MORPHING STRATEGIES LIBRARY PRESENTATION

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ABSTRACT –
Engineers often repeat design shape changes across multiple vehicle programs and platforms. Differing methodologies often lead to disorganized data and repeated work.We have developed the Morphing Strategies Library to store, organize, manage, and automate morphing strategies and related design data. By coupling the SPDRM and ANSA software, the tool offers users a simple, elegant interface to organize, store and reuse their morphing strategies. A custom ANSA interface allows users to organize, assign attributes, and upload the strategies into SPDRM through a simple work flow. The Morphing Strategies Library automatically preserves the links, relationships and organization of all morphing strategies within a model, allowing for easy reuse in a different program. When the user would like to conduct a morphing action on a new or legacy vehicle, they select the saved morphing strategies from a custom SPDRM interface, along with the base model they wish to morph. The Morphing Strategies Library assembles all selected files in ANSA and automatically creates an execution ready Optimization Task. Currently the user must manually ensure the proper fit of morphing boxes, however future plans are to automate the fitting process. The Morphing Library allows a larger number of engineers to include morphing and parameterization in their everyday work without necessarily being experts in the field.