Feature story

Boeing Australia successfully flight tests latest AI technology

September 8, 2020

Boeing Australia has made significant advances in the nation's trusted autonomy space, using artificial intelligence (AI) to 'teach' an unmanned aircraft to detect, decide and act during a mission.

Partnering with the Trusted Autonomous Systems Defence Collaborative Research Centre (DCRC), the successful flight test mission was part of a year-long project to further unmanned technologies.

"We've been developing machine learning techniques in the lab environment with multiple unmanned aircraft," said Emily Hughes, director of Boeing Phantom Works International.

"We've effectively taught the unmanned systems to behave and learn using simulations, so they can detect a target in the real world, and then make a decision to act or react to the environment."

This technology is particularly critical for Intelligence, Surveillance and Reconnaissance missions.

"What we saw during the flight tests was the aircraft's cognitive ability to autonomously detect and classify targets; plan a route on-board the unmanned system; then dynamically coordinate with manned and unmanned platforms to support mission execution," said Hughes.

The capability aims to address the Australia Defence Force's need for rapid response, tactical route execution, along with improved location and identification capabilities in congested and contested environments.

"What's particularly critical for this project is the unmanned systems ability to achieve these objectives in missions where conditions are degraded or in a denied environment," said Professor Jason Scholz, chief executive officer of the DCRC for Trusted Autonomous Systems.

"Projects, such as the one we've pursued with Boeing, continues to grow our knowledge and understanding of artificial intelligence, and furthers the Australian Government's advancement in trusted autonomy."

This project, via TASDCRC, received funding support from the Australian and Queensland Governments.


We've been testing autonomous behaviours
0:00 / 0:33