the location last moved to or drawn to.

cursor: block cursor GIGI displays when not in graphics mode. See also graphics cursor.

default: a value assumed when no specific choice is given by the user or a program.

directional keys: keys on the auxiliary keypad that move the graphics cursor. These keys are printed on the Graphics Editor keypad overlays.

drawing: the operation GIGI performs to display lines or text on the screen.

embedded commands: commands that can be included in tray files to modify the display of the Slide Projection System.

erase writing: the writing mode in which previously drawn objects are erased.

font file: a file that contains the definition of a character or group of characters.

GIGI: Graphics Image Generator and Interpreter.

graphics cursor: a diamond-shaped cursor displayed when GIGI is in graphic mode. See also cursor.

graphic mode: terminal operating mode in which the ReGIS interpreter is enabled.

graphic text: the text displayed when GIGI is in graphic mode.

gray scale: 8 levels of intensity GIGI uses on black and white monitors.

host system: computer system (hardware and software) to which GIGI is connected. The software packages are used on host systems.

image: all objects displayed on the screen.

image memory: a bit map GIGI uses to maintain and display images on the screen.

interactive mode: a state in which keypad keys are used to control the display of each picture or slide. The same as manual mode.

italic: character slant.

keyboard: GIGI's main keypad and the auxiliary keypad.

keyboard overlay: a plastic cover for the keyboard that lets you relabel the keys.

label: an identifier used to distinguish an object or range of objects within a picture.

line pattern: an eight-dot pattern GIGI uses to write.

location: a point, defined with ReGIS statements, on the screen.

main keypad: the portion of the keyboard consisting of the alphanumeric characters.

manual mode: a state in which keypad keys are used to control the display of each picture or slide. The same as interactive mode.

mark: a displayed symbol used to specify a location.

monitor: a separate video device containing the cathode ray tube (CRT) GIGI uses to display screen images.

mosaic: a multi-character image created with characters from user-defined character sets. The spacing between characters is decreased.

multiplication factor: a number used to multiply the pixels in either a writing pattern or a text cell before displaying the pattern or cell.

negative writing: the reversed interpretation of the dot pattern GIGI uses for writing.

object: a distinguishable portion of the image, for example a single pixel which is a part of a line, or a line which is part of a drawing.

overlay writing: the mode of writing in which the overlaid object (the object defined with the overlay setting) is displayed over the existing object. The overlaid object affects the existing object appears to cover the existing object. The overlay setting is the same as laying a cutout on top of another cutout.

picture: any combination of drawings and text displayed on GIGI's screen.

picture files: files that contain the ReGIS descriptions of pictures.

pixel: picture element; the smallest displayable unit on the monitor screen.

point: a single location on the monitor screen.

program function keys: the top four keys on the auxiliary keypad, labelled PF1, PF2, PF3, and PF4.

range: a single object or a group of consecutive objects with which the first and last objects are specified.

relative location: a point on the screen measured from the current location rather than the screen location.

ReGIS: Remote Graphics Instruction Set

replace writing: the mode of writing that causes the object or text string to be written on the screen and to replace any other object that has been written in the same location.

reset: to return to a known default condition.

reverse video: the reverse interpretation of the screen and image bits in video memory; screen color becomes drawing color and drawing color becomes screen color.

screen: the portion of the video monitor on which images are displayed.

scrolling: the continuous horizontal or vertical movement of objects to make room for new objects.

self-tests: internal tests of terminal hardware that GIGI performs.

set-up mode: GIGI operating mode in which set-up parameters can be changed.

set-up parameter: terminal characteristics that can be changed in set-up mode to adapt the terminal to the operating environment.

shading: an attribute that uses the writing color to shade or color in the object being drawn.
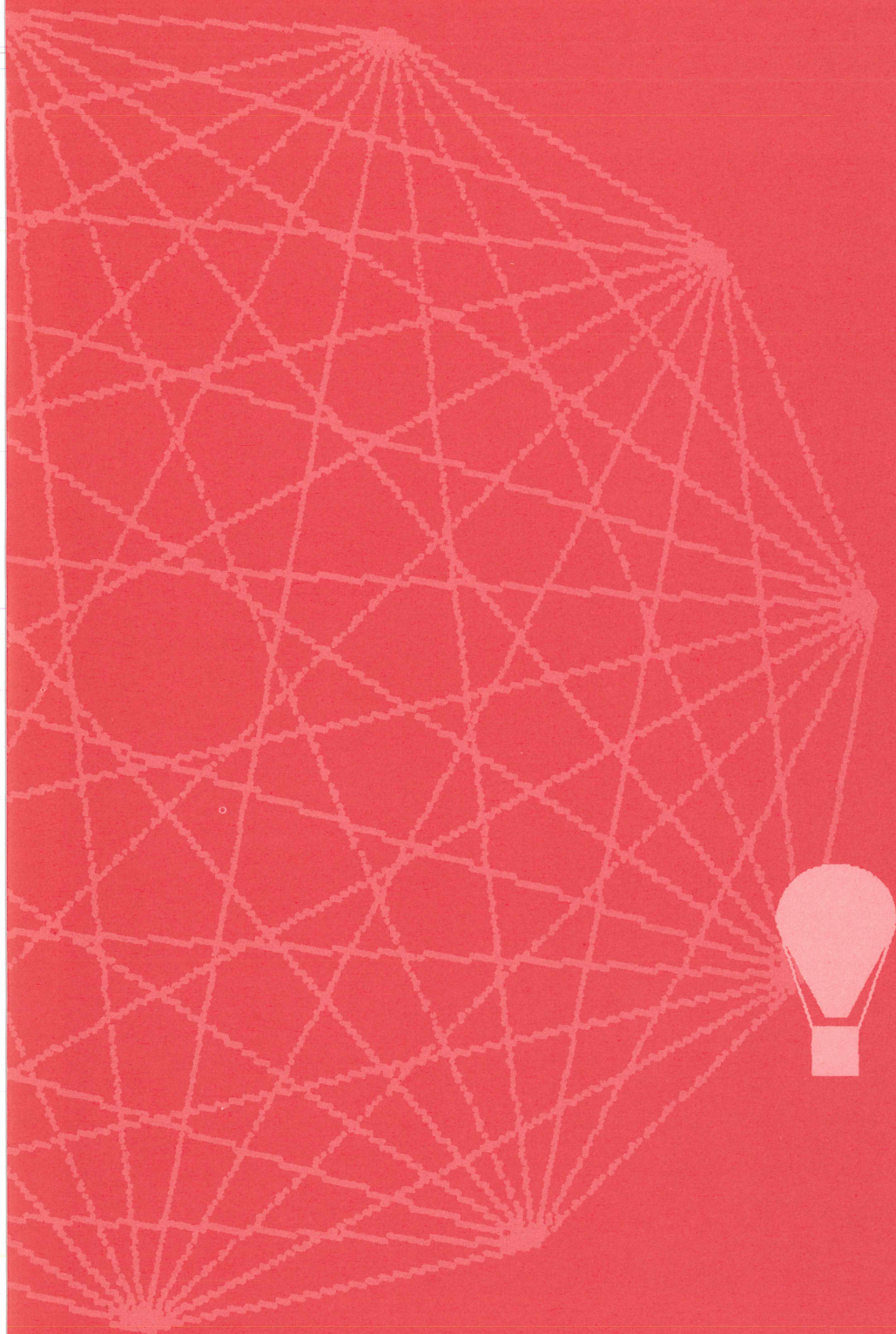
slide: a picture file.

standard character set: the 128 ASCII character set of which 95 are displayable in graphics mode.

text: GIGI operating mode in which GIGI operates as a VT100- or VT52-compatible system terminal.

tray files: files that contain the names of one or more picture files.

writing: the operation GIGI performs to display lines or text on the screen.

Index

INDEX

READER'S COMMENTS

Note: This form is for document comments only. DIGITAL will use comments submitted on this form at the company's discretion. Problems with software should be reported on a Software Performance Report (SPR) form. If you require a written reply and are eligible to receive one under SPR service, submit your comments on an SPR form.

- Did you find errors in this manual? If so, specify by page.

_____
_____
_____
_____
_____
_____

- Did you find this manual understandable, usable, and well-organized? Please make suggestions for improvement.

_____
_____
_____
_____
_____
_____

- Is there sufficient documentation on associated system programs required for use of the software described in this manual? If not, what material is missing and where should it be placed?

_____
_____
_____
_____
_____
_____

- Please indicate the type of user/reader that you most nearly represent.

☐ Assembly language programmer
☐ Higher-level language programmer
☐ Occasional programmer (experienced)
☐ User with little programming experience
☐ Student programmer
☐ Non-programmer interested in computer concepts and capabilities

Name _____ Date _____

Organization _____

Street _____

City _____ State _____ Zip Code or Country _____

Please cut along this line.

Fold Here--

Do Not Tear — Fold Here and Staple--

BUSINESS REPLY MAIL

FIRST CLASS PERMIT NO.152 MARLBOROUGH, MA 01752

Postage will be paid by:

digital

Education Computer Systems
25 Research Drive
Westboro, Massachusetts 01518

fly to the sky on GI – GI_____ and shout to