



A Mobile Interactive Virtual Reality Shopping Environment Combining the Benefits of Online and Offline Shopping

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A Mobile Interactive Virtual Reality Shopping Environment Combining the Benefits of Online & Offline Shopping.

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Abstract — Now-a – days many online users want to buy their things using internet via online shopping. Peoples bought their products using some online shopping platforms such as ‘amazon’, ‘Flip kart’, ‘Myntra’ etc..... But these all used in a normal real-time model.

If we connect the 3d environment it will be attractive. Thereafter it will make a curiosity to people for online shopping using virtual reality. This article shows the virtual reality based online shopping environment . And also it shows the uses & its current scenarios.

Key words : Online shopping , Flutter, Unity, e-commerce, virtual reality.

I. INTRODUCTION

The e-commerce changed the lifestyle of people now-a-days. People interested to buy their products . With infinite amount of peoples are focusing on the online e-commerce .

It's value gets increased in this 20th century. During the Corona Lock-Down 2020,

People get slowly moves to e-commerce shopping due to the pandemic situation.

With the help of the internet the usage of e-commerce shopping gets increased.

The physical based shopping makes you to go via the shop or super market also in shopping plaza & should we wait for the product that we want to buy and still gets wait to pay the money . But in online shopping you can selected your responsive platform such as amazon, flip kart etc..... to search your own product and select it .

After that search your things such as jewels, groceries, stationaries, luxuries etc... for purchasing then purchase our respective product and pay the amount via wallets, G-pay, debit card for online transaction and pay it. After some days our product will come to our residential area for delivery. This is known as online shopping.

But in this online shopping no one can imagine the way of shopping .

Here the 3d viewing virtual reality helps you to interact with the shopping in a virtual based for imagine & interact with the online shopping. It is nothing but , we can view our responsive purchasing product in a virtual based 3d viewing.

Example: If you are using online shopping and purchasing any product you cannot feel the shopping mode . If you are used the virtual reality based online shopping you can imagine and enjoy the online shopping with a physical manner.



Fig 1 : Virtual reality based online shopping

There are 2 types of virtual reality characteristics

Imagination : You can imagine your shopping as a physical mode using virtual reality.

Interaction : You can interactive with the shopping and you can view the MRP or price for your purchased product as a sensor based. It is a plus point for in online VR shopping.

The demo for the Virtual reality based online shopping is shown in the given diagram Fig 1.

II. WORKING OF 3D VIRTUAL REALITY SHOPPING :

Here , first of all wear the VR box and open the VR shopping app to start purchase. After that start to purchase your item .

If you start to purchase your item you can view the item and its price (or) MRP in a virtual manner.

It will take to you in a 3D environment.

Example: If I took a hand Bag means the handbag which you got taken will shown it in a dynamic manner. Here we can saw it in a 3Dimensional manner.

It will take to you to the physical mode purchasing during online VR shopping.

The infrastructure of the shopping get's turn into 3Dimensional model.

Except payment system all the process will be like offline shopping.

For Payment we can use the payment method such as Google pay, phone pay, debit card etc..

The Virtual reality application in electronic commerce will break through the existing restriction made up by variety of factors in e-commerce development & it will made a revolution in online shopping industries.

Hence, there are 2D & 3D based virtualization will fitted with e-commerce based mobile applications

or websites or web applications for 2D or 3D viewing in a 360 degree way.

The Virtual Reality is also attract more consumers to accept and actively participate in the e-commerce, and promotes the popularization of e-commerce development.



Fig 2: Wear the VR Glass before online shopping.



Fig 3: After that it will displayed the product and its price in a virtual 2D or 3d viewing.

III. TECHNOLOGIES WE USE :

The most important features of virtual reality is the vivid and interactive. Technically it is dynamic environment modeling technology, real-time 3D graphics generation technology, three-dimensional display and sensor technology and the development tools. Now-a-days many of the software used for virtual reality such as Unreal, Unity3D, Vuforia, etc.... Here In our project we are interact the online shopping as well as offline shopping in our e-commerce platform. We are using to create a new e-commerce platform as follows:

- Flutter : Flutter is an open-source technology & software to build mobile applications for both Android & iOS . It is also used for VR/AR projects.
- Firebase : Firebase is one of the database used for cloud storage.
- Unity : The Unity is a software used for animation, computer graphics, 3Dimensional or 2Dimensional viewing .

Also it is used for VR/AR projects.

There are many software technologies for network virtual reality of 3D modeling. The early technology is VRML and its development tools, and then is the Web3D application. In addition, common software also include: Cult3D, Viewpoint, Java3D, Virtools, ShockWave3D, etc.

And one technology is developed by java known as Cult3D, it is very not worthy technology. The development goal is for the better show of virtual product in e-commerce. It can import 3D models from 3ds max and MAYA, and then add interaction effect, event and sound to models in Cult3D Designer. At last generate 3D image that can be browsed online (need to install corresponding plug-in to Internet Explorer). Its development is high efficient.

Cult3D consists of two parts, one part is to edit 3D material, and

The other part is to interpret 3D material.

Here we going to build a e-commerce platform embed with online and offline shopping in a VR manner.

The e-commerce should be developed as distributed virtual reality system. Abbreviated as DVR. To build ecommerce DVR system.

IV. Conclusion:

Use the 3Dimensional technology to showcase the goods and environment, and comprehensively show the different performance of a goods object through interaction operation.

The virtual Reality(VR) Technology applied in e-commerce, not only brings a revolution on user interfaces, but also the technical breakthrough and renews ideas. Technically, the success of virtual reality demand computer to improve its ability to virtualization on complex data .

People will immerse in a visualization 3D information space. On one hand, people can directly feel the information and objects in 3D information space.

On the other hand they can be free to use all kinds of information and control objects.

Hence the virtual reality technology helps you to control you in a virtual environment.

V : References:

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