

Indiana Student Wins Second Annual Sikorsky Helicopter 2050 Challenge

STRATFORD, Connecticut - Sikorsky Aircraft Corp., a subsidiary of United Technologies Corp. (NYSE:UTX), and By Kids For Kids Co., an organization that inspires kids to become successful inventors, today awarded an Indiana teenager the Igor Sikorsky Youth Innovator Award for his conceptual design of a circular-shaped medical evacuation helicopter.

Ethan Chu, 16, from South Bend, Ind., received a trophy and a \$1,000 scholarship check during a company-paid visit to Sikorsky's headquarters in Stratford, Conn. Accompanied by his father William Chu, Ethan toured the assembly line of Sikorsky's iconic BLACK HAWK and SEAHAWK® military helicopters, and met with company rotorcraft designers and engineers.

The Igor Sikorsky Youth Innovator Award is the grand prize for the Sikorsky Helicopter 2050 Challenge, a national competition started in 2011 sponsored by Sikorsky Aircraft and By Kids For Kids. This year's program challenged youths ages 9-16 across the U.S. to envision an environmentally friendly helicopter. The competition rated designs for concept uniqueness, description detail and creativity of the presentation.

Ethan portrays his winning design as a compact, circular-shaped twin-engine helicopter dubbed the AH-9 Diamondback. High strength materials in the form of lightweight carbon nanotubes covered with titanium panels comprise the helicopter's structure, a design approach that reduces the aircraft's weight and fuel consumption, and improves its carrying capacity. His environmentally friendly design further reduces carbon footprint by channeling engine exhaust along the rotor blades and around the body of the aircraft to provide a cushion of gas for additional lift — an aerodynamic principle known as the Coanda Effect.

"We were impressed with the strong scientific reasoning and the good deal of thought that Ethan put into his innovative submission," said Vern Van Fleet, a chief test engineer for Sikorsky Military Systems. "And he never lost sight of the competition theme, which was to produce an environmentally friendly helicopter."

As an 11th grader, Ethan likes to play football and paintball. He is a member of the Eta Sigma Alpha National Home School Honor Society. When he is older, Ethan aspires to be an aerospace engineer, and would like to learn to fly aircraft.

"This competition gave me the opportunity to learn new knowledge and gain new skills," said Ethan. "I was fascinated with the 'Coanda Effect' that I read about, and I decided to use it to make my helicopter design more efficient."

Museums throughout the country participated in the Sikorsky Helicopter 2050 Challenge program, which engaged young visitors to envision the environmental future of helicopters while learning important scientific and engineering principles through fun hands-on activities.

"The Sikorsky Helicopter 2050 Challenge is a program to push kids to apply what they've learned in school to create an idea that is entirely theirs," said Judy Bankowski, Vice President and Chief Information Officer at Sikorsky. "Our program seeks to inspire kids to think and innovate, and to begin shaping their future."

Sikorsky Aircraft Corp., based in Stratford, Conn., is a world leader in helicopter design, manufacture and service. United Technologies Corp., based in Hartford, Conn., provides a broad range of high technology products and support services to the aerospace and building systems industries.

By Kids For Kids® (BKFK®) is a platform that empowers youth invention, innovation and entrepreneurship. BKFK promotes youth social innovation and partners with leading corporations to inspire product development, crucial technology skills, invention, and innovation in young people. BKFK provides a unique platform for young people to develop, showcase, and commercialize their products, inventions and entrepreneurship. BKFK's "cycle of innovation" develops critical 21st Century skills in our nation's youth. The company provides educational resources, curriculum and challenges that promote social change, product development and entrepreneurial endeavors. For more about BKFK visit www.bkfk.com.

Learn more about Ethan's Grand Prize Winning AH-9 Diamondback entry and the other Helicopter 2050 finalists at www.helicopter2050.com.

<https://news.lockheedmartin.com/2012-12-18-Indiana-Student-Wins-Second-Annual-Sikorsky-Helicopter-2050-Challenge>