

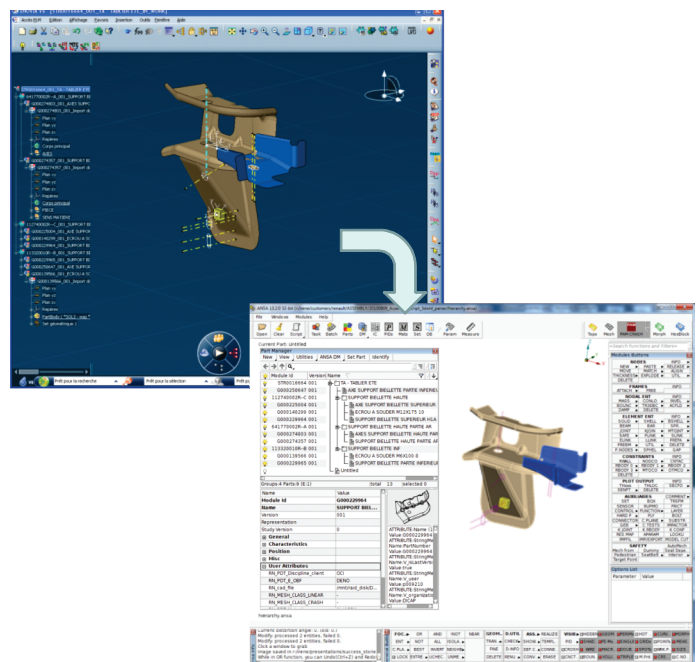
# RENAULT: CAE model generation from CAD and PDM info

## Challenge

- The generation of a CAE assembly model that maintains the PDM structure and meta-data and integrates CAE-specific information.
- This process must be reliable and consistent since it is the first step of the pre-processing phase.
- The quality of this model will be reflected to all FE-models that will be based upon it.

## Approach

- ANSA scripts were developed in order to read the model description file exported from the PDM system.
- The model hierarchy together with part meta-data are imported in the Parts Manager, while all related CAD files are translated into ANSA files with appropriate attributes.
- CAE-specific information, including thickness and material attributes as well as mesh density guidelines, can be optionally mapped to the CAD files.



## Results

- An ANSA assembly that integrates PDM and CAE-specific information is generated in a very short time.
- This model has all those attributes that will assist the CAE-engineer in the upcoming pre-processing steps (e.g Batch Meshing and connections realization), as well as enable the version tracking of the assembly components.

*“For us, this script development is an excellent example of efficiency of ANSA Customers Team: Skilled and adapted engineers, guided by reactivity and Support principles, dealing to Features matching to complex and specific in-house Digital processes ... ”*

*Jeremie Gomez, RENAULT SAS  
Specialiste Simulation Numerique*