

## CAE ACTIVE MODEL APPS

**Sunil Earla<sup>\*</sup>, Santosh Patil, John Skarakis**  
BETA CAE Systems USA Inc., USA

### KEYWORDS –

Active Apps, Model Assistant, Model Diff, Active Model, Model Checks

### ABSTRACT –

CAE has become an indispensable part of product development life cycle. As the importance of the simulations has grown, so has the complexity and amount of the data involved. Most of the times, CAE and CAD data are collected from various business entities in an organization. They are generated using various software, processes, modelling techniques and are exported in different formats. As a result, they are usually far from being “simulation ready” to department standards. Because of these complexities, it becomes challenging for an analyst to verify and integrate the data to perform accurate, efficient and traceable simulations.

BETA CAE Systems USA Inc. has developed the Active Apps portfolio in order to facilitate the CAE design process with a goal of shifting the burden of performing high quality simulations from the analyst to the Active Process Apps. Model Assistant helps to generate an ANSA model from a monolithic solver deck file complete with generic representations and automatic sorting of sub-assemblies. The Model Diff Tool provides an ability to easily differentiate two models by the shape, connection, joints, trim, properties and materials standpoint. In addition it facilitates the output of diff report and the Master Model update based on the differences. Model Checks Tool helps to determine the integrity of the model against the CAE standards. Active Model can understand various geometrical features of the CAD data and sort it into actionable containers. Various algorithms operate on these containers to automatically generate meshed parts, bolts and connections.

Active Apps harness the unparalleled power of ANSA to make the model build process easy and robust. The interaction with the tools is straightforward, making it easy to learn and implement in any CAE environment. Standardization captured into the process software and corresponding automation of repetitive and critical steps, make the simulations accurate, accountable, repeatable and traceable. This allows engineers to focus more on product development and organizations to save cost and increase productivity in short and long term.