



Press Release

Friday 29th August 2008 / Guildford, UK

RapidEye constellation launched successfully

The five-satellite RapidEye constellation was successfully launched onboard Dnepr from Baikonur, Kazakhstan at 0715 UTC today.

SSTL in Guildford, UK, designed and built the spacecraft bus, the spacecraft control centre and performed the spacecraft assembly integration and test. MDA's subcontractor Jena-Optronik GmbH of Jena, Germany, designed and built the imaging payloads.

MDA is the prime contractor of the RapidEye mission that is delivered turnkey and in-orbit to RapidEye AG. MDA has direct responsibility for the mission design, the spacecraft design and the ground planning and image processing system. The Canadian Commercial Corporation, a Government of Canada Crown corporation, is acting as the contracting agency between MDA and RapidEye AG

Following this morning's launch, the spacecraft separated from the launch vehicle in slightly different orbits to allow constellation phasing and will eventually be positioned equally spaced within the same orbit about 19 minutes apart. SSTL will control the constellation throughout the two week Launch and Early Operation Phase (LEOP) in a coordinated effort between their mission control facilities in the UK and the ground station supplied to RapidEye in Brandenburg, Germany. A team of three SSTL operators and three support staff will work with the MDA and RapidEye teams in Brandenburg, with the UK team analysing data as it is received and on standby to react to any technical challenges.

Project manager Ben Stocker commented: "The simultaneous launch of five satellites is not without its challenges. Commissioning will be performed from both the RapidEye ground station in Brandenburg and the SSTL mission control centre in Guildford. The five satellites will gradually disperse from each other following separation from the launch vehicle, allowing three satellites to be tracked and operated from Brandenburg with the remainder under the control of the Guildford operators. This method of operation offers the most efficient route to

achieving the maximum amount of contact time per satellite during the early days of commissioning following launch. As the satellites are gradually manoeuvred into position around the orbit during the commissioning phase, the Brandenburg ground station will assume full control over the constellation.”

Following separation from the launch vehicle, the spacecraft activate three GaAs solar panels, generating up to 105W in sunlight. The power system will then assume active control of the battery charge management system, enabling operators to initiate communication with the five RapidEye satellites via the S-band system. Within hours the team plan to upload programs to the on-board computers that will enable early operations and checkout to commence.

The attitude control system on each spacecraft will use magnetometers, magnetorquers, sun sensors and reaction wheels to achieve 3-axis stabilization, whilst using high accuracy attitude information from a star camera to finalise accurate nadir (towards Earth) pointing before proceeding with more advanced roll manoeuvres.

Following LEOP, the full functionality of the satellites, including the imaging payloads built by German company Jena-Optronik GmbH, will be tested by collecting imagery over a 10-week period. During this time MDA will demonstrate the performance of the constellation before RapidEye AG takes delivery of the system and commences commercial imaging operations.

RapidEye plans to operate the mission to deliver agricultural land information products and services such as crop monitoring and mapping, yield prediction and natural disaster assessment.

SSTL’s Chairman, Sir Martin Sweeting, commented: “SSTL long ago established the benefits of small satellite constellations and launched the Disaster Monitoring Constellation in 2002, paving the way for a new paradigm in remote sensing. The launch of RapidEye will fully realise the business potential of constellations.

The simultaneous build of five satellites is the largest mission so far in terms of maximising and managing production at SSTL’s Guildford facilities. Expert in-house engineering and project management teams worked closely with MDA, streamlining the design, build and test of all five satellite platforms.”

About MacDonald, Dettwiler and Associates Ltd (MDA)

MacDonald, Dettwiler and Associates Ltd (MDA) is the prime contractor for the RapidEye mission, responsible for the design and implementation of a turnkey system, including space and ground segments, launch, in-orbit commissioning, calibration of the spacecraft constellation and establishing the mission operations infrastructure.

MDA provides advanced information solutions that capture and process vast amounts of data, produce essential information and improve the decision-making and operational performance of business and government organisations worldwide. Focused on markets and customers with strong repeat business potential, MDA delivers a broad spectrum of Earth and space-based information solutions, ranging from complex operation systems, to tailored information services, to electronic information products.

MDA employs more than 3300 people in locations across the United States, the United Kingdom and Canada. The Company's common shares trade on the Toronto Stock Exchange under the symbol. TSX:MDA. www.mdacorporation.com

About SSTL

SSTL develops innovative technologies to change the economics of space, delivering cost effective satellite missions within rapid timescales. The Company is a world leader in the design, manufacture and operation of high performance small satellites with experience gained over more than 25 years and 27 missions launched.

SSTL employs 300 staff working on LEO, MEO, GEO and interplanetary missions, turnkey satellite platforms and space-proven satellite subsystems and optical systems. The Company also provides know-how transfer and training programmes and consultancy services, and performs studies for ESA, NASA and commercial customers related to platform design, mission analysis and planning.

Based in Guildford, UK, SSTL is currently owned by the University of Surrey (85%), SSTL staff (5%), and SpaceX of the USA (10%). www.sstl.co.uk

About RapidEye AG

RapidEye is an ISO-certified geospatial information provider focused on integrating customized and industry specific solutions into the workflow of global customers in agriculture, forestry, energy, infrastructure, government, security and emergency services.

The RapidEye system comprises a constellation of five satellites capable of downloading over 4 million km² of high resolution, multi-spectral imagery per day, control station and ground segment for processing and archiving data. With RapidEye's team of experts the RapidEye Constellation is set to provide cost-effective customized services.

The unique combination of large area coverage, high spatial resolution and the possibility of daily revisit to an area provide for superior management information solutions in agriculture, forestry and cartography. Currently more than 90 experts from more than 20 countries worldwide are employed by RapidEye. Following a successful launch, plans are being made to increase the team to over 140. For more information, please visit www.rapideye.de

About Jena-Optronik GmbH

Jena-Optronik produces opto-electronic instruments and systems, guidance, navigation and control (GNC) sensors, software for satellites and for image analysis to be used by the international aerospace industry. The company can rely on 135 highly qualified employees and their unique know-how. www.jena-optronik.com

Notes to editor:

This press release can be downloaded from the [SSTL online press room](#) as a Word and pdf document:

<http://www.ballard.co.uk/sstl>

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