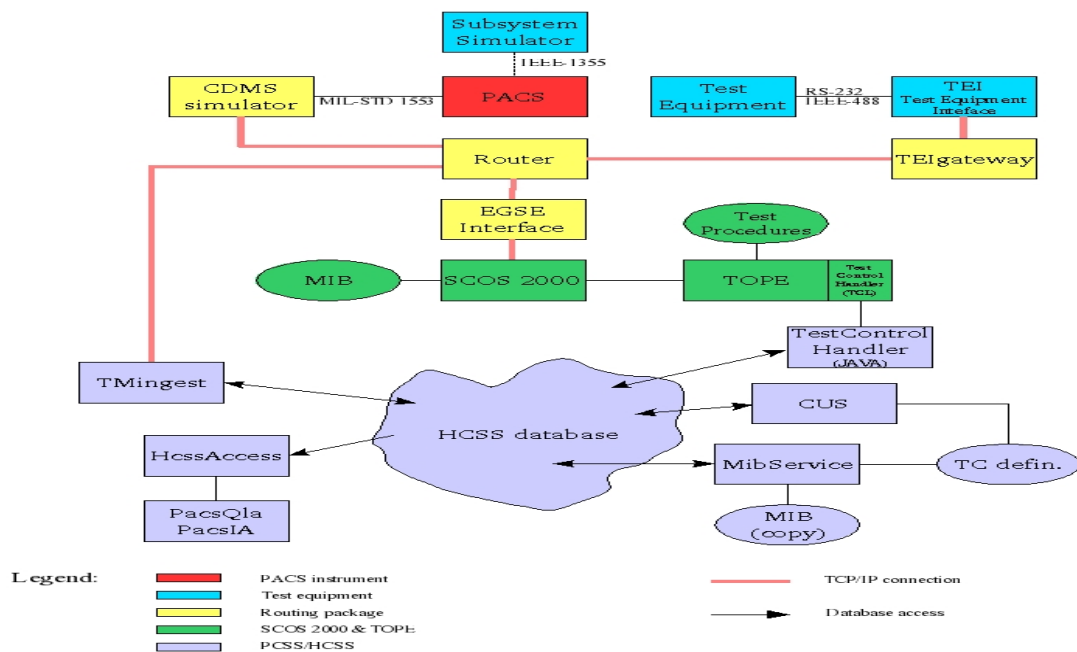




The PACS Electrical Ground Support System at MPE



MPE is hosting the PACS Instrument Control Center, responsible for software development, calibrations, and operations of the PACS instrument for ESA's Herschel mission. As a first step, the PACS Electrical Ground Support System (EGSE) consists of those electrical systems and related software, which provide the functionality required to test and operate the PACS instrument at various stages of its development. Here we give an overview of the major EGSE units to support Instrument Level Tests (ILT) and its setup at MPE. To minimize costs and the resource requirements for the development and operation of the HERSCHEL satellite, a common approach to instrument testing and in-flight operations has been taken, with the maximum reuse of equipment or software in all phases of the mission.



- The **CDMS** (Central Data Management Subsystem) Simulator simulates the CDMS subunit of the HERSCHEL satellite.
- The **Router** is the main application to distribute Telemetry.
- The **TEI gateway** (Test Equipment Interface) and **TEI** are the interface to **Test Equipment** like external calibration sources.
- **SCOS2000** is the HERSCHEL real time monitoring and commanding system used by all three instruments and ESA mission control.
- The mission specific behavior of **SCOS2000** is controlled by a set of files named **MIB** (Mission Implementation Base). It contains Mnemonics of Telemetry commands and definitions.
- **SCOS 2000** is extended by **TOPE** (Test and Operations Procedure Environment) which allows to execute Test Procedures.
- **TestControl** is the Interface between **TOPE** and **HCSS**. Using the **TestControlHandler** observations are commanded which were defined within **CUS** and stored in **HCSS**.
- **HCSS** (Herschel Common Science System) is the common software environment of the HERSCHEL software. The backbone of **HCSS** is an Object Oriented Database.
- **CUS** (Common Uplink System) is used to define Observations and Test Procedures. It use Telecommand definitions provided by the **Mibservice**, which is the interface to the **MIB** (copy)
- **TmIngestion** is responsible to inject data to the Database of **HCSS**.
- **PacsQla** displays PACS detector data in near real time
- **PacsIA** is the interactive analysis system of PACS data for all phases of the mission