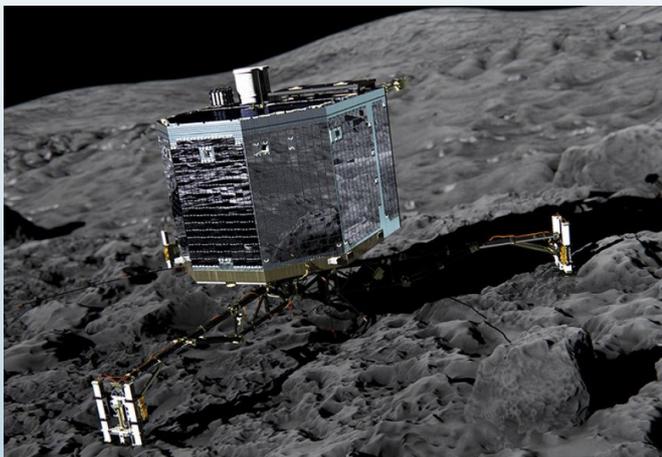# MOIS
Next Generation

RHEA Group's Manufacturing and Operations Information System (MOIS) is a suite of tools used by spacecraft manufacturers and operators to optimize the processes of spacecraft validation, mission operations preparation and mission operations. The MOIS Next Generation (MOIS-NG) toolset has been designed to incorporate and support new technologies being developed around mission operations.
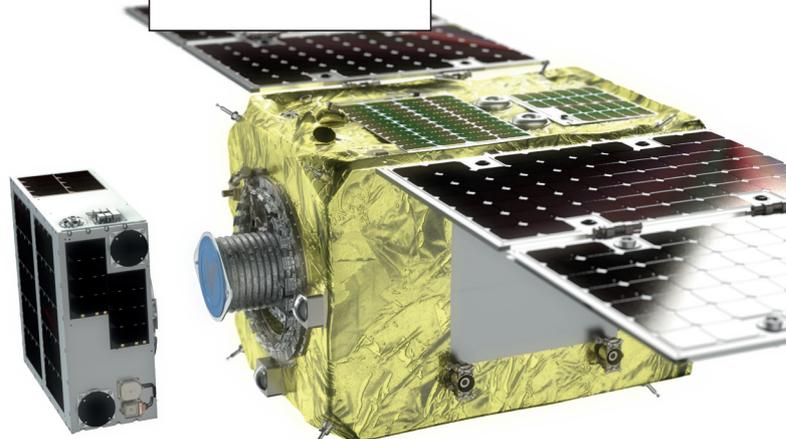
Within the space environment, test and operations procedures are critical to help with the development, verification and testing of complex systems. Efficient validation, configuration control, publishing and execution helps the test and operations teams create and maintain effective, high quality procedures.

RHEA Group's MOIS system has been used to support the test and operations of over 100 spacecraft worldwide, including CubeSat and SmallSat class missions, complex science spacecraft, Earth observation, communications and multi-satellite constellations.

MOIS provides an integrated environment supporting the full procedure lifecycle. It allows multiple users to create, edit, validate, version control, configure and publish procedures for both test and operations. MOIS supports manually executed and automated procedures. It contains its own powerful automation system to drive a spacecraft's test or control system.

ELSA-d, using MOIS as part of its ground segment capabilities
Image: © Astroscale

MOIS also enables procedures to be exported to a test and operations language for remote execution, enabling the procedures to be written once and then used in a variety of contexts and execution environments.

Benefits of using MOIS

- Easy to learn and intuitive to use
- Captures, manages and maintains test and operations knowledge
- Has multiple views of the same procedure (flowchart, script, tabular)
- Ensures consistent procedures for multiple users – single users or client-server deployments
- Validates procedures against the command/control database (telemetry and telecommands)
- Does not require programming skills
- Supports both online and offline editing
- Can be supplemented with custom editors for other test and operations artefacts linked to the command/control database
- Supports several different procedure execution environments
- Integrates with configuration management tools such as SVN and GIT
- Independent of the test or control system
- Supports fast validation and test turnarounds.

Rosetta's probe Philae - scientific mission using MOIS.

What's New in MOIS Next Generation (MOIS-NG)?

MOIS Next Generation includes multiple new key benefits, including:

- Support for European Ground System-Common Core (EGS-CC) while retaining compatibility with SCOS-MIB based systems

- Mission Model Editor (MME), a user-friendly tool for creating, viewing, and editing the EGS-CC Conceptual Data Model (CDM) including support for the ECSS Packet Utilization Standard (PUS)

- New procedure editor with synchronized script, flowchart and tabular procedure views

- Procedure execution with a choice of scripting engines (Groovy, Python, MOIS)

- EGS-CC Automation Procedure Language (EAPL) export

- Harmonised framework (look and feel, contextual actions, user-friendliness) providing access to both offline preparation and online execution environments

- Fully featured desktop editor as well as a web-based editor. Both editing environments support execution

- Import of MOIS6 and MOIS7 procedures and integrated support for custom procedure format importers based on an open Exchange Procedure Model (XPM)

- User interfaces based on extensive experience and industry needs

- Fast installation and deployment

- Links procedures to requirements and generates validation reports from test sessions

- Has a DOORS interface and a REQIF import/export

- Independent of commercial third-party proprietary tools and software

- Multiplatform: runs in both Windows 10 and Linux.

Find out more

To find out more about MOIS-NG contact:
info@rheagroup.com

Galileo, Europe's global navigation system, uses MOIS.

Image: © ESA

About Us

RHEA Group is a privately-owned professional engineering and solutions company, providing bespoke engineering solutions, system development and security services for space, military, government and other critical national infrastructure organizations. Since its creation in 1992, RHEA has built a reputation as a trusted partner, developing tailored solutions that help drive organizational and cultural initiatives, leading to sustainable added value for its customers.

Headquartered in Belgium, RHEA Group employs over 500 people and has offices in Belgium, Canada, Czech Republic, Italy, France, Germany, Spain, Switzerland, the Netherlands and the UK, and works at clients' premises throughout Europe and North America. RHEA is ISO 9001 certified. Key staff retain certifications under ISO 27001 and CISSP and similar.

✉ info@rheagroup.com

🌐 www.rheagroup.com