ISCRAM 2018

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POSTER: beAWARE: Enhancing Decision Support and Management Services in Extreme Weather Climate Events

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"Visualizing Crisis"

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INTRODUCTION TO THE POSTER

In every disaster and crisis, incident time is the enemy, and getting accurate information about the scope, extent, and impact of the disaster is critical to creating and orchestrating an effective disaster response and recovery effort. The main goal of beAWARE framework is to provide support in all the phases of an emergency incident. More specifically, we propose an integrated solution to support forecasting, early warnings, transmission and routing of the

emergency data, aggregated analysis of multimodal data and management the coordination between the first responders and the authorities.
beAWARE is tackling ambitious objectives in order to address the challenge of rapid response during a crisis. beAWARE deals with the whole lifecycle of emergency call management from mobile devices, where issues such as data analysis, forwarding to first responders have been addressed by the partners and efficient solutions have been proposed. This paper presents the framework of a novel crisis management system. Future work includes realization of the components, development of an integrated platform and testing with realistic pilots.

POSTER SUBJECT

One of the main issues and problems during a climate crisis is the management of the end users forces. How can we efficiently have the proper forces to the right place in order to face a disaster? Although several solutions have been tested, many issues and problems are unsolved. These issues concern all the main participants of an emergency call: the users, the Public Safety Answering Points (PSAPs) and the first responders.
Instead of focusing on a specific part of the crisis management problem (e.g. information routing), beAWARE proposes a holistic approach (Fig. 1) to the realization of crisis management framework that it will support all the phases in an emergency call sequence. The overall objective of beAWARE is to provide an integrated solution for new decision support services based on aggregated analysis of multimodal data and previous crisis management records. beAWARE will address the needs of the main sectors of the security emergency procedure, namely first responder and PSAP. Moreover, beAWARE aims to bring first responders, PSAP centres and forecast services to collaborate together in order to explore new ways of working and delivering more effective outcomes. The beAWARE will perform a research study on the requirements for emergency services given the current digital landscape and the special needs of the people in danger during a crisis. These requirements will be the base for all the forthcoming implementations and methods.

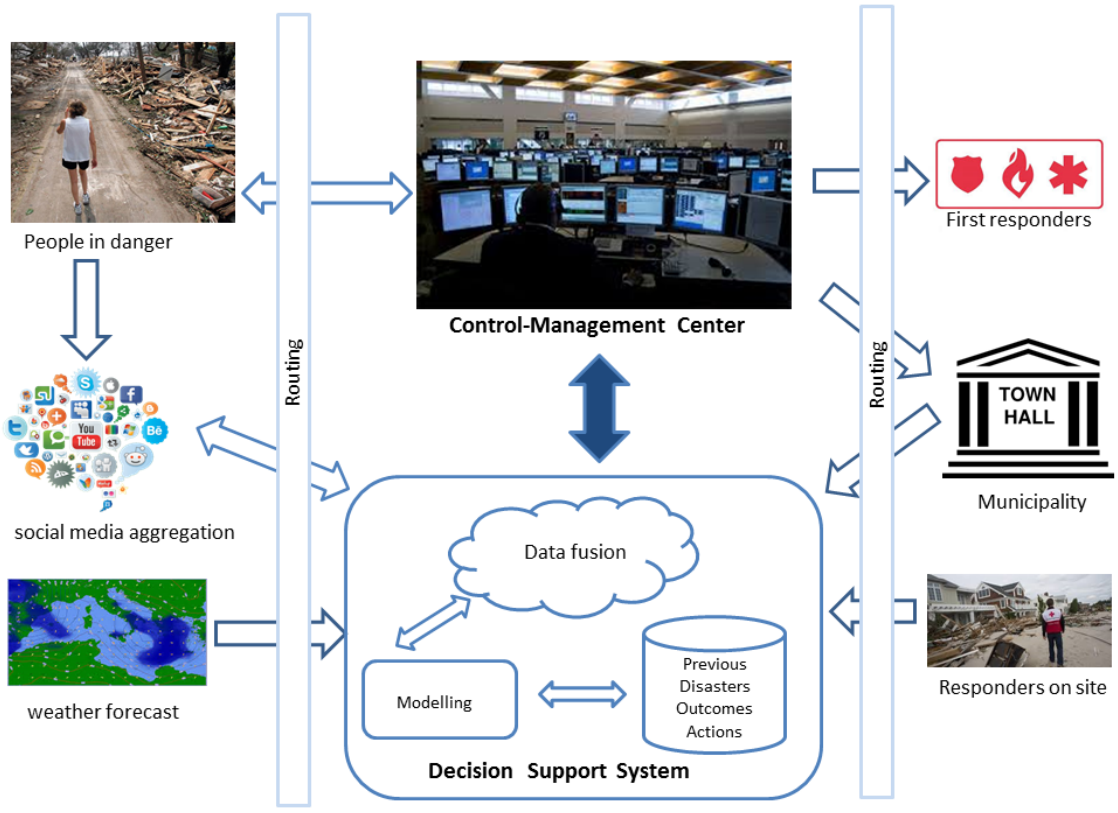

Figure 1. beAWARE approach for integrating the disabled back into workforce
The people in danger will be able to make an emergency call using specific applications that will allow the transfer of multimodal information. The emergency call will be transferred through the control management centre. Moreover data from the weather forecast and social media aggregation will provide as much of the needed information to the PSAP centre as possible. beAWARE decision support system will combine all the above data sources and compare them with previous crisis management situations in order to provide PSAP centre with the proper guidelines and advices. Finally, the PSAP centre will be able to organise the first responder and inform all the local authorities.

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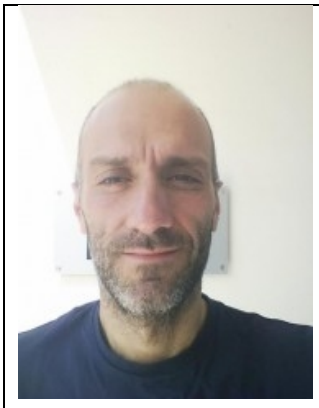
POSTER PRESENTER



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Dr. Anastasios Karakostas (m) received the Degree in Computer Science and the PhD degree in Computer Science Aristotle University of Thessaloniki Greece. He is a Researcher with ITI-CERTH. Currently, he is scientific manager of the H2020 DRS project beAWARE. beAWARE proposes an integrated solution to support forecasting, early warnings, transmission and routing of the emergency data, aggregated analysis of multimodal data and

	management the coordination between the first responders and the authorities. He has also participated in numerous European and national research projects and is the author of more than 60 publications in refereed journals and international conference. His research interests include decision support systems, semantic multimedia analysis, ontologies and semantic information modeling and reasoning. He has served as a reviewer in international Journals such as Computers and Education, IEEE Transactions on Learning Technologies and as Technical program committee in well reputed conferences and workshops such as CSCL, IEEE ICALT. He has been one of the organizers of the IEEE International Conference on Intelligent Networking and Collaborative systems (INCoS 2010) and 2018 IEEE Image, Video, and Multidimensional Signal Processing (IVMSP) Workshop. Anastasios Karakostas will be present at the ISCRAM conference and the ICMT workshop.

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