Research of Representation of deformed image in communication using video chat

Rikiya Tajiri/ Yuji Miyake /Ryoma Yanagi/Takahiro Yamazaki/Yuko Abe/
Graduate School of Design, Kyushu University,
Koichi Sunada,Ph.D./Professor Faculty of Design, Kyushu University

Mitsuharu Morine
Graduate School of Design, Kyushu University

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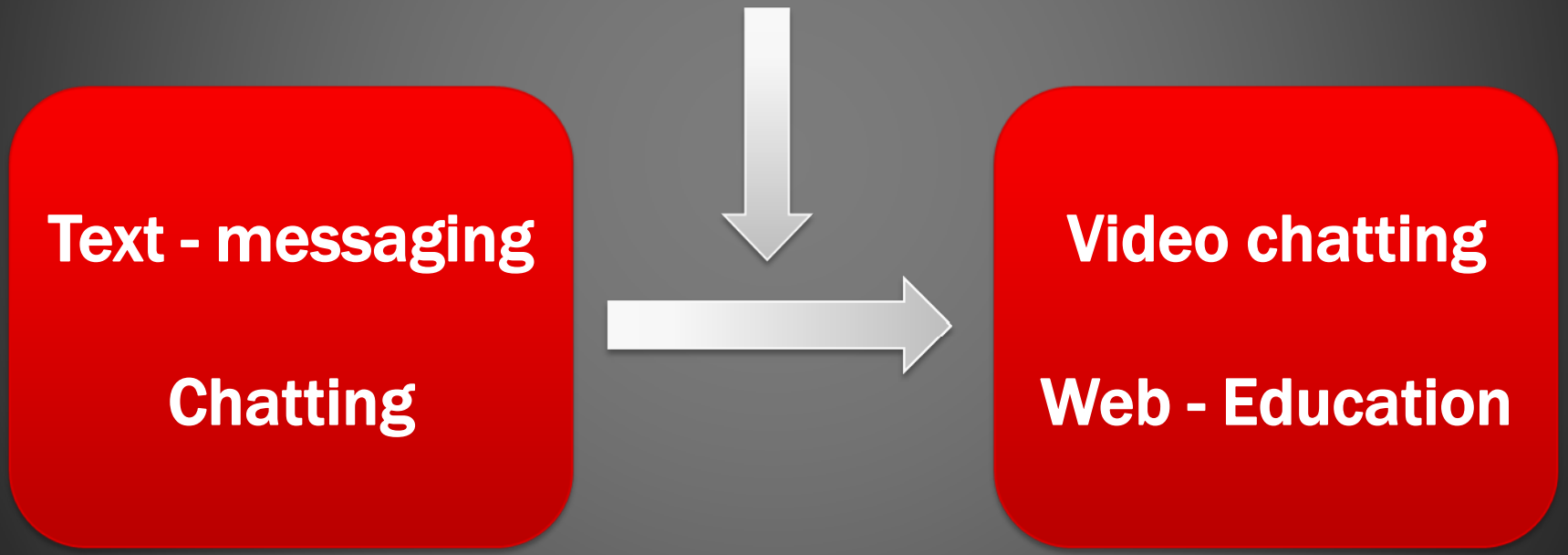
I N T R O D U C T I O N

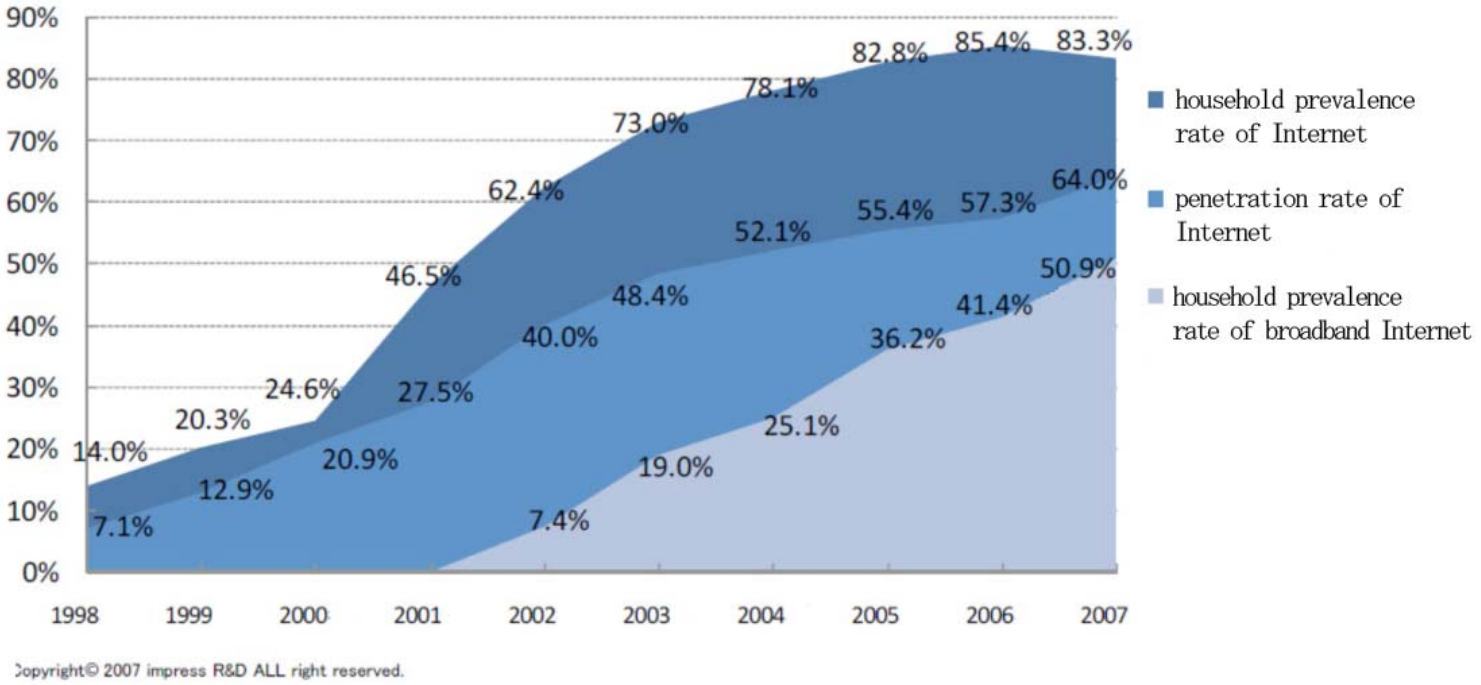
Progress of digital infrastructure has rapidly changed communication.



Communication using letter

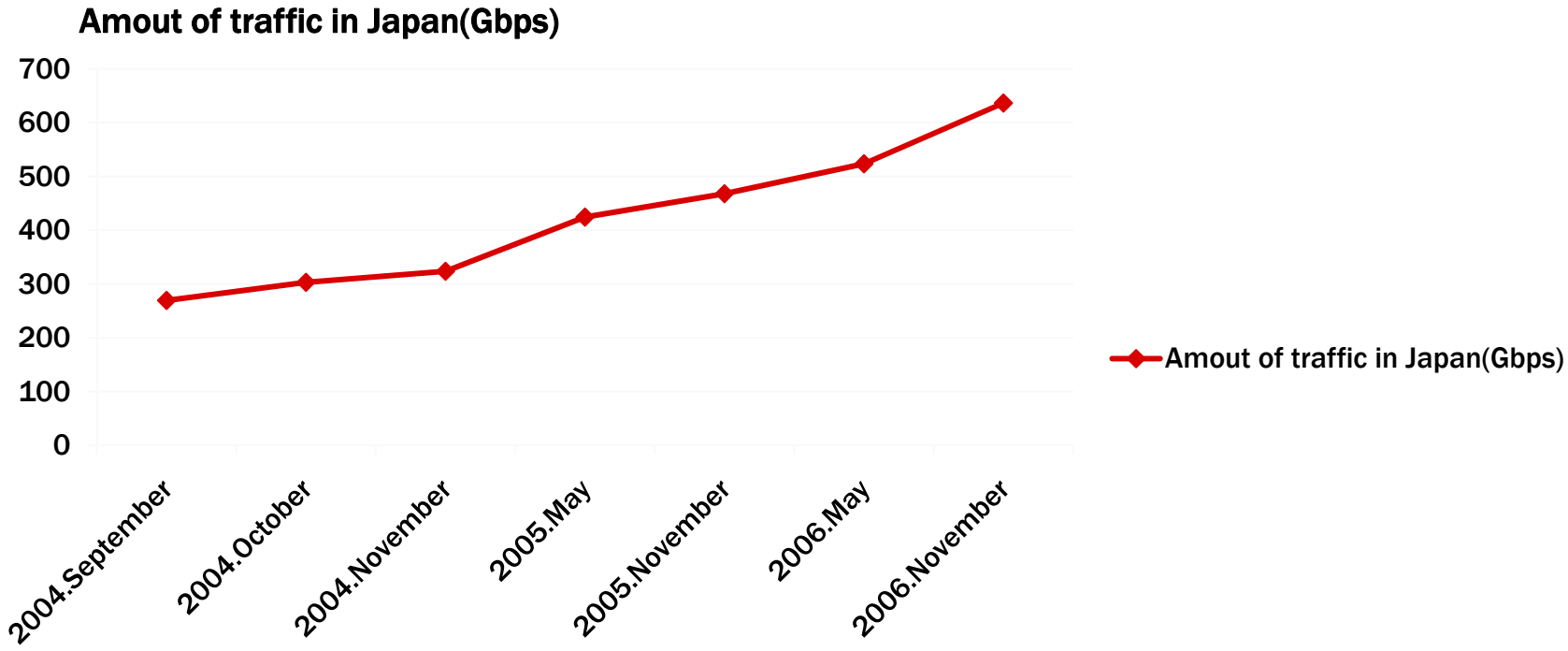
Image correspondence

THE MAJOR FACTOR (1)



>Grid computing improved processing ability

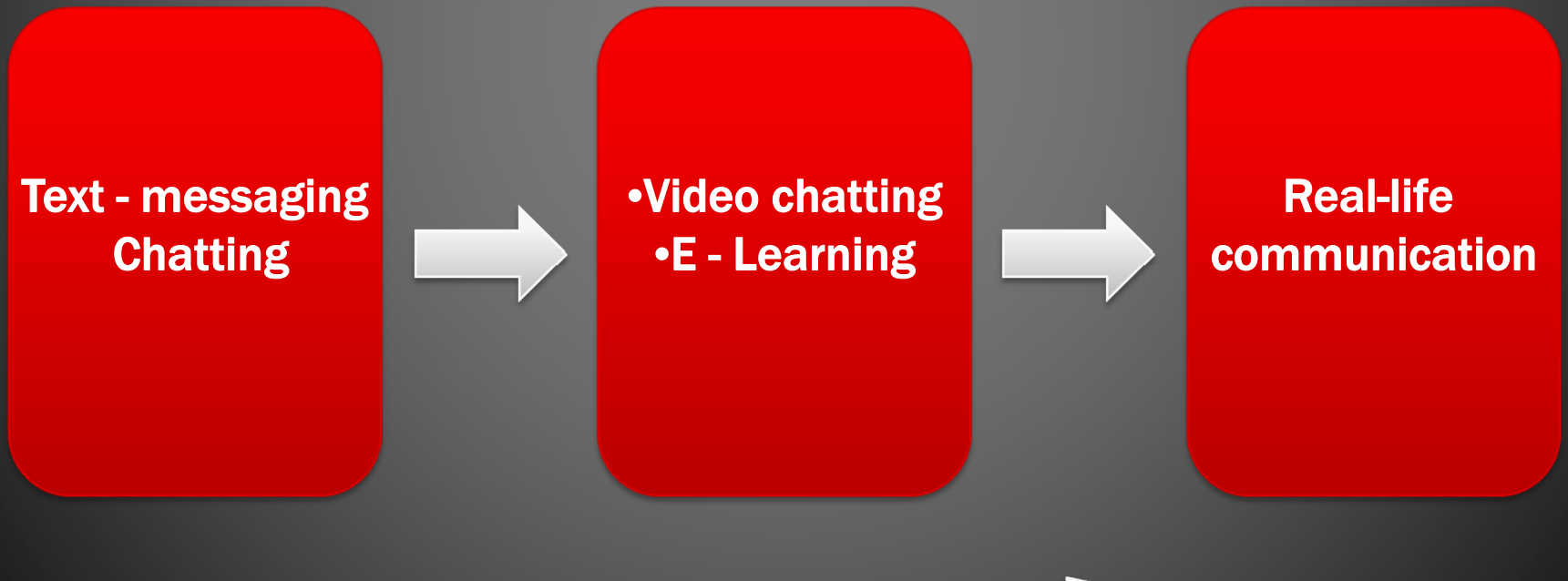
THE MAJOR FACTOR (2)



>Digital infrastructure lead to realize Mbps level communication network

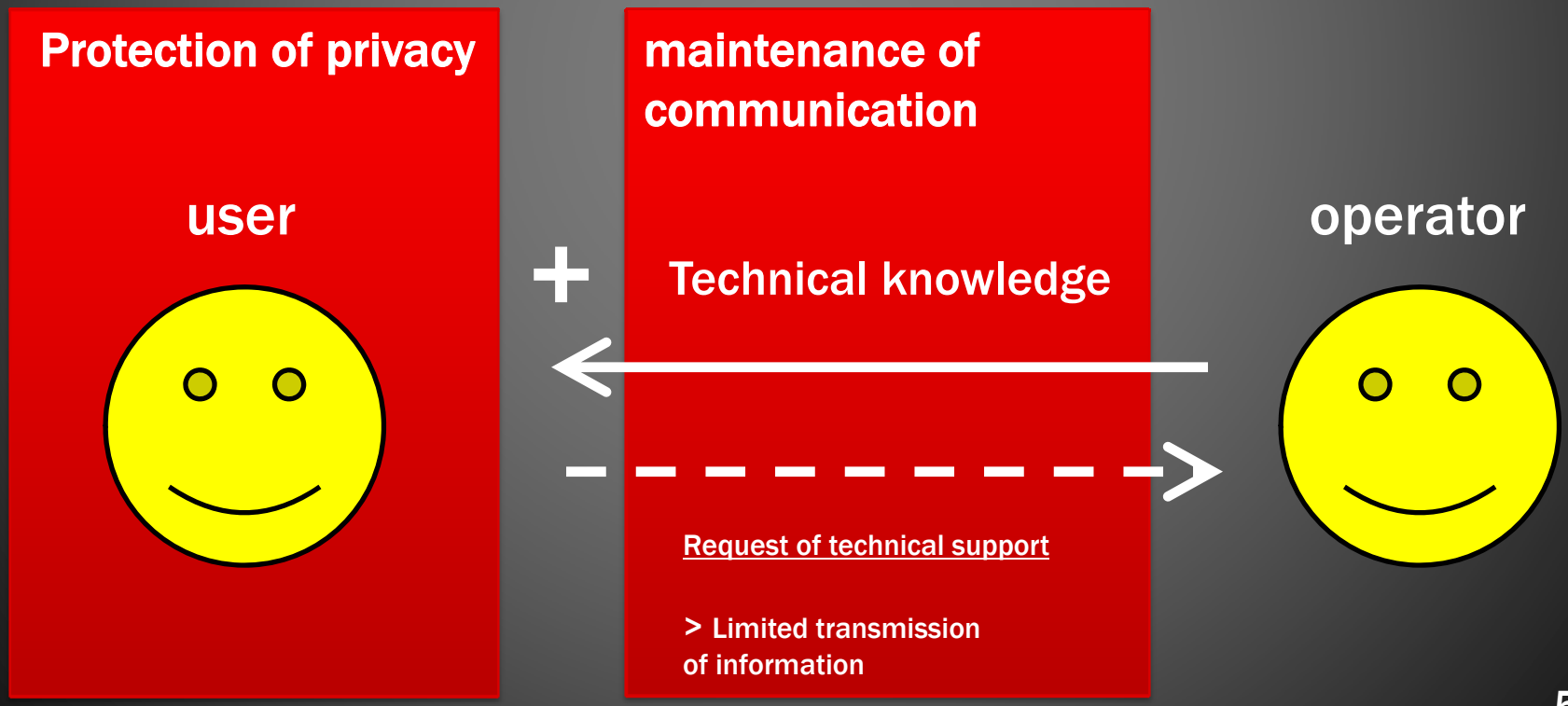
THE PROBLEM OF IMAGE CORRESPONDENCE

Stress toward image communication



C O N C E R N I N G R E S E A R C H

Concerning communication of beginner users and operator in remote technical support service



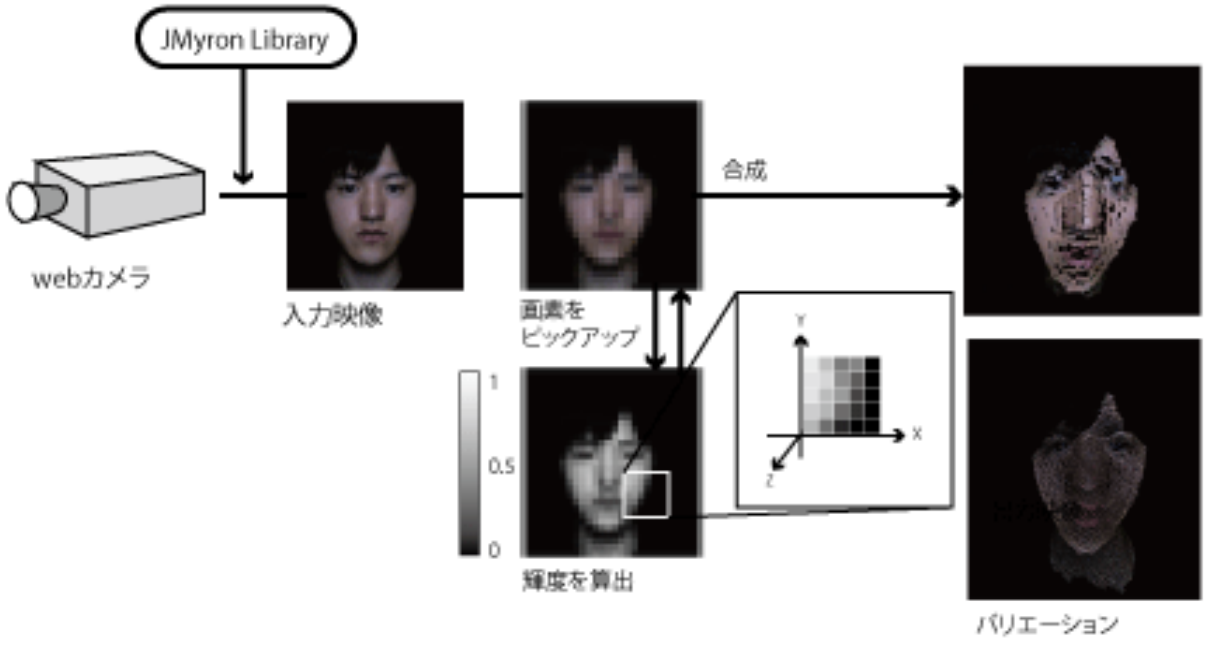
PRESENTATION

Remote support is relatively simple exchange of communication

> It is deficient in daily conversation such as video chatting.

> Verification of representing deformed image in video chatting.

BRIGHTNESS TO DEPTH MOSAIC SYSTEM



System in which image is input from web camera and is output as Pseudo Stereoscopic deformed image.

CHARACTER

Replacing information of brightness of image reflecting users with information of depth leads outputting pseudo stereoscopic image in real time.

transformation

Information of brightness

Information of depth

Stage of information of depth

EXPRIMENT DESCRIPTION

Prepared 5 comparative patterns from “color” “shape” and “texture” which are discernment elements of visual perception.

Detail of Experiment：

(a) Normal

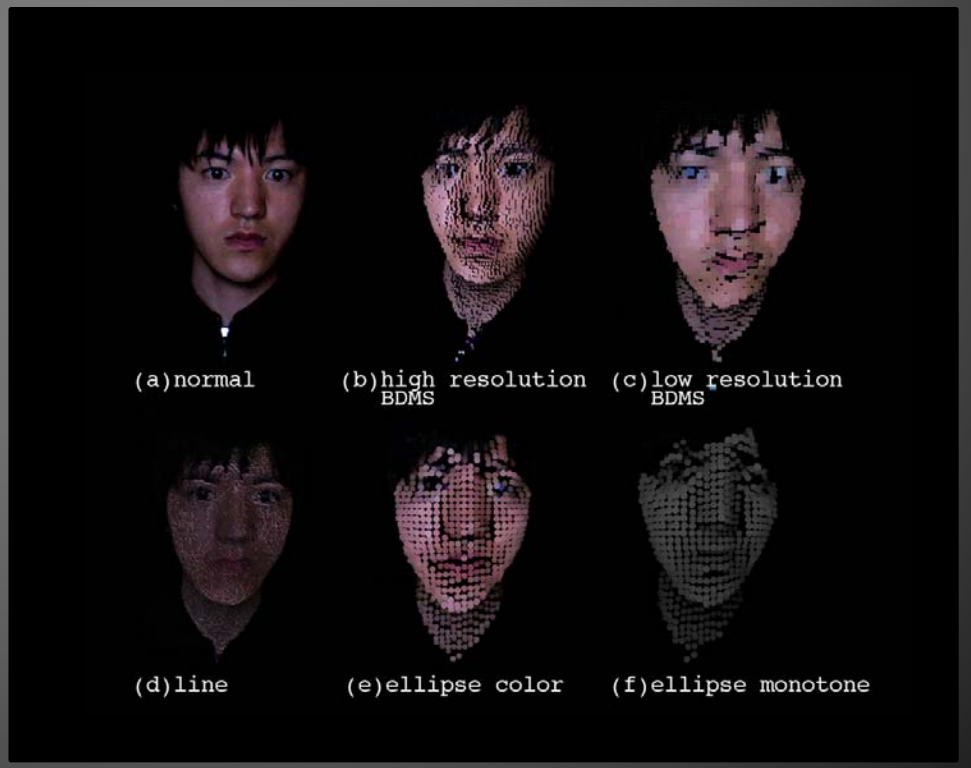
(b) High resolution

(c) Low resolution

(d) Line

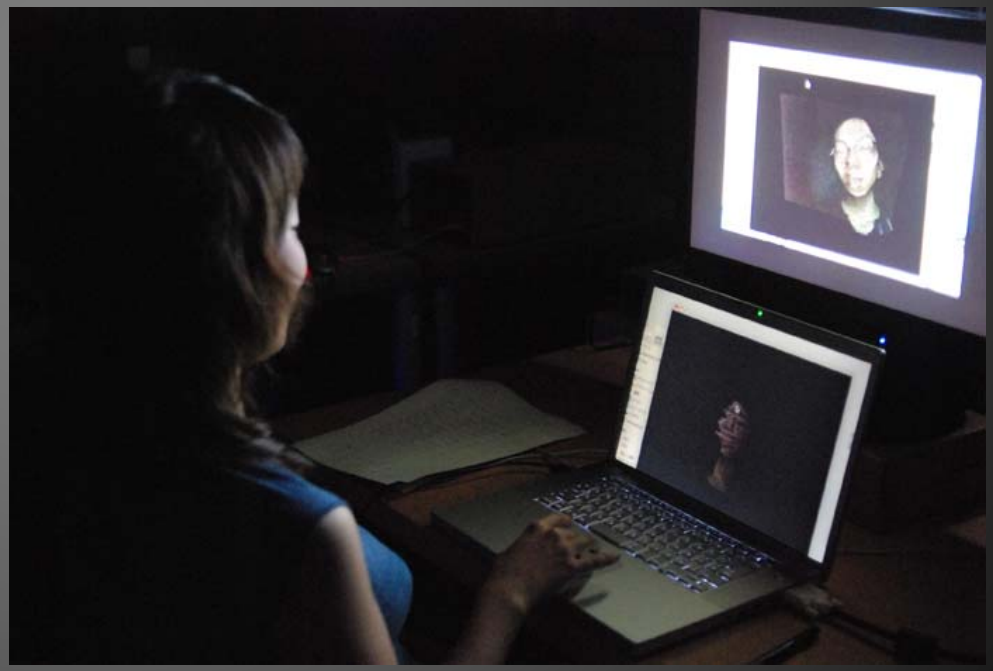
(e) Ellipse color

(f) Ellipse monotone



EVALUATED ITEMS

Partnered each other and Conducted subjective evaluation based on conversation through image correspondence for definite period of time.

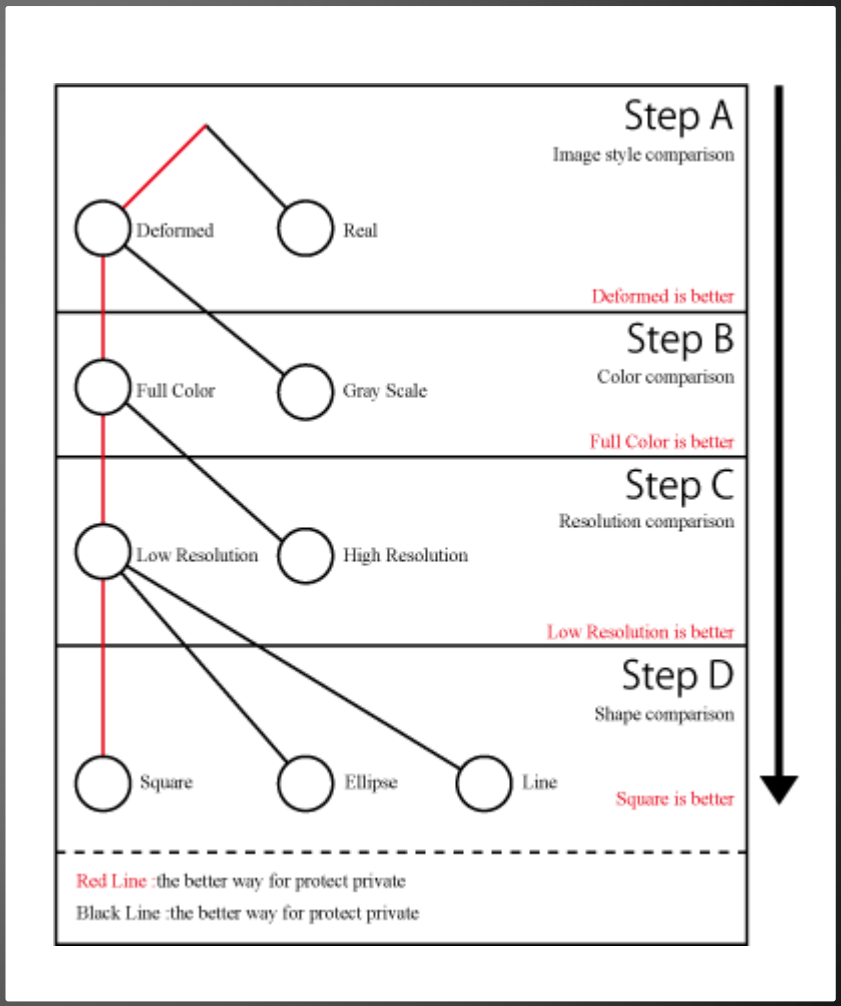


RESULT OF VERIFICATION

Subjective evaluation by “color”, “shape” and “texture” which are discernment elements of visual perception.

>As the best pattern,

Color information：
Full Color
Texture information：
Effectiveness of texture
Shape information：
Square mosaic model



C O N C L U S I O N

Deformed image is more effective in terms of reducing stress in video chatting.

Protection of Privacy + Intelligibility of Information + **Subjective "enjoyment"**

> New possibility by representation

Future Direction