AmI for Crisis management

A workshop in conjunction with

AMI2012

(International Joint Conference on Ambient Intelligence)

Pisa, Italy, November 13

Second call (extended deadline): 23 September 2012

http://research.idi.ntnu.no/ami4cm/

Table of Contents

Preface: Applying AmI technologies to crisis management

Workshop at AmI2012

Monica Divitini[1], Babak Farshchian[2], Jacqueline Floch[2], Ragnhild Halvorsrud[2], Simone Mora[1], Michael Stiso[2]

[1] Dept. of Information and Computer Science, NTNU, Trondheim, Norway
{divitini, simonem}@idi.ntnu.no
[2] SINTEF ICT, Oslo | Trondheim, Norway
{Babak.Farshchian, Jacqueline.Floch, Ragnhild. Halvorsrud, Michael.Stiso}@sintef.no

1 Introduction

Natural and man-made disasters are on the rise, with sources reporting on a five-fold increase of natural disasters in the last 35 years[1]. In 2010, DG ECHO (the EU Directorate for Humanitarian Aid and Civil Protection) reported a EU expenditure of €1115 million to respond to new or protracted crises, and 373 natural disasters killing around 300000 people[2].

ICT solutions proposed for supporting crisis management vary considerably in scope and complexity, ranging from organizational workflow systems up to platforms like Ushahidi (http://ushahidi.com/) for crowd sourcing and the usage of Twitter (twitter.com) to share information among the population.

Because of their pervasiveness and ease of use, Ambient Intelligence (AmI) solutions hold a great potential to support crisis management in an efficient and effective way, thereby contributing to saving lives, reducing risks for rescue teams and lowering costs. Several example solutions are described in the research literature, such as monitoring of environmental data under hard conditions, impact of information presentation on decision-making, rescuer teams management supported with physiological data monitoring, situational awareness support for rapid crowd evacuation.

This workshop has been organized to better understand the strengths of the AmI paradigm and challenges to its application. It offered to researchers and practitioners a

[1] http://www.euractiv.com/foreign-affairs/europe-beef-response-natural-disasters-news-499193
[2] EU DG ECHO, Annual Report 2010, available at http://ec.europa.eu/echo/files/media/publications/annual_report/annual_report_2010.pdf

space to reflect on where these increasingly pervasive and ambient technologies are going, what they will make possible, and how they will be used. Focus was on challenges connected to the use of AmI in crisis management as well as the opportunities to use AmI to conceive innovative solutions, e.g. empowering not only traditional actors, but also the population at large; supporting not only management, but also promoting continuous learning and training. Relevant topics included platforms issues, user interaction in challenging environments, methodologies and applications.

This volume collects the 8 papers that were presented at the workshop, addressing these topics from different angles. Together they provide an up to date overview of the state of the art in the field.

2 Organization

The workshop was jointly organized by three EU IST research projects that investigate from different perspectives ICT support for crisis management:

- BRIDGE (http://www.bridgeproject.eu) aims at building a system to support technical and social interoperability in large-scale emergency management.
- MIRROR (http://www.mirror-project.eu/) aims at developing ICT tools for supporting workplace reflection and learning. Training of crisis workers is a core application domain of the project.
- societies (http://www.ict-societies.eu/) aims at extending the application of pervasive computing beyond the individual to communities of users. Disaster management is chosen as one area for the evaluation of the proposed solutions.

More information about the workshop is available at the workshop website: http://ami4cm.wordpress.com/