Chapter 4.6
Implementation and Performance Evaluation of WWW Conference System for Supporting Remote Mental Health Care Education

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ABSTRACT

Information technology (IT) has changed our lives and many applications are based on IT. IT can be helpful for remote mental health care education. Because there are very few mental health care specialists, it is very important to decrease their moving time. But it is not easy to use the conventional TV conference systems for ordinary people, mental health care specialists, and their students because they are not computer specialists. For this reason, we have developed a WWW conference

system. Our system can communicate between the mental health care specialists and their students by using the live video on WWW browser. In this paper, we show the implementation and the evaluation of proposed system. The experimental results over the Internet show that our system can be used for real time communication between Fukuoka, Ishikawa, and Iwate prefectures.

INTRODUCTION

Recently in Japan, mental health care has become a very important issue because there are many people suffering from mental problems. Also, there are only a few specialists and researchers to deal with these problems. For example, bullying at school is one of the big problems worrying teachers in Japan today. Also, there are other problems such as refusal to go to school and school violence. However, there are few counselors in Japanese schools. It should be noted that many of these specialists are also doing other works. In general, one mental health care specialist should take care for many patients and they want to see their face. They should take care of not only the counseling but also the individual aftercare.

Information technology (IT) has changed our lives. People can communicate between themselves and students can study various courses at anywhere and anytime using the Internet. IT can be helpful for mental health care, education, aftercare, and counseling for patients and their families. Because there are very few mental health care specialists, it is very important to decrease their moving time. Also, it is very important to see the facial expression and to talk to people for mental health care education, aftercare, and counseling. For this reason, the video and voice are needed.

Recently, because of the use of ADSL and FTTH (NTT West, 2004) many people can use several Mbps on the Internet. Therefore, many people can use the streaming live video and TV

conference. For example, the streaming live video is used for the tourist attractions broadcasting (Fuji-shi, 2005; Kumamoto-shi, 2001; Sapporo-shi, 2004), assembly broadcasting (The House of Councilors, 2005; The House of Representatives, 1999;), and public information broadcasting (The ministry of public management, 2004). In these live streaming video methods, the image refreshed at regular intervals over WWW (Fuji-shi, 2005; Kumamoto-shi, 2001; Sapporo-shi, 2004) and RealPlayer or Windows Media Player (The House of Councilors, 2005; The House of Representatives, 1999; The Ministry of Public Management, 2004) are used.

Some TV conference systems are used as special hardware (NEC Engineering, 1996; Polycom, 2004; SONY, 2004; VTEL, 2004) and in other systems are used as application software or PC connected to the existing cameras (Advanced Solutions, 2001, 2002; Hitachi Hybrid Network, 2004; Microsoft, 2004; Visual Nexus, 2004). When using the special hardware, the users need to connect to the Internet and set up the hardware in each spot before using the system. But, it is difficult to use the special hardware in counseling because the users are usual people. While, when using the application software and PC is connected to the existing camera, the users need to connect the PC and camera, setup the PC, and install the application software in each spot before using the system. Also, it is difficult to introduce these systems for mental health care because the mental health care specialists and their student are not computer specialists.

In order to realize a remote mental health care education, we have developed a WWW conference system. Our system is able to support the communication between the mental health care specialists and their students. Also, our system can provide the communication between the mental health care specialists, patients, and their families by using the live video on WWW browser, point to point communication, point to multi-point

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