



SALVEREMO, an automatic system for the search and rescue in the wilderness and mountain areas

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SALVEREMO project aims at designing and prototyping an innovative system for searching and rescuing individuals (especially hikers and mountaineers) who got lost or in peril in wilderness or mountain areas. It makes use of Remotely Piloted Aircraft System (RPAS) equipped with a sensor suite specifically selected according to the requirements identified involving alpine rescuers and government officials.

The peculiarity of the proposed solution is the exploitation and integration of the special skill and expertise coming from different competence fields. It will dramatically decrease the searching time in the wilderness and remote areas off the beaten tracks, providing rescuers and operators with a decision support system increasing successful results and reducing rescue missions costs.

The system benefits from the adoption of a scaled-down Base Transceiver Station (BTS) embarked in the payload sensor suite of a small RPAS that can be carried in a back pack of rescuers. A Software Defined Radio (SDR) board implementing the BTS protocol stack has been integrated in a complex sensor suite made up of open processing boards and camera devices. Moreover computer vision (CV) algorithms for real time pattern detection and image enhancements have been investigated for assisting the rescuers during the searching operations. An easy-to-use ground station application has been developed for speeding up the overall mission accomplishment.

Aknowledgement

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