OpenBIM Integration of Low and Medium Voltage Systems:
Use Cases 2.06 & 2.07

Purpose & Scope

These use cases support the **implementation planning phase (HOAI Phase 5)** of building projects, focusing on detailed coordination and integration of power distribution systems within BIM workflows. Electrical planners use specialized software (e.g., SIMARIS project) to design and document medium and low voltage systems.

The output is an **IFC 4.3 file** containing:
- 3D geometry for archjtect's needs
- Technical data
- System-relevant data for integration and coordination

This IFC file is imported into tools like SIMARIS sketch for visualization and coordination with the architectural model.

Workflow at a glance

Electrical planner
Designs LV/MV systems using SIMARIS project

Software output
IFC 4.3 file with 3D model & data

Architect/Planner
Imports IFC into SIMARIS sketch or CAD/BIM tools

Coordination
Performs clash detection, integration, spatial planning

Click here to access UC 2.06
Click here to access UC 2.07

Key functions

IFC Data Export

- Imports detailed electrical planning information using open IFC format
- Embeds geometry and metadata for both MV and LV systems

Integration with Building Model

- Allows architects and planners to import and coordinate systems within the overall building model
- Enables collision detection and cross-discipline planning

Improved Collaboration

- Facilitates seamless exchange between electrical and architectural planning teams
- Ensures spatial feasibility, optimal layout, and system integration

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