

Portable data assistant for emergency units

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Abstract

In this paper a scenario-based, industrial design project is described which had as goal to design portable electronic devices for a specific group of mobile workers. Two computing devices are described that aid ambulance emergency medical workers and policemen. Questionnaires and personal interviews have been used to gather information about use of current systems, operations and data flow. This research formed the basis for a conceptual design that aims to create end-to-end systems and increases efficiency in tasks of mobile emergency workers.

Introduction

New computing potential and miniaturised electronic components can be used for many mobile applications. To narrow the scope of the project and base it on real situations, the scope is narrowed to two professions: ambulance medical workers and policemen. Both types of emergency units must perform many different tasks in complex environments, including managing the flow of information. Information about patients, victims, or suspects is needed in real-time. For this reason Emergency Call Centres are often congested with high demand for information and have to intermediate between Emergency Units and central databases. Writing reports is a time consuming task that is often done long after the incident, and often details get lost while filing. Portable data assistants could help these workers to access and share information, collect and store data, and create local area networks for more efficient collaborative work.

To design the new system, one has to go beyond technical aspects and focus instead on how to create services rather than physical products. In the scenarios only existing technologies were used.

Workshop

To develop a better understanding of the application fields and to collect specific information, a workshop was organised and the official procedure manuals and the equipment used were evaluated. Two groups of design students at the Politecnico di Milano investigated and created typical scenarios of these emergency situations.

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