

## Press Release

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June 30, 2011

### Verify complicated NC programs on PC in advance 5-Axis NC Simulation launched !

Mori Seiki Co., Ltd. has developed the **5-Axis NC Simulation** software for PC-based, high performance, accuracy, 5-axis machining simulation. This new software is designed exclusively for Mori Seiki's NMV Series of 5-axis control vertical machining centers.

NC Simulation allows you to simulate NC programs output from the conversational automatic programming system (CAPS) of Mori Seiki's MAPPS and MORI-AP. It can also be used for the verification of NC programs from various CAM systems and even manually input programs. In addition, this software enables you to view workpiece material removal simulation, which is generally impossible with machine-loaded collision detection functions. All machining simulation including machine setup and collision and working check can be done off-line before real machining. 5-Axis NC simulation improves customer's productivity, making NC programs suitable by verifying complicated 5-axis NC programs on a PC in advance.

The main features of 5-axis NC Simulation are as follows.

#### 1. Shorter setup time by hassle-free machine configuration

Accurate machine models <sup>1</sup> are provided by default. No need to spend extra time to configure or setup your virtual machines. Default NC parameters are also available, allowing you to obtain accurate time study results.

Easy tool model creation is made possible by a simple tool registration screen. Tool data in MAPPS CAPS and ESPRIT CAM software, both of which are standard features of the NMV Series, can be directly imported and utilized for simulation. Additionally, workpiece and fixture data created with 3D CAD can be imported without changing the file format (such as STL <sup>2</sup>), making your simulation setup simple and easy.

1: All machine and NC information such as axis travel range or spindle speed including options have been input in advance.

2: STL is a file format used for 3D CAD systems

## 2. Simple screen design offers excellent operability

This software features simple screen design that allows users to make the best use of the functions. The software provides an operation panel equivalent to real machines on a PC, and serves as a tool for training machine operators before real machining. Additionally, the simulation view window can be split into two panes. For example, machining simulation and workpiece material removal simulation can be displayed simultaneously. This feature allows users to view machining simulation from different perspectives, offering improved verification.

Another feature of this software is its improved tool offset functions. Both tool length and diameter data registered on the tool registration screen and tool offsets input on the tool offset screen can be used for verification, enabling flexible operation.

Mori Seiki will continue to develop easy-to-use software that contributes to improving our customers' productivity.

Type	5-Axis NC Simulation
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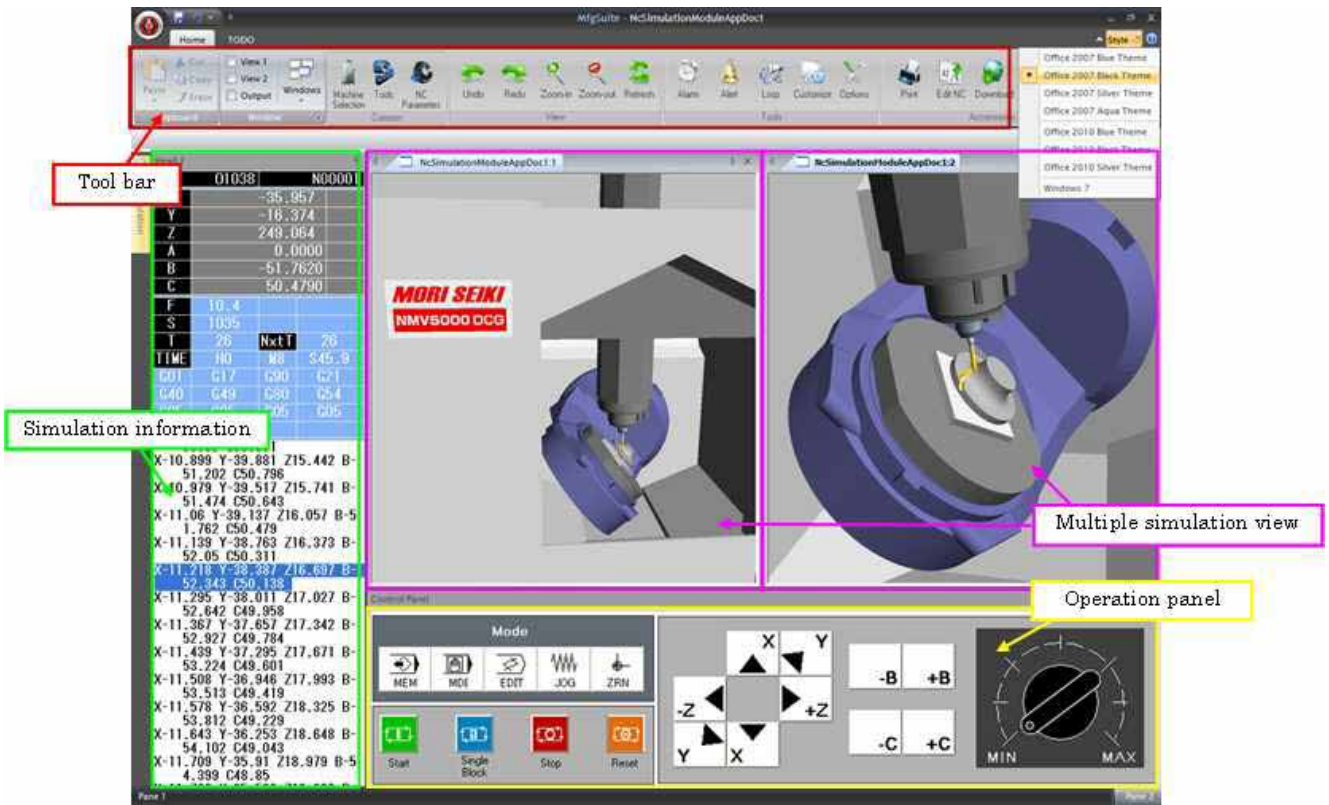


Fig 1. Main screen

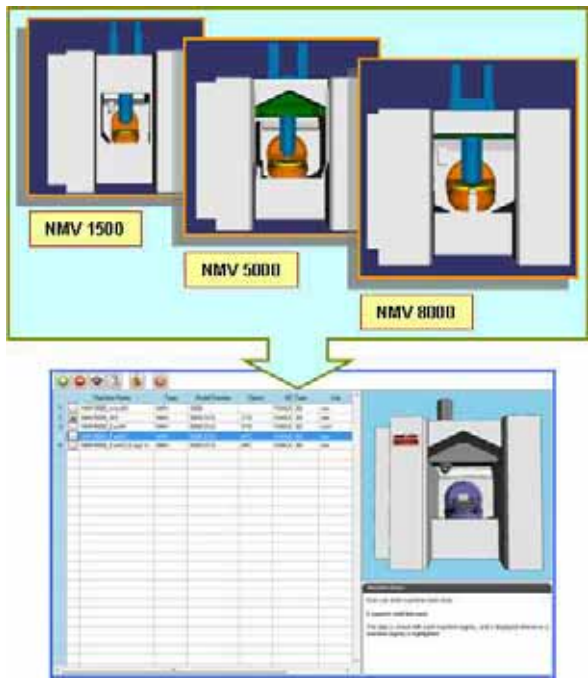


Fig 2. Machine model



Fig 3. Tool data import