

FAA studying technology to make runways safer **Thursday, August 7, 2008**

By JEFFREY McMURRAY

LOUISVILLE, Ky. (AP) — It's a bird. It's a plane. And, when both occupy a runway at the same time, it's a problem.

Small objects, including animals such as squirrels and birds, can wreak havoc on an aircraft traveling down a runway at speeds topping 100 mph. To combat the problem, four companies have developed competing technology to detect these so-called "invisible" runway incursions. The companies made their pitches Thursday to airport executives and a top federal air safety official on why their approach is best.

While its difficult for small objects to do any serious structural damage to a plane's exterior, even the tiniest items can be catastrophic if sucked into a spinning engine blade during takeoff, said James Patterson, an airport safety specialist at the Federal Aviation Administration who is involved in testing and approving the detection systems.

At most airports, the methods for finding foreign object debris, or FOD as industry officials call it, isn't sophisticated, usually relying only on occasional visual scans with the naked eye. Some airports only check once a day, Patterson said.

The 2000 crash of a Concorde jet in France that killed 113 people is the most sobering recent example of the dangers of foreign object debris.

French investigators determined that crash was caused in part by a titanium strip from a Continental Airlines DC-10 that was lying on the runway when the supersonic jet took off. They said the metal strip punctured a tire on the plane, which created flying debris that then punctured the fuel tanks.

"Anybody who works in the aviation environment knows about FOD, knows it's a risk, and Concorde is the ultimate manifestation of that risk," said Dominic Walker, a product development director at QinetiQ Airport Technologies, one of the companies that has built a debris tracking system.

QinetiQ's system largely relies on radar from a tower above the airport. It constantly monitors the runway for foreign objects, and can immediately pass on a warning to airport personnel. During a yearlong test of the technology at Vancouver International Airport, the company found and removed 326 pieces of debris, Walker said.

Other companies have their own version of how to deal with the problem and made presentations to potential buyers at the American Association of Airport Executives' NextGen Airport Conference and Expo.

Stratech Systems Ltd. relies on infrared high-resolution cameras. Xsight Systems said it can save the airports money by mounting the detectors on pre-existing runway lights. And Trex Enterprises features a mobile unit on the back of a truck that picks up the debris after it finds it.

"There are many roads to Rome here," said Grant Bishop, manager of Trex Enterprises' FOD Finder system.

Patterson said the FAA has been testing the detection systems and hopes to approve some of them soon. Once that happens, airports would be able to apply for federal grants to help buy them.
