BLENDER GAME ENGINE

When a gamer plays a game, he or she doesn’t really think about, all those efforts taken by the team to create a game, to showcase a perfect game mood, or what the game offers the player or what the creator could do in future to improve the game, and of course, most importantly how that game was created. He or she only selects those games which offers an exciting adventure or a beautiful experience. The visual graphics also plays an important role in this. Gamers just need to know whether the game is interesting enough to play. What gamers don’t know and according to me should know is that it’s the Game Engine which plays an important role in creating that particular game. A game Engine includes all those functionalities like rendering 2D and 3D graphics, sound system, animation, physics engine, AI functions etc. which are important factors to create a game. There are a few number of game engine which helps the game designers to code the game in an efficient manner. One among them is Blender Game Engine.

![Image 1: Screenshots of few games created by Blender Game Engine](http://devmaster.net/devdb/engines/blender-game-engine)

![Image 1: Screenshots of few games created by Blender Game Engine](http://megagames.com/sites/default/files/game-content-images/Dead%20Cyborg%20Episode%201.jpg)

![Image 1: Screenshots of few games created by Blender Game Engine](http://www.blendernation.com/2009/01/20/bge-masterpiece-ruinas/#prettyPhoto/1/)

Source: http://devmaster.net/devdb/engines/blender-game-engine

Source: http://megagames.com/sites/default/files/game-content-images/Dead%20Cyborg%20Episode%201.jpg

Source: http://www.blendernation.com/2009/01/20/bge-masterpiece-ruinas/#prettyPhoto/1/
Our Game - Whisper was created using Blender Game Engine. Blender Game Engine also known as BGE allows a game designer to create a game which includes 2D and 3D interactions. BGE was written in C++ as an independent component. It also contains Open AL 3D sound which increases its efficiency. BGE is designed in such a way that, not only programmers but also a person with basic knowledge of general games and the interactions in a game, can easily understand the concept behind the logic bricks of blender game engine. But again with all the advantages creating a whole game out of it is always a huge task. BGE is widely used by non-professional game creators but lately by professional game creators like Lama Studios. But often Blender Game Engine is not considered as serious game Engine mainly because of its limitations.

Blender Game Engine consists of logic bricks which is a combination of sensors, controllers and actuators which helps in controlling the game movement and various intercommunication with 2D and 3D graphics. These graphical logical editor helps in creating interactions without the help of programming. All those challenges, for example finding an evil toy – bumble, which was followed by finishing the task given by that toy, then searching for another one so on, and the evil sounds in the background - all these were a result of linking the correct logic bricks to each item in blender. All the effects like collisions, gravity, failure in a game level etc. were made possible by physics simulation. Blender offers an open source library named as Bullet physics library which helps in all above mentioned situation, and much more. But for those who prefers programming or want to create much more complicated stuffs using programming, the scripting language python is always an available option in blender. The game engine has its own Python API used to write the scripts and a python controller to link the script to the game. As our game is mainly based on point and click genre we have used python for the mouse functionality.

Image 2: Indie game Whisper’s Game logic bricks: a) remote, b) menu.
Being a beginner in game world, I was surprised by how much amazing functionality a blender game engine could provide us. Having learnt blender in the previous semester to create models and animation, I never imagined that we could create a game with all the physics, sound effects, visual effects etc. in much simpler way than programming using this unique software. We used Blender software for almost 80 percent of the game work, which included modelling, creating the main character Whisper, the supporting characters, environment, textures, 2D interaction etc. We then transferred all of these works to Blender Game Engine to create the actual Game.

Image 3: Whisper’s Game Environment.
Some important points has to be noted if you are creating a game with the help of Blender Game Engine. The first one would be that the whole modelling should be in low-poly mode that is it should have less than almost 100,000 faces to create a game. Lesser the faces the better. The second important factor is the textures. All the textures has to be in GLSL mode or UV mapped in order to make it visible in the game. As you can see, our indie game Whisper’s main plus point was the scary and nearly efficient 3D graphics environment which helped us in achieving a good visual effects. The textures of the environment and all the models like chairs, cupboards, guitars etc. were UV mapped. Another important point is that all the 2D and 3D interactions created in blender should be imported to a library so as to get an impression of the game without creating any logic.
I always used to wonder what makes BGE so interesting for a game creator. Analyzing about it, these were some of the reason I found out which made BGE popular.

1. Its simple logics.
2. Comparatively easy game rendering.
3. Game testing without any compiling or exporting the game
4. Scripting ability using python.
5. The bullet physics library.
6. Easy to publish etc.

But what I realized later was that, 2 most important factors made it more popular, one being the amazing visual graphics effects it could offer and another being the availability of game in any platform be it windows, Linux, Mac etc. with Blender software installed. What I would like to tell each and every game designer is that, try blender game engine for a change. It would definitely enlighten your game.

Word Count: 975

References: