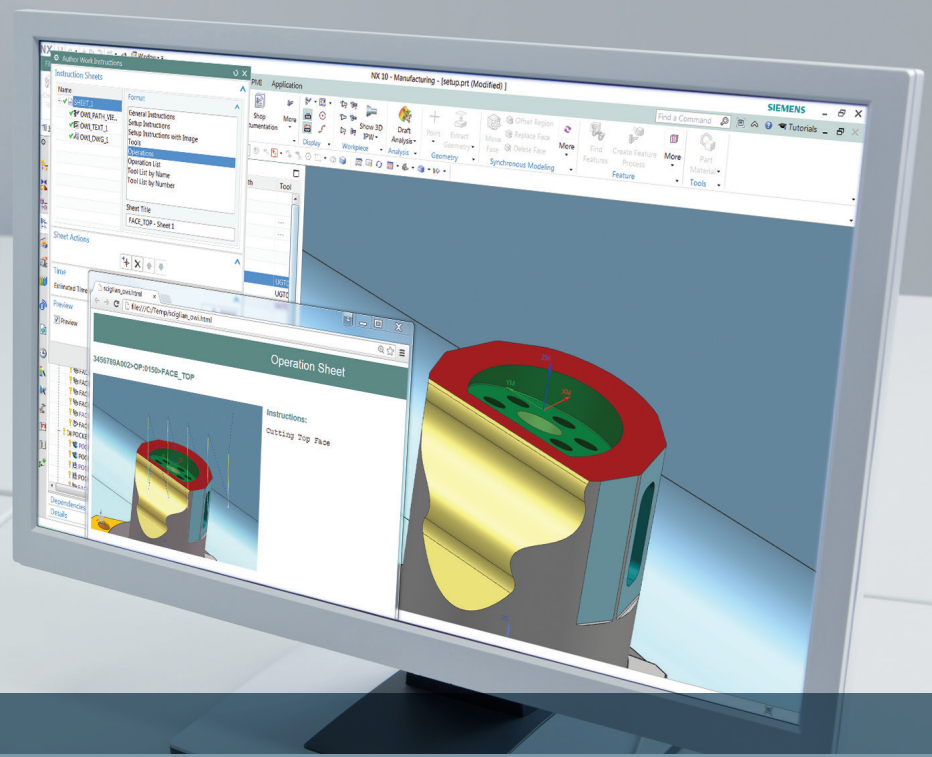# SIEMENS

GEOMETRIC SOLUTIONS

Siemens PLM Software

NX Work Instruction Authoring

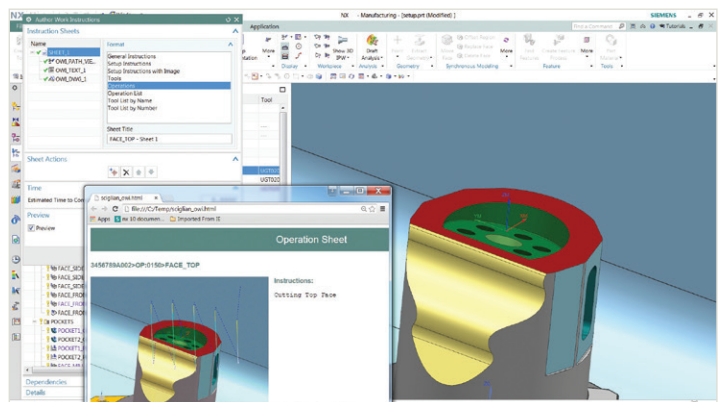Create clear, professional work instructions for part manufacturing

Benefits

- Create work instructions as an integral part of CNC programming with no additional software needed
- Immediately visualize instruction sets with WYSIWYG preview
- Document both on-machine and off-machine steps
- Publish instructions directly to PDF or HTML
- Update instructions 90 percent faster via associativity
- Author new instructions quickly and consistently from configurable templates

Summary

The creation of computer numerical control (CNC) work instructions is generally a manual process that can take as much time as the creation of the CNC program itself. NX Work Instruction Authoring brings this process inside NX™ software so that work instructions can be developed alongside the CNC program. Like CNC programs, these instructions are associative to the design models, significantly reducing the time needed to create and update them. Configurable templates are used to define the required data and display work instruction sheets.

NX Integration

NX Work Instruction Authoring is integrated into the operation navigator of NX CAM software, unifying the machine instructions (CNC program) with human instructions. This allows the CNC programmer to focus on each operation as it is defined and to specify required work instructions while the information is fresh.

Operation-specific display settings clearly illustrate each instruction set.

www.siemens.com/nx

NX Work Instruction Authoring

Features

- Extensive gallery of documentation elements
- Associate screen captures for each step
- Drawing sheet captures
- Operation and tool lists
- External images and documents
- Software variable documentation

Gallery of documentation elements

NX Work Instruction Authoring allows you to specify powerful documentation elements so you can rapidly define work instructions:

- An associative screen capture that remembers the point of view, zoom factor, NX software view and component visibility. It can be displayed with or without the operation tool path
- Capture any drawing sheet in the NX manufacturing setup
- Digital images or documents from external sources
- Operation-specific manufacturing operation management (MOM) variables
- Rich text in all languages that NX supports
- Tool lists with cutting times
- Operation lists
- Configurable lists of standard text for quick authoring
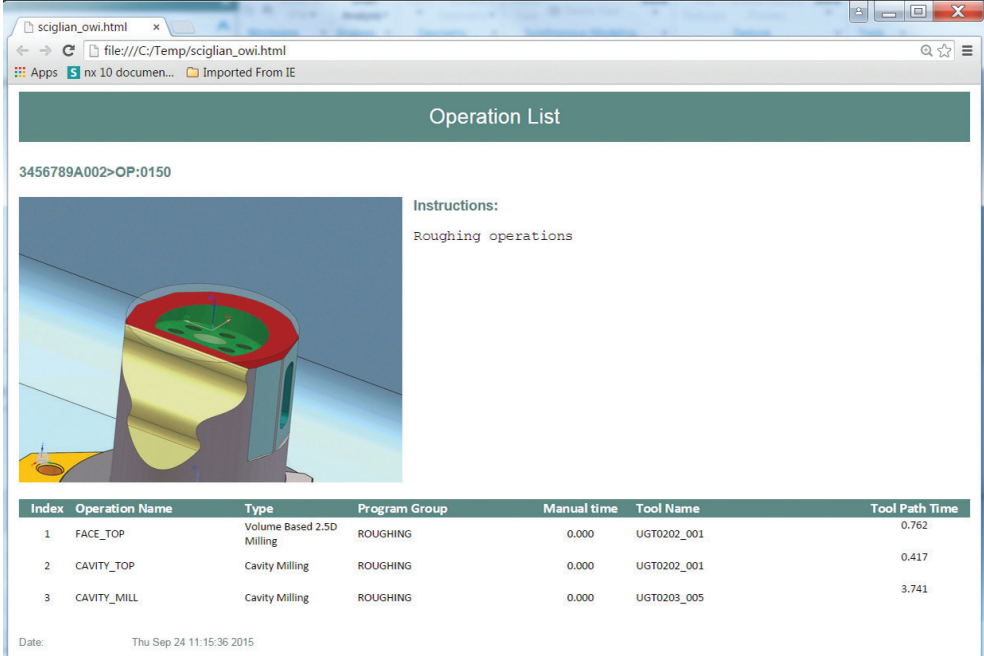
Preview

A dynamic what-you-see-is-what-you-get (WYSIWYG) preview shows what the current documentation sheet will look like when published. It is easy to make quick changes and updates to screen capture and text formatting parameters to ensure the instructions are easily understood on the shop floor.

Complete solution

Everything you need to create professional work instructions is included. There is no extra software to buy, and nothing else to learn. The integrated tools of NX Work Instruction Authoring look and act just like NX for manufacturing because it is NX.

Publish to popular formats

Once the work instructions are complete, publishing to HTML or PDF is a few clicks away. There is no need to leave NX. When publishing to PDF you have complete control over page size, orientation and scale factor to satisfy company requirements. All work instructions are stored in a configurable standard location, making them easy to manage.

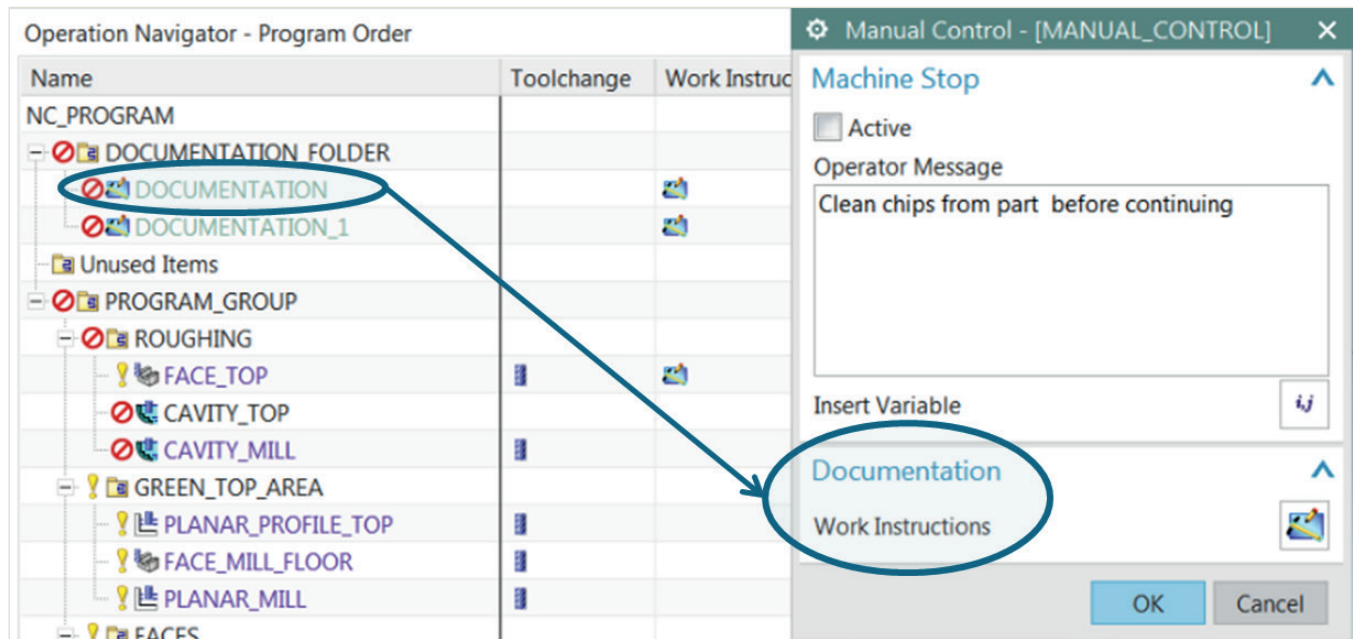*Operation summaries can be grouped and displayed for clear communication to the shop floor.*

Documentation operations incorporate non-CNC steps in the work instruction package.

Updates

NX Work Instruction Authoring enables you to easily handle both part updates and process changes. Whether an engineering change order (ECO) modifies the part geometry or a process change modifies the CNC operations, a single button click is all that is needed to publish updated work instructions. There is no double checking to confirm that all modifications were captured in manually created work instructions. There is no redoing multiple screen captures and manually copying tool-cutting time. It's all right there in the NX model as specified in the NX work instructions.

Template driven

Templates that define typical work instruction formats are provided out-of-the-box. You can use these straight away, or modify and expand them to develop your own customized templates, capturing your company's best practices.

Work-instruction templates are fully configurable so you can define the content (the exact types of data elements and their location) as well as the look and feel of fonts and layouts of each documentation sheet. This makes it easy to optimize and standardize work instructions across the enterprise and enhance understanding on the shop floor.

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