

The logo for Applied CAx features a red wireframe mesh of a dome-like shape above the text. The word "Applied" is in white, "CA" is in white, and "x" is in red. A thin red horizontal line is positioned below the text.

Applied **CA**x

CAD • CAE • CAM • PLM

NX • Teamcenter • Simcenter Femap
Simcenter 3D • Simcenter STAR-CCM+ • Amesim

WE DO THIS EVERY DAY

Since 2008 Applied CAx has guided companies to realize their investment in digital engineering tools.

NX CAD

SIMCENTER FEMAP

NX CAM

SIMCENTER 3D

TEAMCENTER

SIMCENTER STAR-CCM+

SOLID EDGE

Who is Applied CAx?



We Do This Every Day



SIMCENTER 3D · FEMAP · STAR-CCM+
NX CAD-CAM · TEAMCENTER · SOLID EDGE

Our Next FEMAP Training Opportunity
June 7th – June 18th, 2021
AppliedCAx.com/Training



Interested in becoming a client?

Please contact Jeremy Russell

Jeremy.Russell@AppliedCAx.com

(503) 962-0287

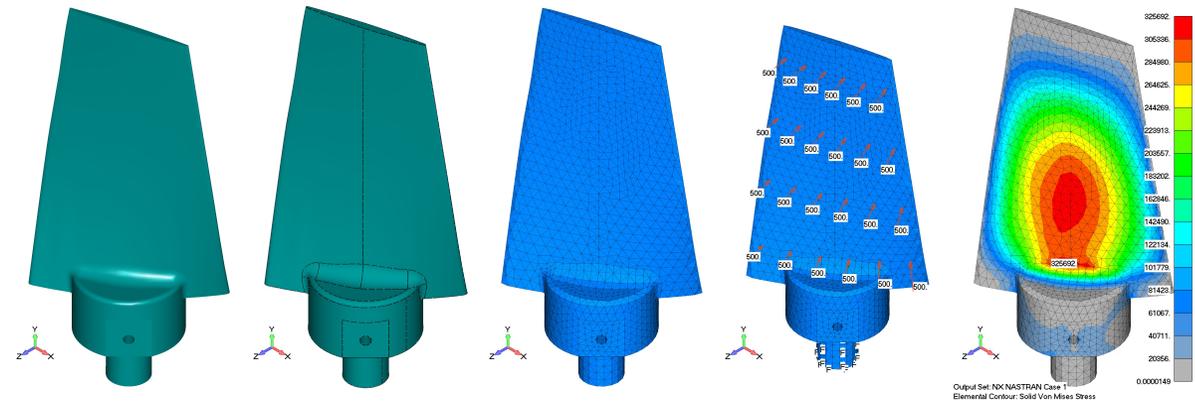
CAE Support Review:

As far as tech support is concerned, I have had fast and top-quality responses. The awesome thing is, I get a lot of information during the support communication, but I also receive the full concept and learn a lot. Even if the issue is very simple, I get a quick response. If someone asks me about buying Siemens products, I will surely recommend Applied CAx.

Srivatsa Pradeep, MSME
Project Consultant (Structures & FEA)
Hatch LTK Engineering Services

HATCH LTK

Positive Change for the Next Century



Simcenter Femap Best Practices: Analysis Workflows

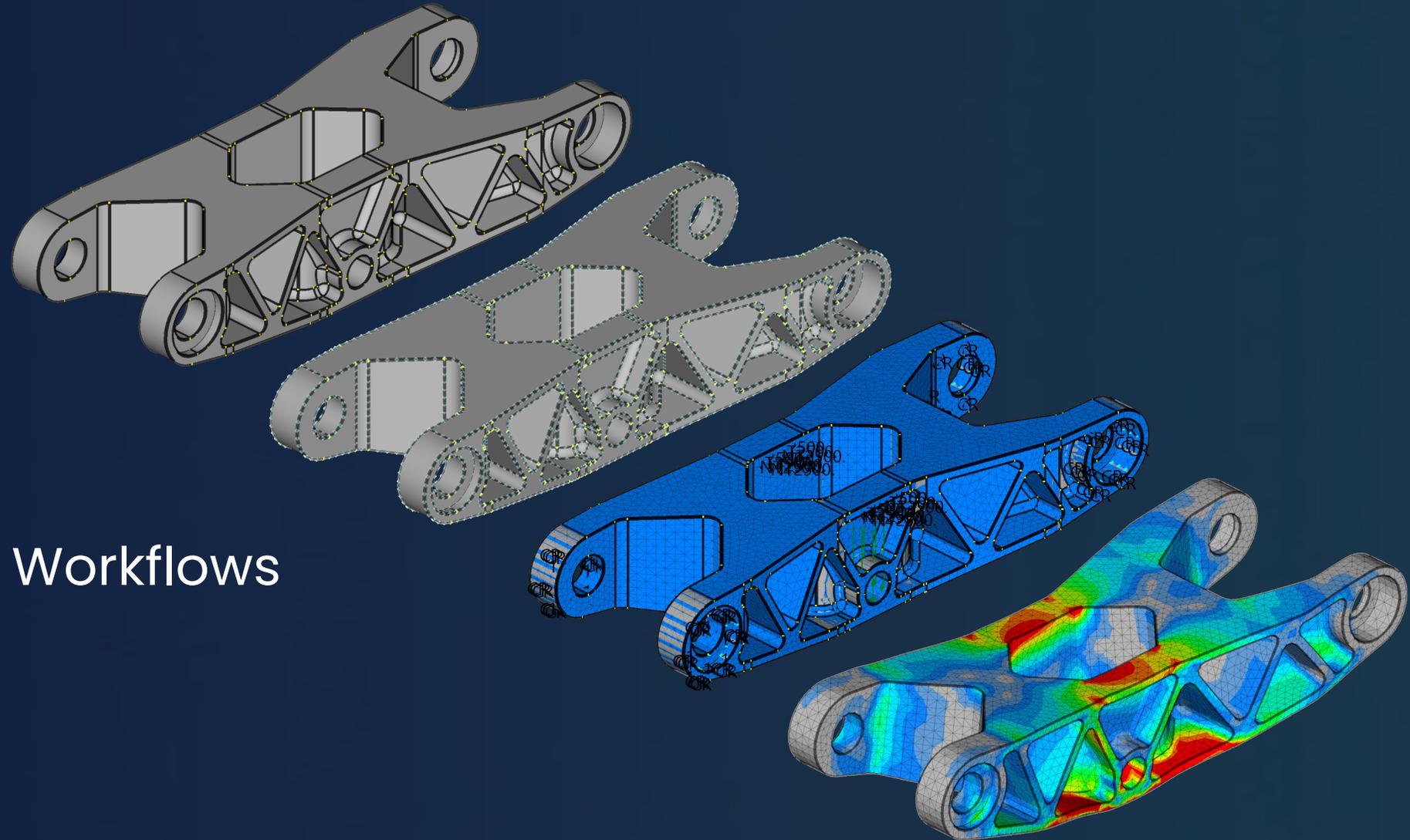
A Seminar for Simulation Engineers

Adrian Jensen, PE – Senior Application Engineer, CAE

Seminar Outline

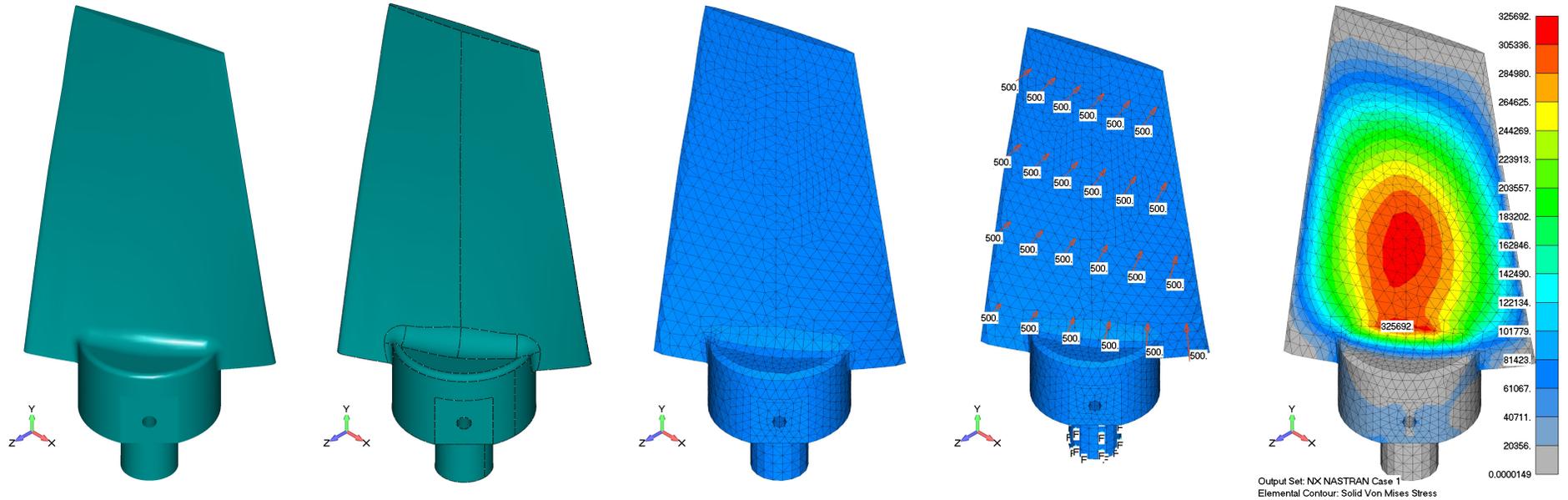


- Workflow Steps
 - Geometry
 - Material
 - Property
 - Mesh Sizing
 - Meshing
 - Loads
 - Constraints
 - Analyze
- Femap Analysis Workflows
 - Model Info Tree
 - File Menus
 - Selector Tool
- Femap API



Workflow Steps

- Geometry
- Material
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- Analyze

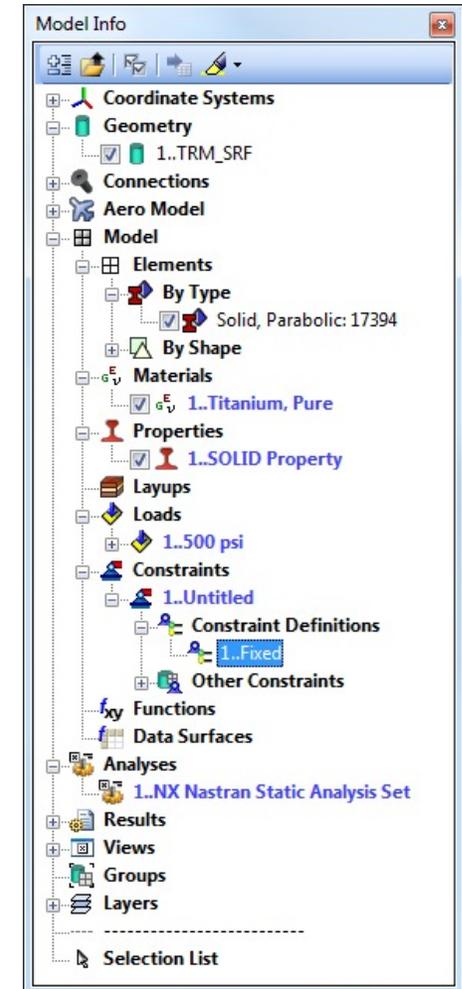
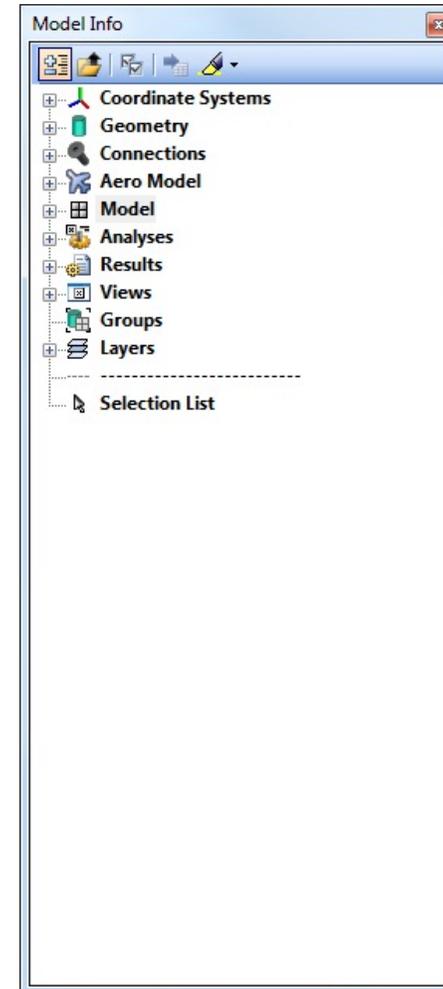


Regardless of the technique used (File Menus, Model Info Tree, Selector Tool), the workflow always follows the same sequence.

Model Info Tree Workflow

The Model Tree is quick and easy. It is recommended that one starts at the top and works their way down.

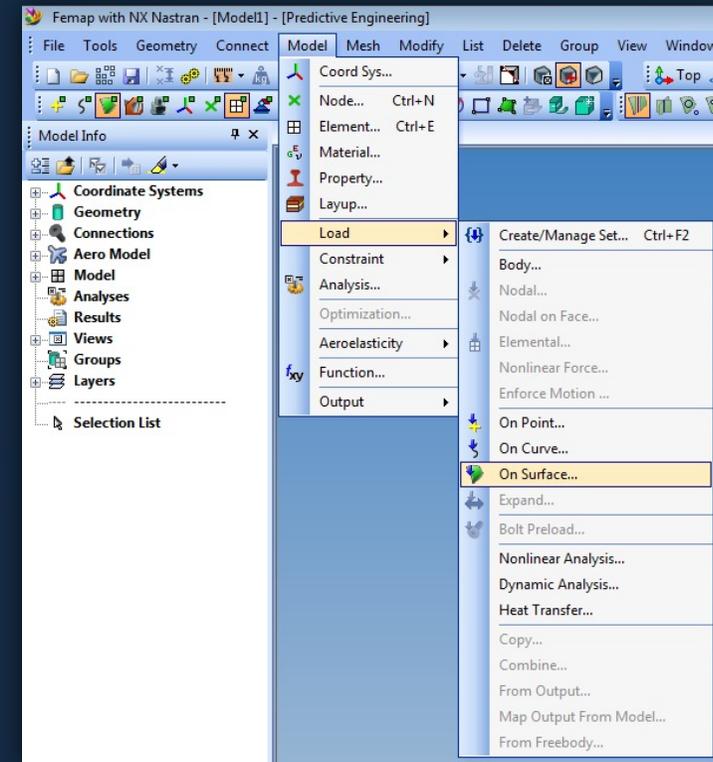
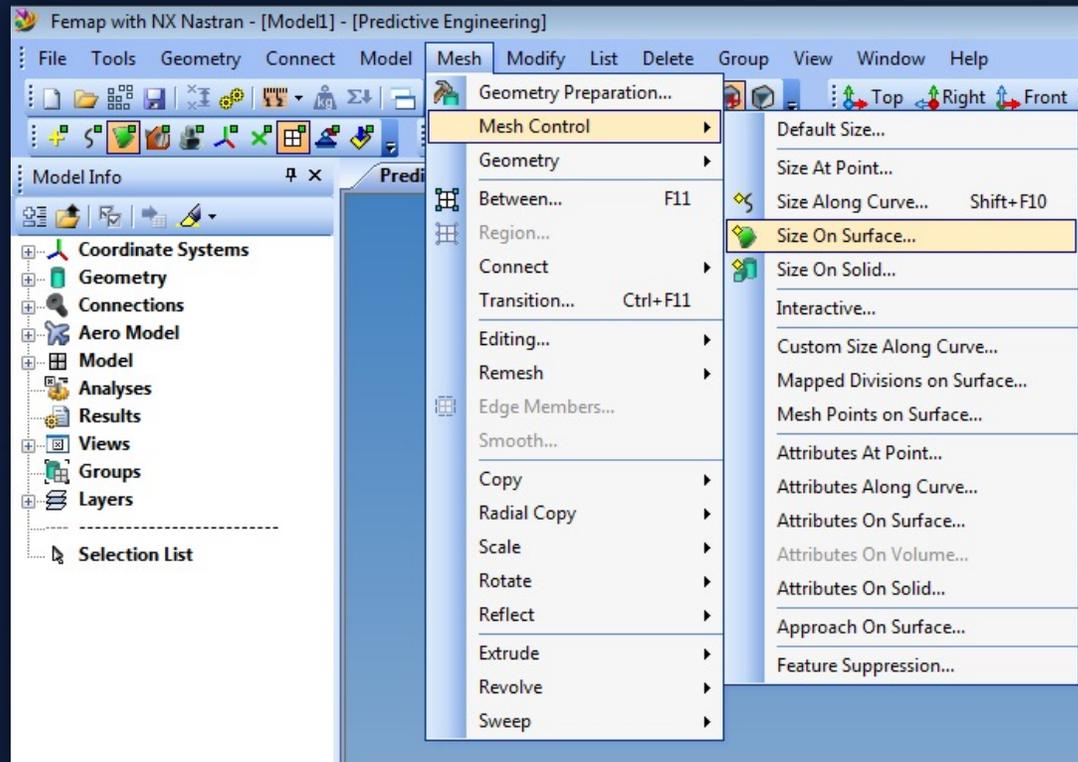
When advanced pre-processing is unnecessary, it is hard to beat the speed of the Model Tree.



File Menu Workflow



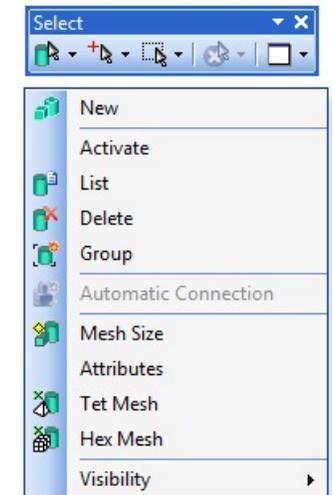
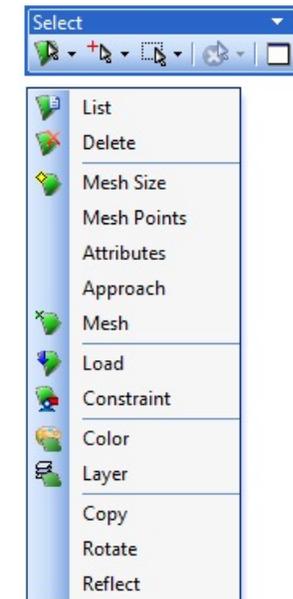
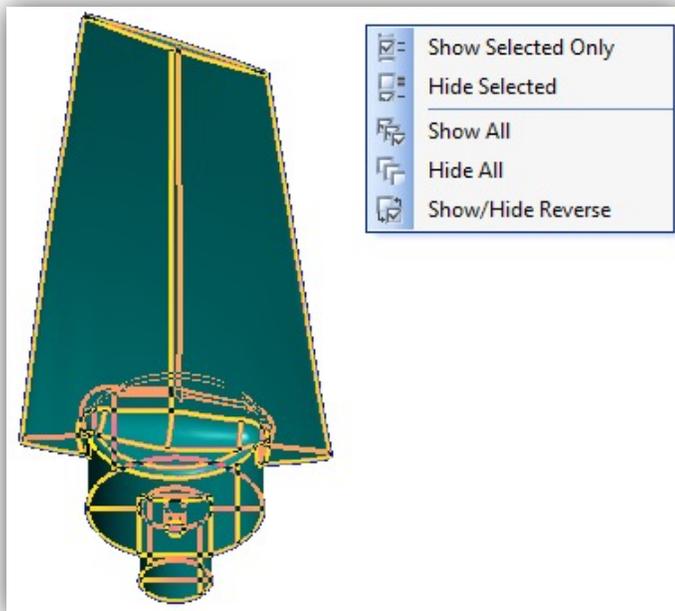
The classic workflow approach. All commands are available and well labeled in the File Menus. This is a great workflow for dedicated analysts because you can see all modeling tools that Femap has to offer.



Selector Tool Workflow

The Selector is the perfect toolbox for the advanced analyst; it provides a combination of speed and a wide selection of options.

Once a given entity type is selected, relevant commands can be accessed with the right mouse button. The standard right mouse button commands can be accessed while holding CTRL. Visibility options can be accessed while holding SHIFT.

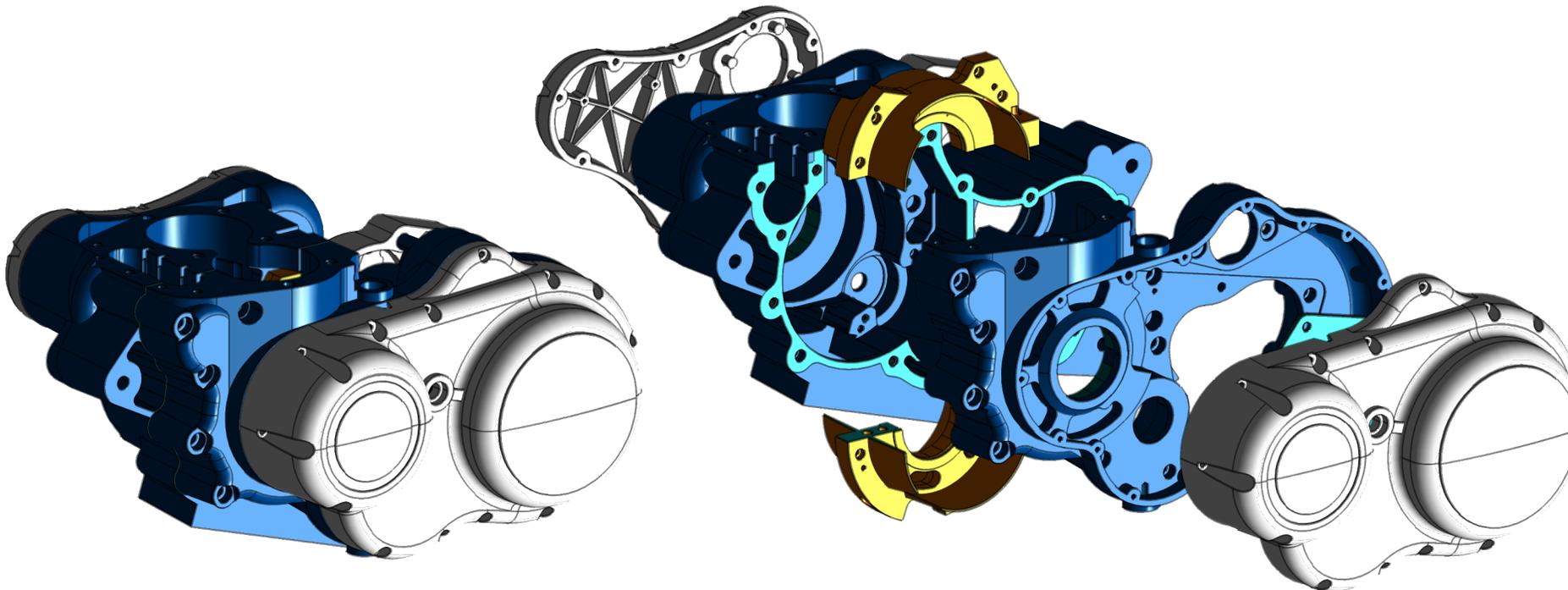


Femap API



Creating User Commands and Custom Toolbars allows you to leverage the Femap API efficiently.

The “Move Solids” macros prompt the user to select geometric solids and then automatically moves them a fixed distance. This makes the process of exploding an assembly quick and easy.



```
API Programming
Sub Main
1 Dim App As femap.model
2 Set App = feFemap()
3
4
5
6 Dim entitySet As Object
7 Set entitySet = App.feSet
8
9 Dim mLen As Double
10 mLen = 5
11
12 Dim vecMove(3) As Double
13 vecMove(0) = 0
14 vecMove(1) = 0
15 vecMove(2) = mLen
16
17 Create a View Orient Object
18 Dim viewOR As femap.ViewOrient
19 Set viewOR = App.feViewOrient
20
21 Get the active view
22 Dim viewID As Long
23 App.feAppGetActiveView(viewID)
24 viewOR.Get(viewID)
25
26 Dim entityType As Long
27 entityType = 39
28
29 Dim messageString As String
30 messageString = "Please Select the Solid(s) You Would Like To Move"
31
32 Dim rc As Long
33 rc = -1
34
35 While rc = -1
36 rc = entitySet.Select(entityType,True,messageString)
37 If rc = -1 Then
38 Dim setID As Long
39 setID = entitySet.ID
40
41 Dim vecLength As Double
42
43 App.feVectorLength(vecMove,vecLength)
44 App.feMoveBy(entityType,setID,False,vecLength,vecMove)
45
46 viewOR.center(2) = viewOR.center(2)+mLen
47 viewOR.Put(viewID)
48 App.feViewRegenerate(0)
49 End If
50 Wend
51
52 End Sub
```