

EDMS for CFS

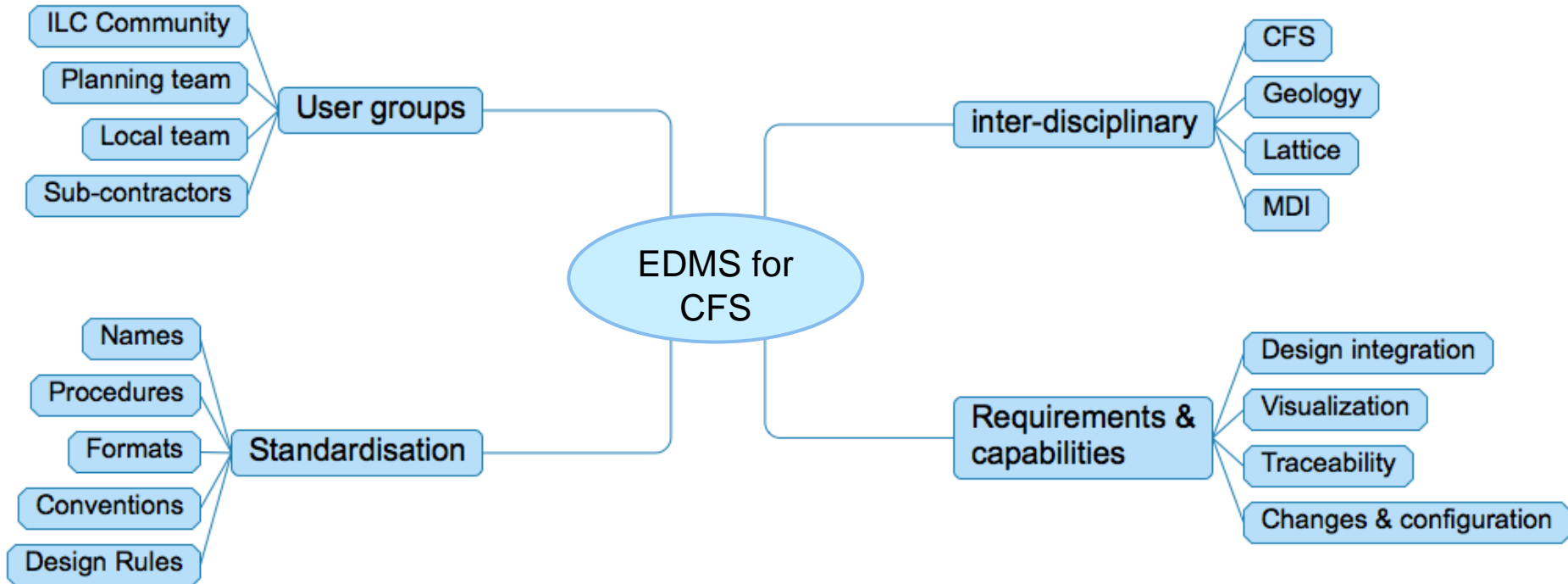
Discussion: How to best use EDMS for CFS in ILC preparation?

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Deutsches Elektronen-Synchrotron DESY

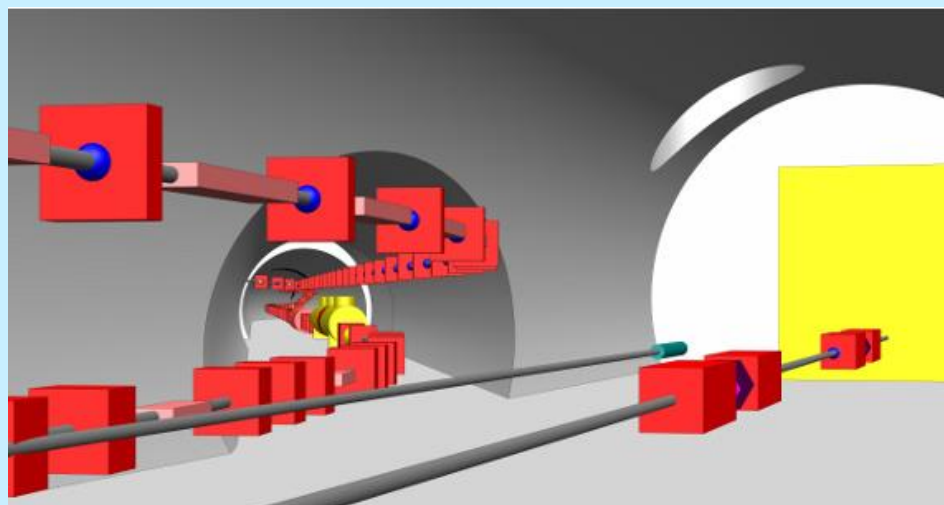
LCWS13, Tokyo, 14.11.2013

EDMS for CFS planning



Requirements on and Capabilities of EDMS

- What shall EDMS be used for?
 - Collect design contributions and make them available to (parts of) the community
 - Check consistency of designs – and trigger negotiations when needed
 - Coordinate design updates
- What benefits does EDMS provide?
 - Provide reliable single point of information
 - Provide common visualization
 - Trace dependencies btw. various types of design documents, e.g. drawings, specifications, decisions, expert opinions, ...



Example: Iterating design contributions

- Tunnel design should be optimized for construction
- Tunnel design has to follow the lattice
- Transport & safety require unblocked paths – i.e. no beamlines crossing paths
- ➔ Need to collect, integrate and iterate designs until all requirements are met

Inter-Disciplinary Planning in EDMS

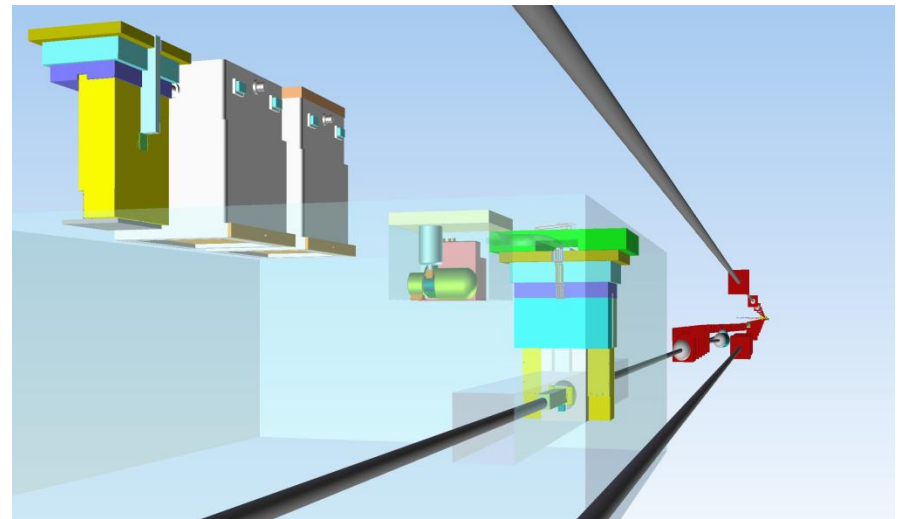
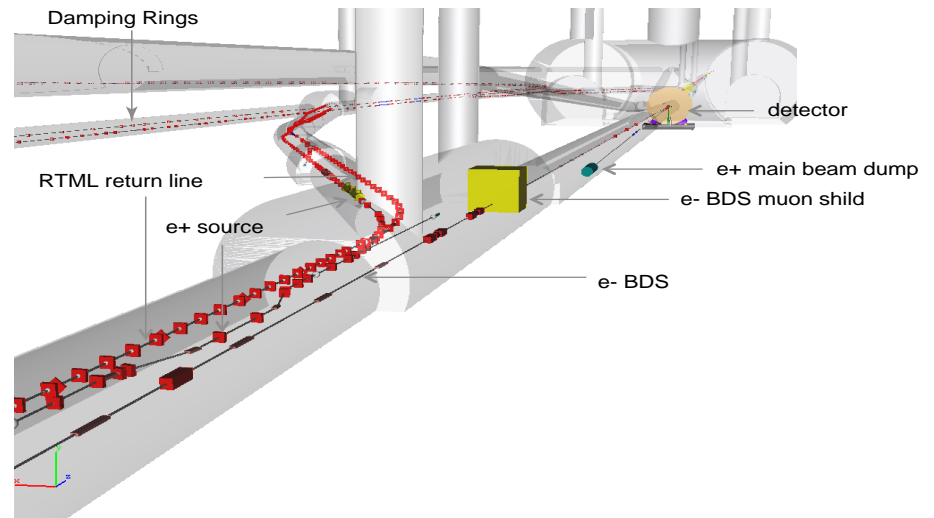
> Which disciplines should contribute?

- Civil engineering
- Site & road planning
- Mechanical engineering (detectors & accelerator)
- Technical infrastructure: Electrical & HVAC systems, cryogenics, ...
- Transportation, Safety, Survey, ...

> Who are the contact persons?

> Set up an information loop with the community?

- Who should participate – representatives of ...?
- What's in the loop: Inform about updates, handle requests, as for comments, ...?



> Who shall use EDMS how?

- **ILC Community** – mostly casual users who want to get informed, easy access through web (like TDD at linearcollier.org)
- **Planning team** – contributes and works with EDMS content, provides comments and signatures, may nominate contact person for interactive work
- **Local team** – similar to planning team, but partly in confidential “areas”
- **Sub-contractors** – contribute content, may receive selected information

Access control in EDMS




- > EDMS offers several mechanisms of access control for protecting confidential information
- > One example: Hierarchy of “storage areas”: Make documents visible only within one area, or also in the next level(s), ...
- > May change level of access at later times

> Which kind of standards are useful?

- CAD model conventions, e.g. coordinate system, origins, naming conventions, assembly structure, ...
- local (Japanese) codes & regulations, e.g. safety, electrical, legal, ...
- specifications of parts and materials, e.g. connectors, properties, ...
- experience in handling local factors, e.g. earthquakes, environment, public impact, ...

European X-ray Laser XFEL



The Top-Level-CAD-Assembly is represented by a Structure-Assembly, which is likewise provided and updated by the XFEL-CAD-QA-Team (CAD-System: I-DEAS). The Structure - Assembly regulates the location of the local (Building-) coordinate systems to the central coordinate system.

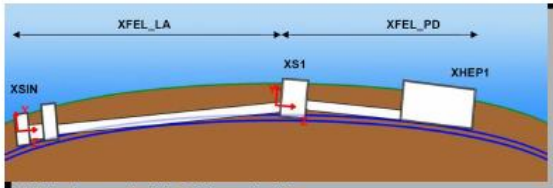


Fig. 2: Schematic representation of the XFEL-Structure-Assembly

2.2. Local Coordinate Systems

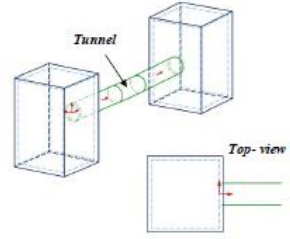
Every building assembly contains a BO serving as a point of origin. The BO is positioned according to the following rules (fig. 3-10):

The point of origin of the buildings is as well the point of origin of the trades within the building!!!

Tunnel

The point of origin of a tunnel is the intersection of the tunnel-axis (z-axis) with the inner wall of the shaft where the tunnel begins (facing away from DESY).

The z-axis faces „downstream“ towards the tunnel-axis, but **does not** necessarily follow the tunnel route. The x-axis lies horizontally.



General Standards for XFEL-CAD (EDMS-Nr. D00000000326080)
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EDMS Nr. D00000000326080 Rev. D, Nr. 4 Status: Released - Dtl: 11. May 2009