

FACTORY AUTOMATION

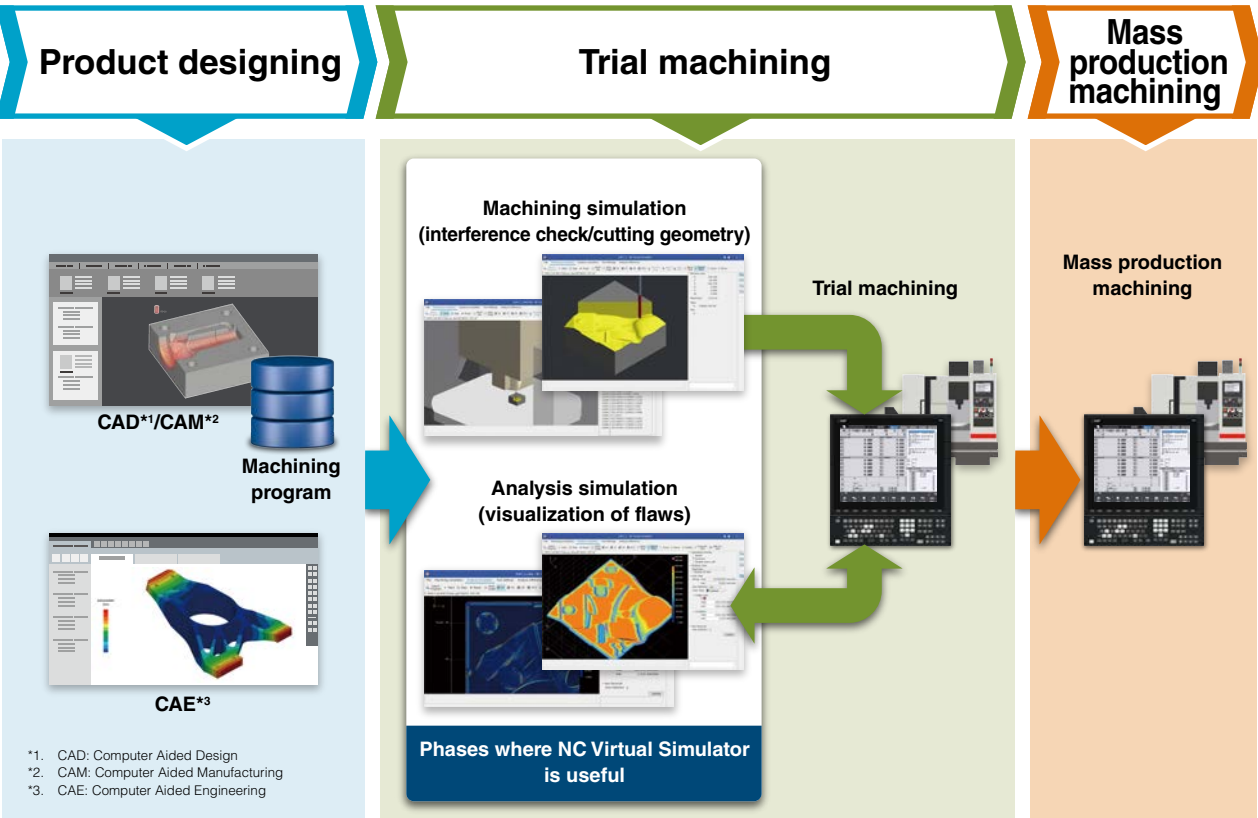
MELSOFT

NUMERICAL CONTROL (CNC) 3D Simulator NC Virtual Simulator



Reduce machining trials with high-fidelity simulation

High-fidelity simulator digitizes the processes from product designing to trial machining, improving work efficiency and productivity. NC Virtual Simulator makes it possible to check at designing stage the machining errors that could previously only be found at trial machining stage, thus reducing the time and effort required for machining trials.

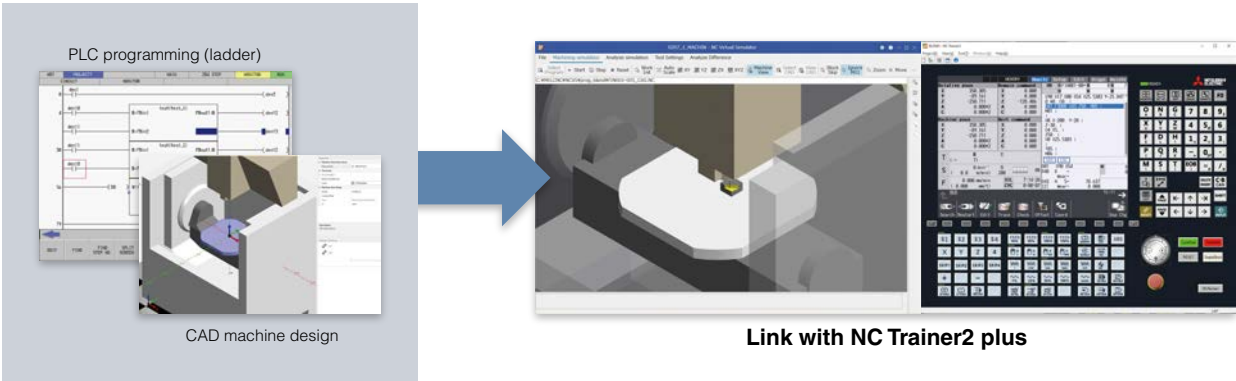


Diverse features allow you to validate machining programs, verify work instruction data, and analyze the flaws in the surface finish to help you identify and correct issues at trial machining stage.

* Only CNC for machining center with a single part system and eight or less NC axes is supported.

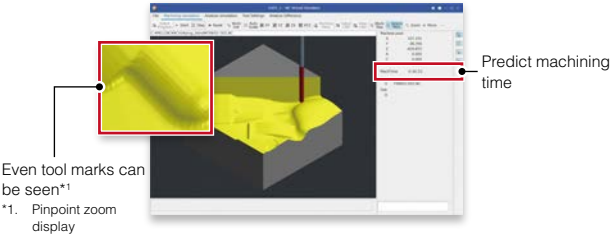
Machine design can be simulated by linking with NC Trainer2 plus

NC Virtual Simulator can also be used in machine design and user PLC development by machine tool builders when linked with NC Trainer2 plus.



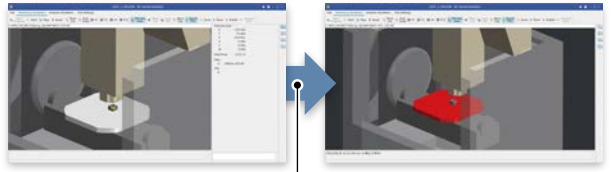
Workpiece simulation

Machining time is calculated accurately using digital position data that factors in smoothing, acceleration/ deceleration, and servo response delay. The surface geometry depicted in a higher resolution allows for safe and quick validation of machining programs.



Machine simulation*2

You can check whether machine interference occurs during automatic operation using a machine model. If interference is detected, the interfering components turn to the interference color to alert you.

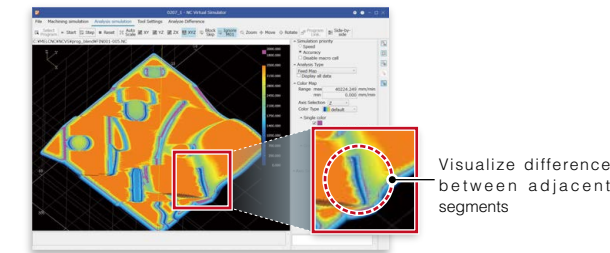


*2. Since the machine model must be provided by the machine tool builder, please contact a Mitsubishi Electric representative if you have any requests.

Analysis simulation

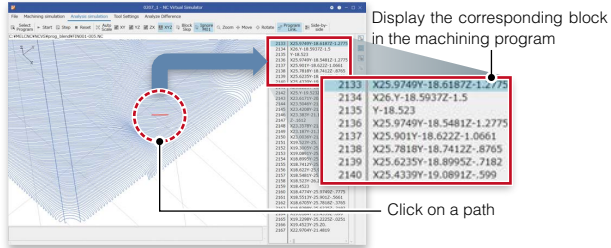
1 Color map display

The change in the speed, the acceleration rate, the speed difference between adjacent segments and other data is plotted as color map. It helps you identify where a machining error occurs.



2 Program link display

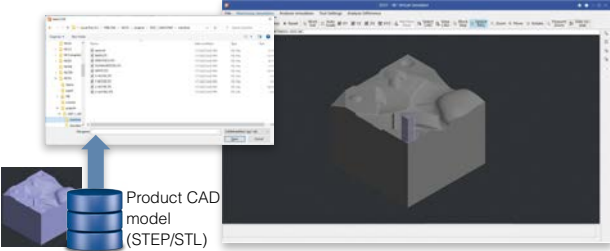
You can identify the corresponding block in the machining program by selecting a segment in the simulated surface. This makes it easy to check and correct the machining program block for the segment with a problem you detect in color map display.



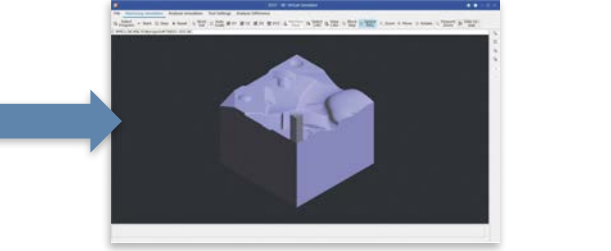
CAD model superimposition

Product CAD models (STEP/STL) can be loaded and superimposed with the workpiece simulation to check if there are missing machining processes.

1 After running simulation, select the product CAD model file using "Select Product Model".

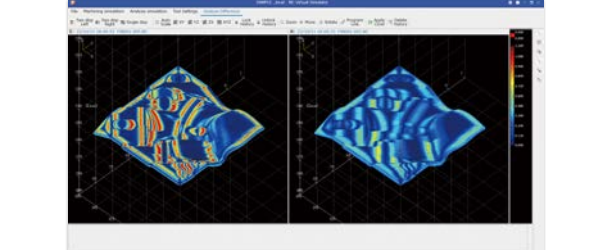


2 Simulation result is superimposed with the product CAD model.



Simulation comparison display

Simulation result is compared with previous result retained as history. You can check how machining result changes with different machining conditions such as NC parameters.



System requirements

Item	Description
Computer	A personal computer with a processor with a clock speed of 2.66 GHz or faster, 2 or more cores and 4 or more threads (4 or more cores and 8 or more threads are recommended)
Memory	8 GB or greater
Available hard disk space	4 GB or greater (excluding the space required for OS operation)
OS	Windows® 10 or newer (64-bit)*3
Interface	10/100/1000M Ethernet (only for network-connected version) USB 1.1 or later
Display	A video adapter and a monitor with a resolution of HDTV (720p) (1280x720) or better (at least 65536 colors; 16770000 colors is recommended) PC with OpenGL 4.5 or later display adapter
Supported language	Japanese/English
Machine	Machining center
Supported CNCs	M800V/M80V/M800/M80 Series

*3. WOW64 is used



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User support videos are available, including how to backup/restore data and replace batteries, and an introduction to our products and technologies.



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