

GUI Design for the Interactive TV Broadcasting.

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Abstract

What is the most important thing to develop the GUI for the digital interactive TV? What factors should be considered for the reasonable and economic GUI design? This study is a research in the GUI design for the digital satellite Interactive Broadcasting which will commence its first service from Dec. 2001 in Korea. This study proposes an optimized Grid for the effective graphic data display on the interactive TV. As a basic research for this, this study investigates the proper font size and font design through the legibility test of the Hangeul (Korean letters) for the type of Hangeul for TV screen and the information navigation design through the information search method on the TV. Unlike the analog TV, the interactive digital TV displays a lot of graphic data on the screen along with various types of texts. The Hangeul font on the digital TV is installed either on the memory in the TV itself or on the memory in the set-top box, and this becomes as a standard Hangeul because it is used as the Hangeul data for all broadcastings. Therefore, an effective verification for this is necessary, and this study verifies it through various kinds of research.

Also, the information search method on the TV differs from that of computer, a grid different from that of computer should be used if a user wants to display letters or graphic information on the TV. For this, this study intends to verify the effective information display method by applying the result of the investigation on the information search on the TV and the previous study.

According to the market analysis research report by Deutsche Bank and British Telecom, the market size of T-commerce will become bigger than that of E-commerce by the year 2004, and about 25% of the TV media will be time-shifted by the year 2004. The report also predicts that the number of the users of interactive media in Europe will surpass that of interactive PC users by the year 2002. The GUI for the interactive TV, which will be the leading media in the next generation, will control the efficiency in information and the sense of beauty of the users. Efficient and esthetic Hangeul font and the effective information design through them will be one of the most precedent issues in the time of the digital interactive TV.

Keywords

GUI Design, TV Graphics, Interactive TV

Protocol Analysis on Usability of Remote Controllers of Household Appliances for Elderly People

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Abstract

The aim of this paper is to find important elements for designing a remote controller for elderly people based upon protocol analysis. The remote controllers with three buttons designed by us can control illumination, air-conditioner and television set. Subjects searched and selected objects and items represented on the small screen of the remote controllers to change illumination level, room temperature and program of television. All operations of the subjects were recorded on video tape recorder that was used to measure the operation time and errors, and to analyze the manner of subjects after the experiment. Results showed that operation time of the elderly was significantly longer than that of the middle aged. The protocol analysis revealed that the elderly had operated without thinking deeply when felt difficult or confuse to use the controllers.

Moreover, the analysis on operations divided into sub-tasks cleared that the elderly were apt to do many errors in toggle operations, the selection of items and the change of numerical values.

Keywords

Usability, Protocol analysis, Elderly people