District I—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont

Andy Argenio
Vice President

brandshobby@gmail.com
3 Sheila Ln., Smithfield RI 02917
Tel.: (401) 231-6901; www.amadistrict-i.org

We all recognize the value for youth when they participate in hands-on, project-based activities that enhance their knowledge of science, technology, engineering, and math (STEM). Aeromodeling today, with its utilization of more complex technologies for flight control stabilization, autopilot navigation, telemetry data, and FPV video, builds valuable skills in STEM-related subjects.

I have been an annual judge for the SkillsUSA competition program conducted by my friend, Edd Spidell, who is an AMA member, engineer, and educator at the Cranston Area Career and Technical Center in Rhode Island. For the past 28 years, Edd has taught a 3-year-long pre-engineering and robotics technology program. Many of his former students have graduated from engineering programs at prestigious colleges.

One of the compelling and engaging studies within his course is aeronautic technology, where students learn about UAS and then design, build, fly, and evaluate a remote-controlled UAS. The students relate the control systems and programming utilized in their robotic automation projects to the technologies utilized in automating UAS flights.

Several years ago, Edd's classroom and lab was used to launch the Real World Design Challenge (RWDC) in Rhode Island. RWDC is similar, in terms of its educational STEM mission and value proposition to the SkillsUSA program, except it focuses on competitions in aeronautical design projects. It's all about keeping the competition challenge real by having the students use real software engineering tools, assume actual engineering roles, and work on defined engineering projects. This provides the students with the opportunity to make an actual engineering contribution.

RWDC began as a partnership between government, industry, academia, and nonprofit organizations to bring professional engineering resources into the classroom, without cost to the students and would be available to every school in the US. Since its inception, the partner contributions have exceeded $750 million in program assistance.

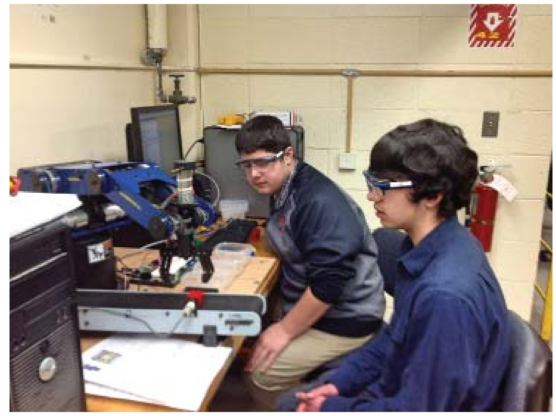
Teachers who participate in the program receive $1 million in engineering software. Other resources include training videos of the technical skills required, a support forum for collaboration, mentors for content support, and a state coordinator for program information. Teams of high school students use these resources to compete in the project design challenge.

Students who win the challenge, based on judges' selection of the best design report on a state level, win the Governor's Cup and get an all-expense-paid trip to Washington, D.C., to compete in the national finals. The national RWDC challenge is slightly different. Each student on the 2015 national winning team receives a $50,000 scholarship to Embry-Riddle Aeronautical University.

Last year's RWDC winner was a team called Next Level, from New England, representing South Burlington High School in Vermont. The winning design was a UAS that would improve precision agriculture through early detection of European corn borer infestations in a large (46,000 acre) cornfield. The UAS could target pesticide applications to minimize the impact of broad-based application strategies. The following is a link to a YouTube video of the team's winning design as presented to the RWDC judges: www.youtube.com/watch?v=WI7v5aUS38k.

Dedicated teachers such as Edd, who have a passion to educate our next generation of skilled technologists and engineers, and the partners who provide SkillsUSA and RWDC competition programs, address the country's shortage of skilled workers and the future of America's workforce.

Congratulations Edd, for being named the 2015 SkillsUSA Rhode Island Career and Technical Educator of the Year.



Students create robotic software code to automate material handling, sorting, and placement processes in the SkillsUSA State Robotics Competition.

Edd Spidell is an AMA member and passionate pre-engineering and robotics technology educator.

Associate Vice Presidents: **Steve Brehm**, Jamestown RI; stbrehm@yahoo.com; **Andrew Figlar**, Shelton CT; figlar335@att.net. **James Gilliatt**, Concord, MA; (978) 369-9796; jegilliatt@cs.com; **Erik Haakonsen**, Trumball CT; (203) 816-5010; ama4295@gmail.com; **Robert Kilmon**, Nashua NH; nhrepdist1@aol.com; **Ray LaBonte**, Maine; havefun@mainehobbies.com; **Joan Liska**, Middletown CT; (860) 347-0257; jliska9000@sbcglobal.net; **Tom Rocheleau**, Wethersfield CT 06109; (860) 280-1701; trocheleau@cox.net; **Rusty Scott**, Lancaster NH; (603) 684-1070 ; Rustys@dscottre.com. **Safety Coordinator**: **John Cartisser**, Medfield MA; (508) 359-4080; jcartsser@yahoo.com; **Contest Coordinator**: **David Surwell**, 24 Norwich Rd.; Nashua NH 03062; (603) 888-2020; davidsurwell@comcast.net; **Frequency Coordinator**: **Joel Chappell**, Milford NH; (603) 673-6240; joel.b.chappell@myfairpoint.net. **Webmaster**: **David Beach**, Amherst NH; webmaster@amadistrict-i.org.