UAVForge reveals challenge of developing perch-and-stare UAV

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UAVForge concluded recently with nine finalist teams demonstrating air vehicles in a fly-off event at Ft. Stewart, Ga. Credit: DARPA

DARPA's UAVForge, a crowdsourcing competition to design, build and manufacture an advanced small unmanned air vehicle (UAV), set out to determine if a loosely-connected community of UAV enthusiasts could develop a militarily relevant back-pack portable UAV with specific capabilities. By using a crowdsourcing design approach, the effort sought to inspire innovation and creative thought by lowering barriers to entry and increasing the number and diversity of contributors.

More than 140 teams and 3,500 individuals from 153 countries and territories participated on UAVForge.net—the collaboration portal that hosted the year-long competition. UAVForge concluded recently with

nine finalist teams demonstrating air vehicles in a fly-off event at Ft. Stewart, Ga. The fly-off scenario, conducted on a training site, was a simulated military perch-and-stare reconnaissance mission, requiring vertical take-off, navigation to an area beyond the line of sight from the take-off location, landing on a structure and capturing video, and then returning to the starting point. While some teams were able to reach the observation area, none were able to land on a structure and complete the mission.

Persistent, beyond-line-of-sight, soldier-portable perch and stare intelligence, surveillance and reconnaissance (ISR) is a significant mission area of interest that shows promising capability, but hurdles of asset cost and complexity of use must be overcome.

"The teams brought creativity and enthusiasm to the competition," said Jim McCormick, DARPA program manager. "The competition was more constructive than you might expect; there were many examples of teams helping each other."

Since no team completed the fly-off event, the $100,000 prize will not be awarded, and a design will not be manufactured for further testing in a military exercise as originally envisaged.

  More information: For more information on the fly-off see www.uavforge.net

Provided by DARPA