ter delivery on advanced technology and new products. The strong Chess support, which our customers currently enjoy, will continue without change."

Chess is an ERP open manufacturing planning and control system used by both discrete and repetitive manufacturers to automate their operations, reduce production costs, and cut time to market.

With $233 million in revenues last year, MDIS is a worldwide supplier and producer of open systems software and hardware products as well as a provider of a variety of application packages, facilities management, disaster recovery, and a host of supporting services to local and central governments, libraries, health care organizations, police forces, and commerce. Currently, the firm has more than 270 package solutions available, with tens of thousands of users worldwide.

The Smart Distributed System (SDS) offers several new hard-wiring solutions to reduce costs and wiring complexity for the factory-floor environment. The wiring allows up to 64 cables to be replaced with just a single cable.

The Road to Machine Distributed Control

BY MARTY WEIL

FREEPORT, IL—Honeywell's Micro Switch Div. (Freeport, IL), a leading supplier of sensors, switches, and manual controls, recently unveiled its Smart Distributed System (SDS), which promises to usher in the era of true machine distributed control. SDS changes sensors and actuators from change-of-state devices to intelligent communication and control devices through a robust, open network. A system solution for distributed machine control, SDS is a bus system that brings the power of communications to the device level on the factory floor to reduce downtime, installation, and operating costs (*Managing Automation*, June 1994, page 58).

According to Edward Hurd, Honeywell Industrial Control president, SDS will reduce overall system cost by up to 40% as a result of the completely open nature of the SDS control system. "The Smart

Distributed System allows customers maximum flexibility and choice in selecting devices that are best suited for their specific applications," he says.

"Until now, control component manufacturers interested in increasing their products' functionality to help solve customer problems lacked the communication and control interface needed to support additional functions," says Jeffrey Beal, SDS business development manager for Micro Switch. "SDS helps interface customers with the kind of information that really makes a difference in terms of productivity and profitability on the factory floor."

SDS interfaces with any programmable logic controller (PLC) or personal computer (PC) on the market. It empowers PCs, PLCs, sensors, actuators, and other control devices to communicate over a single, four-wire cable. Unlike discrete wiring, which only communicates that a sensor is on or off, SDS also provides system and device diagnostics and status. It excels by providing potential bus growth that includes peer-to-peer communication, where empowered devices take action on the information without going through any dedicated control device.

SDS utilizes an open protocol

built around Control Area Network (CAN) technology. This removes the limitations imposed by proprietary control systems. According to Beal, CAN offers better connectivity, as well as more system flexibility and versatility with enhanced device-to-host or peer-to-peer communication. SDS interfaces with any available PC or PLC and can accommodate specialized devices needed to meet the broad range of control requirements on the factory floor. Typical applications include bottling, canning, conveying, dry packaging, storing, shrink-wrapping, automated storage and retrieval systems, and assembly lines.

"We anticipate a steady flow of 'revolutionary evolutions' for SDS and SDS-related sensors and switches," says Ramon Alvarez, vice president and general manager of Honeywell Micro Switch. "We are already working on Phases II and III for SDS. We will be continuously adapting existing sensors and switches and developing new ones to support customers' distributed machine control systems and working with third-party suppliers of other devices to ensure that all necessary factory floor devices needed by customers will be SDS-compatible in the future."

Research Consortium Targets Electronics Manufacturing

BY GREGORY FARNUM

TROY, NY—The Rensselaer Electronics Agile Manufacturing Research Institute (Troy, NY), which officially opened its doors this past April, has a clear though ambitious mission. That is to develop and test an information architecture that will allow electronics manufacturers to tightly integrate their design, manufacturing, and marketing functions, and link these functions with suppliers and customers (*Managing Automation*, August 1994, page 18).

Rensselaer-EAMRI is located on the Troy, NY, campus of Rensselaer Polytechnic Institute (RPI), one of the prime movers behind the project. This five-year research initiative has an impressive list of other backers as well. On the government side there are the National Science Foundation and the Advanced Research Projects Agency, whose contributions will amount to a million dollars a year over the life of the project, nearly half of its total five-year budget of $11.2 million.

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With Wonderware, you can change the way you look at your business. With our powerful, Windows™-based applications development tools, you'll have the creative power to see your operations from an unc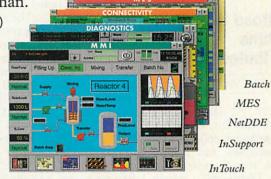onventional perspective. Visualize data the way you want to see it – react to trends in real time. You'll know what's happening, man. (Remember the Velvet Underground?)

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