Synthetic aperture radar (SAR) with transponder aboard UAV

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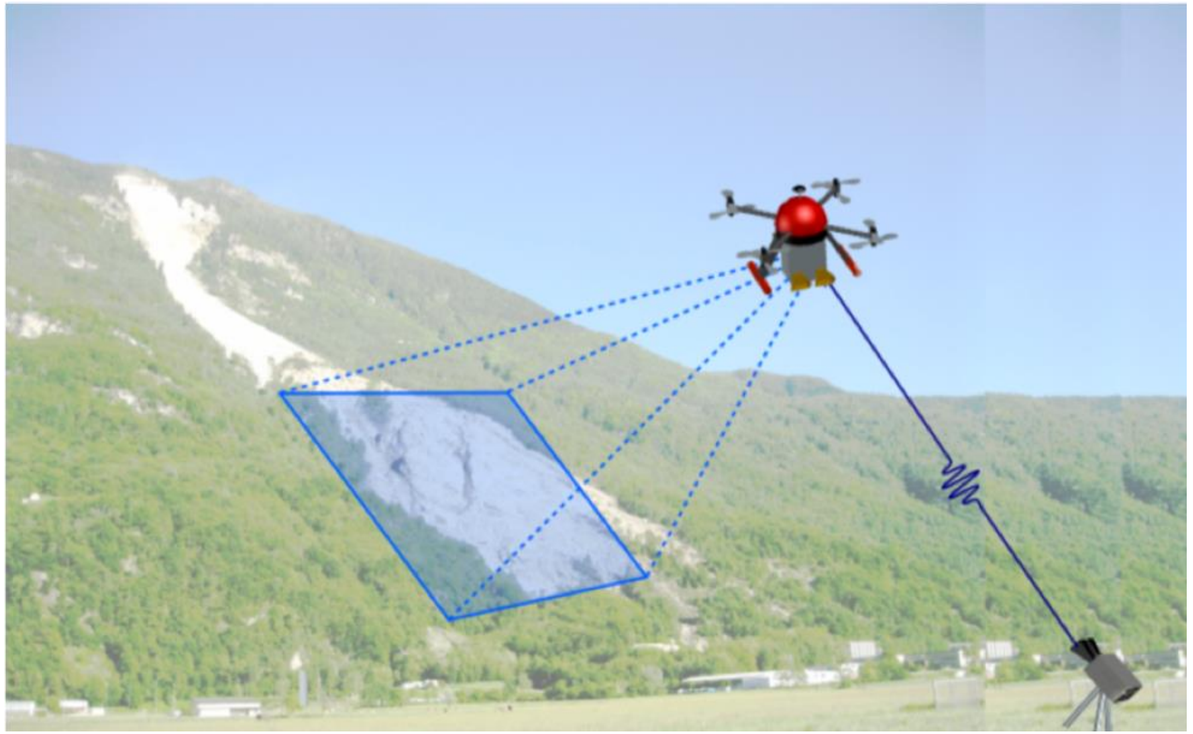
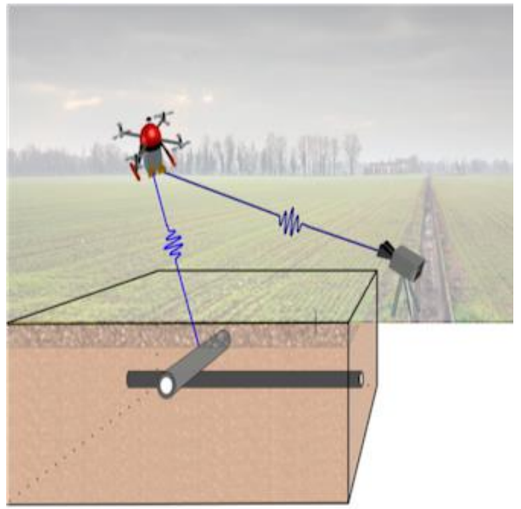
Invention

The patented invention is a ground-based synthetic aperture radar (GBSAR) that makes use of drones (UAV) to realize the opening synthesis without weighing the aerial vehicles used.

The patented radar is ground-based but it exploits the transponders mounted on one or more drones to realize the synthetic opening, so it does not require the movement of the structure on the ground. The main advantage of the solution is the use of very small UAVs with extremely reduced payload.

Drawings
& pictures





Industrial applications

The technology allows the development of a radar system that uses very small UAVs even in contexts where their use, as well as that of SAR radars, presents significant risks of instrument loss.

The main industrial applications are to be identified in the civil, industrial and military sectors that require the remote detection of natural or human artifacts, as well as the observation of landslides, quarries and mines, architectural structures or the execution of underground investigations.

Possible developments

The patent is available under an exclusive/non-exclusive license or sale. The license are available for the entire remaining term of the patent titles.

The research group is available for new research activities in collaboration and on behalf of third parties, technical insights, scientific advice, also aimed at raising the TRL of technology.

The TRL of the invention is 6.

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