

# Tarsier™

## Runway Hazard Management System

Presentation to  
National Aerospace FOD Prevention Inc.

August 2011

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**QinetiQ**

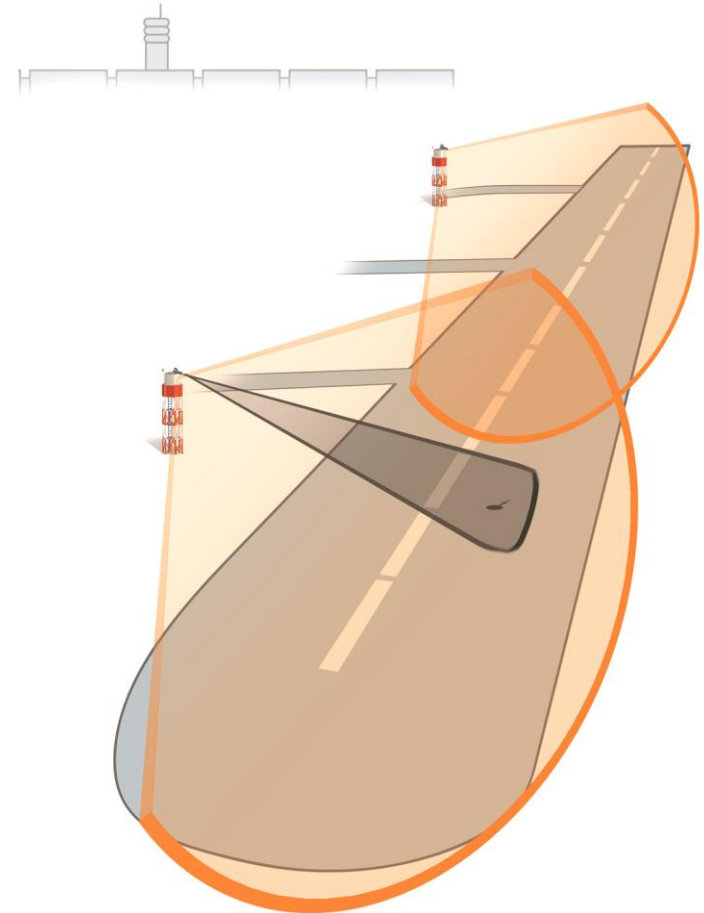


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# Tarsier Runway Hazard Management

Tarsier™

- Combined high resolution radar and day/night camera system that continually scans the runway
- Quantifiable reduction in risk of FOD related incidents, damage, and other runway hazards
- Supports best practice as an element of a FOD Management System
- Dual use benefits
  - Wildlife management
  - Security



# Tarsier Radar Signal Processing

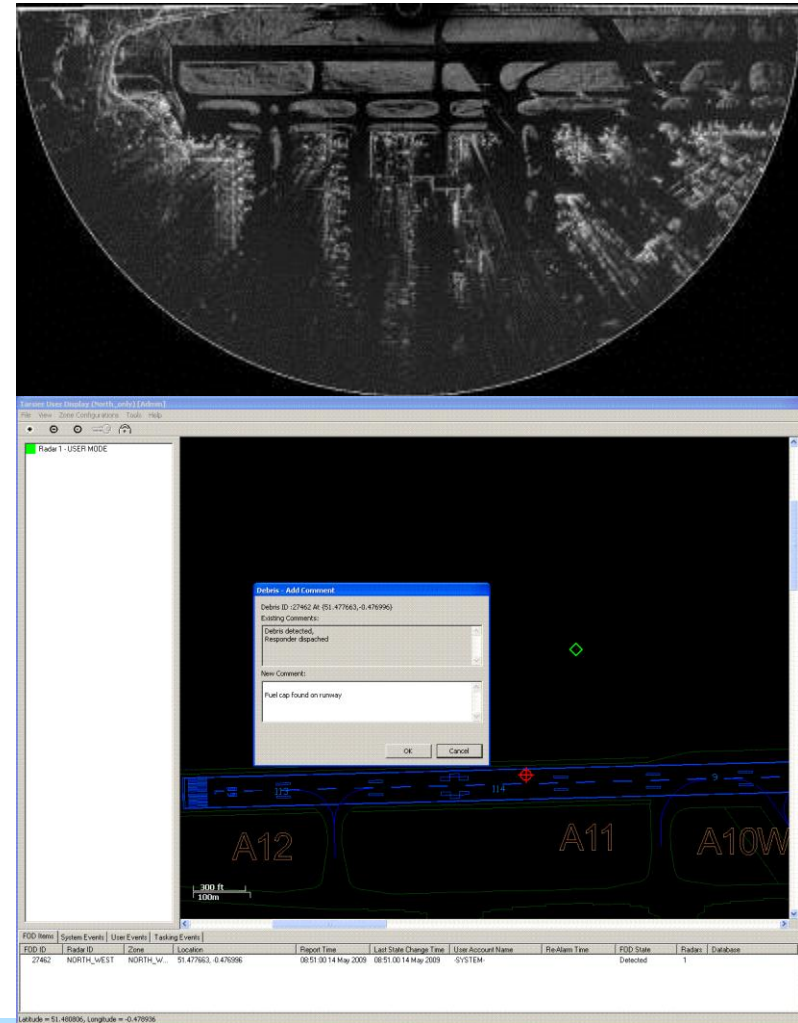
Tarsier™

Sensors provide very detailed image

- Buildings & airbridges
- Aircraft & vehicles
- Lights, people & grass
- And FOD.

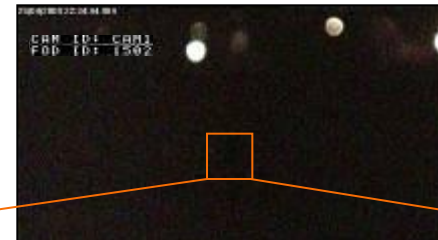
Simple Operator display

- Audio Alarm
- Location
- Visual Confirmation



# Camera confirmation and assessment Day and Night

Tarsier™



# Tarsier Detection Examples

Tarsier™



YVR341 Primary - 21/03/2009 07:10:40



# Tarsier Detection Examples



# “We don’t get much FOD on our runways”

- A typical airport currently finds (on manual inspections) 1-2 FOD items per month on the runway
  - Typically tools, litter, rubber sealant from runway joins, aircraft parts
  - There is more FOD than this on the runway
  - Data from our five operational installations in 2 months shows Tarsier has found **239 items** (5-6 per week) including:

Weeds	Wood	Grass	Low Risk
Screws/Bolts	Live Birds	Dead Birds	
Soda Cans	A deflated helium balloon	A Piece of Aluminum	High Risk
Aluminum tape	Aircraft Pitot cover	Food wrappers	
Paper	Aircraft Fuel Cap	Tire Debris	
Foam material	Fox droppings		

# Operational Data

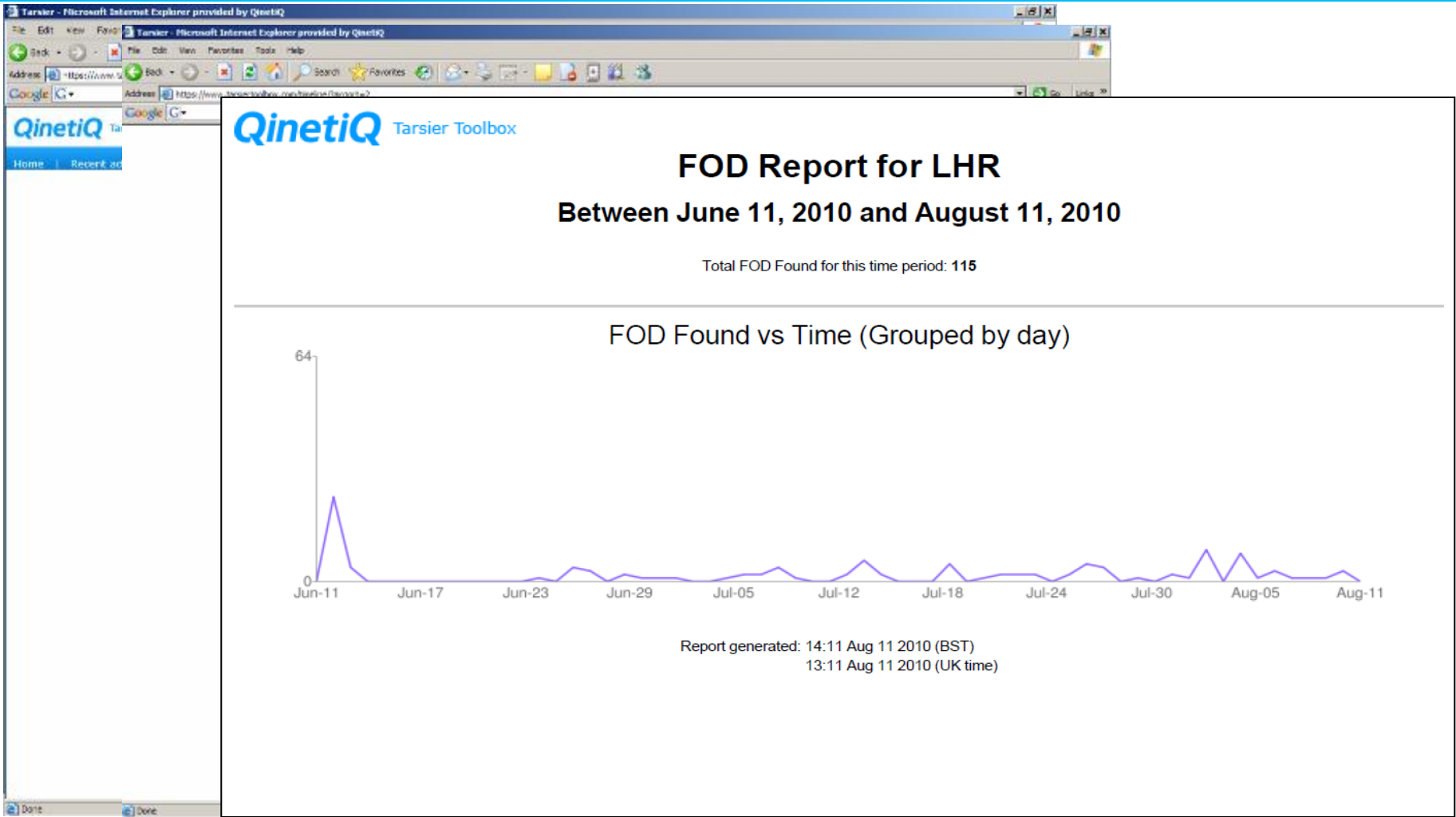
- Vancouver International – Fully operational for over 4 years, 24 hours a day, 365 days a year
  - In that time Tarsier has found and led to the removal of **933** items of FOD, and counting
  - In a 12 month period in 2009, Tarsier found **92%** of the FOD removed from Vancouver's runways
  - These are **real operational results**, not controlled experiments or demonstrations
- 
- So far, In 2011 we have detected **155** items of FOD on the runways at Vancouver

# Tarsier Toolbox – Analysis and Reporting tool

Tarsier™

- A securely hosted database
- Automatically updated with data from the Tarsier system
- Auto-report formats available
- Can be securely accessed from any location
- Can also be updated with manually entered data (Photographs, reports etc.)

# Tarsier Toolbox – Analysis and Reporting tool



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**CAM ID: CAM1**  
**FOD ID: 178103**



**SCALE: 3.5 metres**

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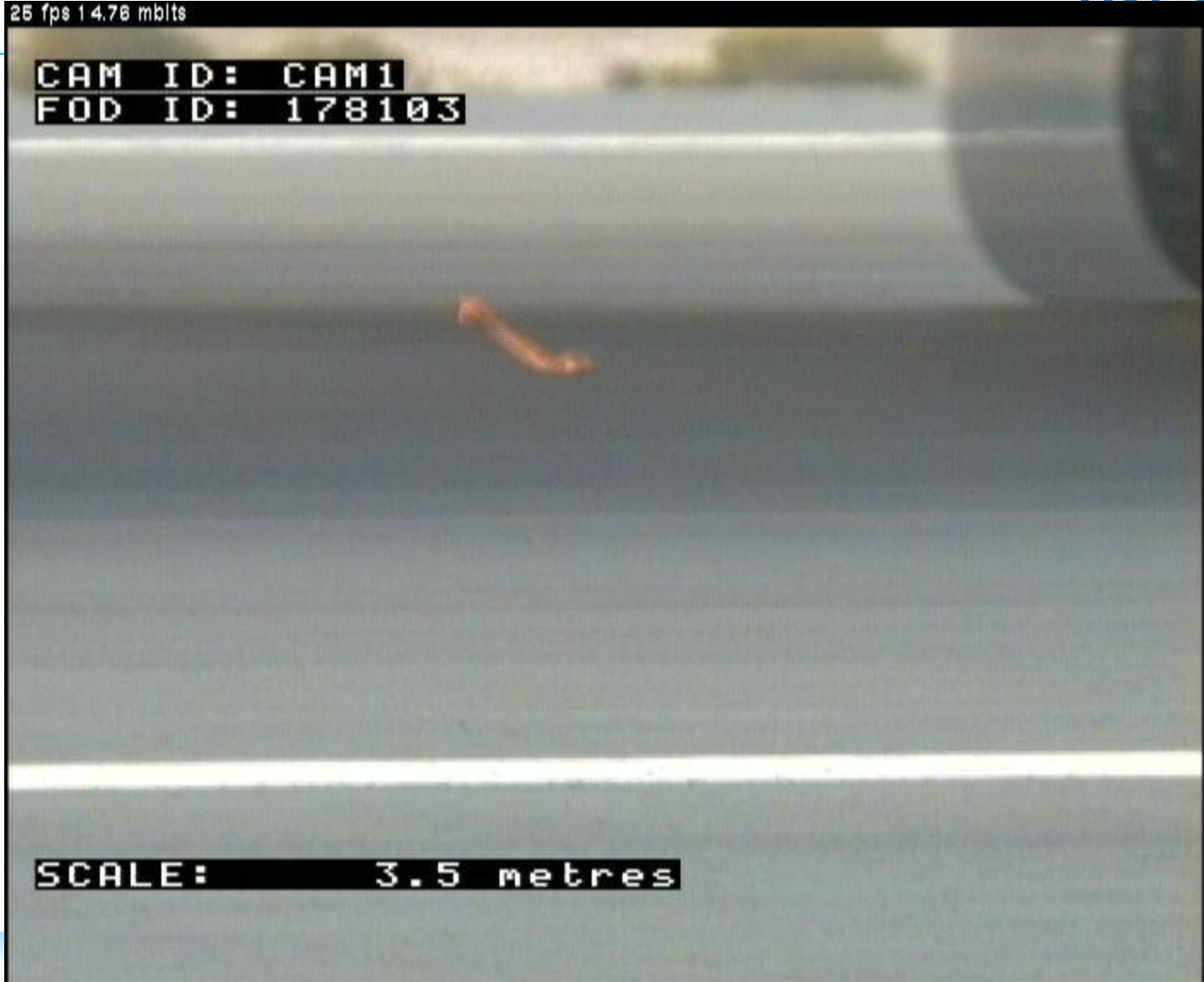


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This is why Tarsier is a:-

“Key Component to Operational Excellence”

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