Assets in MTF Database

In MATHIS Control Room mode (integrated in the CERN Control Infrastructure), all those calibration parameters are registered in the MTF Database, the main CERN database meant for manufacturing and installation follow-up of equipment.

The BCAM instruments, as well as the metrologic tables holding the devices and the reference pillars of the survey network, should be registered in that database using the InforEAM interface. Four categories of equipment (assets) have thus been newly created (use this code when creating a new asset):

- PXGISBP001 - BCAM reference pillar
- PXGISBT001 - BCAM metrologic table
- PXGIOBBR01 - BCAM Device - Brandeis CCD Angle Monitor
- PXGIOHBR01 - BCAM Device - Brandeis CCD Angle Monitor (High Resolution)

For the installation of the two first HIE-ISOLDE cryo-modules, 16 assets of type PXGIOHBR01 have for instance been inserted in the database with the identifiers PXGIOHBR01-CR000001 to PXGIOHBR01-CR000016 (use this ID for retrieving them through InforEAM interface).

30 custom fields describe the calibration constants of the HBCAM device: for each new asset, they must be set with the values given by the manufacturer (see Calibration Data File).

Extraction of the calibration data is also possible through SQL queries and specific views accessible from our Oracle Survey Database. Four additional views were therefore created and granted to survey@accdb account:

- asbviews.INFO_PROPERTIES_GIO
- asbviews.API_EQUIPMENT_GIO
- asbviews.API_STEP_GIO
- asbviews.API_PROPERTY_GIO.

The first view asbviews.INFO_PROPERTIES_GIO contains the property names corresponding to the calibration parameters (see example of SQL request listing the property names). The last view called asbviews.API_PROPERTY_GIO contains the values themselves (see example of SQL request querying the Pivot.x value of the Front Sensor for all registered HBCAM devices in the database).

In MATHIS software, we use the MathisCOM Java server and well formatted TCP-based queries to get those required constants. The MathisCOM module translates automatically the incoming message into appropriate SQL requests to the Survey DB on the tables above.