



## GibbsCAM Support of STEP AP224

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Enhancement to popular CAM system supports next generation manufacturing data standard.

MOORPARK, CA: Gibbs and Associates, developer of GibbsCAM®, software for programming CNC machine tools, announced today the completion of a collaborative effort in conjunction with South Carolina Research Authority (SCRA) which allows GibbsCAM to read STEP Application Protocol 224 (AP224) files. STEP (for STandard for the Exchange of Product model data) AP224 is the foundation format within the STEP Manufacturing Suite of the International Organization for Standardization (ISO). This robust suite of STEP Application Protocols addresses the data requirements extending from product design through manufacturing engineering to machining using numerically controlled machine tools to final inspection. STEP AP224 specifically supports the transfer of manufacturable product information between design engineering and manufacturing engineering groups and includes both geometric and product manufacturing information, such as features with dimensions and tolerances.

"STEP AP224 represents the next generation of product model data," states John Callen, Gibbs' Vice President of Marketing. "Not only does AP224 contain the geometry of the product, but it also includes the other information which is required to have a complete product specification necessary for machining. Traditionally, this product information has only been available to the manufacturing group through a set of separate engineering drawings. This initial step allows us to gauge the market's reception of AP224 while establishing a technical foundation upon which further enhancements can be developed."

The STEP AP224 interface was implemented under funding from the Army's Tank Automotive Research, Development, and Engineering Center (TARDEC), a key client of SCRA. In the interest of improving overall operational efficiency and reducing deployment and maintenance expenses, various branches of the Department of Defense have been investing in STEP-based technologies. Today, a number of STEP formats are in use in various military maintenance depots throughout the United States.

"We see GibbsCAM's support of AP224 as an important step in its commercial deployment and adoption," comments Dr. William Freeman, SCRA's Director of Research and Development, Institute for Solutions Generation, which specializes in working with various organizations within the Department of Defense. "We believe that AP224 has considerable applicability outside the military supply chain and this is an excellent way to demonstrate that value to manufacturers of commercial goods. This also provides our military clients with a commercially available CAD/CAM system which is capable of meeting their mission requirements."

GibbsCAM's STEP AP224 interface reads the solid model contained in the AP224 file and then creates features which correspond to the features in the AP224 file. The Feature Manager can then be used to organize and manipulate the features within GibbsCAM. A feature selected in the Feature Manager listing is highlighted and the geometric faces within that feature can be passed as a group to various operations which are used for machining within GibbsCAM. For example, hole features can be selected as a group and then passed to GibbsCAM's Hole Manager for processing. The features' product manufacturing information contained in the AP224 file is also read into GibbsCAM and can be referenced by the user while creating their CNC program.

For more information about GibbsCAM or to locate your local GibbsCAM Reseller, go to [www.GibbsCAM.com](http://www.GibbsCAM.com), call 1-800-654-9399.

About Gibbs and Associates and GibbsCAM

For over twenty years, Gibbs and Associates has been a leader in providing cutting edge CAD/CAM technology, while maintaining its signature ease-of-use and productivity. Powerfully Simple, Simply Powerful is the guiding philosophy at Gibbs. Gibbs believes in empowering the NC programmer, machinist, and manufacturing engineer, not eliminating them. Gibbs' goal is to introduce manufacturers to new technologies and new ways of working that makes their machining easier and their businesses more profitable. To achieve this goal, Gibbs creates tools that are naturally intuitive, graphically interactive, extremely visual, associative, and just plain enjoyable to use. Gibbs provides a total quality solution with the service and support successful customers require.

The current GibbsCAM product line supports 2- through 5-axis milling, turning, mill/turning, multi-task simultaneous machining and wire-EDM. GibbsCAM also provides fully integrated manufacturing modeling capabilities that include 2D, 2.5D, 3D wireframe, surface, and solid modeling. GibbsCAM has received Microsoft's "Designed for Windows XP/2000" certification. GibbsCAM's data exchange capabilities are able to access the broadest range of native and industry standard CAD data formats. GibbsCAM is certified under the Autodesk Inventor Certified Application Program, is a Solid Edge Certified Select Product, and is a SolidWorks Certified CAM Product. GibbsCAM is either offered or endorsed by a number of leading worldwide control and machine tool manufacturers, including GE Fanuc, Infimatic, Siemens, Doosan Infracore, Haas, Index, MAG Fadal, Mazak, Mitsubishi, Mori Seiki, and Tornos. Gibbs and Associates distributes its products worldwide through a network of international Resellers. For more information about Gibbs and Associates and its CAM software packages, call 1-800-654-9399, or visit the company on-line at [www.GibbsCAM.com](http://www.GibbsCAM.com).

About South Carolina Research Authority and STEP AP224

SCRA is a leader in applied research and commercialization services with offices in Anderson, Charleston, and Columbia,

South Carolina, in addition to McLean, Virginia, and Dayton, Ohio. SCRA collaborates with its industry, academic, and government partners to advance technology, providing technology-based solutions to solve challenges having a national scope. For more information about SCRA, visit the organization's web site at [www.scra.org](http://www.scra.org).

SCRA's Readiness and Sustainment Business Unit within the Institute for Solutions Generation was responsible for the development of ISO 10303 STEP Application Protocol 224, "Mechanical Product Definition for Process Planning, using Machining Features" and its registration as an International Standard. A format which is part of the overall STEP Manufacturing Suite that includes AP203, AP240, AP219, and AP238, AP224 provides production-grade product data. SCRA has developed a suite of applications to further prove-out and demonstrate the feasibility and operational benefits of using AP224: a product data translation system (STEPTrans), a product data validation system (STEPValidator), and a generative process planning system (STEPPlan). For more information about ISG and STEP AP224, visit the group's website at [www.ISG-SCRA.org](http://www.ISG-SCRA.org).

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