



HIROSHIMA INSTITUTE OF TECHNOLOGY

A phone-based communication support system for elderly persons

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BACKGROUND

- **In Japan, 37.7% of all households have elderly (over age 65) persons.**
- **In 50% of these households the elderly are not living with their children.**
- **The children can not take care of their parent's daily life needs.**
- **The telephone is mainly used as the communication tool.**
- **A significant percentage of elderly persons have poor eyesight and memory, causing them to often call a wrong number.**



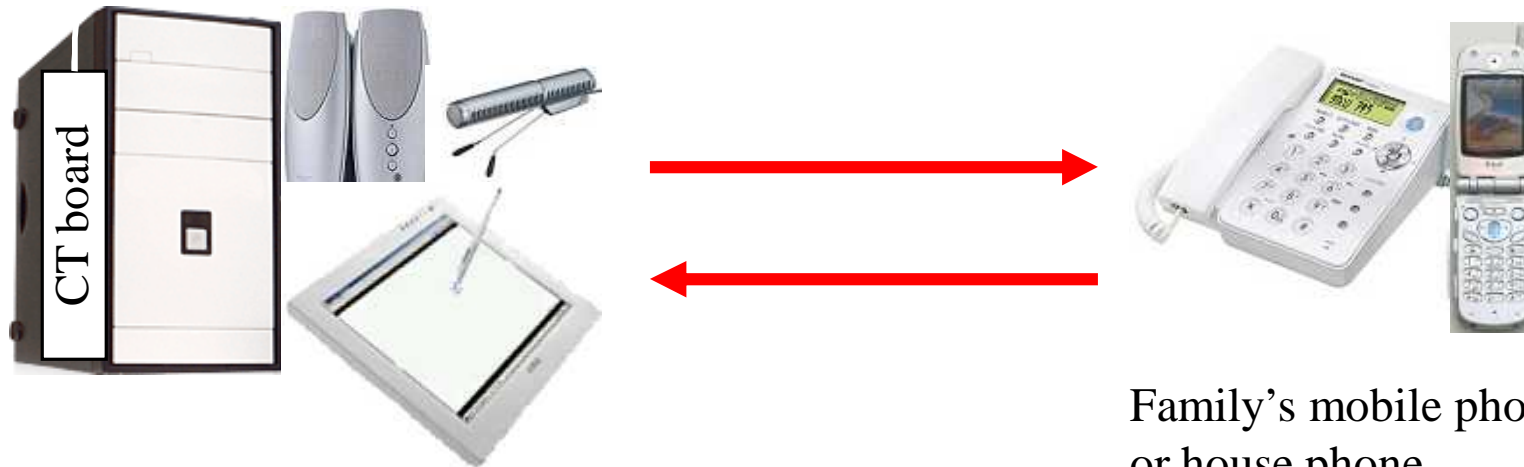
PURPOSE

Development of a computer-based audiovisual support system for assisting elderly persons with their phone communications.



SYSTEM DESCRIPTION

Telephone line



The computer in elderly person's home

Family's mobile phone or house phone

The overall phone-based communication support system.



MAIN MENU

The display of communication status

The communication person's name

The communication person's picture

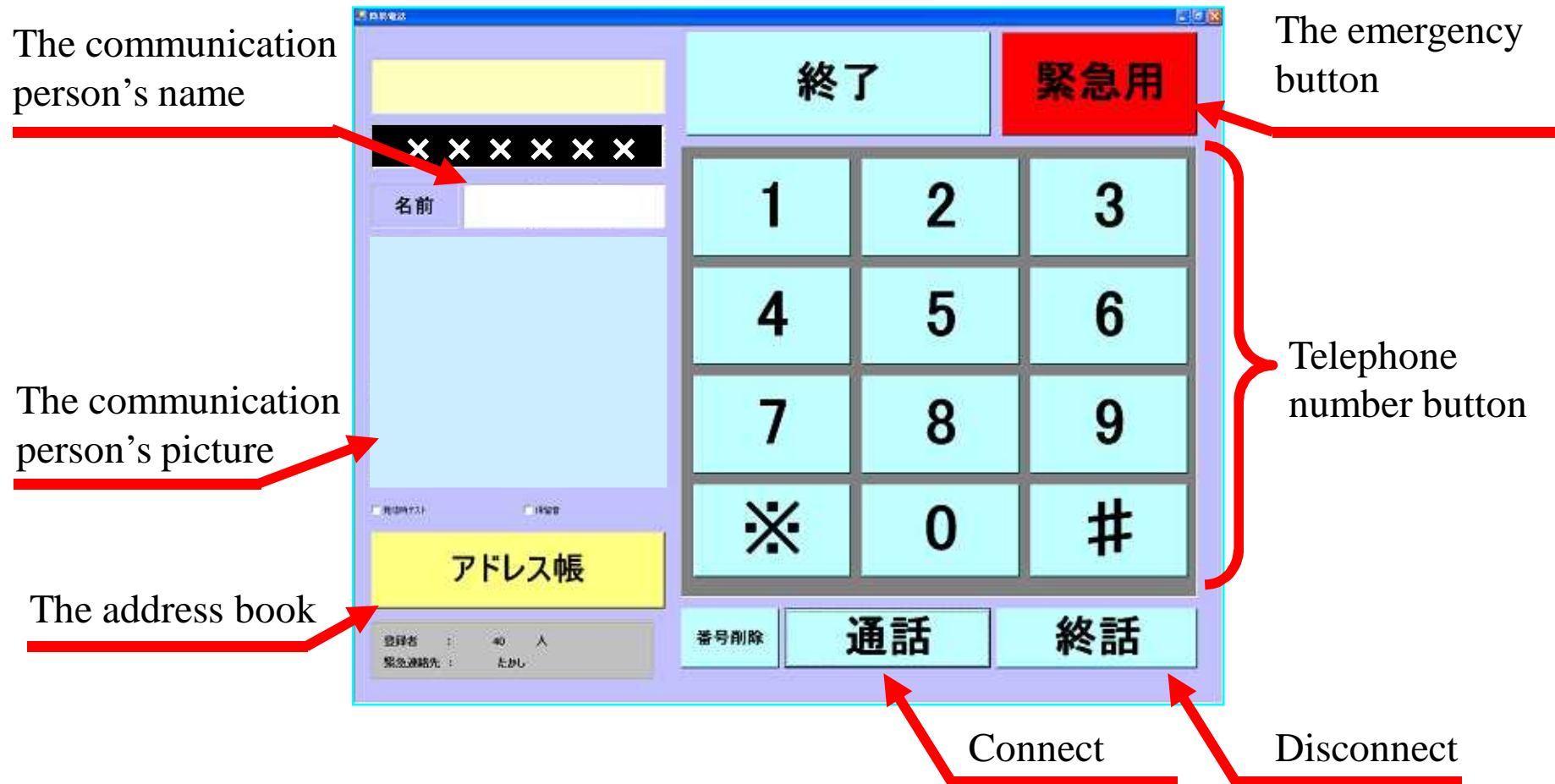


The emergency button

The one touch dial button

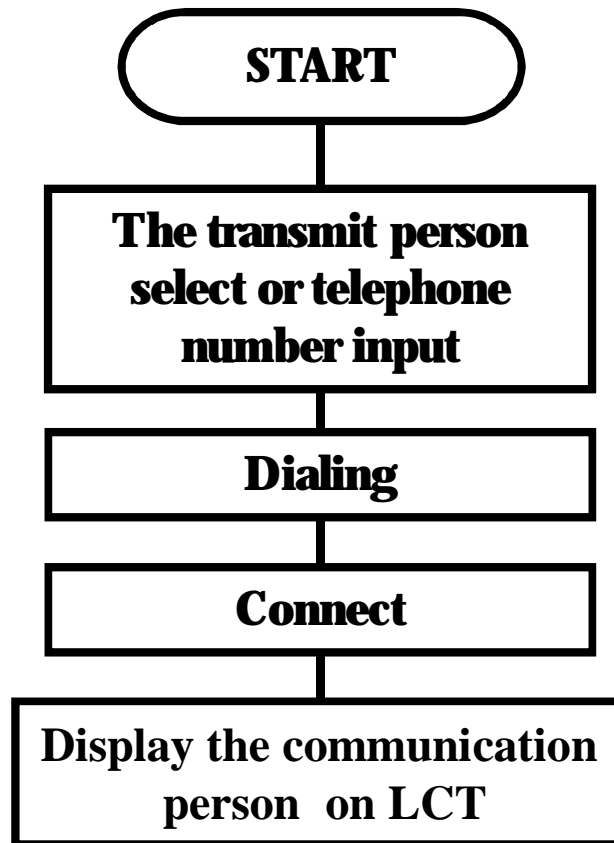


DIAL MENU



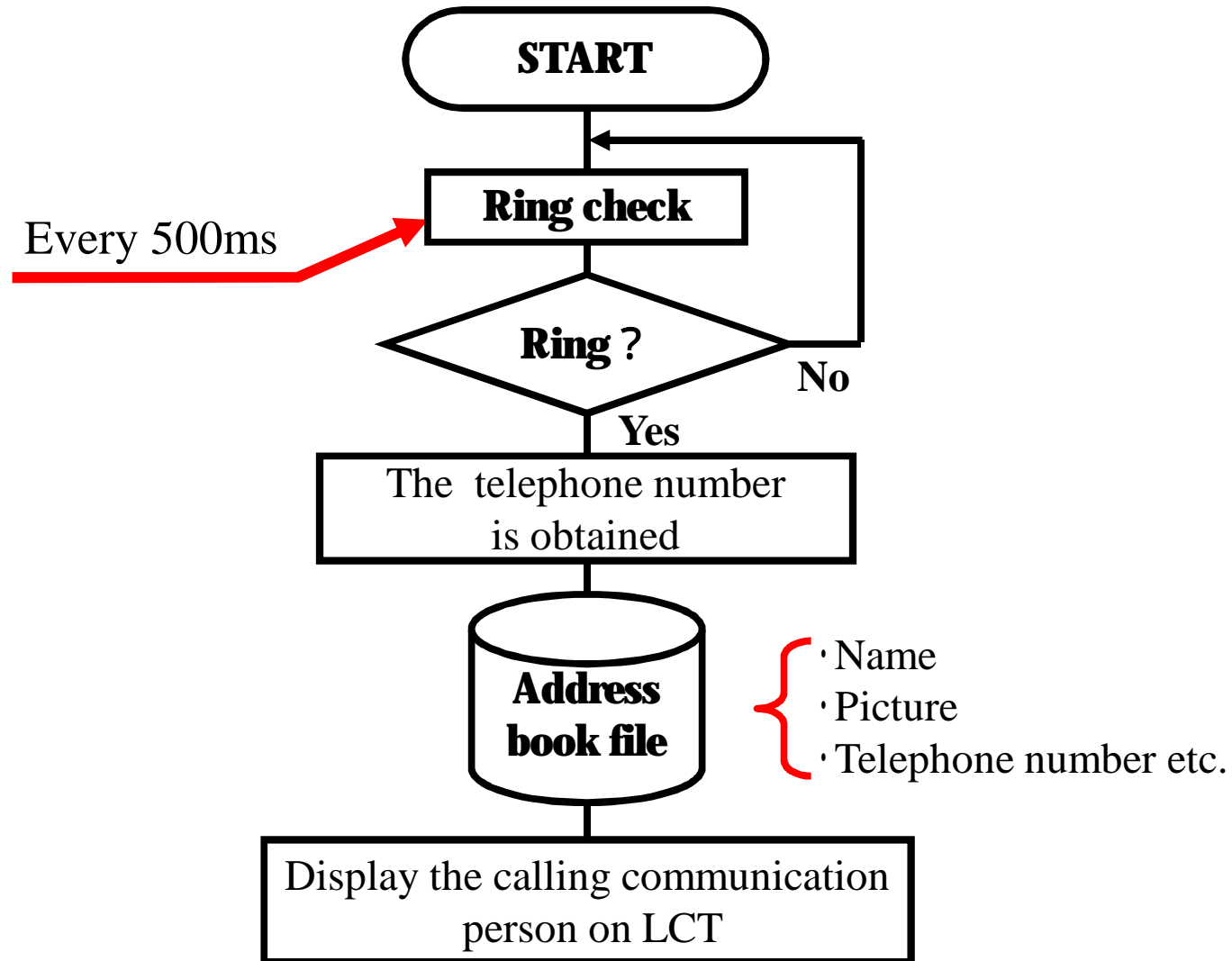


DIALING PROGRAM



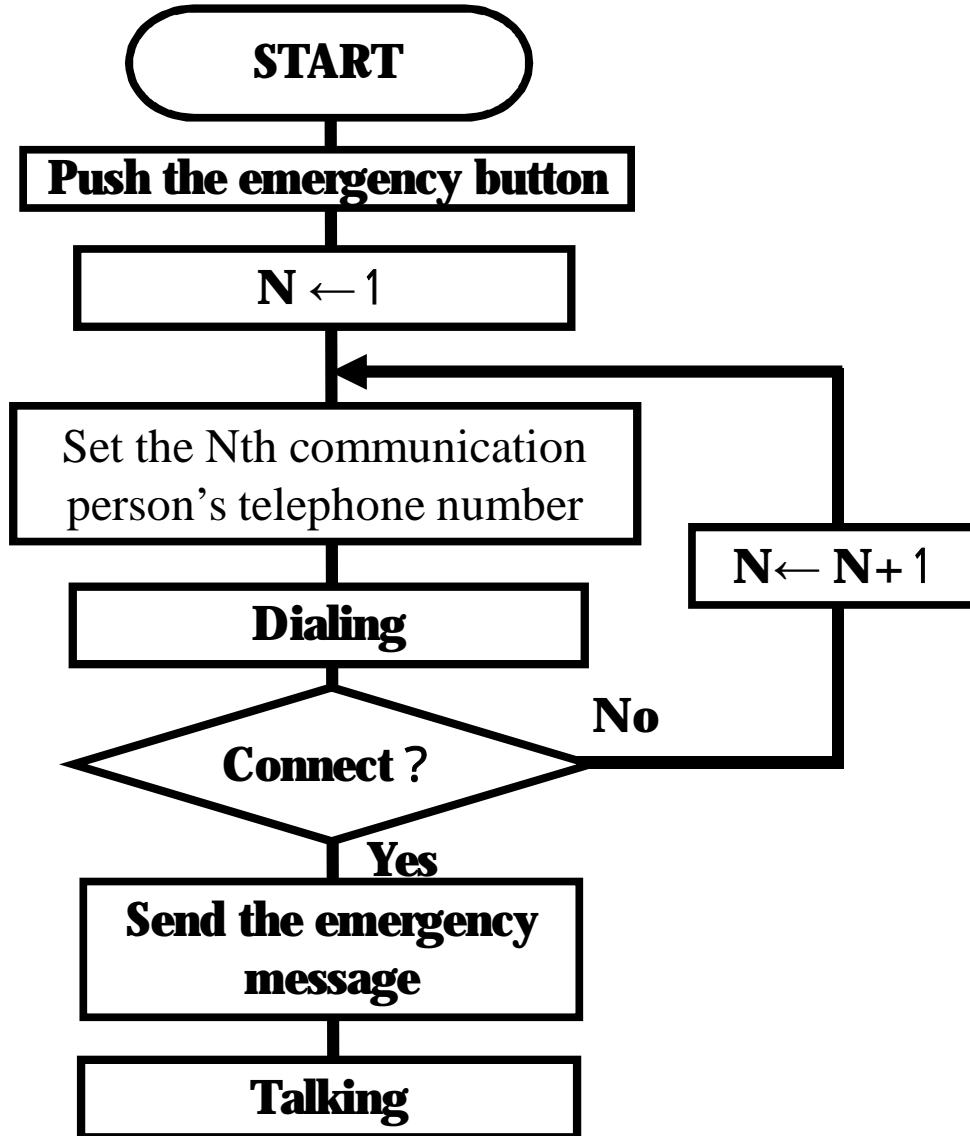


RECEIVING PROGRAM





EMERGENCY PROGRAM



The emergency button



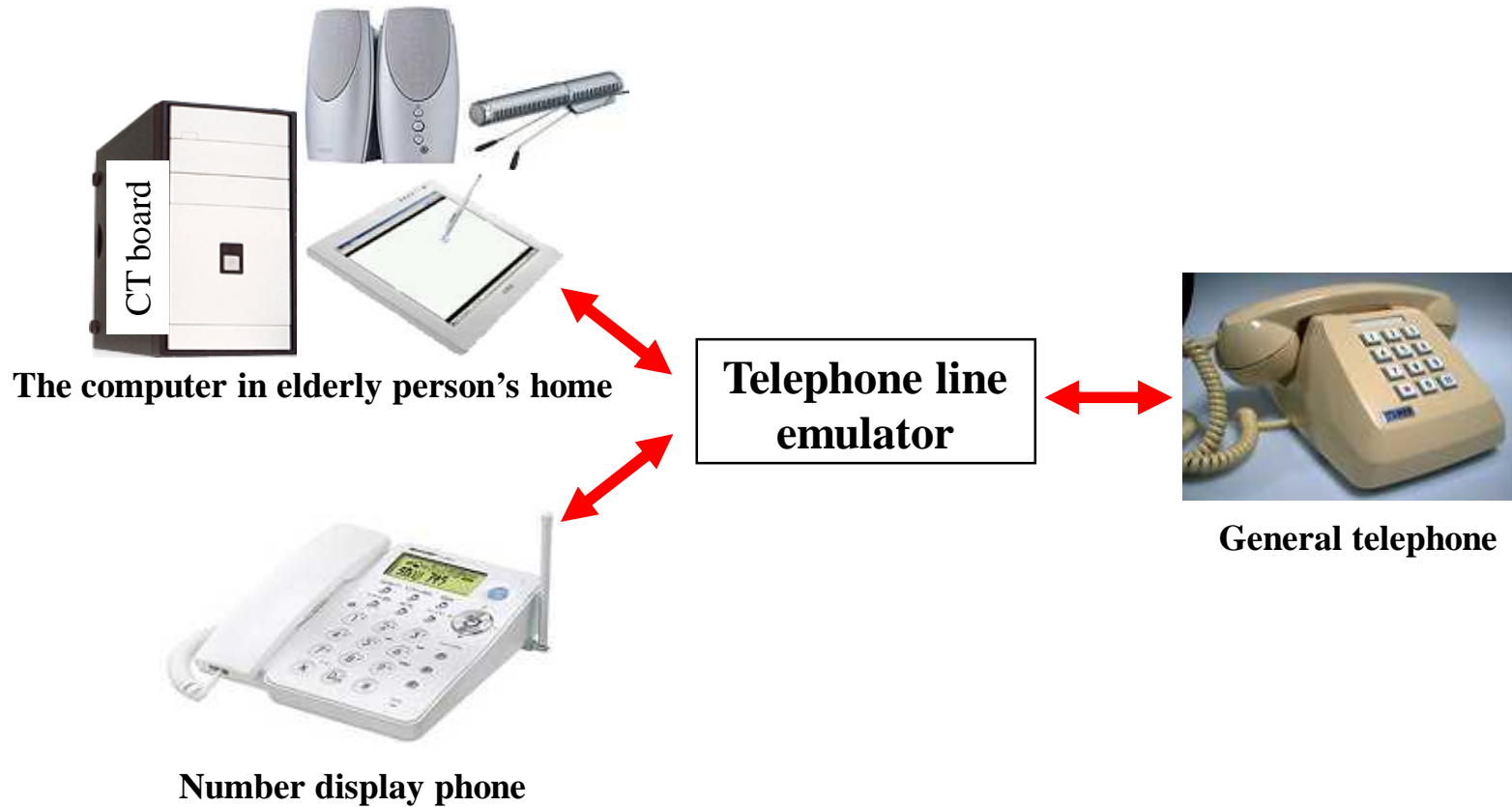


SYSTEM EXPERIMENTAL TRIAL

- **The connection times from the system to the conventional phone and from the number display telephone to the conventional phone were measured in both directions 20 times.**

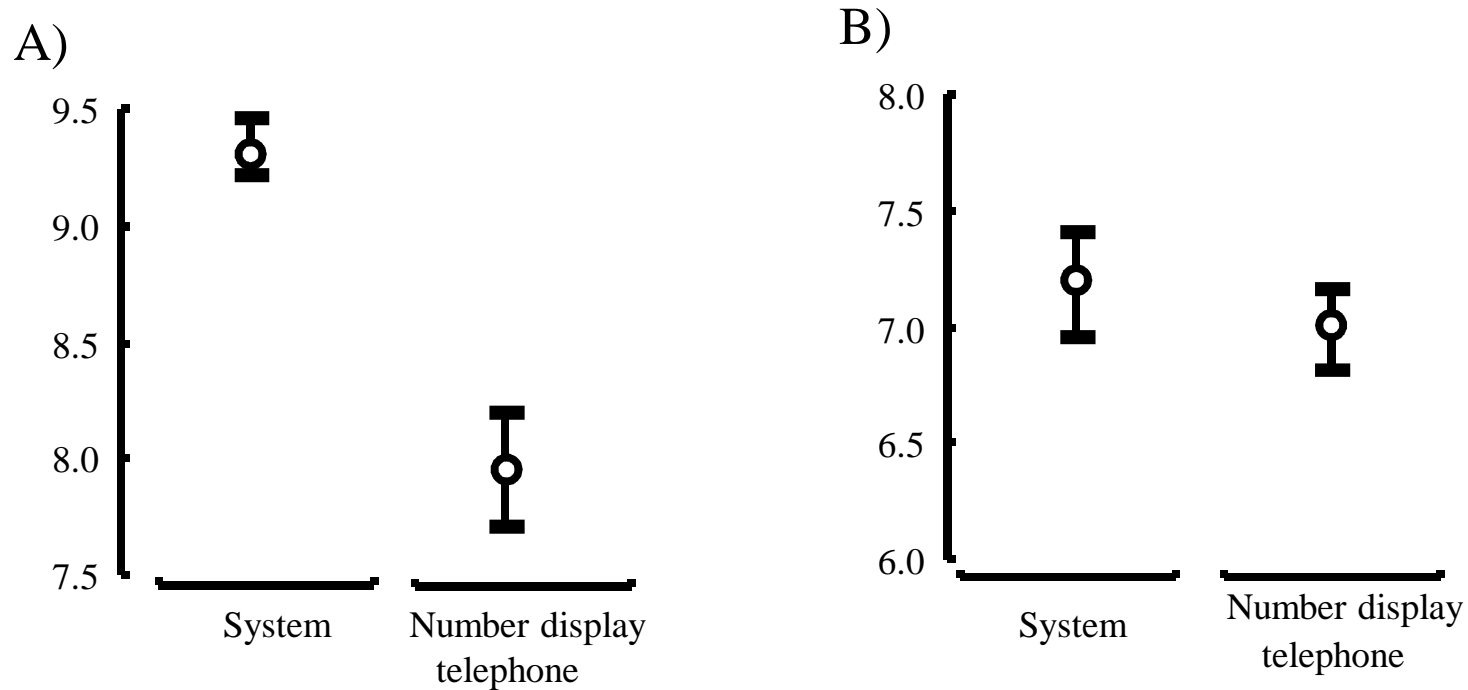


TRIAL EXPERIMENTAL SYSTEM





RESULTS



The connection times from the system to the conventional phone and from number display phone to the conventional phone (plot A). The connection times from the conventional phone to the system and from the conventional phone to the number display phone (plot B).



DISCUSSION

- **The results indicate that the developed system needs a longer connection time than a number display telephone.**
- **The difference causes no problem in the actual use of the system.**



CONCLUSION

- **we developed a communication support system consisting of a conventional computer with a liquid crystal tablet, a computer-telephony interface board, a microphone, a speaker and a telephone line.**
- **Elderly persons can easily operate the system and eliminate the possibility of their calling a wrong number.**