AeroVironment's Pathfinder Solar Unmanned Aircraft Lands in Smithsonian Institution

WASHINGTON, D.C.--(BUSINESS WIRE)--Feb. 26, 2007--AeroVironment's (AV) (NASDAQ:AVAV) pioneering solar-electric unmanned aircraft, Pathfinder-Plus, has become the fourth AV innovation to be acquired for the permanent collection of the Smithsonian Institution. Developed under NASA sponsorship, the ultra-lightweight flying wing was enshrined in the museum's Steven F. Udvar-Hazy Center at Dulles Airport in suburban Virginia in late January, and is now prominently displayed for public viewing among the center's fleet of famed aerospace craft.

The original Pathfinder all-electric aircraft, called HALSOL (for High-ALtitude SOLar), made its first flight in 1983, and was later upgraded with solar cell arrays to enable it to fly on the power of the sun. Its successor configuration, Pathfinder-Plus, went on to establish several flying records, including soaring to a world altitude record for propeller-powered aircraft of more than 80,000 feet in 1998. The aircraft also completed a series of telecommunications tests, the world's first from more than 65,000 feet in the stratosphere, in 2002. From its position over the scenic island of Kauai, Pathfinder-Plus transmitted several hours of next-generation mobile voice, data, and video services to off-the-shelf handheld user devices on the ground, as well as high definition television (HDTV) broadcast signals.

"The Pathfinder / Pathfinder-Plus peeled back some of the veils of flight and explored new regimes," said John Del Frate of NASA's Dryden Flight Research Center, Edwards AFB, Calif., who managed most of the NASA-supported flight research projects. "The Pathfinder lived up to its name by gently plying its way to record-setting altitudes - and those records speak for themselves," he added.

Pathfinder Plus' record-setting development and test flights led the way for its successors. The AV Helios set and still holds the current world altitude record of 96,863 feet for propeller-driven aircraft in level flight and led to the next generation of stratospheric UAS, AV's Global Observer, currently in development. In 2005 the Global Observer prototype successfully completed the world's first liquid hydrogen-powered flight by a UAS.

"The learning and technology developed from Pathfinder and Pathfinder-Plus' successful missions have been invaluable toward the continuing development of Global Observer, which we believe represents the future of stratospheric flight," said Tim Conver, president and chief executive officer of AeroVironment. "Innovation drives our business, and the installation of Pathfinder-Plus in the National Air and Space Museum, alongside some of the most storied aircraft in aviation history, will enable the public to share in this innovative aircraft's history."

The Global Observer persistent platform is designed to operate at 65,000 feet for over a week at a time and provide numerous high value mission capabilities, including communications relay and remote sensing payloads for military or commercial customers. Examples include global, near-space loitering capability for defense and homeland security missions; low-cost, rapidly deployable telecommunications infrastructure and GPS augmentation; hurricane/storm tracking, weather monitoring, wildfire detection, and sustained support for relief operations; and aerial imaging/mapping, for commercial and environmental monitoring, agriculture crop management and harvesting optimization.

NASA selected Pathfinder for its Environmental Research Aircraft and Sensor Technology (ERAST) program in 1994 to assist in the development of research platforms for the stratosphere. Pathfinder flew to 50,567 feet at Edwards AFB in 1995, its first trip to the stratosphere. It then flew to 71,500 feet in 1997 performing a series of science missions over the Hawaiian Islands.

In 1998, Pathfinder was upgraded to become Pathfinder-Plus, with a new center wing panel that increased the wingspan from 99 feet to 121 feet. Pathfinder-Plus was fitted with new high-efficiency solar cells and other improvements before making its record-setting flight in 1998. Pathfinder-Plus completed telecommunications and aerial surveillance of crops missions before its final flight in 2005 performing atmospheric turbulence measurements at Edwards AFB.

The Gossamer Condor and Gossamer Albatross, developed by Paul MacCready while chairman and president of AV along with AV personnel, were acquired for the permanent collection of the Smithsonian Institution before the Institution acquired the subsequent four AV vehicles: Solar Challenger, Quetzalcoatlus Northropi replica Pterosaur aircraft, GM Sunraycer developed by AV for General Motors, and now Pathfinder-Plus.
About AeroVironment, Inc. (AV)

Building on a history of technological innovation, AV designs, develops, produces, and supports an advanced portfolio of Unmanned Aircraft Systems (UAS) and efficient electric energy systems. The company's small UAS are used extensively by agencies of the U.S. Department of Defense and increasingly by allied military forces to deliver real-time reconnaissance, surveillance, and target acquisition to tactical operating units. AV’s PosiCharge® fast charge systems eliminate battery changing for electric industrial vehicles in factories, airports, and distribution centers. For more information about AV, please visit www.avinc.com.

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PHOTO EDITORS: High-resolution photos to support this release are available electronically on the NASA Dryden website at: http://www.dfrc.nasa.gov/Gallery/Photo/Pathfinder-Plus/index.html.

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