PSI

PAU Workshop

Particle Accelerator Upgrade - Removal and Installation (PAU R&I)

2026

The importance of a centralized HW Database

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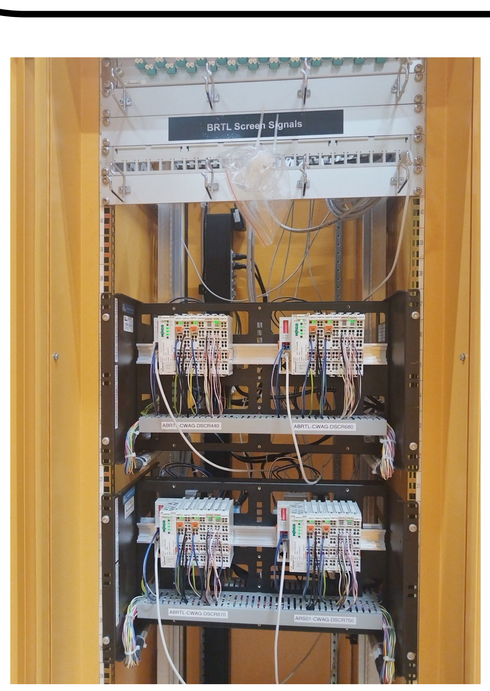
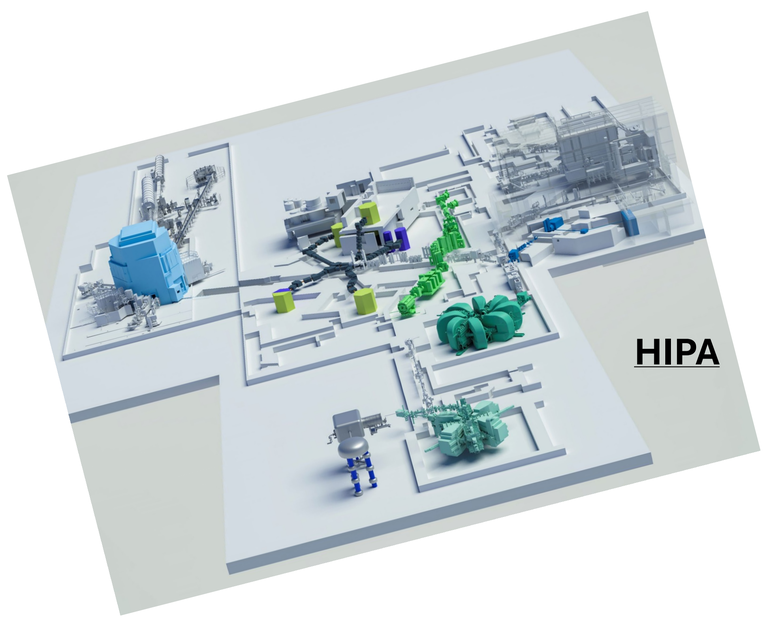
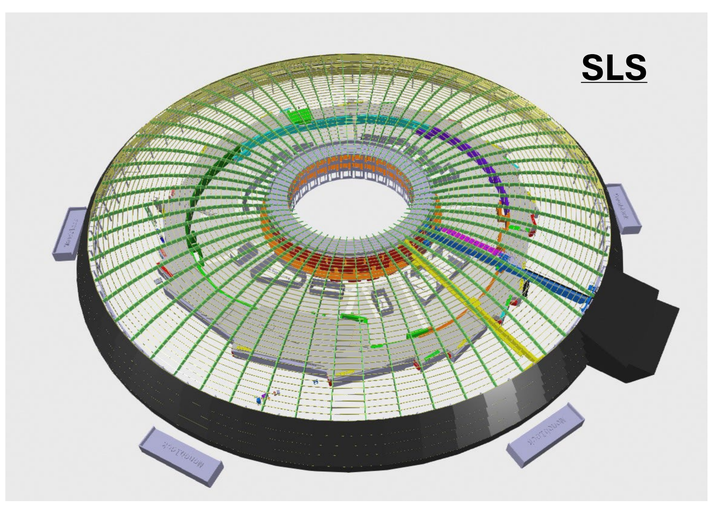
Goal of centralized HW Database

- one source for data
- quick search, easy handling with excel import
- Life-Cycle Management
- Links to manuals and/or other repositories
- Getting rid of excel sheets
- Sharing information over different groups
- Maintenance
- Statistics (Installed, Stock, Testing)
- Attributes like serial Nr. MAC addresses ...
- Fast implementation of tool changes
- Filtering for various Attributes i.e. Facility, Installed or Stock ...
- History for every part
- Makes life easier for a lot of people @ PSI



Installation in SLS-2.0,
all components are in
HW database and linked
to documentation (schematics...)





Concept and Simulation → Device List → Planning → Installation → Commiss-ioning → Operation and Pikett

Task centralized partly in Group HW Support

Device Name
Device Position
Location

HW-Requests
Where ?
What ?
How many ?
from Device Name
Hostname and
PV Names

Links to :

other Repositories
- GITEA
- Elektroschema.psi.ch
- 3D Experience
- Alfresco / Codebeamer
- Manuals, Datasheets
- Links to Manufacturer

External Companies

Ordering COTS or PSI HW

SQL- Server

HW Database

Deliver HW into Database related to PSI Order Number

Attributes like :
- Serial Nr.
- MAC Adress(es)
- FW / HW Version

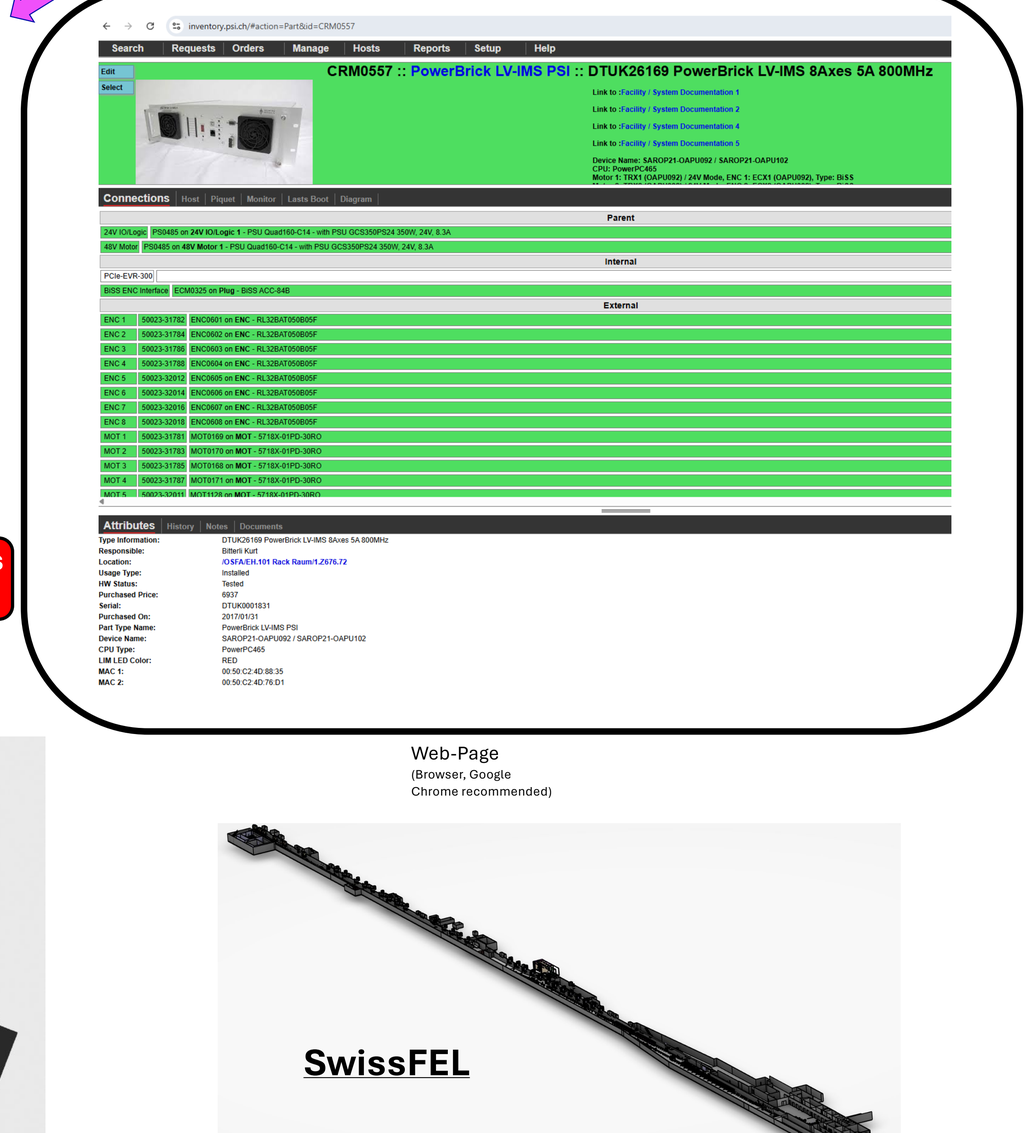
PSI Groups

- AIT
- Controls
- Diagnostics
- Electronics
- Electricians, Infrastructure
- Magnets
- PLC Systems
- Power Supplies
- Vacuum
- Water, Cooling

Web-Server
(C# / .NET, Typescript, JQuery, LESS)

API (Interface)

Ordering HW from various people



Web-Page
(Browser, Google
Chrome recommended)

TID – Tools Inventory Database

SQL Server
HW Database TID Devices

Lending out Process
User :
Ask for device to borrow from / until
User gets device for use
User gets notifications for bringing device back

Key benefits
Sharing equipment over various organisation untis

This work has been possible with the support of : Users of Inventory

HW Catalogue

- Overview about HW Types
- Various filters for Manufacturers / Distributors
- Categories like (DI/DO, AI/AO, Timing, Cameras, IOC's, Computing, ...)
- Links to Documentation
- Statistics (Stock, Ordered, Request, Installed, HW Version, FW Version)
- Status (Preferred or obsolete)