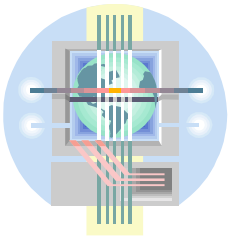
EXSYS Case Study

Customized Diagnostic System for Unusual Hardware



MicroDimensions, Inc.

A knowledge automation system was developed to help technicians diagnose hardware/software problems in a machine vision system. What makes this project especially interesting is that there was a constraint that the knowledge automation system run on the same hardware as the machine vision programmer. This was a board with no keyboard, only light pen input, no disk drive, and a screen size of 64x24 characters. Most importantly, there was no operating system in the normal sense. Needless to say, it was a very unusual computer to port to.

Clearly, off the shelf software could not be used for this project. EXSYS staff worked with the company to produce a custom version of the runtime that could run on this hardware. The port was completed by cross compiling on a specific PC model. Routines were written that simulated an operating system for the calls made by the knowledge automation system. Due to the easy portability of the code, this project was accomplished very rapidly.

Development of the rules was on a PC with both the inference engine and rules permanently stored in memory. Input was handled by an external program, which drew the keys needed by the knowledge automation system on the screen with selection by light pen. The system has been highly successful.