2met

Advanced meteorological systems and solutions for processing Earth observation data

CGI

2met is a multi-mission, Earth observation (EO) solution for the real-time acquisition, processing, visualization and distribution of meteorological satellite data.

2met offers automatic workflow—from scheduling to acquisition, processing, visualization and dissemination—for government and defense organizations, national meteorological services, weather forecasters with media outlets, airports and other organizations that need to manage the complete life cycle of weather forecasting.

A commercial off-the-shelf (COTS) solution, 2met is built on standard hardware and software and supports multiple remote-sensing satellite systems, including Meteosat, MSG, GOES, NOAA, MetOp, Fengyun, Terra/Aqua, Suomi NPP and the JPSS system.

We have long-standing 2met contracts with clients all over the world, providing services that include ad-hoc support and preventative and standard maintenance. We also support upgrading existing systems and sub-systems using 2met hardware and software.

Software

2met software supports every step of the process, including:

- **2met acquisition software including**
  - Data reception and decoding
  - Data calibration and navigation (L0 and L1)
- **2met processing software offering**
  - Data positioning and projection on different map formats
  - Combination of spectral channels (e.g., fog detection, NDVI and RGB)
  - File conversion to XPIF, PIF, TIF, HDF and GRIB (more than 50 data formats)
- **2met visualization software allowing**
  - Graphical visualization for meteorologists' weather forecasts
  - On-the-fly data processing for many different satellite missions
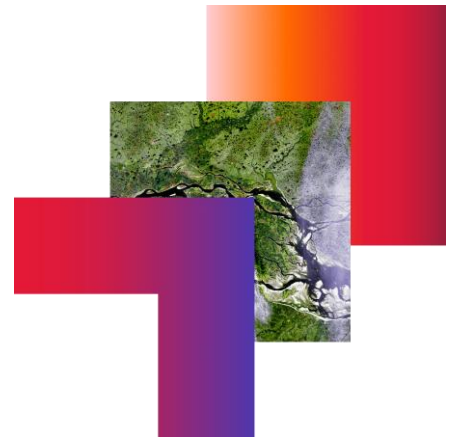
We have a long history of developing and maintaining real-time, user-critical systems and have been active in the space industry since the early 1970s.

We build and maintain robust, reliable systems to support vital operations, 24/7.

- **2met general features consisting of**
  - Platform-independent software components to enable use on Linux, Unix and Windows hosts (virtual machines)
  - Integration of existing application programs like AAPP, IMAPP, IPOPP, CSPP and RT-STPS

Hardware

Hardware associated with our 2met satellite-data solution includes:

- **2met Tracking Antenna X/Y**: The 2met tracking antenna provides satellite detection and tracking, support for S, L and X-band missions, control with different data formats, auto-track capabilities, and remote control and diagnostics according to service-level agreements.
- **2met DSR III Digital Satellite Receiver (DSR):** The 2met DSR III enables the reception of data from EO satellites. The receiver supports different data rates and modulation/encoding formats and other features such as software frame synchronization with multiple standards and special formats.
- **2met receiving stations**: Our 2met receiving stations feature a wide range of capabilities for direct reception of missions, COTS products and platform-independency. Our clients include EUMETSAT, national weather services, military weather services, universities, other research institutions and private organizations.

Service and maintenance

With 2met we offer:

- **Systems integration**: We handle turnkey systems and the integration of third-party solutions.
- **Infrastructure:** We operate satellite ground stations, control centers and complex local-area and wide-area networks (LAN/WAN).
- **Consulting**: We provide system and feasibility studies and technical concepts for end-to-end communication solutions.
- **Technical support**: We provide requirements specification, system engineering, advanced engineering analysis, system installation and integration, and testing (AIV support).
- **Training**: We provide operator, system administrator and user training at internal training facilities.
- **Maintenance**: We deliver maintenance service at varying levels according to customer needs.

CGI and Earth observation

We use our space-domain expertise to deliver unique insights from [Earth observation](#) (EO) satellites to users across a wide range of sectors and geographies.

- Our end-to-end EO ground system solutions work 24/7 developing applications and services to use EO data.
- Our EO clients include the European Organisation for the Exploitation of Meteorological Satellites, the European Centre for Medium-Range Weather Forecasts, the European Space Agency (ESA), the U.S. National Oceanic and Atmospheric Administration and other meteorological agencies.
- Our EO4SD Lab supports global, sustainable development activities to advance the discovery, access and exploitation of vital EO information.

About CGI

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments.

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