



Info-Electronics Systems Inc.

Your Experts in *Hydro-Meteorology*

ISO 9001:2000 Registered Quality System



THE COMPANY & THE TEAM

Incorporated in 1981, **Info-Electronics Systems Inc. (IES)** is an engineering, integration and project management company. Working in the field of computer-based technologies, IES develops systems and application software for Meteorology, Hydrology, Remote Sensing, Environmental Monitoring, Communications and Instrumentation. With its headquarters in Montreal, Canada, IES has an additional office in New Delhi, India. We have a strong Process Management Methodology as our Quality Management System (QMS) is registered as being in conformity with ISO 9001:2000.

IES' success can be attributed to our experienced and motivated staff, the state-of-the-art technology we utilize and develop, and our dedication to Research & Development and Quality Assurance.

IES EXPERTISE

The Technology Domain

Technology-based software development in:

- Meteorology and Hydrology
- Remote Sensing
- Image Processing
- Environmental Monitoring
- Terrestrial & Satellite based Communications
- Telemetry
- Process Control & Industrial Automation
- eBusiness, Multimedia & Interactive Training

The Methodology & Services Domain

Employment of state-of-the-art techniques in:

- Project Management
- System Development
- Independent Verification & Validation
- Quality Assurance
- Configuration Management
- Training & Support

IES CAPABILITIES IN HYDRO-METEOROLOGY

IES' Hydro-Meteorology Division draws its strength from the rich and vast experience initiated at IES Inc. Canada through the development of various systems for top-class meteorological organizations, including the Meteorological Service of Environment Canada and other international Meteorological/Aviation Departments.

IES provides end-to-end solutions in this field, where the systems consist of data collection (in-situ, as well as, remotely-sensed), data backhauling to a central location, processing, and redistribution.

Some of the areas in which IES has been involved include:

- Provision of Ground Station for Satellite Data Reception and Processing
- Provision of equipment (RTU, sensors and satellite communication) for hydro-meteorological data collection and backhauling to the central location for processing
- Establishing turnkey hydro-meteorological data collection networks for Flood Forecasting, Avalanche Forecasting, Weather Forecasting and Cyclone Forecasting
- Meteorological data distribution/broadcast via satellite and via terrestrial networks

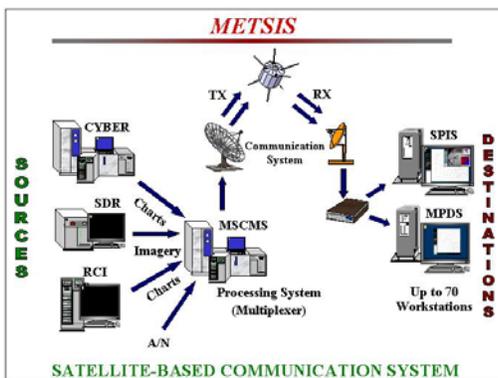
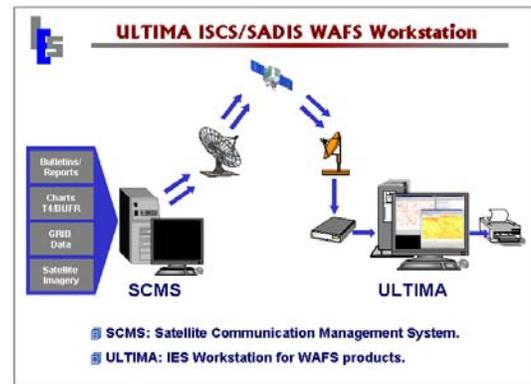


IES ACHIEVEMENTS – PROJECT EXAMPLES

IES has proven itself in the field of Hydro-Meteorology with numerous accomplishments. We are responsible for the project management, component development, and technical design of some major international projects.

ULTIMA^{IES}

ULTIMA^{IES}, the new generation of IES products, is the successor to HI-WIPS and is a modular and powerful SADIS/ISCS (WAFS) Reception and Processing System. It interfaces with satellite channels to receive and handle bulletins, charts (T4, BUFR), GRIB and imagery data. It performs all the functionalities required for a Weather Briefing Workstation. One can query the meteorological database as well as display and manipulate graphics products (charts & images). In addition, ULTIMA^{IES} provides tools for weather analysis and generation of significant weather charts. ULTIMA^{IES} has been installed in such countries as Cuba, Brazil, Bahrain, and Hong Kong.

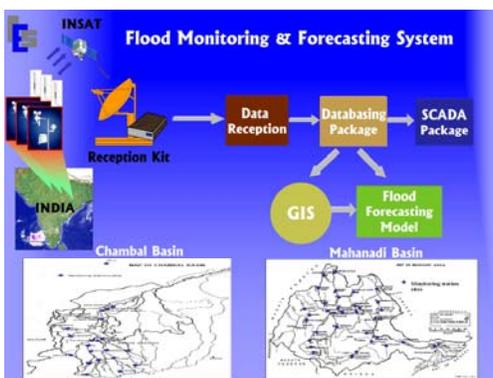
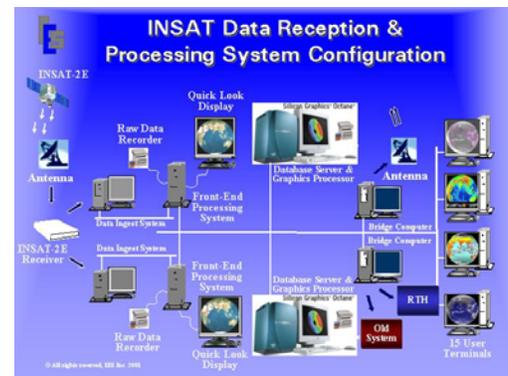


Meteorological Satellite Information System (METSIS)

Meteorological Satellite Information System (METSIS) was a satellite-based communication network developed for Atmospheric Environment Service Canada (now known as Meteorological Service of Canada). It was designed to distribute meteorological products (in the form of Alphanumeric data, GRIB data, BUFR data, Facsimile data and Satellite Imagery). This system has now been replaced with a VSAT-based high speed (up to T1 speed) system called **SATNET** with IES assistance.

The INSAT-2E Meteorological Data Processing System (IMDPS)

Development of a system called IMDPS, to collect and process imagery data from India's INSAT-2E satellite. Imagery is used by the India Meteorological Department for weather forecasting. The system includes Data Ingestion System (DIS), Front-End Processing System (FEPS), Database Server and Graphics Processing System (DSGP) and interface with the Regional Telecommunications Hub (RTH). All systems are duplicated to provide redundancy.



The Flood Monitoring & Forecasting System

The Mahanadi and Chambal rivers in Eastern and Central India, respectively, often flood during the monsoon season. The Flood Monitoring and Forecasting System installed in these two basins by IES consists of the supply and installation of fifty-five Remote Monitoring stations. These in-situ stations measure hydro-meteorological parameters such as water level, rainfall, temperature, humidity, and evaporation, along the banks of these two rivers. Information from these stations is backhanded via satellite to two Satellite Reception Ground Stations equipped with Processing Systems and installed in Jaipur and Burla.

This data enables the Central Water Commission of India to warn people of possible floods, as well as provide valuable information to plan dams for agricultural irrigation.



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