

v. 10.0

GMS 10.0 Tutorial **Display Themes**

Quickly save and restore display options

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		the Project Explorer:	Lighting	Solids	Cross-sections
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	*		Drawing grid	2D Scatter	✓ 2D Mesh contours
			Triad	3D Mesh	✓ 2D Grid contours
			Materials	3D Grid	✓ 3D Mesh contours
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Objectives

This tutorial describes Display Themes. Display Themes are a powerful way to create and save display options for later use. Using Display Themes, the user can quickly change the look of the data.

Prerequisite Tutorials Required Components

None

Grid module

Time 5-10 minutes



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1 Introduction

GMS has many display options. Display options are used to change how data appears without actually changing the data. For example, it is possible to change the colors of the Feature Objects—the points, arcs, and polygons. To do so, use the *Display* / **Display Options** menu command.

Display Themes are a way to save the current display options so that the user can quickly return to them again.

2 Getting Started

To get started, do the following:

1. If necessary, launch GMS. If GMS is already running, select the *File* / **New** command to ensure that the program settings are restored to their default state.

2.1 Create a 2D Grid

Do the following to create a 2D grid in order to see how it is affected by display themes:

- 1. Create a grid frame by right-clicking in the Project Explorer and selecting the *New* / **Grid Frame** command from the pop-up menu.
- 2. Create a 2D grid by right-clicking on the "Grid Frame" in the Project Explorer and selecting the *Map To* / **2D Grid** command from the pop-up menu.
- 3. The *Create Finite Difference Grid* dialog will appear. Click **OK** to accept the defaults and create the grid.

2.2 Create a Default Display Theme

Do the following to create a new display theme:

1. Right-click on the blank space in the Project Explorer and select the *New* / **Display Theme** menu command.

This brings up the *Display Theme Properties* dialog. This tutorial will explain this dialog in detail a little later. For now, do the following:

- 2. Change the *Display Theme name* to "Default."
- 3. Click **OK** to exit the *Display Theme Properties* dialog.

2.3 Change the Display Options

Now do the following to change the display options and create another display theme:

- 1. Click on the **Display Options button**.
- 2. In the *Display Options* dialog, change the *Background color* to green by clicking on the drop-down menu and selecting a green color.
- 3. Change the *Triad size* to "100."
- 4. Click on the 2D Grid Data item in the list on the left side of the dialog.
- 5. Change the *Cell edges* line color to blue by clicking on the drop-down menu and selecting a blue color.

 ➢ Display Options 2D Grid Data ✓ Map Data Materials Lighting Options Lizk Axes It Drawing Grid 	2D Grid			
Z magnification: 1.0 Background color:	Grid boundary			
Help	OK Cancel			

Figure 1 Changing the display options

- 6. Change the Color option under Cell edges from "Auto" to "Specified."
- 7. Click OK.

2.4 Create the Display Theme

- 1. Right-click on the blank space in the Project Explorer and select the *New* / **Display Theme** menu command.
- 2. Change the Display Theme name to "Green background."
- 3. Click **OK**.

2.5 Switching Between Display Themes

1. In the Project Explorer, click on the "Default" display theme.

Notice the background color, the triad, and the grid color will all revert back to their default settings. Clicking on a display theme changes the display options to whatever they were when that theme was created.

2. In the Project Explorer, click on the "Green background" is display theme.

Again notice how the background color, the triad, and the grid color have changed. The display theme captures the display options that were in effect at the time that this particular display theme was created.

2.6 Theme Properties

Now to take a closer look at the display theme properties.

1. Right-click on the "Green background" a display theme and select the **Properties** command from the pop-up menu.

This brings up the Display Theme Properties dialog shown in Figure 2.

Display Theme Properties			×
Display Theme name:	Display settings to inclu	ude with theme	
Green background	General:	Display options:	Data set rendering:
Load this theme when objects with	Z magnification	TINs	Vectors
the following names are selected in	View	Boreholes	Color ramp
the Project Explorer:	Lighting	Solids	Cross-sections
	Background color	2D Mesh	V Isosurfaces
	V Plot axes	🔽 2D Grid	✓ TIN contours
	Drawing grid	2D Scatter	2D Scatter contours
	🔽 Triad	3D Mesh	✓ 2D Mesh contours
	Materials	3D Grid	2D Grid contours
		3D Scatter	3D Scatter contours
	All On	📝 Мар	✓ 3D Mesh contours
		GIS	✓ 3D Grid contours
Delete	All Off	UGrid	Map contours
			UGrid contours
Help			OK Cancel

Figure 2 Display theme properties

The main section of the dialog lists the settings that are included with the theme. This can be used to create themes that only include specific settings. For example, if the user doesn't want the current Z magnification to be changed when clicking on a display theme, he or she can turn that option off in the properties dialog. What follows is a demonstration using the background color.

- 2. Uncheck the *Background color* option.
- 3. Click OK.

- 4. Switch between the "Default" and "Green background" a display themes to see that the background color no longer changes, but the grid color and the triad still do.
- 5. Right-click on the "Green background" a display theme and select the **Properties** command from the pop-up menu.
- 6. Turn on the *Background color* option and click **OK**.
- 7. Switch between the "Default" and "Green background" a display themes to see that the color again changes, and that it is still green for the "Green background" theme.

2.7 Updating Display Themes

It is also possible to change the display options saved with a display theme.

- 1. Click on the *Display Options* **button**.
- 2. Change the *Background color* to red by choosing a red color from the drop-down menu.
- 3. Click **OK** to exit the *Display Options* dialog.
- 4. Right-click on the "Green background" i display theme and select the **Update With Current Display** command from the pop-up menu.
- 5. Switch between the "Default" and "Green background" display themes to see that the new color is now associated with the "Green background" theme.

2.8 Automatically Loading Display Themes

Display themes can be loaded automatically when the user selects other objects (objects other than display themes) in the Project Explorer.

1. Select the "Default" display theme to restore the display options to the default values.

Automatically Loading a Display Theme

- 1. Right-click on the "Green background" a display theme and select the *Properties* command from the pop-up menu.
- 2. Turn on the option to *Load this theme when objects with the following names are selected in the Project Explorer.*
- 3. Type "2D Grid Data" into the list.

Display Theme Properties			X
Display Theme name:	Display settings to include with theme		
Green background	General:	Display options:	Data set rendering:
Load this theme when objects with	Z magnification	TINs	Vectors
the following names are selected in	View	Boreholes	Color ramp
the Project Explorer:	🔽 Lighting	Solids	Cross-sections
1 2D Grid Data	Background color	2D Mesh	✓ Isosurfaces
	V Plot axes	🔽 2D Grid	✓ TIN contours
	🔽 Drawing grid	2D Scatter	2D Scatter contours
	🔽 Triad	3D Mesh	✓ 2D Mesh contours
	Materials	3D Grid	2D Grid contours
		3D Scatter	☑ 3D Scatter contours
	All On All Off	🔽 Мар	✓ 3D Mesh contours
		GIS	✓ 3D Grid contours
Delete		UGrid	Map contours
			UGrid contours
Help			OK Cancel

Figure 3 Automatically loading display themes

- 4. Click **OK**.
- 5. Click on the "2D Grid Data" item in the Project Explorer. Notice that the "Green Background" theme (which is now red) was loaded.
- 6. Click on the other items in the Project Explorer and notice that the "Green background" theme is only loaded when the user clicks on it or on the "2D Grid Data" item.

Note that the theme looks for the name of the item, not the type. For example, if a TIN was named "2D Grid Data," it would also trigger the "Green background" theme.

3 Conclusion

This concludes the tutorial. Here are the things that the user should have learned in this tutorial:

- Display themes can be used to quickly save and restore display options
- If desired, display themes can include just a subset of display options
- Display themes can be loaded automatically when clicking on other objects in the Project Explorer