



Entity Relationship Diagrams (ERDs)

Entity relationship diagrams are schematic drawings showing the relationships between various table columns (entities) in the database. They are useful if you want to import data into SmartPlant Instrumentation, and need to consider the logical sequence of data entry to maintain its integrity.

Meanings of ERD Symbols


Lines indicate associations, that is, there is a relationship exists between the entities.

A diamond  next to an entity indicates an aggregation.

An open arrow  next to an entity indicates a primary key – foreign key relationship.

In the example below, the diamond indicates that the revision is part of the drawing; if the drawing is deleted, the revision is also deleted automatically. The open arrow shows that the drawing is the primary key and the revision is the foreign key.



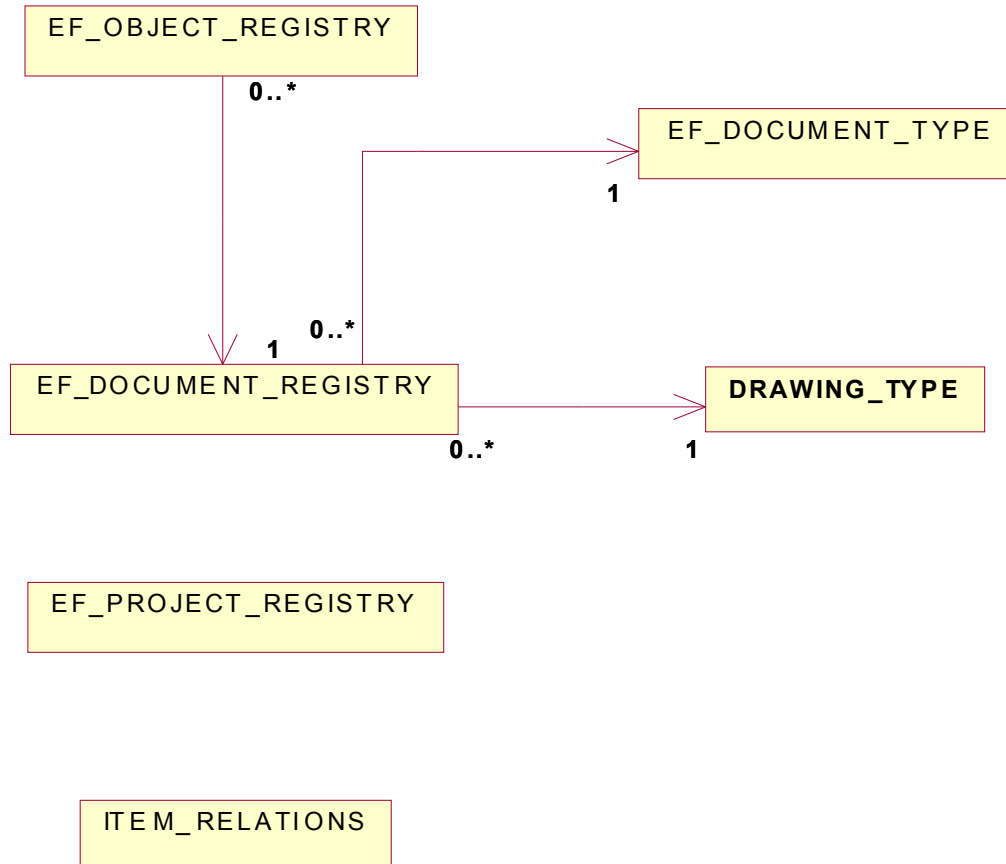
A closed arrow  next to an entity indicates an inheritance relationship. In the example below, the closed arrow indicates that the Contract Report List inherits structure and behavior from the Installation Category.



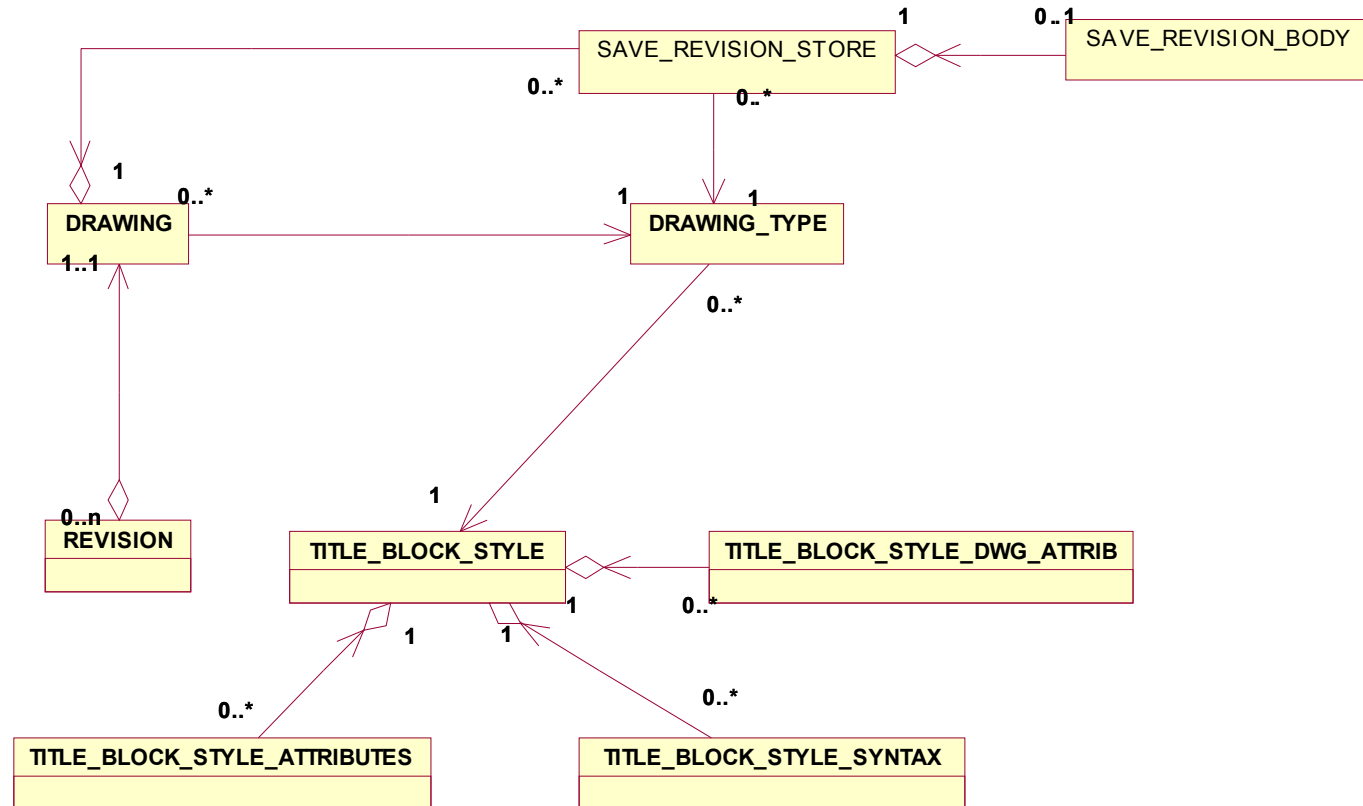
Multiplicity indicators:

- 1 Exactly one
- 0..* Zero or more (entity is not required).
- 1..* One or more (at least one entity is required).
- 0.. 1 Zero or one.
- 5.. 8 Special range (5,6,7, or more).
- 4.. 7,9 Combination (4,5,6,7, or 9).

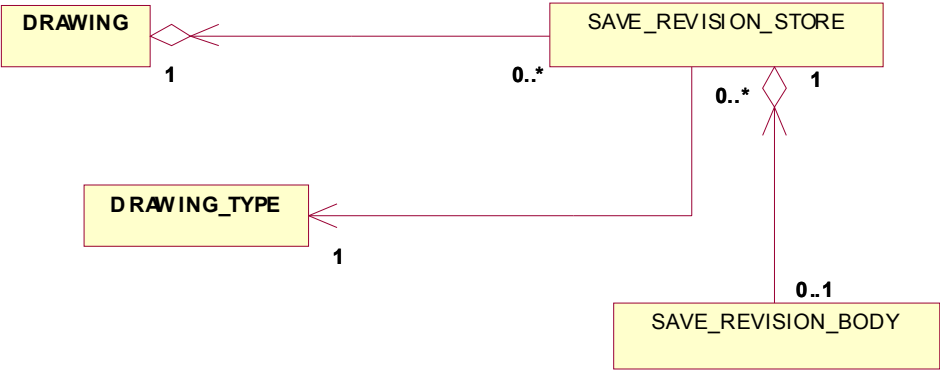
The Engineering Framework



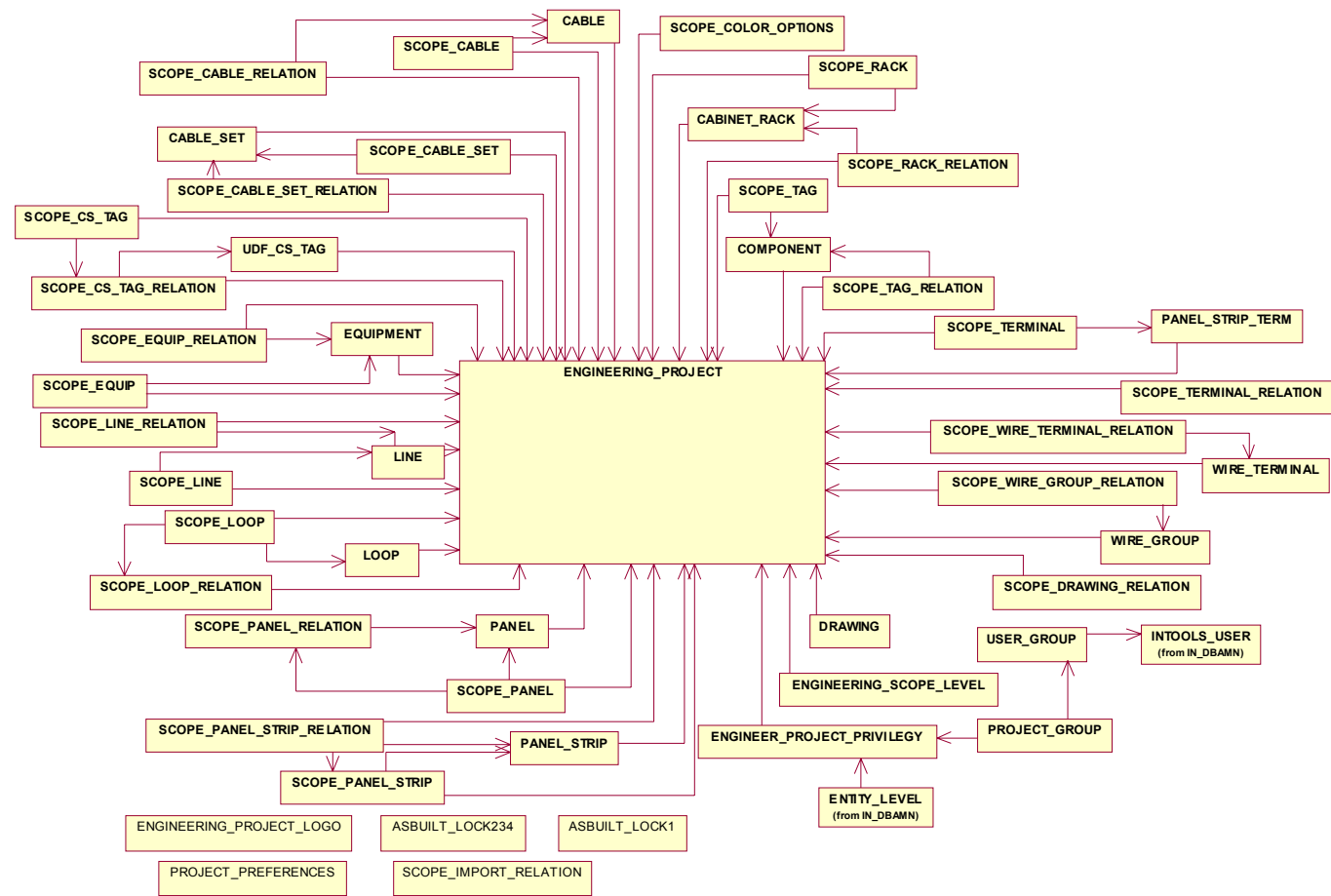
Document Number



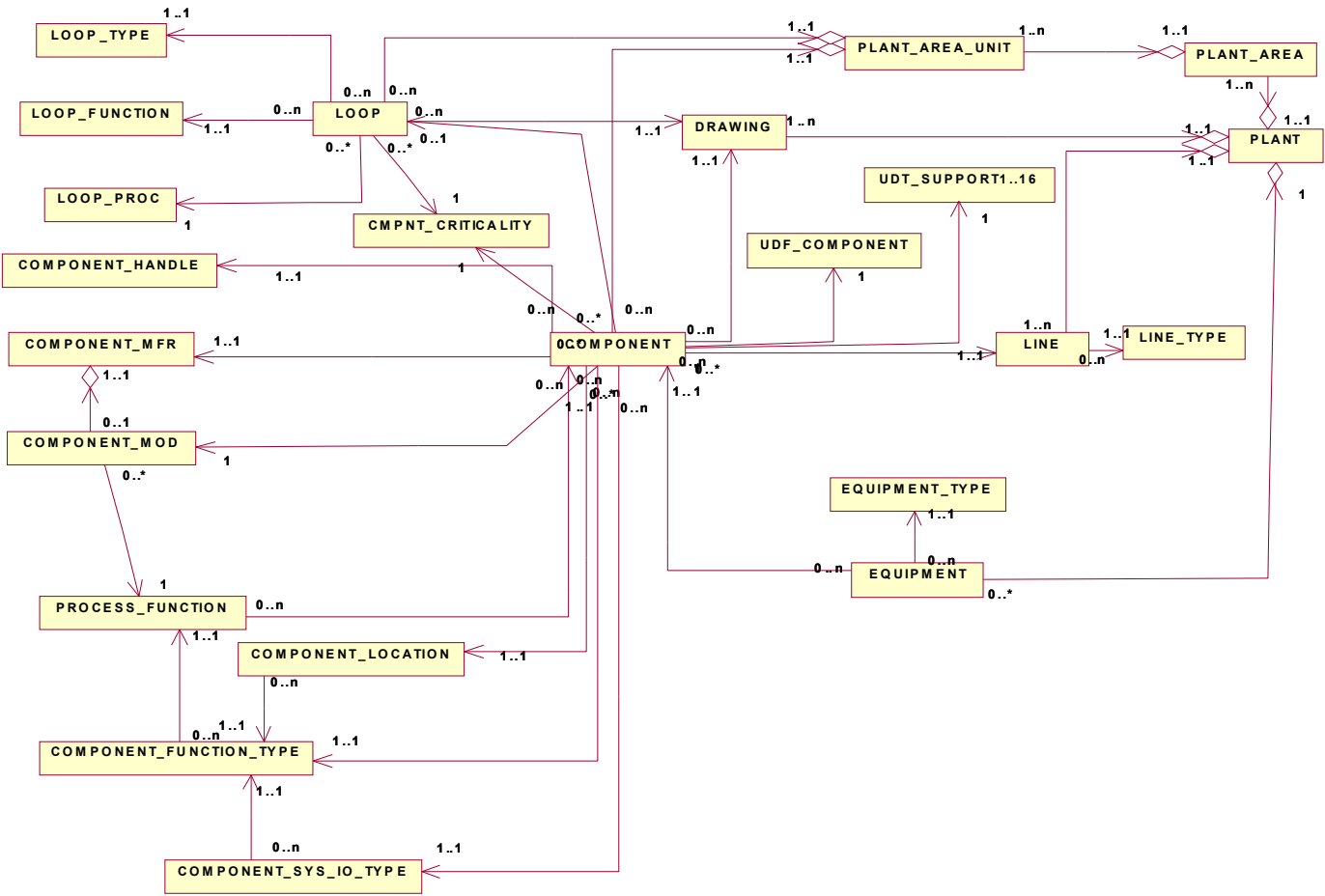
Saved Revision



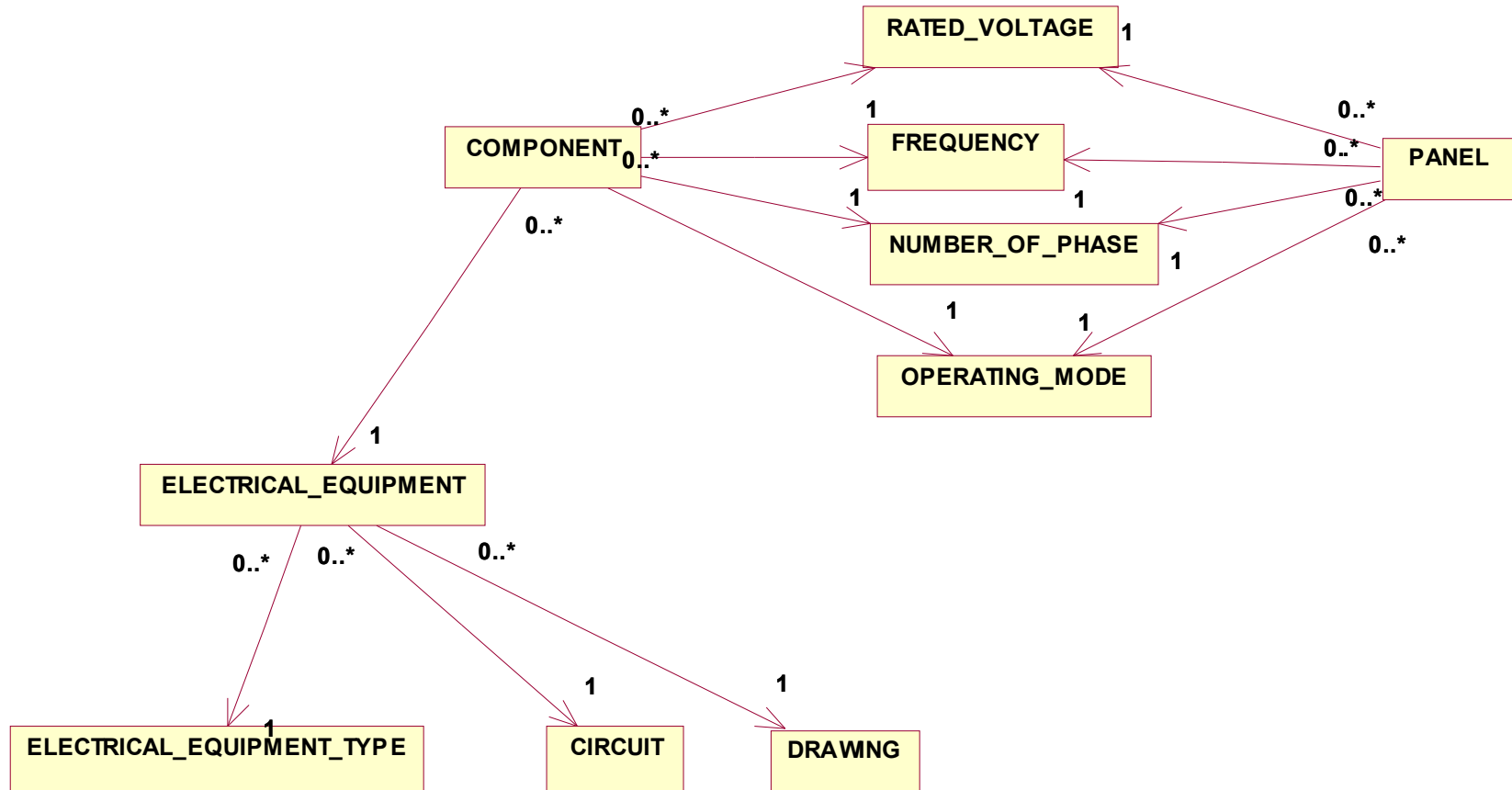
AsBuilt



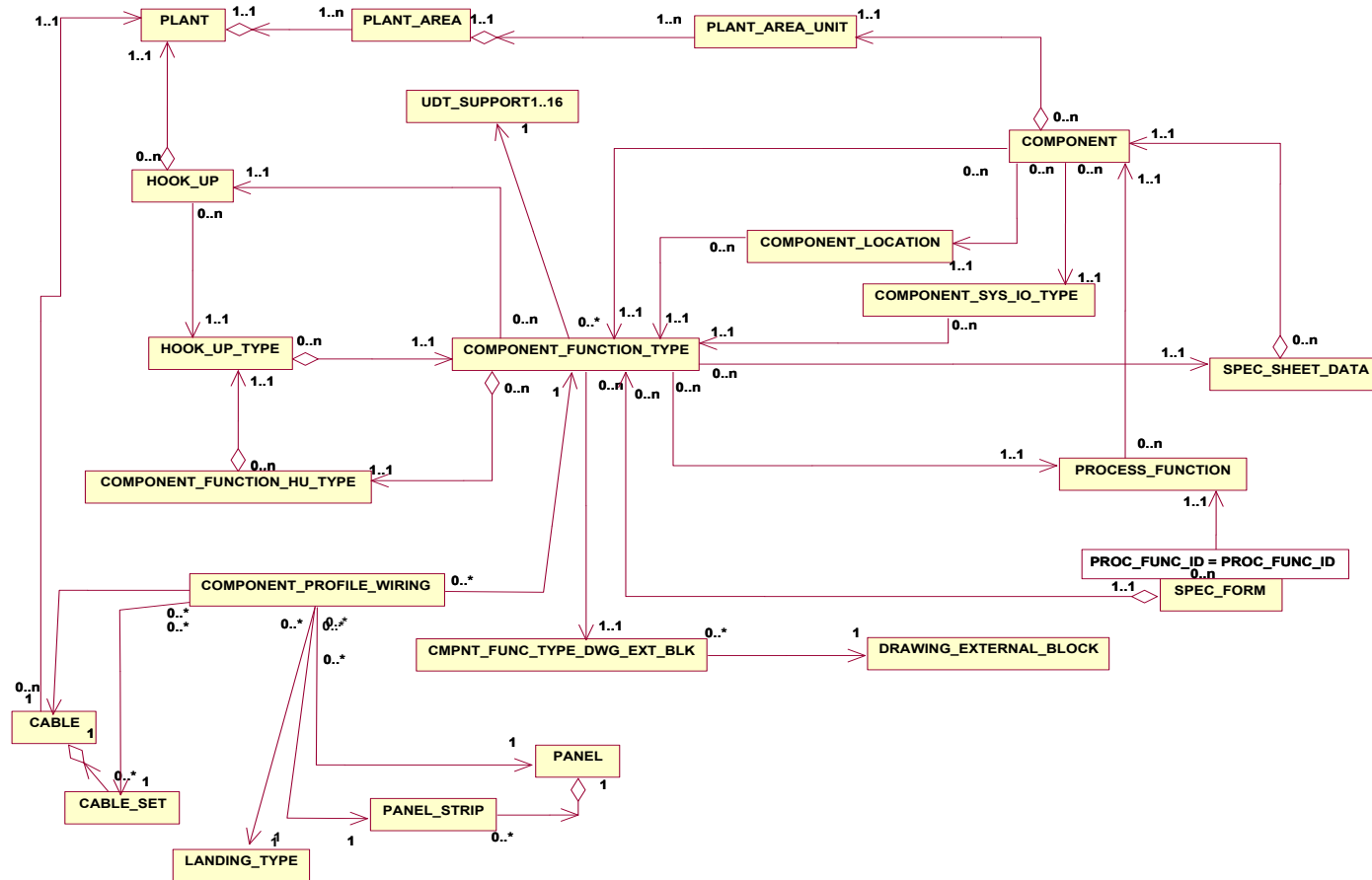
Instrument Tag



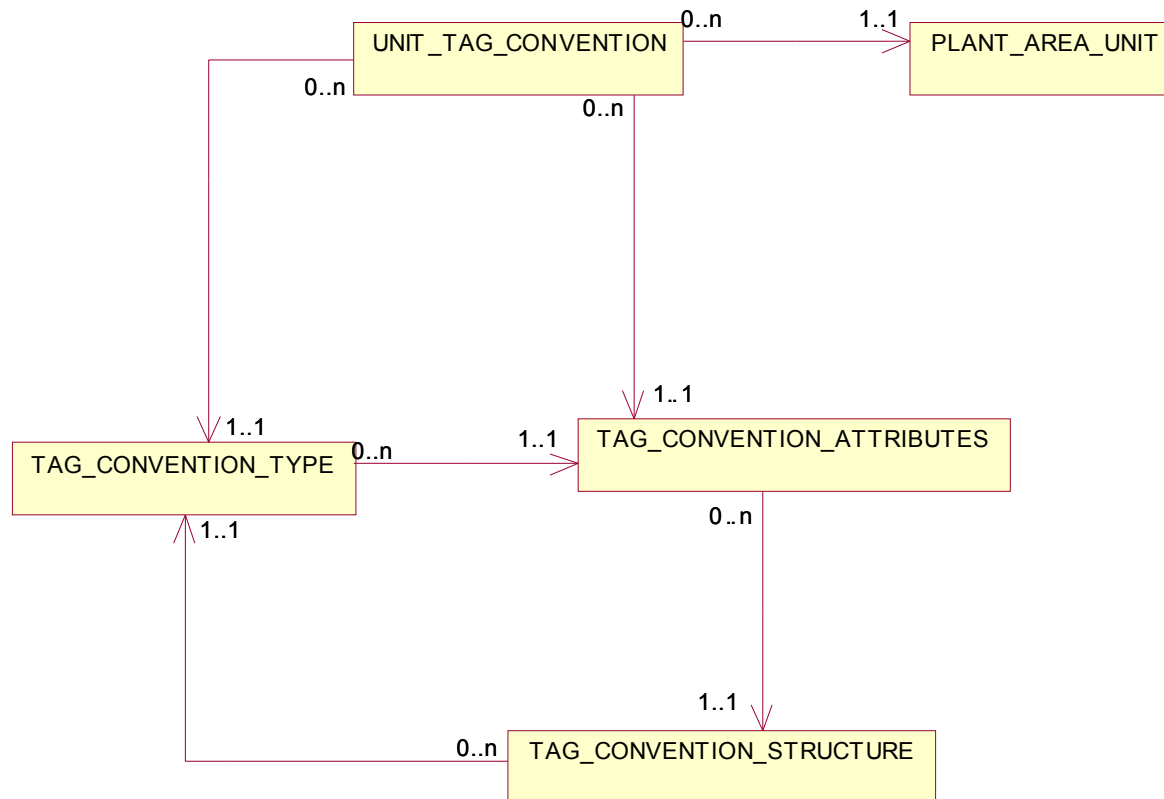
Power and SmartPlant Electrical Tag



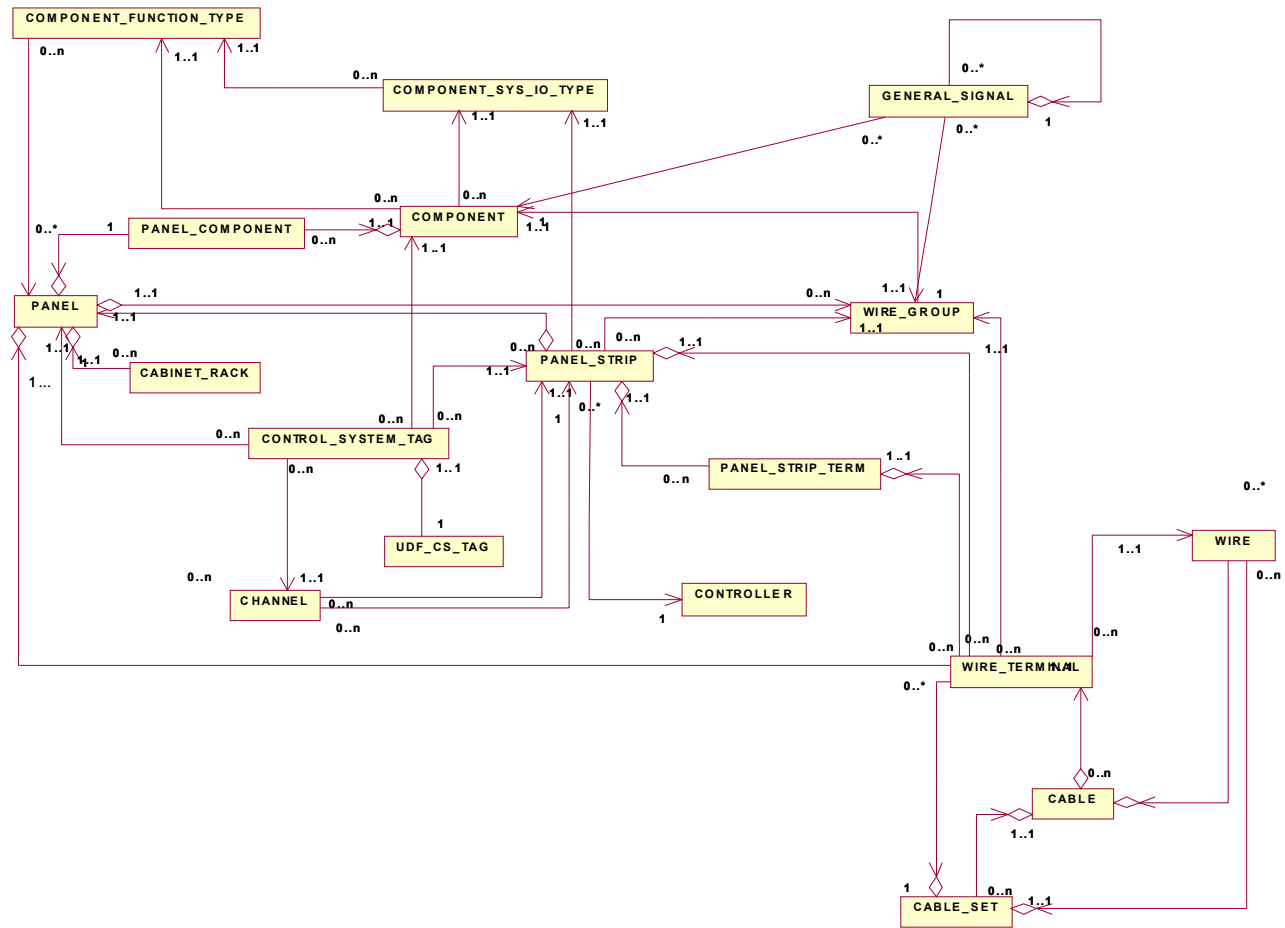
Instrument Type Profile



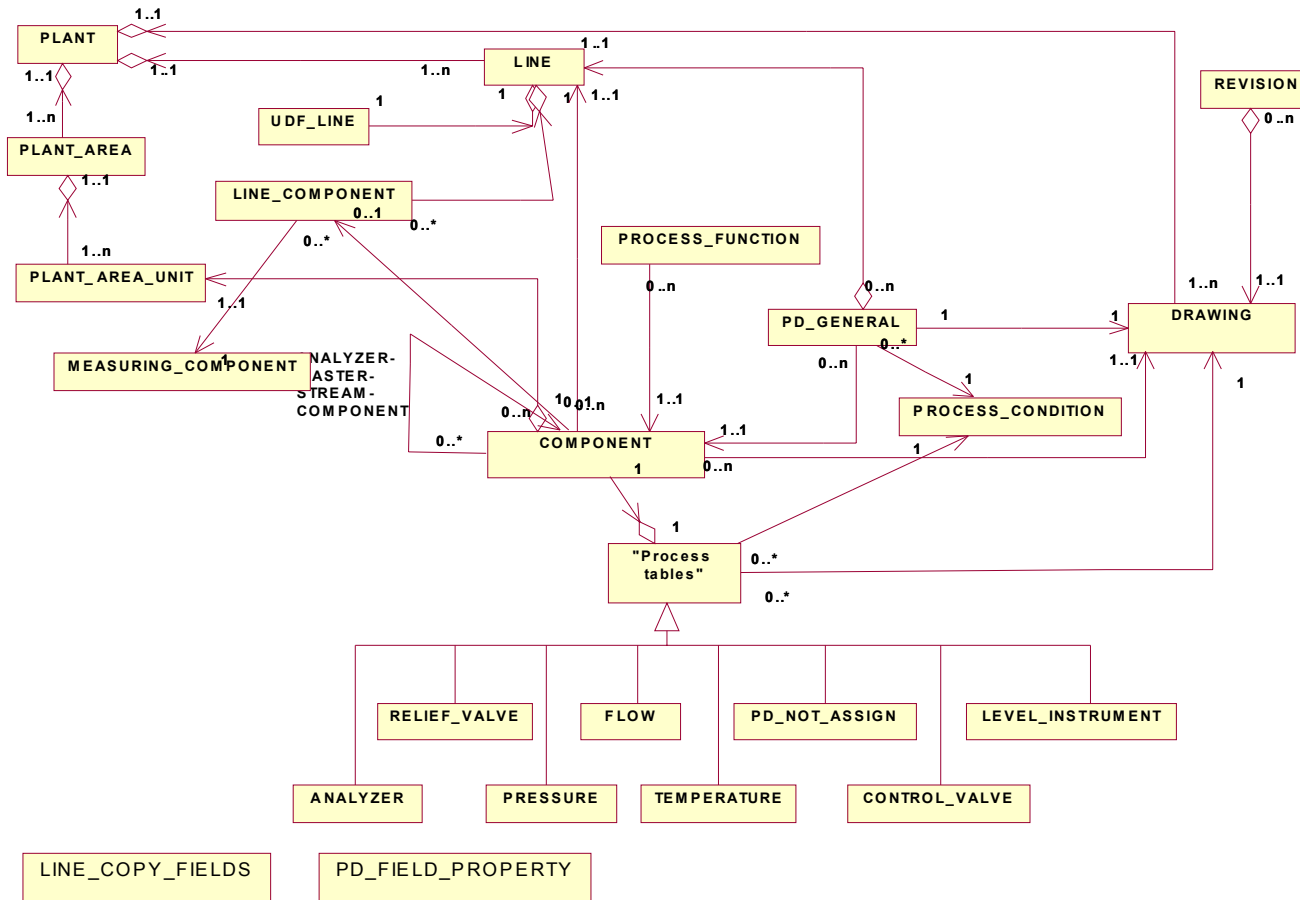
Tag Convention



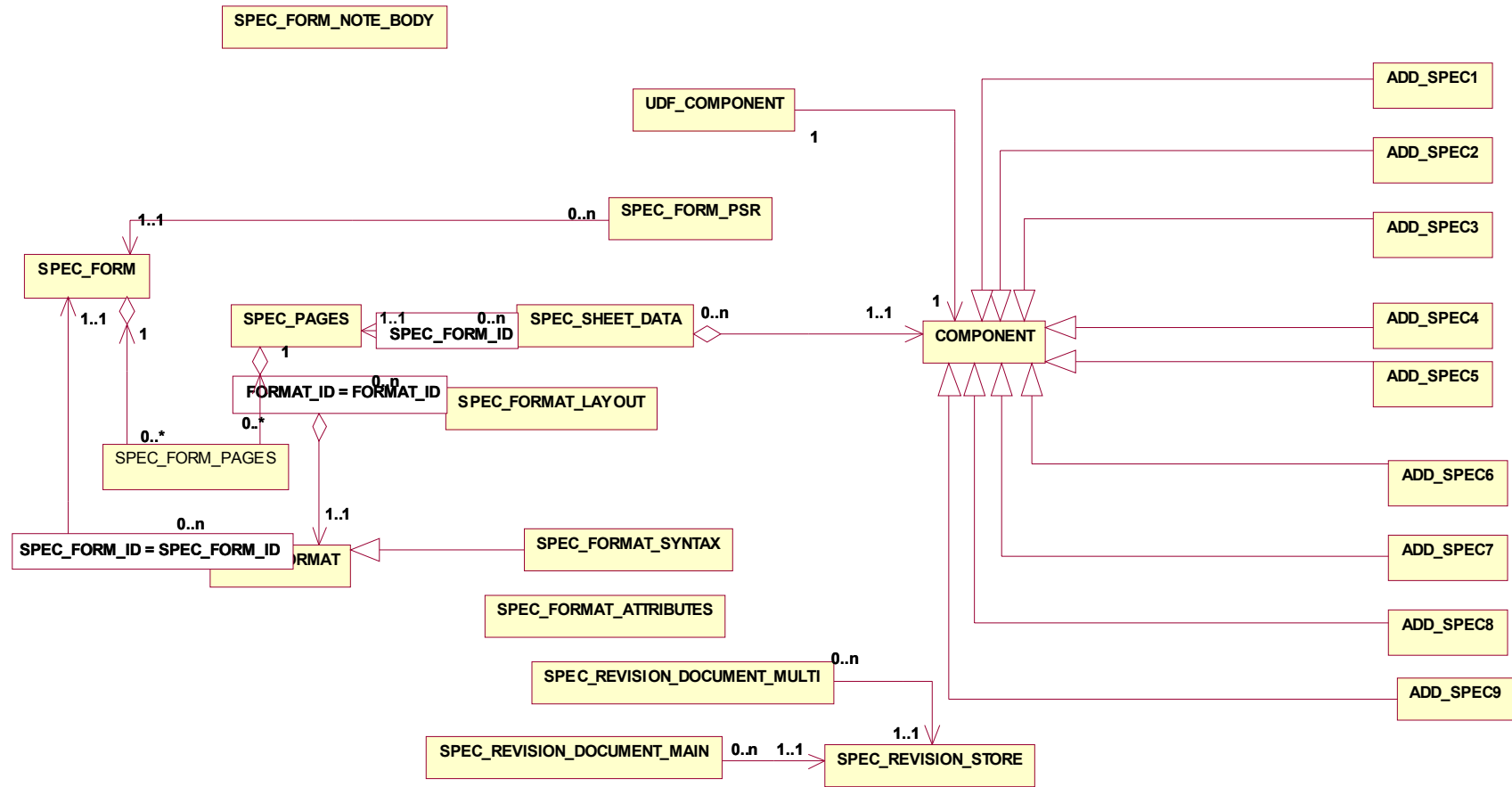
Tag Assignment



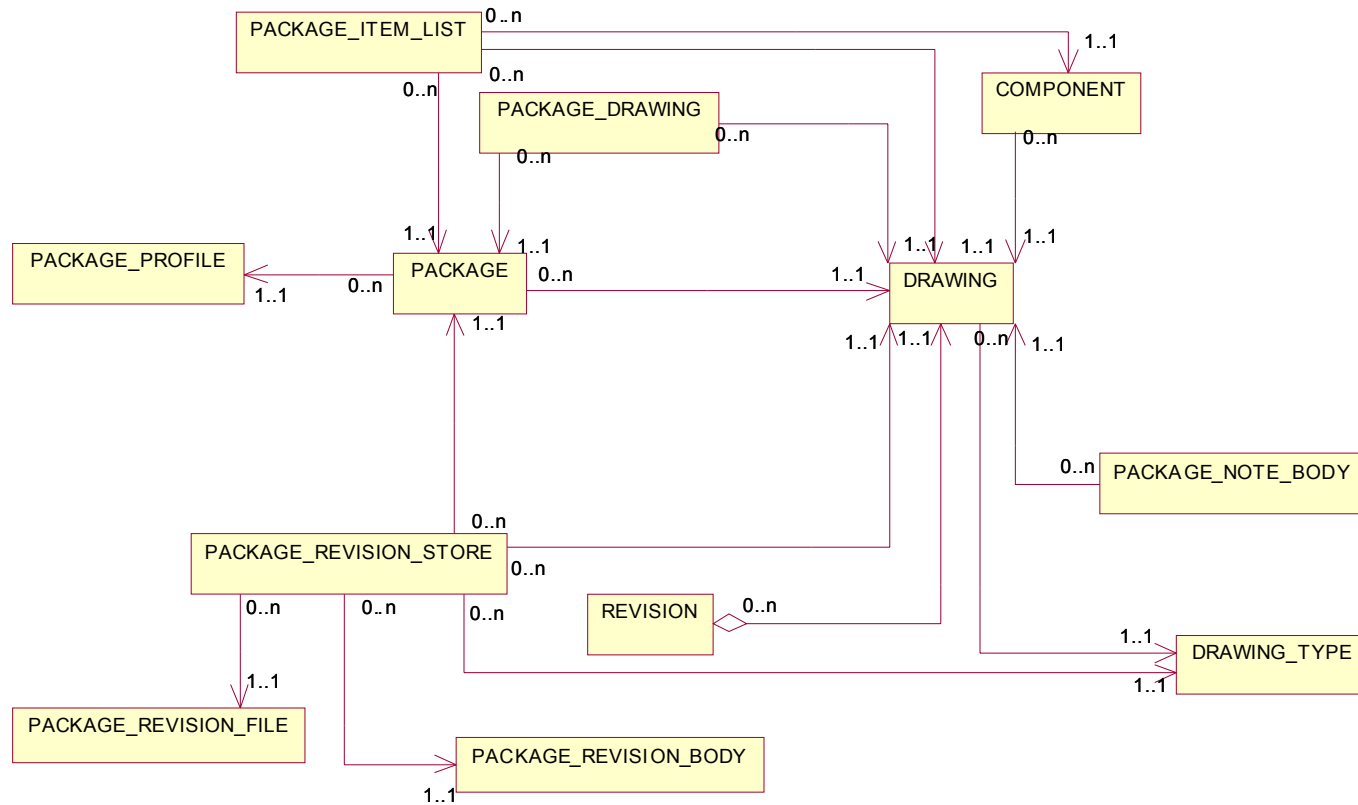
Process Data



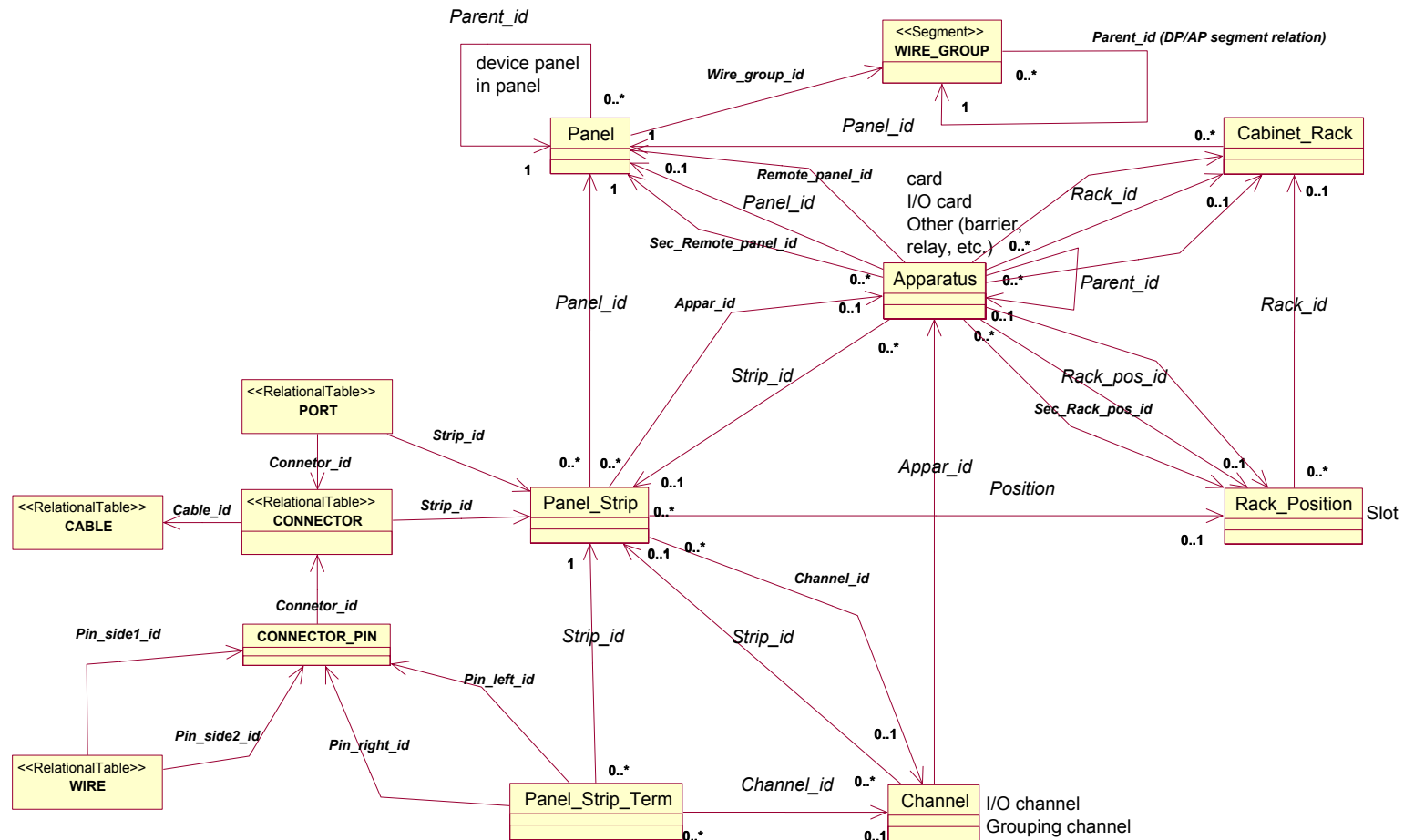
Specifications



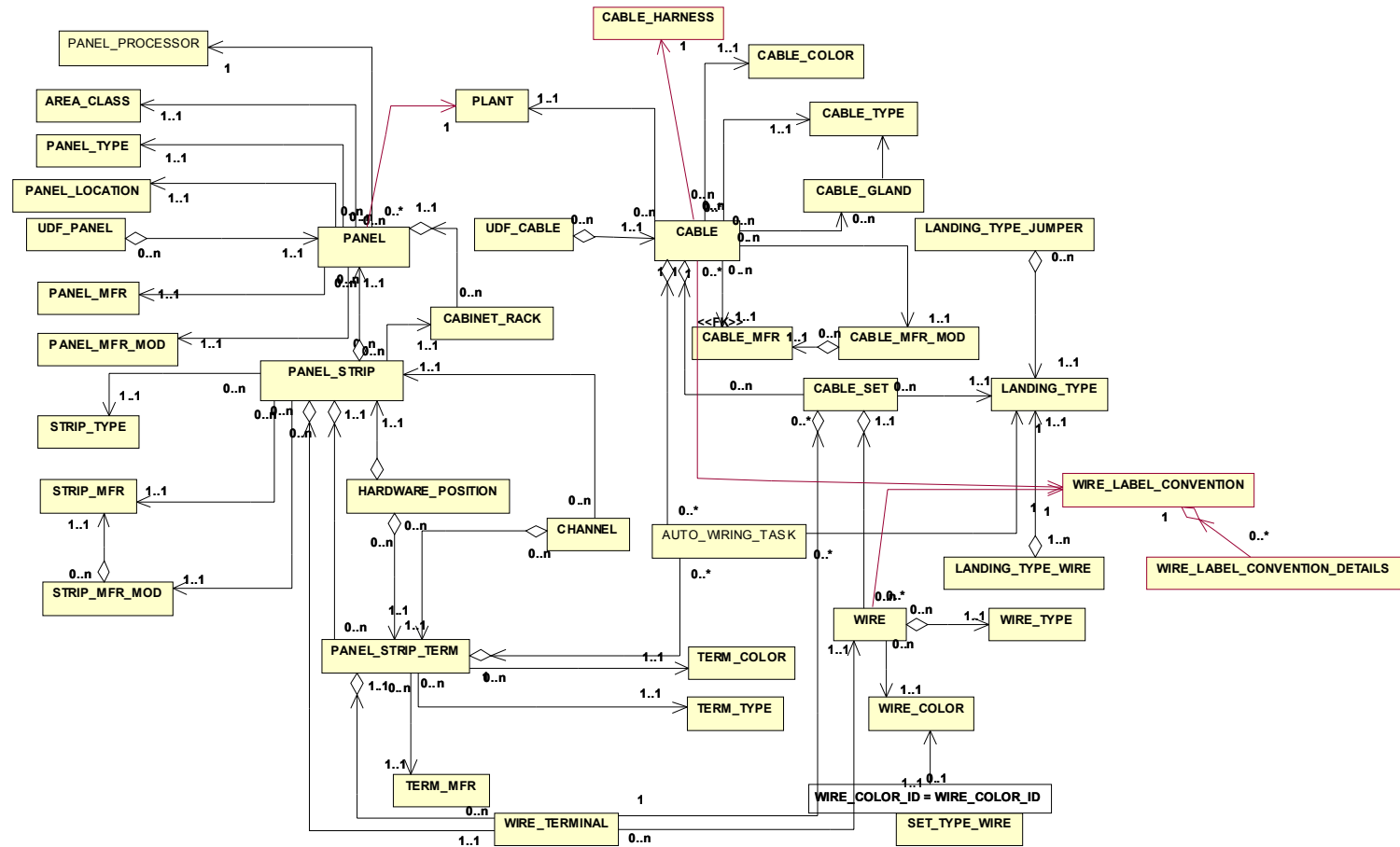
Document Binder



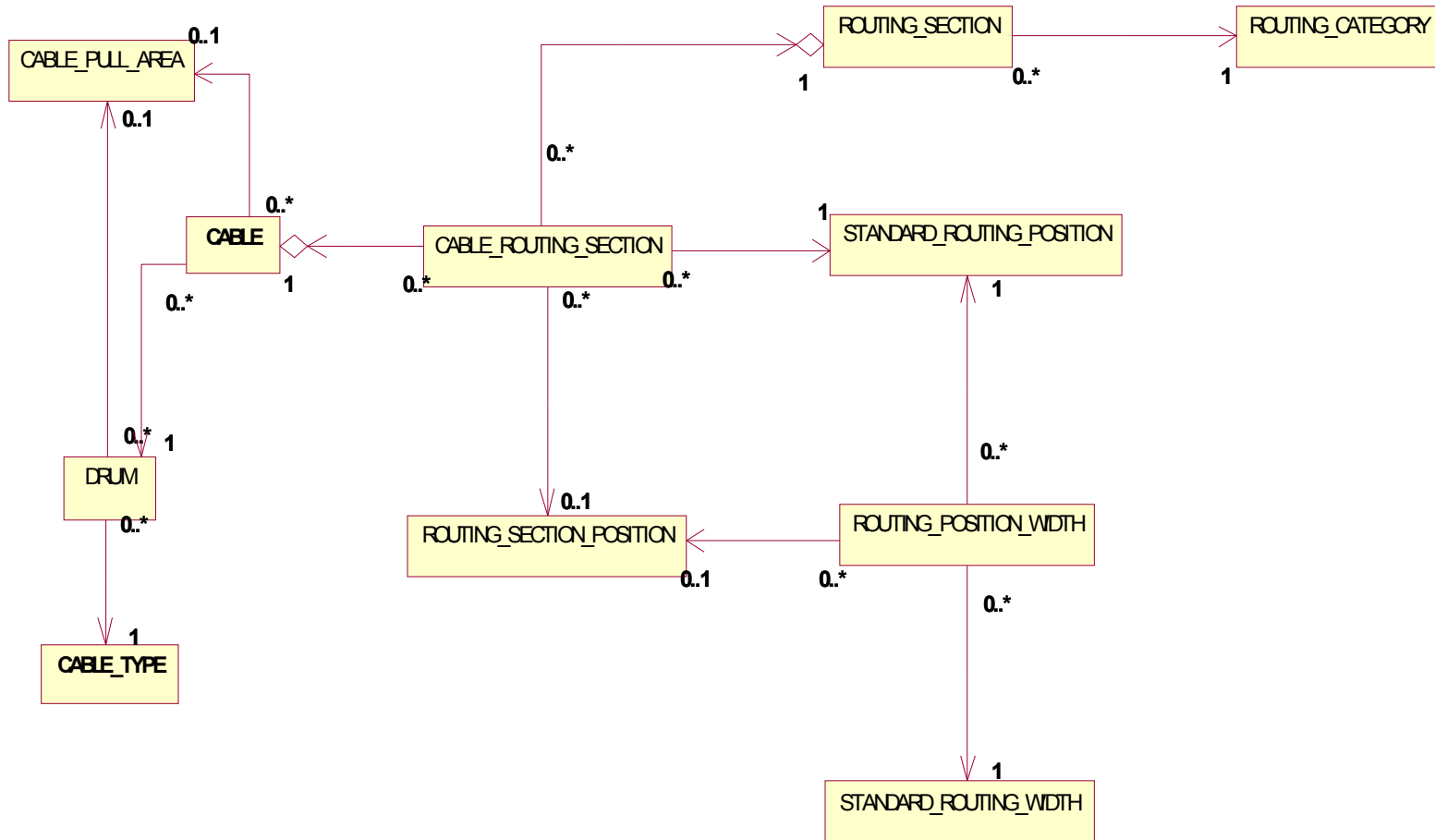
Wiring – New Wiring Model



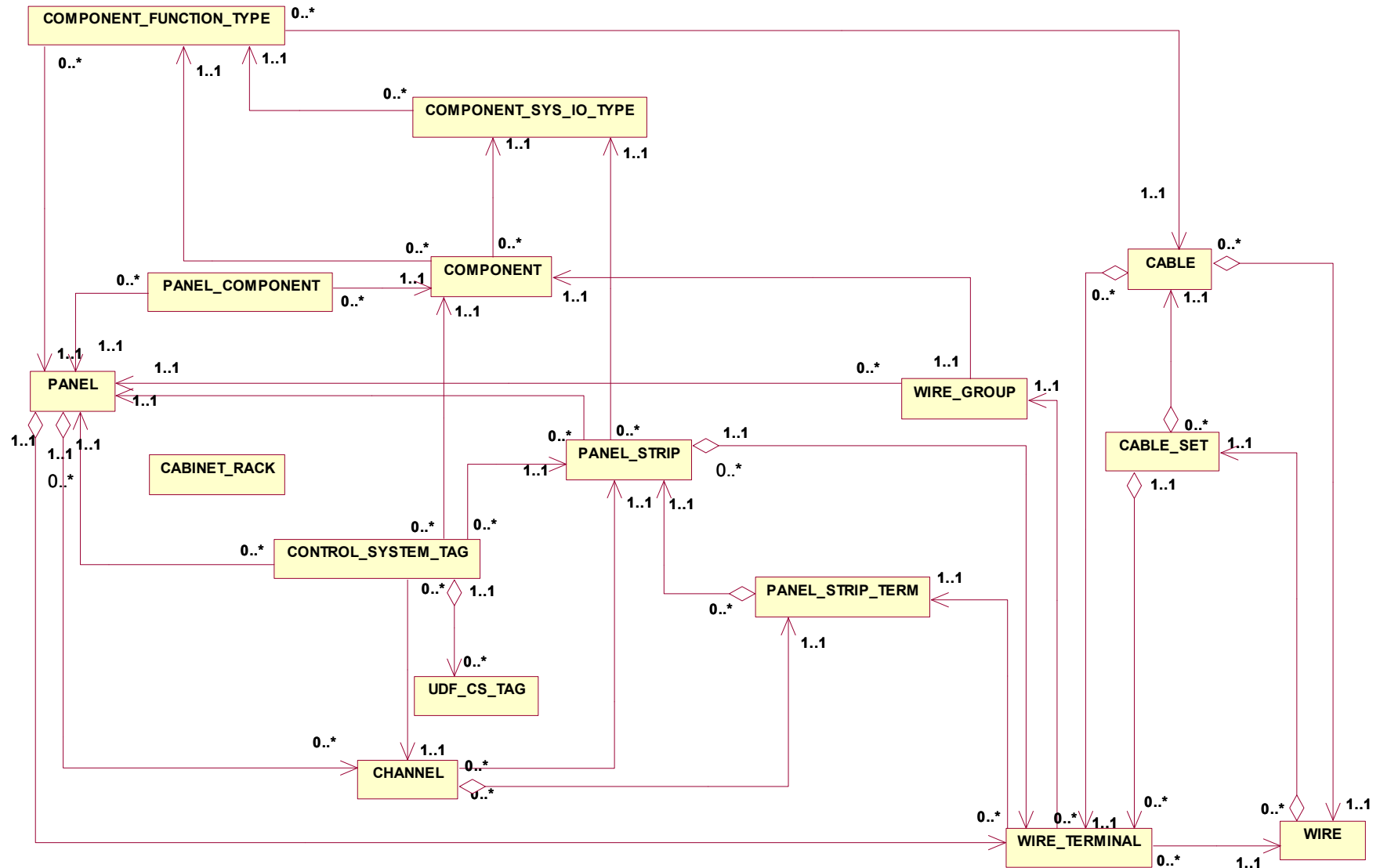
Wiring – General



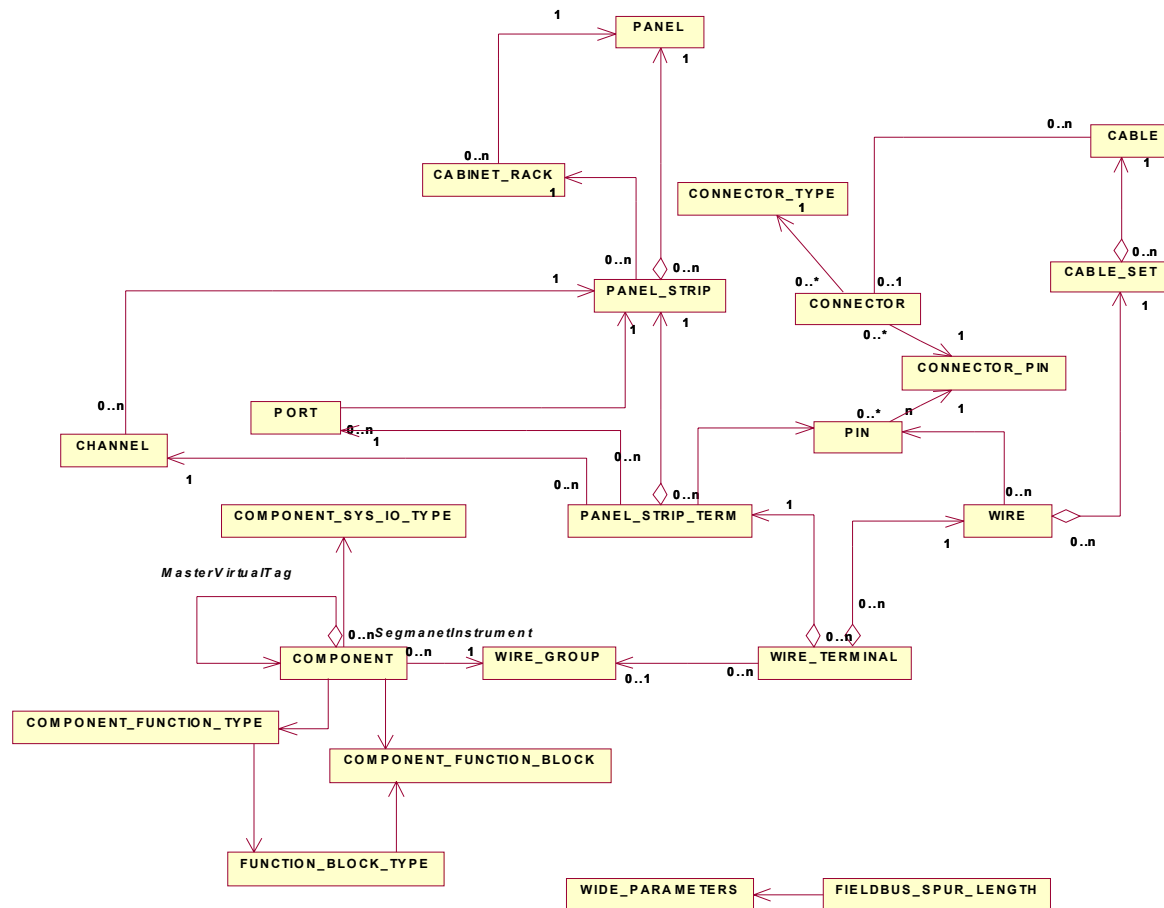
Wiring – Cable Routing and Drum



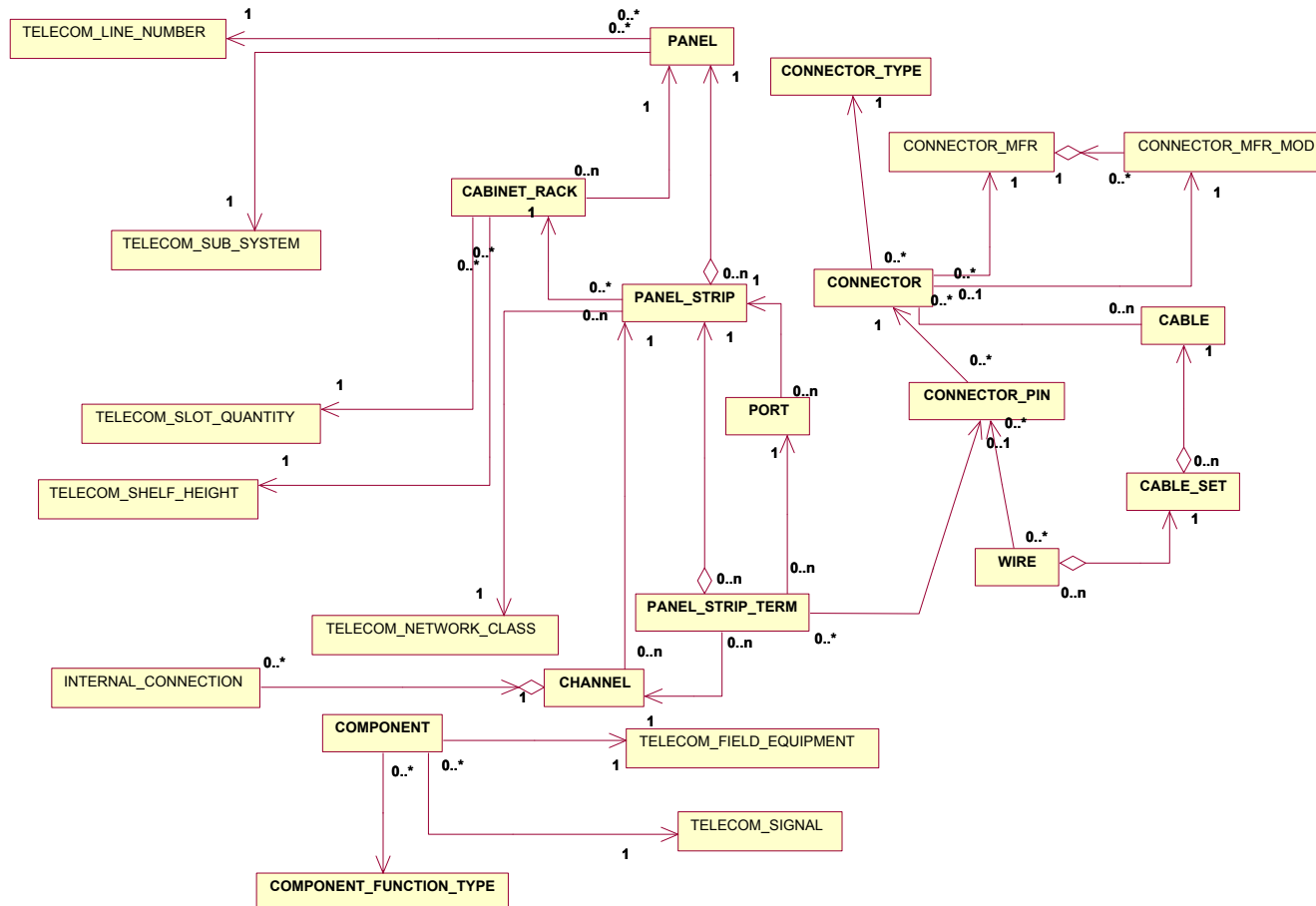
Wiring – Signal



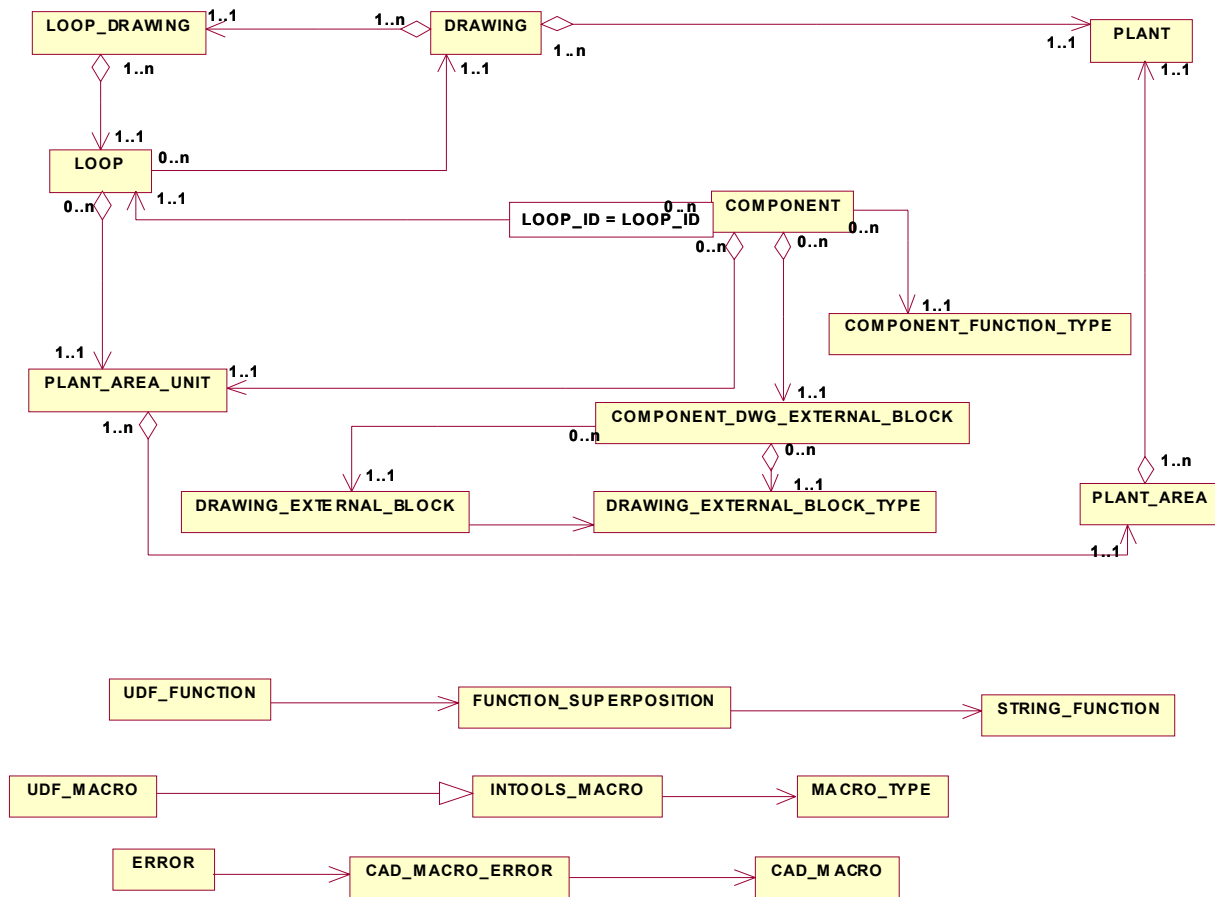
Wiring – Fieldbus



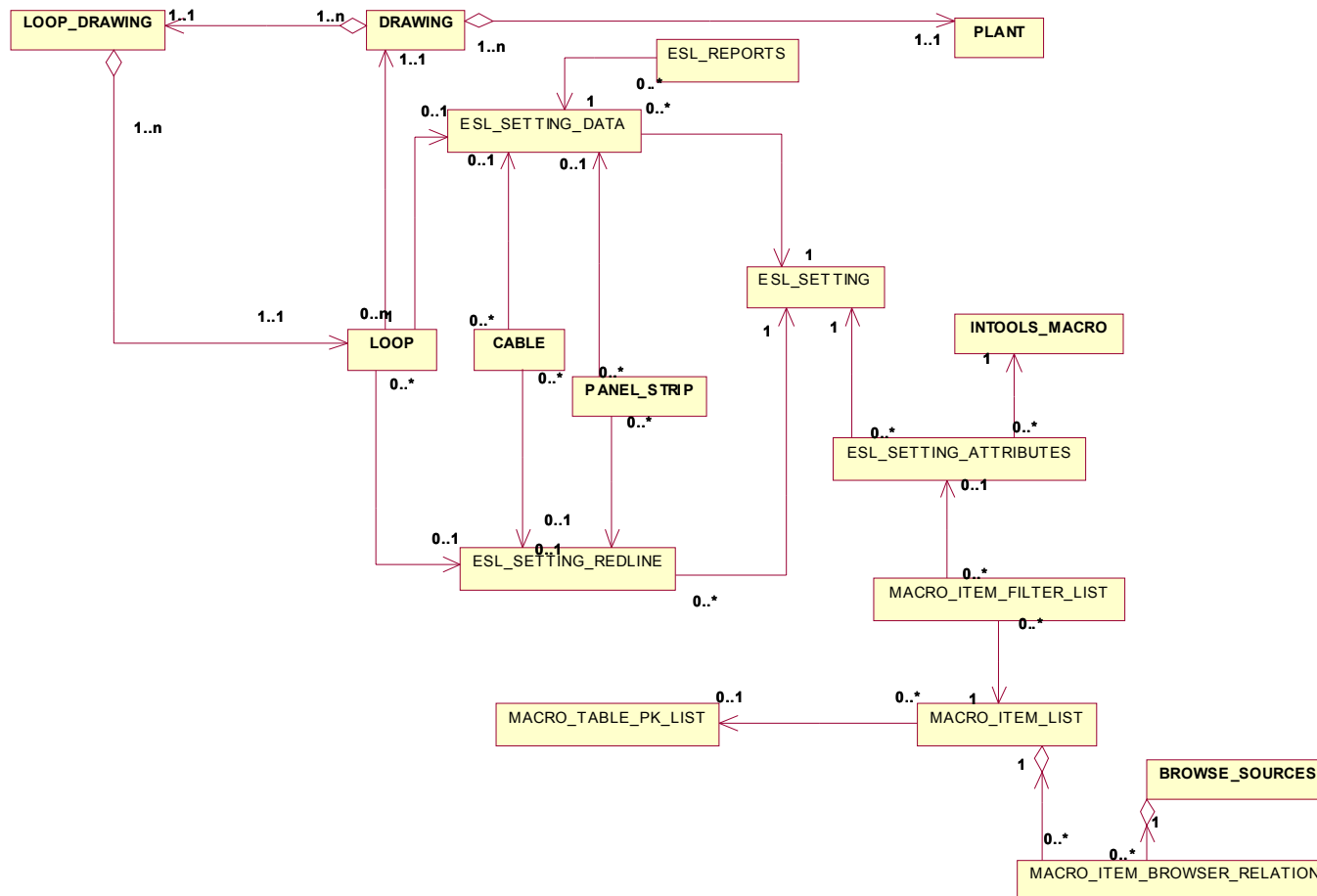
Wiring – Telecom



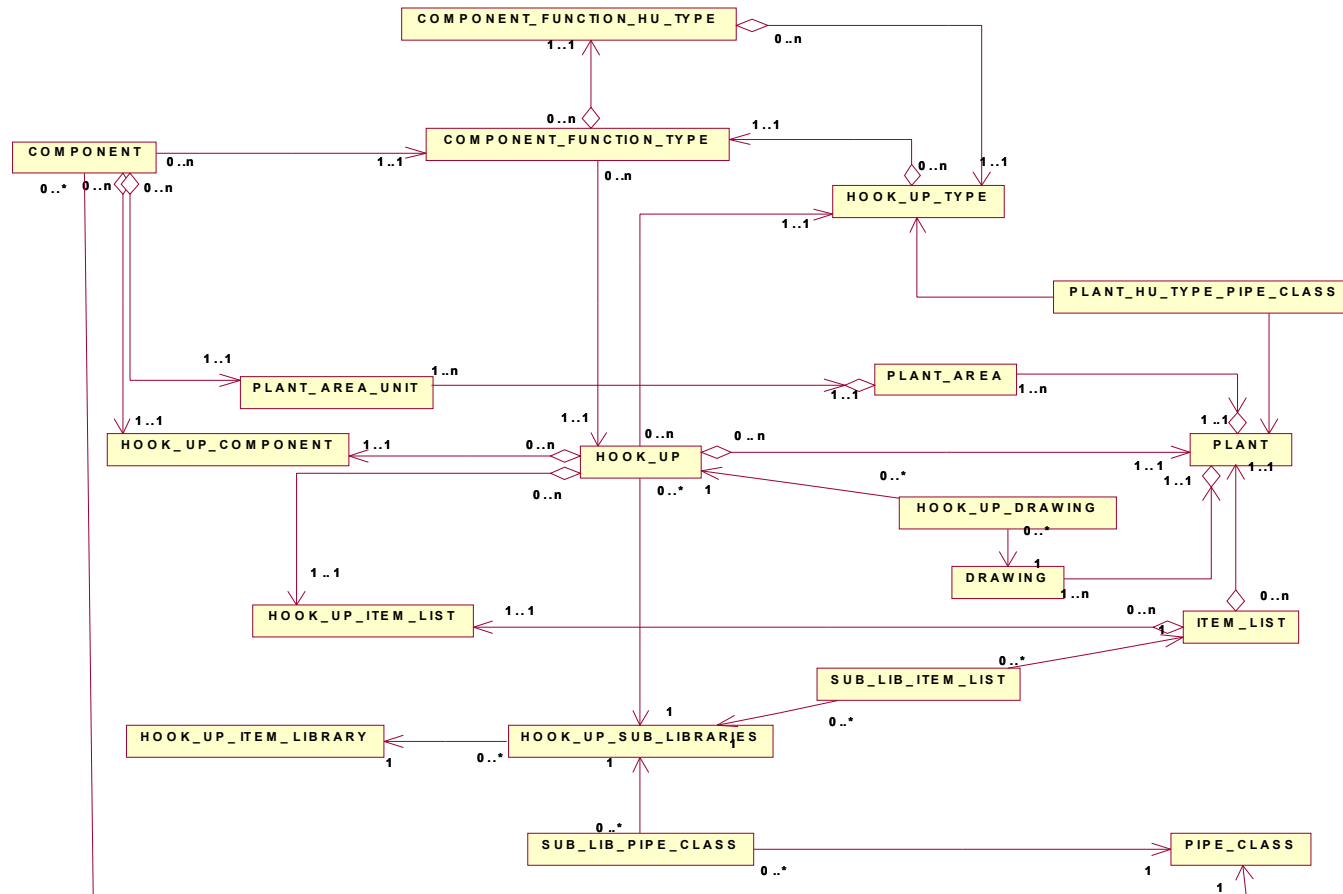
CAD Loop



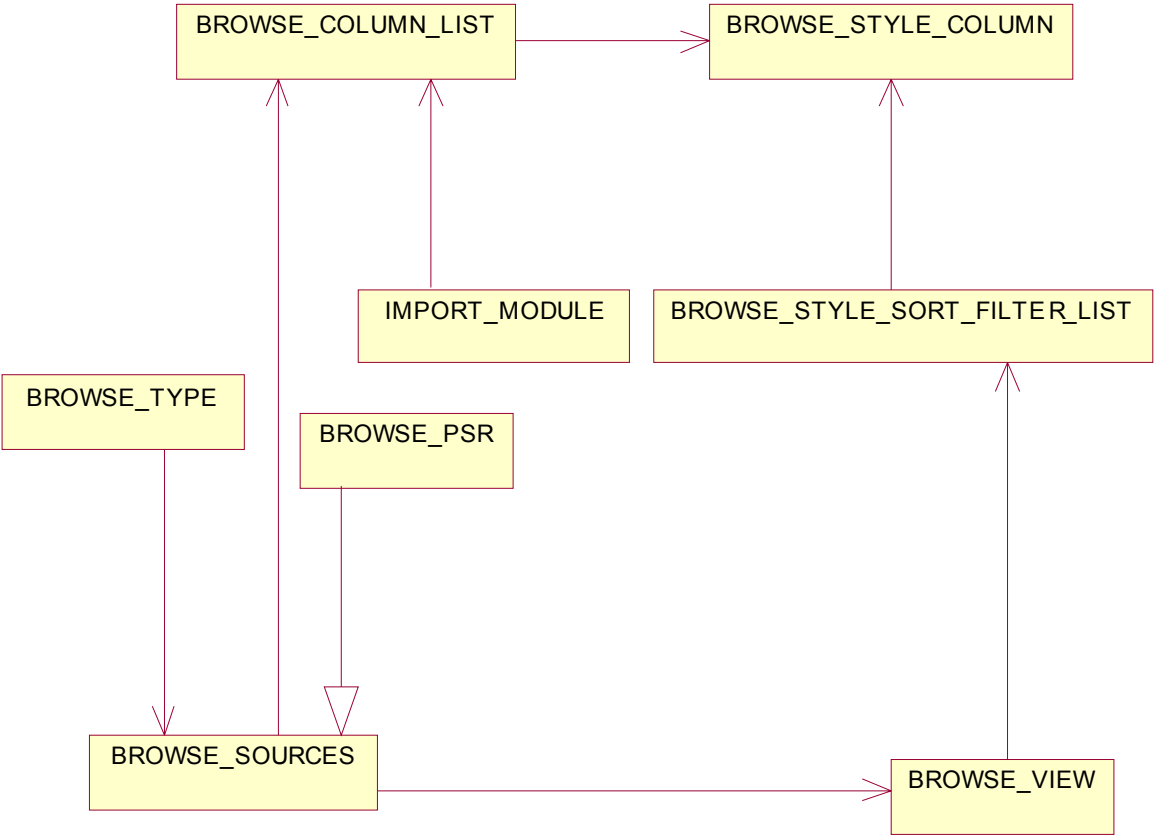
Enhanced Report Utility



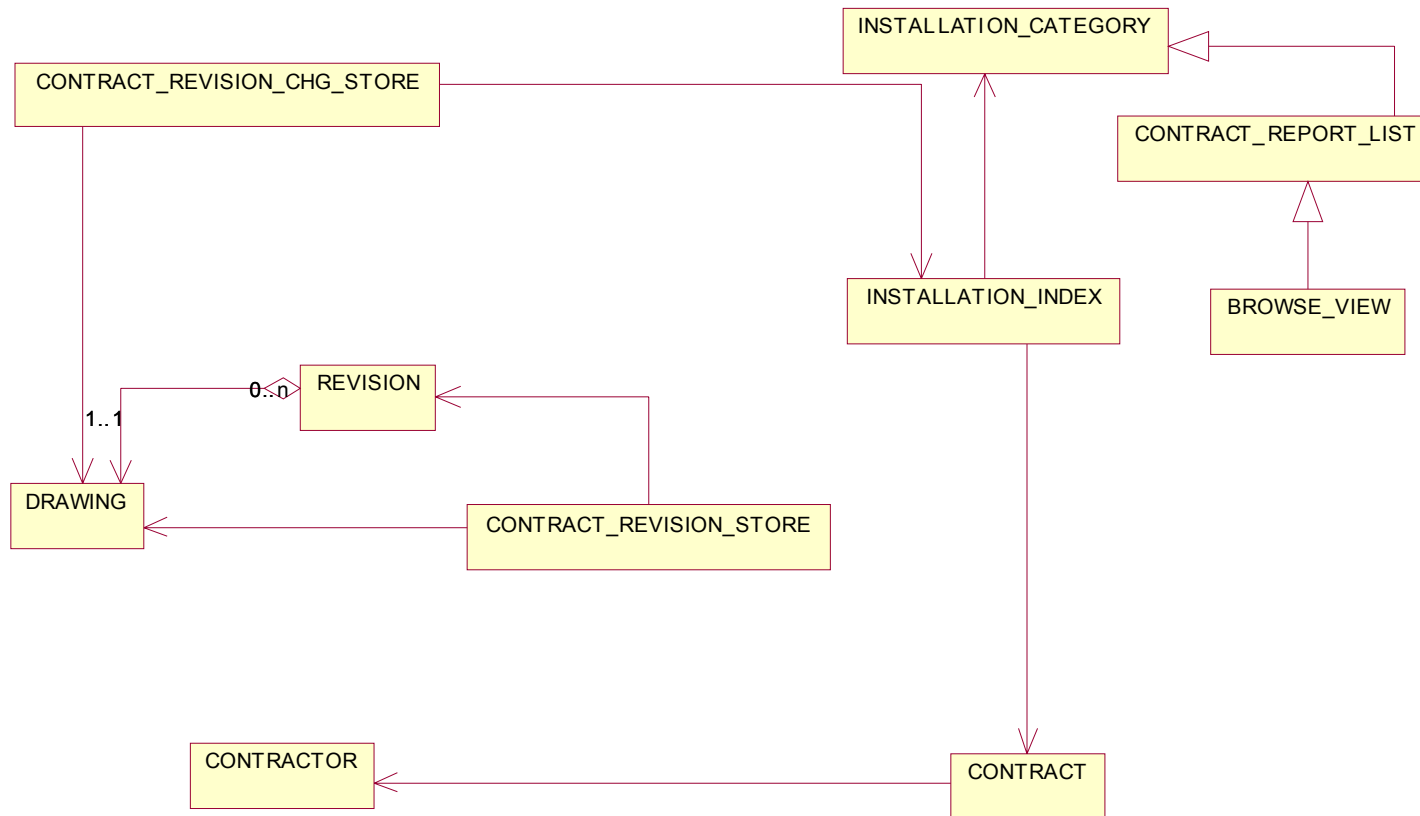
Hook-Ups



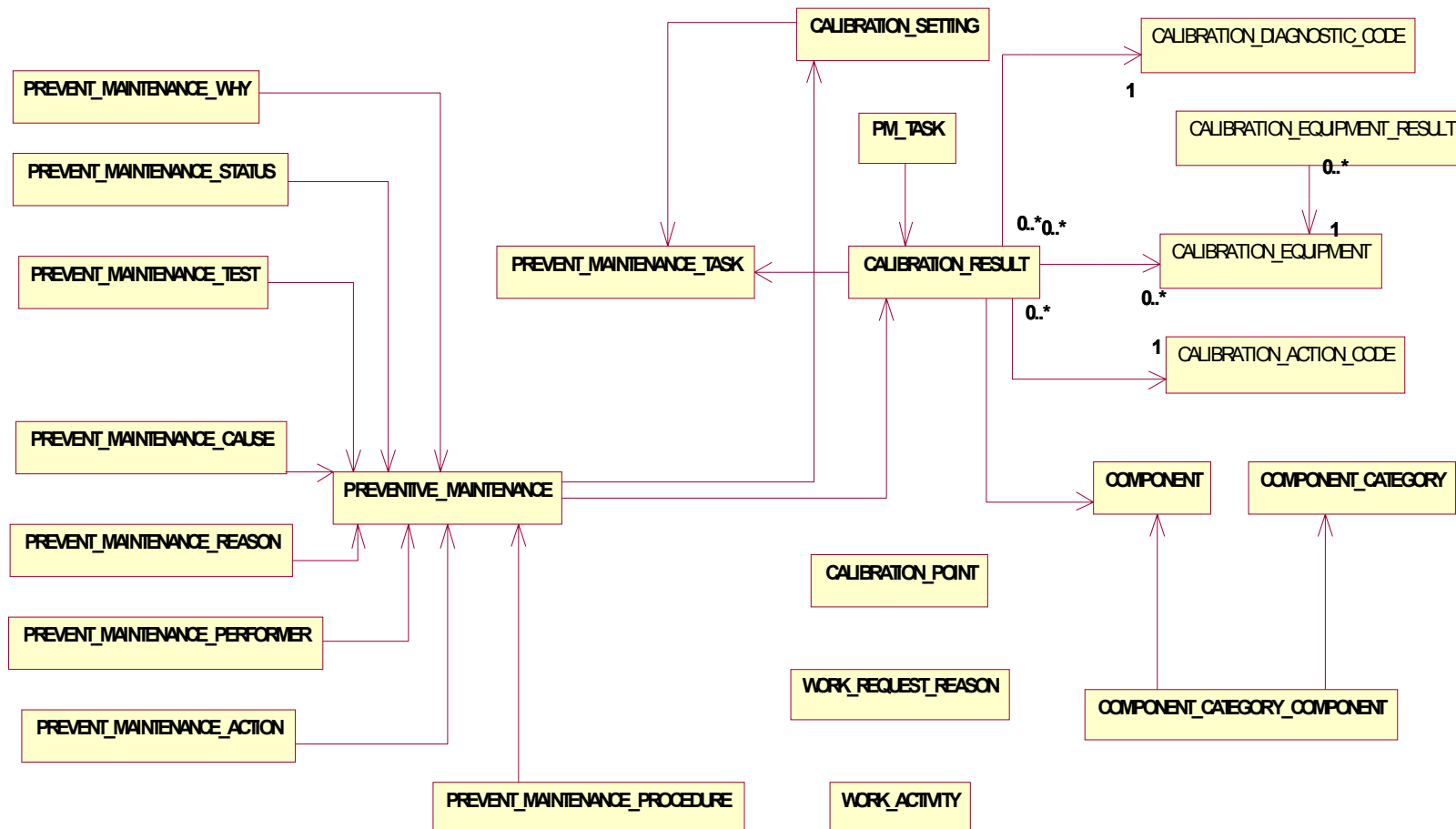
Browser



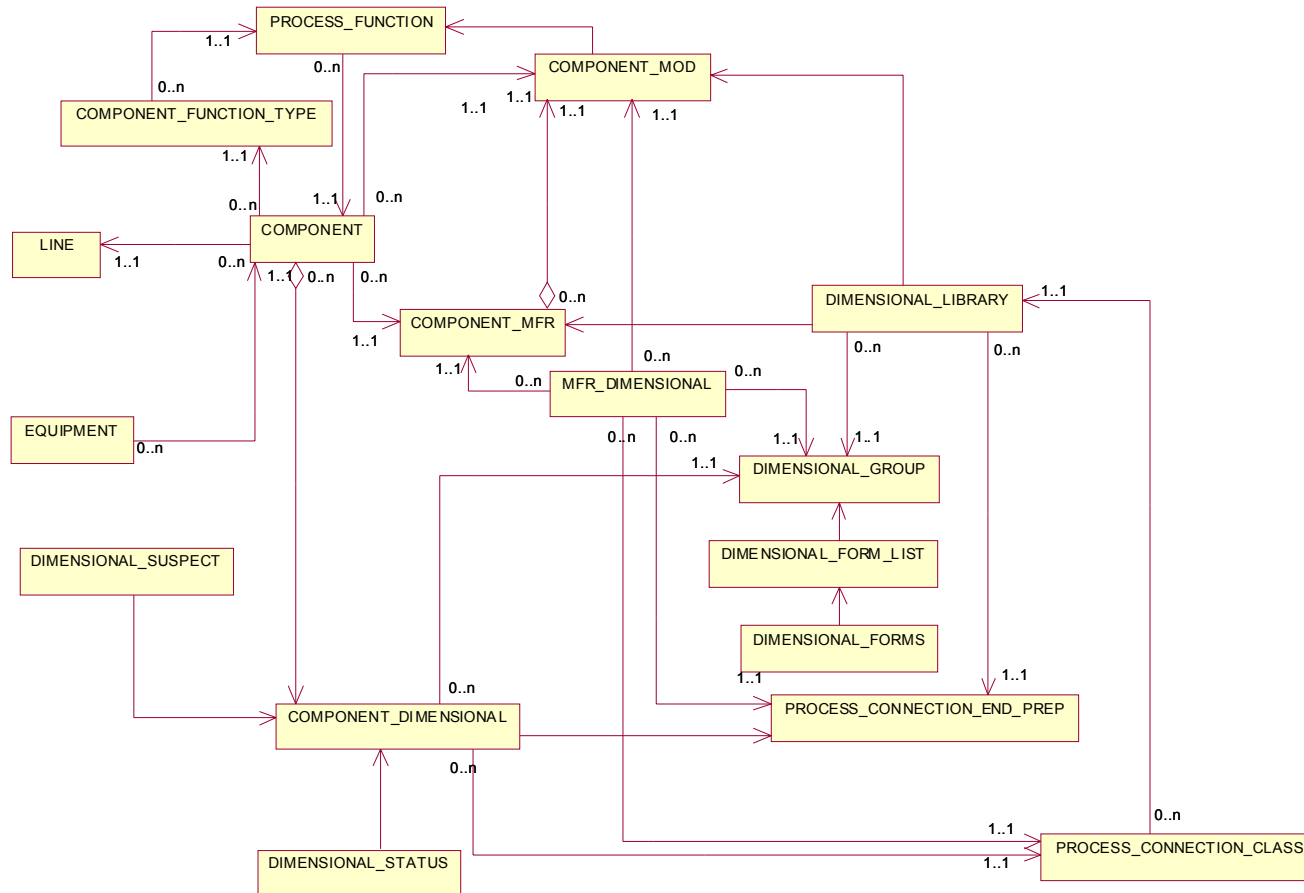
Construction



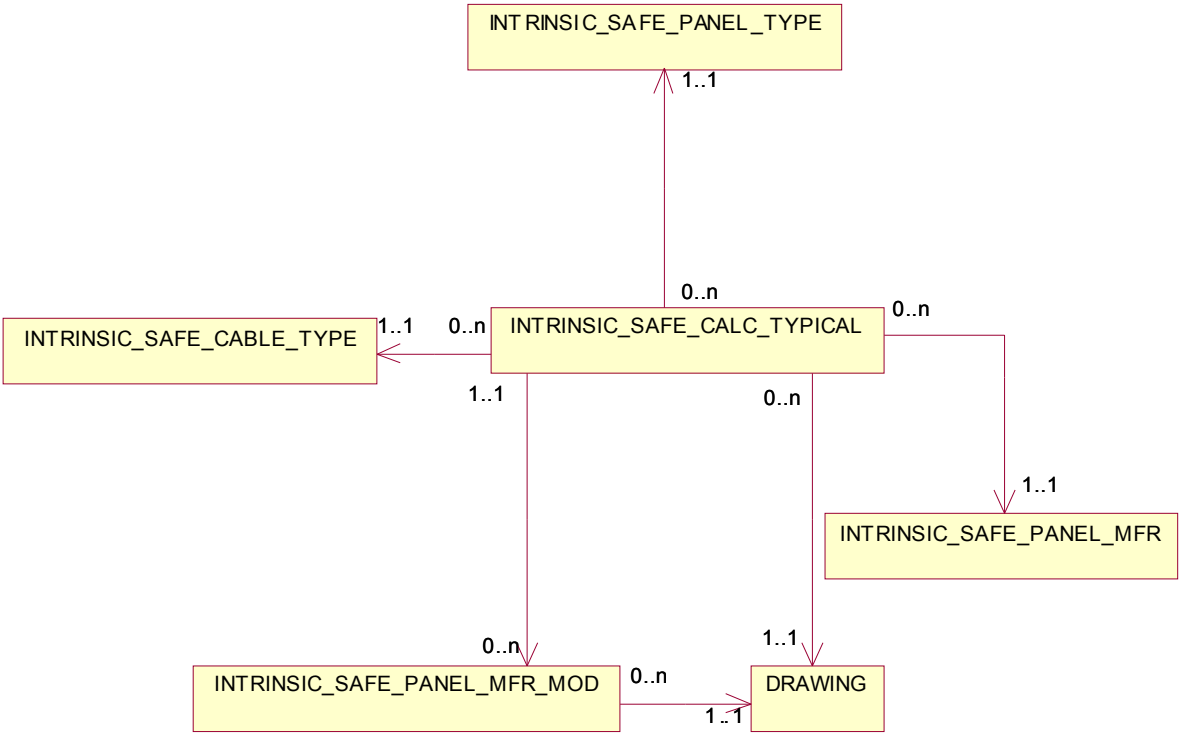
Preventive Maintenance and Calibration



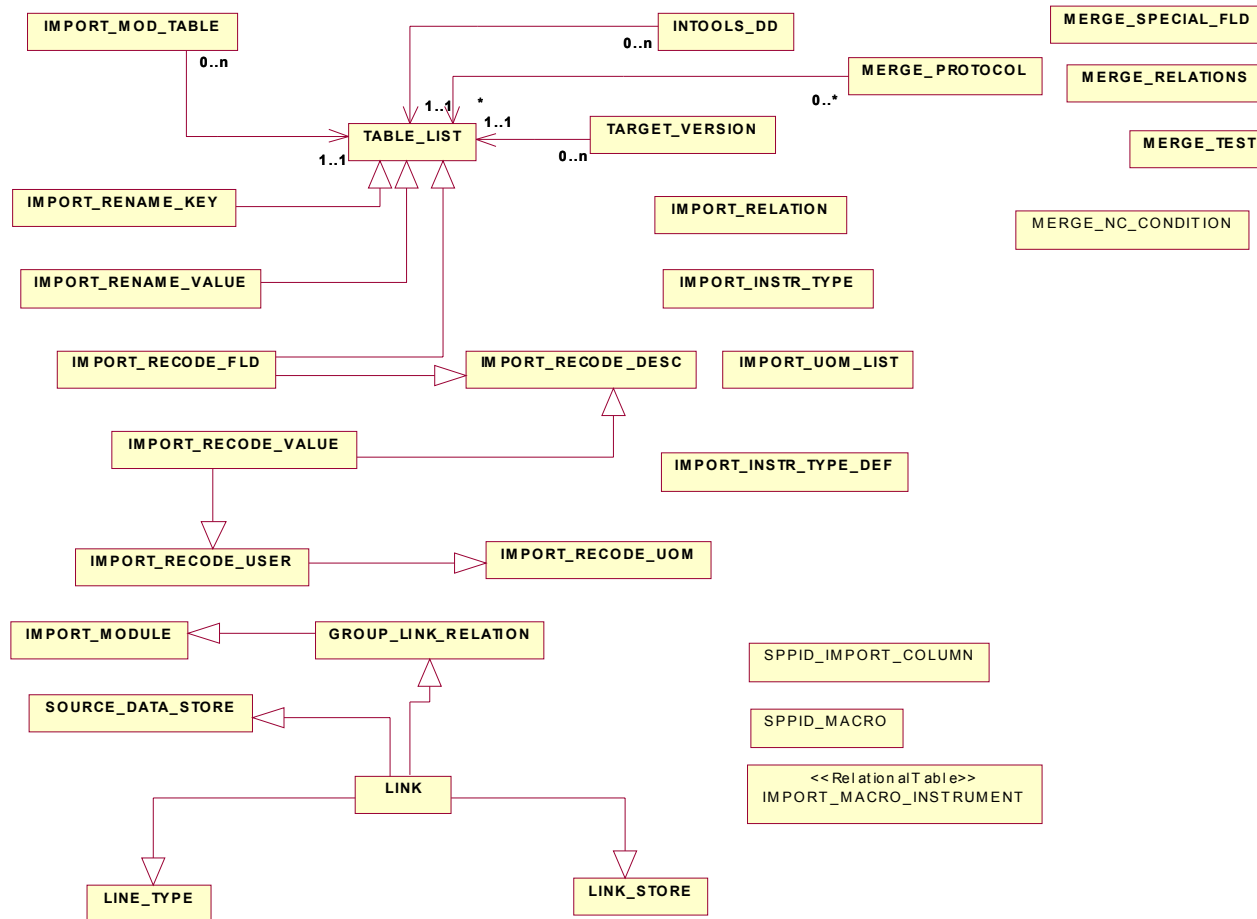
Dimensional Data for Piping (DDP)



Intrinsic Safety



Import and Merger Utilities



SAP

