Give a **boost** to your traditional programming process: **Simplicity & Flexibility**

2016 North America
Our Customers in Aerospace and Defense
SPRING Technologies

Established in 1983
Privately held
140 partners

US Headquartered in Cambridge, MA
Over 30 distributors Worldwide

Best in class CNC experts around the world
2000+ NCSIMUL Licenses
Best Machine Post-pro know-how available

GLOBAL PRESENCE
SPRING Partner with a Global Offer

NCSIMUL SOLUTIONS IN ACTION

NCSIMUL SOLUTIONS

Flexibility drives Productivity
G-code simulation

Overview

- Protect your machines
- Decrease machining time
- Document the CNC process
G-code simulation: Benefits

Where simulation stands...

- Eliminate long shop floor prove-outs
- Avoid costly repairs and downtimes
- Reduce new machine setup time
- Facilitate machine programming
- Only foolproof program
- Run machines unattended
- Lights-out machining
Complement your CAM

Overview

- Simplify your new machine setup
- Flexibility between machines
- The all in one process
Complement your CAM: Benefits

- Re-engineer programs in few minutes
- Create flexibility from any G-code program
- Eliminate the need of post processor
- Generate an optimized and safe G-code
Give a boost to your traditional programming process

Simplicity & Flexibility

Apt to G-code
Challenge

First business case:
Highly competitive aerospace market group is looking for new way to improve productivity in their Workshops and bring much more flexibility to their Manufacturing means.

They would like to:

• Use existing APT with just a click
• Eliminate external postprocessors need
• Generate verified and optimized CNC programs
• Natively update G-code program modifications, back in CAM

Starting point:
- New Hermle C40 Heidenhain without validated Post-Processor
- Programming in CATIAV5 with .Apt Output
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Simplicity & Flexibility

Apt to G-code

5x to 5x
Challenge

Second business case:
An electrical power company have to replace their outdated CNC with a new Mori Seiki NMV5000.

They want to:

• Generate automatically new CNC machine programs from a formally created G-code toolpath
• Reuse existing G-code files with just a copy/paste click

Starting point:
- New NMV5000 controller Mapps without validated Post-Processor
- G-code programs for their old DMU
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Simplicity & Flexibility

Apt to G-code

5x to 5x

5x to 3x

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Third business case:
Electronic company, needs to unload the roughing cycle operations in 3X from the 5X machine for a high volume part without re programming.

They are looking to:
- Release some production time from 5 axes machines
- Removing deep cuts from a high end 5 axes machine
- Multiplying the production

Starting point:
- The VF2 machine is available
Give a boost to your traditional programming process

Simplicity & Flexibility

Apt to G-code

5x to 5x

Optimize

5x to 3x
Challenge

Third business case improvement:
Electronic company, needs to unload the roughing cycle operations in 3X from the 5X machine for a high volume part without re programming.

They are looking to:
  - Optimize the tool changes and approach / retract tool path

Starting point:
- 3 parts in the VF2
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Simplicity & Flexibility

Apt to G-code

5x to 5x

Optimize

5x to 3x

Finish

5x to 3x

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Challenges

Fourth business case:
Electronic company, needs to expand the 5 axes machines capabilities to a Mazak Variaxis.

They want to:

- Process a G-code from a legacy G-code
- Only machine 5 axes toolpath: the roughing operations done (in the 3 axis machine)
- Avoid any potential collisions after the 3 axes roughing material remaining.

Starting point:
- Mazak 630 / Matrix controller without validated Post-Processor
- Initial rough stock
Give a boost to your traditional programming process

- Simplicity & Flexibility
  - Apt to G-code
  - Multiply
  - Optimize
  - Finish
  - 5x to 5x
  - 5x to 3x

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Flexibility drives Productivity

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Fifth business case:

Multiplying parts production, in a 5 axes machines with a new complex fixture.

They want to:

• Multiply the part in a 5 axes
• Reuse existing G-code files with just a copy/paste click
• Duplicate the operations regardless the program origins

Starting point:
- Mazak 630 / Matrix controller without validated Post-Processor
- New fixture
“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.
G-code simulation

“Every week for us is a new challenge. We need to be on-time, ready for the next race. We have already saved a couple of parts with NCSIMUL.”
-Clifton Kiziah
Manufacturing Engineer
RICHARD CHILDRESS RACING
Takeaways

Flexibility & simplicity will boost your productivity:

• Post processor are no more needed
• Switch from any 5 axes machines to another
• Distribute programs from a 5 axes to a less or more complex machine
• Optimize tool changes and auxiliary motions automatically
• Generate quickly new process based on new technology available (fixture, tools, machines...)