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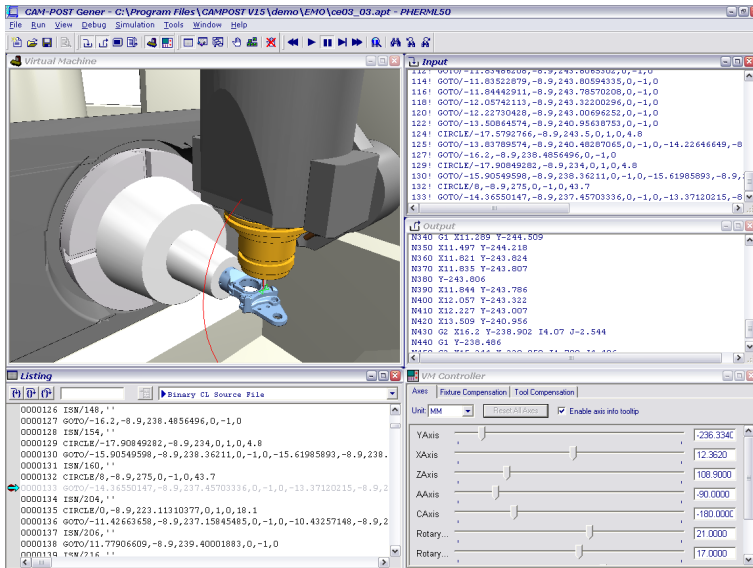
## RAPID TRAVERSE

*Metalworking Technology In Brief*

### Bridging The Gap Between CAD and CNC

*By Derek Korn*

The postprocessor is the last software link between an ideal CAD model and a 'real' machined part. To what degree the postprocessor can take advantage of a CNC's capabilities, and vice versa, determines the number of available programming options and degree of programming difficulty. CNC/postprocessor rapport is particularly important for high speed machining (HSM).



There isn't a comprehensive, unifying solution that marries all CNCs and postprocessors in such a way. However, Siemens and ICAM have made a step in that direction by developing the CAM-Post Sinumerik 840D postprocessor, which is tailored specifically to the Siemens 840D control. This dedicated postprocessor speeds and simplifies programming, while taking some of the mystery out of accessing the control's high end HSM features.

"High speed machining, in particular, brings into play a lot of new CNC features that are not necessarily intuitive from the perspective of some CNC users," says Siemens' Norman Bleier. "Help in the postprocessor is another step in advancing the CNC concept to address the new challenges of high speed machining."

The Sinumerik CAM-Post version is an adaptation of ICAM's universal CAM-Post. It supports 840D control features such as:

- Local coordinate system programming, to allow 2 ½-D cycles to be performed from any tool axis orientation
- Rotating Tool Center Point (RTCP) programming based on the 840D's transformation orientation (TRAORI) tool-tip programming capability, which is designed to simplify 5-D programming and tool compensation
- Circular Intermediate Point (CIP) and dual curve NURBS interpolation.

According to ICAM's Malcolm White, this CAM-Post version is also helpful for programming special Cycle832 and Cycle800 commands used by the 840D for high speed machining and coordinate frame transformation. It does this by providing an intuitive dialog box to choose parameters such as exact stop, acceleration pattern, feed forward control, and data compression, and then combines these into a single cycle command.