

DELMIA V6


NC Machining Simulation

DELMIA NC Machine Simulation: Simulation of NC Machine Tools

NC programmers benefit from full associativity with V6 product designs and powerful machining automation capabilities which can dramatically reduce NC programming and program optimization time.

DELMIA NC Machine Simulation (NMS) enables NC programmers to perform virtual NC program validation, giving programmers the ability to control and simulate machine tool motions, along with material removal, using either the NC tool path or post processed NC code.

DELMIA NC Machine Simulation ensures the NC programmer delivers high quality and optimized NC programs by finding potentially damaging collisions, excessive non value-added machine motion, out of travel machine motion or wrong material removal.



Through its V6 Product Lifecycle Management (PLM) environment, NC programmers are immersed in a V6 3D environment that delivers a lifelike experience as they optimize and validate their NC programs in the context of the physical machine.

DELMIA V6 Machining Automatic mounting of NC assembly and machine setup validation

Users can position the NC assembly (workpiece, fixtures and design part) at the correct location on the NC machine in a single step. Interactive reachability analysis provides easy validation of the machining setup.

Integrated and simultaneous simulation of NC machine motions and material removal based on NC tool path and NC code

NC machine simulation based on the NC tool path helps users to validate programmed tool paths by identifying erroneous and redundant machine motions upfront, quickly leading to the generation of high quality NC operations. It also enables the user to check and validate the quality of material removal. The NC programmer can generate and validate NC code as a final “buy-off” before it is used in the shop-floor.

Validation of the entire manufacturing program or a single machining operation

The entire program or a selected operation of interest can be simulated as soon as it is defined, leading to enhanced productivity.

Collision detection

Collisions in the machining cell related to machine motion can be detected and corrective actions taken, helping users to generate error-free programs upfront.

Checking travel limits of the machine tools

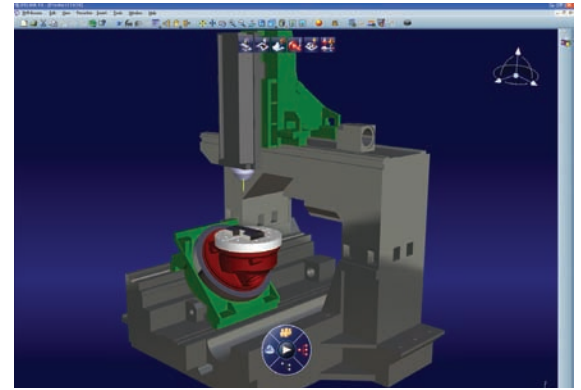
Axis limits can be displayed during simulation, which provides early feedback to the user regarding suitability of the selected NC machine to complete the program without exceeding limits.

Cycle time calculation

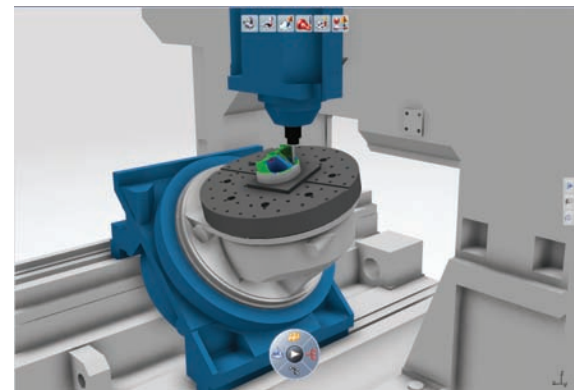
Cycle times, based on speeds and accelerations defined on individual machine axes, are calculated and displayed, allowing the NC programmer to see how much time will be required to machine the part.

Product Highlights

- Delivers critical workflow support for the NC programmer
- Extends the reach of DELMIA V6 Machining solutions to more complex machining scenarios
- Users do not need to stop the simulation when collisions are detected. Instead, they can capture the details in a report and quickly “jump” to the part of the program where the collision occurred to make the necessary adjustments
- Validation through simulation of the post-processed ISO code for milling, turning and mill-turn machines
- Support for part transfer and tool change activities
- Generation of a “Fault List” which can be analyzed at the end of a simulation



NC machine simulation that is based on the NC tool path helps users to validate programmed tool paths upfront, leading to the generation of error free NC operations quickly.



Axis limits can be displayed during simulation, giving feedback to the user regarding suitability of the selected NC machine to complete the program without exceeding limits.

About Dassault Systèmes

As a world leader in 3D and Product Lifecycle Management (PLM) solutions, Dassault Systèmes brings value to more than 115,000 customers in 80 countries. A pioneer in the 3D software market since 1981, Dassault Systèmes applications provide a 3D vision of the entire lifecycle of products from conception to maintenance to recycling. The Dassault Systèmes portfolio consists of CATIA for designing the virtual product - SolidWorks for 3D mechanical design - DELMIA for virtual production - SIMULIA for virtual testing - ENOVIA for global collaborative lifecycle management, and 3DVIA for online 3D lifelike experiences.

For more information, visit 3ds.com

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