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3D Stereoscopic Measurements from AR Drone Squadron

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Abstract : A cost-efficient alternative is proposed to the use of a single drone carrying multiple cameras in order to take stereoscopic images and videos during its flight. Such drone has to be particularly large enough to take off with its equipment, and stable enough in order to make valid measurements. Corresponding performance for a single aircraft usually comes with a large cost. Proposed solution consists in using multiple smaller and cheaper aircrafts carrying one camera each instead of a single expensive one. To give a proof of concept, AR drones, quad-rotor UAVs from Parrot Inc., are experimentally used.

Keywords : drone squadron, flight control, rotorcraft, Unmanned Aerial Vehicle (UAV), AR drone, stereoscopic vision
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