CRISIS

Critical Incident management training System using an Interactive Simulation environment

**Funding:** European (7th RTD Framework Programme)

**Duration:** May 2010 - Oct 2013

**Status:** Complete with results

**Total project cost:** €4,590,310

**EU contribution:** €3,495,612

CORDIS RCN: 94447

**Objectives:**

CRISIS is a 42-month project to research and develop an advanced critical incident management, interactive simulation environment for training security and emergency personnel in airport operational security. The prototype to be delivered will be distributed, scalable, collaborative interactive simulation environment that will enable training of crisis managers and their staff at airports, at different levels of the organization.

The prototype system will avoid the simulation paradigm where the trainee selects one of a number of pre-set drill-oriented choices at a predictable decision point. Instead, using an interactive games paradigm, the trainees will be able to practice situation and cue assessment, problem diagnosis, decision making and action coordination, in real-time in response to a critical incident. Currently, one key problem hindering the maintenance of a high level of preparedness in operational security organizations at airports is the long 2-year wait between major exercises.

In CRISIS, we will enable organizations and individuals to train-on-demand, and as frequently as needed due to the innovations, such as end-user re-configurability of training scenarios. This will allow staff to train individually 'playing' against the system, as a team within an organization, across organizations, and at different levels of the command hierarchy. CRISIS will adopt a 3-stage development strategy, integrating, testing and iteratively evaluating user performance at each step of the way.

The CRISIS consortium brings together a powerful combination of expertise in User modeling and requirements engineering, Games and simulation, Software engineering, distributed systems, and security, Decision sciences and technology, User performance evaluation, to deliver capability for training and improving operational security preparedness at airports.

**Parent Programmes:**

FP7-SECURITY - Security

**Institute type:** Public institution

**Institute name:** European Commission

**Funding type:** Public (EU)

**Lead Organisation:**

Middlesex University Higher Education Corporation

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**Technologies:**
Key Results:

Enhancing airport security training

A crisis situation requires on-scene personnel and various emergency teams to work together under difficult and unique circumstances. An EU initiative designed a state-of-the-art simulation and gaming technology to support managers and airport staff in better preparing for crises.

Airport security has become one of the biggest concerns of the travel industry. The EU-funded project ‘Critical incident management training system using an interactive simulation environment’ (CRISIS) worked on a cutting-edge critical incident management solution to train security and emergency personnel in airports.

Project members examined how existing training procedures and systems can be modified to benefit from the new interactive training environment and to deal with identified training gaps. It developed a prototype of an interactive simulation environment that trains crisis managers and relevant staff at different levels of the organisation, avoiding predictable simulation exercises with pre-set drill-oriented choices.

The project created a train-on-demand security solution by developing software to simulate complex group behaviours in exercise scenarios and integrating related technologies to allow for robust functionality. It conducted field studies in collaboration with police officers and firefighters, as well as live exercises in Iceland, Portugal and the United Kingdom.

Work also involved research into advanced decision technologies, creating sophisticated exercise templates and enabling exercise planners to configure sophisticated scenarios and situations for training.

CRISIS members developed reconfigurable tools to accommodate particular situations and different environments, and also to scale up or down for small and large airport scenarios.

The system will be able to automatically update the instructor on trainee performance in real-time. It will also feature a mobile or tablet application that can be used by instructors to monitor performance.

Extensive analysis and testing were carried out to assess the system’s usability and training effectiveness.

Thanks to CRISIS, first responders and crisis managers from around the world can take part in crisis management simulation training to enhance their readiness and preparedness skills. Airports and travellers will be better protected as a result.

Documents:
- periodic Report Summary.pdf
- Final Report Summary - CRISIS (CRitical Incident management training System using an Interactive Simulation environment)

STRIA Roadmaps: Network and traffic management systems
Transport mode: Air transport
Transport sectors: Passenger transport
Transport policies: Safety/Security
Geo-spatial type: Infrastructure Node