MOVING GROUND STATIONS TO THE CLOUD

📄 **WHITE PAPER**

Moving ground stations to the cloud

After more than 40 years of industry-leading experience on orbit, Maxar is re-imagining the collection of satellite imagery. For the last half century, every organization that uses satellite imagery has been forced to choose between control and cost: Construct an entire ground station to control satellites or trust a satellite imagery provider to come up with a good plan for collection. Maxar's Rapid Access Program offers a virtual ground station to its partners, balancing control and cost.
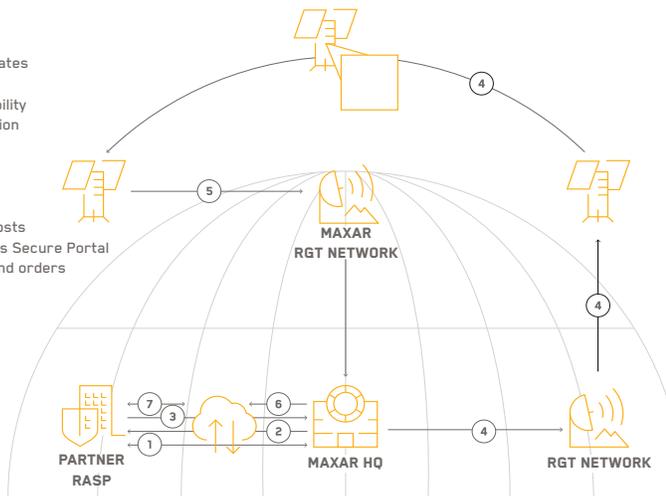
Saving time and money

Geointelligence organizations will have ground station level access without a massive bill and waiting years for delivery. Saving time and money for modern organizations, the virtual ground station is access without excess.

Virtual ground station

The Rapid Access Program employs a cloud-based virtual secure portal: Rapid Access Secure Portal (RASP) provides partners with many of the benefits of traditional direct access—without the need to invest time and money in an antenna. To simplify workflows, this innovative cloud service is broken into two user interfaces. Partners purchase satellite access minutes from Maxar and use a web-based Satellite Access Management Interface (SAMI) for satellite access planning and order management. Maxar tasks the satellites, downlinks and processes the imagery and delivers image products to the Imagery Management Interface (IMI) within six hours.

SUPPLEMENTING EXISTING GROUND STATIONS

Rapid Access is advantageous also for organizations that already have physical ground infrastructure. As the need for actionable intelligence grows, the virtual ground station allows partners to grow capacity and gain access to the world-class Maxar constellation quickly and affordably.

SUPPORTING GEOINTELLIGENCE OBJECTIVES

You need persistent satellite imagery access to modernize your geointelligence and imagery intelligence objectives. Rapid Access supports a broad range of use cases so partners can respond to dynamic situations with a dynamic solution.

PREPARE PREVENT ENFORCE MONITOR

COUNTER ASSESS RESPOND

1. Partner reserves SAW and evaluates collection opportunities
2. Maxar assesses collection feasibility
3. Partner submits finalized collection requests to Maxar
4. Maxar uploads commands to satellite and collects imagery
5. Maxar downlinks to RGT
6. Maxar processes imagery and hosts finished products on Rapid Access Secure Portal
7. Partner queries online archive and orders image products for download or FTP delivery
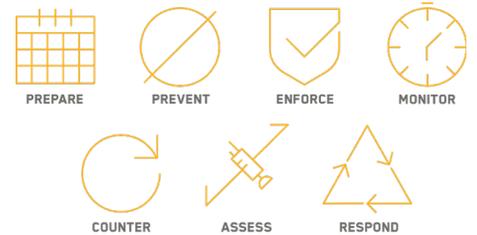
MAXAR RGT NETWORK

PARTNER RASP   MAXAR HQ   RGT NETWORK

Rapid Access concept of operations

MAXAR

User interfaces

Joystick control with the Satellite Access Management Interface

Use the SAMI to view and interact with the order-management database. Partners specify their own access window collection requirements, then evaluate and optimize potential access windows to plan collections. Maxar will verify the feasibility of submitted plans and uplink the orders to our satellite constellation. All of this can be done with as little hardware as a laptop or smartphone.

Secure hosting and dissemination with the Imagery Management Interface

Partners can utilize the IMI secure portal to view, stream and download imagery from a private catalog of imagery sourced from their access windows and target tasking orders. They can also enter orders for target tasking and view reduced-resolution archive imagery from multiple Maxar archives, then order it in full resolution to augment their private collections.
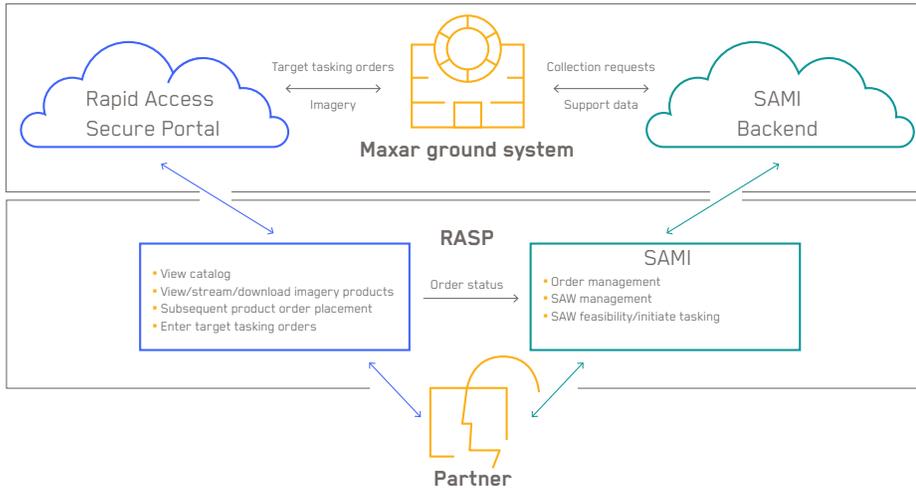
Rapid Access, high-level design and capability

Access imagery leadership

Innovative access means nothing if the service is subpar. Rapid Access is backed by Maxar's long history of leading the satellite industry. Maxar's imagery leadership is attained through industry-best resolution, pointing accuracy, latency, spectral diversity, agility and coverage.

Summary

The Rapid Access Program offers the first and only virtual ground station. This revolutionary satellite-tasking solution allows partners to enjoy joystick control of Maxar's satellite constellation along with secure hosting and dissemination of collected imagery. Augment the operating picture without investing millions of dollars and multiple years in ground infrastructure, or supplement current ground infrastructure with Maxar's world-class satellite constellation.

MULTITIERED SECURITY

The RASP is called a secure portal for a reason. The first layer of defense is a multitiered web application firewall that performs deep inspection of all web traffic. The RASP protects partner data by actively preventing SQL injection, cross-site scripting and DoS and DDoS attacks. All communication between the client and the server is done via HTTPS encryption. Security measures don't stop there. SFTP, Aspera and AWS S3 secure downloads from the IMI support a wide range of partner use cases:

Geointelligence objectives such as force protection, counterterrorism and assessment of critical military infrastructure can be augmented by streamlined file transfer to local image processing without compromising sensitive data.
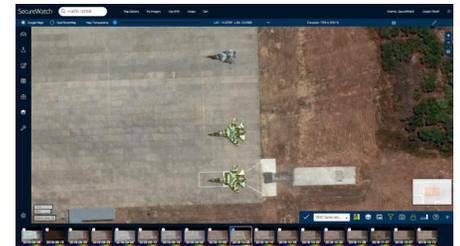
ORDER MANAGEMENT
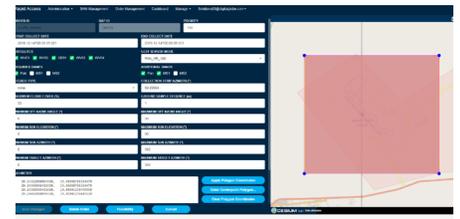
Create and manage collection orders to meet mission requirements

TASKING

Select the satellite access windows that best fulfill mission requirements and edit collection orders up to 90 minutes prior to acquisition

IMAGERY DISSEMINATION

Easily view, analyze and share imagery from your satellite access window within 6 hours of collection

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