NCSIMUL | The complete CNC machine verification solution

How do you test a new CNC program?

- ☑ Do you run the program block-by-block?
- ☑ Do you waste time air cutting?
- ☐ Do you verify CNC programs using machinable wax?
- ☐ Do you modify your NC program during the prove-out?
- ☑ Do you experience collisions?
- ☐ Have you ever broken any fixtures, tools, or machine components?

If you answered YES to any of the questions above, you need NCSIMUL

Benefits of NCSIMUL

Save time, money and equipment

- Test your program on a PC; keep your CNC machine running
- Eliminate manual prove-outs
- Secure your machine environment and avoid crashes
- Train new employees in shorter virtual sessions and eliminate risk
- Optimize cutting conditions and improve productivity
- Standardize shop floor documentation in no time and collaborate with your internal team, suppliers and customers

Image courtesy from TROCHET AMGGC

"Countless man and machine hours are saved, since we don't have to verify step by step on the machine"

Dean Dancer / Manufacturing Manager / Hutchinson Inc

Exclusive features

Read and simulate any G-Code and machine tool builder macros

Preview tool path and detect errors before simulation

Interact easily between 3D window, G-code program, and information windows

Preview machine movements and material removal with graphical 3D technology and dynamic zoom capabilities

No machine is too complex: NCSIMUL supports an unlimited number of channels

Launch all major verification tasks from a single screen

Turnkey solution which includes machine license, service and support at no additional cost

www.ncsimul.com

NCSIMUL, Verify your NC programs in three steps

CAM → **NC program verification** → **Machining**

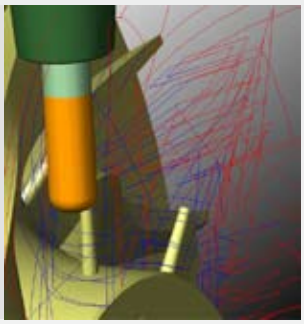
correct errors

correct machining incident

error-free program

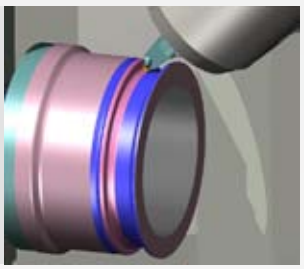
1 | Investigate to find and correct coding errors

- Tool path preview before simulation
- G-Code decoding including tool builder macros, probing macros, system variables, structured programming
- Automatic detection and reporting of programming errors: ISO syntax, out-of-range motion and compensation errors
- Native link between 3D window, ISO program and reporting window
- Internal program editor for on-line correction
- Quick view of real-time CNC parameters: variables, status, etc…
- Precise calculation of real machining time



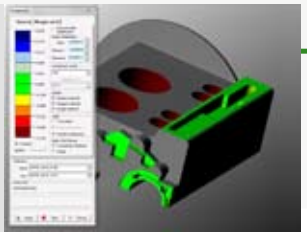
2 | Simulate to find and correct motion errors

- Detect potential collisions and remove material
- Pan, rotate and zoom during simulation
- No file size limitation, from fine watch component to aircraft wing
- Report machining errors and avoid collisions: no rapid movements into material, no cutting material without spindle rotation
- Extensive troubleshooting in one simulation
- Reverse simulation with “on the fly” error correction



3 | Validate your part

- Precise comparison between CAD Model and rough stock
- Display gouging and surplus material
- Report on gouging problems
- Measurements: thickness, distance, drilling, internal turning diameter and radius
- Dynamic 3D sections of your results



Two additional options to improve your productivity

NCDOC® Standardize your shop floor documentation

- Create 3D simulation movies for collaboration with your suppliers and customers
- Produce technical documentation for the shop floor quickly and easily
- Generate customizable inspection reports

OPTITOOL® Optimize your cutting conditions

- Analyze the actual cutting conditions
- Reduce air-cutting
- Optimize feed-rates into material
- Write new G-code file

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