

Need for assistance of visually and physically disabled and non-disabled persons when using cash dispensers

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Abstract

To what extent do private users need assistance when dealing with a terminal such as a point of information or a point of sale? In a preliminary study, experts (i.e. engineers and developers of an assistance system for terminals) identified characteristics typical of the person, the situation and the technical system (its functionalities and forms of technical assistance) involved in cash dispenser transactions. In a user analysis following the first study the differences between visually impaired persons (VIP), physically disabled persons (PDP) and non-disabled persons (NDP) with regard to their need for assistance and their evaluations of situational factors that might influence these transactions were studied. We also focused on differences in the assistance functions preferred and the forms of technical support needed by these different user groups. Our findings showed that between user group specific differences exist which are related to the visual and physical disabilities that limit accessibility (e.g. wheelchair restricted persons). On the other hand, the different user groups seem to be very similar in their evaluation of situational factors and their preference of different assistance functions and forms of technical support by a mobile system.

Introduction

The two studies were carried as a part of the EMBASSI Research Project granted by the Federal Ministry of Education and Research (BMBF/Fkz. 01IL904I). The "Terminal Group" which is a subdivision of EMBASSI (*electronic and multi-medial service assistance*) will develop an assistance system that makes it possible for all persons to use terminals (i.e. vending machines, electronic information kiosks and cash dispensers) regardless of the user's physical ability. The usage process is influenced by various characteristics. In an initial study we looked for relevant characteristics of the user, the situation and the technical system, focusing on cash dispensers, photo-booths, shopping- and internet terminals. Experts (i.e. developers of assistance systems) were consulted during this process to guarantee accuracy. In a second study we looked for similarities and differences between the disabled and non-disabled user groups. By analysing the users' behaviour and difficulties when interacting with terminal systems, we tried to derive guidelines for the development and design of terminal assistance systems.