



ISSN(Online) : 2320-9801
ISSN (Print) : 2320-9798

International Journal of Innovative Research in Computer and Communication Engineering
An ISO 3297: 2007 Certified Organization *Vol.5, Special Issue 2, April 2017*

An International Conference on Recent Trends in IT Innovations - Tec'afe 2017

Organized by

Dept. of Computer Science, Garden City University, Bangalore-560049, India

Influence of Augmented Reality in Showcasing the Digital Tourism Experience for Future Travelers with Human Touch

Dr. Potukuchi Thryamba kam

Dean, School of Professional Studies, Garden City University, Bengaluru, Karnataka State, India

ABSTRACT: In this globalized innovative digital era, new smart strategies and initiatives are indispensable to stay in the race of innovative change in Tourism, travel and hospitality industries, as these industries are the most influenced by its very service concept and direct usage by public in a large scale. To perform better, to be in the race and to win over the competitors, technologies Augmented reality wherein Virtual Reality and Human Touch are uniquely mixed to produce the real feel to the travellers about the tourism destinations, hotels and etc..

Even the travellers and guests in hotel industry are expecting more data driven apps with Augmented Reality and want to see how their choice is going to be and then are deciding to visit those destinations and hotels. To achieve this, tourism industry and people should update regularly by keeping a constant watch on the recent trends developing in Tourism, Travel and Hotel industries and IT and IT enabled influences in these sectors to better serve the Guest or travellers of tomorrow.

This paper explores the influence of Augmented Reality and such innovative technologies along with different trends impacting and influencing the tourism industry by really giving the Digital Experience to future travels with Human Touch to make them more attractive, accessible, and adoptable to their changing needs of travel.

KEYWORDS: Augmented Reality, Virtual Reality, Latest Travel Trends, New Innovations in Tourism, ICT in Tourism

I. INTRODUCTION

Technological Revolution is influencing Tourism a lot and reshaping its dynamic structure. One can witness its presence in day to day life in different usage forms like mobile internet, Smart Phones, GPS, GIS and Social Media with which people are constantly connected to the digital world. The way the tourist search, explore, book and experience travel has already been changed by the usage of Internet. Therefore it has become indispensable to the whole industry to adopt new technology trends, rethink their strategies and reshape the way they provide services.

Augmented Reality with its principle component Virtual Reality (VR) is helping the Travel, Tourism and Hospitality sectors to a great extent by making the tourists or travelers to feel the destinations or hotel services with human touch and realize how their visit is going to be thrilled and comfortable in the reality. Many hotels in the world have been using the Robotic Technology in maintenance, guest services and room service, holograms with avatars (reception, staff), interactive displays. In making these innovations such as Augmented Reality (AR) and Virtual Reality (VR) experiences to be felt by the people, Smart Phones and gadgets are making them accessible for Travel, Tourism and Hospitality industries. Today all the features of this technological advancements of the future has become an integral part of tourism sector, and its reach to the expected target audience or customer totally depends on the innovative and strategic positioning of these instruments to reach them in a smart way.

It is a general perception about the travel products to be risk oriented and experimentally demanding. This perception is what differs it from the characteristic of intangible as against the manufacturing product which is tangible and which can be consumed directly and satisfaction can be felt immediately by the customer after purchase. Inseparability character of travel product is another such reason for this as this requires simultaneous usage and



development and production between the travel service providers and the final traveller. In this case of travel Product Sale, it is difficult for one to Trial the sale or visualize it , because a destination can only be felt or consumed by the traveller when he personally or physically visits that place and should feel the destination and match it to his perceptions. But here this can only happen upon personal embarkation of travellers to their respective preferred choice of destination

Therefore to reduce the risks of perception and difficulties arising thereof, it is a common thing for travellers to accesses multi dimensional information media such as Television, News Papers, Travel Magazines, Brochures, Social Media, Word of Mouth and testimonials or previous tourist experiences. The most widely accepted, reliable and the most influencing aspect on the selection of destination or customer preference among these traditional media channels are Previous Tourist Experiences and the Word of Mouth, as they show other tourists or travellers, their direct experiences and perception of the product. Therefore, it can be said that travellers are in sought of such information or details which are highly expressible and interactive or virtually enabled to experience them before choosing or going to those destinations. Here comes the role of Augmented Reality (AR), and Virtual Reality (VR), which can be of immense help in making the tourism destination or product more accessible to the traveller.

Superimposing of real world view by the computer generated graphics in real time is often referred or defined as Augmented Reality (AR) AR Unlike the Virtual Reality, wherein a completely natural experience in a simulated realistic world is felt, here in AR, the main objective and goal are to enhance the view of the user with virtual objects providing visual information to give him a real world view. The following are the different definitions given to the aids employed for real time visualization systems – Head Mounted Displays (HMDs), Hand Held Devices (HHDs), Retinal Displays and enhanced projection systems

Augmented Reality (AR), quickly became the buzz word of the world with invention of latest Smart Phones and with Google's recently released Project Glass. Combining of seamlessly physical world and virtual information in the beauty of AR Technology. In the field of Tourism, travel and hospitality it is still under used and very lately they realized its rich technical potential and started its usage.

The Paper highlights most innovative experiences of AR and showcases its rich technological potential to revolutionize the experience of new destinations and services.

1) Digital Brochures and Flyers: Many top Hotels and Restaurants in the world are making use of this AR technology to increase their business and guest occupancy. They are designing their brochures and flyers with AR technology so that the guests can experience realistic virtual view of the facilities. They demonstrate their amenities and accommodations to prospective guests. It has been a difficult task for many hotels to show their exact beauty as it is. This AR technology has helped them a lot in doing so, and this is the unique concept of AR.

This AR technology enables them to display all their amazing and attracting amenities in brochures and flyers in such a way wherein where they are scanned, the guest can see the virtual layout of the place and the hotel is brought to life to feel the amenities.

2) Enhanced Booking System - People can get the impression of the hotel that they are going to book with help of this AR technology and the hotel is made alive with this. People who are booking the Hotel facilities online, can now feel that they are personally visiting them and doing the booking by this AR technique. The amount of information embedded in AR system makes its more presentable and eye catching In other way it is as simple as the guest is virtually visiting or taking a turnaround of its amenities like, Spas, Pools, restaurants, conference halls, banquet facilities, rooms, gyms.

AR strongly helps in building an effective marketing tool as this will give a tremendous persuasive power over potential customers. Any guest will be impressed by seeing the hotel facilities in an interactive manner and will further go to the process of negotiation or booking when he is fully satisfied with the ambience, amenities and continue for final booking. With the technical accessibility from their Smart phones, the customers can book what they want according to their budget constraints and requirements in the fast and easy way.



Organized by

Dept. of Computer Science, Garden City University, Bangalore-560049, India

3) Museum Interactivity – With the ability to provide a tangible interface with simulation of mental and motor activities through interaction of intuitive with content of unfamiliar nature. As visits rich in education and learning is also an important component of tourism industry, AR can be an immense usage in involving actively tourists in this learning process, wherein, they will experience various artifacts, art forms, culture in various museum settings .

To increase their education potential, very recently storytellings in digital interactive techniques have been introduced in many museum. DBS - Digital Binocular Station (DBS), makes the static contents of a museum come to life, leading to an interactive, dynamic and interesting adventure which increases visitor retention time and return visits is a perfect example of this learning process.

4) The Popularity of AR Browsers – AR browsers enjoy much popularity amongst AR enabled Smart Phones. Tourism related functionalities are quiet common among many of them these days. An AR browser allows visitors to unfamiliar locations to know them and also give them much needed information interesting to them and make them to learn more about it with its real world interactive virtual information technique. **Yelp Application** in smart phones is probably the most successful and standalone APP that can be cited as the best example in this feature.

5) Augmented Hotel / Restaurant Service- AR technique can work wonders in a format known as Google Glass, wherein information of the guests are shown in an optical display in a Smart phone. This really helps the Hotel Management to identify its guests. For example, Guests who have come earlier and stayed here at the hotel and who are the new ones to the hotel are better known by this Google Glass. It also helps the users in knowing the guest details like, arrival, departure, and dining reservations. The most amazing feature of this AR technology of Google Glass is that it enables the restaurant staff who wore it to tell the stewards about guests allergies towards specific food and beverage or not. It also helps in matching the guests face so that the order is rightly served without any mistake. The most impressive advantage of this AR is to identify the purpose of the visit of the guest to the hotel. It allows them to know whether he / she is arriving to the hotel for birthday, or celebrating Honeymoon or vacation break and so on. It helps in giving them priority and better service. AR here also helps them in knowing who is a VIP guest, and therefore they know what to talk and what not to.

6) Augmented Historic - Life and Events – An astonishing feature of AR is Re-creation of ancient temples and historic buildings. It is a developed prototypical commercial system. Olympia in Greece was the first cultural site that has been used in this technology and benefited by this from augmented virtual re – construction. The technology used here was **Archeo Guide** AR system developed by continuous efforts by researchers Tourist now can by using **LAYAR**, can virtually view Berlin Wall and see its representation in a realistic 3D model view.

MANY MORE..... AR is helping the tourism and Hospitality sectors with its tremendous features with latest advancements in almost all the areas.

II. CONCLUSION

Yes, no doubt, AR is a wonderful magic wand to turn various things to be accessible in realistic view. At the same time all the People, Governments, Stake holders and computer researchers should make a note on this important aspect that any technology whatsoever it is has to be innovated for the betterment of society and to build a strong sense of brotherhood among member nations. It is also important that the right information is disseminated to the general public, tourist and hotel guests, so that they take full benefit of this AR technology and gain knowledge and pass on the same knowledge to the next generations with more technological advancement.

All the people in Tourism, Hospitality and customers should make use of this modern AR technique to make their business grow, reap rich revenues and gain good knowledge of whatever they go through this technology.

REFERENCES

- [1] AZUMA R., HOFF B., III H. N., SARFATY R., DAILY M., BISHOP G., VICCI L., WELCH G., NEUMANN U., YOU S.,NICHOLS R., CANNON J.: Making Augmented Reality Work
- [2] Outdoors Requires Hybrid Tracking. In Proceedings of the International Workshop on Augmented Reality (IWAR '98:) (1999),A. K. Peters, pp. 219–224. 3
- [3] BALE K., CHAPMAN P.: Scene graph Technologies: A Review. University of Hull, 2007.



Organized by

Dept. of Computer Science, Garden City University, Bangalore-560049, India

- [4] BEHRINGER R.: Registration for Outdoor Augmented Reality Applications Using Computer Vision Techniques and Hybrid Sensors. In Proceedings of the IEEE Virtual Reality (1999), IEEE Computer Society, pp. 244–251.
- [5] BIMBER O., RASKAR R.: Spatial Augmented Reality: Merging Real and Virtual Worlds. A. K. Peters, Ltd., 2005.
- [6] FEINER S., MACINTYRE B., HOLLERER T.: A Touring Machine: Prototyping 3d Mobile Augmented Reality Systems for Exploring the Urban Environment. Wearable Computers, IEEE International Symposium (1997), 74.
- [7] GAUSEMEIER J., FRUEND J., MATYSCZOK C., BRUEDERLIN B., BEIER D.: Development of a Real Time Image Based Object Recognition Method for Mobile AR-Devices. In AFRIGRAPH '03: Proceedings of the 2nd International Conference on Computer Graphics, Virtual Reality, Visualisation and Interaction in Africa (2003), ACM, pp. 133–139.
- [8] V. VLAHAKIS N. IOANNIDIS J. K., M. TSOTROS I. S.: Archeoguide: An Augmented Reality Guide for Archaeological Sites. IEEE Computer Graphics and Applications 22 (September 2002), 52–60.
- [9] Williams, P. & Hobson, J.S.P., (1995), Virtual Reality and Tourism: Fact or Fantasy?, Tourism Management, vol. 16, no. 6, pp. 423 – 427.

BIOGRAPHY

Dr.Potukuchi Thrymbakam, is working as Dean – School of Professional Studies, Garden City University, Bengaluru, India. He is a Doctorate in Medical Tourism and written more than 45 International Papers which are published in various refereed International Journals. He has more than 20= years of Teaching experience in various universities in India and abroad. His areas of interests are Medical Tourism, Rural Tourism, Sustainable Tourism, Adventure tourism and MICE Tourism.