

3D GAME STUDIO – BACKGROUND INFORMATION

Basics

Website: <http://www.3dgamestudio.com>

3D Game Studio (3DGS) is a PC software package for creating 3d games, generally from a first person perspective. It comes with its own 3d game engine, a level editor (world editor, or “WED”), a basic model and animation editor (“MED”), and a script editor (“SED”). The program produces a single executable file that runs on Windows computers, only.

The program is developed by Conitec a joint German/US company. A free version of the program runs for 30 days but publishing (i.e. creating the executable file) is disabled meaning that games will only run within the program and cannot be distributed. The standard version of 3DGS costs US\$49. The differences between various versions are listed here: <http://www.conitec.net/english/gstudio/3dgs2.htm>

The current version of the program is A7, we are using A6. The developers are continually tweaking the code and adding new features and there is a constant stream of beta and final versions of upgrades being released. The only way to keep on top of it is to pay close attention to the forum (see below).

Support

The program has an OK help system. Unfortunately, not everything is up to date with the current release of the product. Although, once experienced, the program is fairly easy to use. One of the major challenges of the novice is user is finding out where to start.

There is limited user support directly from Conitec. The main source of support is in the very active users forum: <http://www.coniserver.net/ubbthreads/ubbthreads.php>
To get anywhere using this program you will have to join the forum to search for information on how to do things and to ask questions. Advanced users are very keen to help beginners, but you must search for answers in forum first, because nobody is very keen on answering questions that have already been answered. You can expect an answer to most (sensible) questions within a day or two. At first, post in the “Starting with Gamestudio” forum.

There are also a number of tutorials out there, but unfortunately many are a little out of date and/or incorrect. The best source for tutorials and other free content is the Acknex Unlimited web site <http://au.conitec.net/> (Acknex is the actual name of the 3D engine inside 3DGS).

WED

The world editor, WED is where all the components of a game or level are assembled and eventually compiled into the final executable game. This is where you set up the basic game geometry, add textures to the geometry, add terrain, add the player, NPCs, models, sprites, objects, etc This is where you add behaviors to the player and NPCs so they act how you want them too. Many behaviors, e.g. NPC artificial intelligence are easily applied to via the graphical user interface without having to access the code.

Complete buildings and even entire game levels can be found on the internet. Refer to the class web site. Building geometry can be imported from AutoCAD and other 3d modeling packages.

MED

MED is a basic model editor where models made up of polygons can be constructed, skinned and animated for use in the game. In practice, MED is not very user friendly and construct and animate their models in another program such as 3d Studio MAX (not related to 3DGS) which is extremely expensive, or in Milkshape – a 3d modeling and animation program developed for editing Half Life models which is a \$10 shareware program. Milkshape can import and export many different model file types including the .mdl format used by game studio. Milkshape may be downloaded here:

<http://www.swissquake.ch/chumbalum-soft/index.html>

Making and skinning a model is time consuming. There are many sources for 3d models on the internet (see the class web site).

SED

SED is 3DGS's script editor. 3DGS uses a scripting (or programming) language called C Script which is a simplified form of C++ which resembles javascript. Each game is controlled by several script modules which all have the .wdl extension. Conitec claims that simple games can be made without any programming. In practice, it will always be necessary to tweak something in the scripts.

SED is a good editor with a useful context-sensitive help system, i.e. highlight an item of syntax and information about the item will appear in a window of the editor.

There are many custom .wdl script modules available on the internet and these can be plugged into your game. However, due to version differences, or sloppy programming, these usually require some work to be effective. Refer to the 3DGS resources on the class web site.

Steps in 3D Game Construction

The following are the basic steps in creating a first person 3d game:

1. Create level geometry
2. Add terrain and textures
3. Add models
4. Assign actions to the models
5. Build the level
6. Run!

In practice, the procedure is iterative with a continual cycling between the steps given above. When the game is ready to be distributed it is published. An executable is created to run the game and all required files are copied to a .CD folder. These files are best distributed using a Windows installer package such as freeware NSIS which will combine all the files to be installed to the users computer into a single Windows setup file for distribution.

This is not the same as “modding”. A “mod” is a modification (duh!) of an existing game using the game engine with which the game was made, e.g. a Half Life mod. This mod can only be played by those who have the original game on which it is based (e.g. Half Life). 3DGS creates standalone games which can be played by anyone with the Windows OS.