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What's New in NX6 CAM Visualize and ISV

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Product Manager

January 29, 2008

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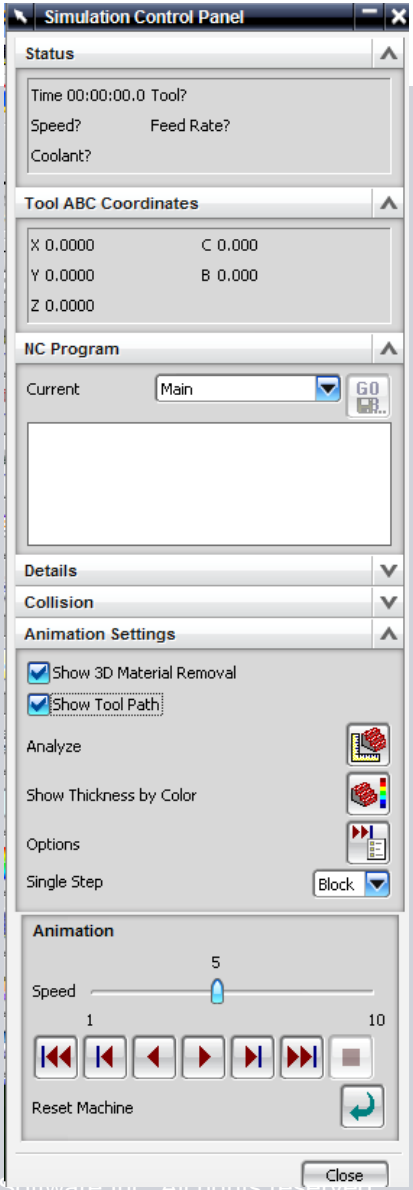
ISV Enhancements



- New set of sample machines delivered with postprocessors and Common Simulation Engine (CSE) simulation drivers that support Siemens, Fanuc, and Heidenhein controllers
- Enhanced user interface using UI Components to be consistent with NX look and feel
- Collision processing
- Tool Dialog and device holder data
- CSE Enhancements

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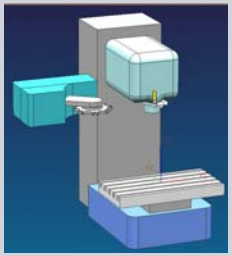
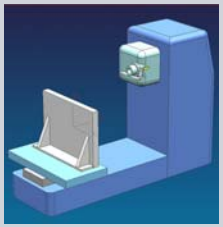
New Set of Sample Machines

Type

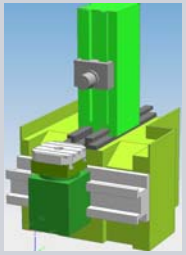
- Example 1-- 3 Axis Mill Vertical + Tool Changer



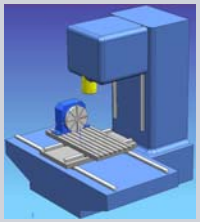
- Example 2-- 3 Axis Mill Horizontal



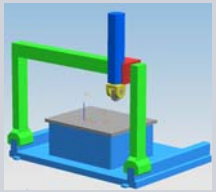
- Example 3-- 4 Axis Mill Horizontal with Rotary Table



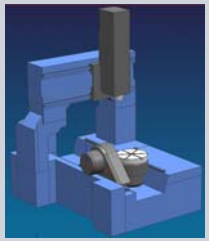
- Example 4-- 4 Axis Mill Vertical with Rotary Table



- Example 5-- 5 Axis Mill Gantry Head/Head



- Example 6-- 5 Axis Mill Table/Table with Offset



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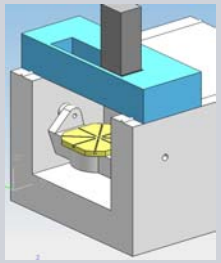
New Set of Sample Machines (cont.)

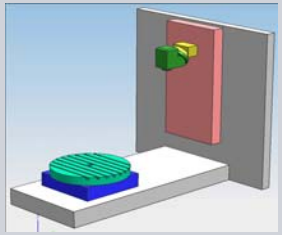
Type

- Example 7-- 5 Axis Mill Table/Head

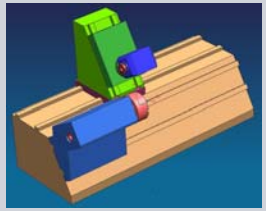
- Example 8-- 5 Axis Mill Vertical with Cradle



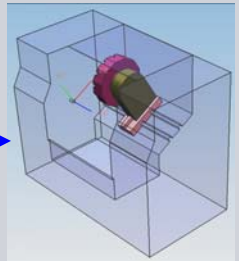
- Example 9-- 5 Axis Mill 45° head



- Example 10-- 4 Axis Lathe Horizontal with Milling Head

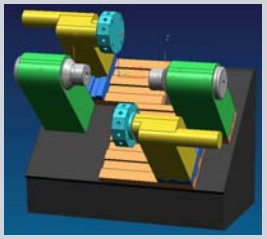


- Example 11-- 2 Axis Lathe Horizontal with Turret



- Example 12-- 2 Axis Lathe Vertical with Turret

- Example 13– 4 Axis Lathe Horizontal with 2 Spindles



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Collision Processing

- Highlight components (even if they are hidden) when collision
- Tool holder collision checking separate from tool (used to be part of tool)
- IPW can be a collision component
- Report collision of tool with workpiece if tool is inactive or is moving in RAPID mode
- Can select a sub-branch of k-tree for collision checking

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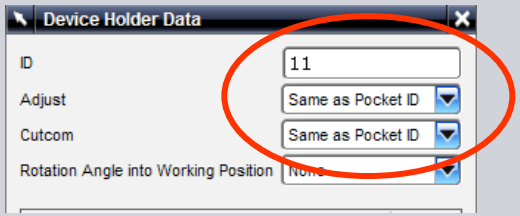
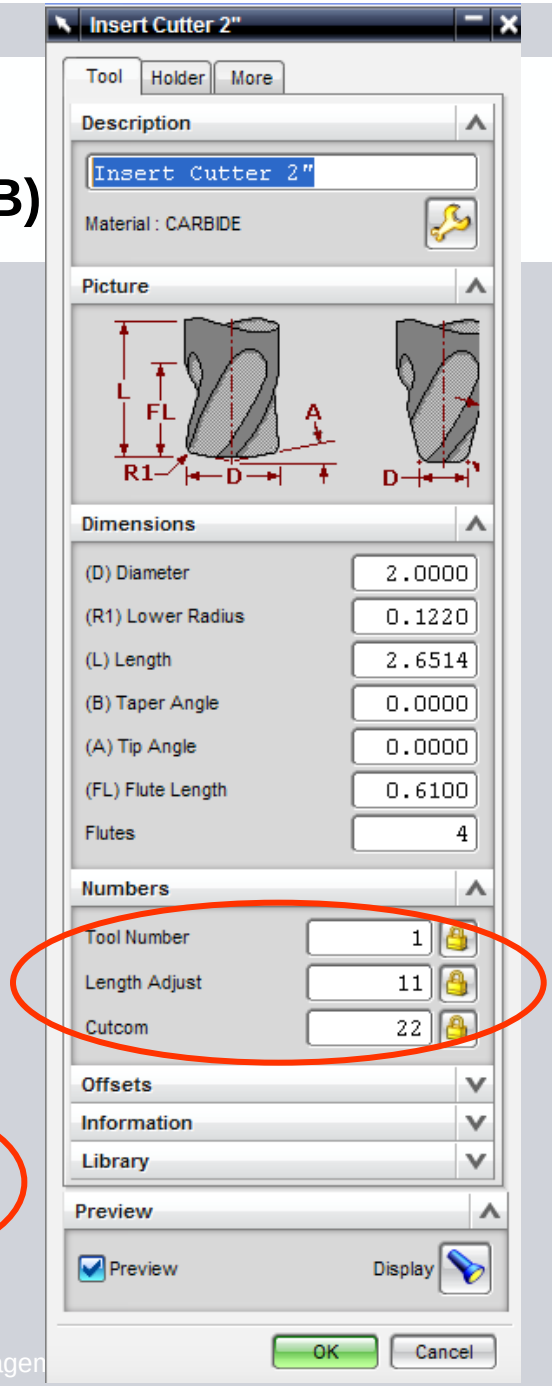
Tool Dialog (ONT) and Device Holder Data (in MTB)

- Inherit from pockets in the Tool Dialog (ONT) and Device Holder Data (Machine Tool Builder):
  - Tool number
  - Length ADJUST register number
  - CUTCOM register number





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CSE Enhancements

- ISV supports tool tip programming for:
  - Siemens using TRAORI
  - Fanuc G43.1, G43.4, or G43.5
  - Heidenhain
- Also supports pivot programming
- Tilted MCS
  - Siemens ROT, TRANS, FRAME
  - Fanuc G68, G68.1
  - Heidenhein Cycle19, G7
- Reload with Linked Posts. Postprocessing and simulation use kinematics information from the machine model for processing of the NC data. Pivot point, gage point, rotary limits
- Contact Contour uses defined cutter for simulation (CUTCOMP works as before)
- All sample machines support existing MCS (G54 not needed not needed in the post)
- Support of multiple channels

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Things to Remember When Using CSE Drivers

- Tool number, adjust register, CUTCOMP register CANNOT be zero
- If your post outputs G53, make sure your Machine Zero (defined in the k-tree) is at the MAIN MCS (one main MCS per program)
- For 4 and 5-axis machines, there is a difference when driving tool tip vs. pivot point (see documentation for more details)
- For simulating external NC code, any fixture offset coordinate system in NX/CAM needs to be named as in the G-code (e.g. G54)

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CSE Controllers Using Post Builder

- Find sample machine that matches your machine configuration
- Configure your machine's k-tree in the same way the sample machine is configured (same axis names, etc.)
- Add your machine tool to the machine tool library
- Test to see if your machine runs correctly with the example post
- Add your postprocessor to the library
- Test to see if your machine runs correctly with your post

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CSE Controllers Using Post Builder

- Demo of sample machine with CSE running Siemens, Fanuc, and Heidehein controllers.

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