

## **Integration of Real-Time Bird Radar Information into Commercial Air Traffic Control**

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### **Abstract of Presentation.**

The new King Shaka Airport in Durban, South Africa is located 3 kilometers from a European barn swallow roost of 3-5 million birds that winter there from October through April. During design, concerns were raised about the potential risk to aircraft from bird-aircraft strikes and potential mortality to the barn swallow population. In 2007, the airport conducted an avian radar survey to collect data on bird movement patterns, altitudes, and densities to develop a risk assessment, recommendations for mitigation and management, and a draft BASH plan for the airport that included a deployment plan and concept-of-operations (CONOPS) for installation of an aircraft-birdstrike avoidance radar at the airport to provide real-time bird detection and operational risk advisories to aircraft.

In 2008, the airport issued a competitive Request for Proposals for supply, installation and support of a bird radar system to support airport operations and provide real-time information on bird activity and birdstrike risk advisories to air traffic control, ordering a system in October 2008. The system - a DeTect MERLIN Aircraft Birdstrike Avoidance Radar - was delivered in December 2008 and is operating at the airport with a real-time display in the air traffic control tower delivering automated birdstrike risk advisories to controllers that includes a custom-developed swallow risk prediction algorithm. This installation is the first known use of a real-time bird radar information in a commercial airport control tower and the presentation will present the "lessons learned" from this project.