MachineWorks

Janus Engineering and MachineWorks announce SOLID IPW for Siemens NX based on MachineWorks' new Parasolid Bridge
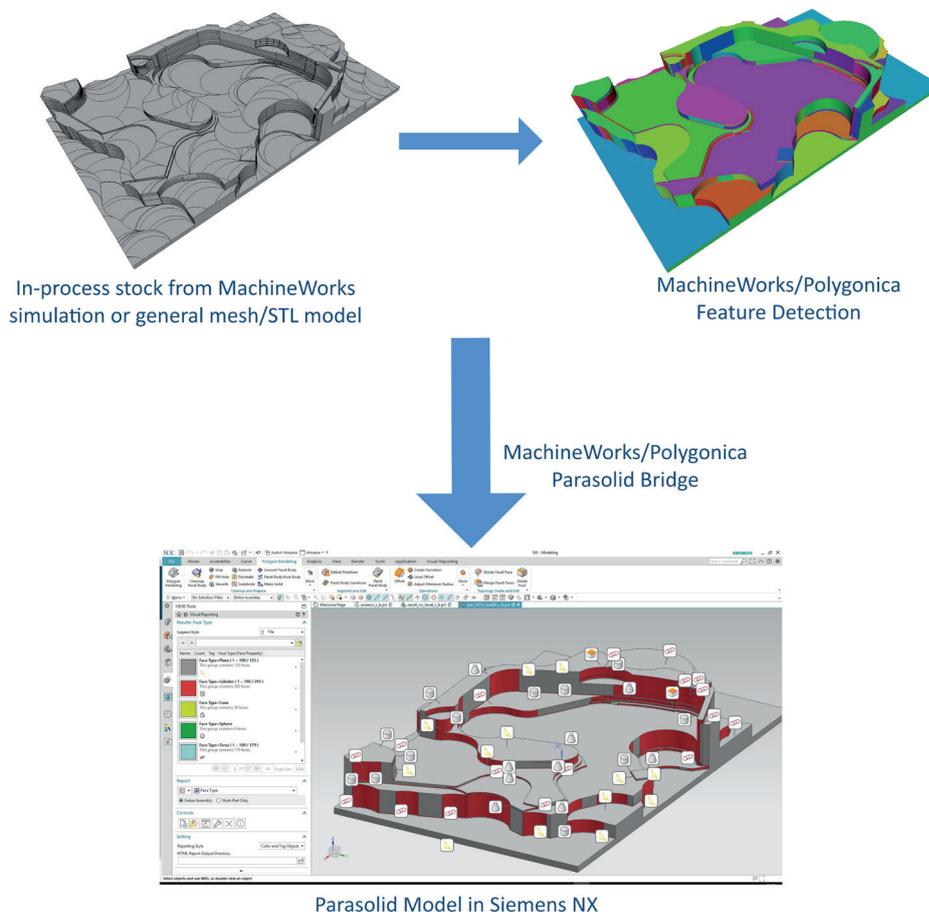
MachineWorks Ltd, the leading provider of MachineWorks and Polygonica, component software for CNC simulation, verification and polygon-mesh modelling, is pleased to announce the availability of the MachineWorks Parasolid® software Bridge.

Janus Engineering SARL are leading experts in Siemens NX CAM. Franck Paris, Managing Director, describes the background to the SOLID IPW project:

"Driven by our goal of continuous improvement and innovation for our customers, we've been looking for a long time for solutions to improve the use of machining simulation results within NXTM software, a leading integrated solution for CAD/CAM/CAE from Siemens Digital Industries Software. We are especially interested in the case where part manufacturing requires multiple setups; our goal was to find a way of using the intermediate in-process stock from the material removal simulation to help fixture design, CMM inspection and documentation of the intermediate process steps."

"After extensive testing and exchange with the MachineWorks team, we were able to realize the full potential of their new feature detection module. This technology was exactly what we needed to obtain the required accuracy from the in-process stock to make it useful in our customers' workflows. After extensive testing we integrated MachineWorks and its new Parasolid Bridge into Siemens NX and we are now happy to be able to offer it to our customers."

MachineWorks' Parasolid Bridge is an innovative new library that uses the MachineWorks feature detection module to analyse the in-process stock and then construct a Parasolid model. Portions of surfaces that map onto planes, spheres, cylinders, cones and torus are recreated in Parasolid as analytic primitives whilst more complex freeform surfaces can be passed as polygon meshes using Siemens' innovative Convergent Modeling™ technology in Parasolid.

In-process stock from MachineWorks simulation or general mesh/STL model

MachineWorks/Polygonica Feature Detection

MachineWorks/Polygonica Parasolid Bridge

Parasolid Model in Siemens NX

olid IPW from Janus Engineering howing in-process stock from MachineWorks inside Siemens NX

The Parasolid Bridge for Polygonica also generates a Parasolid model but based on a general polygon mesh rather than an in-process stock model.

Using Parasolid Communicator with Convergent Modeling APIs, a fully compliant Parasolid XT model can be constructed suitable for accurate design of complex fixturing, inspection planning, engineering documentation and even as input to CAM toolpath generation algorithms.

Dr Fenqiang Lin, Managing Director of MachineWorks, comments:

"This was a challenging project for us and a real test for the feature recognition in MachineWorks and Polygonica. It was great to work closely with Janus Engineering who were driving the requirements and continually testing the results. However we couldn't have done it without the always superb support provided by the Siemens Parasolid team."

"We are happy to report that the mesh quality from the polygonal-BREP of MachineWorks' Visicut engine combined with the power of MachineWorks' and Polygonica's feature detection algorithms delivers game-changing results. Janus Engineering are our first partner to benefit and it's great to see how quickly they have been able to productise this technology for their customers."

About Janus Engineering SARL
(www.janus-engineering.com)

JANUS Engineering France is a certified solution partner supporting manufacturing companies in the integration, optimisation, individualisation and training for Siemens PLM Solutions. Janus has been providing services based on Siemens NX CAM, formerly Unigraphics CAM, to the French, Benelux and Scandinavian markets since 2001.

About MachineWorks Ltd
(www.machineworks.com, www.polygonica.com)

Founded in 1994 MachineWorks Ltd is a leading supplier of components to the engineering software market. MachineWorks is the leading toolkit for CNC simulation and verification. Polygonica is a leading tool for polygon-mesh modelling and is widely used in the Additive Manufacturing, CAE, CAM, Medical, Dental, Construction and Mining software markets.

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