Space-E/CAM 5 Axis

:: Space-E CAM 5 Axis Feature ::

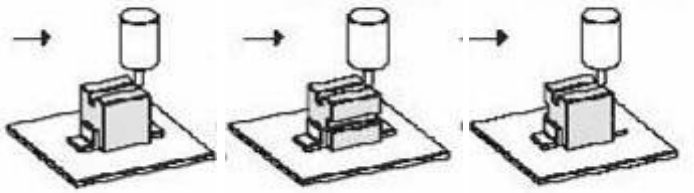
Advantage for CAM 5 Axis

- Processing time and accuracy improvement by touring condition easying .
- Shortening of arrangements time when inclination is processed .
- Man-hour reduction by reduction in electric discharge machining part .
- Improvement of processing side fineness that makes the best use of tool characteristic 5 axes inclined to it .

Sample : Cutting in various side of work piece

CAM 3 AXIS

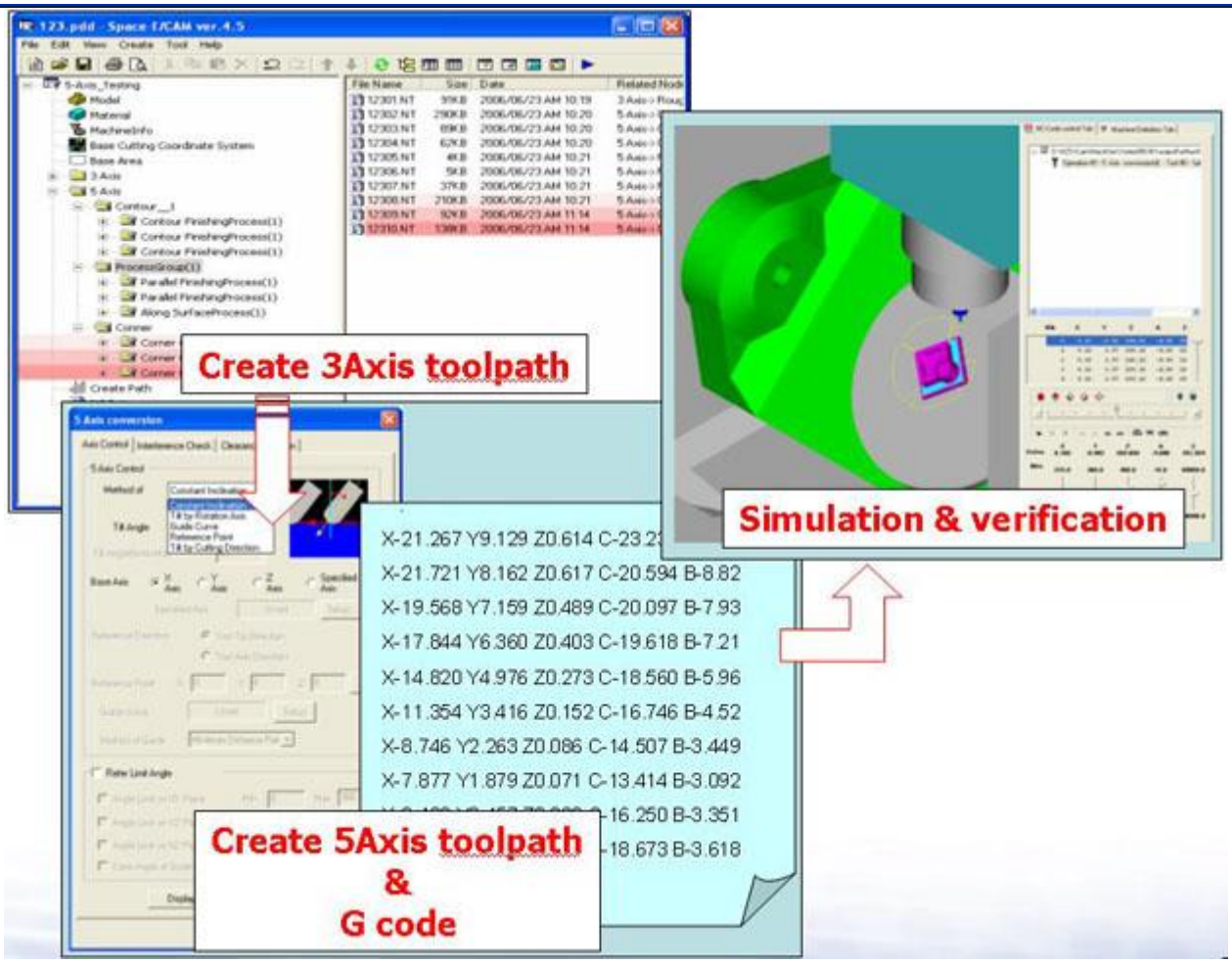
First program | Second program | Third program



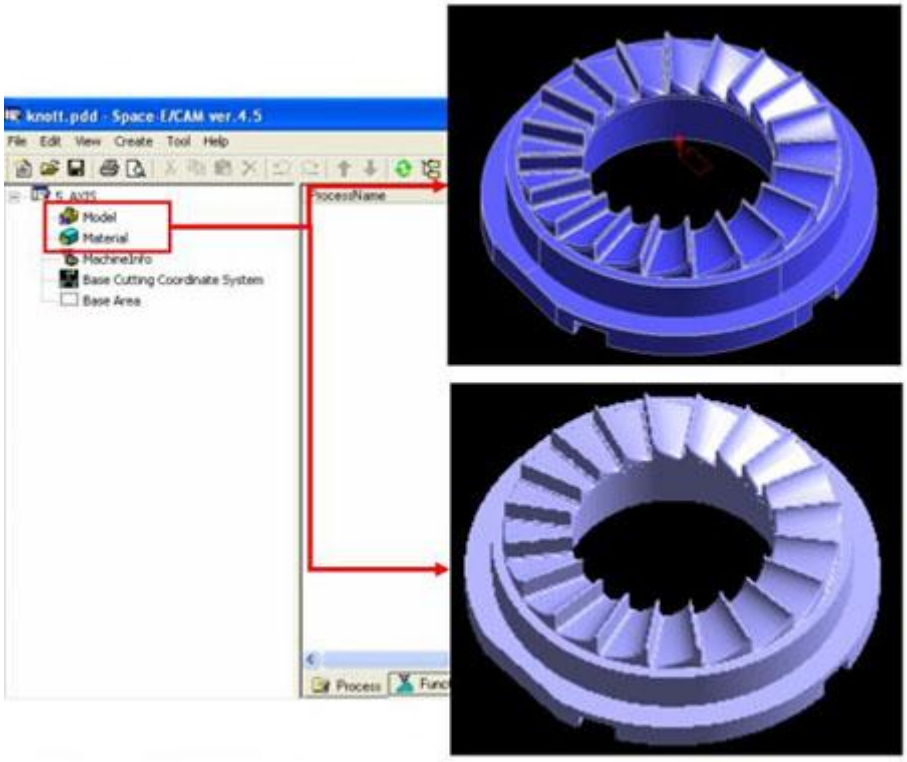
CAM 5 AXIS

First program | First program | First program

:: Space-E/CAM 5 Axis Setup ::


Create 3Axis toolpath
Simulation & verification
X-21.267 Y9.129 Z0.614 C-23.2
X-21.721 Y8.162 Z0.617 C-20.594 B-8.82
X-19.568 Y7.159 Z0.489 C-20.097 B-7.93
X-17.844 Y6.360 Z0.403 C-19.618 B-7.21
X-14.820 Y4.976 Z0.273 C-18.560 B-5.96
X-11.354 Y3.416 Z0.152 C-16.746 B-4.52
X-8.746 Y2.263 Z0.086 C-14.507 B-3.449
X-7.877 Y1.879 Z0.071 C-13.414 B-3.092
16.250 B-3.351
18.673 B-3.618
Create 5Axis toolpath
&
G code

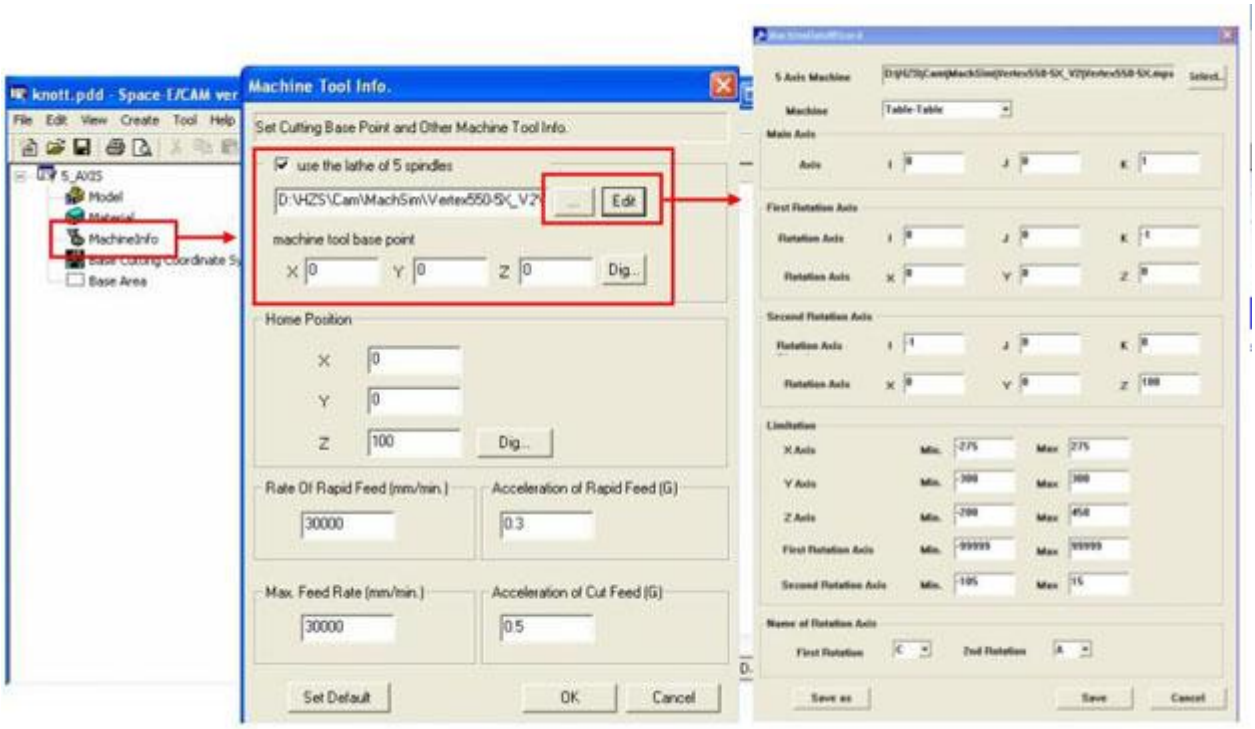
:: Set up Data ::



Define Model

Define material

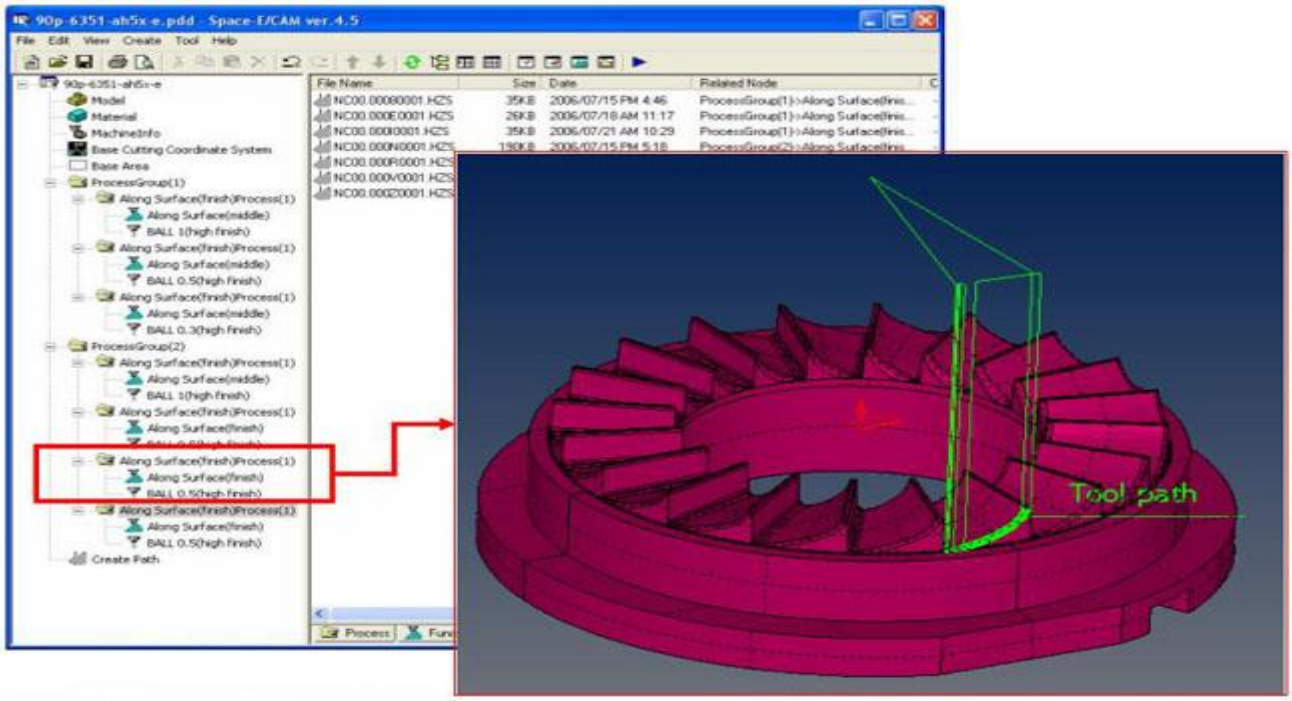
Define model and material

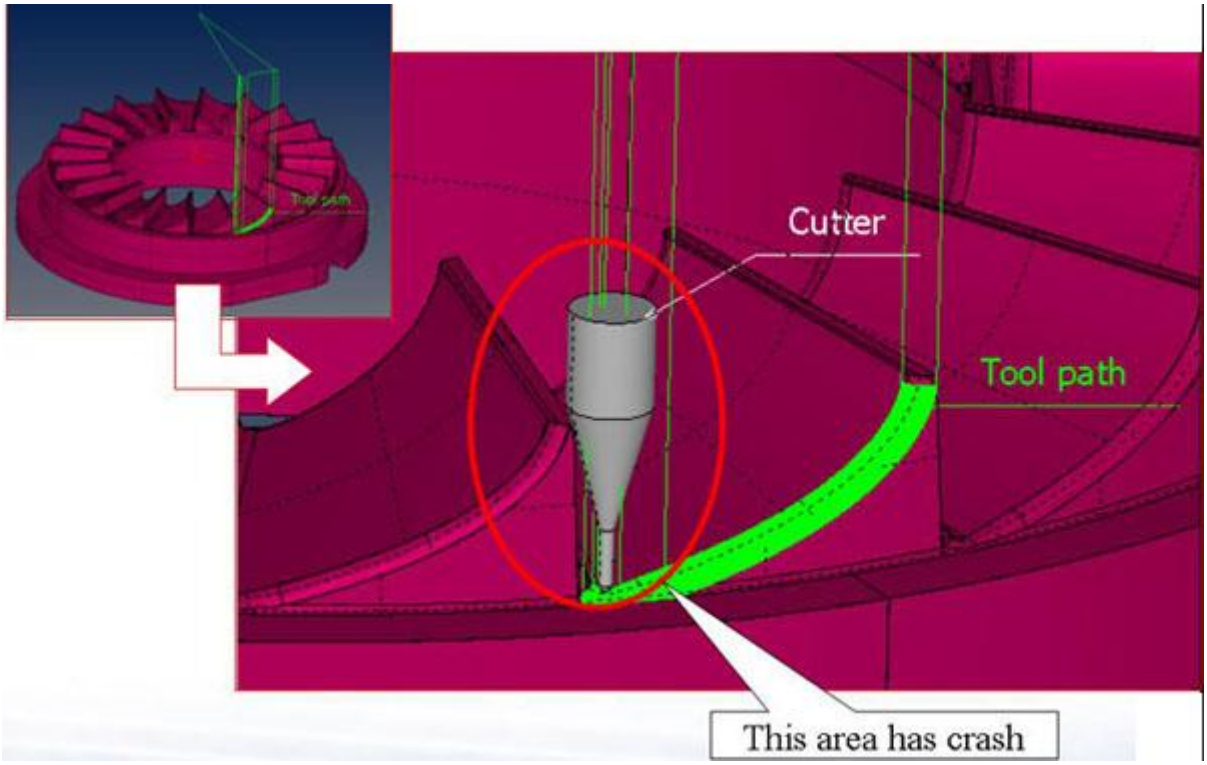


Define machine

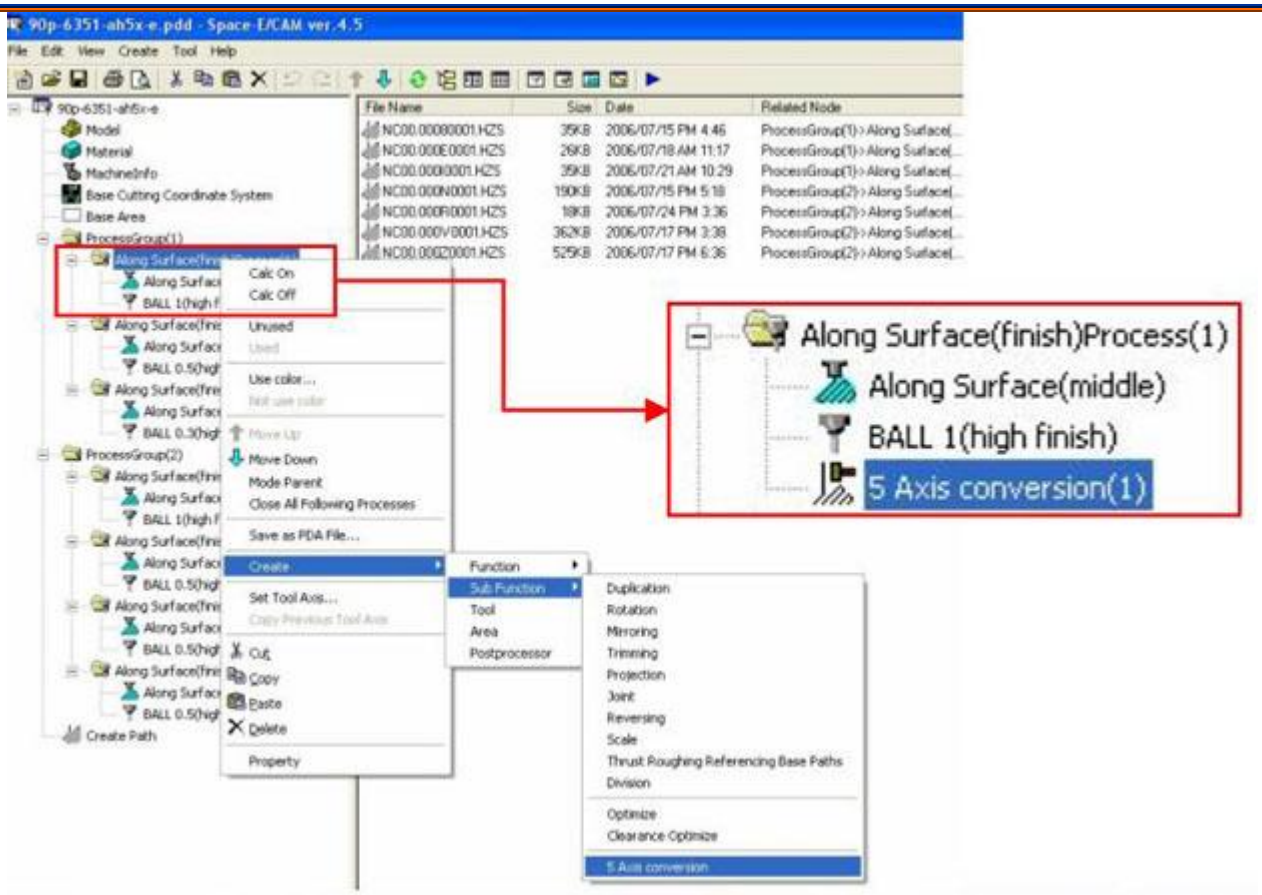
:: Make Process ::

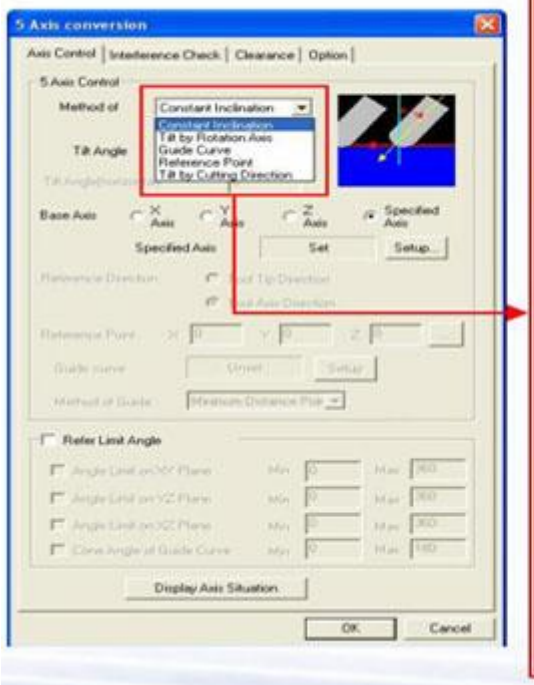
Make tool Path axis

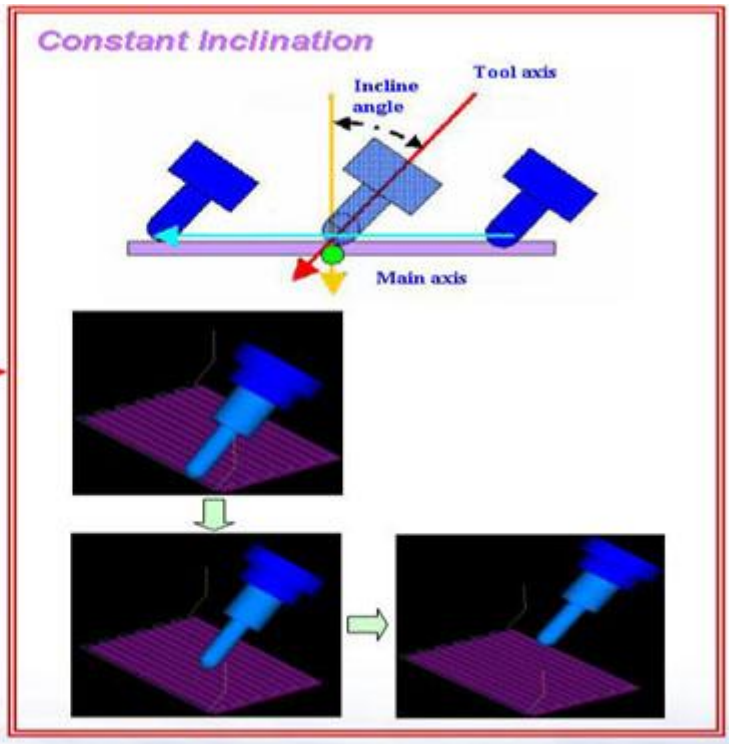


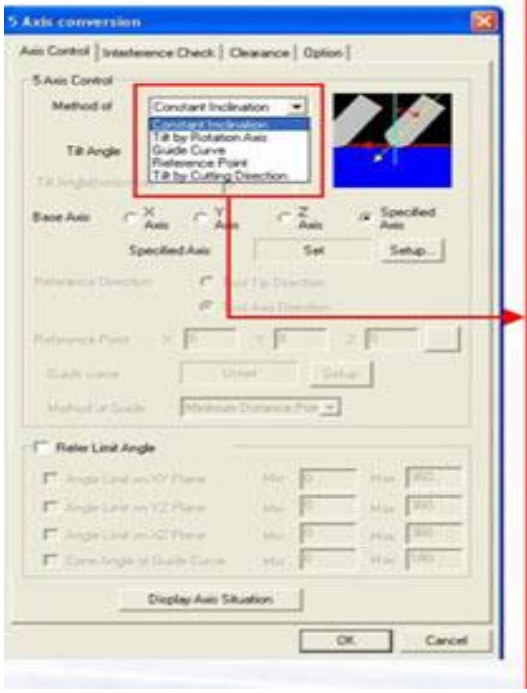


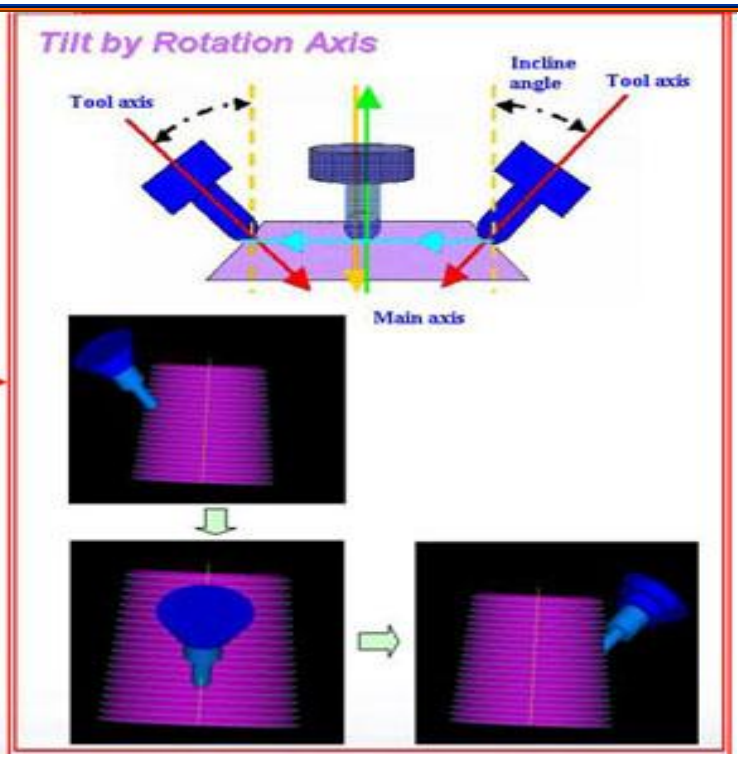
5 Axis Set up


90p-6351-ah5x-e.pdd - Space-E/CAM ver.4.5
File Edit View Create Tool Help
Along Surface(finish)Process(1)
Along Surface(middle)
BALL 1(high finish)
5 Axis conversion(1)
Calc On
Calc Off
Unused
Use color...
Move Up
Move Down
Mode Parent
Close All Following Processes
Save as PDA File...
Create
Set Tool Axis...
Cut
Copy
Paste
Delete
Property
Function
Sub Function
Tool
Area
Postprocessor
Duplication
Rotation
Mirroring
Trimming
Projection
Joint
Reversing
Scale
Thrust Roughing Referencing Base Paths
Division
Optimize
Clearance Optimize
5 Axis conversion
Create Path

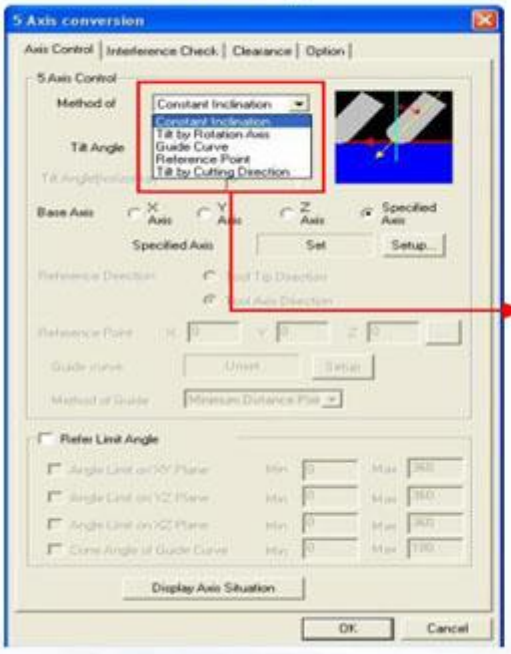

5 Axis conversion
Axis Control
Interference Check
Clearance
Option
5 Axis Control
Method of
Constant Inclination
Tilt Angle
Tilt by Rotation Axis
Guide Curve
Reference Point
Tilt by Cutting Direction
Base Axis
Specified Axis
Set
Setup...
Refer Limit Angle
Display Axis Situation
OK
Cancel

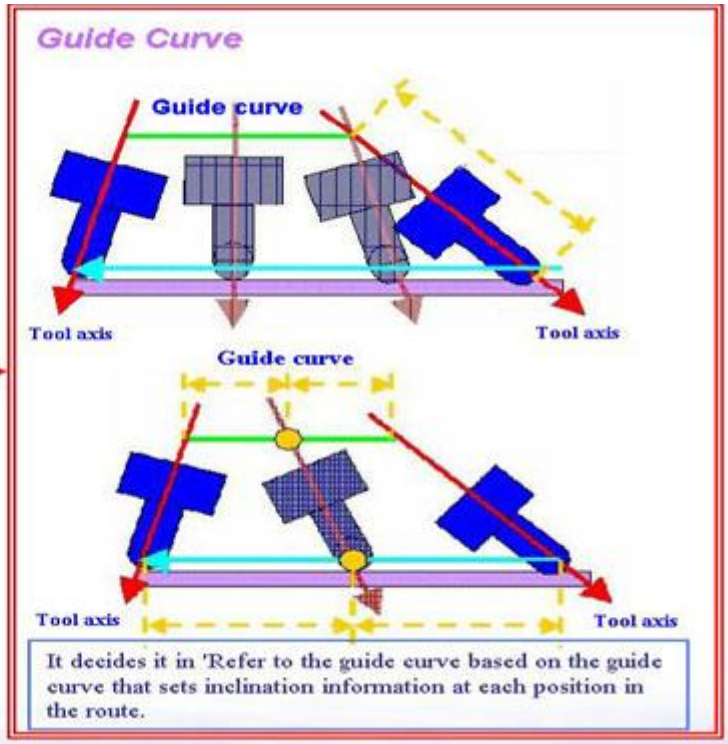

Constant Inclination
Incline angle
Tool axis
Main axis


5 Axis conversion
Axis Control | Interference Check | Clearance | Option
5 Axis Control
Method of
Constant Inclination
Constant Inclination
Tilt by Rotation Axis
Guide Curve
Reference Point
Tilt by Cutting Direction
Tilt Angle
Base Axis
X Axis
Y Axis
Z Axis
Specified Axis
Specified Axis
Set
Setup...
Refer Limit Angle
Display Axis Situation
OK
Cancel

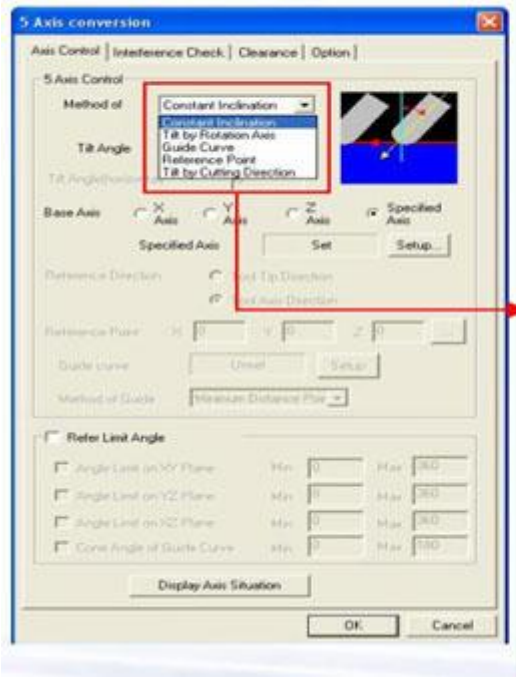

Tilt by Rotation Axis
Incline angle
Tool axis
Tool axis
Main axis

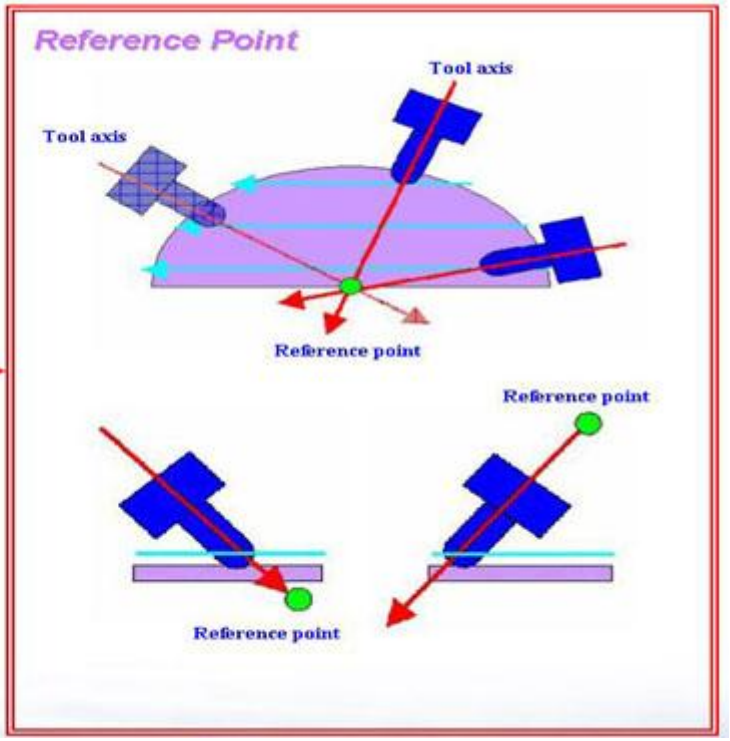
5 Axis setup

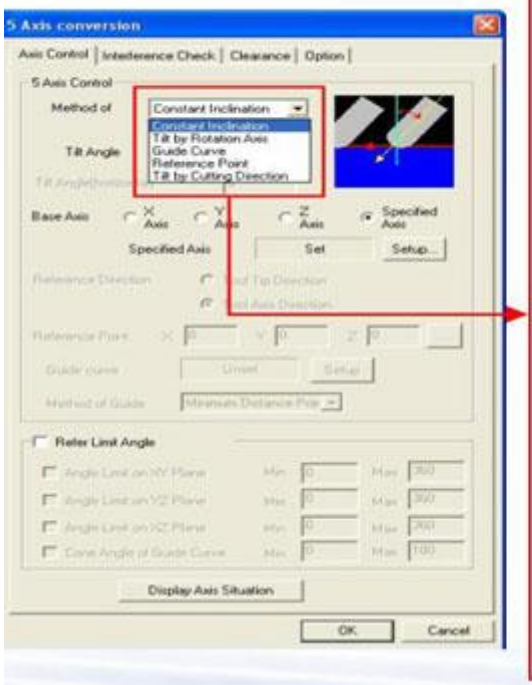

5 Axis conversion
Axis Control | Interference Check | Clearance | Option
5 Axis Control
Method of
Constant Inclination
Constant Inclination
Tilt by Rotation Axis
Guide Curve
Reference Point
Tilt by Cutting Direction
Tilt Angle
Base Axis
X Axis
Y Axis
Z Axis
Specified Axis
Specified Axis
Set
Setup...
Refer Limit Angle
Display Axis Situation
OK
Cancel


Guide Curve
Guide curve
Tool axis
Tool axis
Guide curve
Tool axis
Tool axis
It decides it in 'Refer to the guide curve based on the guide curve that sets inclination information at each position in the route.

5 Axis setup


5 Axis conversion
Axis Control
Interference Check
Clearance
Option
5 Axis Control
Method of
Constant Inclination
Tilt Angle
Constant Inclination
Tilt by Rotation Axis
Guide Curve
Reference Point
Tilt by Cutting Direction
Base Axis
X Axis
Y Axis
Z Axis
Specified Axis
Specified Axis
Set
Setup...
Refer Limit Angle
Display Axis Situation
OK
Cancel


Reference Point
Tool axis
Tool axis
Reference point
Reference point
Reference point


5 Axis conversion
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Constant Inclination
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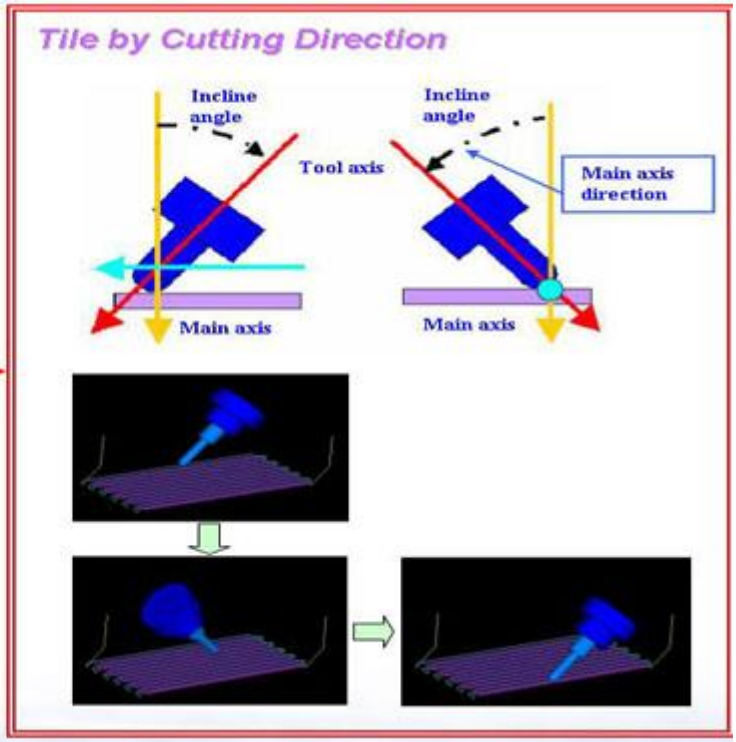
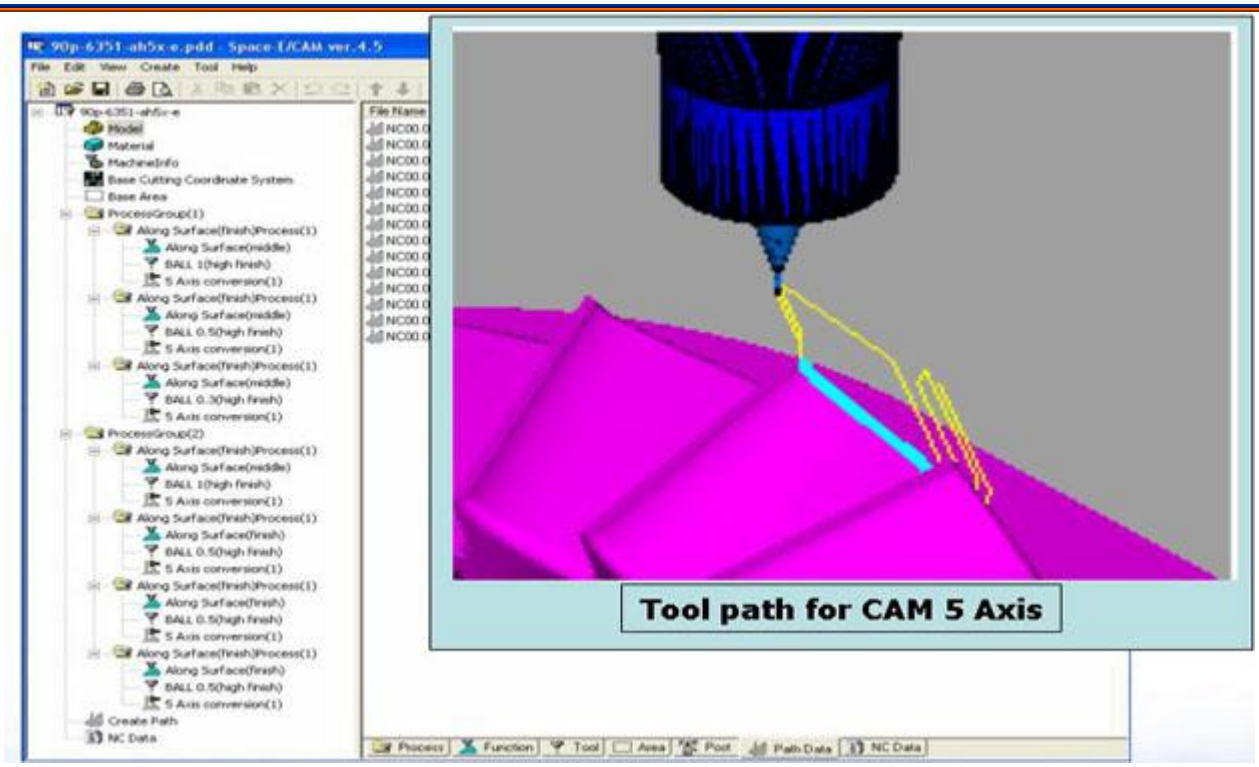

Tile by Cutting Direction
Incline angle
Tool axis
Incline angle
Main axis direction
Main axis
Main axis

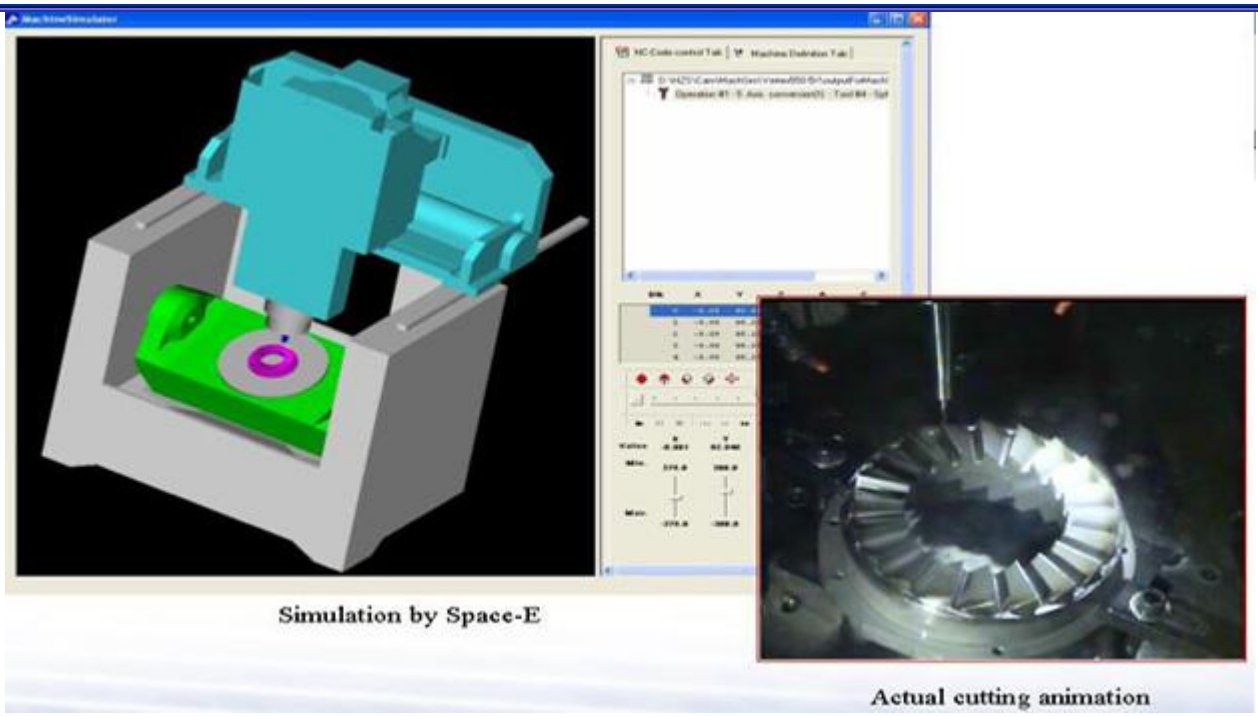


NC data for CAM 5 Axis

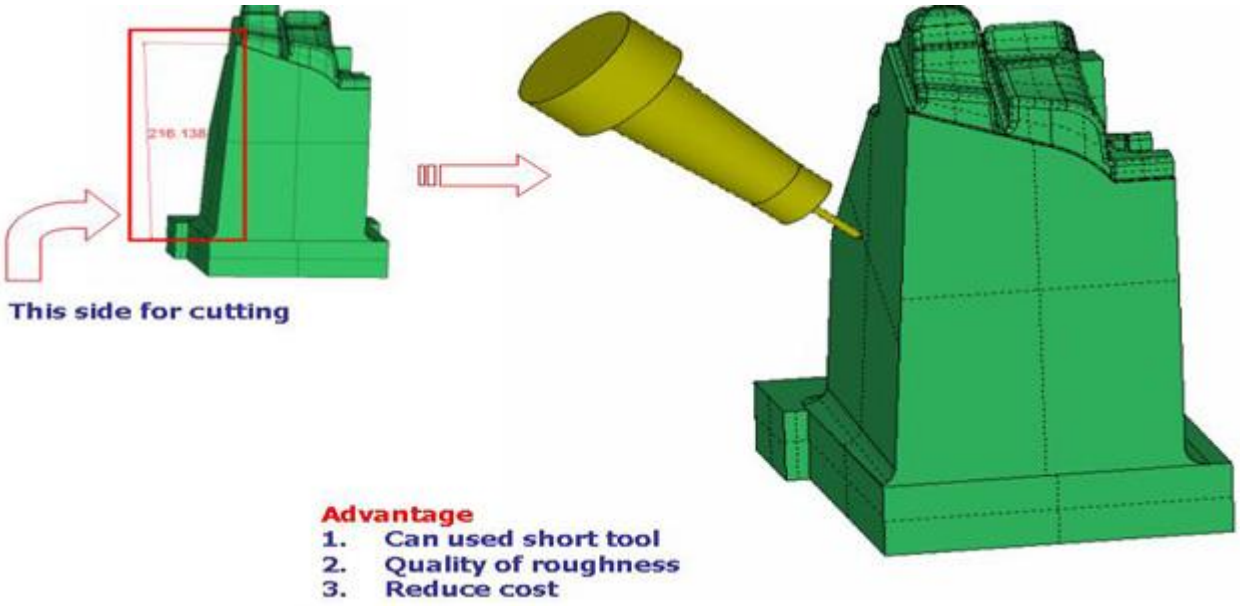
Addition tool axis and table axis

:: Simulation ::

Machine Simulation for CAM 5 Axis

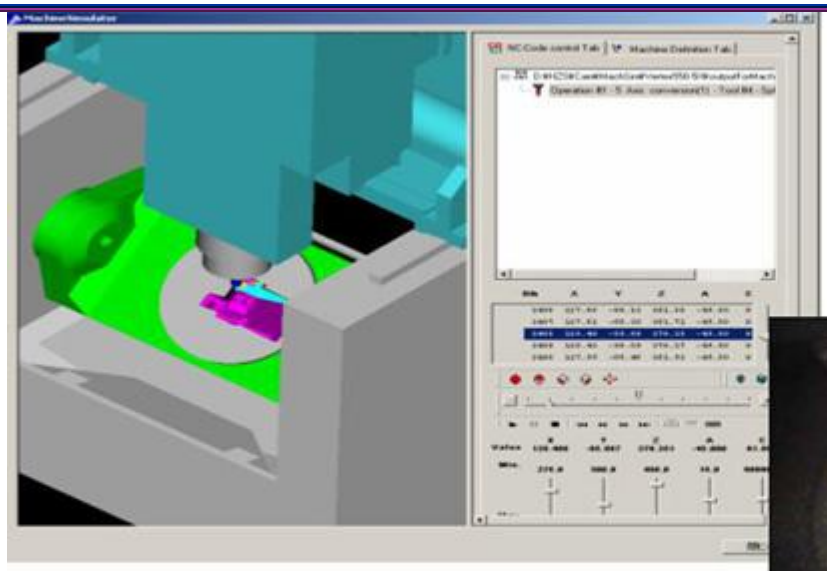


:: Space-E/CAM 5 Axis Sample ::



Advantage

1. Can used short tool
2. Quality of roughness
3. Reduce cost



Simulation by Space-E

Actual cutting animation