



A WEB-BASED CARE-REQUIRING CLIENT AND HOME HELPER MUTUAL SUPPORT SYSTEM

Hidekuni Ogawa^{*1}, Yoshiharu Yonezawa^{*2}, Hiromichi Maki^{*3},
Allen W. Hahn^{*4} and W. Morton Caldwell^{*5}

*1 Department of Information and Intellectual Systems Engineering, Hiroshima Institute of Technology, Hiroshima, Japan.

*2 Department of Electronics, Hiroshima Institute of Technology, Hiroshima, Japan.

*3 Department of Clinical Engineering, International Trinity College, Hiroshima, Japan

*4 Department of Veterinary Medicine and Surgery, University of Missouri-Columbia, Missouri 65211.

*5 Caldwell Biomedical Electronics, Hurricane, West Virginia 25526.



BACKGROUND

- Home Helpers are sent to the homes of care-requiring clients to provide home services.
- Care items are scheduled for one month before the care visit.
- The schedule are often changed suddenly by request from the care-requiring client.
- The Home Helpers need to know these changes as soon as possible.



PURPOSE

To developed a web-based client and Home Helper mutual support system for the improved efficiency of home care of the elderly.



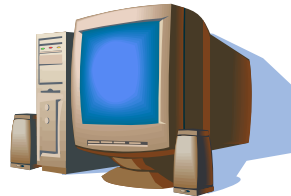
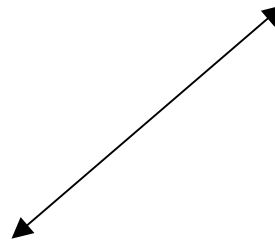
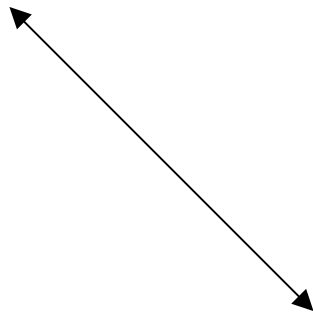
SYSTEM DESCRIPTION



Client computer
at care-requiring
client's home



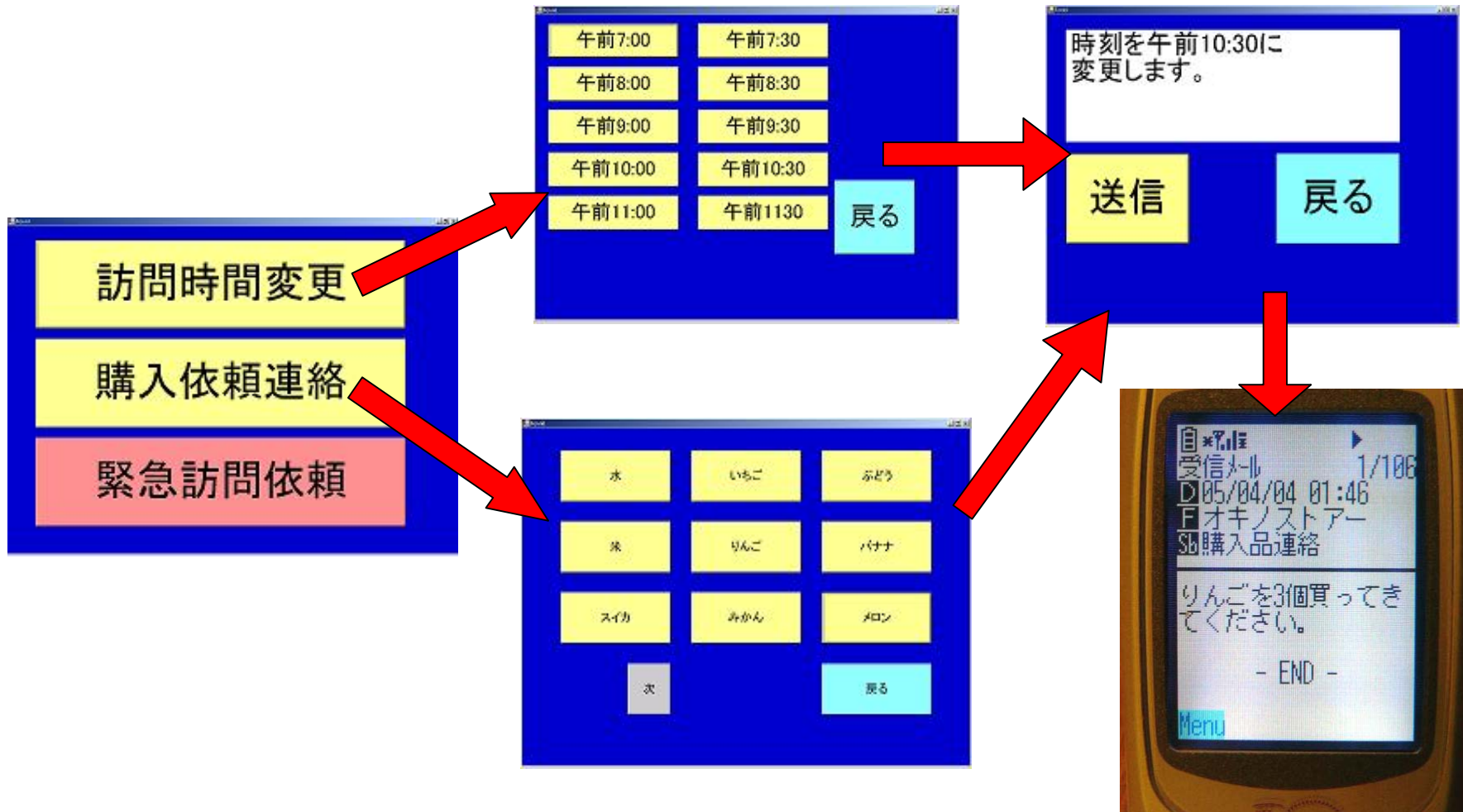
Mobile phone for
Home Helper



Server computer
at office



OPERATION PROCEDURE





Non-picture buttons and picture buttons displayed on screen of Internet client computer.



a) Non-picture buttons



b) Picture buttons



INVESTIGATIVE METHOD

- The length time for choosing was evaluated per two conditions; by the item buttons being indicated on the LCD in the character with picture, or without picture.
- The 14 subjects, one male and 13 females, varied in age from 60 to 89 years, choose four care items from 27 item buttons.

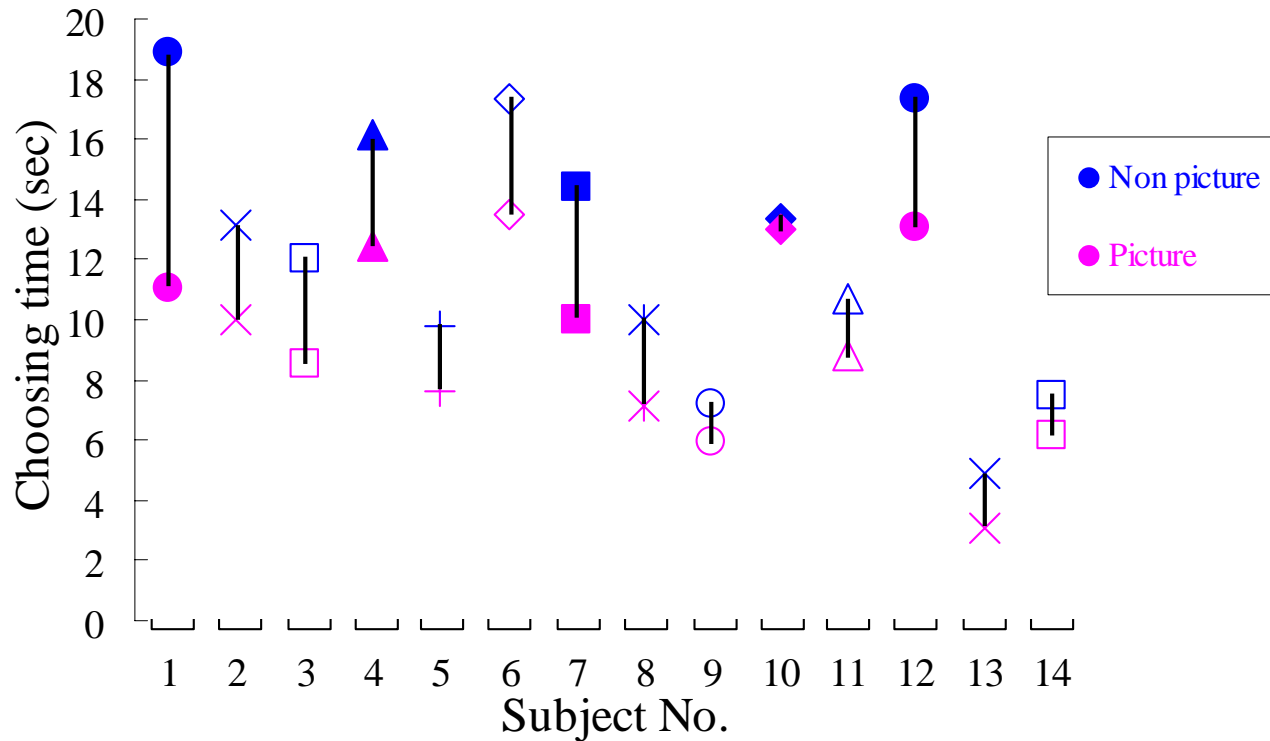


THE QUESTIONNAIRE

- Understanding of the items displayed on buttons with picture or without picture.
- Ease of operation for choosing the items displayed on buttons with picture or without picture.



RESULTS

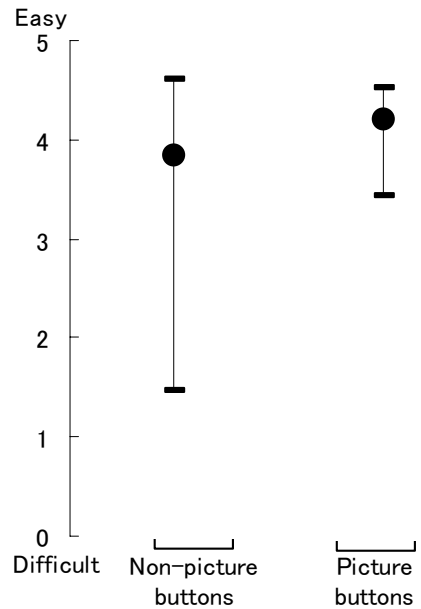


The average length of time to choose either the non-picture button or the picture button obtained from 14 subjects.

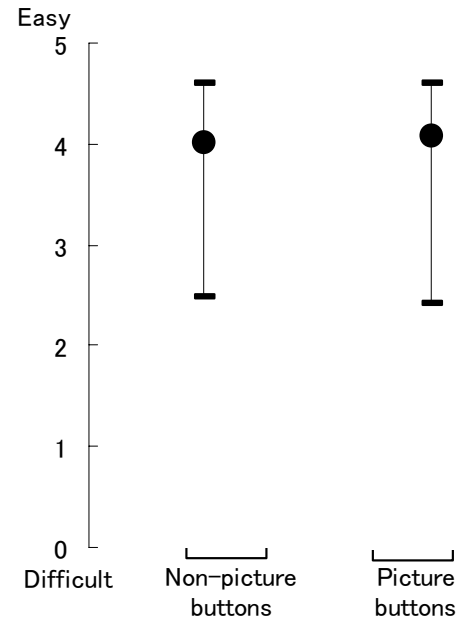


THE QUESTIONER RESULTS

Understanding of the items



Ease of operation





DISCUSSION

- The length of time to choose the picture button was shorter by 20% than the non-picture button, and the .05 t-test indicated that there was a significant difference.
- The .05 t-test about the questionnaire results indicated that there was no significant difference.
- The care item buttons with pictures were suitable for choosing the items.



CONCLUSION

- The care-requiring clients can easily operate the developed system and send their requests to the Home Helper and care manager via the server computer at any time, day or night.
- Our system improves efficiency of home care of the elderly.