Development of a Virtual Cyber-Tour System in the Virtual Reality Environment

Jongchel Yoo*
Yongbem Kim*
MyongKyu Park**

Abstract

This study is to explain the importance and the necessity of virtual cyber-tour in a virtual reality environment, and to present a way of its realization as a means to surmount the fundamental constraints in current tourism, arising mainly from the individual health, cost, leisure time, and the low perception on tourism culture. This virtual cyber-tour using virtual reality technology will not only provide various indirect tour experiences to the existing tour resources, but also develop a new type of tour system, leading to new worlds which have not been accessible to the public because of various restrictions coming from the current technology, transportation means, and physical limit's of human body

INTRODUCTION

Currently, the tourism has been recognized as an important socio-cultural diplomatic means according to the recent world-wide peace mood and rapidly increasing non-political contacts of diversity. This means that it is the time for the international tour industry of each nation to play an important role in the field. Despite this world-wide need, there are still many restrictions in tourism.

But more substantial restrictions come from personal reasons, such as health, financial situation, leisure time, and the cultural perception of each tourist. If a cyber-tour system is developed and given to those who can not afford an international tour, it will be an excellent opportunity for them to experience the cultural legacies of our world in an indirect, but very economical way.

*Professor, Chungju National Unversity, Ph,D. Course MJU
**Professor, IE Myongji Unversity

The indirect tour can be realized by the development of a virtual cyber-tour system in a virtual reality environment, using rapidly growing new technology of multimedia network systems, and it will provide a vivid indirect tour experience on user's demand at home.

In this study, the method for the realization of virtual tour is presented on the basis of virtual reality and multimedia network technology, and the advantages of this tour system are discussed.

Restraining Factors in International Tourism

Restraining factors in international tourism may come from the political and economic situations of each nation, but the most important factors except personal reasons are the restrictions and regulations that the receiving countries have imposed on foreign tourists. Under this condition, the international tour industry can not be expected to grow. Therefore, OECD's Committee on Tourism stressed that the receiving countries and international organizations should collaborate to remove those restrictions. First above all, each government should ensure more free travels, and also the personal restrictions suggested in previous section should be solved. When we consider how many people in the world can take overseas tour, the international tour can still be a privilege allowed to the citizens of advanced countries and some of the upper class people of other underdeveloped countries. Accordingly, we should notice that, to the most of the world population, the international tour is only a dream due mainly to the personal restrictions.

These are many factors, they are practically applied only to the privileged individuals who can afford the international tour, but not to the many ordinary people, who have relatively much more personal restrictions. Therefore, a great effort should be made to remove those restrictions in order to enable the underprivileged to receive the benefits of tourism, at least, from the indirect tour.

Tourism and Environmental Problems

Tourism can not only give lots of pleasure but also environmental damages; Development of tour sites or sight-seeing resort can spoil the nature itself and tourists can also pollute the environment. Accordingly, the tourism is frequently open to criticism because it can cause environmental damage and pollution. It is clear that tourism and environment are very closely interrelated and a tour can be

viewed as an act of visiting a new environment. However, a lot of people involved in tourism business do not realize the fact that a threat to the tour environment can be a serious problem to themselves.

Virtual Reality Technology and Indirect Tour Using Internet

(1) Multimedia technology and internet environment

(2) Stereoscopic images and cyber-tour

(3) Virtual cyber-tour system

1) Making up the system
2) Production of stereoscopic image tour data
3) Building up a data base of stereoscopic image tour data
4) Building up a network of stereoscopic image tour data
5) Viewing System

(4) Utilization of virtual tour system

Development of New Tourism Industry in the Cyber-Space

Virtual tour system builds the computer graphics of present and near future images of tourist attractions and provides the users a chance to experience them indirectly as if they are touring in the real world. They will visit the places where human beings can't go, such as micro- and underground world and bottom of the deep sea. Virtual tour will contribute greatly to the tourism industry as a new resource. It will create new forms of industry ranging from system-building industry to film-making industry, and to display media development industry, producing new jobs and added value.

CONCLUSION

Currently, the tourism has been getting acknowledged as a diplomatic means in various social and cultural aspects. However, it still has a lot of fundamental tour resources.

This indirect tour can be realized by a development of virtual cyber-tour system in virtual reality environment, using the rapidly growing new technology of multimedia network system, and will provide an indirect, but, very vivid tour experience with

stereoscopic images on tourists' demands at their homes. In this study, the method for the realization of virtual cyber-tour has been presented on the basis of virtual reality and multimedia network technology and the advantages of this new system have been discussed. In addition to the indirect tour experience for the existing tour resources, this virtual cyber-tour is believed to open new worlds, which have not been accessible to the public because of various restrictions

Thus, it is thought to be a new tour resource of totally different concept and its industrialization will concurrently result in the developments of new related industries for the virtual reality system, video production, and display media, creating lots of new jobs and added value.

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