

LATEST ENHANCEMENTS IN PRE- AND POST-PROCESSING SOLUTIONS FOR CFD

Vangelis Skaperdas

BETA CAE Systems SA, Greece

KEYWORDS –

CFD-meshing, pre-processing, post-processing, ANSA, META

ABSTRACT –

This presentation summarizes the latest developments of ANSA and META in the field of CFD, which allow them to excel in a very competitive market. A wide range of new features are presented, starting from improvements in the quality of surface batch meshing and surface wrapping to an enhanced powerful hex/polyhedral mesher with boundary layers, applicable to non-watertight surface data. A new smoothing algorithm introduced in Hexablock meshing tool, now allows the generation of even higher quality complex hexa meshes.

In addition, ANSA is now able to generate and handle meshes of several hundreds of millions of elements at significantly faster times and reduced memory needs than before, thanks to new optimized data structures. All these features, in combination with ANSA Data Management functionality, that allows the fast and efficient modular CFD models, offer engineers the needed solutions to their real problems.

In the field of post-processing, META now supports more native CFD formats, and offers enhanced graphics with new rendering options, improvements in Line Integral Convolution visualization as well as data compression to address the ever increasing size of CFD result data.