THE MORE PHYSICAL NETWORK SPACE

A preliminary experiment in VR-Cave

YU-LU LIU
The Institute of Architecture, National Chao-Tung University
Lumeis@yahoo.com.tw

1. Introduction

For now, the written word is still the most efficient communication method in network space (Anders, 1998). When designing a network space, it is necessary to let users know the concept of the space. Some researchers imitated physical space and brought a similar spatial experience into network space. The design of network space may be based on existing space in the real world. The rules of construction in physical space and network space are the same (Donath, 1997; Dyson, 1998). Consequently, the best way to explore network space is to imitate physical space (Mitchell, 1995, 1999a).

2. Problems

Network space as a new type of space. The interface between the user and network space still relies on the graphic interface. To realize and to project the concept of a space is dependant on the imagination and the experience of the user. There is still a large part of network space that cannot be revealed by today's interfaces (for example, the relationship and framework between websites). By using the same rules of physical space we can rebuild network space using VR-Cave that has the characteristics of physical space. Would the spatial cognition of the internet user be more like physical space? The answer to this question could be used as a template when designing network space with spatial characteristics and for showing up the possibility of exploring network space by using VR equipment.

3. Experiment

There are three steps in this research. First, to catalogue the different types of network space on the Internet that have the same spatial characteristics. The subjects used are websites, BBS and internet games. By interviewing the users we can determine which parts of the space provide that ``spatial feeling´´. Then, to establish some guidelines, analyze these characteristics to determine the reason why they provide that spatial feeling and compare them to the elements of physical space. The criteria are speed, distance, scale, and movement. Second, use these rules to rebuild the network space in VR-Cave using some movement detection equipment as the interactive equipment. Third, to invite users to compare the traditional interface with the VR-Cave interface, and record and compare the differences in the cognition of space.

4. Conclusion

Through the VR-Cave environment, the users can use their original spatial experience in physical space to explore the network space. They can move and realize their position in network space naturally. The structure and relationship between websites, which was hard to understand, can be sensed clearly. This research provides a method for network space designers to construct websites with spatial characteristics. Although the VR equipment is not available to all today, when personal VR equipment does become available, the way of exploring network space will be changed significantly. In the future the design of network space in this environment will use the same concepts as those used in designing physical space

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