



CAD SITUATION

ILD Meeting

- March 6th, Sendai –

Marc ANDUZE



IN2P3

- Different CAD software are used

Laboratories	Software
KEK, Tohoku Univ.	Autodesk Inventor Solid Edge
DESY	Ideas Solid edge
Institute of Nuclear Physics <i>(Poland)</i>	Autodesk Inventor
IN2P3 <i>(LLR, LAL, LPSC, LPNHE)</i>	CATIA V5
BNL	Solid Edge

- Decided at Zeuthen :
 - Integration of gobal concept in **CATIA V5** by **LAL/LLR**
 - Using **STEP** files as exchange format

- First exchange from STEP file to CATIA V5

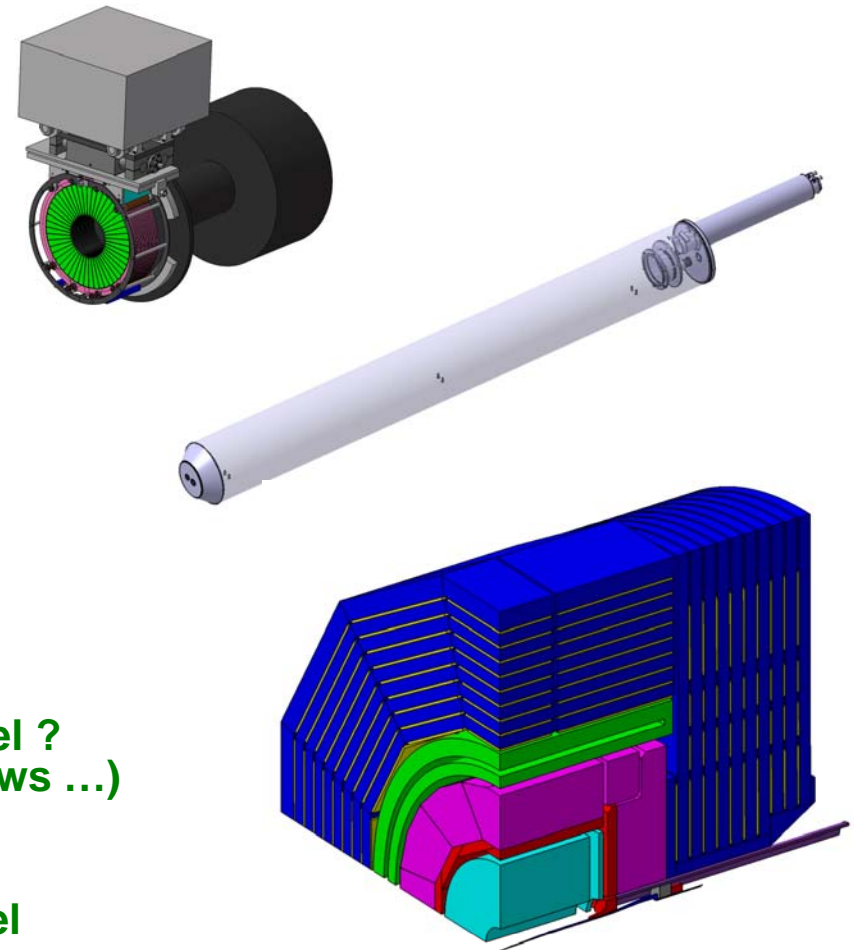
- **LumiCal** (Autodesk) → OK

- **QD0** (Solid Edge) → OK

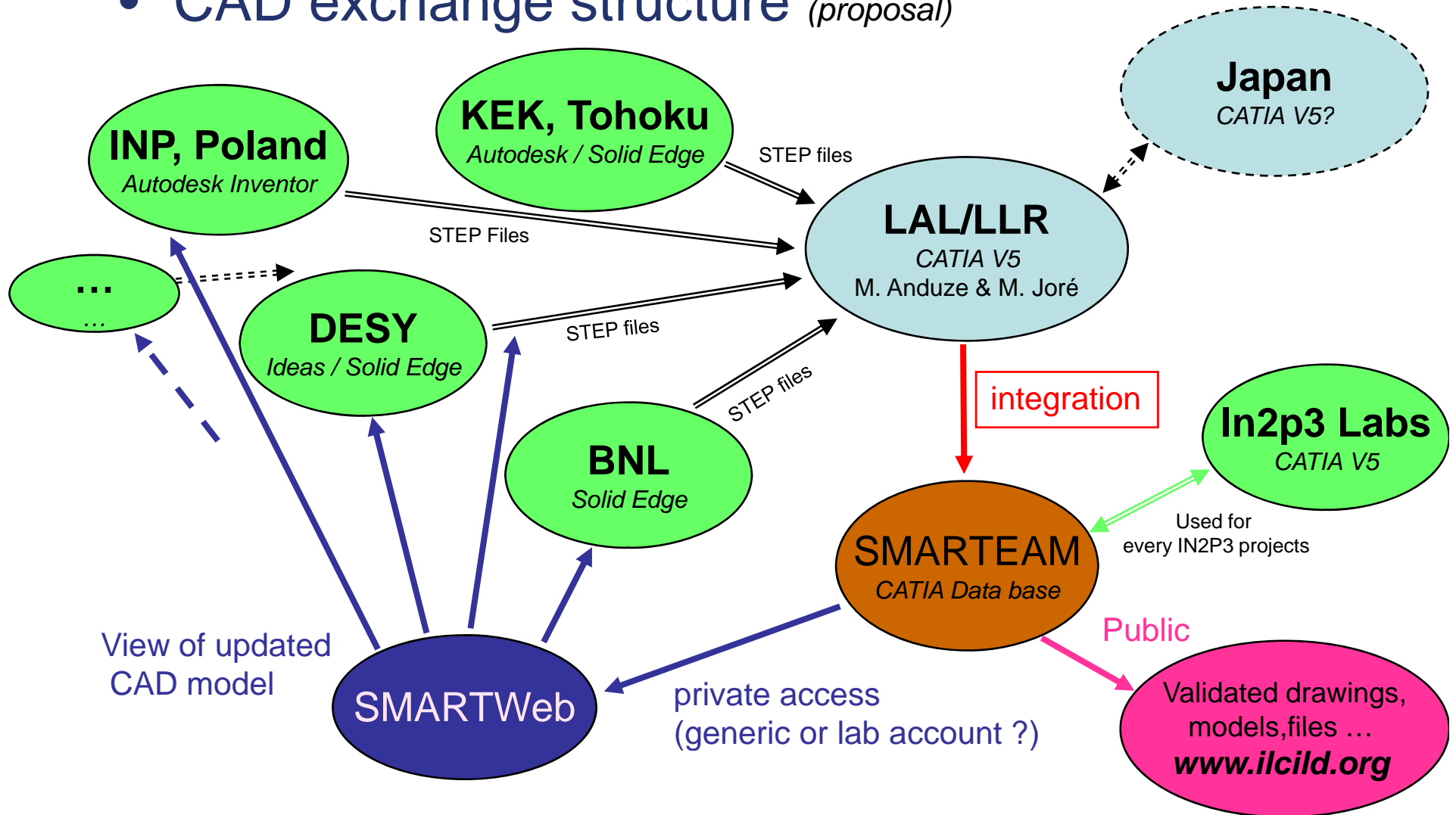
- **GLDc** (?) → OK

- Comments :

- No information about materials
- Too much detailed : light step model ? (external shape, interfaces, no screws ...)
- Avoid specific characters and dots in names
- Impossible to modify the step model




- CAD exchange structure (proposal)

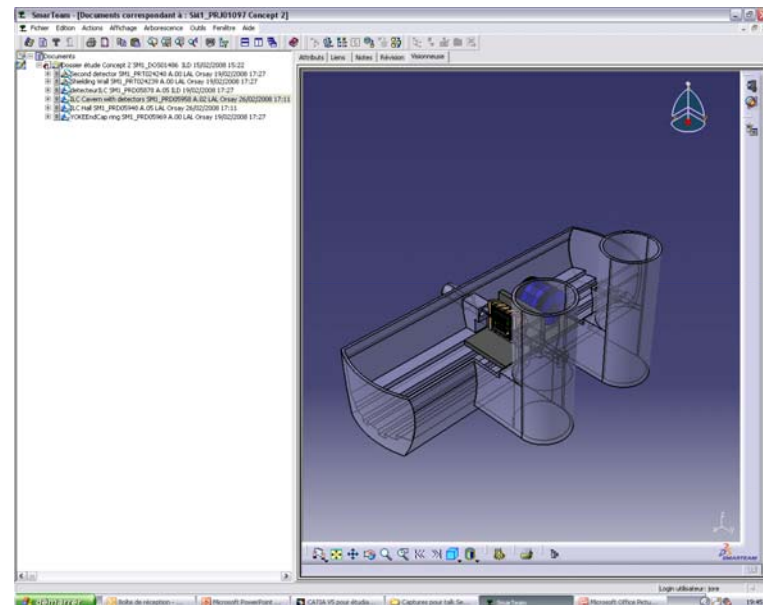
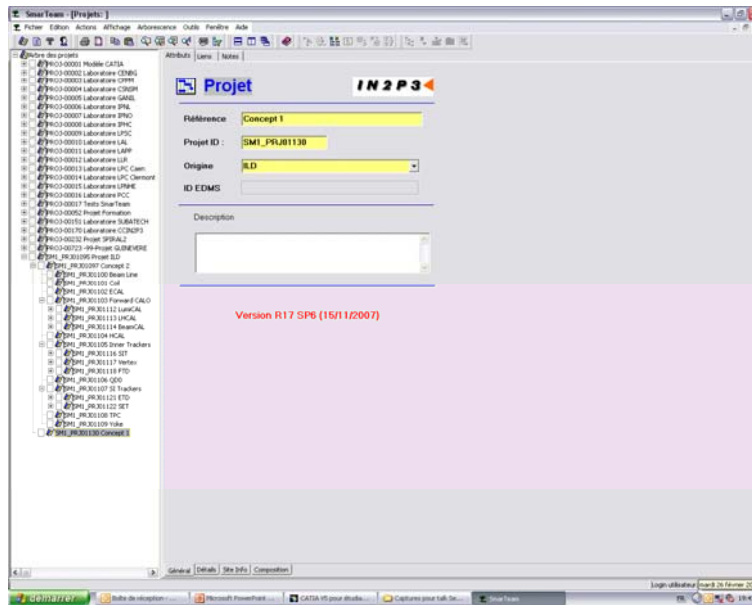




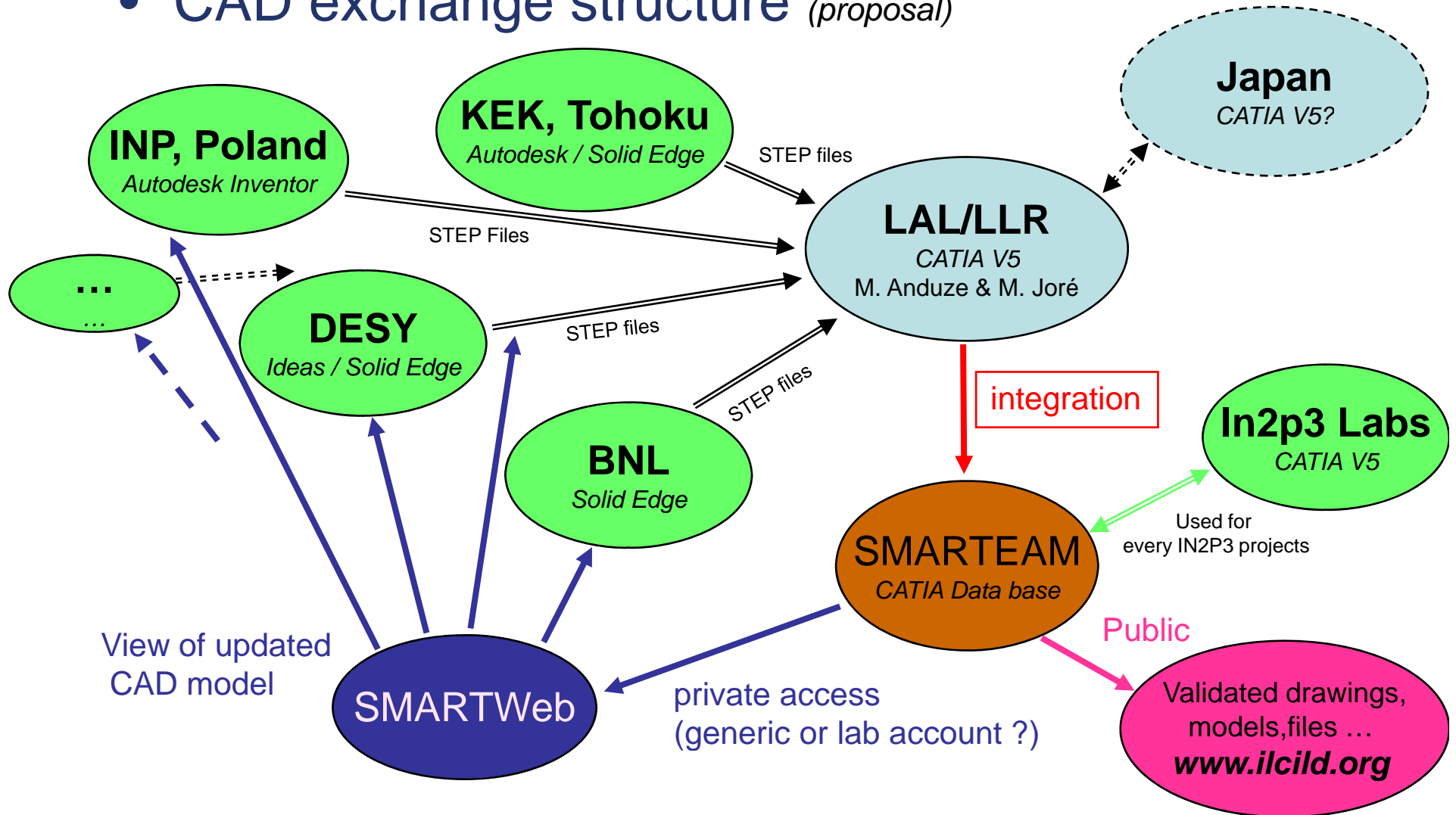
SMARTeam



- What is SMARTeam for CATIA V5?
 - data base for CAD model, drawings, pdf...
 - Unique updated CAD model (with lifecycle)
 - design team members can have full access to the same model anywhere
 - Currently only accessible for In2p3 labs via 



- CAD exchange structure (proposal)



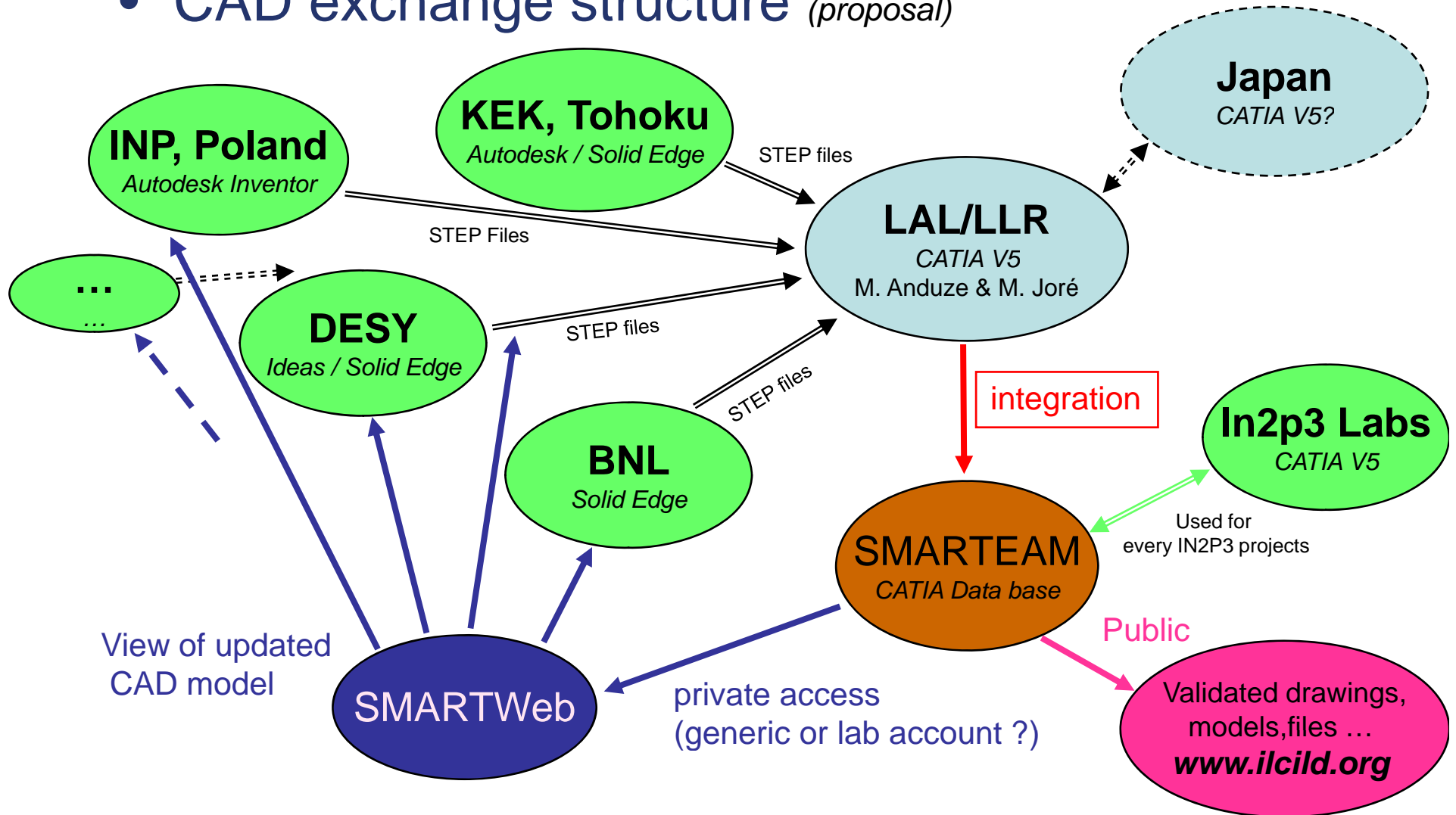


- SMARTWeb editor
 - Access to CAD model & drawings using standard web browsers
 - Quick visualisation for 3D model without CAD software
 - Obtain several informations :
 - Available volume for each sub-detector (boundaries)
 - Localisation of interfaces, fastening systems
 - Dimensions,
 - Print files (drawing, pdf, ...)
 - ...
 - Check and validate design

But need to have an access to the data base

- the demo <https://ccsmweb.in2p3.fr/webeditor>

- CAD exchange structure (proposal)



- ILD integration in SMARTeam is going on
- First exchanges of STEP files (OK)
- Prospective
 - Create account to access to SMARTweb (generic or labs ?)
 - Agreement on proposal of exchange process ?
 - CAD contacts for each component ?
 - Need precise rules of exchange (eg name of files : **NO . / # !!!**)
- CAD model integration = integration studies
 - OK today for ILD2 : Matthieu Joré & Marc Anduze
 - How precisely move to ILD ?