Student Teams Fly High at 7th Annual MAV Student Challenge

By Joseph Gillman & the Unmanned VTOL Committee

On Monday morning, May 13, six teams met to test their skills at the 7th Annual Micro Air Vehicle (MAV) Student Challenge at Forum 75 in Philadelphia, Pennsylvania. This year the MAV competition was held off-site from the Forum, at the University of Pennsylvania. One team from both Penn State University and Drexel University, along with two teams each from the University of Maryland and Vaughn College of Aeronautics & Technology, were selected to compete in this year's flyoff.

The Unmanned VTOL Committee has hosted the challenge at the VFS Forum every year since the first MAV competition in 2013. The event invites students from all over the world to compete with their peers to accomplish challenging tasks using autonomous and unmanned VTOL technology. Each year, students choose to design, build and fly either a remote-controlled air vehicle or a fully autonomous aircraft to complete the prescribed mission.

This year's challenge centered on a package pickup and delivery set in a key moment of the Revolutionary War, General George Washington's famous crossing of the Delaware River, which took place just north of Philadelphia on Christmas night 1776. The electric-powered MAVs task was to deliver a bag filled with pamphlets, fly to a second location to pick up another bag filled with supplies and return it to the original starting point. Meanwhile, the air vehicles also had to navigate a complicated obstacle course to avoid British encampments and lookouts.

The teams were scored on both a presentation of their work and attempts to fly the obstacle course. Both Maryland and Vaughn autonomous teams demonstrated an autonomous hover, and their piloted teams were able to complete the course. Technical difficulties prevented the Penn State and or Drexel teams from attempting the course.

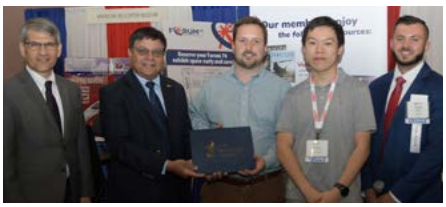
The event was led by Joseph Gillman, former vice president of VFS Philadelphia Chapter, and his team, who developed the course and provided support to the competing teams. The team of seven judges recognized the technical merit of each MAV, and awarded first prize to University of Maryland for both the autonomous (AMAV) and manually piloted (Firefly) teams. Vaughn College won second prize in both categories: Vaughn UAV Club for piloted and Vaughn Aerial Robotics Team for Autonomous. Drexel University was a new entrant in the competition this year and we hope to see them compete again next year!

More than $4,500 in total prize money was awarded in the 7th Annual MAV Competition. Each of the teams demonstrated great technical ability and innovation in the design and flight of their MAVs. The Unmanned VTOL Committee offers its congratulations to all the students who worked long and hard on this competition!

This MAV competition is designed to provide students an opportunity to demonstrate their knowledge, creativity, and leadership skills while working together as a team. The next challenge will be held in May 2020 at Forum 76 in Montreal, Canada—stay tuned for details!

View photos from the event at
gallery.vtol.org/album/1IUX
Learn more at **www.vtol.org/mav**

The MAV Challenge students, faculty, judges and organizers.



Mike Hirschberg, Executive Director of VFS, and Ajay Sehgal, Chair of the Unmanned VTOL Committee, present representatives of the Maryland teams their first prize certificates. George Farah, lead course designer, is at right.

Hirschberg, Sehgal and Farah present the Vaughn teams with their second prize certificates.

Drexel University's Dragonfly Team won Best New Entrant Award.