

CH10_003

ANSWER



ENGINE ORGANIZATION

1 The Simple View

Answers:

1. Three or four, depending on whether you consider "Your Code" to be a layer.
2. The Platform Layer, The Torque Porting Layer, and Torque Core Layer. The top layer doesn't have a name, but is meant to represent changes and additions that you make to TGE in order to create a game.
3. Please note, the vertical bands (in figure 10.1 TGE - The Simple View) represent code subsystems and libraries that may extend into more than one engine layer.
4. The bottom three layers (Platform, Porting, and Core) are fixed, in the sense that you don't need to modify them to create a game using standard TGE features.
5. The layers each have the following purposes:
 - **Platform** - This layer contains the code necessary to allow TGE games to be targeted to multiple operating systems without the need to change game code.
 - **Porting** - This layer contains code that is provided to allow simple and consistent code behavior of games across the supported operating systems and game hardware. Furthermore, if you need to target TGE to work on a new OS or on new hardware, this code enables that port.
 - **Core** - This layer contains common (to OS and hardware) engine code that defines much of Torque's functionality.
 - **"Your Code"** - This layer represents any engine modifications you make, game scripts, art assets, etc..
6. As was stated above, the "Your Code" layer contains game scripts, artwork, and other game assets.
7. You can modify all of the layers. You have the source code.

ENGINE ORGANIZATION

2 The Directory View

Answers:

1. There are 19 major engine directories.
2. You would need to modify code in at least three different directories in order to add OpenGL extensions for use on a Windows platform.

- "`\engine\platform`" - Among other things, this directory contains code relating to graphics initialization. (See the file "`GLExtFunc.h`".)

- "`\engine\platformWin32`" - This directory contains code specific to the Windows platform. (See the files "`GLWinExtFunc.h`", "`platformGL.h`", "`winGL.cc`", "`winGLSpecial.cc`", "`winOGLVideo.h`", and "`winOGLVideo.cc`".)

- "`\engine\DGL`" - This directory contains the Dynamix Graphics Library and you may want to add or modify code here to use the extension you are enabling.

- Other? - Depending on the extension, you may need to modify code in other locations too, according to the extension and the way you wish to use it.

3. There are four primary directories that contain code representing specific game world objects.

- "`\engine\game`" - This directory contains the bulk of world object game code.
- "`\engine\interior`" - The code for interiors, sky, sun, and waterblock world objects is located here.
- "`\engine\sim`" - The decal manager (and decal code) is located here.
- "`\engine\terrain`" - The terrain code is located here.