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Aerosonde robotic airplane completes historic trans-Atlantic flight

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An aerosonde takes off from Bell Island Airport in St. John's Newfoundland on its way to the Outer Hebrides Islands of Scotland in an attempt to complete the first trans-Atlantic flight by an unmanned airplane.

With an assist from Latvia's lady luck, the third time was the charm for an Aerosonde miniature robotic airplane and its developers in their bid to complete the first trans-Atlantic crossing by an autonomous aircraft.

After two Aerosondes launched Monday failed to reach their destinations, a third plane, named Laima after the Latvian goddess of good fortune, successfully completed the 2,000 mile, 26-hour flight today. The plane landed at about 1:40 p.m. (5:40 a.m. PDT) in a grass field on South Uist of the Outer Hebrides Islands of Scotland after taking off from Bell Island, Newfoundland, at 7:29 a.m. (2:59 a.m. PDT) Thursday. In addition to being the first trans-Atlantic flight by an unmanned airplane, the 29-pound aircraft becomes the smallest aircraft of any kind to cross the Atlantic.

"We were beginning to worry we wouldn't get one across, but we made it," says, Tad McGeer, president of The Insitu Group. The Bingen, Wash., aerospace research and development firm is working with Environmental Systems and Services of Melbourne, Australia, and The University of Washington Department of Aeronautics and Astronautics on development of the Aerosonde and

on the trans-Atlantic crossing project. "The success of the mission is due in no small measure to regulatory officials, air traffic controllers, weather service personnel and our hosts on both sides of the Atlantic," McGeer says.

"The third time was the charm, and apparently we needed Laima," added Juris Vagners, UW professor of Aeronautics and Astronautics, who was unable to join the field crews for the trans-Atlantic mission but named what turned out to be the record-setting plane in honor of his Latvian heritage. "Of course, we didn't intend to get so wet before we succeeded, but the important point is that we did succeed and achieved a significant milestone in development of the aircraft."

Two planes were launched Monday. The first plane failed to arrive in Scotland and is believed to have crashed somewhere over the Atlantic. The second crashed within a minute of takeoff due to a technical malfunction.

Laima took off from Bell Island Thursday morning and was tracked via computer for about 25 miles along its northeasterly route before flying beyond communication range. Using its onboard global positioning satellite navigation system, the plane flew autonomously along a pre-programmed flight path to the Benbecula Military Range on the Hebrides Islands. Engineers using a special computer beacon picked up Laima's signal at 1:15 p.m. (5:15 a.m. PDT) and took over manual remote control to land the airplane 25 minutes later.

The Aerosonde follows Charles Lindbergh's Spirit of St. Louis, the Concorde and other aircraft in the well-traveled, trans-Atlantic path to aviation history. The successful crossing also carries autonomous aircraft in general, and the Aerosonde in particular, one step closer to their much-heralded promise as aviation workhorses of the next century.

The trans-Atlantic crossing project – sponsored by The Boeing Co., L-3 Communications, Conic Division, and the U.S. Office of Naval Research – was organized to demonstrate the Aerosonde's ability to conduct long-range flights over the ocean. Insitu and the UW are collaborating to mount an Aerosonde weather reconnaissance demonstration project off the Pacific Northwest coast to improve weather forecasting. The first flights are expected to take place next summer.

The Aerosonde was developed over the past three years by Insitu and Environmental Systems and Services under primary sponsorship from the Australian Bureau of Meteorology Research Center. Field tests have been staged off the coasts of Western Australia, Vancouver Island, the South China Sea and now the northern Atlantic. Engineers now will begin work on refining the detail design of the aircraft in order to improve its reliability, endurance and overall performance.

"There is a lot of work left to do, but there is no longer any doubt that the concept works," says Greg Holland, senior researcher with the Australian Bureau of Meteorology Research Center. "This is a great day for the Aerosonde project and for aviation history," adds Jon Becker of Environmental Systems and Services.

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