

A composite illustration of a jungle scene. In the upper left, a white drone with a camera and an antenna flies through the air. In the center, an orangutan is partially visible behind dense green foliage. The foreground is filled with various tropical plants, including yellow and pink flowers, and two tree stumps. Several butterflies are scattered throughout the scene. The background is a light blue sky with some palm fronds visible at the top.

The Jungle Book

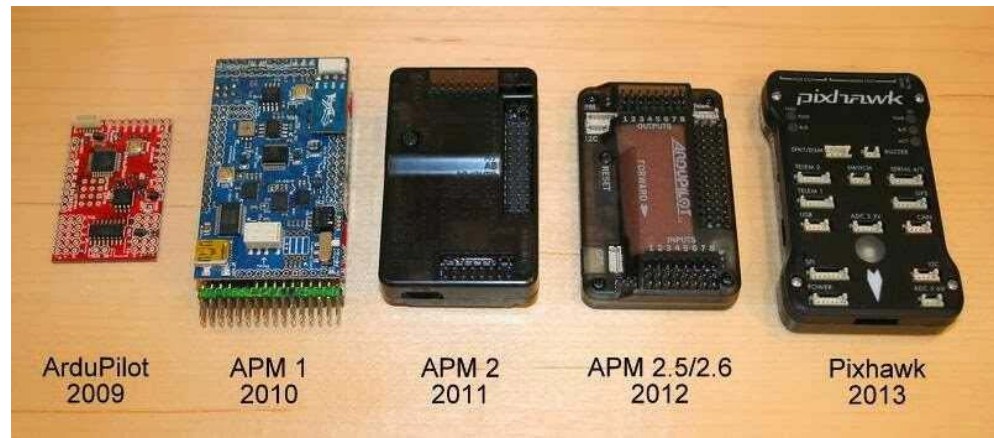
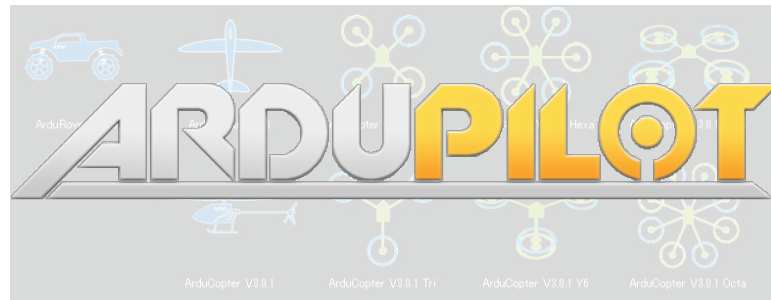
Andreas Gazis

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The old country



Context



Dreamers



ConservationDrones.org seeks to share knowledge of building and using low-cost unmanned aerial vehicles for conservation-related applications with conservation workers and researchers worldwide, especially those in developing countries.

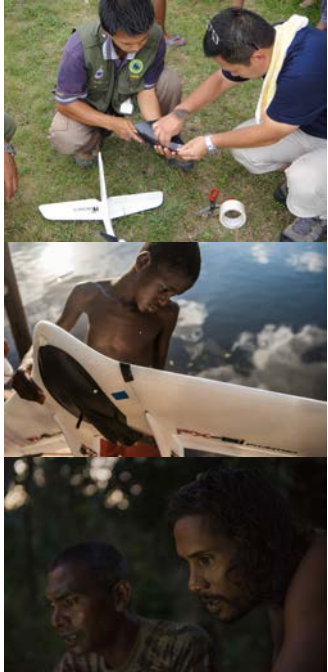
Home sweet home



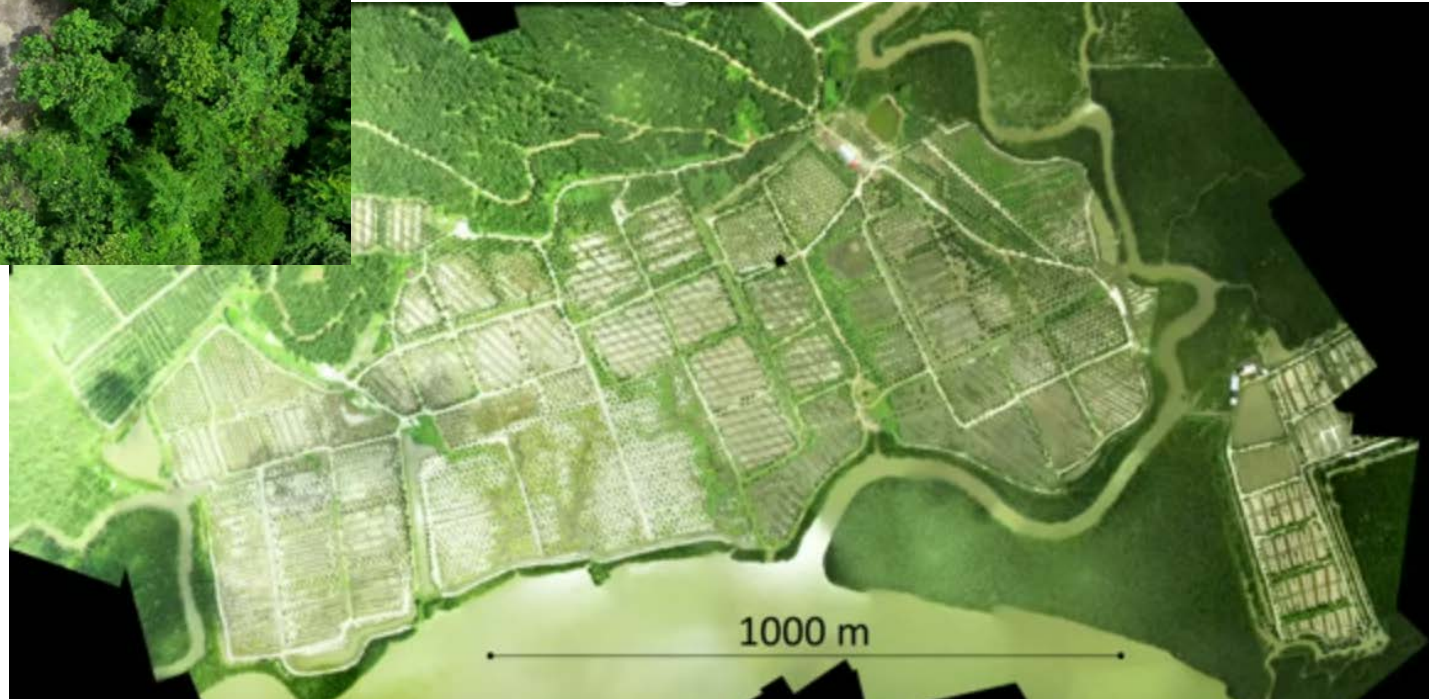
Orangutan nests (2012)



The greatest show on Earth



Invasive species



Law of the jungle

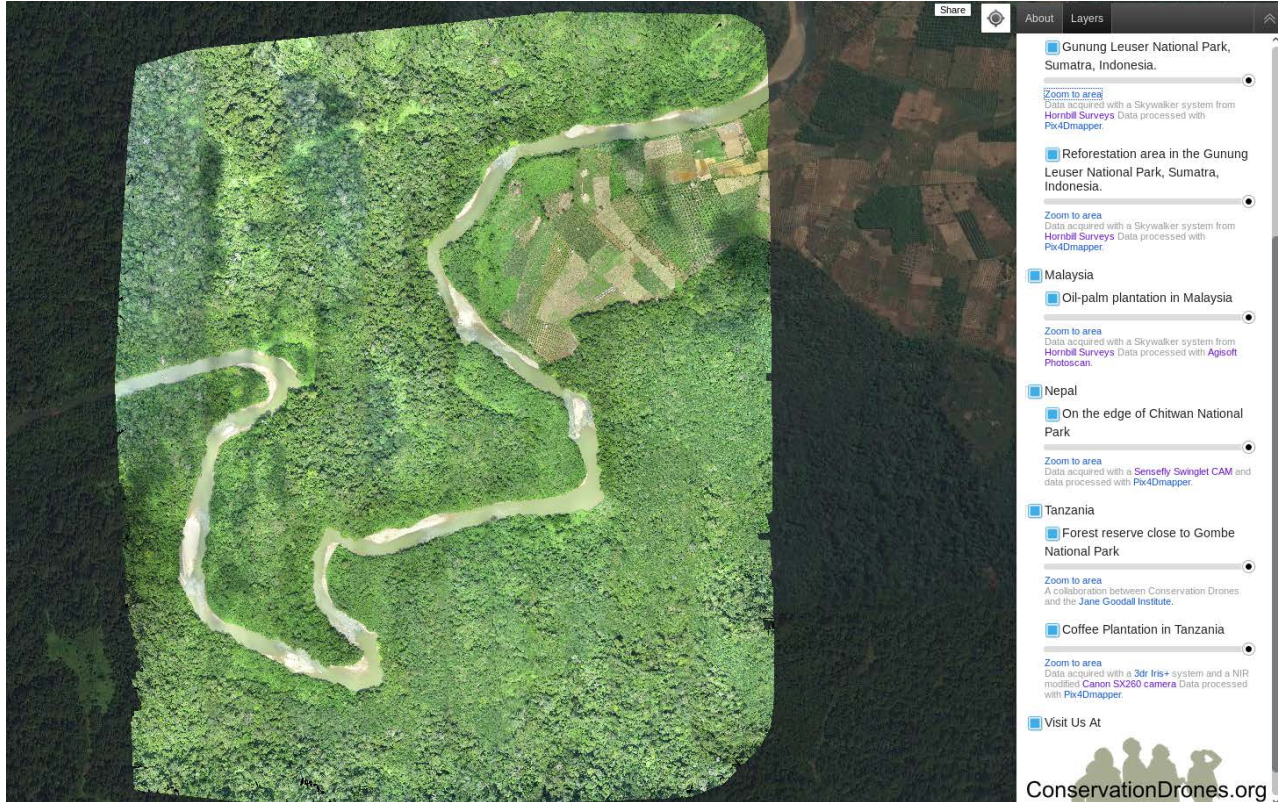
Spot the drone
in distress



Roof of the world



Cloud computing



<http://google.org/crisismap/a/gmail.com/Missions>

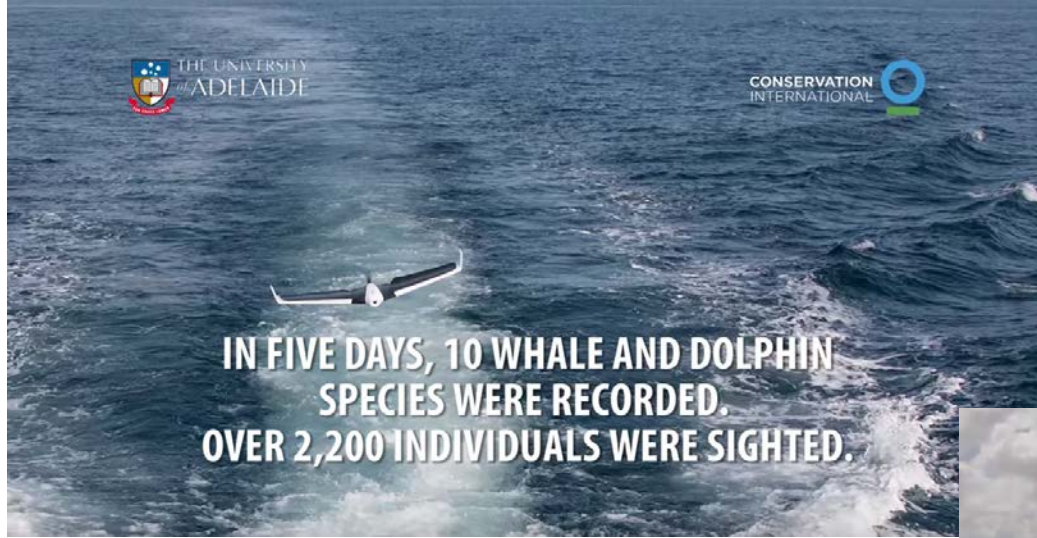
Extremophiles



Jeff Kerby
monitoring plant
growth (2014
Greenland)



Water water everywhere



Cetacean survey in
Timor Leste (2016)

Looking for amazon
river dolphins (2017)



Rapid prototyping

TED talk
2013

Ongoing developments...



WADI data
mule 2015



Sharing is caring

Microcontroller

Accessory Power

Servo Outputs

Expansion Connector

ArduPilot / ardupilot

Contributors

Commits

Code frequency

Punch card

Network

Members

Dependents

May 23, 2010 – Apr 5, 2017

mavlink / mavlink

Contributors

Commits

Code frequency

Punch card

Network

Members

Dependents

Mar 28, 2010 – Apr 5, 2017

ArduPilot / MissionPlanner

Contributors

Commits

Code frequency

Punch card

Network

Feb 3, 2013 – Apr 5, 2017

tridge

9,089 commits 1,004,005 ++ 575,220 --

rmackay9

4,555 commits 113,510 ++ 62,672 --

lucasmarchi

1,125 commits 25,529 ++ 45,943 --

priseborough

540 commits 51,151 ++ 22,593 --

mavlink / qgroundcontrol

Contributors

Commits

Code frequency

Mar 28, 2010 – Apr 5, 2017

tridge

900 commits 27,353 ++ 90,505 --

LorenzMeier

200 commits 67,728 ++ 45,531 --

igoppert

21 commits 51,908 ++ 81,616 --

thomasmugler

11 commits 1,820 ++ 181 --

meeee1

2,549 commits 4,075,226 ++ 2,948,309 --

SkTiTu

52 commits 49,709 ++ 36,373 --

kjeremy

16 commits 578 ++ 421 --

LukeMike

14 commits 1,665 ++ 101 --

LorenzMeier

1,999 commits 835,883 ++ 730,208 --

dogmaphobic

579 commits 137,396 ++ 295,530 --

malcom2073

185 commits 54,352 ++ 11,288 --

dagar

155 commits 1,464 ++ 342,712 --

1% / 100ppm

Spektrum

RP1 and J

UCC1

UCC2

UCC3

UCC4

UCC5

UCC6

UCC7

UCC8

UCC9

UCC10

UCC11

UCC12

UCC13

UCC14

UCC15

UCC16

UCC17

UCC18

UCC19

Trends

Ready made systems' prices approaching sanity



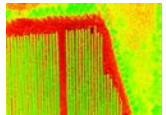
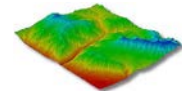
Multirotor proliferation



Standardisation



Post processing workflows maturing



Dedicated sensors



Thanks



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