

# midas FX+ V300 **Release Note.**

**1. Summary of enhancements**

**2. Descriptions for Major Upgrade Items**

# 1. Summary of Upgrade Items

## A. Graphics

- (1) Support large mesh model (shell : 1.5mil, solid : 1.0mil)
- (2) Fast manipulation for dynamic view
- (3) Improvement of speed of manipulation for nodes and elements (e.g. selection, query)
- (4) Auto transformation on virtual transformation
- (5) Additional STL import option

## B. Geometry

- (1) Extract surfaces from solid geometry with considering neighboring shape
- (2) Highlight operating description for sketch functions

## C. Mesh

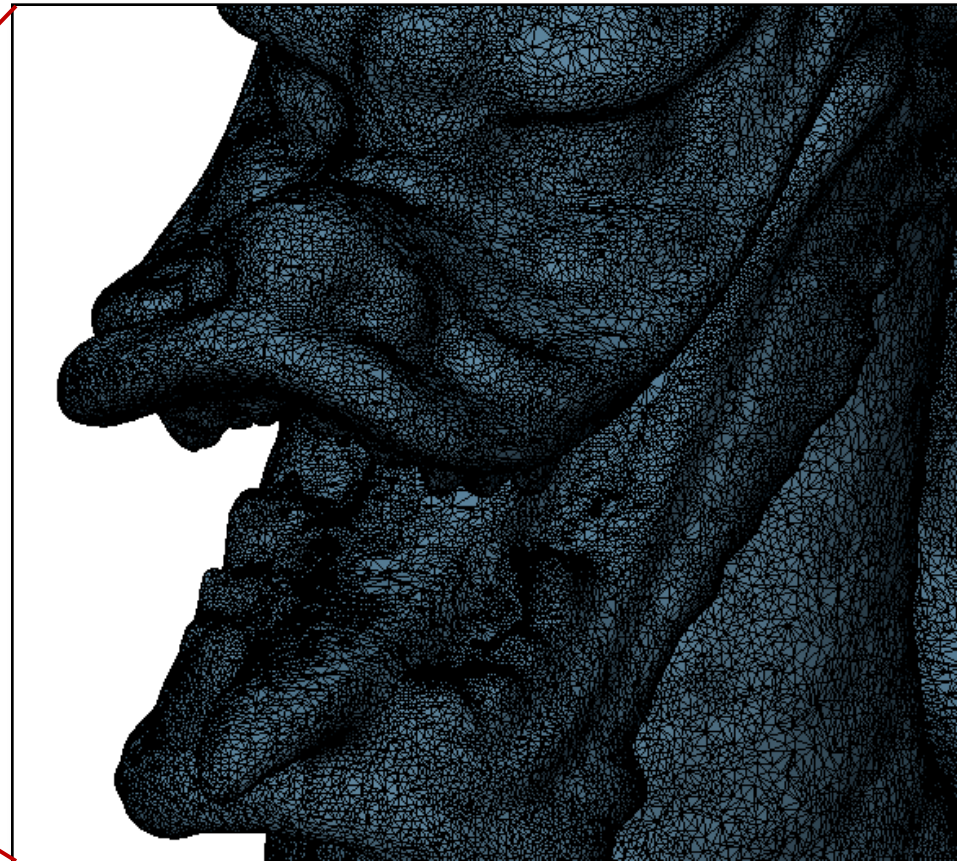
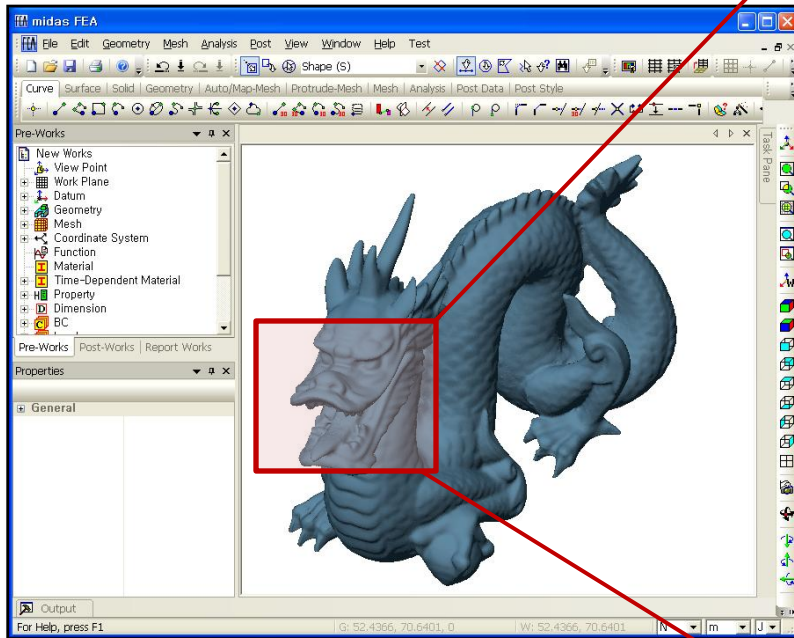
- (1) Post-remeshing after auto-meshing
- (2) Improvement of the mesh seeds
- (3) Separate advanced options for mesh functions
- (4) Delete duplicate elements

## A. Graphics (1)

### A.1 Support large mesh models

- Change graphic kernel for mesh
- Maximum size : 1.5mil shells, 1.0mil tetra

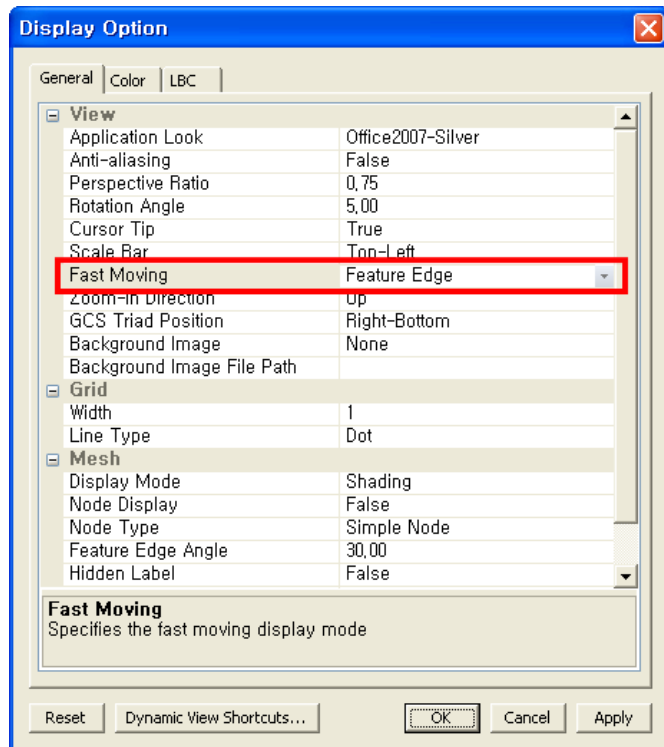
- **Number of triangles: 871,306**
- **Number of nodes: 435,543**



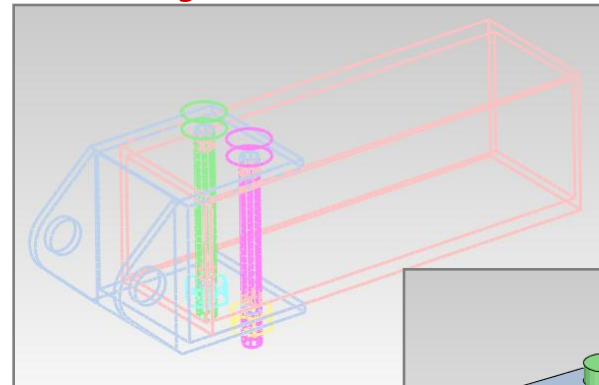
## A. Graphics (2)

### A.2 Fast manipulation for dynamic view

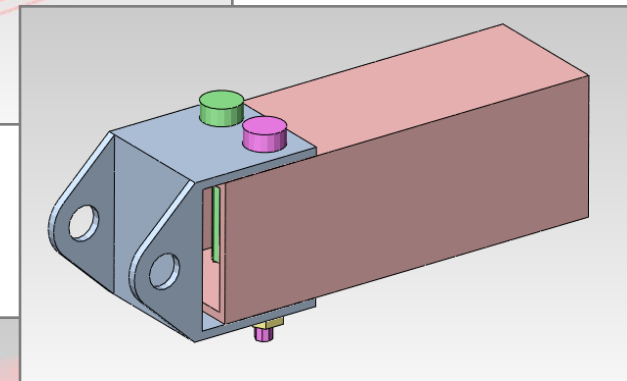
- Support fast moving mode (feature edge, wireframe and shading) to improve the performance of dynamic rotation, panning and zooming



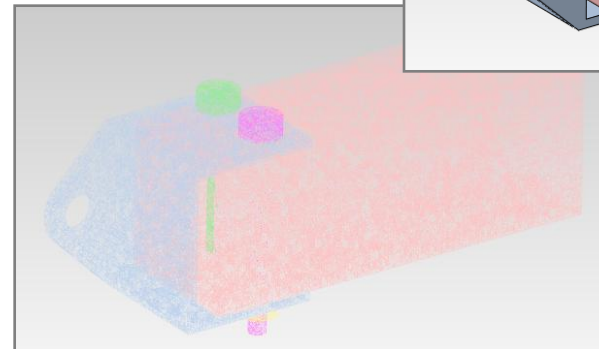
*Feature Edge*



*Feature Edge with shading*



*Wire Frame*

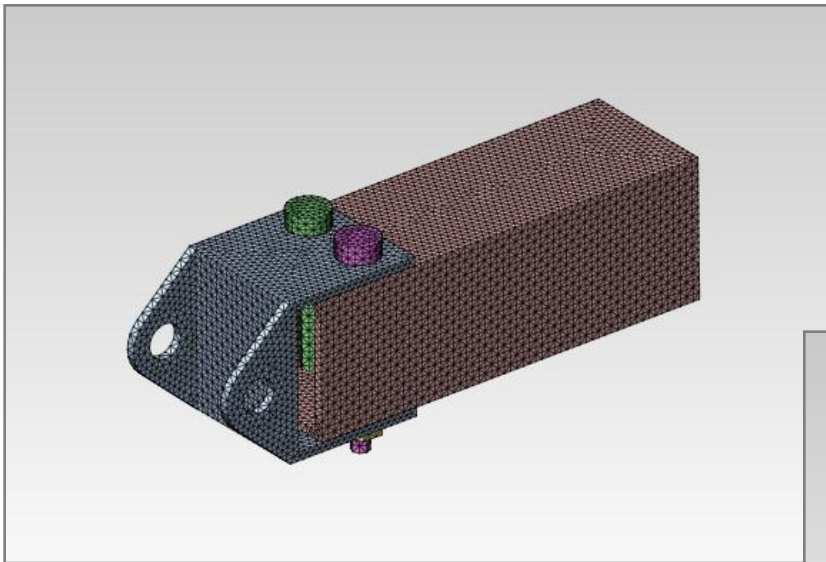


## A. Graphics (3)

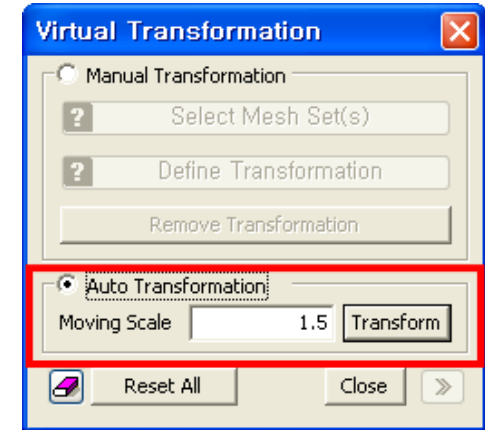
### A.3 Auto transformation on virtual transformation

- Add function for automatic transformation with scaling factor
- **Mesh > Mesh Set > Virtual Transformation...**

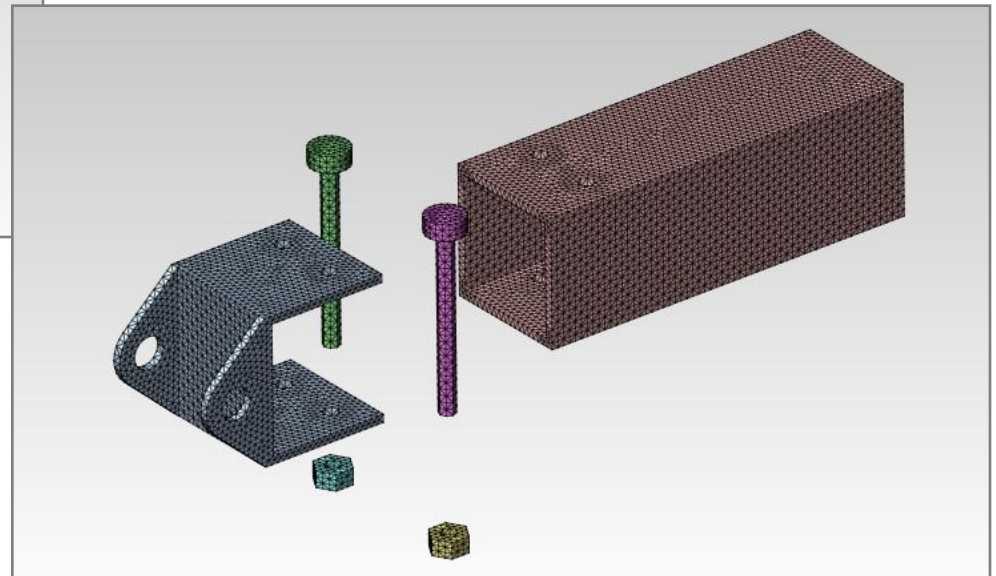
*Original mesh sets*



*Scaling for transformation*



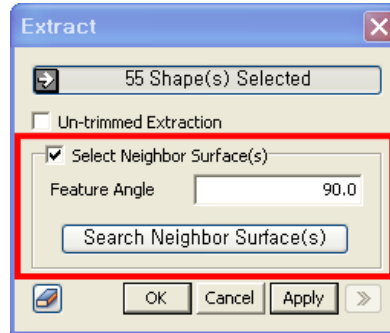
*After auto transformation*



## B. Geometry (1)

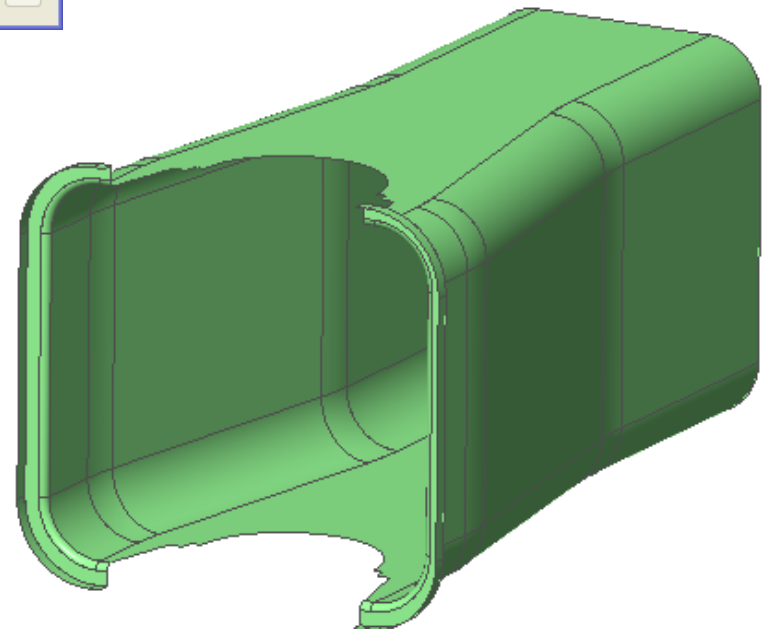
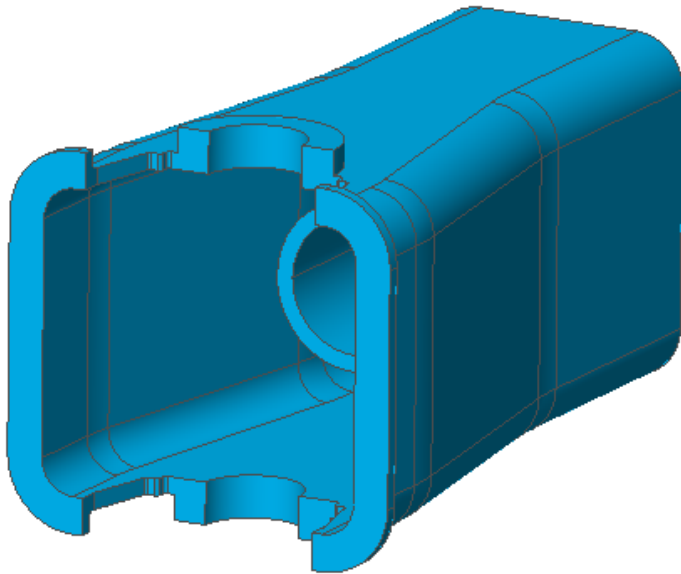
### B.1 Extract surface from solid geometry with considering neighboring shape

- Extract surfaces from solid model ( to perform more efficient analysis of thin solid model)
- **Geometry > Extract...**



*Using the feature angle to find Neighboring surfaces*

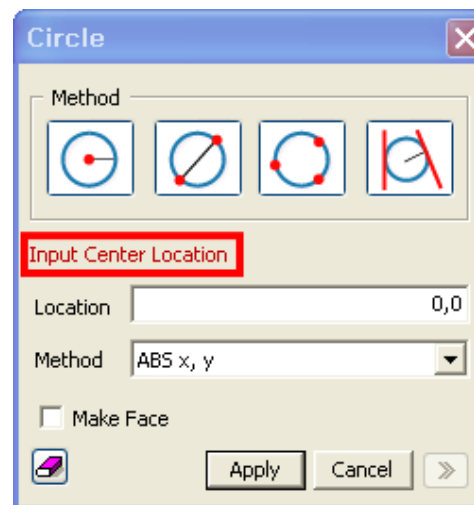
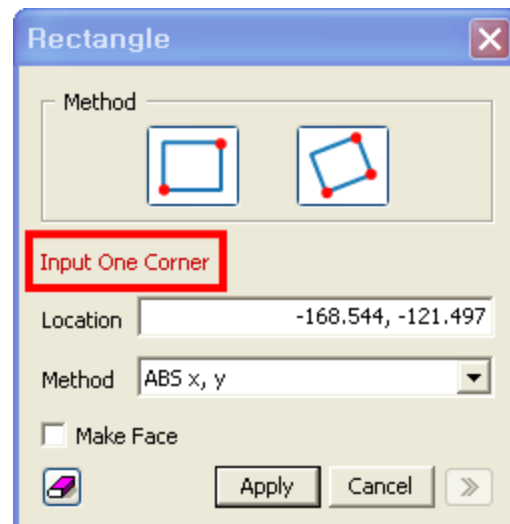
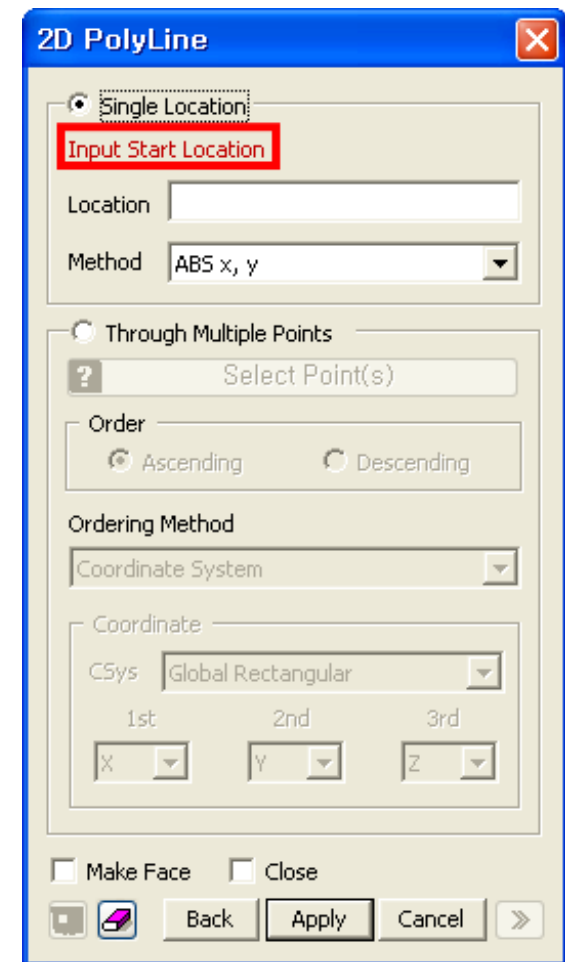
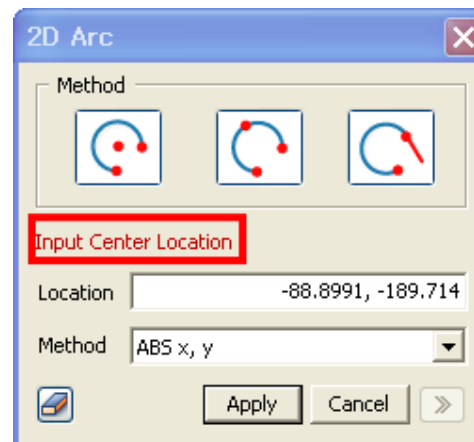
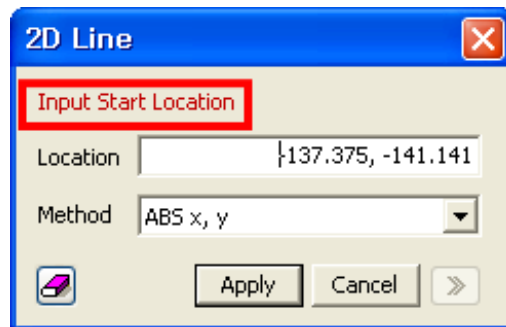
*Original solid model*



*Extracting surface geometry*

## B. Geometry (2)

### B.2 Highlight operation description for sketch functions

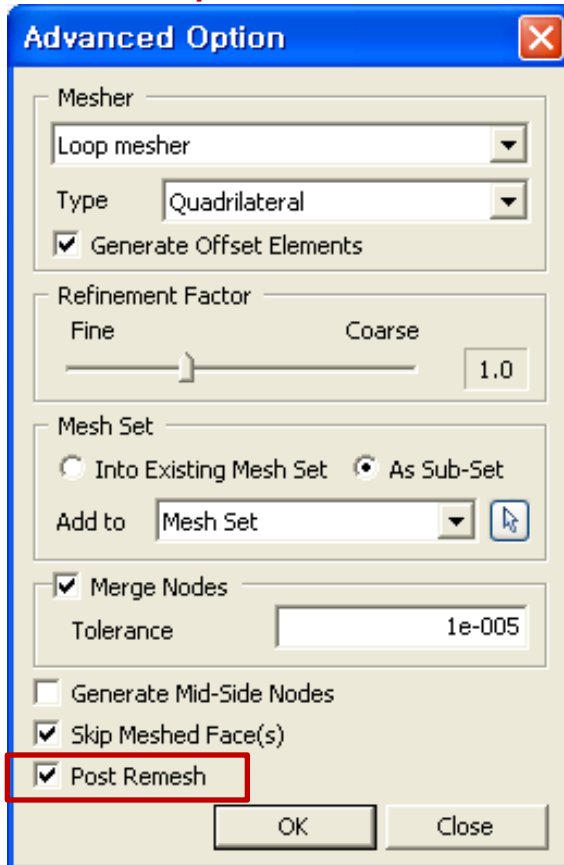


## C. Mesh (1)

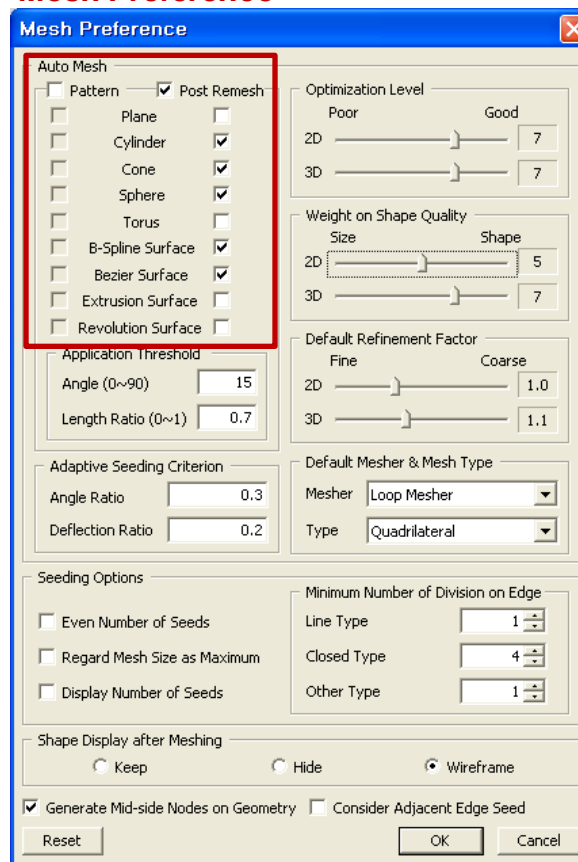
### C.1 Post-remeshing after auto-meshing

- Menu : **Mesh > 2D Mesh > Auto Mesh Face, Mesh > 3D Mesh > Auto Mesh Solid : Advanced Option**
- Remesh to improve poor quality after auto meshing

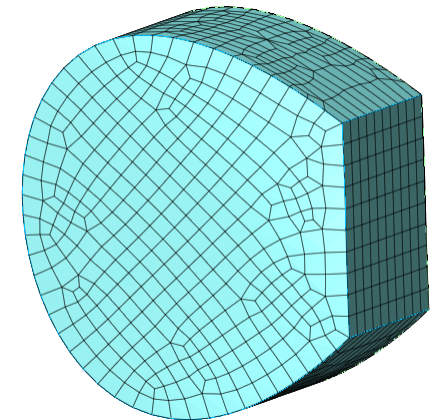
*Advanced option of auto-mesh*



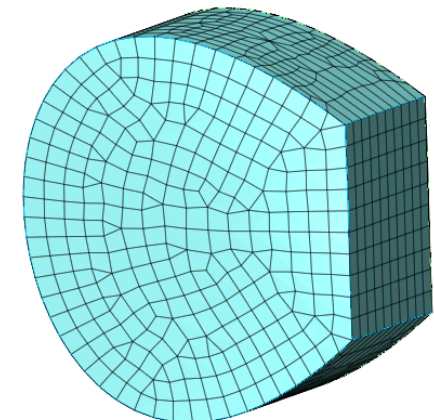
*Mesh Preference*



*without post remesh*



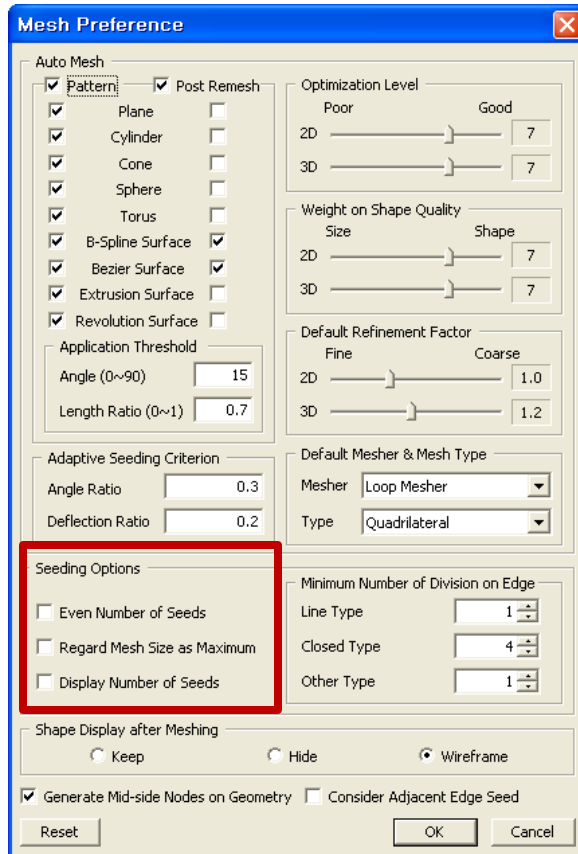
*with post remesh*



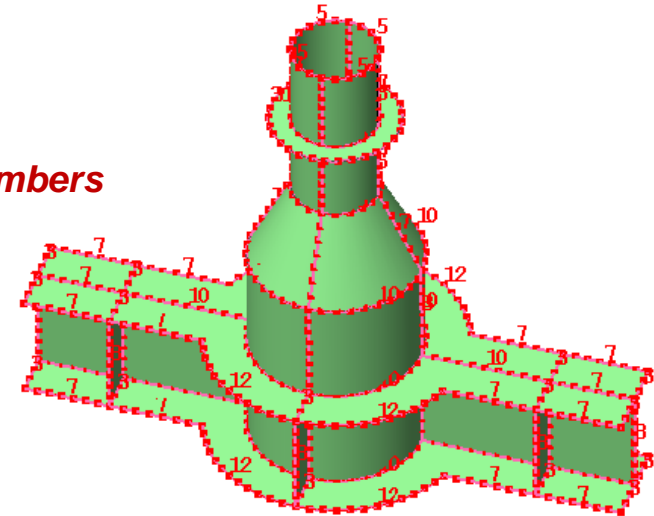
## C. Mesh (2)

### C.2 Improvement of mesh seeds

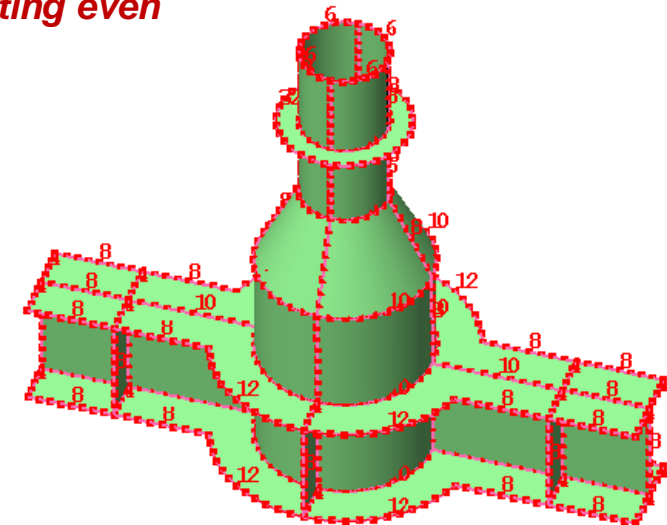
- Even number of seeds / Regards size as maximum / Display number of seeds



*Default seeds  
with showing numbers*



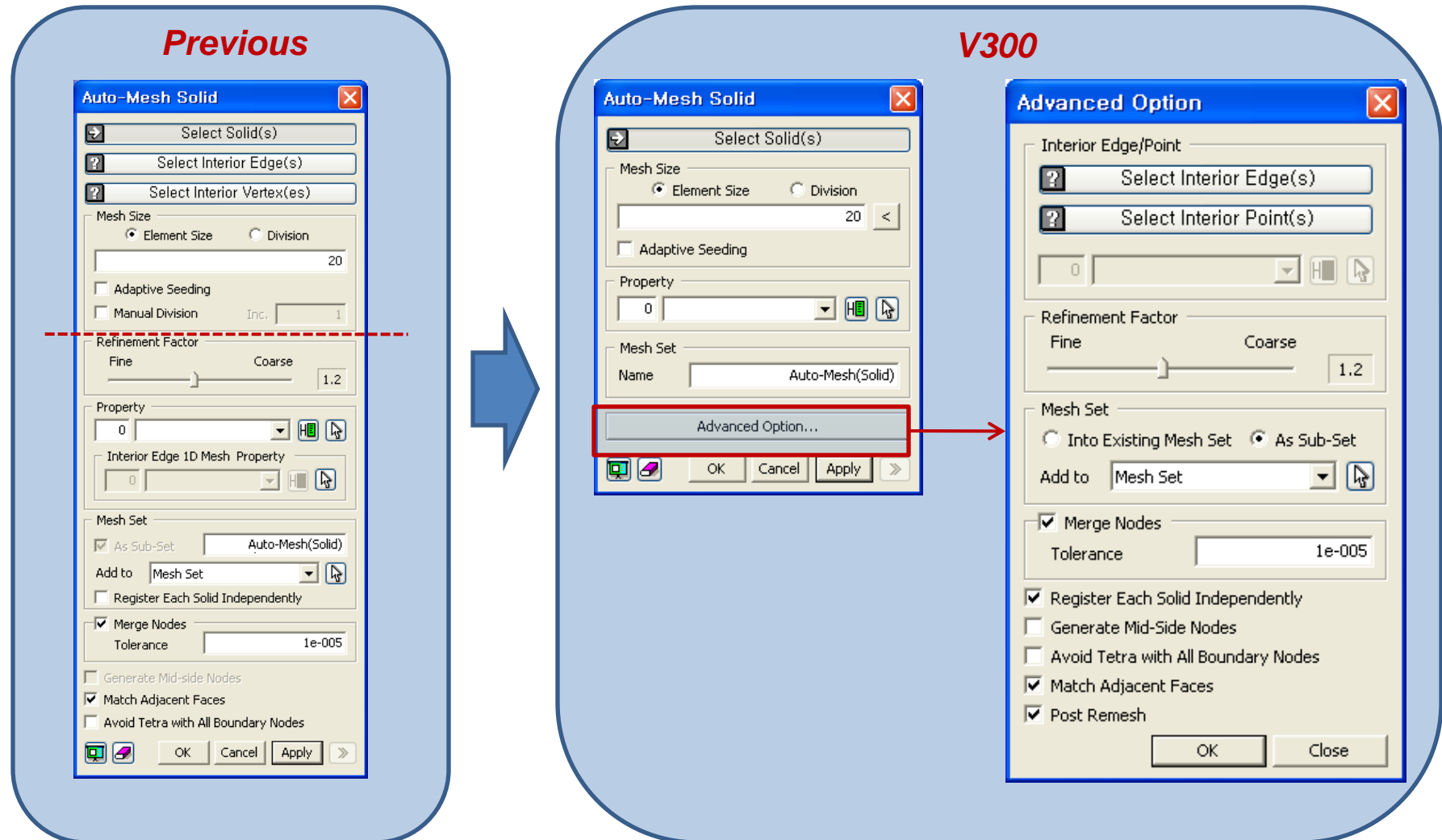
*Seeds with adopting even  
number option*



## C. Mesh (3)

### C.3 Separate advanced options for mesh functions

- Simplify auto mesh operations for beginners of midas FX+

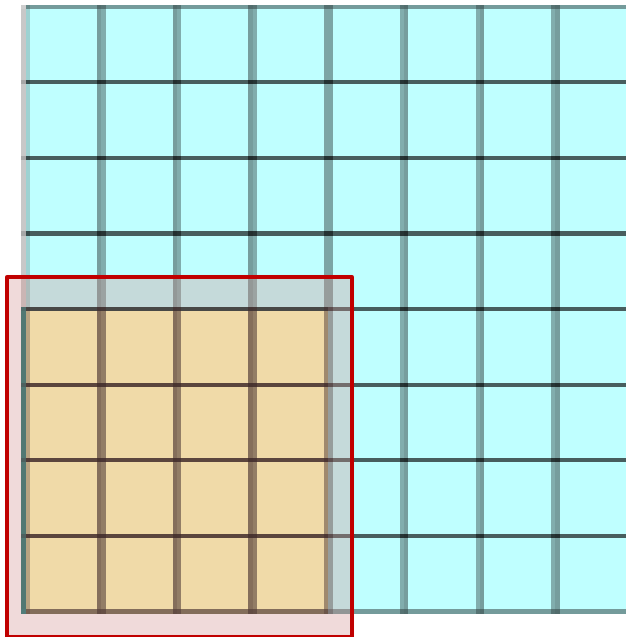


## C. Mesh (4)

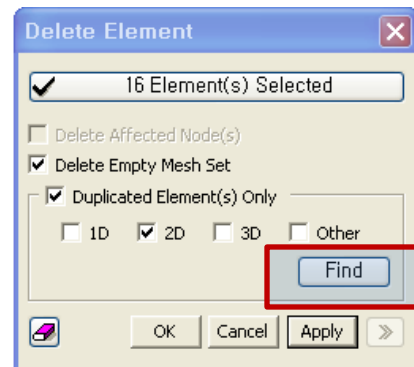
### C.4 Delete duplicate elements

- *Mesh > Element > Delete...*

*Original model*



*Duplicate elements*



*Find duplicate elements*

