

SELF REPORTING CAMERAS FOR BIOSECURITY

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NICK MOOYAN, Mi5 limited



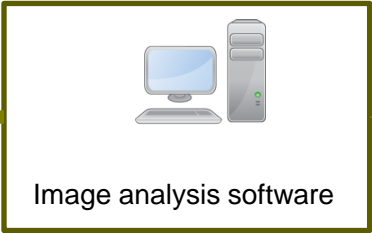
CONCEPT



Cellular net work



Alert



KEY COMPONENT: CAMERA

McNeill et al (AgResearch) demonstrated proof of concept in 2002

However, problems

- Battery life
- Image quality
- Reliability

Technology is a constantly moving feast

- Mi5 Ltd New Zealand
 - Battery life
 - Reliability
 - Data Management



MI5 REDEYE CAMERA SYSTEM PROOF OF CONCEPT

Porina flight monitoring



MI5 REDEYE CAMERA SYSTEM PROOF OF CONCEPT

Porina flight monitoring



2011-11-13 00:00:01, Disarm - MI5 Security - BioEye Demo

MI5 REDEYE CAMERA SYSTEM PROOF OF CONCEPT

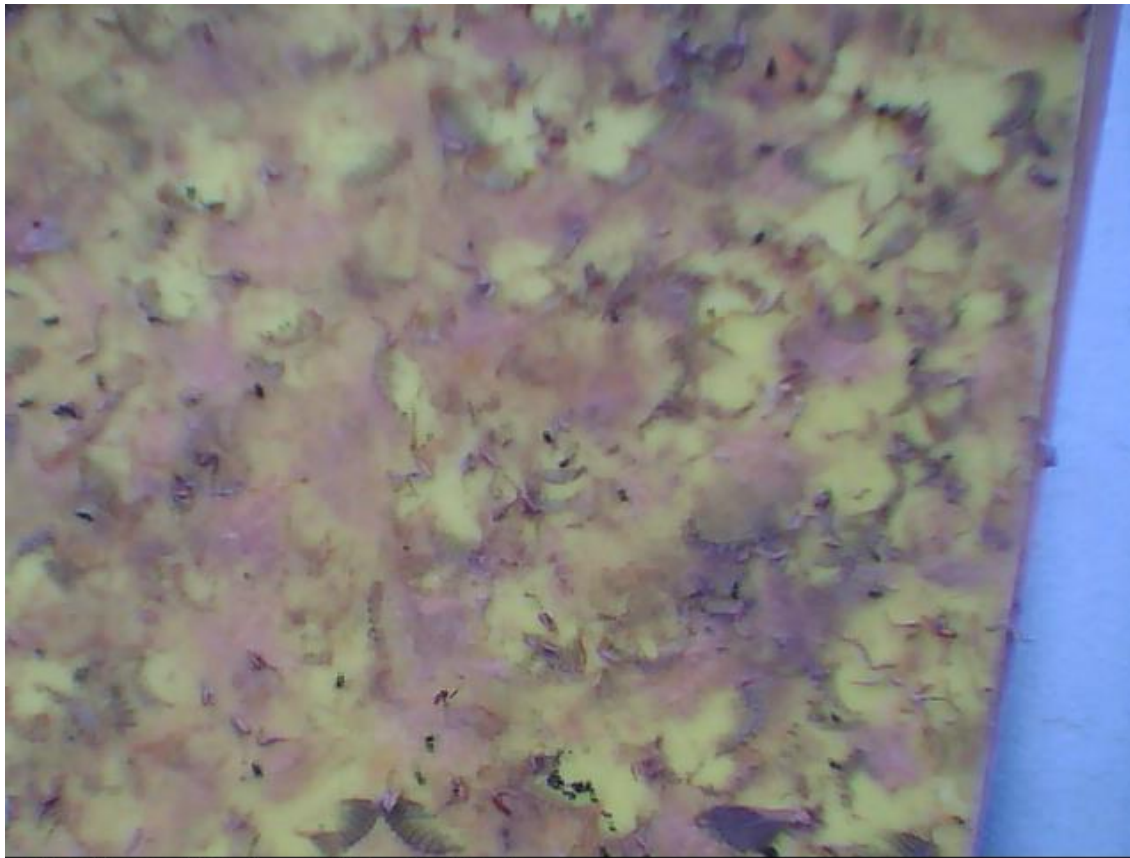
Porina flight monitoring, now you see them



2011-12-03 00:00:01, Disarm - MI5 Security - BioEye Demo

MI5 REDEYE CAMERA SYSTEM PROOF OF CONCEPT

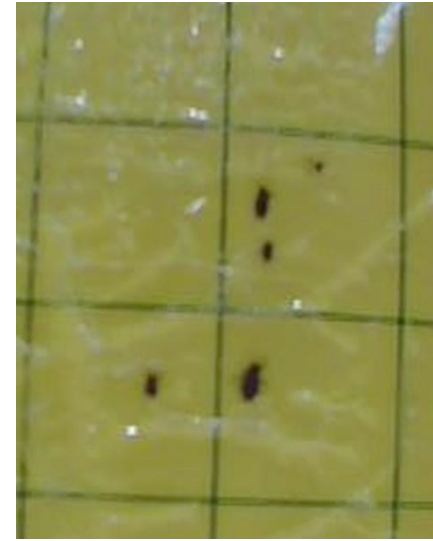
Porina flight monitoring, now you don't



2011-12-03 09:30:08, Time-Lapse - MI5 Security - BioEye Demo

HOWEVER

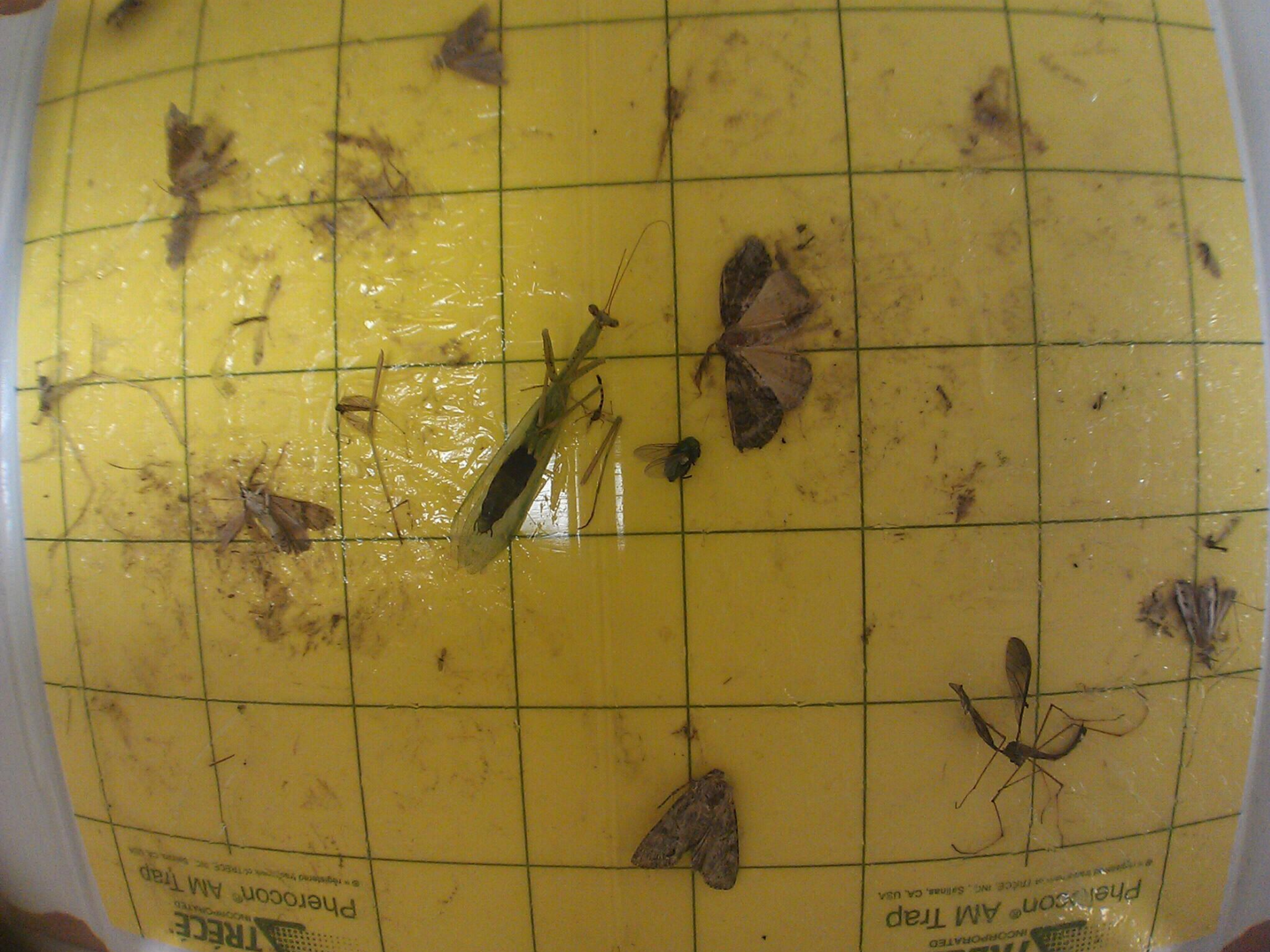
- Red eye camera provide a stable platform but only provided low resolution pictures



UPGRADING CAMERAS

Images quality

- Latest version of camera takes scheduled 3MP image
 - force a 5MP picture on demand
- Has a LED flash so can take images in low light or total darkness
- Still working on lens selection and flash coverage



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FLEXIBILITY

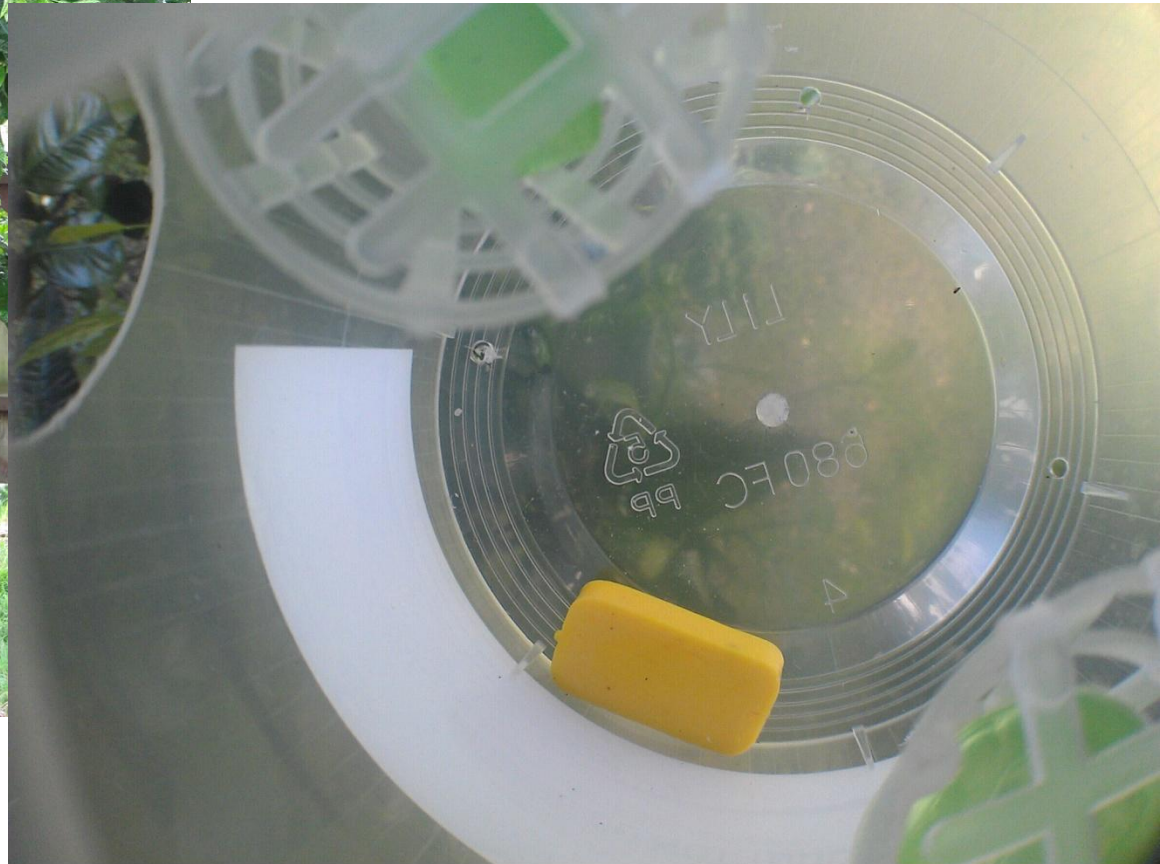
Now have prototypes mounted to monitor

- Lynfield traps
- Lindgren Funnel traps
- Delta traps
- Flat panel sticky traps





agresearch



SOFTWARE TO HANDLE A MULTITUDE OF CAMERAS AND IMAGES

- Why don't we just go with the guts of a cheap smart phone?
 - One camera and associated images easy to manage
 - A network of cameras presents multiple problems in terms of data management, costs and, the checking of pictures and issuing of alerts
 - Mi5 ltd has developed software and data management systems to



CAMERAS

- BioEye - Self Reporting Camera
- Christchurch
 - Camera (00002111)
 - Camera (3940) - 8mm
 - Camera (3941) - 3.7mm
 - Camera (3944) - 8mm**
 - Camera (0000b001)
 - Camera (0000b002)
- France
 - Camera (0000b004)
- Italy
 - Camera (3936) - 3.7mm
 - Camera (3938) - 8mm
 - Camera (3939) - 3.7mm
 - Camera (393e) - 8mm



LATEST CAPTURE



Camera (3944) - 8mm 16:49
02/04/2012

RECENT EVENTS

	Tue 27/03/2012	Wed 28/03/2012	Thu 29/03/2012	Fri 30/03/2012	Sat 31/03/2012	Sun 01/04/2012	Mon 02/04/2012
Camera (00002111)							
Camera (3936) - 3.7mm							
Camera (3938) - 8mm							
Camera (3939) - 3.7mm							





- CAMERAS**
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 - Camera (393e) - 8mm

DASHBOARD BUSINESS SITES CAMERAS

Logged In: [Scott Hardwick](#) | [Log Out](#)

2012-04-02 16:49:27 - 790k - 480p

Camera Details

Camera Camera (3944) - 8mm
 Image from Camera (00003944)
 Site Christchurch
 Organisation BioEye - Self Reporting Cameras
 A total of 79 images dating between 16:00 21/02/2012 and 16:59 02/04/2012. [Settings](#)

Current Image Details

Received 16:49 02/04/2012
 Number 25 of 25 [Save Image](#)

Image Search

From
 To
 25 to load for the selected date range [Search](#)

02/04/2012 07:36 02/04/2012 08:37 02/04/2012 09:43 02/04/2012 10:42 02/04/2012 11:43 02/04/2012 12:49 02/04/2012 14:46 02/04/2012 15:44 02/04/2012 16:49 02/04/2012

LATEST CAPTURE

Camera (3944) - 8mm 16:49 02/04/2012

RECENT EVENTS

	Tue 27/03/2012	Wed 28/03/2012	Thu 29/03/2012	Fri 30/03/2012	Sat 31/03/2012	Sun 01/04/2012	Mon 02/04/2012
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- Why don't we just go with the guts of a cheap smart phone?
 - One camera and associated images easy to manage
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 - Mi5 Ltd has developed software and data management systems to
 - Manage data and cameras
 - In France they monitor several thousand culverts for flooding problems
 - Manage security images from 10,000 + cameras in Europe, Australia, and New Zealand
 - Close working relationship to Vodafone in order to collect and move large amounts of data around