

Tech issues cause most drone accidents, study finds

August 23 2016

World-first research has found technical problems rather than operator errors are behind the majority of drone accidents, leading to a call for further safeguards for the industry.

Researchers Dr Graham Wild and Dr Glenn Baxter from RMIT University's School of Engineering, along with John Murray from Edith Cowan University, completed the first examination of more than 150 reported civil incidents around the world involving [drones](#), or Remotely Piloted Aircraft Systems (RPAS).

The study showed technical problems were the cause of 64 per cent of the incidents, which occurred between 2006 and 2016.

Wild said their findings illustrated the need for further airworthiness requirements for RPAS vehicles, as well as the mandatory reporting of all accidents or incidents.

"Understanding what happens to drones, even those that don't cause damage to people or property, is essential to improve safety," he said.

The research came about after an incident earlier this year involving a drone and a British Airways Airbus A320 at Heathrow Airport.

Recently published in the journal *Aerospace*, the study found that in most cases, broken communications links between the pilot and the RPAS were the cause of the incident, leading the researchers to call for

the introduction of commercial aircraft-type regulations to govern the communications systems.

"Large transport category aircraft, such as those from a Boeing or Airbus, are required to have triple redundant systems for their communications," Wild said.

"But drones don't and some of the improvements that have reduced the risks in those aircraft could also be used to improve the safety of drones."

Wild said more robust communications systems, even on cheaper RPAS, could help prevent accidents.

Part of the problem with current regulations was related to the large difference in size between those drones that required licences and those that didn't, he said.

Wild said drones weighing less than 25kg did not require any airworthiness certificate, just licences for the pilot, despite the potential damage that could be caused if they failed while flying in a built-up area.

"Drones are being used for a wide range of tasks now and there are a lot of day-to-day activities that people want to use them for - delivering pizzas and packages, taking photos, geosurveying, firefighting, and search and rescue," he said.

"It's essential that our safety regulations keep up with this rapidly-growing industry."

Provided by RMIT University

Citation: Tech issues cause most drone accidents, study finds (2016, August 23) retrieved 17 April 2024 from <https://phys.org/news/2016-08-tech-issues-drone-accidents.html>

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