Avian radar

Effective use of avian radar

Mexico city, October 21st - 2014

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Radar capabilities

- Thousands of bird movements simultaneously
- Up to 10 km
- All around
- During day, night and low visibility conditions.
- Including their exact location, height, direction, speed and fight path

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General Challenge

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Clutter filtering is
the name of the game

General Challenge

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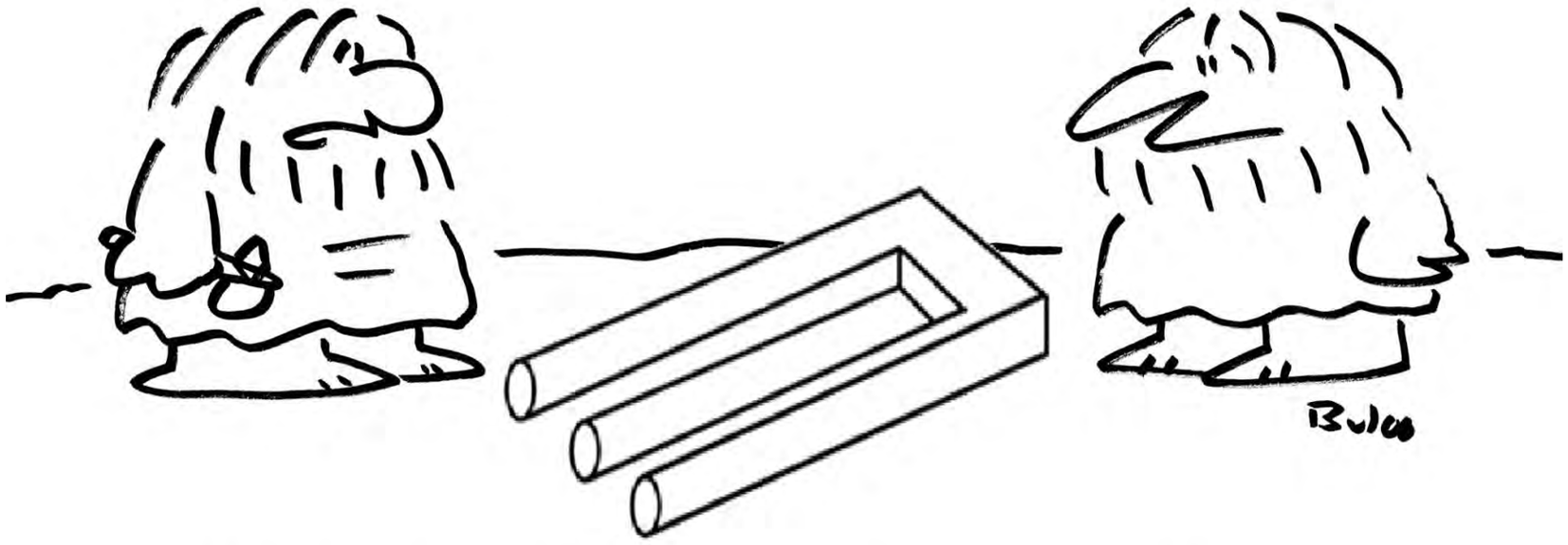
Clutter filtering is
the name of the game

“Great technology, but what does that mean for an airport operator?”



"Yeah, it's a neat invention,
but I haven't found a practical
use for it yet."

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Strategic applications

Using bird information for backoffice analysis

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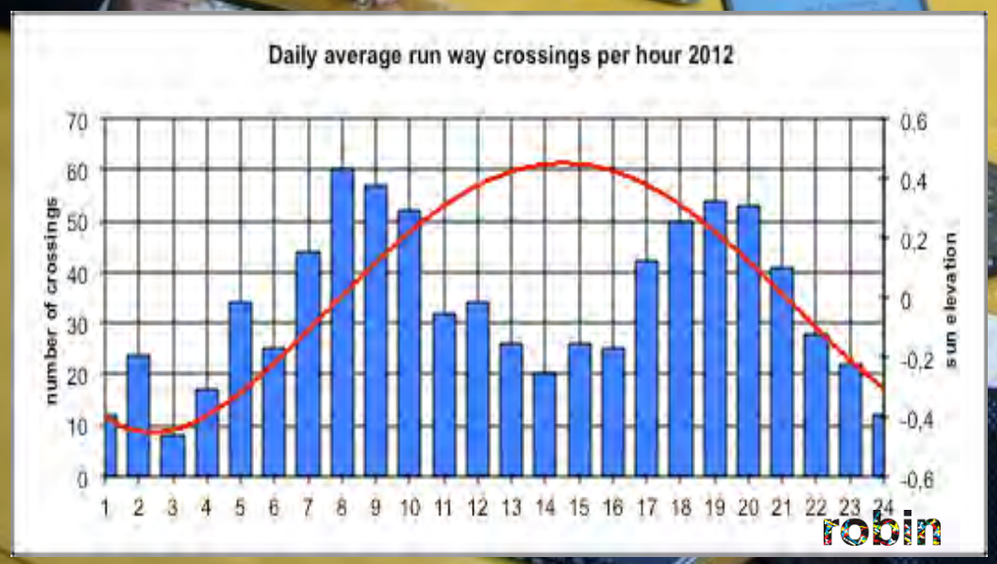
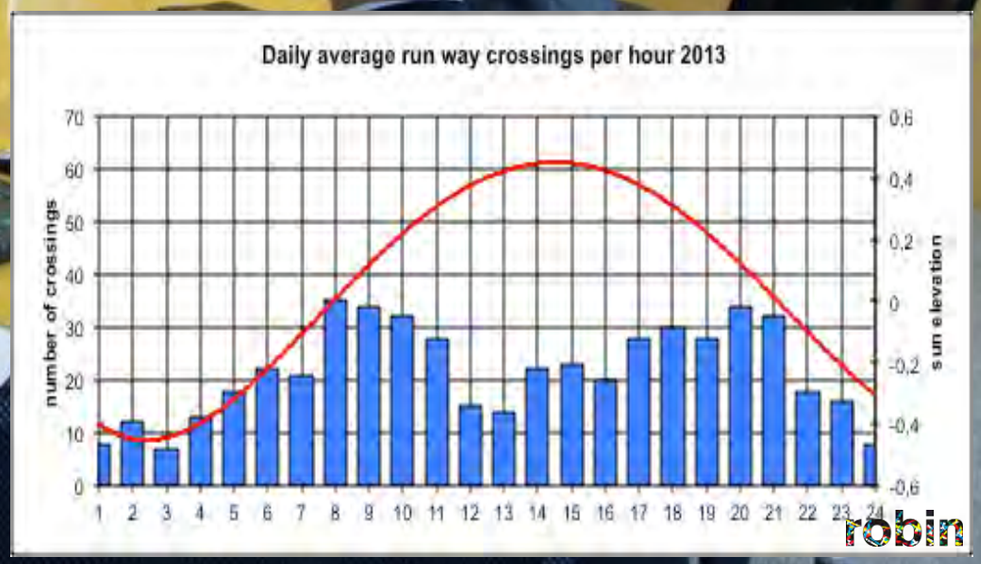
Determine the effectiveness of mitigation policies

"We invest in numerous bird strike mitigation measures, ranging from grass policies to politically sensitive population reduction. We want to quantify how effective these investments are."





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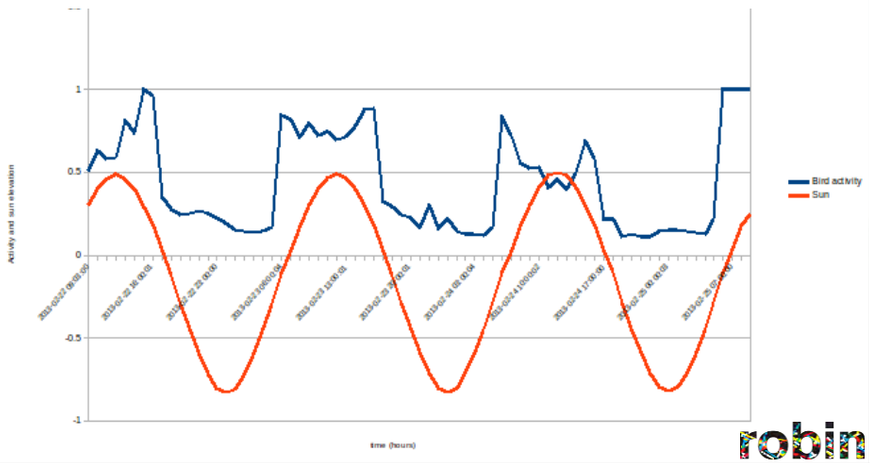
Bird activity versus sun elevation



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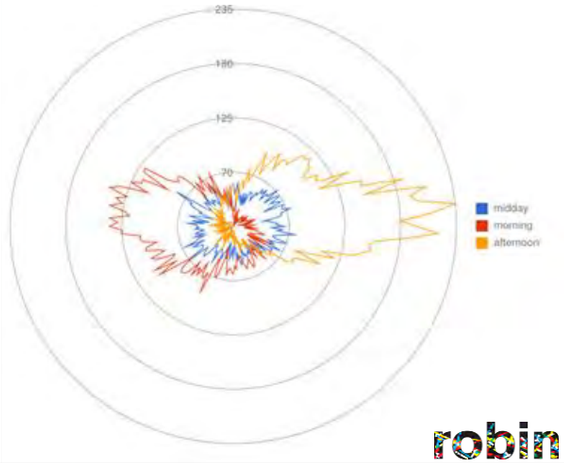
Fligth directions



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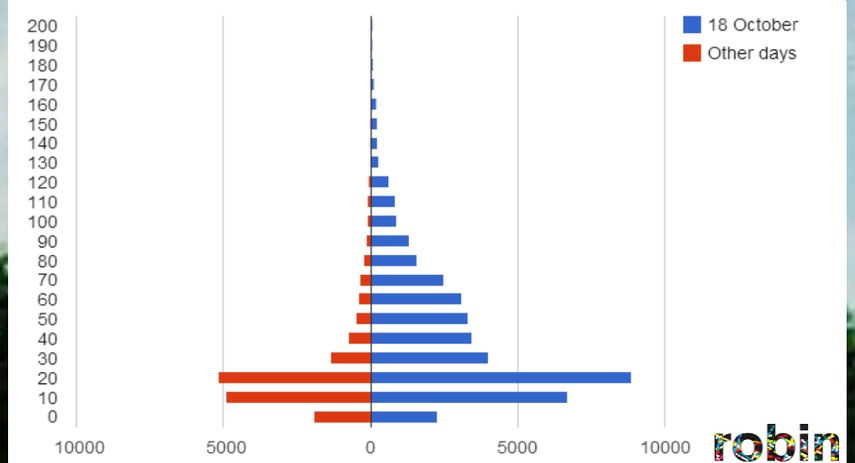
Height distribution



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"We aim to make the airport vicinity as unattractive as possible for birds .
We needed to understand their behaviour before we could start influencing it"

Unique quantified information
as input for Habitat Management

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“The system identified a new ‘hot spot’ for birds. It turned out a local farmer altered his policy, in violation with previous arrangements.”

Identify new bird activity ‘hot spots’

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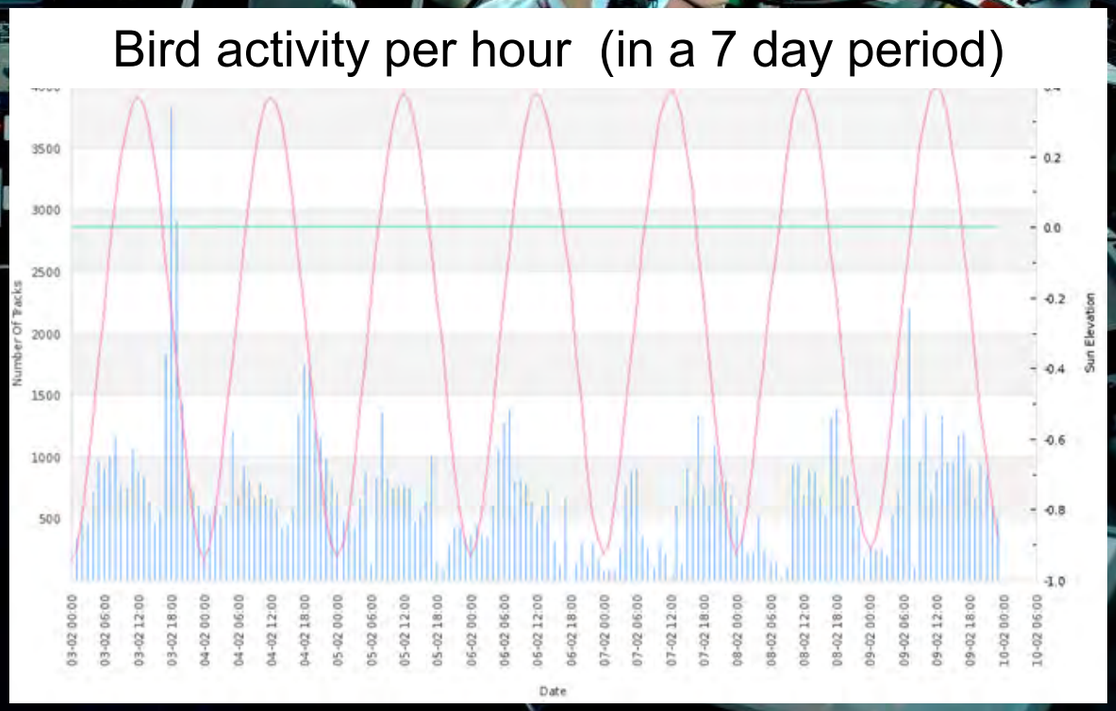
Convert bird behaviour patterns into risk profiles

“In June we start using runway 3 from 7 am because we’ve learned hundreds of gulls typically cross it between 6:00 and 6:30”



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“Once a landing is set in motion I will not evade birds but I do appreciate a warning to be prepared.”

Increase the ‘Situational Awareness’ of pilots

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Tactical applications

Using bird information in real time by Bird Control
Extending their visibility

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“Quite a few birdstrikes happen during fog. When we can’t see a thing, ...radar becomes our ears and eyes.”

See the bigger picture
even when visibility is low

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See the bigger picture
even when visibility is low

“Before Avian Radar,
we were blind at night.”

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Extending the eyes of Bird Control Units

“For me, the Robin Radar is like a high tech “Ultimate Binocular”

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Help
set priorities

“I was deterring a falcon at runway 1 when the system notified me that a large flock of geese was approaching runway 4.”

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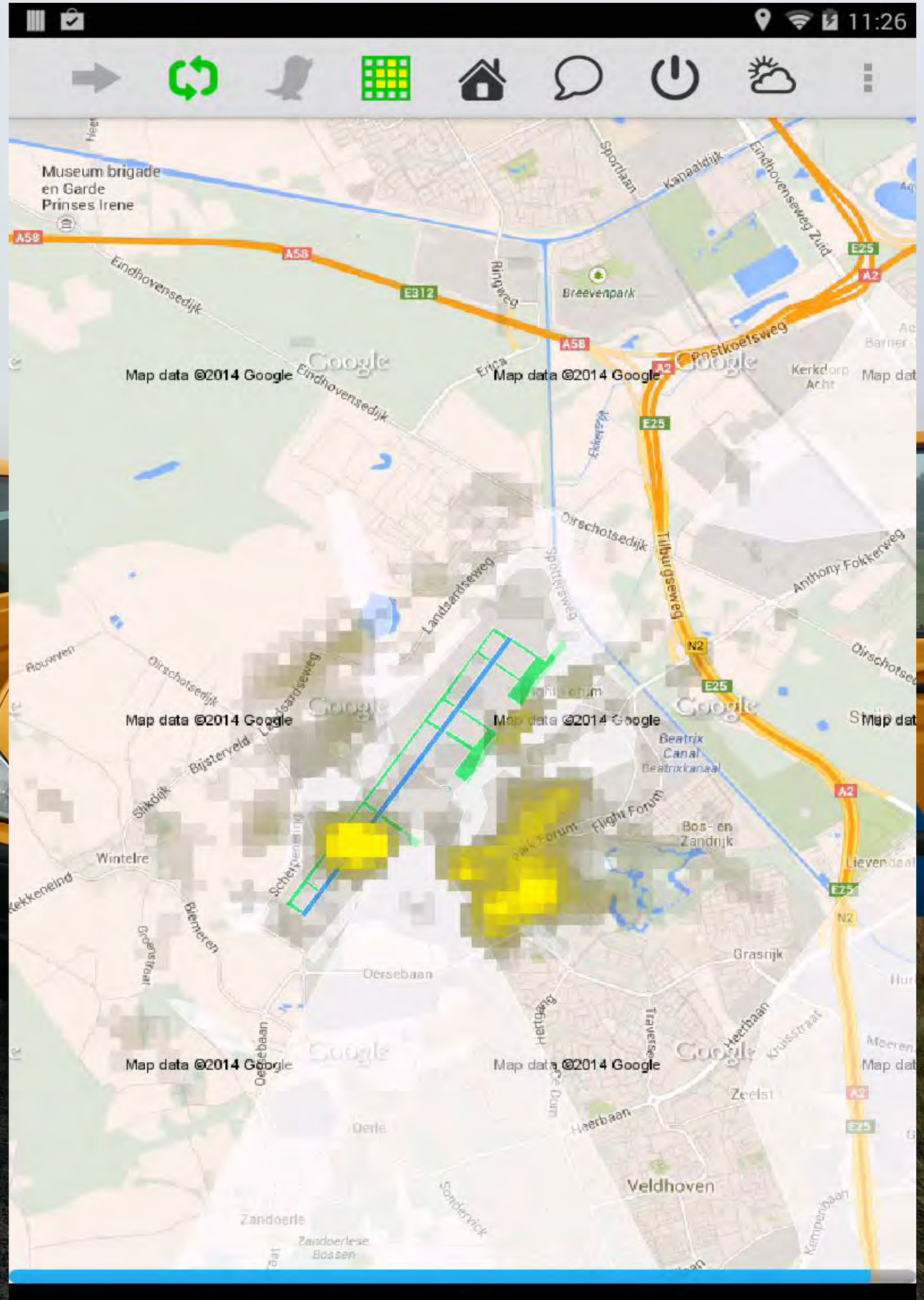
Real time data analysis



“When I start my shift, the Robin Radar tells me where the birds are most active at the time”

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Communication tool

“We both look at the same live image. I see my own exact location on the map and that of my colleague. That really helps in communication and divide tasks.”

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‘Light version’ Ground movement radar

“By detecting planes and vehicles and integrating (ADS-B) transponder information, the system supports avoiding runway incursions”

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Questions ?