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Thunder Force - First Person Shooting (FPS) Game

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Abstract— *It has been found in researches that there is an association between playing first-person shooter video games and having superior mental flexibility. It was found that people playing such games require a significantly shorter reaction time for switching between complex tasks, mainly because when playing fps games they require to rapidly react to fast moving visuals by developing a more responsive mind set and to shift back and forth between different sub-duties.*

The successful design of the FPS game with correct direction, attractive graphics and models will give the best experience to play the game. First person shooter also known as FPS game is type of 3D video game genre which is now a days quite popular in game industry. The main design element of this type of games is combat and action centred storyline. This games comes also comes under role player category too, because player has to play with protagonist point of view.

Key Words: - FPS (First Person shooting), game, graphics,

1. INTRODUCTION

The purpose of Gaming is to create a video game that requires players to master the skills necessary to operate several types of guns that are typically used in eliminating enemy and rescue and law enforcement. Study shows first person shooter games Increase player's brain and helps to increase its learning ability helps the person to take better decisions which will ultimately help him/her for facing difficult situations. Gaming also improves reflex, Vision and Creativity of player.

In this work, we are developing game FPS i.e. First-person shooter, it is a video game genre centred around gun and other weapon-based combat in a first-person

Perspective; that is, the player experiences the action through the eyes of the protagonist.

In First-person shooter (FPS) the player experiences the action through the eyes of the protagonist. The genre shares common traits with other shooter games, which in turn makes it fall under the heading action game. Since the Genre's inception, advanced 3D and pseudo-3D graphics have challenged hardware development, and multiplayer gaming has been integral. First-person shooters are a type of three-dimensional shooter game featuring a first-person point of view with which the player sees the action through the eyes of the player character. They are unlike third-person shooters in which the player can see (usually from behind) the character they are controlling. The primary design element is combat, mainly involving firearms. First person-shooter games are also of ten categorized as being distinct from light gun shooters, a similar genre with a first-person perspective which uses light gun peripherals, in contrast to first-person shooters which use conventional input devices for movement.

2. LITERATURE SURVEY

The FPS game genre is one of the biggest and fastest growing video game genres, being the most attractive to publishers in terms of revenues. FPS games allow players to move about and interact with each other and do battles in real time in a virtual environment. Our aim is to give background on the shared networking architecture currently in use and draw a general process taken for measuring and modelling game traffic from field research. With this we present the relative characteristics of datasets analysed in research and validate various, sometimes contradicting, and game session traffic models derived from said datasets. We do so in a fashion that presents game traffic with respect to the evolution in game engine design, in the hope that this leads insight into future traffic. Let us begin by providing an overview of game engine characteristics, parameters of interest, and networking protocols. First-person shooter (FPS) games position players from the point of view of a game character and require them to navigate 3D space and shoot enemies in order to complete game objectives. While the FPS has developed and adopted numerous gameplay and narrative conventions in the 20 years since the form coalesced, competitive online multiplayer gameplay is a pillar of the genre. FPS games are controversial with the general public because of their representations of violence but very popular within gaming cultures and a mainstay of the game industry. While a good deal of historical, formalist, and interpretive scholarship informs this entry, social scientific research is only

beginning to move beyond the question of violence and to examine prosocial effects and applications of FPS games. Evidence has shown that violent video games increase adolescent aggression (Anderson & Bushman, 2001). The increased popularity of first-person shooter violent video games creates a need to explore the effects.

3. PROPOSED SYSTEM

A first person shooter (FPS) is a genre of action video game that is played from the point of view of the protagonist. FPS games typically map the gamer's movements and provide a view of what an actual person would see and do in the game. A FPS usually shows the protagonist's arms at the bottom of the screen, carrying whatever weapon is equipped. The gamer is expected to propel his avatar through the game by moving it forward, backward, sideways and so on using the game controller. Forward movements of the controller result in the avatar moving forward through the different types of FPS video games have on adolescent behaviour. In comparing reality based first-person shooter (FPS) violent video games with fantasy based first-person shooter (FPS) video games and the effects they have on adolescent behaviour in a future study.

It is difficult to precisely define the FPS genre due to an increasing number of diverse titles on the market, however the basic concepts found in most FPS games are: heroes, teams, and different skills for different heroes, resource collection and consumption, bases with defensive structures, creeps and lanes

Heroes are player controlled units. Each player usually controls only one unit, their chosen hero, and there is no army management.

FPS games usually allow the players to choose from a range of different heroes with different play styles, skill sets and roles. Heroes can have different resources at their disposal of which the most common is health.

Health is a resource which, when depleted, causes the hero to die. In most FPS games, heroes can respawn at specified locations called respawn points.

Teams in FPS games are usually two to six players in size and there are usually two teams in a match .Teams are competing against one another in achieving the main objective of the match which can vary from having to destroy the opposing team's defensive structures to having the highest number of kills. The team which achieves the main objective is the winning team.

Skills are hero-specific actions available to players which are usually the only way to interact with other player's heroes, as well as to provide boosts to one's own hero. In most FPS games skills can be activated by a specified keyboard shortcut. Activating a skill usually costs a certain amount of non-health resources. Skills also have a cooldown time which starts immediately after the skill has been activated and during which that same skill can't be activated again. Skills can vary greatly between different heroes and they define a hero's play style.

Resources other than health are used to perform certain game actions such as activating a skill, resurrecting a hero or purchasing other benefits. Resources are usually automatically accumulated as the time passes, but can also be gained by defeating other players or destroying secondary defensive structures.

Bases are areas where players start the match and where main defensive structures are located. Each team has their own base. Defensive structures in the bases can also have health and some of them can also damage the enemy team's heroes. The main objective of a FPS match is most often to infiltrate the enemy team's base and destroy the main defensive structure.

Lanes are paths that lead from one base to the other. The number of lanes can vary but there are usually three: the top lane, the bottom lane and the middle lane. The middle lane is usually the shortest path between the two bases.

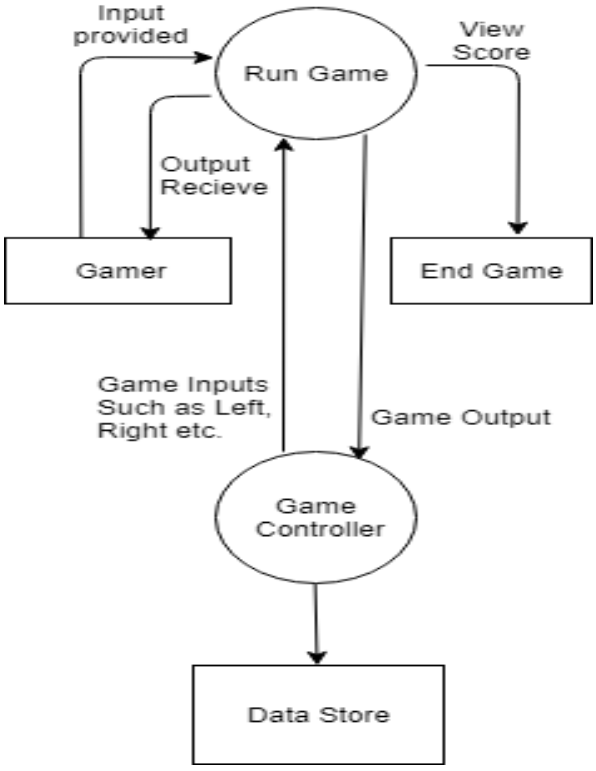

Fig. 3.1. Architecture of First Person Shooter

4. FLOW OF SYSTEM

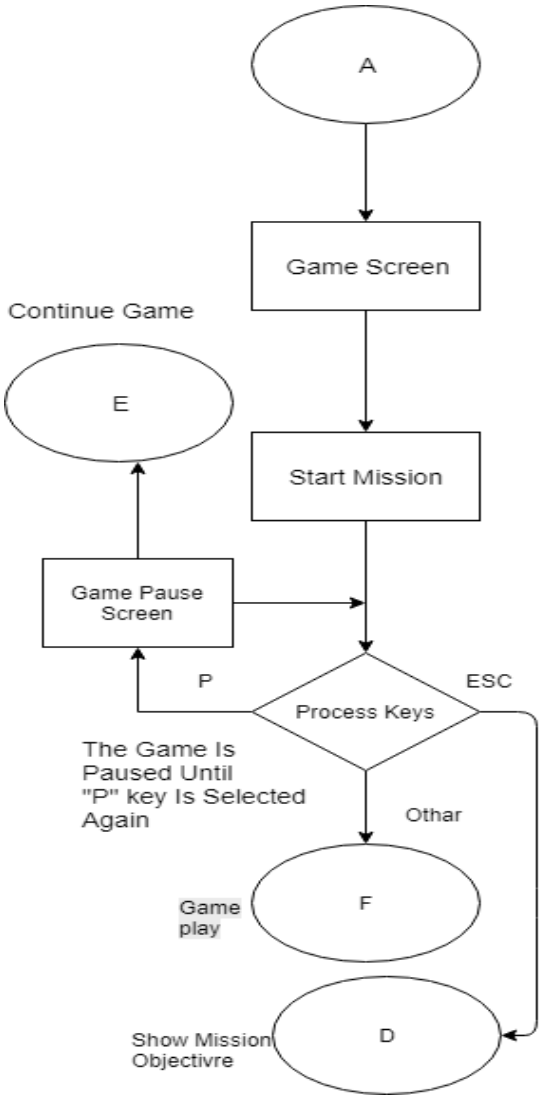

Fig. 4.1. Flow of FPS Application System

The linear working of our project can be explained in the following manner:

The user interface will be logically divided into two sections: the "main menu" and the "in-game" areas. The user interface will be fairly simple, with a focus on making its use a quick and easy process.

The main menu will present a title screen to the user and allow the user to choose between starting the game and viewing the generic Torque options panel, which allows changing of the screen resolution and audio settings. Once the user clicks the "start game" button on the main menu, the game will transition to the "in-game" user interface.

Upon transition to the in-game user interface, the player object and the environment will be displayed. The user will control the player throughout the game by using the keyboard and mouse much like the "standard" FPS (first-person-shooter) controls in many games.

If the user presses the ESC (escape) key when playing the game, an in-game menu is displayed. This menu will allow the player to resume the game, quit to the main menu, or restart the area. Choosing the "restart area" option will be equivalent to dying; that is, the player will start over at the last checkpoint reached.

For the in-game interface, a "health bar" will be displayed near the bottom-left corner of the screen and will represent the current health of the player. Above this bar, small icons will represent the possible tools (weapons or items) that the user can choose from. The active tool will be highlighted.

5. SYSTEM INTERFACE

Here is the list of tools and equipment used to develop the proposed system.

1. Unity 2017.1.2
2. Microsoft Visual C# 2008 Express Edition
3. XNA Game Studio 3.1
4. Blender
5. MonoDevelope

Required Hardware for developing FPS

1. Windows 7 or later
2. Shader Model 2.0 or later
3. Processor Core2duo 2.2GHz or Higher
4. 2 GB RAM or higher
5. Free space 5GB or more
6. Graphic card 1GB or higher

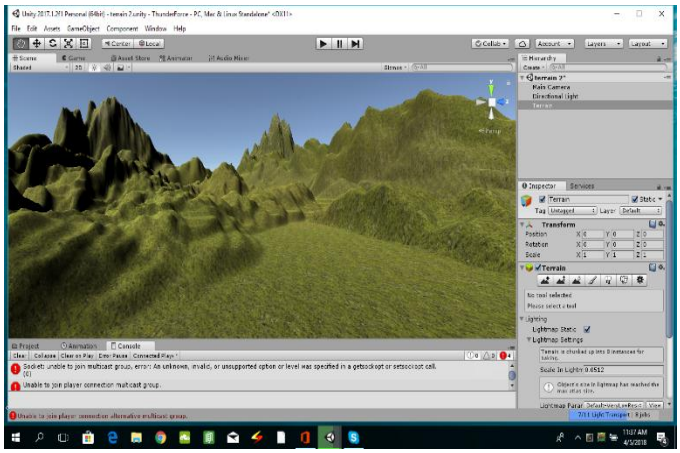

Fig. 5.1. Terrain of FPS

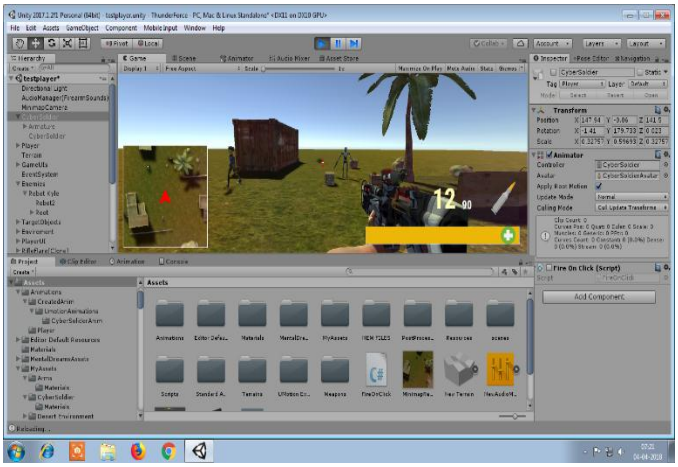

Fig. 5.2. User interface of FPS

6. CONCLUSION

FPS (First Person Shooter) i.e. shooting game which is design using Unity Game developing tool. Unity is a cross-platform game engine developed by Unity Technologies, which is primarily used to develop video games and simulations for computers, consoles and mobile devices. The models i.e. Actors in the game are developed using blender tool. This project will give the best experience of playing FPS (Shooting) game.

The outcome of this project will be attractive game design including superb graphics and models which will make you addictive to play this game.

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