

Detroit Engineered products (DEP), is an engineering services, product development, software development, consulting and talent acquisition company. Since its inception in 1998 in Troy, USA, DEP is now a global company with footprints in Europe, China, Korea, Japan, and India. DEP uses the accelerated and transformed product development process, accomplished by utilizing our proprietary platform, DEP MeshWorks, which rapidly reduces the development time of products for all segments.

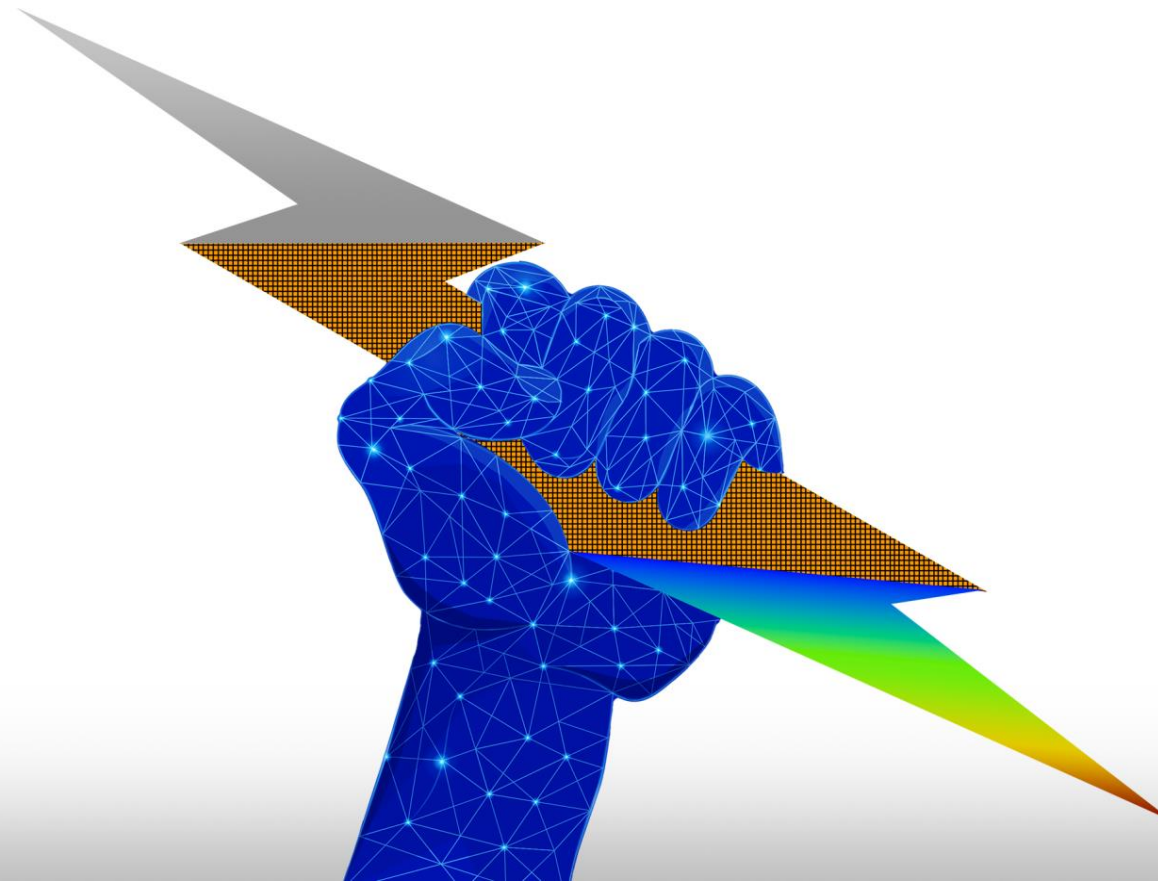
DEP MeshWorks, a CAE platform helps leading companies around the globe transform their product development process, reduce their development time, and get to market faster, thus saving considerable time and money. MeshWorks is a CAE driven integrated platform for pre and post processing, involving rapid concept CAE and CAD model generation. With in-built features of advanced meshing, process automation, concept modeling and CAD/CAE Morphing, it is now an industry standard tool for faster & smarter parameterization and optimization. Since its release in 2001, MeshWorks has been simplifying tedious time consuming processes associated with design changes, and helping engineers develop future-ready products across industries.

The latest version of MeshWorks features the additional enhancements of industry specific and targeted customizable solutions. Custom modules for precise functions in manufacturing, plastics, etc. are available with more robust features in the current version. Smart functionalities under CAE Modeling tools provide highly automated solutions for even the most complex geometries. Our patented CAD Morphing function is augmented with high degree of automation in full vehicle and sub-system morphing. Furthermore the post-processor functions are updated with more options making it customizable according to user needs. Latest modules additions of ConceptWorks & ROM Builder focuses on accelerating the design & optimization phase in multitudes.



POWER TO TRANSFORM PRODUCT DEVELOPMENT PROCESS

PRE/ POST PROCESSING
CAE/ CAD MORPHING
PROCESS AUTOMATION
MULTI-DISCIPLINARY OPTIMIZATION
CAE PARAMETRIZATION
CONCEPTWORKS
REDUCED ORDER MODELING TOOLS
eMOD



New & Improved MeshWorks

Hexa Meshing

Auto HexMesh

- Completely automated tool that generates high quality HexMesh for complex geometries in single push of a button.
- Very Effective in models like Seat Foam, Bumper Foam, Calipers, etc.,

Extruded HexMesh

- Highly Automated, process driven tool to generate high quality Hexmesh.
- Accuracy and flexibility in feature capturing, accounting rib draft angles.
- Very effective for models like Mounts, Rotors, Housings, etc.,
- Hexa from MidShell
- Automated features that generates Hex Mesh from mid shells.
- Suitable for Thin walled structures.

Hex Cutter

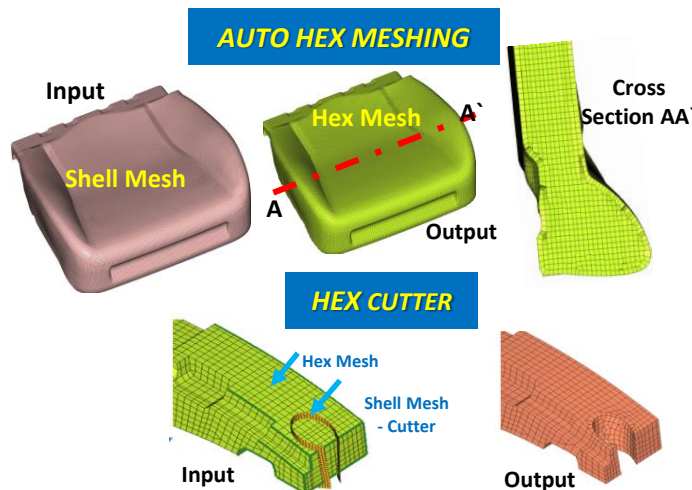
- Completely Automated tool to create Holes, Slots, Arbitrary Re-Entrant profiles in the existing Hexmesh adhering to the high quality of the element.

Solid Fuse

- Completely Automated tool to fuse highly complex connected regions of two different Hexa geometries with Node-to-Node connectivity.

Hexa Layer Creation

- This function is used to pad on the layer of Hexa with nodal connectivity with surrounding elements



ConceptWorks

ConceptWorks - Sheet Metal

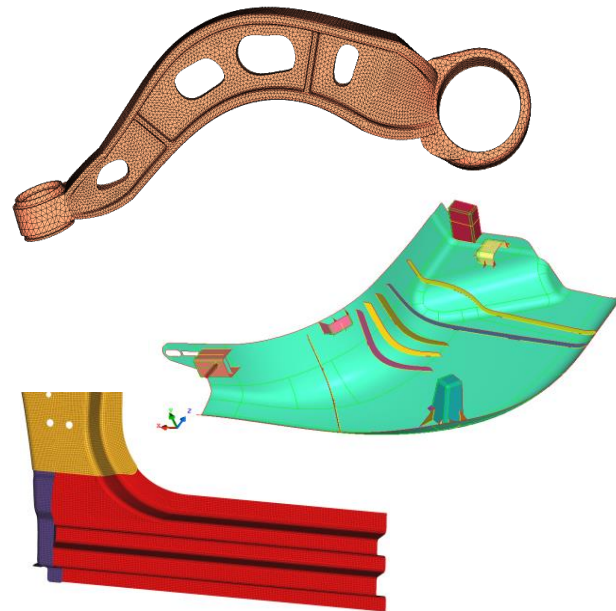
- Using ConceptWorks sheet metal capabilities, early conceptual design and development can be done without CAD data.
- Using specialized parametric tools user can easily build new members, interior components, joints, and unique characteristics like holes, fillets, and beads.
- Using ConceptWorks modules, the conversion procedure for conventional CAE car models into hybrid types are done easily.

ConceptWorks – Plastics

- Using minimal inputs, old design solutions can be easily converted to new designs
- Using Concept Works - Plastics specific features, new model elements can be added to CAD data.

ConceptWorks – Casting

- Using casting, user can rapidly produce a sketch and the topology optimization results will automatically generate a standard section.
- Using Concept Works - Casting specific features, and creation of slots and ribs are done easily & in less time.



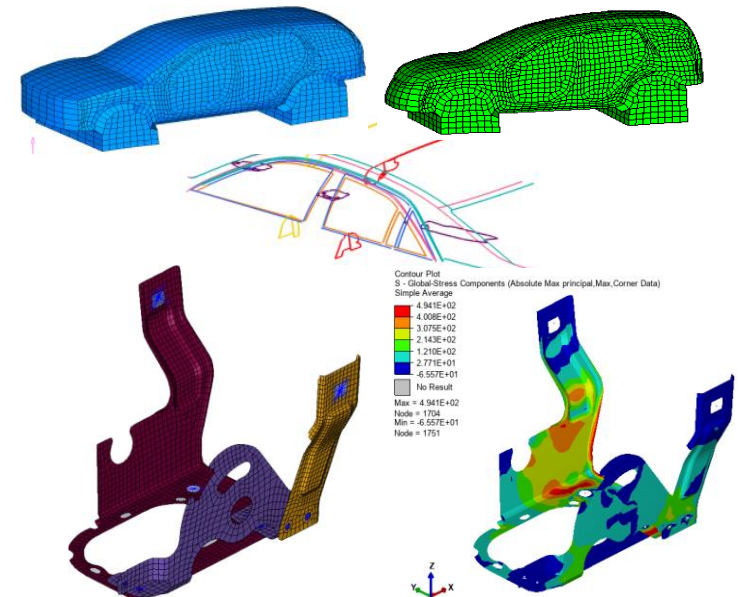
Advanced Morphing

It is used to morph the 2D sections by using 1D feature lines based on user defined profiles without CAD data. For eg: Width change, depth change, fillet radius change by using the below steps:

- Group is used to deform/morph the model by translating the 1D feature lines through user defined direction.
- Edit curve is used to edit the 1D feature lines. Morphing will occur based on the edition.
- Re-shape is mainly used to change the fillet radius
- Update mesh corrects the mesh flow very smoothly.
- Remesher is used to re-mesh the existing shell, in order to improve the quality of mesh in the deformed zones.

Post Processing

- Contour features are reflected based on selected levels in legends section & the supported levels count increased to 20.
- 'Global Stress Component' result type can now be calculated & presented based on the stress tensor values.
- 'Sets' panel components can be used for contouring, querying, score card and hot spot extraction.
- Performance & option enhancements are made in features of 'Active Model' & 'Apply Style'.



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