

Above and beyond

Boeing is part of the International Space Station team honored for one of history's great engineering accomplishments

by Adam Morgan

Like many engineering students, Elliott Harik often tried to imagine where his career might take him. It was out of this world.

Harik is a mechanical and structural engineer for Boeing on the International Space Station program. In March, the National Aeronautic Association selected the ISS team, which includes

Boeing, the station's prime contractor, for the prestigious 2009 Collier Trophy, the aerospace industry's highest annual honor.

"As a college student in the field of engineering, you try and picture where you'll end up, where your training and career might take you," Harik said. "Working for the ISS program is an opportunity that outshines just about everything else. It is a challenging and rewarding job, and it's gratifying to know that the program is being recognized publicly for its achievements.

The National Aeronautic Association selected the space station team for the "design, development and assembly of the world's largest spacecraft, an orbiting laboratory that promises new discoveries for mankind and sets new standards for international cooperation in space."





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PHOTO: BOB FERGUSON/BOEING

Joy Bryant, vice president and program manager for Boeing’s space station program, described it as one of “the greatest engineering triumphs of history in terms of the sheer magnitude of the challenges the ISS faced, and the innovation, scientific achievement, leadership excellence and international diplomatic finesse that contributed to the success of one of NASA’s most ambitious programs.”

The Collier Trophy was not the only award the space station received in March. The industry publication *Aviation Week* honored the station with its 2010 Laureate Award for Space. The award commended the space station program for completing the addition of the last major modules and expanding the crew to six in May 2009.

“The ISS is arguably the signature engineering achievement of the last 60 years,” the magazine noted. And that “working together, partner agencies demonstrated the station is as much an achievement in foreign relations as it is in aerospace engineering.”

The magazine’s award recognized the program managers from five international space agencies partnering on the ISS—the Canadian Space Agency, the European Space Agency, the Japan Aerospace Exploration Agency, Roscosmos [Russian Federal Space Agency] and NASA.

“Without the efforts of teams around the world, including thousands of Boeing employees, this kind of success would not have been possible,” Bryant said.

In addition to designing and building all the major U.S. elements of the space station, Boeing is responsible for the integration of new hardware and software—including components from international partners.

Boeing officially turned over the U.S. on-orbit segment of the space station to NASA in March, with the signing of U.S. government form DD-250 at an Acceptance Review Board meeting. Often referred to as “handing over the keys,” the DD-250 is equivalent to a final bill of sale that formally transfers ownership, verifying delivery, assembly, integration and activation of all hardware and software required by contract.

“It was 10 years in the making, but NASA’s acceptance confirms that the U.S.-built portion of the ISS meets [NASA’s] requirements and that its hardware and software are in excellent shape,” Bryant said.

Michael Suffredini, NASA space station program manager, said the space agency got what it asked for, “and I would say it was delivered in fine fashion.

“Nearing completion of this orbiting laboratory,” he added, “we are only beginning to understand its true value as the dividends in our investment pay off with advances in medicine, technology and international relations.” ■

adam.k.morgan@boeing.com

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PHOTO: ELIZABETH MORRELL/BOEING



PHOTO: The International Space Station as photographed by a crew member on Space Shuttle *Endeavour* during a mission in February. NASA