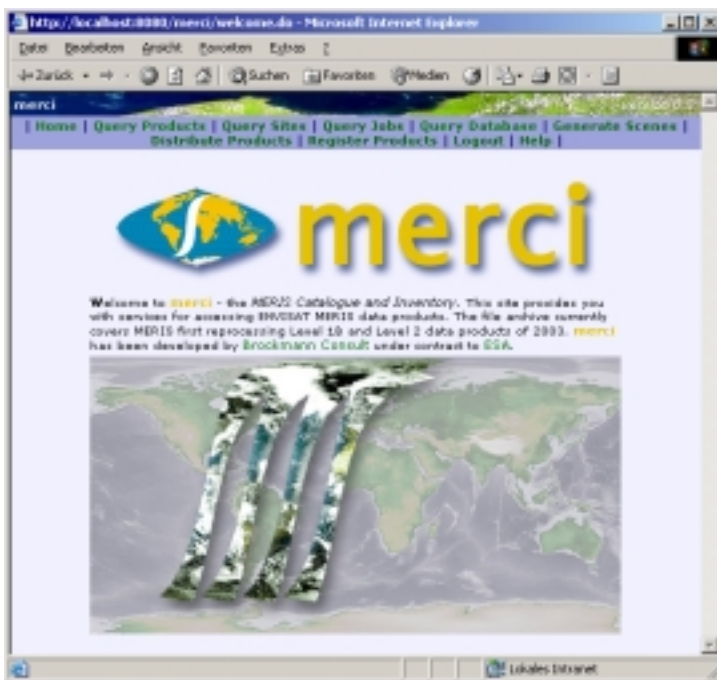




MERCI

- MERIS CATALOGUE AND INVENTORY -

After 2 1/2 years in space the Medium Resolution Imaging Spectrometer MERIS onboard the ENVISAT satellite has produced about 15 Tera Bytes of data. MERCI is a powerful software that has been developed to manage and process MERIS data regardless of the data volume and regardless of the storage media – even and specifically online storage is supported, either partly or for the complete archive of data to be managed. MERCI is used internally by Brockmann Consult to manage an online archive of 1 year of MERIS data and an offline archive of all MERIS data from 2002 up to 2004. MERCI provides all functions for data acquisition, registration, quality control, product query, child product generation and dissemination. MERCI comes with a Web-Interface to make the MERIS data accessible from any place on the world.



MERCI IS THE IDEAL SOFTWARE PACKAGE FOR DDS RECEIVING STATIONS

If you intend to buy a satellite receiving station (Digital Video Broadcast) to receive MERIS data directly, MERCI is the ideal tool for data management and child product generation.

MERCI CAPABILITIES

- *Product registration:* MERIS data coming from any source media (CD, DVD, Satellite Link) are registered in a product database and organised in a file repository.
- *Quick-Look generation:* During product registration, a quick-look and thumbnail are generated and available through the Web Interface
- *Statistics:* A large number of statistical information are generated during registration: blank lines, number of flags set, averages of band values, ...
- *Automated Quality Control:* Tests can be defined on the statistics to perform quality control of products during registration. A final "yes/no" is calculated and the test details are available through the Web.
- *Product query:* A powerful query interface includes the statistical parameters and an interactive map for searching relevant products from the archive
- *Child product generation:* Working on the quick-look image a subset of a full orbit product can be selected and generated on-the-fly
- *Pre-Defined sites of interest:* Fixed areas of interest can be defined which are automatically extracted from full orbit products.

THE SOFTWARE

MERCI is a distributed application consisting of 4 software modules implemented in Java – and thus being operating-system independent:

- Product registration
- Database
- Web Application
- Production Facilities.

The **Product Registration** analyses each single MERIS product entering the system. The results of this stage consist of

- General metadata,
- Statistics for MDS, Flag occurrence and blank lines
- Results of numerous quality checks
- Quicklook and thumbnail images.

This information is stored in the systemwide

Database (mySQL 4.1). Access to this data repository is possible through the **MERCI Web Application** allowing

- User management with scaled system access.
- Exhaustive queries on the database for exact product retrieval
- Viewing quicklooks of every product
- Full access to the quality checks and statistics information
- Direct download of satellite scenes
- On-the-fly creation of scenes from selected full-orbit products using the Production Facilities

The **Production Facilities** include also non-web-based distributed processing on multiple computing nodes. This allows effective mass production of satellite scenes for dedicated locations/time-ranges.

MINIMUM HARD- AND SOFTWARE REQUIREMENTS

- Windows PC or Linux Workstation recommended (CPU > 2 Ghz, 1024 MB RAM).
- Harddisk appropriate for the data repository. E.g. for 1 month of MERIS data ~500 GB.
- Apache Tomcat 5.0.25
- MySQL ver. 4.1 database
- Java runtime 1.4

EXAMPLE INSTALLATION

At Brockmann-Consult, the server sided hardware for the MERCI implementation consists of an 18 TB RAID array driven by three Pentium 4 computers, a dual AMD Opteron compute server and another 2 TB FTP server. All units are communicating over a high-speed Infiniband PXI-X connection.

This system can host approx. 2 years of MERIS full-orbit products and derived scenes.



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