

SITUATIONAL AWARENESS & DECISION SUPPORT

In disaster and crisis operations as well as operations involving unknown hazardous substances, emergency forces are often exposed to great and unpredictable dangers and risks. A new sensor system considerably improves the current level of information and thus the basis for operational planning.

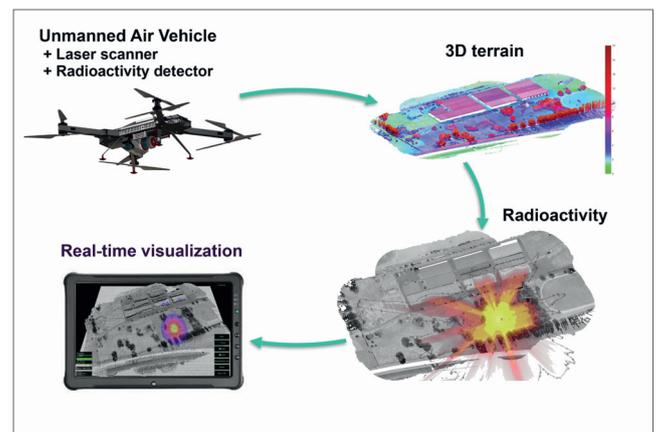
REAL-TIME INFORMATION FOR FIRST RESPONDERS

The within the project SecueRescue developed new sensor system tackles the needs to improve visibility of risks in disaster areas, to allow fast and efficient localization of dangerous zones and to increase safety for action forces and victims. As an essential component, **3D terrain data** of a high-quality laser scanner or images of a novel **3D 360 ° panorama camera** (TUCO-3D) are fused with data from hazard sensors (gas, radioactivity, ...).

The laser scanner system is used in combination with a gamma probe from an unmanned aerial vehicle (UAV). The TUCO-3D panorama camera and a gas sensor are mounted on a mobile robot.

In potential hazardous situations, such as fire, escape of hazardous substances or release of radioactivity, an unmanned aerial vehicle (outdoor) or a robot (indoor), are able to explore the terrain **semiautonomously and without endangering human life**, in order to generate an interactive map and a visualization on a tablet in a very short time frame.

Further information: <https://www.ait.ac.at/securescue/>



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