

Documenting and Protecting Displays

◆ Documenting and Protecting Displays

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Objectives

In this module, you will review the available features for documenting and protecting a display created in Display Builder. At the end of this module you will be able to do the following:

- Understand why documentation and protection are important.
- Know what features are available for documenting displays.
- Know how to use the documentation features.
- Recognize a display listing and its parts.
- Understand how to enhance documentation.
- Know what features are available for protecting displays.
- Know how to use the protection features.

Why Document and Protect a Display?

Documentation

- Hours building and troubleshooting
- Scripts alone represent many man hours
- Company proprietary material involved

Protection

- Hours of time invested
- Confidential company information
- Prevent unauthorized changes
- Casual “hackers”

Why Document Displays?

You and your company have invested a lot of time in producing GUS displays.

- Building and Troubleshooting
- Writing, testing, and debugging scripts

If displays are not well-documented, you run the risk of losing valuable time and materials.

Why Protect Displays?

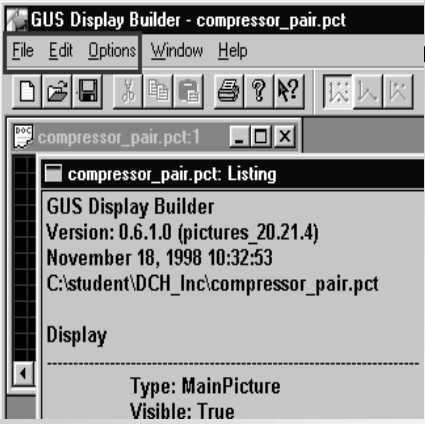
Hours of time have been invested in displays and much of the work may be confidential.

- You can protect your investment in intellectual property.
- You can prevent accidental or malicious loss of files or altered scripts.

Documentation Features

Display Listing (Alt-L)

- Since the menu bar has changed, the **Options** menu is now **Window** and **L** keys



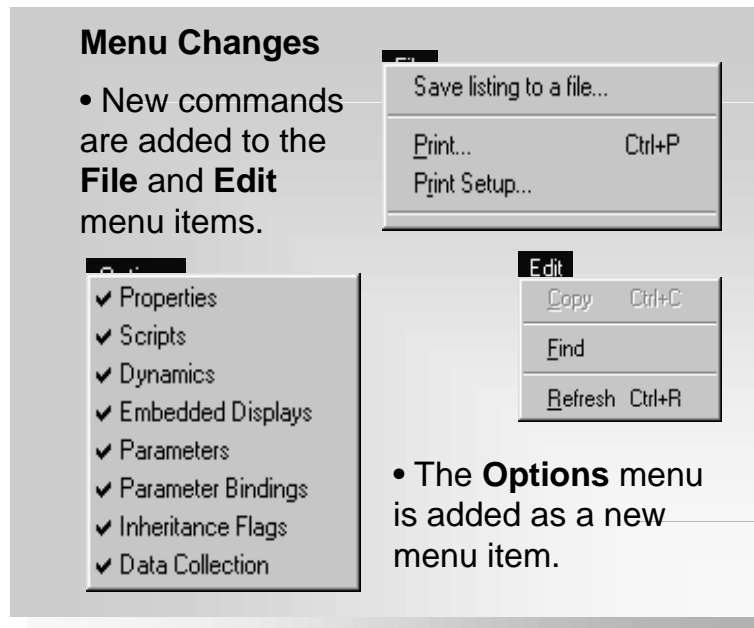
RESULT: A listing of all the display's objects and scripts is produced. Also notice the menu bar has changed.

Display Listing (Alt-L)

When you press Alt-L while a display is in an active window, you will produce a listing of all the objects in the display, their scripts, and other information about the display.

In addition, the items on the menu bar change so you can choose the desired options and print the listing.

Using Documentation Features (Menu Bar)



Two Menus Change and One Menu is added

File Menu has a new command.

Edit Menu has two new commands.

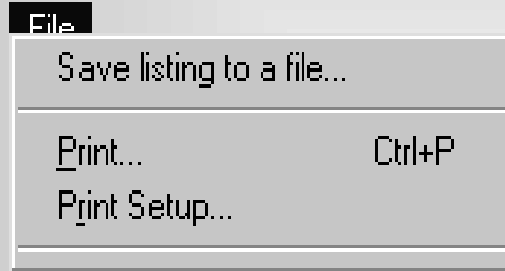
Options Menu has been added.

We'll cover these in more detail later in this discussion.

Using Documentation Features (Menu Bar)

File Menu Changes

- **Save listings to a file** produces an ASCII text file that can be printed using **Notebook** or re-formatted in **Microsoft Word**.
- **Print** and **Print Setup** are standard windows menu items.



File Menu Changes

Save listing to a file is a new command.

- It produces an ASCII text file listing that is shown in a window.
- The listing can also be saved to disk or printed.

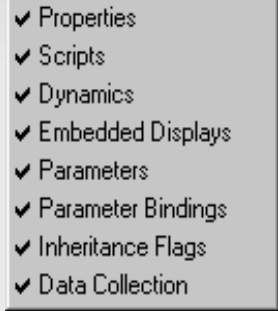
Print and **Print Setup** are standard Windows dialogs.

Using Documentation Features (Menu Bar)

File Menu Changes (continued)

Some listings, especially those containing **Embedded Displays** and **Change Zones**, may be very large (hundreds of pages) so you can use **Notebook** or **Word** to add page numbers.

You may want to limit some of the **Options** by unchecking them in the Options Command (more on Options later).

- 
- ✓ Properties
 - ✓ Scripts
 - ✓ Dynamics
 - ✓ Embedded Displays
 - ✓ Parameters
 - ✓ Parameter Bindings
 - ✓ Inheritance Flags
 - ✓ Data Collection

File Menu Changes (continued)

Some listings, especially those containing Embedded Displays and Change Zones, may be several hundred pages.

- Use **Notebook** or **Word** to add page numbers and format text if desired.

You can conserve the printout size if you uncheck some items in the **Options** menu.

Using Documentation Features (Menu Bar)

Edit Menu

- You *cannot* edit any part of the listing.
- **Copy** is used to copy portions of the listing to the clipboard. You can only paste from the clipboard to another application.
- **Find** is a text search utility.
- **Refresh** changes the listing so it corresponds with changes made to the display.

Edit

Copy Ctrl+C

Find

Refresh Ctrl+R

Edit Menu

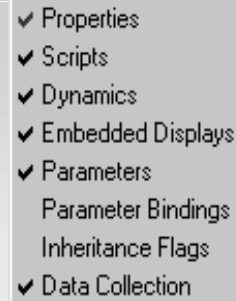
You *CANNOT* edit any part of the listing as it is displayed by Display Builder.

- **Copy** can be used to copy text to the clipboard.
- You **MUST** paste from the clipboard to another application.
- **Find** is a text search utility.
- **Refresh** is used to update the listing window if changes have been made to the display.

Using Documentation Features (Menu Bar)

Options Menu

- **All** listing options are checked by default when first opened.
- **Uncheck** some items to save listing space.
- **Tip #1:** The checked items in this illustration are the recommended minimum.
- **Tip #2:** When troubleshooting or just reviewing scripts, **uncheck** Properties.



Options Menu

This is where you select those options you want to have listed.

- By default, **ALL** listing options are checked.

- If you **UNCHECK** some items, you may cut down drastically on the printed listing size.

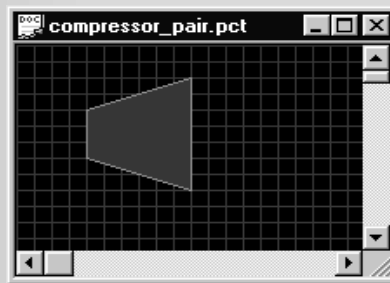
Tip #1: If you uncheck **Parameter Bindings** and **Inheritance Flags**, you will save space with little loss.

Tip #2: When you are **troubleshooting** or **reviewing scripts**, you may also uncheck **Properties**.

Sample Documentation Listing

Introduction

- Let's look at a sample listing. It is an object of a Compressor Pair that will be used to embed in displays where needed.



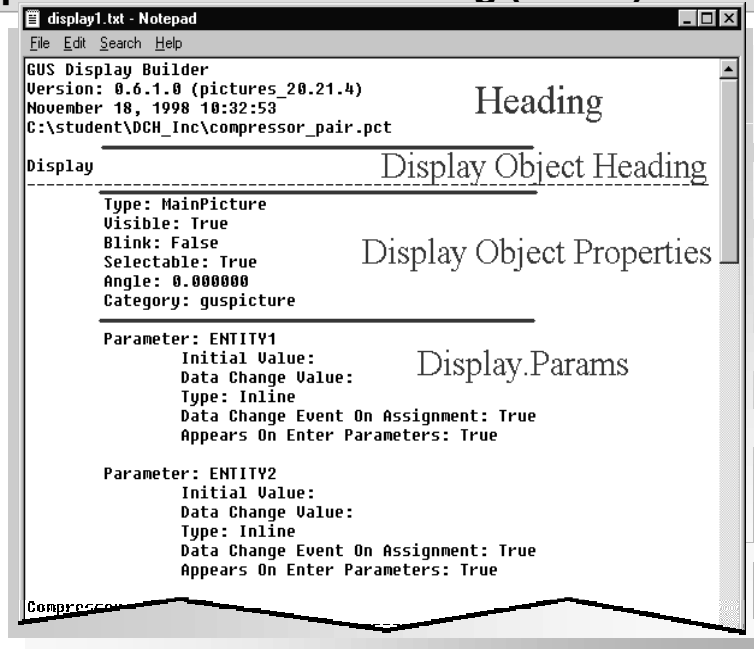
Let's look at the listing piece-by-piece.

Sample Listing

We will now review a sample listing of a small polygon object that represents a compressor pair.

It is part of a library of objects that can be **EMBEDDED** in displays when needed.

Sample Documentation Listing (Part 1)



```
display1.txt - Notepad
File Edit Search Help
GUS Display Builder
Version: 0.6.1.0 (pictures_20.21.4)
November 18, 1998 10:32:53
C:\student\DCH_Inc\compressor_pair.pct

Display ----- Display Object Heading
Type: MainPicture
Visible: True
Blink: False
Selectable: True
Angle: 0.000000
Category: guspicture
-----
Parameter: ENTITY1
Initial Value:
Data Change Value:
Type: Inline
Data Change Event On Assignment: True
Appears On Enter Parameters: True
-----
Parameter: ENTITY2
Initial Value:
Data Change Value:
Type: Inline
Data Change Event On Assignment: True
Appears On Enter Parameters: True
-----
Compressor
```

Sample Listing (Part 1)

The listing starts with a **Heading** which states:

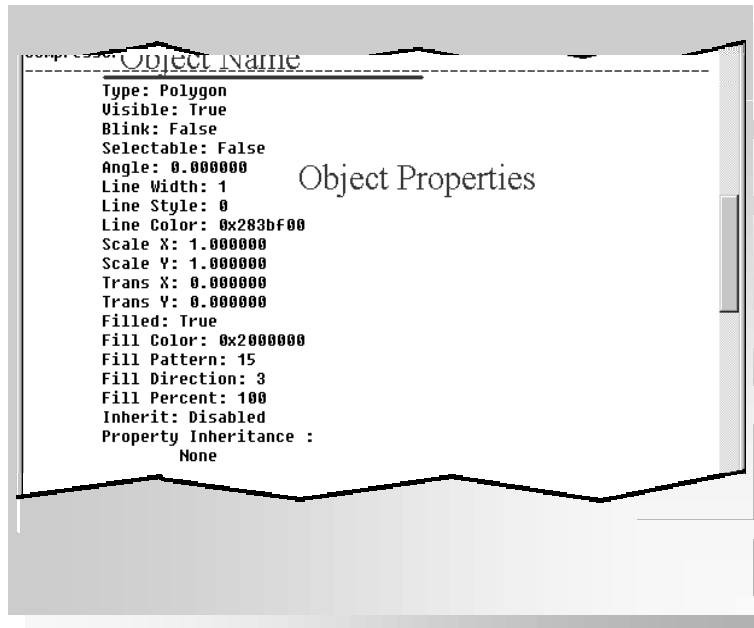
- The GUS Display Builder application and Version number.
- The date and time the listing was made.
- The pathname of the “pct” file being listed.

The **Display Object Heading** shows the title of the display object in the listing.

A listing of the **Display Object Properties** comes next.

Display.Params--Definitions of the display parameters follow.

Sample Documentation Listing (Part 2)



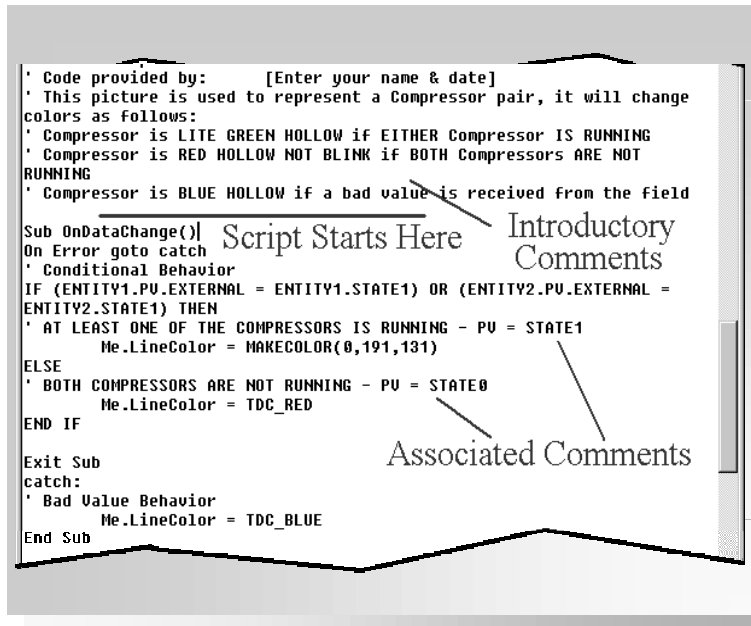
Sample Listing (Part 2)

Next, every object in the display is listed. In this small sample there is only one object, a polygon, here named **Compressor** by the programmer.

- It is a good idea to follow a naming convention for your display objects.
- Naming conventions can vary among users.
- Your course material provides some suggested conventions while recognizing that this is a subject of strong personal preferences.

As with the display object, a listing of this object's **Properties** follows the object name.

Sample Documentation Listing (Part 3)



Sample Listing (Part 3)

The object's script is listed after its properties.

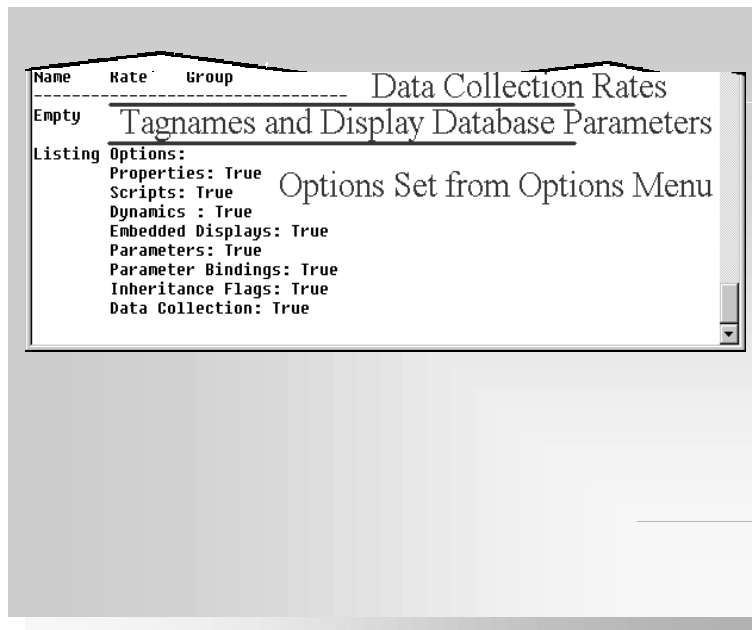
The **Introductory Comments** are written by the programmer and are listed first.

- **Comments** always occupy one line; they begin with an apostrophe (') and end with the Enter key.
- Always supply the **name** of the programmer and the **date the script** was last updated.
- If more than one programmer worked on a display, each object should carry this information.
- Following your name and date, enter a concise **description** of what the script does and how it does it.

The actual script then comes after the introductory comments.

- Add **Associated Comments** within the script to associate the script with the functions it performs.
- The programmer who wrote this code used CAPITAL LETTERS to clearly associate the comments.

Sample Documentation Listing (Part 4)



Sample Listing (Part 4)

Follow-up information comes at the end of the listing.

Data Collection Rates come first after the script (there are none for this embedded display example).

- **Tip:** You can always retrieve Data Collection information from the Display Builder but, it is more convenient to review your rates from the listing.

- **Note:** Data Collection rates are specified only after display validation.

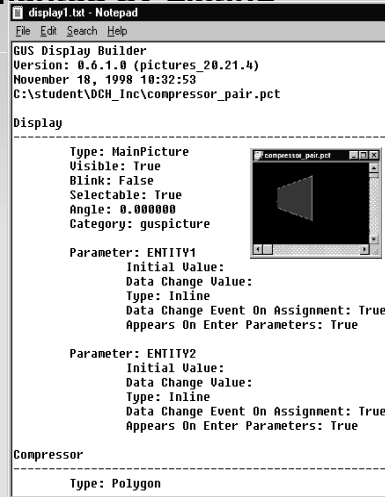
Tagnames and Display Database Parameters come next (again, none are listed for this display).

Listing Options are the settings you selected on the **Options** menu.

Enhancing Your Documentation

Items Not Documented by Listing

- **Pictures** of each object
- **Location** of Objects in the Display (X/Y)
- **Display Parameters** (Description, Picture Options, Background and other Properties)



Enhancing Your Documentation

Some features that you consider important may not be included in the listing. You can use a word processor (like Word) to format and add additional information to the listing. Here, we have listed some suggestions. **Remember**, all these suggestions have to be manually entered into your listing.

A **Screen Capture** picture of the full display and individual **images** of each object may be helpful.

- **Tip**: Once you have the images collected, you can also view them from a graphics application that has a thumbnail browser (many shareware companies offer thumbnail browsers at prices from \$30 to \$70).

The **X/Y Coordinates** from the upper-left corner of the display to each object may help position them.

Finally, the **Prompt** for your Display Parameters might be added.

- **Note**: The prompt, as you may recall, provides information to the person who will embed your display. The prompt includes suggestions about what to enter.

Protection Features

Display Builder Protection Provides

- Password-based approach
- Can't use build mode or capture scripts
- Can't use Alt-L command to view listings
- Can't read files with a binary file dumper

Password Protection Not Intended to

- Be an impenetrable defense
- Protect against a determined hacker
- Be a replacement for NT security

Additional Protection offered by NT

- Prevents unauthorized running of displays
- Prevents copying or deleting files

Password Protection Features

You can't open a password protected display, therefore, you can't

- Enter **Build** mode,
- **View or Copy** scripts, or
- Use the **Alt-L** command to produce a display listing.

You can't use Display Builder's **Object Browser** to view the contents of a password protected display when it is an embedded display.

You can't use a **binary file dump** function to attempt to read the script in a protected display.

Characteristics of Password Protection

A determined hacker may be able to violate Display Builder's password security.

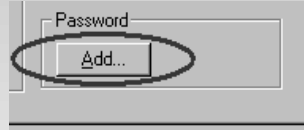
Don't consider password protection to be a substitute for NT security.

Using Protection Features

Adding Password Protection to Display

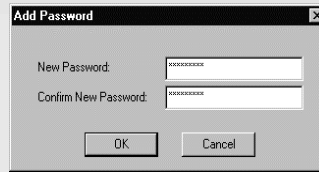
- By default, a display has no password.

- To add, click **Add** in Display Object Properties dialog.



- Enter password, then enter again.

- Be sure to **Save** the display and don't forget your password!



**A PASSWORD CAN'T BE RECOVERED
AND CAN'T BE REMOVED FROM A FILE!**

Setting Up Password Protection

A display doesn't have a password and isn't protected until someone adds one.

During the process of adding a password, Display Builder always asks for the NEW password TWICE. This helps insure that a typo wasn't entered by accident.

Your file is not password protected until you **Save** the file.

It's too easy to forget a password, so you should

- Be sure you, your superior and, perhaps a trusted co-worker, know the password.

- **REMEMBER, NOT EVEN HONEYWELL CAN UN-PROTECT A PROTECTED DISPLAY!**

Using Protection Features

Tips on Using a Password

- A password should be a “word” that can’t be associated with you; don’t use things like your address, spouse’s or pet’s name, etc. Change it at least every three months.
- A password can be a mixture of letters, numbers, and non-alpha characters. You can use non-printing characters.
- A password should be at least eight characters. Up to 255 are allowed. Case is recognized and must be entered exactly.

Tips on Using Password Protection

Don’t use a password that can be easily tied to your business or personal identification.

A password can be a mixture of alphanumeric, non-alphanumeric and non-printing characters, although non-printing characters may be dangerous.

Use at least eight characters in your password. Display Builder will accept up to 255 characters.

A password is case-sensitive, that is, upper and lower case letters are considered as separate entries.

Using Protection Features

How to Change Password on Display

- Click **Change** in Display Object Properties dialog
- Enter your current password, then enter new password
- Enter new password a second time to confirm it
- Be sure to **Save** the display and don't forget your **NEW** password!



Changing Password Protection

You must enter your old password before you can change your password.

During the process of changing a password, Display Builder always asks for the NEW password TWICE. This helps insure that a typo wasn't entered by accident.

It's very easy to forget a password that has been changed in haste! Be sure you, your superior and, perhaps a trusted co-worker, know the NEW password.

Using Protection Features

How to Remove Password Protection

- You may want to remove a file's password when transferring the file to another worker or when protection is not needed.
- Click **Remove** on Display Object Properties dialog
- Enter password
- Be sure to **Save** the display



Removing Password Protection

You must enter your old password before you can remove your password.

You must **Save** your display after you have removed a password or it will remain in effect.