

Design and Demonstration of a Global Alerting System for Disaster Management

Project Idea for 3rd Security Call - Activity 10.4 (Restoring security and safety in case of crisis)

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SEC-2010.4.2-1 Interoperability of data, systems, tools and equipment (1/2)

➤ Description

The task is to address the needs for improved systems, tools and equipment for "the command and control" function of emergency management organisations and their harmonisation at European level. The goal is to ensure an effective management of large civil crises and complex emergencies (either man-made or natural) by strengthening command and control capabilities throughout the phases of the crisis management process (prevention, preparedness, response and recovery, including simulation and training). Participating organisations and nations commonly have different mandates, goals, means and methods of handling crisis, which makes cooperation difficult. Technology is a critical tool for improving interoperability, but it is not the sole driver of an optimal solution, as cooperation requires harmonised rules, procedures and processes. Successful implementation of data, systems, tools and equipment technology should be supported by strong leadership and is highly dependent on effective collaboration and training among participating actors and countries. Therefore, there is a need to create and demonstrate the development of new and integration of existing solutions into a common set of data, tools, systems and equipment that are interoperable in order to support: a) access to and distribution of relevant information (including different data formats, sources, data transformation etc); b) early warning and alert infrastructure; c) response planning and management, based on shared operational picture and situational awareness between first responders; d) coordinated asset localisation and management, during large emergencies across organisational and geographic boundaries. The proposed solution should be set up and tested in a real environment e.g. as a proof of concept. The expected outcome would be interoperable data, tools, systems and equipment that help crisis management structures in complex emergencies and crises across organisations and countries and cope with their heterogeneity.



SEC-2010.4.2-1 Interoperability of data, systems, tools and equipment (2/2)

➤ Expected impact


Actions in this area will provide the adapted data, tools, systems and equipments technology basis and relevant knowledge for security capabilities needed in this (and also other) mission(s), as required by integrating industry and (private and/or public) end users. Significant improvements will be achieved with respect to performance, reliability, speed and cost. Actions will reflect the mutual dependency of technology, organisational dynamics, human factors, societal issues as well as related legal aspects. It will also cover important issues such as harmonisation and standardisation, potential classification requirements, international co-operation needs, communication strategies etc.

SEC-2010.4.3-1 Alert and communication, including the use of media, towards the population in crises management (1/2)

➤ Description

The task is to develop innovative methodologies and technological solutions to manage alert and communication in crises management. This includes:

- Evaluation and re-assessment of alert procedures and processes in order to cope with new, complex and recurrent crises.*
- Screening of the information structure (content, explaining...) between all kind of actors taking into account intercultural factors, communication toward the population and consistency with response and rescue of on-going operation, recurrent crisis communication management and the familiarisation of the public (false alert problematic).*
- Analysis of the role of mass media (in particular new ones) during crises and the best practices in their use in order to ensure effective and ethical crisis management while respecting the freedom of the press.*
- Technological solutions, e.g. agent-based simulation platforms, to perform what-if analyses of the efficiency of communication plans, to prevent communication pitfalls and support better information exchange between authorities, crisis management stakeholders and citizens*



SEC-2010.4.3-1 Alert and communication, including the use of media, towards the population in crises management (2/2)

➤ Expected impact

Efficient communication about possible or actual emergencies can be fundamental to prevent them. Contemporary alert, communication concepts, procedures and technological simulations for effective crisis management will improve the planning and the response during and after an incident.



Global Alerting Concept

➤ Main Idea

- Integration of several existing technologies (terrestrial and satellite) to reach the maximum number of potentially affected citizens despite disruptions due to natural or manmade disaster

➤ Project High-Level Objectives

- Design of such global alerting end-to-end system using a smart combination of existing terrestrial and satellite technologies (including positioning information)
- End-to-end Validation



Relevance wrt to Open Topics in Security Call 3

➤ SEC-2010.4.2-1

- Development and demonstration of an early warning and alert infrastructure with means for interoperation between
- With features for coordination at European Level (and more)
- Ensuring effective management of large civil crises and complex emergencies in early phases of the crisis management process
- Ensuring interoperability between technologies... even integrating them
- Inline with the expected impact for early phases of crisis management process, adding human factors to the concept

➤ SEC-2010.4.3-1

- 100% inline with topic description and expected impact
- alert procedures and human factors shall be added

Summary

Design and Demonstration of a Global Alerting System for Disaster Management

- Tool
 - Sub-Project within a large Integration Project in Topic SEC-2010.4.2-1
 - or
 - Stand-alone Capability Project in Topic SEC-2010.4.3-1
- Tentative Funding
 - 3.5 M€
- Project Duration
 - 2-3 years
- Partners
 - max. 10 (among them at least 1 SME)
 - **1-2 End Users (Civil Protections)**
 - **1-2 Service Providers**
 - **3-5 Operators (for the different technologies)**
 - **1 University**
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