

K-044

A Communication System using a black prompter “●”

Li Jen Chen[‡] Tetsuya Kato[†] Yukio Tokunaga[†] Jun Ohya[‡]Department of Information Science and Engineering, Shibaura Institute of Technology[†]GITI, Waseda University[‡]**1. Introduction**

With the popularization of Internet technology, e-mail and mobile phones have become the latest method for communication, while, at the same time, have also become the newest form of entertainment for modern people. However, many people still find it difficult to directly express their true feelings using face-to-face communication.

On the other hand, personal communication through the Internet, using methods such as Instant Messaging and chat, has been widely embraced and the adoption rate is still growing. One of the reasons might be because the user can hide behind the computer, and imagine themselves as third parties while communicating with others. This somehow allows people to feel more comfortable in expressing themselves, especially when true feelings come to the fore.

In this paper, a new communication system using a black prompter, “●” is introduced. In normal circumstances, the average human being tends to be involved in several diverse functions while talking or chatting. In the research, an experiment was conducted on users while they were actively occupied in other tasks, in order to achieve a simulation of normal communication patterns. Through the experiments, communication conditions and usage have been analyzed and observed.

2. “While” Conversation**2.1 “While” conversation**

By analyzing the patterns of daily communication, it was discovered that it is extremely rare for people to establish a specific topic and concentrate solely on the conversation. On the contrary, people tend to have conversations while they are involved in other activities, including watching television, drinking, or eating.

The “while” conversation is the most usual pattern that was found to occur during daily communication.

In a “While” conversation, people found that they can be more relaxed during the conversation, and also tend not to be so concerned about the time-cost of the response from the opposite side. A possible interpretation of this is that while people are paying

attention to other things as they are talking, they tend to feel less stress regarding the conversation.

2.2 Conversation media

In a “While” conversation, there are both first and second media involved. For example, the first media could be considered as “talking”, while “tea and cake” could be thought of as the second media in an “afternoon tea” situation. An additional aspect that could impact upon this scenario is the fact that talking while eating can also activate further relaxation during the conversation.

2.3 The “While” conversation using the “●” communication system

The communication system using the black prompter, “●”, is created using a combination of both images and characters, and through the process of interpreting the resulting images, those involved in the experiment not only receive and accept the conversation, but also participate in the conversation. The biggest advantage of this system is the reduction of constraints during the conversation.

However, a major obstacle to the smooth and interactive flow of the conversation is the time taken to create each frame. Therefore, in order to allow communication that avoids the time-cost factor, several major features related to the “while” conversation have been constructed and introduced into the original communication, using the black prompter system. The main features are as follows.

- The system will “beep” to inform the participant whose turn it is to create the conversation. On the other hand, the second participant can push the “call” button to draw the attention of the “creating” participant, to inform them that it is now their turn to contribute to the conversation.
- If a second media is taking place on the same PC during a “while” conversation, a simple switch between the two systems was been considered necessary. Therefore, the system has been designed to be able to enlarge or reduce the application window with a single click.
- A scrollbar on the application window automatically updates to the newest conversation in order to provide a visual context and to inform the participant that it is now his or her turn to engage in the conversation.

[†] Tetsuya Kato [†] Yukio Tokunaga

[‡] LI JEN CHEN [‡] Jun Ohya

[†] Department of Information Science and Engineering, Shibaura Institute of Technology

[‡] GITI, Waseda University

3. Communication System

The communication systems using the black prompter, “●”, are shown as follows. Figure 1 indicates the flow of the conversation system.

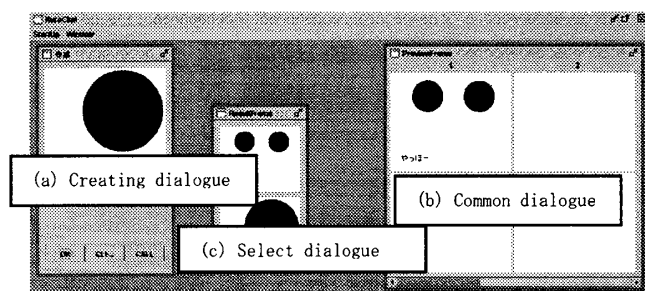


Figure 1. Communication system

1. The message, “It’s your turn now. Please select one set from the four frame sets to create your conversation” will appear on the “Creating dialogue (a),” when it comes to the turn of creating conversation. Four of two frames sets will appear in the “Select dialogue window (c) to enable a set to be selected by clicking the select button.
2. Selected frame in procedure (1) will then appear in the “selected dialogue” window (c), and the upper frame will appear in the “creating dialogue” window (a).
3. By considering both frames, messages can be typed in the blanket space located in the lower part of “creating dialogue” window, which can then be dragged to the desired place in the frame. By clicking the “clear” button, the message inside the blanket will be discarded and restored to the original status.
4. After clicking the “OK” button in the “creating dialogue” window, the first frame that was created in procedure (3) will then move to the “common dialogue” window (b). The second frame of the set will appear on the “creating dialogue” window (a) and will be ready to be created by the same procedure in procedure (3).
5. After both frames are completed, it will become the second participant’s turn to perform the creating processes.
6. The second participant then repeats procedures (1) to (5) to continue the conversation.

4. Conversation Experiment

The experiments were conducted with 10 students who were divided into five pairs. The experiments have been obtained using two laptops located in two different rooms connected via the LAN. Each student conducted 10 frame sets, meaning that each pair completed twenty sets for the experiment. In addition, each student was involved in different activities as the second media, such as reading comic books, using a mobile phone, or watching a movie on the computer. The activity combinations are as follows.

Student A • comic Student B • comic
 Student C • comic Student D • comic
 Student E • comic Student E • comic
 Student F • comic Student G • mobile phone
 Student H • comic Student I • TV

The following is an example of a conversation. (Figure 2).

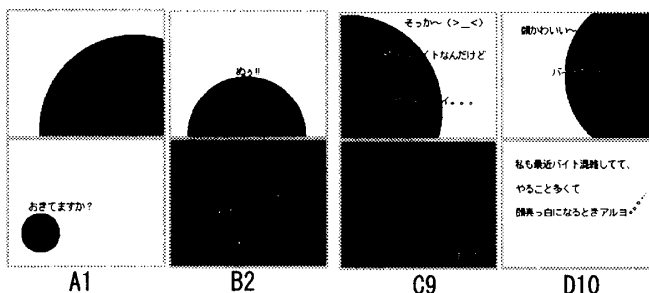


Figure 2 Conversation examples

5. Conclusion

An experiment that implemented the “while” conversation into the original communication system using the black prompter “●” was conducted. By including additional activities as a second media while conducting the conversation, gave results from the conducted experiments that showed a reduction of constraints during the conversation, and also successfully avoided the time-cost effect. The overall result also showed that a better conversation can be obtained in a more relaxed environment. On the other hand, participants tended to create better resulting images, which reflected more on their emotions than the original system.

This communication system has been constructed to perform in real-time in a PC environment, which the location has been limited. The performance of the system under mobile conditions might be the future goal for this communication system.

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