District IV—Delaware, District of Columbia, Maryland, North Carolina, Virginia



Jay Marsh *Vice President*

jaymarsh@ama-d4.org 3227 Pine Needles Rd., High Point NC 27265 Tel.: (336) 687-0973; www.amadistrict-iv.org

Flying season is here at last. I hope each of you will make plans to go to an event, share your models, and enjoy your fellow modelers at their field. You know, when members of your club show up at other club's events, they in turn will come to yours. This increases participation and makes our events better. It helps your club's coffer, too!

With the long-awaited FAA NPRM coming out as I write this, please stay vigilant as all our efforts may be needed.

Please send me reports on your events so I can share them with the rest of the district and watch for the new District IV website.

As a way of moving into the event report about a science, technology, engineering, and math (STEM) program in Virginia, let me introduce you to a special person in aeromodeling, John Langford.

John is the CEO of Aurora Flight Sciences, where this event took place, and is part of the AMA Foundation Board of Directors. He started modeling as a child.



John Langford.

building plastic models and model rockets. While attending MIT, his love of competition and aeronautics lead him to FAI competition. He continues flying RC rocket gliders and has been the US Spacemodeling team manager for many cycles.

His vision for the AMA Foundation is to bridge a generational change by creating youth-oriented excitement through competition and career interest in aerospace by combining efforts and resources of associations such as AIAA, AIA, and the AMA. This STEM program sponsored by Aurora is the beginning of such an effort.

Nic Burhans, District IV associate vice president, sent the following report on Sky Robotics.

Aurora Flight Sciences sponsored a Sky Robotics Education/Demonstration Camp in October 2014, at the Battlefield High School in Haymarket, Virginia. Sky Robotics is a new aspect to the high school's STEM programs, and this camp was the second field trial conducted by Aurora with 13 northern Virginia middle and high school students participating. Four students from the first Aurora sponsored camp also participated as mentors.

Aurora's goal for this second camp was to "demonstrate Sky Robotics Competition as a fun, effective, and robust tool for introducing high school students to aerial robotics." The classroom work centered on using Aurora's software to create flight plans, simulate UAV behavior, and navigate competition mazes.

The aircraft, developed by Aurora, consist of a foam wing with two outrunner motors mounted on servos with flight times of up to 50 minutes. The aircraft are simple on the outside, but inside are GPS, autopilot, a gyro system, homer, student flight path input port, downed locator, and more. If there is a problem in flight, each aircraft has a kill button that stops what it is doing and flutters safely to the ground.

The Sky Robotics flight operations are conducted with each team's aircraft launching, climbing to its assigned altitude, circling a homing beacon, and awaiting ground instruction to start the event. After all of the team aircraft are in the air, the event start signal is given, and the models head to the maze entrance and fly as programmed by their

student team with monitored location points, bonus points, maze misses, and run times to determine the scores.

Aurora Flight Sciences hopes to eventually expand this program to national competitions developing an interest in aerospace technologies in our youth.



The students who participated in the Sky Robotics Education/Demonstration Camp.



The Aurora program's foam wing drones.



Computer scoring for the obstacle course.



Students spent time learning drone protocol and launch safety.

Go fly and have fun safely.

Associate Vice Presidents: DE: John Kirchstein, (302)731-2831; john@kirchstein.net; Mark Weiss, (302)547-4917; ama8282@yahoo.com; NC: Josh Bunn, (919) 291-6374; josh@ qualityplusautomotive.com; Mark Smith, (704)798-2776; mark@ama-d4.org; David Trogdon, (910)654-1220; frogman28472@embarqmail.com; MD: Richard "Rick" Moreland, (301) 261-7366; rmoreland1@verizon.net; VA: Nic Burhans, (540)219-9646; nic@ama-d4.org; Randy Elliott, (540)239-0645; Randy.Elliott@nordsonxaloy.com; Rusty Kennedy, (757) 812-2812; rusty@ama-d4.org; Steve Moulton, (757) 421-4545; Terry Terrenoire, (412)760-4593; terry@ama-d4.org; FF AVP: Bob Sowder, (540)525-7086; bsowder@rbnet.com. CL AVP and FF/CL Contest Coordinator: John Tate, 10 Hanbury Ave., Portsmouth VA 23702; (757) 399-5376; jtate22@cox.net. RC Contest Coordinator: Andy Kane, 305 Natick Ct., Silver Spring MD 20905; (301) 785-3022; andykane01@gmail.com. Education/Safety Coordinator: Bradford Booth Jr., (336) 685-4064; bradford@ama-d4.org Webmaster: Jack Upchurch, webmaster@ama-d4.org.