

Model built up with A/LC points for NVH and use in Pre-Post

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A common problem in CAE activities in pre-processing is to build multiple loadcases on a certain model or variation of it, depending on the analysis type. BETA CAE Systems has introduced a new tool, called Loadcase Assistant (currently for building loadcases for NASTRAN) which facilitates this process through a user friendly environment.

The user is able to define the Boundary Conditions (BCs) and Output Requests (ORs) along with all necessary loadcase and solver parameters. The loadcases can be defined by combining the created BCs and ORs arbitrarily. The generated loadcases can also be saved as loadcase templates in order to be reused on another model. The created loadcases can also be associated with different configurations of the model within the same database by taking advantages of technics available in the newly introduced features of Model Browser (Parts), which offer great capabilities of creating several model setups.

The process of creating reduced representation of a part of a Model (NASTRAN Super Element, Modal representation, FRF representation) will be presented. Display models can be associated with these reduced representations. Simulation models and the respective solver file can be output for a NASTRAN solution (Nastran Super Elements) or FBS analysis driven in META and setting up the FRF Assembly tool (Modal, FRF representations).

Assembly and Loadcase points (A/LC points) are a new way to tag hard points (referring to grid ID or location) with a name. Connectors, boundary conditions and output requests, can now be defined on A/LC points instead of just model grids. Thus templates can be created and applied on various models afterwards.

In this demo the build-up of such a loadcase scenario will be presented on a model for NASTRAN analysis. A template will be generated and reapplied on another variation of the model. Afterwards the usage of A/LC points in post processing comparison techniques will be demonstrated. Comparison between two FE model results or between FE and measured results can be done without reliance on IDs.
