

# The Jungle Book

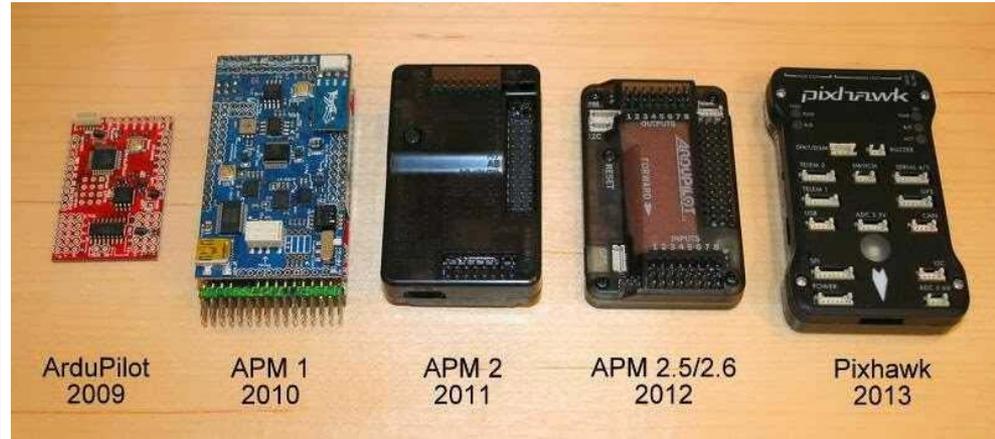
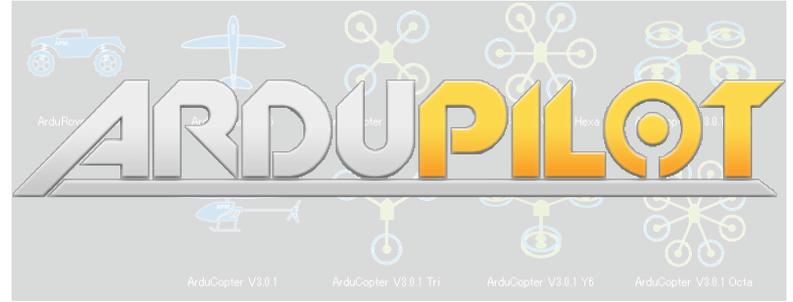
Andreas Gazis

[andreas@skarl.se](mailto:andreas@skarl.se)

# The old country



# Context



ArduPilot  
2009

APM 1  
2010

APM 2  
2011

APM 2.5/2.6  
2012

Pixhawk  
2013

# 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



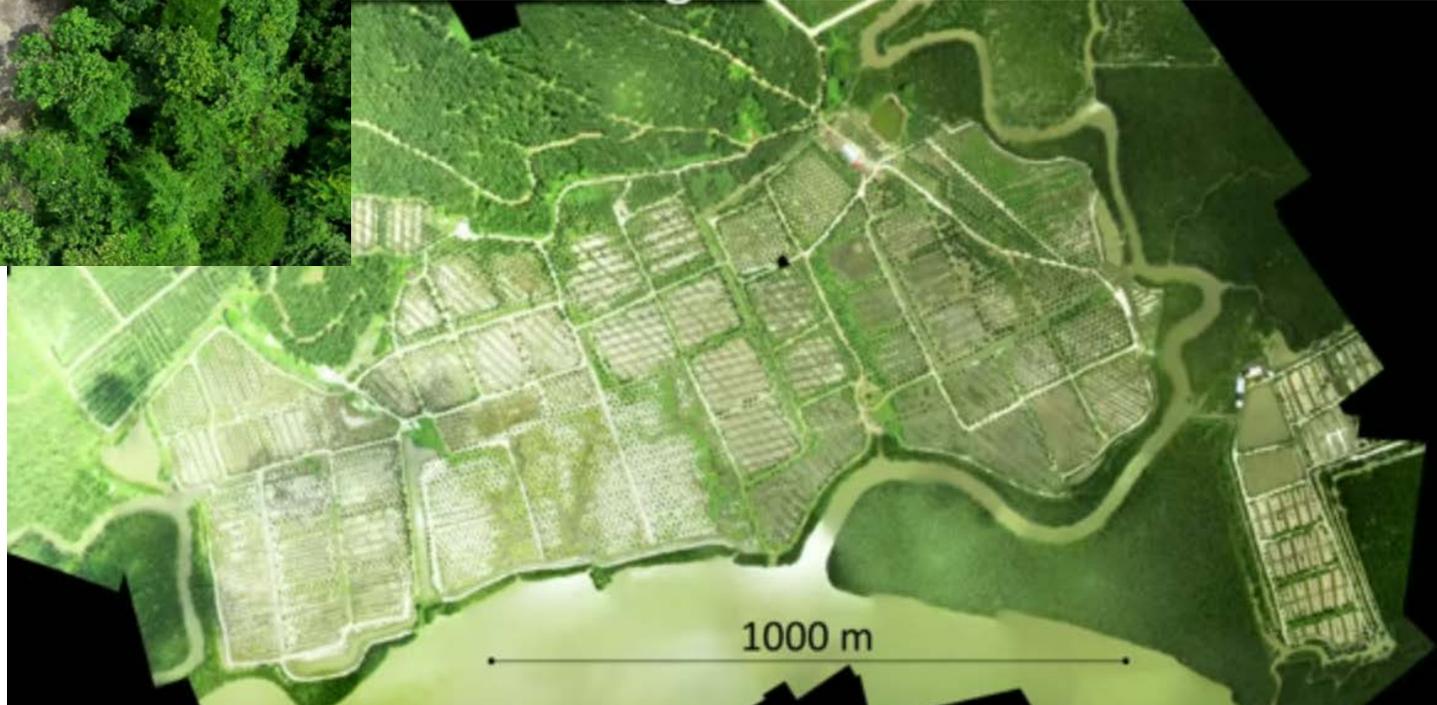
Orangutan nests (2012)



# The greatest show on Earth



# Invasive species



# Law of the jungle

Spot the drone  
in distress



# Roof of the world

Drone training



Footage from a 'conservation drone'



Drone image: rhinos



# 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

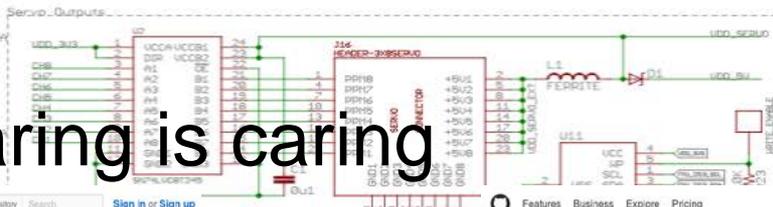
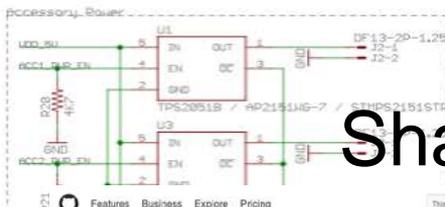
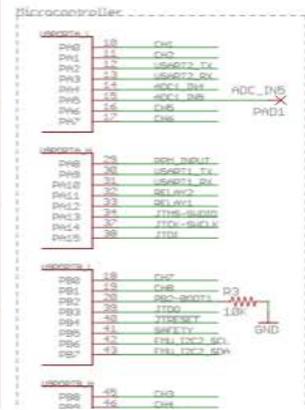
Ongoing developments...



WADI data  
mule 2015



# Sharing is caring



ArduPilot / MissionPlanner

Contributors

Feb 3, 2013 – Apr 5, 2017

Contributors

Feb 3, 2013 – Apr 5, 2017

mee1

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

SkITiSu

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

kjeremy

16 commits 578 ++ 421 --

LukeMike

14 commits 1,668 ++ 101 --

ArduPilot / ardupilot

Contributors

May 23, 2010 – Apr 5, 2017

tridge

9,059 commits 1,004,000 ++ 575,220 --

rmackay9

4,555 commits 13,510 ++ 62,672 --

lucasmarchi

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

priseborough

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

ArduPilot / ardupilot

Contributors

May 23, 2010 – Apr 5, 2017

mavlink / mavlink

Contributors

Mar 28, 2010 – Apr 5, 2017

LorenzMeier

1,099 commits 855,883 ++ 733,208 --

dagar

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

mavlink / mavlink

Contributors

Mar 28, 2010 – Apr 5, 2017

tridge

900 commits 27,363 ++ 60,505 --

igoppert

21 commits 51,906 ++ 81,616 --

LorenzMeier

216 commits 67,729 ++ 46,551 --

thomasgubler

41 commits 1,800 ++ 181 --

LorenzMeier

1,099 commits 855,883 ++ 733,208 --

malcom2073

145 commits 54,302 ++ 11,288 --



PX4ioV1.3  
20/02/2013 22:41  
Sheet: 1/1

# Trends

Ready made systems' prices approaching sanity



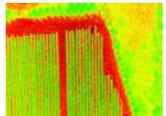
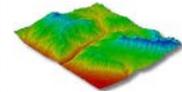
Multirotor proliferation



Standardisation



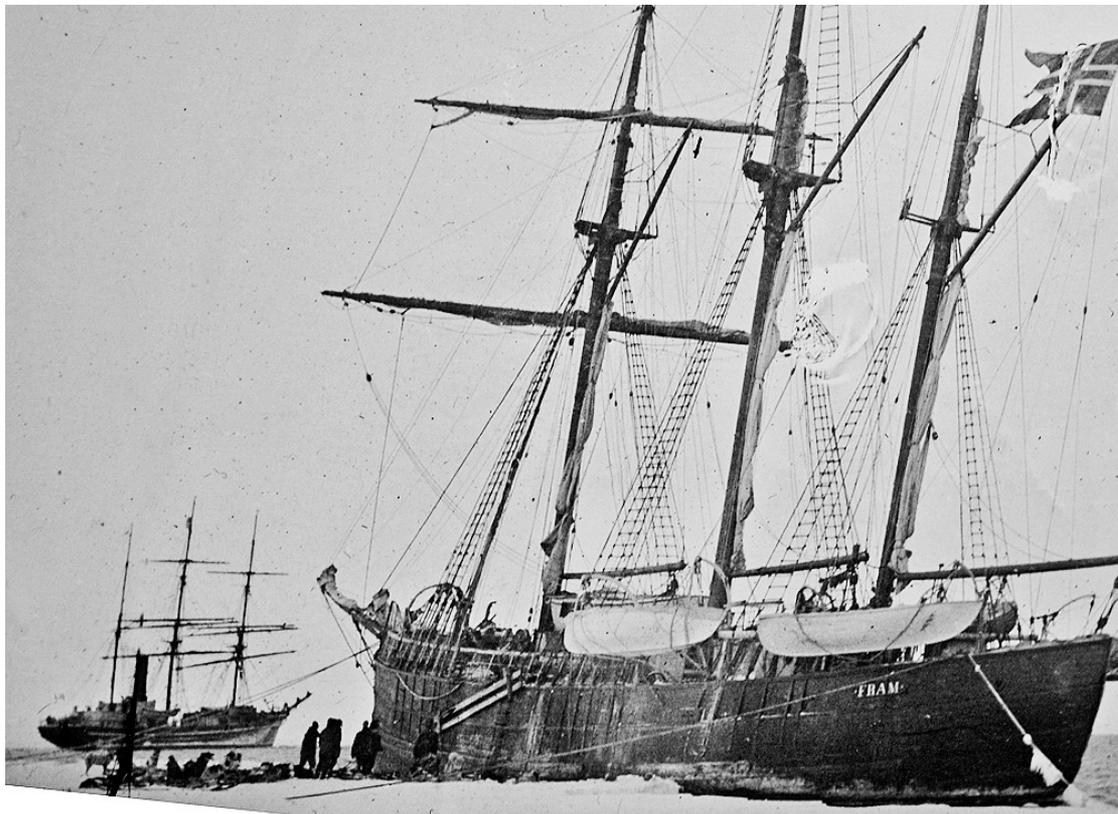
Post processing workflows maturing



Dedicated sensors



# Thanks



[andreas@skarl.se](mailto:andreas@skarl.se)