

Remote sensing simulator

The Remote Sensing Simulator (RSS) software tool models the performance of a large number of payload instruments for any orbit and celestial body. With RSS the performance of the instruments for realistic missions is predicted. The user has full control over the mission parameters and the response functions of the instruments.

RSS supports the following remote sensing instruments

Simulated instruments:
Imaging cameras
• nadir-pointing and stereoscopic, visible and infra red spectrometers
• visible, infrared and ultraviolet
Laser altimeter
Gamma-ray and neutron spectrometers
X-ray spectrometer and imager

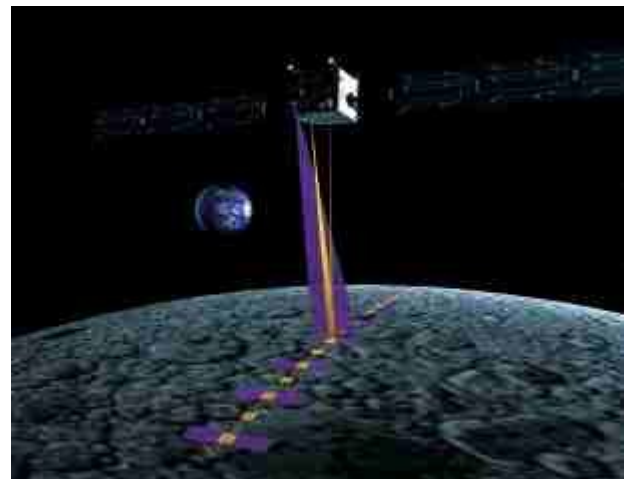
For each simulated instrument a number of key performance indicators are calculated, based on parameters provided by the user. The user can then select a planet and a spacecraft orbit, and the simulator produces output of the performance indicators versus time and environmental conditions. Any planet, moon or asteroid of the Solar System can be selected.

The user can provide input for the response functions and define one or more performance indicators for the mission and instrument. After configuration the performance is integrated over the mission duration and orbit to determine the scientific return.

RSS is an elegant software tool that offers a user friendly and fast way to predict the outcome of remote sensing instrumentation for planets.

RSS comes as a software tool running on your PC with on request a graphical user interface. cosine provides a manual, installation instruction and user support. The configuration is done by configuration files and the graphical user interface. cosine also provides support to add your instrument into RSS.

For more information about this product please contact Dr Erik Maddox, e.maddox@cosine.nl, phone +31 71 5284962



Remote Sensing Simulator Applications

Space Research

- Performance prediction of remote sensing of planets, moons and asteroids
- Earth observation

Instrument Design

- Instrument optimization
- Trade-off analysis

Mission Planning

- Mission preparation
- Observation schedule planning

