



vertiflite Commentary

Educating the Future

By Mike Hirschberg, Executive Director

After a third of a century, the AHS International Igor I. Sikorsky Human Powered Helicopter Competition was finally awarded in July, as detailed in this issue's cover story.

AeroVelo's win was not just a victory for its Atlas team. Each of the hundreds of students and innovators who pursued this prize over the past three decades is also a winner. We didn't establish the AHS Sikorsky Prize to produce a practical human powered helicopter to bike to work or to the grocer's. We set up the prize in 1980 to inspire the next generation of vertical flight pioneers and give them a challenge to hone their engineering acumen, creativity and teamwork. The scientific breakthroughs, engineering innovations and inspiring accomplishments that have been engendered by the AHS Sikorsky Prize are a testament to the ability of the human spirit to tackle seemingly impossible challenges.

All those students and researchers who worked on human powered helicopter concepts have gained invaluable experience to help them forge the future of vertical flight. And that is what AHS International is all about – advancing the state of the art of vertical flight technology and promoting its application throughout the world.

AeroVelo's chief competitor in the home stretch for the AHS Sikorsky Prize was the University of Maryland's Gamera team. For the past year, they were both flying – almost neck and neck. Darryll Pines, the Dean of the University of Maryland's Engineering School, who had



originally inspired his students and faculty to pursue this prize in 2008, spoke for the Gamera team in congratulating AeroVelo on its victory: "We pushed each towards excellence, and in fact – a miracle was achieved."

In the mid-2000s, after no human powered helicopter had gotten off the ground since 1994, AHS International could have quietly abandoned this seemingly impossible goal. Instead, with the tenacity that is the hallmark of our members, in 2009 we doubled down – through the generous support of Sikorsky Aircraft – to inspire a new generation of innovative thinkers.

Victory in the AHS Sikorsky competition was made possible through three things: a third of a century of progress in aerospace technologies, including lightweight structures, computer modeling and multi-disciplinary design optimization; the \$250,000 prize that was sufficient to motivate innovators from around the world; and the engineering audacity of AeroVelo's Atlas team to combine those cutting-edge technologies and that

motivation with daring and innovation in an aircraft and a pilot capable of conquering a goal that had eluded so many for so long.

But while this stunning achievement was a shining example of AHS's educational mission, it is a relatively small part of what the Society does to educate the future.

This year is the 30th anniversary of the AHS International Student Design Competition. As in past years, more than a dozen schools from around the world participated in the competition, with 11

entries submitted in the end. Every student who has the opportunity to participate in our Student Design Competition must demonstrate teamwork, engineering acumen and creativity.

This year's competition, sponsored by Eurocopter, challenged students to design the "HealCopter," a helicopter aimed at rescuing victims of a natural disaster. The Request for Proposals for 2014 is sponsored by AgustaWestland and will be the "X-VTOL," requiring students to design an innovative VTOL X-Plane concept. Find out more at www.vtol.org/sdc.

The AHS Unmanned VTOL Aircraft & Rotorcraft Committee initiated an Annual Micro Air Vehicle Student Challenge, with the first one held at Forum 69 in May. The MAV Challenge is intended to lead to advances in this area and help to develop increased expertise by students and universities. Prizes were awarded for best poster presentation and best manual challenge execution, which entailed flying line of sight to a target and then doing a sensor-guided,

remotely operated hover over it. However, the grand prize – for an autonomous target acquisition and hover – was not claimed this year; the award money has been reserved to encourage practical and technological pursuits in next year's competition, the requirements for which will be posted later this year. Go to www.vtol.org/mav to learn more.

AHS is now kicking off a major new Science, Technology, Engineering and Mathematics (STEM) education outreach initiative. The intent of this effort is to promote scientific and engineering career aspirations of grade school through college students (particularly in the field of vertical flight). This is especially critical in countries such as the United States, where the number of new engineers is not keeping up with the demand in the workforce. Go to www.stem.vtol.org for more information. Please consider leading a local initiative with your fellow AHS members at local schools, work with your Chapter officers to create or augment outreach efforts, or help to develop materials that can be used by teachers and students. Vertical flight is exciting – we need to share this excitement and enthusiasm with future generations.

If you don't have the time or ability to personally help with these efforts, you can still do your part to support our educational outreach opportunities: consider donating to the Vertical Flight Foundation (VFF) Scholarship Fund. More than 400 students have received scholarships through this program since it was founded in 1977. Through the generosity of members like you, we have been able to award \$50,000 to about 20 college students each of the past two years. But we could reach so many more deserving candidates if you make a commitment to help educate the future. Make a donation today at www.vtol.org/vff or include VFF in your estate planning.

The challenges in vertical flight continue to get more demanding. We need to fully develop the creative talents of today's innovative students for tomorrow's workforce. Help support AHS International's educational mission by contributing generously to our efforts with your time and financial support. We have a proud legacy of educating and inspiring the next generation of vertical flight engineers and leaders, and we will continue to expand our role in educating the future with your support. Be part of it.



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