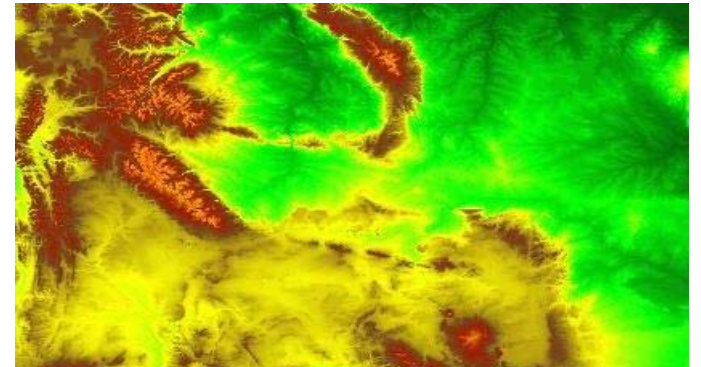




METASENSING

Compact, high resolution SAR systems for commercial and scientific applications

Dr. Adriano Meta





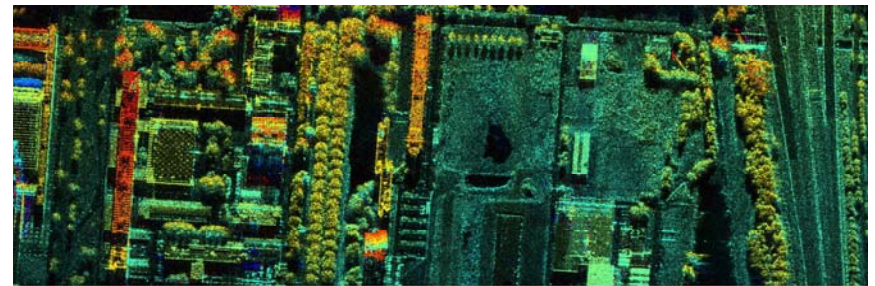
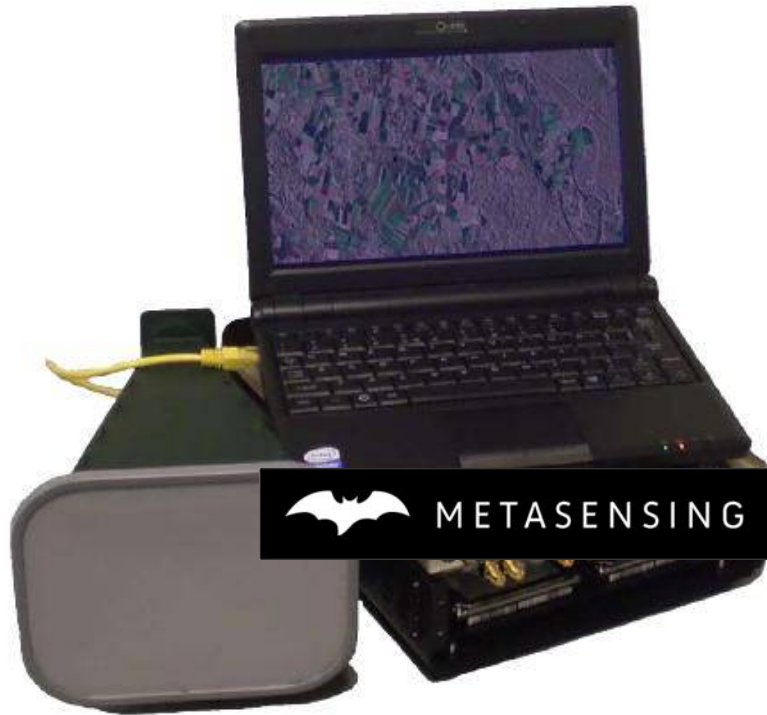
Contents

- MetaSensing
- First flight campaigns and images
- Next steps





MetaSensing radar sensor








System tailored to customer needs and requirements



METASENSING




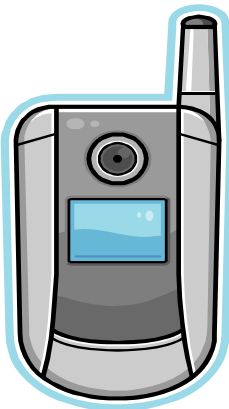
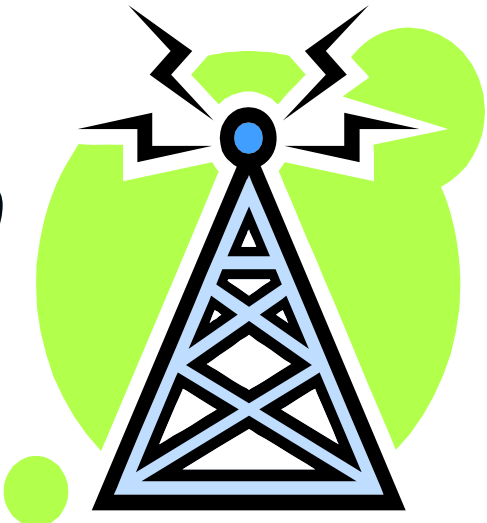
Compact sensor, small airplanes (UAVs)

 METASENSING	Other radar's example
	
	





Very low irradiated power

 METASENSING	<i>Other radar's example</i>
<p><i>like a mobile!</i></p> 	<p><i>~ 1000 Watt</i></p> 





MetaSensing: a short background



International Research Centre for
Telecommunication and Radar



METASENSING



ESA Business Incubation: 2008-2009

ESA Business Incubation



METASENSING



-
- MetaSensing
 - First flight campaigns and images
 - Next steps





Small, cost-effective airplanes



Flights in Rotterdam, The Netherlands



METASENSING



Small, cost-effective airplanes



Flights in Portimao, Portugal

Setting for:

- Polarimetric acquisitions
- cross-track interferometry
- along-track interferometry



METASENSING



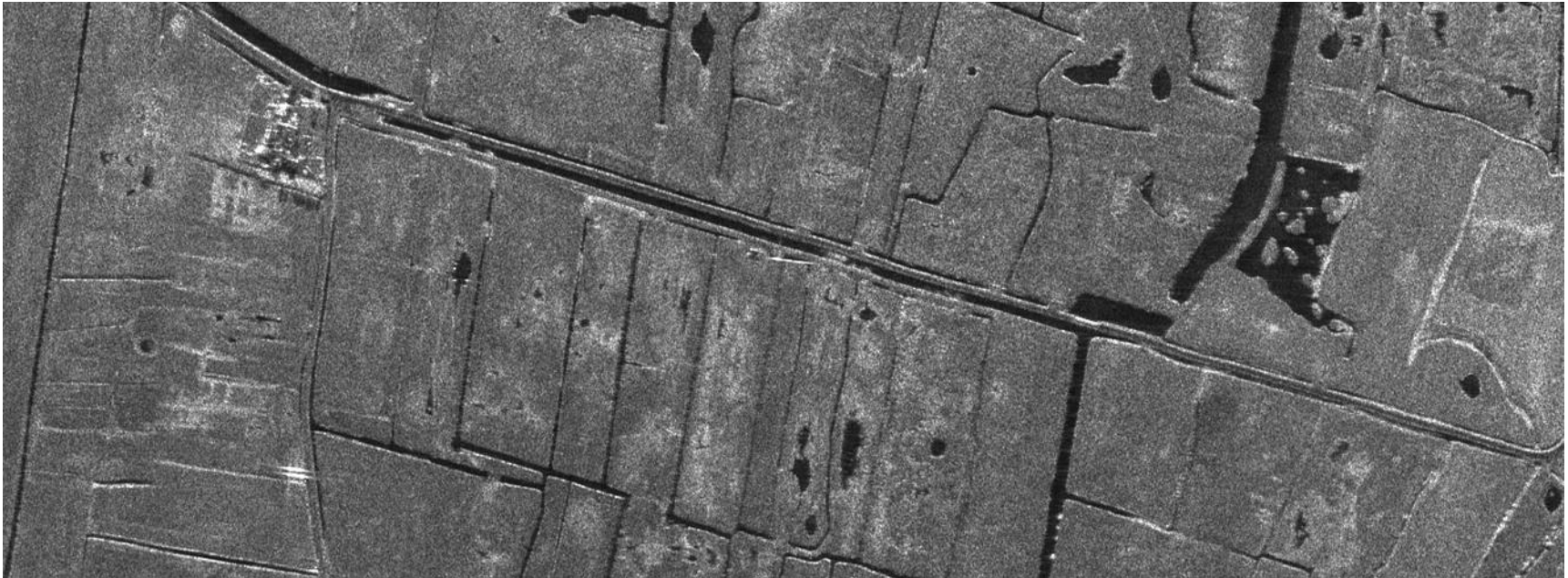
Flight test snapshots



METASENSING

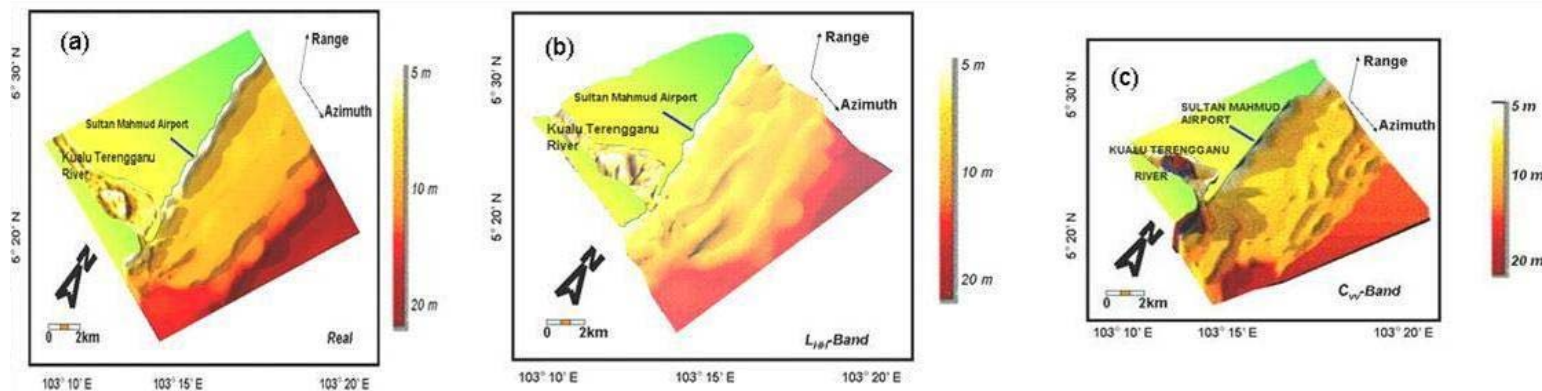


First results at X-band: ditches





Water area: bathymetry retrieval



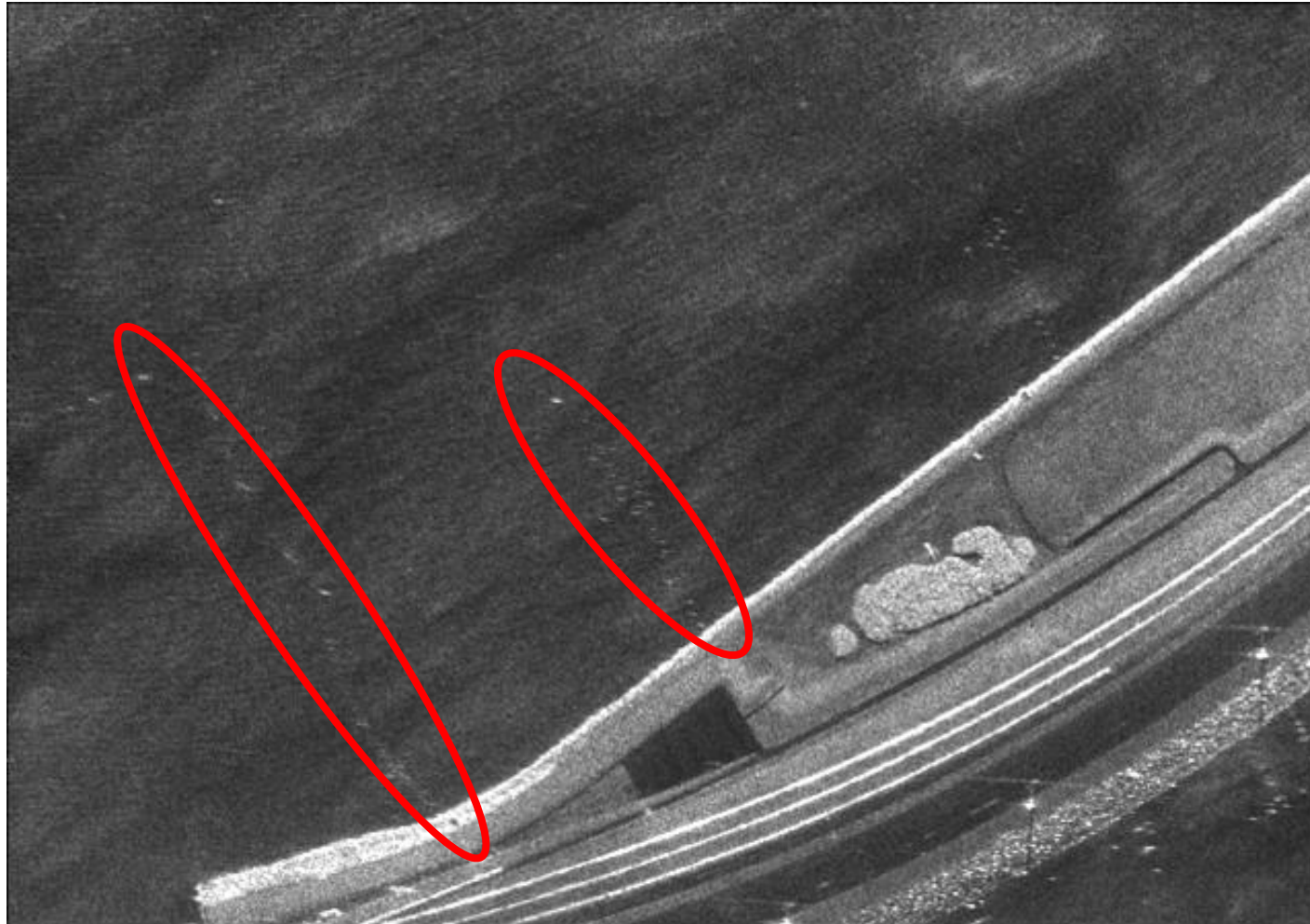
Bathymetry can be retrieved by using the new developed MetaSensing sensor



METASENSING



Object detection



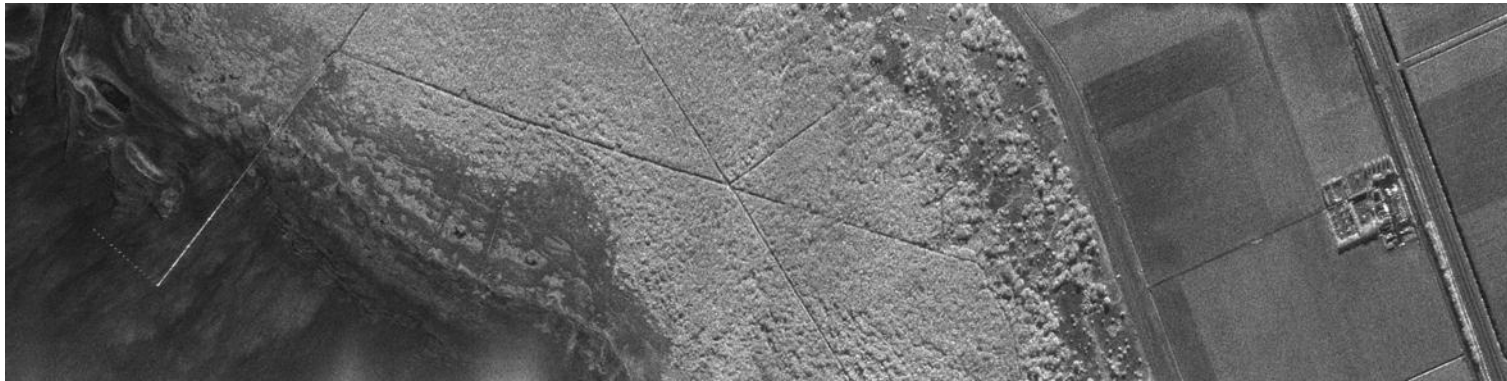


Object detection





Other images



Phase stability: 3.4 degree



METASENSING

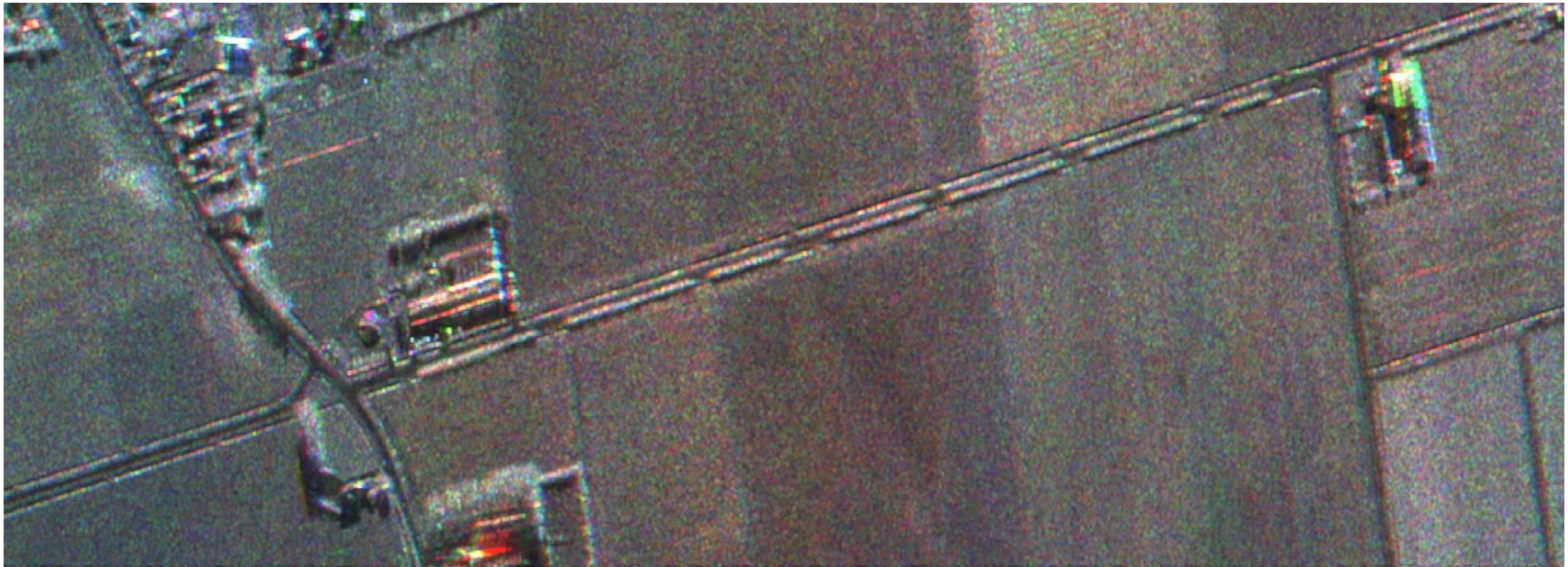


Sub-band processing 1/2





Sub-band processing 2/2



Angle color coded image



METASENSING



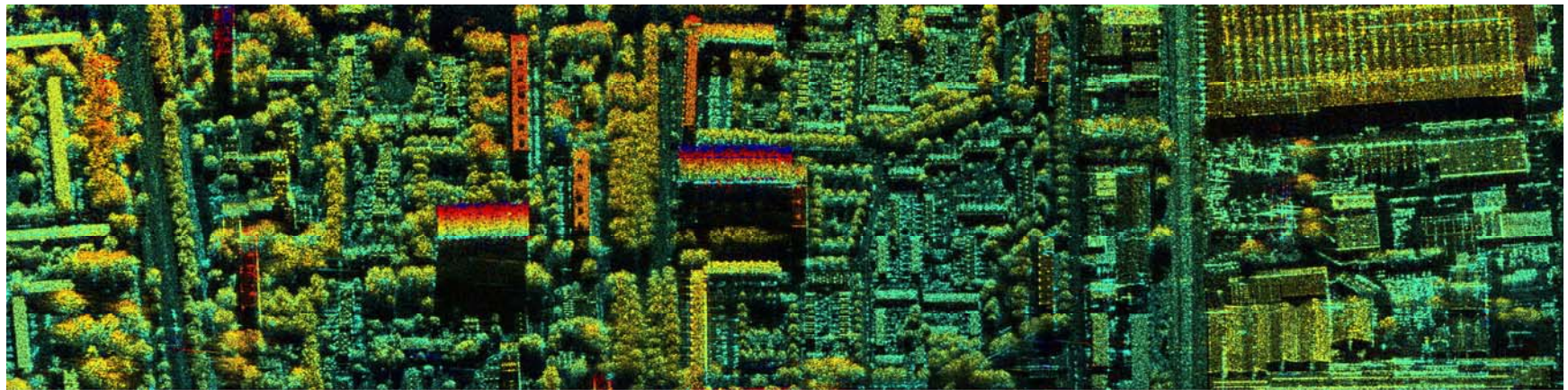
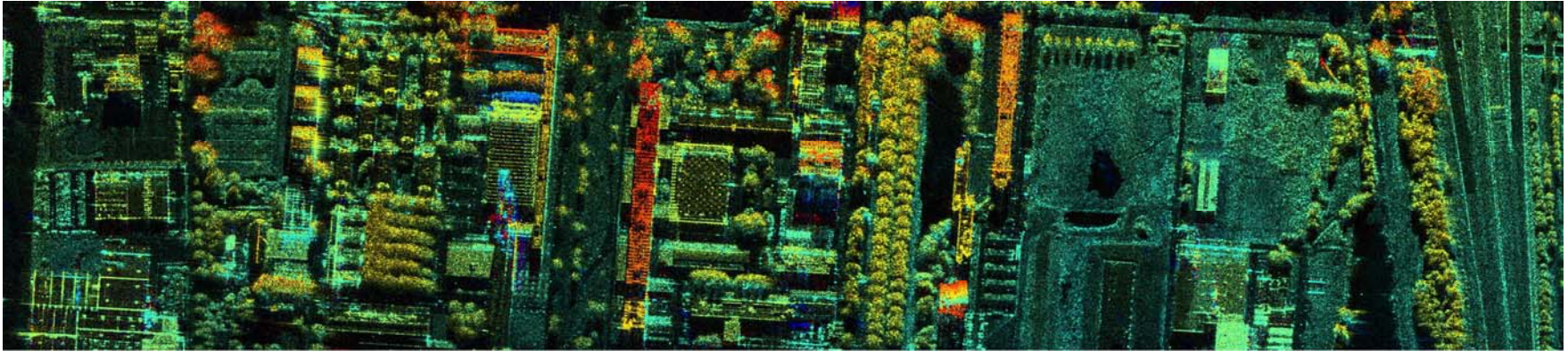
GeoTIFF images



METASENSING



First interferograms



Cross-track radar interferograms: color phase over amplitude



METASENSING



-
- MetaSensing
 - First flight campaigns and images
 - Next steps



METASENSING



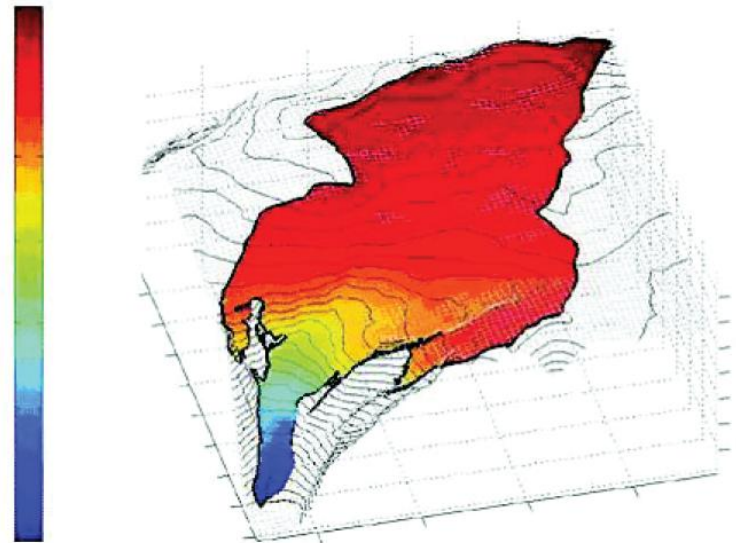
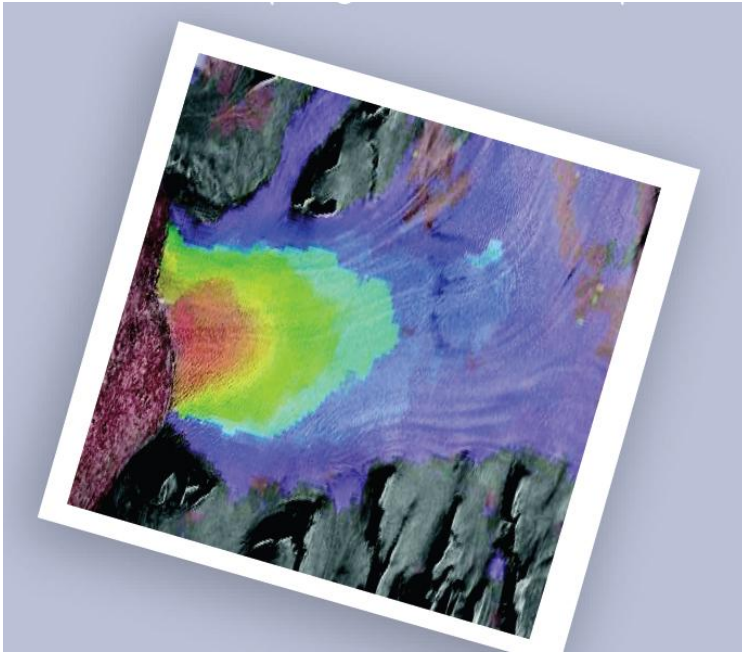
Fully polarimetric L-band sensor

- Digital back-end ready. Antenna subsystem ready in February 2010
- First flights in May 2010
- Operational in July 2010
- Services already requested by customer





L-band sensor: glacier monitoring



Glacier deformation monitoring at L band already demonstrated with motion accuracy up to 1 cm per day





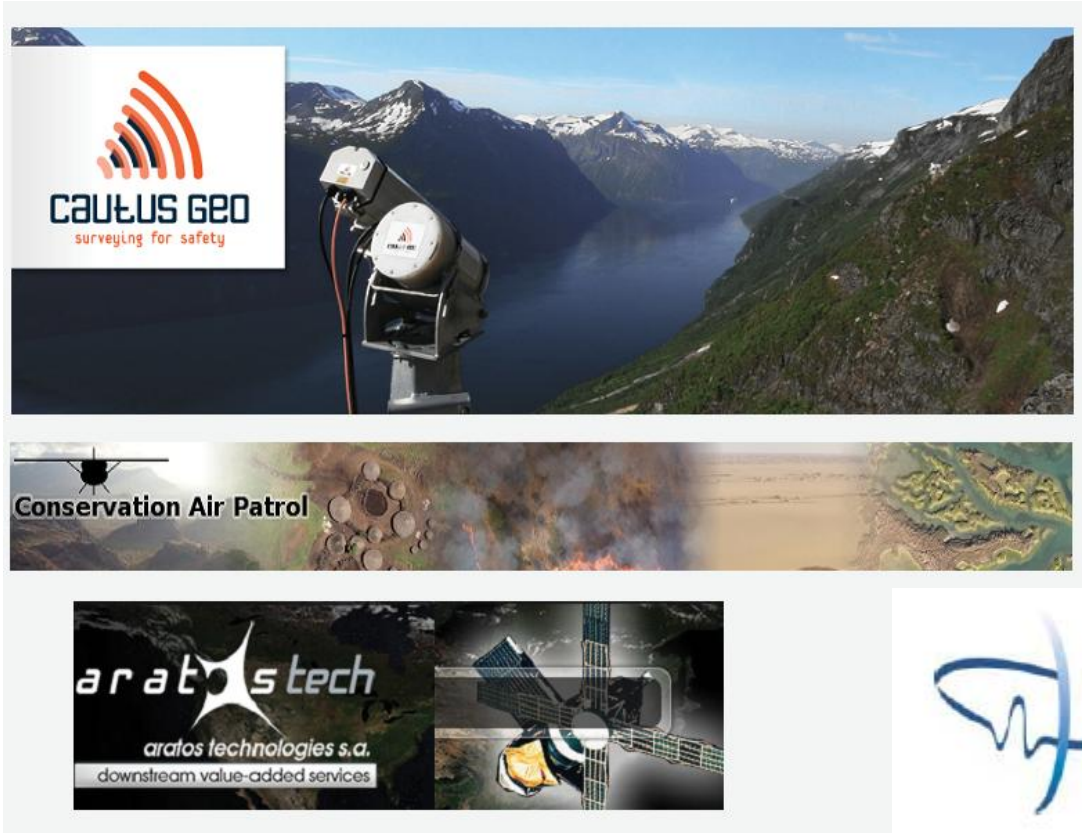
Other platforms for MetaSensing



METASENSING



Commercial partners



MetaSensing is willing to extend its partnership network through fruitful cooperation with complementary and/or enabling companies



METASENSING



METASENSING

HOME

SENSORS

SERVICES

CUSTOMERS

ABOUT US

METASENSING high resolution radar mapping at lower cost

By combining a new radar technology and advanced Synthetic Aperture Radar (SAR) techniques, MetaSensing offers very high resolution airborne sensors and superior quality radar mapping services at lower cost.

High resolution mapping is desirable for homeland security, environmental assessment and infrastructure monitoring, but it is usually too expensive or of difficult realization.

MetaSensing provides the cost effective mapping solution which meets the needs of governments and private companies who face daily the increasing demand for accurate monitoring.



COMPACT SENSORS



LOWER COST



ADDED VALUE



METASENSING

ESA-ESTEC, Keplerlaan 1
2201 AZ Noordwijk
The Netherlands
info@metasensing.com

NEWS

3D Mapping

September 2009

MetaSensing has collected first radar 3D data over Delft, in The Netherlands, by using a small and cost-effective single engine aircraft Cessna 172.

ESA press release on MetaSensing

July 2009

The European Space Agency (ESA) reports on MetaSensing achievements during the incubation period and



METASENSING