3DSafeguard – Global Situational Awareness in Rescue, Calamity and Inspection Operations

3DSafeguard proposes a solution offering global situational awareness for both individual actors carrying out the operation and for the coordinating commanders. This situational awareness is enabled by integrated data, control and communication workflow between the abovementioned parties.

Technological innovations

3DSafeguard proposes a solution enabling the situational awareness by introducing an integrated operation workflow, which deploys the following technological innovations:

- multi-modal heat, depth, toxicity, acoustic and video sensors mounted on acting officers or UAVs,
- sensor data fusion, resulting in reconstructed 3D map of unknown premises as actors propagate though and in tracking of the actor positions;
- situational analysis and decision support providing automated guidance and alerts to the officers,
- multi-layered visualization of the sensors, analysis and 3D-map data onto coordinator displays and onto HMD displays of acting officers.

ITEA

3DSafeguard is a project supported by ITEA.

ITEA is the EUREKA Cluster programme supporting innovative, industry-driven, pre-competitive R&D projects in the area of Software-intensive Systems & Services (SiSS). SiSS are a key driver of innovation in Europe's most competitive industries, such as automotive, communications, healthcare and aerospace.

Why 3DSafeguard?

At present, calamities such as fires in buildings and bomb threats in stations/airports occur frequently. During such large incidents, organisations like fire departments, police, hospitals etc. work together, but the information about the actual actions is limited and information sharing between organisations is restricted. Currently, first responders coordination and decision making during the rescue, firefighting or police operations are performed via radio/GSM channels with some support of video streaming. In unknown premises, officers have no global situational awareness on operation status, which reduces coordination efficiency and increases decision-making mistakes.

The solution will provide global situational awareness to both coordinators and actors, thereby increasing the efficiency of coordination, reducing mistakes in decision making and diminishing risks of unexpected situations to appear.

Future deployments of 3DSafeguard

The project will result in faster operation progress, the decrease of human casualties and financial losses and, the most important, saved human lives in calamity situations. The project is supported by 14 end-users of various nature: public authorities; fire, police and rescue departments; public safety associations, and private security companies operating worldwide.

PARTNERS

A multifaceted project like 3DSafeguard needs a well-balanced consortium. In the 3DSafeguard project we have partners from 10 companies and three different countries; Romania, Spain and Turkey.

The consortium covers all the technical competencies to implement the proposal and also contains partners that ensure that the targeted market impact will be generated. The consortium is well-balanced with respect to industry and knowledge institutes.

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