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GAME PLATFORM "UNITY": PROBLEMS AND PROSPECTS IN DEVELOPMENT OF MODERN COMPUTER GAMES

The new phase of human society is connected with developing computer games industry. The range of modern computer games is wide: from shooters (Borderlands, Counter Strike, Serious Sam, Call of Duty) to strategies (Rome, Warcraft, StarCraft, Cossacks). Current game developers (Trey arch, CD Project RED, GSC Game World) are trying hard to create a real story with a logic sequence and make a gameplayer think how to get to the next level. The main feature of a human is logical thinking. In my opinion, creating novel computer games and implementing connected software are of great importance to the majority of the game designers today.

Unity is one of the most prospective integrated development tools used for creating 3D software. This is a game platform (engine) for developing bi- and three-dimensional games. Using this program allows creating game platforms for a variety of personal computers (PC), smartphones, tablets, etc. Such games work under the different operating systems, such as Windows, Android, Apple iOS, Linux, PlayStation and Xbox 360.

Year after year Unity is being perfected and some add-ons are being added allowing developers to produce and modify high quality games. Unity supports files created in the most popular applications like Blender, Maya, Cinema 4D and 3DS Max. Different objects can be created in specialized listed programs (see pictures 1, 2).

Image 1 - Model for fantasy games

Image 2 – Girl

These objects can be further used in games. Also a code for managing a hero`s actions needs to be written. Unity users can choose whether to program in C#, JavaScript, or Boo utilizing Python-like syntax. The development environment is supported by Mono, an open source implementation of the Common Language Infrastructure (.NET) Framework. Unity itself is mostly written in C++. According to John Alvarado, the inXile technical director, Unity3D is also a "component-based game object system". "You write your scripts and derive them from a certain class and model behavior, and automatically when you drag scripts onto a game object that you create in the editor it will run your script. … It's real easy to add code components to any object you create in the game, whether it be a box you just

made or an animated character. It's a very modular, object-oriented way of adding functionality to an object in the game."[3].

In the early 2000s, three young programmers without much money gathered in a basement and started coding what would become one of the most widely used pieces of software in the video game industry. One of them was David Helgason, the CEO and co-founder of Unity Technologies, maker of the Unity3D game engine. Helgason explained that a game engine is "a toolset used to build games and it's the technology that executes the graphics, the audio, the physics, the interactions, the networking. Everything you see and hear on the screen is powered by this code that has to be super-optimized because it's moving so much data and throwing so many pixels on the screen."[3]. He has made one of the global steps in game industry. The first Unity version consisted only of an engine that was supported by the game. Year after year this program is being improved. The recent version is named Unity 4.3.5. The platform consists of all the newest technology that is feasible in modern gaming society. In image 3 a very simple interface is demonstrated to be used in designing incredibly complicated and spectacular games.

In the left upper corner the main menu can be seen. It is the basic operating part including the buttons "Game" (demonstrating projects in work) and "Scene" (which is actually the work surface). In the middle a window is placed which shows the project development process. Below a library containing different objects from models of weapons to animals is integrated.

The right part of the interface is the settings like color, form and lighting of the objects. Also, this part is intended for coding.

Apart from a lot of other advantages, this program is easy to work with. If one lacks some specific knowledge of creating games with Unity there is a special section one can get specialized information. Unity is a feature rich, fully integrated development engine for the creation of interactive 3D content.
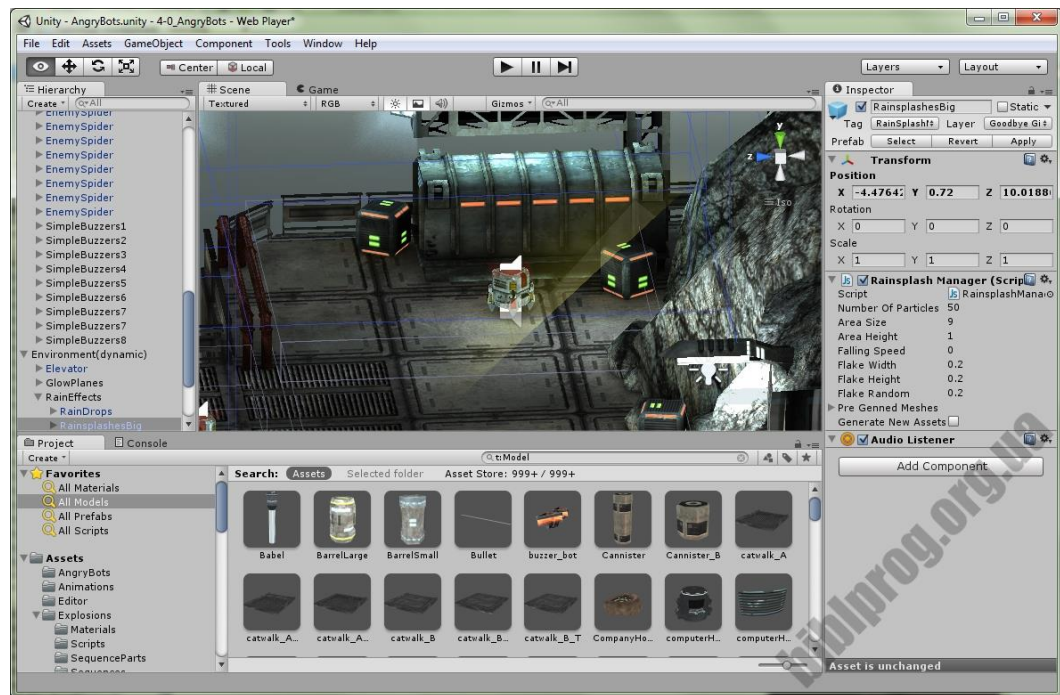
Image3 – Unity interface [4]

Today on the Internet there are a lot of different lessons on Unity and creating games with this platform [5]. This game platform offers free trial versions, but for those who are interested in purchasing a Unity Pro version, a more feature-rich professional version, is offered.

Of course, the program has already become upgraded. At its early stage Unity was used as an engine for game only. Now it is an absolutely independent game platform which allows creating, modeling, and coding objects without such graphic programs as Blender, 3dsMax and Cinema 4d.

It is obvious that the developers of this program have made a lot of work. But, on the other hand, it is also needless to say that there is still to be done in the future.

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