

EARTH OBSERVATION SYMPOSIUM (B1)  
Earth Observation Sensors and Technology (3)

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A NEW GENERATION OF DISASTER MONITORING CONSTELLATION IMAGERS

**Abstract**

Over the last decade, UK-based small satellite manufacturer Surrey Satellite Technology Ltd (SSTL) has developed and launched 6 Medium Resolution Imagers (MRI) on the SSTL-100 platform as part of the Disaster Monitoring Constellation (DMC). Currently, 4 DMC platforms are in operation augmented by platforms providing both high resolution and the MRI. In addition two satellites with DMC imagers are awaiting launch. The DMC constellation is operated by the consortium partners and co-ordinated by SSTL's subsidiary company DMC International Imaging Ltd (DMCii).

There has been an interest in developing the DMC concept further to address a growing demand for additional capacity and capability. Consequently, two new developments of the MRI are planned for the future to enhance both the platform and the payload and provide the users with better coverage and a wider range of possible applications.

The first enhancement has been enabled by platform improvements, particularly in the areas of power generation, data storage and communications. The enhancements allow the MRI to be operated whenever the satellite is flying over land and is called "Earthmapper". Earthmapper, offers full coverage of the Earth's land area in 5 days and opens up the possibility of a constellation of 5 Earthmappers imaging the whole world landmass every day.

The second enhancement is a radically new optical design providing similar ground sampling to the current MRI on the SSTL-100 platforms but with significantly increased spectral range. This is an enhanced true colour imager incorporating several channels ranging from the blue to the SWIR that can, in principle, be tuned to the specific customer requirements.

These two new developments will be presented and details provided of potential applications.