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Virtual world

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***Abstract*— A virtual world is a computer-based simulated environment populated by many users who can create a personal avatar, and simultaneously and explore the virtual world, participate in its activities and communicate with others. The normal games like shoot, arcade and adventure are the older version video games. This game doesn't like normal games. It provide games environment, online transaction. It also provides real-time environment stimulation such as basic knowledge for the user, fun. This virtual world game coding will done by unity software which is predefined editor and also provide different environment. The database activities is done by PHP and SQL which are controlled transactions. The action event like car parking, driving, ticket booking are done by C# script. All cities like banks, malls, cinema theatre, house, all places are available in unit assets which can deploy it. In this gameplay the amount should be paid by the user for unique id. After it provides unique id, there will be login page. In this login page, the unique id must be entered. Before the user enter into the virtual world, it ask for location which is for looking city places. So the user must give some places. In that place the game will provide car and vehicle to travel the cities and also do some online jobs. The user can drive by own car and purchase tickets of railway, airport, theatre and also pay mobile bill, electric bill. They can do any work for future purpose such as communication, online shopping, and travel anywhere by file sharing.**

***Key words*— Avatar, Assets, Virtual gear, booking ticket.**

1. INTRODUCTION

A virtual world or massively multiplayer online world (MMOW) is a computer-based simulated environment populated by many users who can create a personal avatar, and simultaneously and explore the virtual world, participate in its activities and communicate with others. These avatars can be textual, two or three-dimensional graphical representations, live video avatars with auditory and touch sensations. In general, virtual worlds allow multiple users. The user accesses a computer-simulated world which presents perceptual stimuli to the user, who in turn can manipulate elements of the modeled world and thus experience a degree of presence. Such modeled worlds and their rules may draw from the reality or fantasy worlds. Example rules are gravity, topography, locomotion, real-time actions, and communication. Communication between users can range from text, graphical icons, visual gesture, sound, and rarely, forms using touch, voice command, and balance senses.

2. LITERATURE REVIEW

2.1 Online Games

First-person shooter game during the 1990s, online games started to move from a wide variety of LAN protocols (such as IPX) and onto the Internet using the TCP/IP protocol. Doom popularized the concept of death match, where multiple players battle each other head-to-head, as a new form of online game. Since Doom, many first-person shooter games contain

online components to allow death match or arena style play. And by popularity, first person shooter games are becoming more and more widespread around the world. And FPS games are now becoming more of an art form because of the required skills and strategy with teammates. More first person shooter competitions are formed to give players a chance to showcase their talents individually or on a team. Competitions have a range of winnings from money to hardware.

2.1.1 Hero shooter

Expansion of hero shooters, a subgenre of shooter games, happened in 2016 when several developers released or announced their hero shooter multiplayer online game

2.1.2 Real-time strategy game (RTS)

Early real-time strategy games often allowed multiplayer play over a modem or local network. As the Internet started to grow during the 1990s, software was developed that would allow players to tunnel the LAN protocols used by the games over the Internet. By the late 1990s, most RTS games had native Internet support, allowing players from all over the globe to play with each other. Services were created to allow players to be automatically matched against another player wishing to play, or lobbies were formed where people could meet in "rooms" to play a game.

2.1.3 Multiplayer online battle arena game (MOBA)

A specific subgenre of strategy video games referred to as multiplayer online battle arena (MOBA) gained popularity in the 2010s as a form of electronic sports, encompassing games such as the Defense of the Ancients mod for Warcraft III, its Valve-developed sequel Dota 2, Heroes of the Storm and League of Legends

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2.1.4 Massively multiplayer online game (MMO)

Massively multiplayer online games were made possible with the growth of broadband Internet access in many developed countries, using the Internet to allow hundreds of thousands of players to play the same game together. Many different styles of massively multiplayer games are available, such as:

- MMORPG (Massively multiplayer online role-playing game)
- MMORTS (Massively multiplayer online real-time strategy)
- MMOFPS (Massively multiplayer online first-person shooter)
- MMOSG (Massively multiplayer online social game)

2.1.5 Cross-platform online game

As consoles are becoming more like computers, online gameplay is expanding. Once online games started crowding the market, networks, such as the Dreamcast, PlayStation 2, Game Cube took advantage of online functionality with its PC game counterpart. Games such as Phantasy Star Online have private servers that function on multiple consoles. Dreamcast, PC, Macintosh and GameCube players are able to share one server. Earlier games, like 4x4 Evolution, Quake III Arena and Need for Speed. Underground also have a similar function with consoles able to interact with PC users using the same server. Usually, a company like Electronic Arts or Sega runs the servers until it becomes inactive, in which private servers with their own DNS number can function. This form of networking has a small advantage over the new generation of Sony and Microsoft consoles which customize their servers to the consumer.

2.1.6 Browser games

As the World Wide Web developed and browsers became more sophisticated, people

started creating browser games that used a web browser as a client. Simple single player games were made that could be played using a web browser via HTML and HTML scripting technologies (most commonly JavaScript, ASP, PHP and MySQL). More complicated games such as Legend of Empires or Travian would contact a web server to allow a multiplayer gaming environment. The development of web-based graphics technologies such as Flash and Java allowed browser games to become more complex. These games, also known by their related technology as "Flash games" or "Java games", became increasingly popular. Many games originally released in the 1980s, such as Pac-Man and Frogger, were recreated as games played using the Flash plugin on a webpage. Most browser games had limited multiplayer play, often being single player games with a high score list shared amongst all players. This has changed considerably in recent years as examples like Castle of Heroes or Canaan Online show. Browser-based pet games are popular amongst the younger generation of online gamers. These games range from gigantic games with millions of users, such as Neopets, to smaller and more community-based pet games. More recent browser-based games use web technologies like Ajax to make more complicated multiplayer interactions possible and Web GL to generate hardware-accelerated 3D graphics without the need for plugins.

Java has become the most widely used programming language for browser games (though 2d). Applets made in Java are embedded in webpages and are run on the user's computer.

2.2. SERVER STRUCTURE AND GAMEPLAY

The existence of a wide variety and number of servers has made possible several variations on gameplay. Most multiplayer games tend to have smaller communities then massive multiplayer online games. Yet massive multiplayer online have the risk of DoS attacks taking down the main info-structure as they tend to rely on more centralized structure rather than multiplayer online games which tend to rely on servers which tend to be more distributed. The main server structure tends to be more distributed on a multiplayer online game rather than centralized some multiplayer online games, various servers have their own names, websites and gaming groups. Often a list of rules will display when a player first logs on a server.

2.3 GAMES AND VIRTUAL WORLDS

Computerized games which have learning or training purposes demonstrate a popular trend in training due to the wide availability and ease of use of virtual worlds. The use of serious games in virtual worlds not only opens up the possibility of defining learning game-based scenarios but also of enabling collaborative or mediated learning activities that could lead to better learning. An added benefit of using serious games in combination with virtual worlds is that learners engage with these in a multimodal fashion (i.e. using different senses) helping learners to fully immerse in a learning situation which might lead to learning gains. The multimodal nature of virtual worlds and the facilities they offer to share resources, spaces and ideas greatly support the development and employment of serious games and virtual worlds for learning and training.

This paper pervasive augmented reality serious game that can be used to enhance entertainment using a multimodal tracking interface. The main objective of the research is to design and implement generic pervasive interfaces that are user-friendly and can be used by a wide range of users including people with disabilities. A pervasive AR racing game has been designed and implemented. The goal of the game is to start the car and move around the track without colliding with either the wall or

the objects that exist in the gaming arena. Users can interact using a pinch glove, through tangible ways as well as through I/O controls of the UMPC. Initial evaluation results showed that multimodal-based interaction games can be beneficial in serious games

3. EXPERIMENTAL RESEARCH

Unity's graphics engine's platform diversity can provide multiple variants and a declarative fall back specification, allowing Unity to detect the best variant for the current video hardware and, if none are compatible, to fall back to an alternative shade that may sacrifice features for performance. Unity is the default software development kit (SDK) for Nintendo's video game console platform, with a free copy .Unity Technologies calls this bundling of a third-party SDK an industry first.

3.1. GAMEPLAY

A virtual world game provide unique id for the user who paid the amount for this game. There will be login page appear for the user. By using the unique id the user will access the virtual world game. The unique id must to be enter by the user. Before the user accessing the virtual world, it ask location for looking cities and places. The user must give some places to travel in the virtual world. In that place, the virtual world will provide a house and vehicles such as car, bike, boat, cycle etc. By using vehicle they can do some online jobs. The user can drive by own car, they can purchase any ticket as the following

- Railway
- Airport
- Theatre
- Mobile bill
- Electric bill
- Bank transactions

The user can do any work such as feature purpose as following

- Communicate
- Online shopping
- Travel anywhere by file sharing

3.2. TRACK EDITOR

Once Bezier curves were shown to be reliable and easy for the user to generate we implemented a track editor integrated into Pop Racer. This was based on the demonstration explained above but had the extra feature of actually drawing the track based on the current points the user has clicked on, updating itself with each new click.

The only extra code required was code to pass the current list of control points to the Bezier function every time a new point is added, and plot the resulting coordinates on the fly. One extra change that was made was to replace the straight lines between co-ordinates with the interpolated friction circles talked about in the architecture and physics sections. The black track is surrounded by brown and green ‘mud’ and ‘grasses’. After a few more points the middle button is pressed and the track is closed into a loop.

Fig 4.6 race track

The track has been saved from the editor, and loaded into Pop Racer as the race track. Note the white dotted line drawn down the center of the track. Cars are added to the simulation and evolved, and then the best and previous-best racing lines are drawn. The cars on a simple design made with four straight lines, as we found that even just by adding an extra line and small circle for one of our designs, the speed of the simulation when multiplied up to 50 cars was reduced by about 5-10%. The design for our cars. It shows the forward direction of motion, and the wheels. The cars are plotted using the line library and are moved using the very useful command which saves us having to erase and redraw the objects each time.

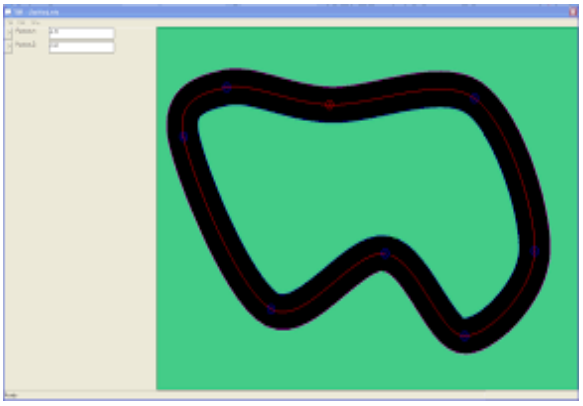

Fig 4.7 Beizer curve

The way Pop-11 draws these lines is to combine the colors of the object and its background together bitwise using the logical XOR function. This works fine and very fast – for our cars on a white background. But most of the time the cars are on the black track, and the XOR car appears inverted, with yellow wheels and a cyan body. This not only looks rather poor, it makes the cars harder to see as the contrast between the yellow and cyan is less than with our preferred red and blue.

So to make the cars look better on the track we inverted their default colors to become yellow wheels and a cyan body, which XOR with the black track to become red and blue respectively. This works much better except for when the cars stray off the track as they then become yellow/cyan, although this has the advantage that they are then less noticeable against the white background, hence being less of a distraction and helping the user to focus on the action happening on the track. One other unavoidable problem using this method is that if two cars occupy the same position, their colors are XOR and they turn invisible

4. CONCLUSION

The normal games like shoot, arcade and adventure are the older version video games. This game doesn't like normal games. It provide games environment, online transaction. It also provides real-time environment stimulation such as basic knowledge for the user, fun. This virtual world game coding will done by unity software which is predefined editor and also provide different environment. The database activities is done by PHP and SQL which are controlled transactions. The action event like car parking, driving, ticket booking are done by C# script. All cities like banks, malls, cinema theatre, house, all places are available in unit assets which can deploy it. In this gameplay the amount should be paid by the user for unique id. After it provides unique id, there will be login page. In this login page, the unique id must be entered. Before the user enter into the virtual world, it ask for location which is for looking city places. So the user must give some places. In that place the game will provide car and vehicle to travel the cities and also do some online jobs. The user can drive by own car and purchase tickets of railway, airport, theatre and also pay mobile bill, electric bill. They can do any work for future purpose such as communication, online shopping, and travel anywhere by file sharing. Hence this virtual world game will be more useful for the user

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