MACRES, under MOSTI, has more than a decade of experience in satellite remote sensing.

MACRES is involved in a wide range of activities – from satellite data acquisition, archiving, processing and distribution to developing data application packages for natural resources, environment, and disaster management, and training for remote sensing users.

MACRES is the focal point for distribution of satellite remote sensing data products for users in Malaysia.
DATA DISTRIBUTION SERVICE IN MACRES
DATA DISTRIBUTION SERVICE IN MACRES

MACRES GROUND STATION
Temerloh, Pahang
Data Reception & Catalogue Generation

Mission Management & Control Centre (CNES, CSA)

MACRES HQ, Kuala Lumpur
User Service, Data Archiving Centre & Value-added Data Processing

SPOT IMAGE
MDA Satellite Operator Agencies

Users

MDA
Satellite Operator Agencies

DATA ACQUISITION VIA MACRES GROUND RECEIVING STATION (MGRS)

- MGRS received real-time data downlinks from the following remote sensing satellites:
  - NOAA (USA)  [Telemetry contract - April 2002]
  - Radarsat - 1 (Canada)  [Telemetry contract - October 2003]
  - SPOT - 2, 4 & 5 (France)  [Telemetry contract - July 2004]
  - Terra/Aqua (USA)  [Telemetry contract - February 2005]
  - IRS-P4 (India)  [Telemetry contract - July 2005]

- MGRS will receive data from Malaysia RazakSat satellite in March 2008.
DATA ACQUISITION VIA MACRES GROUND RECEIVING STATION (MGRS)

- **13m ANTENNA**
  - RADARSAT-1
  - SPOT 2,4,5

- **3.6m ANTENNA**
  - Terra & Aqua
  - Oceansat

- **2.4m ANTENNA**
  - NOAA
MACRES GROUND RECEIVING STATION (MGRS)

Acquisition and Reception System

Archiving and Processing System
DATA ARCHIVING AND RETRIEVAL SYSTEM (ARS)

The functions of MACRES Data Archiving and Retrieval System:

- To ensure the safety and security of MACRES remote sensing data
- To managed the data systematically and efficiently
ARS HARDWARE COMPONENTS

Application server

Management server

Console server

SAN storage

DLT Tape library

Off-line storage rack
DATA FLOW IN ARS

MACRES HQ

OFFLINE STORAGE RACK

DLT TAPE LIBRARY
700 slots ~ 100 TB STORAGE

SAN
Transmission 4TB
Shared 1TB

FTP SERVER

MGRS

8 Mbps Point To Point

PRODUCTION WORKSTATIONS
DATA ARCHIVING AND RETRIEVAL SYSTEM
DATA CATALOGUE & SEARCH SERVICE

As main functions of data archiving and distribution, MACRES has developed an on-line data catalogue and search service, accessible by users via MACRES website: www.macres.gov.my
You need to log in, in order to command through the catalogue.

Create new account

MGRS guide

MACRES Homepage

Member Access

User name: 

Password: 

Log me in
DATA PROCESSING & PRODUCTS

MACRES generate level 0 signal data, metadata and quick-look (preview images) for all data received by the MGRS.

**Standard data products** level 1, 2 and 3 are generated as and when orders are received.

- **Level 1**: imagery is radiometrically and geometrically corrected using satellite ancillary data
- **Level 2**: imagery is geometrically corrected based on ground control points (GCPs obtained from a topographic map)
- **Level 3**: imagery is geometrically corrected based on GCPs and digital elevation model (DEM)

MACRES also offers **customised products** such as mosaic and pan-sharpened imagery, Satellite Image Map (SIM) and imagery in various scales on photographic paper.
SPOT PAN-SHARPENED PRODUCT

2.5m resolution

Multispectral Mode (10m)

Panchromatic Mode (2.5m)
DATA DISTRIBUTION POLICY

To maintain a systematic national remote sensing data archive, data acquisition and distribution for Government use shall be centralised under MACRES.

All data of resolution up to 5m shall be distributed to users without any restrictions.

With a purpose to protect national security interests, all data of 5m and better than 5m resolution will be screened by CPP before distribution so that images of sensitive areas are excluded.

MACRES data is provided to users for non-commercial use only. Data reproduction for commercial purpose is prohibited.

All MACRES data product is protected by the copyright of the respective Satellite Operating Agency (SOA) and MACRES (under license from the respective SOA).
MACRES DATA PRICING POLICY

- The data is heavily subsidised by Government.

- 80% of the data cost (infrastructure and production) is borne by Government.

- Price range from RM1,300 – RM5,000 per scene (pricelist available from MACRES website www.MACRES.gov.my)
MACRES USER PROFILE

NO OF USER AGENCIES

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MACRES USER PROFILE

NO OF DATA REQUESTED

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CONCLUSION

With the capability to acquire real-time data, state-of-the-art data archiving, processing and production systems, MACRES will continue to better serve the Malaysian remote sensing community.