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Scritter

A multiplexed image system for a public screen

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Abstract — **Scritter is a system that enables one the superimposition of invisible messages and comments on a large screen while sharing a movie. By putting other information on an image that only users who wear special glasses (named "IP(Information Polarized)-Glasses") can see, a multiplex of image media can be realized. By selecting the glasses, visible images can be changed into a movie or a message.**

Keywords: multiplex, secret message, public viewing, real-time annotation system, multi-subtitle

I. INTRODUCTION

There is a vast amount of information on the Internet, especially websites such as a "Social Networking Site" like the "Twitter" system [1] that attract attention as individuals can use that system to transmit information to others on the Internet.

Twitter is a communication service that allows loose connections on the Internet, and those connections relationships are being considered as a new form of communications. However, such relationships are completely dependent on either a PC or cell phone as they exist only on the Internet.

In contrast, on public screens, many more people can be exposed to information simultaneously, and communicate in real time among those who share that same data. Therefore, this public system is essential for sports games, speeches, movies, advertisements, and meetings. However, the public screen system also involves the possibility of providing extraneous information because the information flow is only one way.

Moreover, displayed information on a public screen may overwhelm as the receiver has no control. If control can be provided to the receiver, the level of satisfaction may increase thereby increasing acceptance of the system.

II. BASIC CONCEPT

This proposal, "Scritter", suggests visual information on a screen can be filtered casually by using "IP-Glasses". As a result, "Scritter" enables receivers access to information desired while allowing the blockage of undesired data.

A combination of the twitter system and public screens may resolve the negative points of both. This mixed system can solidify the loose Internet connection, as many people can watch the same screen at the same time and communicate with each other. Furthermore, communication can be achieved immediately with current correspondents as well as new.

III. PROTOTYPES

This system consists of two prototypes.

i. SILVER SCREEN

This prototype enables the selection of projected information on a screen by projectors attached to different circularly polarizing plates, IP-Glasses that have the same two polarizing lenses, and a silver screen.

ii. THE SYSTEM FOR LAVAL VIRTUAL

This system uses two rear projectors. A different polarized filter is attached to each projector, and two images from two projectors are superimposed on a screen.

Users can select information by changing IP-Glasses and watch all information projected from two projectors with the naked eye. The structure of this system is shown as Fig.1 and Fig.2.

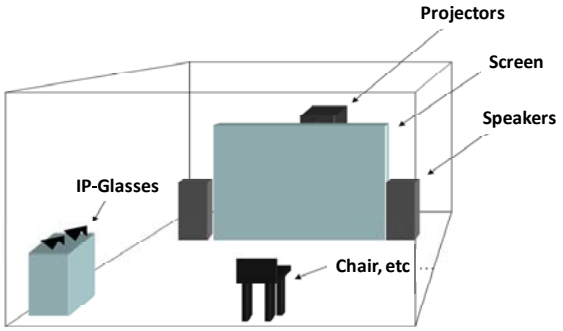

Figure.1 system front view

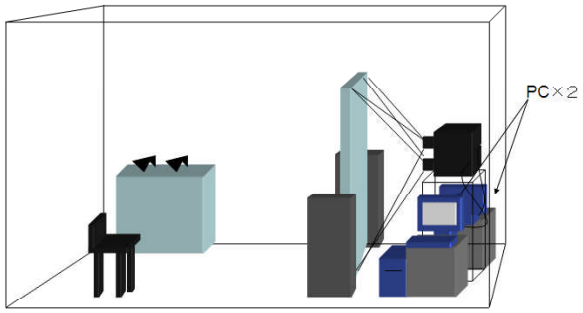

Figure.2 system side view

iii. CUSTOMISED PROJECTOR

Two methods above are the forms with no modifications to the projectors. However, if modification of projectors is possible such as with the media art works, “The window of the mermaid” in the “Fairy Finder” series [2], produced by media artist Kazuhiko HACHIYA, there is also another form which enables the naked eye to see invisible information through a polarizing plate by removing one polarizing plate from a projector equipped with two polarizing plates. Therefore, the present system can be developed into a system that enables sight of invisible information through IP-Glasses that allows attachment of further information to a screen.

The methods with no modifications to the projectors realize a system compatibility with a general three-dimensional stereoscopic projection.

IV. USER INTERACTION

User interactions possible via this proposal are as follows:

i. TWITTER

Normally comments from individuals in the twitter system are only on the Internet, however this proposal allows those messages to be superimposed, then shown on a movie screen. Audiences can share comments on the movie, and can also remove comments from the multiplexed image by wearing the other IP-Glasses. The creation process of the multiplexed image is shown as Fig.3 and selection process of images is shown as Fig.4.

ii. MULTI-CAPTION

For example, subtitles of two languages are attained at the same time. Users can select a subtitled language and enjoy a movie. The audiences can enjoy same movie at same space while watching subtitles they choose.

iii. DRAWING COMUNICATION

A drawing game that tells secret messages is available. Children will be able to understand choice of information intuitively.

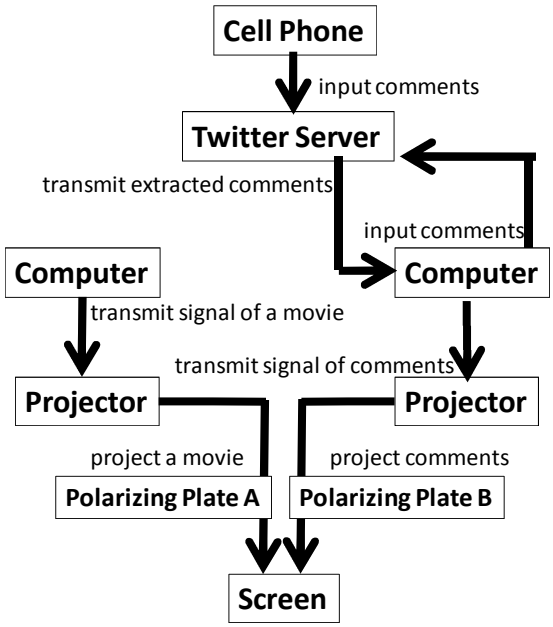

Figure.3 The creation process of multiplexed image

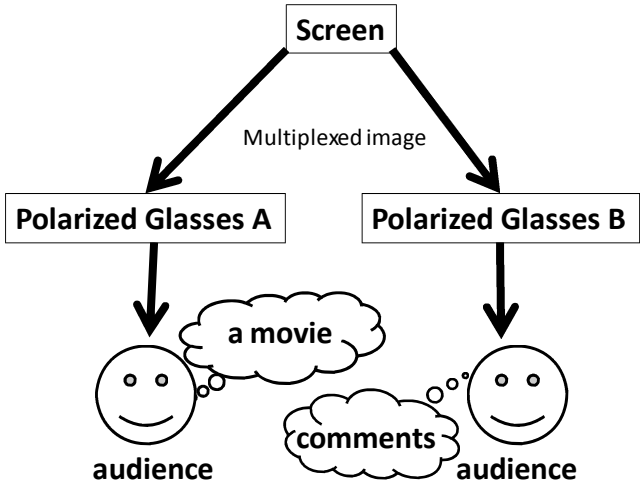

Figure.4 Selection process of images

V. FUTURE WORKS

Large televisions at home are expected to come into common use in the future. In the public space (a living room) children and adults can enjoy video games and watch TV programs respectively on the same display at the same time by this system. There is the possibility of incorporating “loose” communications, which is unavailable with many home TVs. Moreover, this communication platform will be able to contribute to communication in real time within the family no matter the distance.

VI. CONCLUSION

In this proposal “Scritter”, IP-glasses realize easily accessible options and offer new choices of visible information on a public screen. Moreover, no modification to a projector is needed and a “Scritter” system can be created with a high compatibility with normal stereoscopic technology.

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