



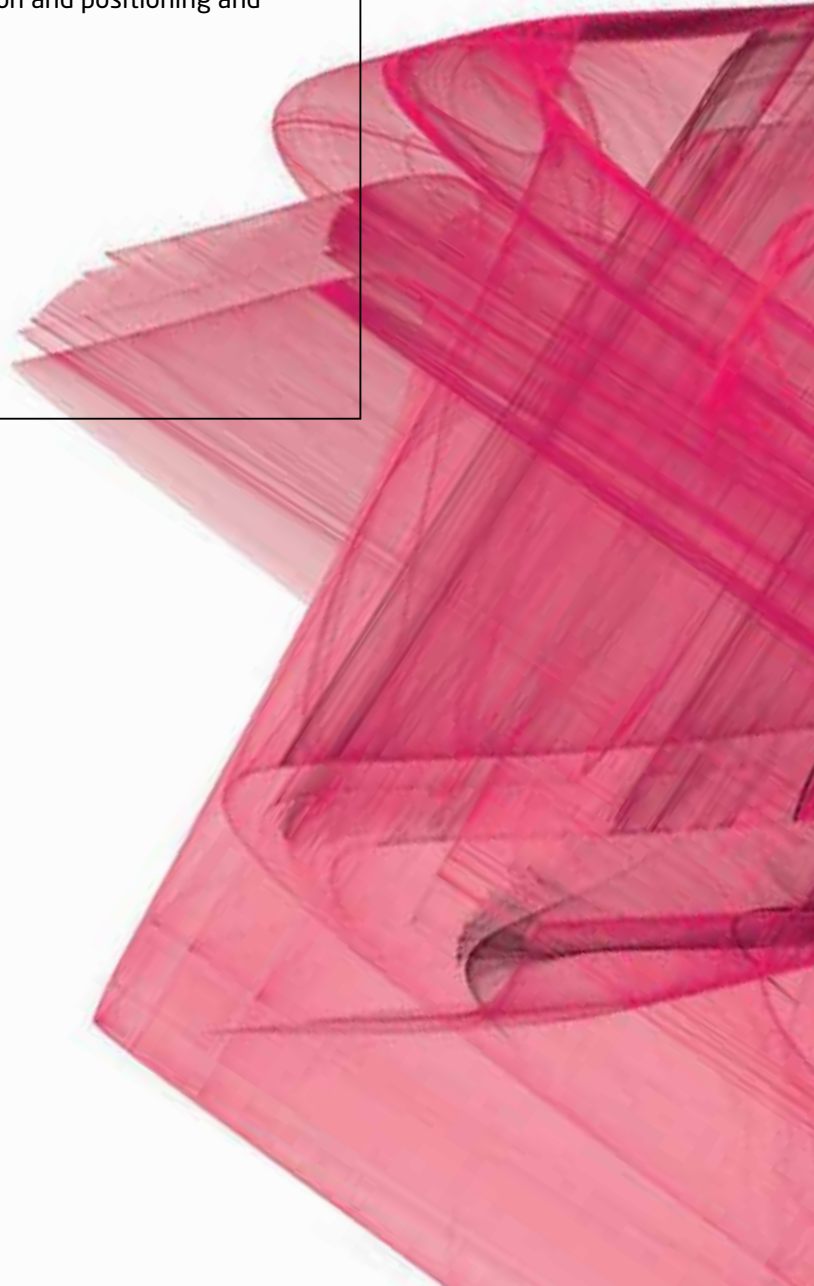
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SPACE

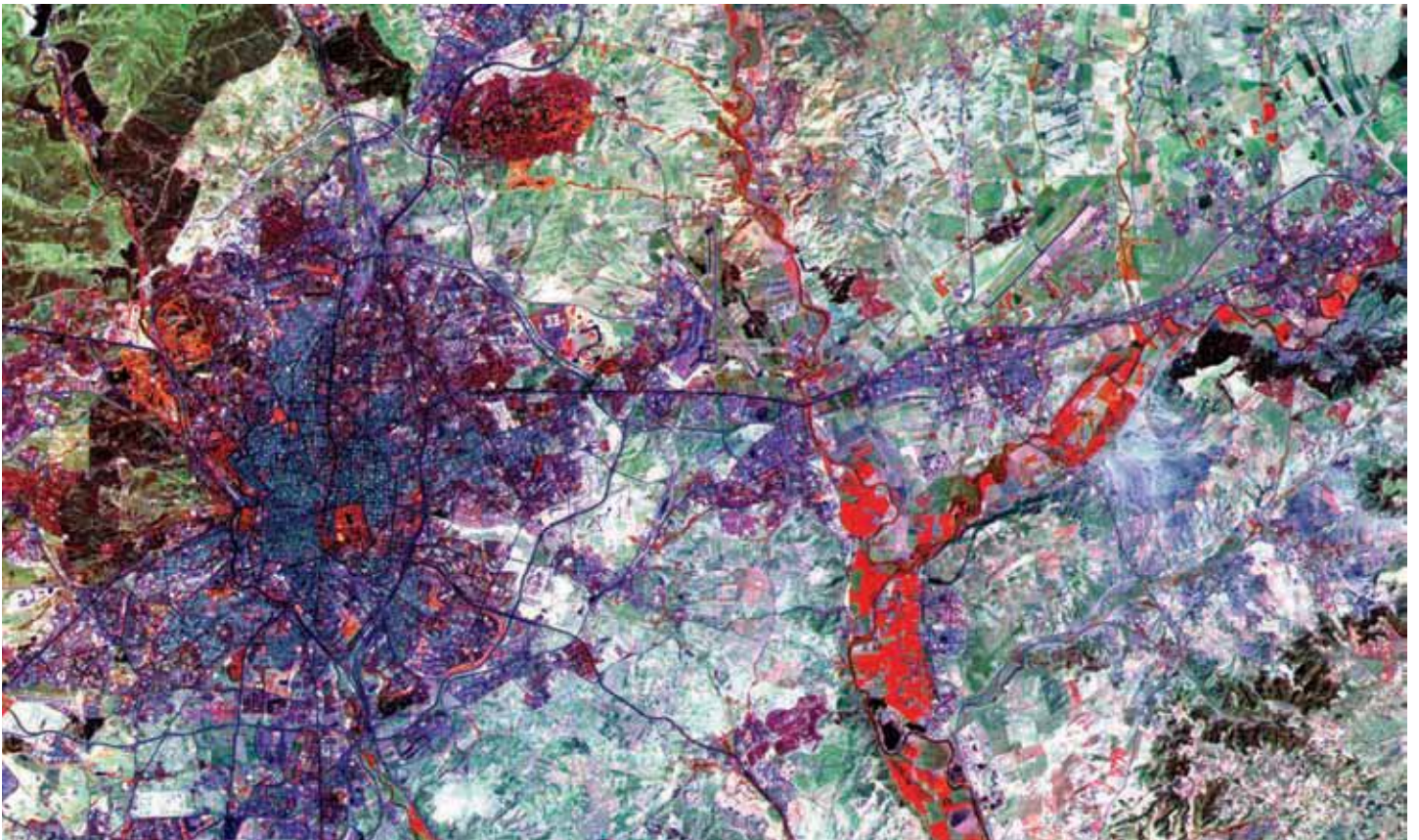
EARTH OBSERVATION SYSTEMS

Satellite communications, earth observation, navigation and positioning and control stations

indracompany.com



EARTH OBSERVATION SYSTEMS



We add value processing earth observation satellites data

Introduction

The growing interest in the monitoring and management of the earth's resources has resulted in an emerging remote sensing market, requesting data from satellite sensors with higher spatial resolution in different spectral bands.

Since 1984 Indra keeps on demonstrating its excellence in earth observation systems, using data from all kind of satellites and instruments (Landsat, Spot, IRS, IKONOS, ERS, Meteosat, NOAA...), developing projects in several fields such as meteorology, environment, agriculture, hydrology, emergency management (flooding, forest fire...) or territorial planning.

Nowadays, the remote sensing department is a multi-task group of skilled engineers and technicians in remote sensing, SIG, digital image processing and software development.

Technologies

Engineering of image reception stations.

Digital image processing: optical and SAR.

- Algorithms for radiometric and geometric corrections (Spot, Landsat, Helios, IKONOS, Eros, Pleiades, Terrasar...)
- Software for linear objects detection (Optical and SAR)
- Image processing software based on Java technology
- Interferometric SAR data processing software: EPSIE 2000

- Implementation and customisation of Geographic Information Systems (GIS)
- Pattern analysis and recognition
- Digital cartography at different scales
- Computer aided graphics and artificial vision
- Photo-interpretation of digital images
- SW exchange control
- Space data infrastructure

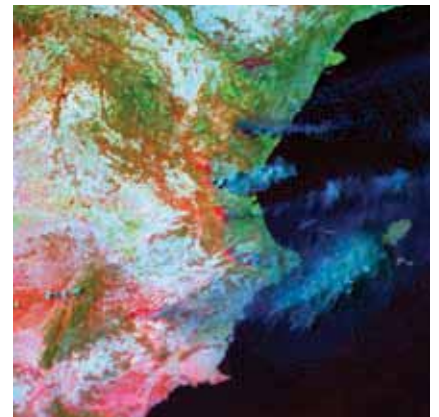


Multispectral IKONOS image used for farming applications (accurate farming, irrigation map)

Systems

- Image reception centers
- Processing and image exploitation centers based on distributed architecture (web server)
- Processing and management centres of urban geoinformation: urban services
- Synthetic aperture radar processor

- Image archive and dissemination systems.
- High resolution imagery distribution (IKONOS, QB, SPOT, KOMSAT....)
- Thematic processing center for emergency situations
- Multi-mission receiving stations (NOAA, Spot-Vegetation, Seastar SeaWiifs, Fen-Yung 1C)



Forest fire monitoring using NOAA AVHRR images

Aplicaciones

- Cadaster
- Land use
- Hydrology
- Agriculture
- Forest farming
- Urban development

- Oceanography
- Meteorology
- Military applications
- Real scene simulation (3D)
- Volcanology / seismology
- Environmental studies

- Forest fire and flooding
- Water quality
- Oil spill
- Subsidence
- Risk assessment and mapping
- Change assessment



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