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 Ne tworking Site" like th e "Twi tter" sys tem [1] th at at tract atten tion as individuals can use that system to transmit information to others on the Internet.

Twitter is a co mmunication s ervice th at a llows lo ose connections o n t he Int ernet, and t hose con nections relationships are bei ng co nsidered as a new form of communications. However, such rel ationships are completely dependent on either a PC or cell phone as they exist only on the Internet.

In c ontrast, on p ublic screens, many more peopl e can be ex posed t o i nformation sim ultaneously, an d communicate i n real t ime am ong t hose who share t hat same d ata. Th erefore, th is pu blic syste m i s essen tial fo r sports gam es, speeches, movies, adve rtisements, and meetings. However, the public screen syste m a lso involves the possibility of providi ng extrane ous information because the information flow is only one way.

Moreover, di splayed i nformation on a p ublic screen may overwhelm as the receiver has no control. If control can be provide d to the receive r, the level of satisfaction may increase thereby increasing acceptance of the system.

II. BASIC CONCEPT

This pro posal, "Scritter", sug gests v isual in formation on a screen can be filtered casually by using "IP-Glasses". As a result, "Scritter" e nables recei vers access to information d esired while al lowing t he blockage o f undesired data.

A combination of the twitter syste m and public screens may reso lve t he n egative po ints o f bo th. Th is mixed system can solidify the loose Internet connection, as many people ca n watch the sam e s creen at the sa me time and communicate with each ot her. Furtherm ore, communication can be achi eved 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 sy stem uses t wo rea r projectors. A different polarized filter is attached to each projector, a nd two images from two projectors are superimposed on a screen.

Users can select information by changing IP-Glasses and watch all info rmation projected from two projectors with the naked eye. T he structure of th is system is sh own as Fig.1 and Fig.2.
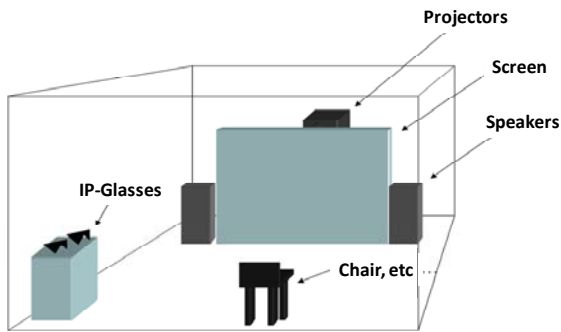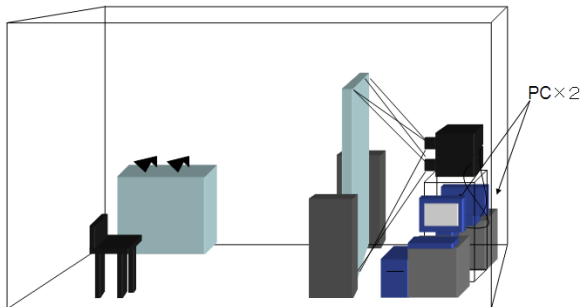

Figure.1 system front view

Figure.2 system side view

iii.   CUSTOMISED PROJECTOR

Two m ethods ab ove a re t he f orms wi th no modifications to the projectors. However, if modification of projectors is possible such as with the media art works, "The window of t he m ermaid" in the " Fairy Finder" series [2], produced by media artist Kazuhiko HACHIYA, there is also another form which enables the naked eye to see i nvisible i nformation t hrough a polarizing pl ate by removing one polarizing plate from a pro jector equipped with two polarizing plates. Therefore, the present system can be developed i nto a sy stem t hat enabl es si ght of invisible info rmation th rough IP-Glasses th at allo ws attachment of further information to a screen.

The methods with no modifications to the projectors realize a syste m co mpatibility with a gen eral t hree-dimensional stereoscopic projection.

IV.   USER INTERACTION

User in teractions po ssible via this proposal are as follows:

i.   TWITTER

Normally co mments fro m individuals in t he twitter system are onl y on t he Int ernet, ho wever this prop osal allows those messages to be superimposed, then shown on a m ovie screen. Audiences can sha re com ments on the movie, and can al so rem ove co mments from t he multiplexed i mage by weari ng t he other IP-Glasses. The

creation pr ocess of t he m ultiplexed i mage is sh own as Fig.3 and selection process of images is shown as Fig.4.

ii.   MULTI-CAPTION

For example, subtitles of two langua ges are attained at the same time. Users can select a subtitled language and enjoy a m ovie. The audience s can enjoy same movie a t 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 inform ation intuitively.
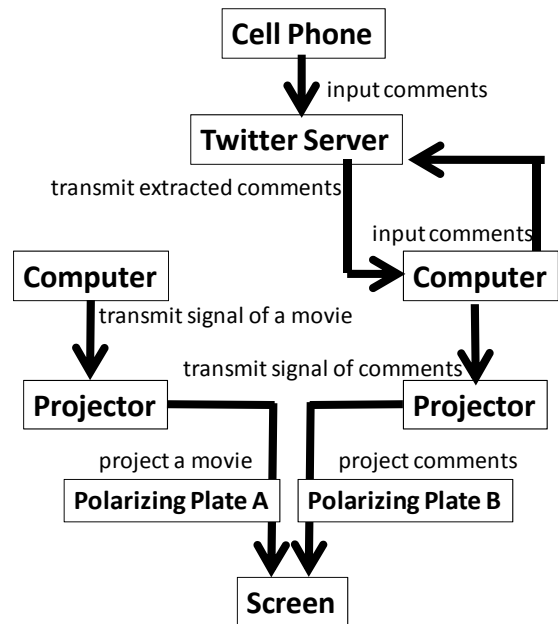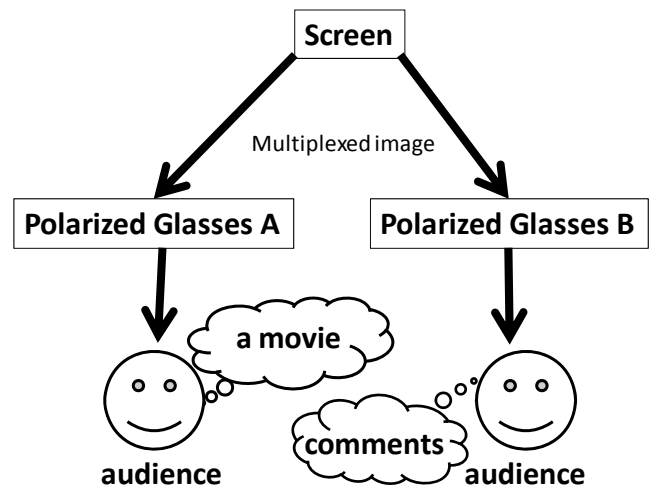

Figure.3 The creation process of multiplexed image

Figure.4 Selection process of images

V. FUTURE WORKS

Large telev isions at home ar e expected to come into common use in the future. In the public space (a livi ng room) chi ldren a nd a dults can e njoy video games an d watch TV prog rams resp ectively on th e same d isplay at the same ti me by th is system. Th ere is th e possibility o f incorporating "l oose" c ommunications, w hich i s unavailable w ith m any h ome TVs. M oreover, t his communication platform will b e ab le to contribute to communication in real tim e within th e family n o matter the distance.

VI. CONCLUSION

In this p roposal "Scritter", IP-g lasses real ize easily accessible opt ions a nd offer new c hoices of visible information on a public scree n. M oreover, n o modification t o a projector is n eeded and a "Scritter" system can be created with a high co mpatibility with normal stereoscopic technology.

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