

Acceptance of mobile phone text messages as a tool for warning the population

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Abstract

In an emergency situation the community is alarmed with sirens. In The Netherlands many complaints are expressed about the audibility of this siren. This mainly concerns the audibility indoors and in big cities with a lot of background noise. Local authorities of the city of Vlaardingen, regional fire services and a text message provider have studied the use of mobile phone text messages (in The Netherlands this is called SMS, Short Message Service) as an addition to the siren. The purpose of this SMS service was to improve information and instructions to people in case of an emergency. It was determined whether this service could reach more people than the current siren and whether the community, auditory impaired, medical and teaching personnel and shopkeepers, see the service as a useful addition to the siren. The SMS service is an effective and efficient addition to the current siren. This study has shown that the SMS service is technically feasible. The range of SMS is large; the number of people that are reached can be substantially increased with use of SMS. Besides this it is possible to send differentiated messages to different target groups. SMS messages can be heard indoors as well as outdoors and can substantially enlarge the range of warning.

Introduction

Warning a community in an emergency situation does not always function properly. Recent incidents in the Netherlands, such as an incident in 2003 in Vlaardingen, have shown this imperfection (Jansen, 2003; Temme, 2003). Vlaardingen is a city in The Netherlands of 74.000 inhabitants near the Rotterdam harbour. In a period of a few months, the inhabitants of Vlaardingen had to be warned twice; once because of a fire in a fishing vessel, the other time because of a large chemical spill. Evaluation of the incidents shows that people do not know what to do if the siren sounds. There are also problems in communicating what is happening and what should be done during an emergency situation (Temme, 2003). Furthermore, a lot of people have complained about the audibility of the siren (Vos, 2003). This mainly concerns the audibility of the siren indoors and in big cities with a lot of background noise.

In the Netherlands the siren is tested every first Monday of the month at noon. In all other conditions if the siren sounds people have to do three things. 1. Go indoors or

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