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## **New Technology Advances Bird Radar Use at Airports**

URBANA, Ill. (January 14, 2010) -- University of Illinois researchers, led by Professor Edwin Herricks, have announced the commissioning of a new advanced bird tracking system using avian radars at the Seattle-Tacoma International Airport in Washington State. The system, deployed by the Federal Aviation Administration (FAA)-designated Center of Excellence for Airport Technology (CEAT) at the University of Illinois, with the support of wildlife biologists at the Port of Seattle and equipment from Accipiter Radar, is now live and provides wildlife managers with real time displays of bird activity on and around an airport, presented as overlays on a Google Earth™ map of the area.

The research program has now progressed from validation of radar capabilities to an operational assessment phase and will continue to work toward the development of guidance for avian radar use at civil airports under the FAA-sponsored research and development program. Avian radars improve situational awareness for wildlife managers and provide a valuable tool to improve airport safety, Herricks said.

Using this enhanced technology, wildlife staff can access the "as it happens" data from airport avian radars using laptop computers as they patrol the airport and its known bird hazard "hot spots." Other options are available to follow movements on larger monitoring screens, or screens at other locations. System users can also call up daily summaries of bird track histories on a day-to-day, week-to-week, or season-to-season basis to better assess bird movement patterns and analyze flock and individual bird dynamics.

Bird radar tracking activity at Seattle's airport began in 2007. The new, more advanced system implements a science-based program to assess the bird tracking capabilities of radar for the FAA. It is the latest milestone of the wildlife management program at Seattle's airport. "Our commitment to wildlife management dates to the 1970s, when we hired the first full-time wildlife biologist at a U.S. airport," said Mark Reis, managing director of Seattle-Tacoma International Airport. "We are proud to work collaboratively with the University of Illinois to successfully develop avian radar to minimize bird strike incidences."

In 2006, commercially available avian radar systems were identified and the FAA tasked CEAT with the performance assessments of radar use in wildlife management and operational safety. Validation of target information followed radar deployment using field observations and also included experiments that flew radio controlled model aircraft to simulate birds and their flight patterns.

"Although radar has been around for a long time, its use at civil airports for bird tracking is new and requires exacting assessments to establish needed requirements and standards for general use," Herricks said.

Bird strikes are a continuing problem to aviation. Under the current voluntary reporting system, more than 7,000 strikes across the United States are reported annually to the FAA. Compared to aircraft or other moving objects, birds pose special challenges. “Their rapid changes in altitude, speed and direction have required the development of advanced avian radar systems and new operational procedures for wildlife and airport safety management.” Herricks said.

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The Center of Excellence for Airport Technology (CEAT) is a research center with its home in the Department of Civil and Environmental Engineering at the University of Illinois at Urbana-Champaign. CEAT is a Federal Aviation Administration (FAA) Center of Excellence focusing on airport pavement improvement and safety issues, including wildlife, anti-icing and lighting. The O'Hare Modernization Program (OMP) also partners with CEAT through a research program that targets technical issues related to the construction of new and extended runways at O'Hare International Airport.

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For information on Seattle's demonstration contact Perry Cooper/Sea-Tac Airport Media Officer, 206/787-4923; e-mail: [cooper.p@portseattle.org](mailto:cooper.p@portseattle.org).

Further information:

- Avian Radar Assessment Program, [ceatasmp.cce.illinois.edu](http://ceatasmp.cce.illinois.edu)
- Center of Excellence for Airport Technology, [ceat.illinois.edu](http://ceat.illinois.edu)
- Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign, [cee.illinois.edu](http://cee.illinois.edu)

Photos and video available upon request.