LBNF DUNE 3D models strategy

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LBNF/DUNE on EDMS

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◢ 📁 LBNF/DUNE

   ▷ 📁 CAD Models official

   ▷ 📁 LBNF

   ▷ 📁 DUNE

   📁 Integration and configuration

   ▷ 📁 Far Installation

   📁 ITF

   ▷ 📁 MOUs,Agreements

   ▷ 📁 EFIG

https://edms.cern.ch/project/CERN-0000193817

Write permission (read mostly public):
https://e-groups.cern.ch/e-groups/Egroup.do?egroupId=10312675

Links

	Call Name		Source
INCLUDE	CENF-CERNgr		E-GROUPS
INCLUDE	CENF-LBNF-DUNE	You can subscribe here!!!	E-GROUPS
INCLUDE	CENF-LBNF-DUNE-admin		E-GROUPS
INCLUDE	CENF-Project-Man		E-GROUPS

4 record(s) displayed

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3D models strategy

- Centrally collect all 3D models from any CAD system
- Translate it to CATIA
- Check for conflicts with other systems/models
- Check for the validity of the model in general
- Produce and store on EDMS a stp file and a navis-work file associated
- Redistribute to the various systems and subsystems the file for further work
- We keep a stp file for each subsystem, it should contain all possible details. No need for simplifications.
- Approved versions are marked as released (green), working versions are marked as in work (red)
- All history of versions are kept on EDMS

Who does what?

- The configuration control manager (now Jack Fowler) collects all 3d models from the various systems and decide if such models should be integrated and checked

- Jack and Dimitar Mladenov, organize that the model received is integrated in CATIA and is checked also for conflicts or errors. They are working in a design office with at least 4 experience designers (now: J.Freitag/FNAL, E.Seletskaya/CERN, B.Lacarelle/CERN, Adrien Parchet/CERN)

- Once the new model is ready it will be posted on EDMS (red) and the related system is informed

- Once in a while, Jack will decide to release a new version (green) and inform the collaboration. Probably every 3-4 weeks if necessary. All changes with respect to the previous released version will be documented

- It is the responsibility of the consortia technical leads to make sure the 3D official models are in line with the consortia latest status

Availability on EDMS

- Everybody has available a released version, which is approved by the project and a working version, which might change with time.
- All old released versions are also stored
- Production drawings should be in line and follow the latest released models. For some cases this is automatically done, for others it is done manually
- It is the responsibility of the person signing production drawings to make sure such drawings reflect the status of the integration work. Eric for DUNE consortia, Elaine for LBNF issues, Marzio for installation/integration activities
- The edms file: https://edms.cern.ch/document/2059874 contains a summary of the existing models and status
- The edms file: https://edms.cern.ch/document/2053096 contains a full assembly of all models in Navis Work format, easy to consult and navigate
- We just have now the first release
- From this moment on all changes need to be requested and approved via Jack

Models Today on EDMS

Model ID	N	EDMS #	Version	Content	Released Y/N
CF Caverns and drifts (60% design)		2059806	1	Caverns and drifts civil engineering	Y
CF Infrastructure (60% design) ventilation, lights, stairs		2059809	1	Ventilation, lights, bridge, stairs	Y
CF - For Discussion		2059812	1	All items currently under discussion	Y
Cavern N - Chamber EN: Warm Cryostat SP - Floor and Walls		2051553	1	5 walls and floor, side stairs	Y
Cavern N - Chamber EN: Warm Cryostat SP - Roof		2051554	1	Roof with penetrations, hand rails and floor	Y
Cavern N - Chamber EN: Warm Cryostat SP - TCO		2051555	1	TCO	Y
Cavern N - Chamber EN: Warm Cryostat SP - Mezzanine Structure and Supports		2051556	1	Cryo mezzanine mechanics	Y
Cavern N - Chamber EN: Warm Cryostat SP - Mezzanine Platform and Access		2051558	1	Cryo mezzanine platforms and means of access	Y
Cavern N - Chamber EN: Warm Cryostat SP - Mezzanine Proximity Cryogenics		2051559	1	Proximity cryogenics and pipes	Y
Cavern N - Chamber EN: Warm Cryostat SP - Detector Mezzanine Structure and Supports		2051560	1	Detector mezzanine mechanics	Y
Cavern N - Chamber EN: Warm Cryostat SP - Detector Mezzanine Racks and Services		2051561	1	Detector mezzanine racks, cable trays, racks, crosses	Y
Cavern N - Chamber EN: Warm Cryostat SP - Internal Cryogenics		2051896	1	Internal cryo piping	Y
Cavern N - Chamber EN: Warm Cryostat SP - DSS		2059036	1	Detector Support System	Y
Cavern N - Chamber EN: Warm Cryostat SP - APAs		2059804	1	APAs	Y
Cavern N - Chamber EN: Warm Cryostat SP - Cathodes and Field Cages		2059873	1	Cathodes, field cages and ground planes	Y
Cavern S - Chamber ES: Warm Cryostat SP - Floor and Walls		2060165	1	5 walls and floor, side stairs	Y
Cavern S - Chamber ES: Warm Cryostat SP - Roof		2060166	1	Roof with penetrations, hand rails and floor	Y
Cavern S - Chamber ES: Warm Cryostat SP - TCO		2060167	1	TCO	Y
Cavern S - Chamber ES: Warm Cryostat SP - DSS		2065463	1	Detector Support System	Y
Cavern S - Chamber ES: Warm Cryostat SP - Detector APA		2065464	1	APAs	Y
Cavern S - Chamber ES: Warm Cryostat SP - Cathodes and Field Cages		2065465	1	Cathodes, field cages and ground planes	Y
Cavern S - Chamber ES: Warm Cryostat SP - Mezzanine Structure and Supports		2066325	1	Cryo mezzanine mechanics	Y
Cavern S - Chamber ES: Warm Cryostat SP - Mezzanine Platform and Access		2066661	1	Cryo mezzanine platforms and means of access	Y
Cavern S - Chamber ES: Warm Cryostat SP - Mezzanine Proximity Cryogenics		2066948	1	Proximity cryogenics and pipes	Y
Cavern S - Chamber ES: Warm Cryostat SP - Detector Mezzanine Structure and Supports		2067819	1	Detector mezzanine mechanics	Y
Cavern S - Chamber ES: Warm Cryostat SP - Detector Mezzanine Racks and Services		2067822	1	Detector mezzanine racks, cable trays, racks, crosses	Y
Cavern S - Chamber ES: Warm Cryostat SP - Internal Cryogenics		2067825	1	Internal cryo piping	Y
CUC - Cryogenic equipment and LN2 Dewars		2060511	1	Dewars and piping inside the CUC	Y
Complete Assembly (Navis work)		2053096	1	Overall assembly in Navis work file	Y
Cranes and Monorails		2059810	1	Bridge crane and monorails	Y