

# EXSYS Case Study

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## **Sales Support System Configures Computer Integrated Manufactured Cells (CIM)**



*Rockwell Automation/Allen-Bradley*

Allen-Bradley is one of the major manufacturers of Computer Integrated Manufactured Cells (CIM Cells). The company has fielded this system worldwide and it is used extensively by their sales force. CIM cells are a highly advanced form of automated machining equipment. The CIM cell is capable of re-configuring itself under computer control to produce a wide range of different parts in lots of 1 to 10,000 or more. The flexibility and speed with which differing parts can be produced make CIM cells one of the most advanced production technologies available.

A CIM cell is extremely complex, utilizing many different types of sensors, controls, cutters and peripheral equipment. There are hundreds of components that can be included in a CIM cell, and many possible configurations will not function properly. Configuring a CIM cell involves determining that all components are compatible and that the system is complete. This used to require a human expert with extensive experience, and take a full day.

A large knowledge automation system was built that now configures a CIM cell in minutes. The system backward chains extensively and uses external programs for data input, and obtaining current prices of equipment. A sales person can input information to the configuration using a large customized "fill-in-the blank" type screen. The system then checks the configuration and asks the user for additional information as needed. Once the CIM cell is configured, the system looks up prices of the selected components and prints a detailed quotation, using the Report Generator. The report can then be incorporated into a sales proposal and given to the customer.