

Augmented Reality

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Abstract

Augmented Reality is a breakthrough technology that could considerably ease execution of complex operations. Augmented Reality mixes virtual and actual reality, making available to the user new tools to ensure efficiency in the transfer of knowledge for several processes and in several environments. Various solutions based on augmented reality have been proposed by the research community: particularly in maintenance operations Augmented Reality tools have offered new perspectives and have promised dramatic improvements.

Keywords: Augmented, Reality, Dramatic, Process.

Introduction

The augmented reality is concealed information, recently it was used in the advertising of a car and football boot as it makes a 3D render of a product. This permits the customer to get a 360-degree picture of a product, as per the quality of augmentation this can go as far as viewing the size of the product and also permits the customer to wear the item as viewed through their phone. With the avail of a mobile app, a mobile phone's camera identifies and renders a marker which is often a black and white barcode picture. The software analyses the marker and makes a virtual picture on the device screen. It explains that the app works with the camera to render the angle and distance.

History

The history of augmented reality reminds of Sutherland's work in 1960, which used an HMD to present the 3D graphics. In the year of 1997, Azuma explained the field of augmented reality, its issues and they require advancements. After this, there was a revolution in the growth and the progress of augmented reality.

Applications

The augmented reality has many applications and some of it is as follows:

- The applied science of augmented reality is used in medical field and robotics.
- It is used in manufacturing and repairs.
- It is used in military aircraft.
- It is also used for annotation, visualization, and entertainment.

Augmented Reality Vs Virtual Reality

Augmented reality

- The system has to augment the scenes of a real world.
- The user needs to maintain the presence of the genuine world.
- It needs a technique for the combination of virtual and real worlds.
- In augmented reality, it becomes complex to register virtual and real.

Virtual reality

- All the elements have the immersive environment.
- In virtual reality, the system controls the senses.
- It needs a technique to feed virtual world to a user.
- It is difficult to create the virtual world interesting.

It wasn't until the early 1990s that the term "Augmented Reality" was coined by scientists at Boeing who were developing an experimental AR system to help workers assemble wiring harnesses.

Advantages of Augmented Reality

The advantages of the augmented reality are as follows:

- It enhances the knowledge and data of the people.
- It aids the people in sharing the experiences over a long distance.
- The games of augmented reality furnish more real experience.
- It has a form of escapism.

Disadvantages of Augmented Reality

The disadvantages of augmented reality are as follows:

- It has the feature of spam.
- The augmented reality does not have the strong security features.
- The avail of augmented reality in social situations is improper.
- In this, the people can advance their own layers of content.
- It also has the problems like performance issues, interaction issues, and alignment issues.

Conclusion

Augmented reality is far behind Virtual Environments in maturity. Several commercial vendors sell complete, turnkey Virtual Environment systems. However, no commercial vendor currently sells an HMD-based Augmented Reality system. A few monitor-based "virtual set" systems are available, but today AR systems are primarily found in academic and industrial research laboratories. AR will probably be used for medical training before it is commonly used in surgery.

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