



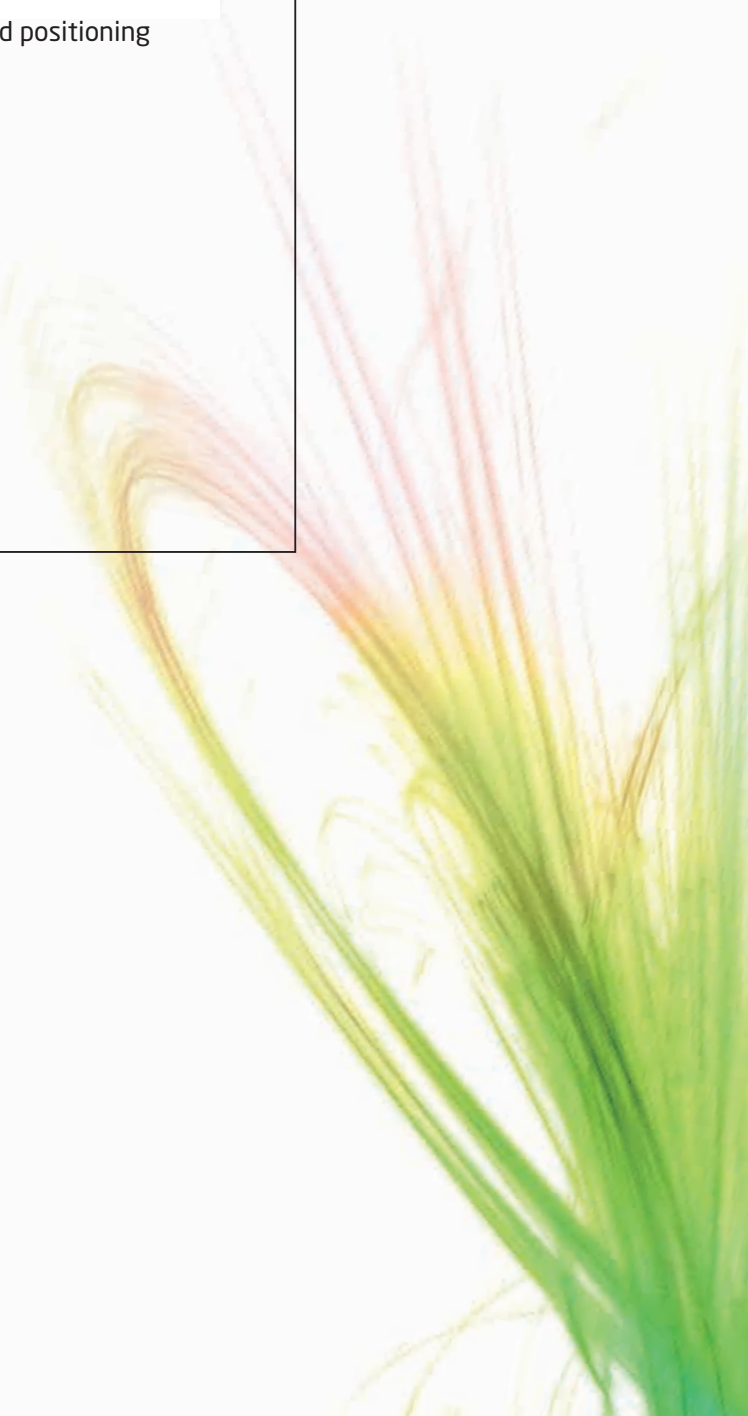
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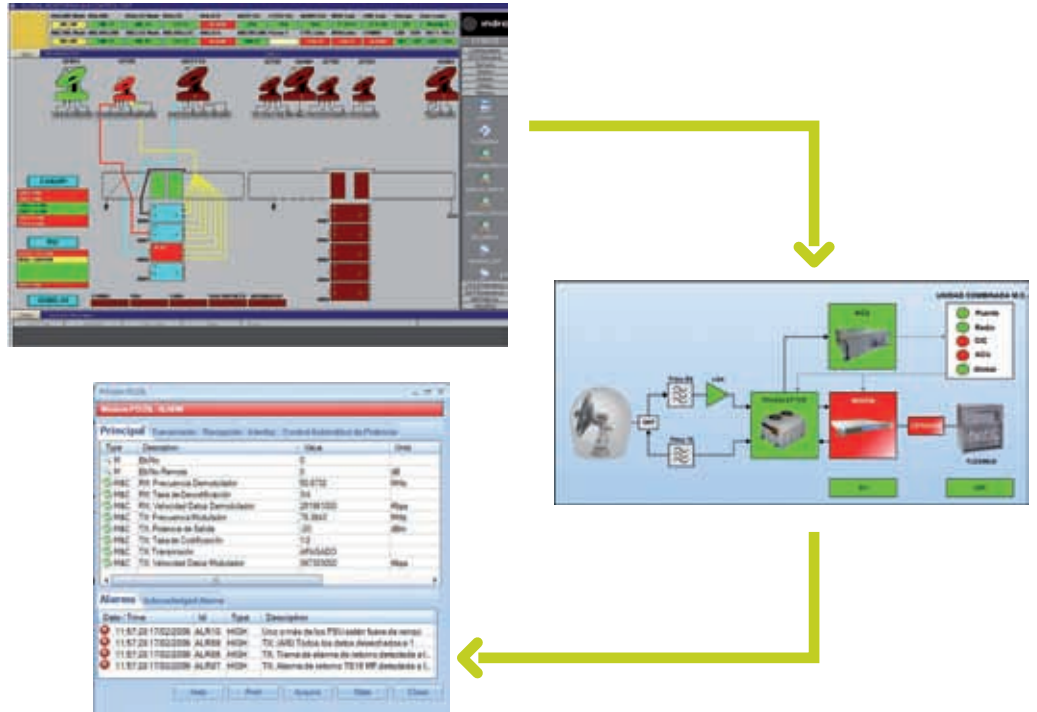
GENIUS M&C SOFTWARE

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

indracompany.com



GENIUS M&C SOFTWARE



Hierarchical views according to system architecture: System, subsystems, devices and parameters visualization

GENIUS is a suite of generic components that ease the generation of any M&C solution

Introduction

The GENIUS suite is a set of software components that can be used to generate final solutions devoted to M&C any equipment, process or system.

These final products are fully customizable and are designed to satisfy the most stringent requirements of a wide variety of systems, satellite operators and service providers.

The flexibility of the GENIUS suite allows to cope with existing customer infrastructure and the set of provided tools allow for an easy customization to be performed by the end user.

The GENIUS suite has been designed to provide a complete set of monitoring and control functions, such as:

- Data acquisition (raw parameters)
- Data processing
- Commands (control) execution
- Automated measurements
- Alarms generation
- Events log-book
- Long-term data recording
- Reports and statistics
- Graphic user interface based on menus, windows, diagrams, colours
- Multi-language
- Procedures and macro-commands definition and execution

- Programmed actions (macro-commands triggered by a condition)
- Scheduler of activities
- Centralized and/or stand-alone data base
- Security: user levels for different application access
- Operational modes (master/slave, local/remote, unique controller...)
- Hot and cold redundancy
- Spares management

The GENIUS M&C adaptability allows building global solutions starting from equipment level and ending in large complex systems.

GENIUS M&C architecture

As shown in the diagram below the GENIUS M&C is composed of the following basic elements:

- Acquisition module (ACQ)
- Operation console (MMI)
- Scheduler module
- Events viewer module
- Recorder parameters module
- Data base manager module
- Simulator

GENIUS characteristics

The characteristics of the GENIUS M&C can be summarised as follow:

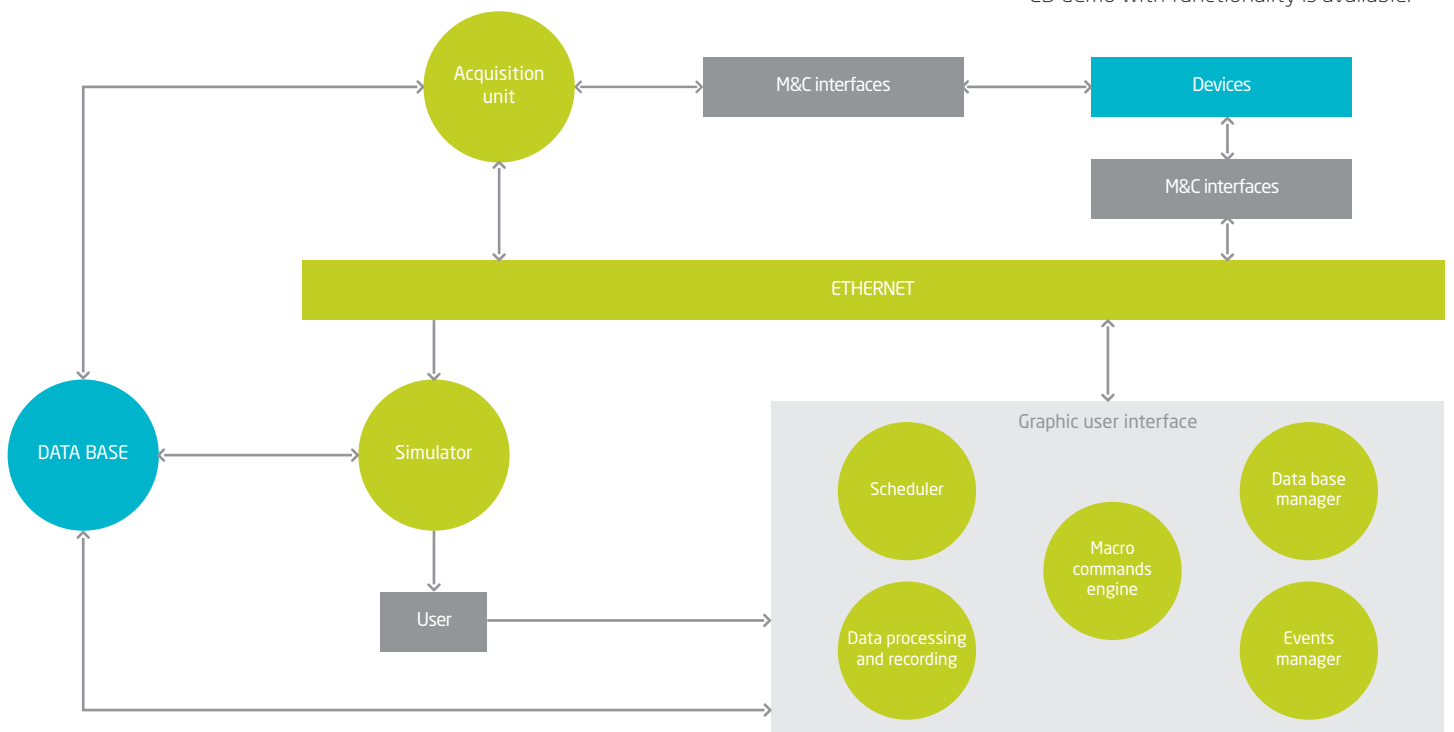
- Available for windows environments
- Allows to build applications in a hierarchical way
- Client/server architecture (multi-client allowed)
- Centralized database (SQL)
- Operational modes:
 - Master/slave
 - Local/remote
- Fully configurable by setting the data base
- In-house acquisition platforms
- Hot redundancy
- Drivers library (more than 400 devices already supported)

- Diversity of interfaces supported:
 - Serial: RS-232, RS-422, RS-485, Q2
 - GPIB
 - Ethernet:
 - SNMP
 - TCP/IP
 - Basic monitoring and control
 - FTP
 - Dry contacts
 - Digital input/output signals
 - XML

The main simulator characteristics are:

- Behaviour rules definition
- Training plans
- Contingencies (risks) simulation
- No GUI difference: identical to any client
- Configuration from the same data base of above components

The behaviour of the GENIUS M&C is defined by setting up the data base. So, this is the main task that has to be done in order to produce a specific M&C product based on it. CD demo with functionality is available.





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