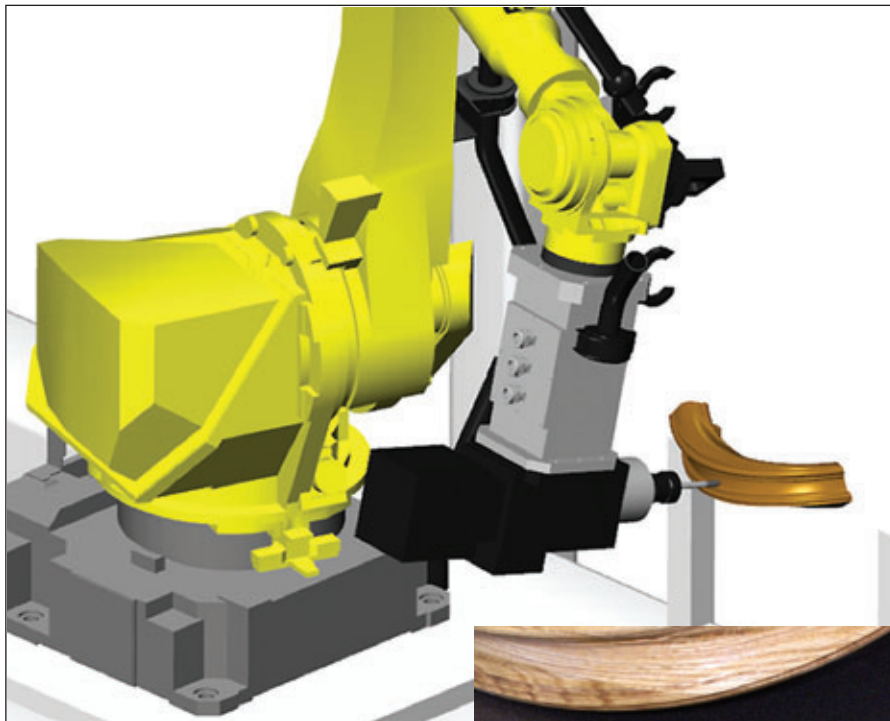


Dedicated Robotics Software Allows a Machining Robot to Be Programmed Just Like a CNC Machine Tool



The 3- to 5-axis machining of complex parts can easily be programmed using Robotmaster. Traditional robotic applications such as trimming, deburring, polishing, dispensing, grinding and painting also are supported by Robotmaster. The software works with robots carrying such major brand names as Stäubli, KUKA, ABB, Fanuc, Motoman and Mitsubishi.

The Robotmaster software environment is easy to use for optimizing robot programmes. Paths are verified for errors (problem areas being displayed graphically) and, with a few mouse clicks, are easily optimized for singularities, joint limits, robot reach and collisions even before the path is verified in the simulator. After the

Machining robots are growing in market demand owing to their attractiveness to manufacturing companies looking for a time- and money-saving alternative to CNC machine tools. With the reach a 6-axis robot offers, many parts can be machined by a robot in a single setup that would require multiple setups if a CNC machine were used. A robot placed on rails or set up to work with rotary tables offers even greater reach and flexibility in the production of large aircraft, ship and power-generation parts.

Robotmaster® software for programming 6-axis robots provides the same flexibility and speed as software used for programming CNC machine tools because it seamlessly integrates robot programming, simulation and code generation inside Mastercam®'s industry-proven CAD/CAM platform. Developed by Jabez Technologies, a company that specializes in dedicated software solutions for industrial automation, manufacturing and robotics, Robotmaster is, like CNC Software's Mastercam, distributed in Europe by InterCAM S.A.

As robots have become more rigid and capable of providing higher accuracy in machining harder materials, more companies have considered



using them as a machining tool. But a major challenge those companies have faced has been the lack of an integrated CAD/CAM robot programming solution. Typical commercial solutions have involved multiple software components, for programming, for postprocessing and for simulation. This arrangement limits programming flexibility, and successful programming of the part requires a greater level of user intervention along with advanced knowledge of the robot.

Robotmaster, however, is designed to facilitate both the programming of precise tool motion and the generation of long tool-path trajectories (some of which are impossible to teach via on-line methods). The requirement for programmer intervention is minimal: in fact, the programming effort takes minutes rather than days.

simulation and verification process is complete, the user can output robot-ready operational code from the fully integrated Robotmaster solution.

Using all of the CAD/CAM tools available in Mastercam, Robotmaster provides a direct link from the CAD model to the tool path, as well as file tracking and change recognition for engineering change management. The software supports machining both with the tool mounted on the robot and with the part mounted on the robot. In addition, Robotmaster accommodates applications involving programming a robot mounted on up to three rails and a part mounted on two rotary tables, for a total of 11 axes simultaneously.

InterCAM S.A.

MORGES, SWITZERLAND

www.intercamsa.com