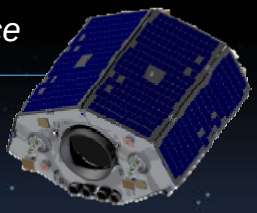
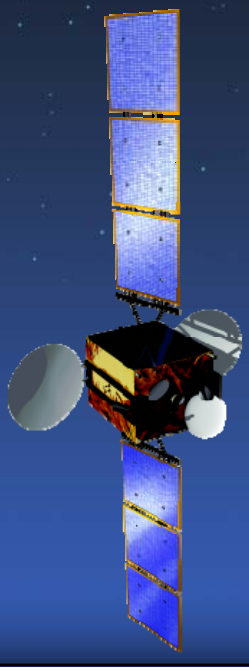
SURREY SATELLITE TECHNOLOGY LTD *Changing the economics of space*





Disaster Monitoring Constellation

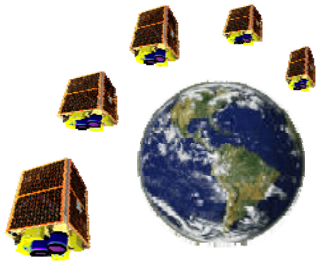
Richard Peckham,
Chairman UKSpace

October 2009

Disaster Monitoring Constellation (DMC)

- A Unique International Partnership Combining National Objectives, Humanitarian Aid and Commerce…

The Team



The Constellation

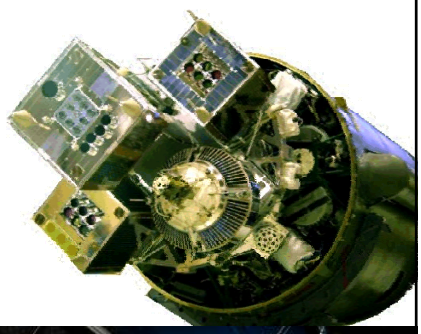
- ALSAT-1 (2002)
- NigeriaSat-1 (2003)
- UK-DMC1 (2003)
- BILSAT (2003)
- Beijing-1 (2005)
- Deimos-1 (2009)
- UK-DMC2 (2009)
- NigeriaSat-2 (2010)
- NigeriaSat-X (2010)

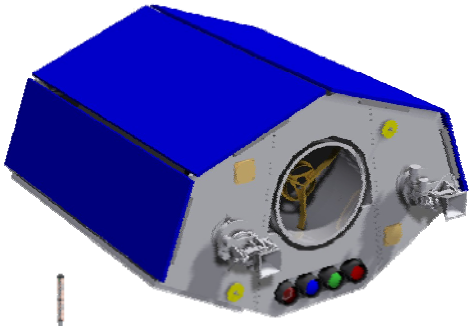
dmc International Imaging

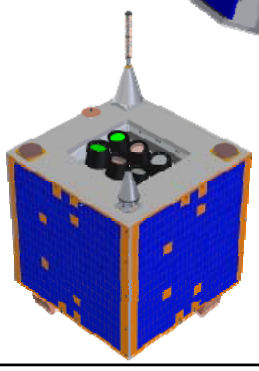
The Coordinator

The Satellites

- A range of sensors:
  - Optical medium to high resolution
  - Radar (in development)







DMC International Imaging - DMCii

Multispectral

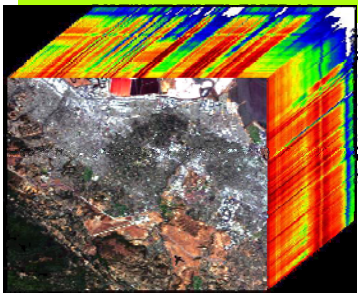
- GSD 32m, 22m (2009), 5.6m
- Up to 670 x 4,100 km images
- Daily Revisit
- Levels RAW to L1T Ortho

Panchromatic

- 4 & 2.8 metre GSD
- Up to 24 x 4,100 km images
- Large dynamic range
- Levels 1 & 2

Hyperspectral

- 18 metre GSD
- 64 Spectral bands
- Mutli-look angles
- Levels 1 & 2

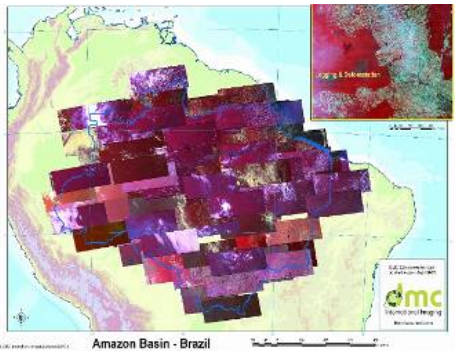


Forestry | **Agriculture** | **Environment** | **General Mapping** | **Civil Government**

http://www.dmcii.com

The Applications

- Multispectral imagery at 32m and 22m GSD



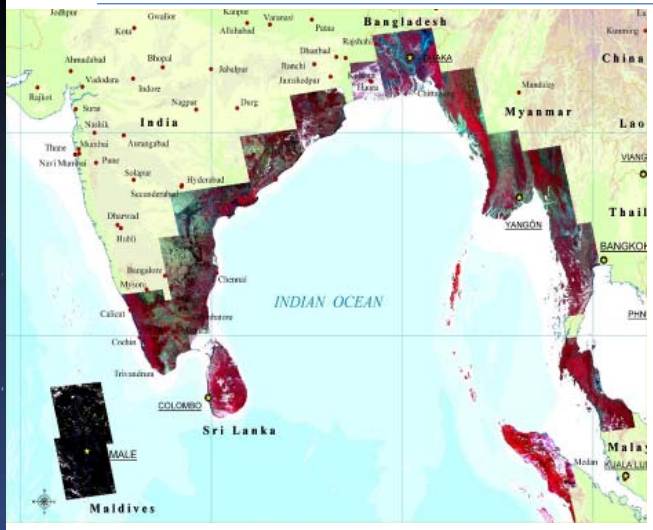
Deforestation & Land Cover

Global Science, Climate change

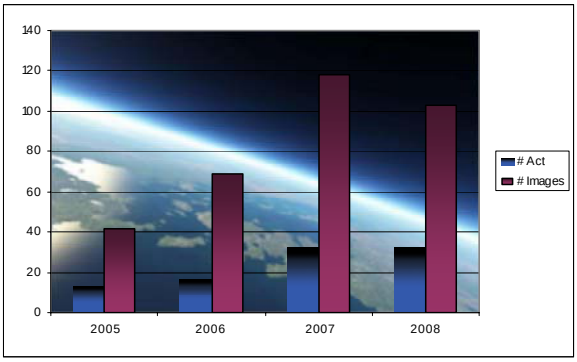
Flooding, disaster response

Fires: prediction, tracking

DMC in the international charter



- **International charter space and major disasters**
- **2005-2008 DMC has:**
  - responded to 93 activations
  - with 332 wide-area images
- **Major campaigns in 2008:**
  - Floods in Southern Africa
  - Earthquake in China
  - Cyclone in Myanmar



DMC and European Policy

The Disaster Monitoring Constellation addresses diverse European priorities aligning:

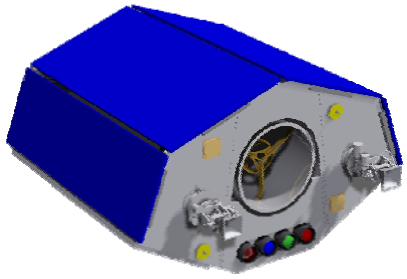
- *Environmental monitoring*
- *Climate change monitoring*
- *Economic benefit*
- *International co-operation*
- *Capacity building in Africa*

through a single programme

Demonstration of what can be achieved when government departments and industry work with a common aim

Next generation DMC

- SSTL currently finalising plans for the UK-DMC3
  - Based on design of NigeriaSat-2
  - Medium resolution and very high resolution (2.5m)
- Great potential for use in a variety of government applications
- 70% funding secured
  - Excellent opportunity for UK government to meet multiple objectives
    - International trade partnerships
    - Climate change monitoring
    - Support to sustainable development
      - Precision agriculture
      - Resource management




Example of 4m
hi-res image from
Beijing-1

Conclusions

- DMC has “changed the economics of space” for land imaging
- It is a successful international collaboration
- Providing useful and timely data:
  - For commercial users
  - For government users
  - In many applications including land usage, agriculture, environmental monitoring & disaster response
- Demonstrating what can be achieved when government and industry work together