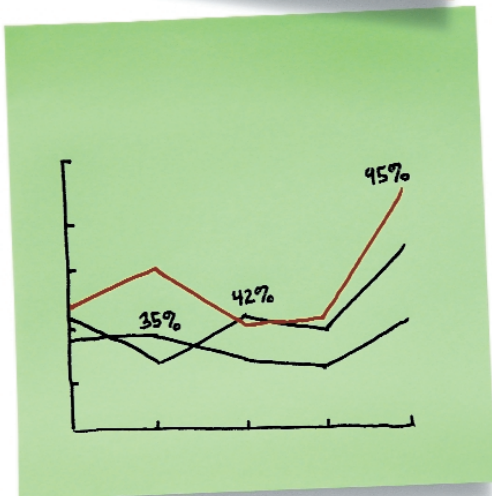
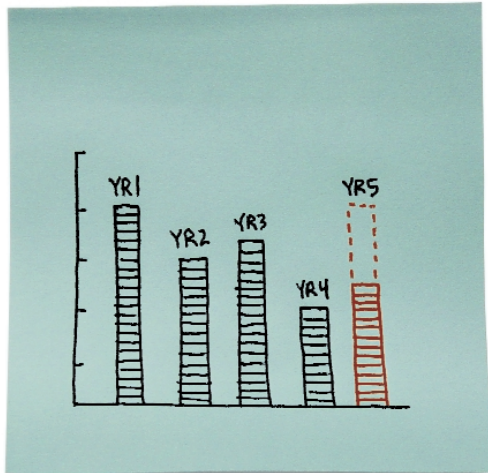
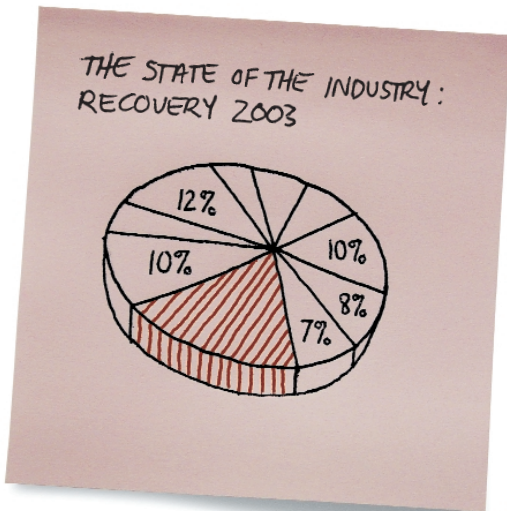


START

THE VOICE OF THE MANUFACTURING EXECUTIVE : JANUARY 2003



Doing more with less is quickly becoming the mantra of the new year. How prepared are you to take advantage of technology to propel your economic recovery?

ALSO :

- Automotive
- I/GEAR, WAGO COLLABORATE
- Best Practices
- GENERAL MOTORS

Data: the Key to Automotive

The concept of sharing information on the plant floor with enterprise level business systems is not new. However, only recently, due to more open standard technology, it has become more of a legitimate possibility.

The growing market defined as data transport utility (DTU) falls directly in line with this concept. It allows for every application and technology within a manufacturing operation to work together in a smooth and seamless manner.

The newest release in this area is from integration company Advanced Production Systems, Louisville, Ky., I/Gear, and has caught the attention of many automotive companies.

This middleware tool is helping both original-equipment manufacturers (OEMs) and suppliers bridge the gap between plant floor and business systems by enabling functional interchange between disparate systems. The product has the ability to collect and distribute information to virtually any device or system, integrating shop floor devices, manufacturing execution systems (MES), and enterprise resource planning (ERP) systems within a single software package.

"I think companies were tired of technology not being able to talk (to each other) and the custom integration that is involved in making it work," says Don Korfhage, president and CEO of APS. "And a few years ago something like this couldn't exist because there weren't the open standards such as we have today."

Data transport utility is a growing trend as manufacturers begin taking advantage of dedicated transport technologies due to an increased need for improved quality and productivity and the high costs associated with solving connectivity issues with more typical software approaches.

In particular, I/Gear formed a partnership with distributed I/O system provider Wago, Germantown, Wis., where I/Gear is the data transport method for getting information from the Wago I/O modules up to the enterprise and devices that need the realtime data collected from these modules.

Wago's distributed I/O systems use a very modular approach. Unlike similar systems, which have their own architecture, the systems from Wago incorporate an open architecture approach, supporting approximately 15 open architectures, says Bill Lydon, product manager, Wago. This fully supports the concept of information sharing and fits in very nicely with what I/Gear has developed, he says.

"As auto manufacturers look to achieve more of a make-to-order environment, getting this realtime information from the plant floor to the enterprise becomes much more important," explains Lydon. "I've been involved in (the auto) industry for a while and there hasn't been a product that has been such a

nice fit for (capturing this information) and one that makes it so easy as this has been."

Although this allows auto manufacturers to take advantage of the realtime information in many ways, one way that many are using this is for validating plant processes. One example of this is APS' VIP Station—or Validating Important Processes—which coincides with error-proofing concepts as part of lean manufacturing procedures. The station uses an I/O module from Wago tailored in the areas of error-proofing and traceability and the I/Gear software to execute these procedures.

Auto part supplier Dana Corp., Toledo, Ohio, for instance, uses the VIP Station in its steer axle assembly line for the heavy truck market. It is used as an error-proofing method by crosschecking the serial number on each part that goes onto the axle during assembly to the bill of material within the company's ERP system in realtime.

"In terms of production it gives us data from anywhere in the plant, so as to check how much productivity on any certain hour, day, or shift as well," says Bill Mossing, plant manager for the Dana plant in Humboldt, Tenn.

Toyota, Aichi, Japan, is among the OEMs using I/Gear along the assembly line. In a similar fashion to Dana, Toyota is also using it as an error-proofing procedure along the axle assembly line. Data from an external shop comes into the facility and is fed into a PC on the plant floor. The internal Ethernet prints out the information so operators can carry out individual tasks along the line.

"(I/Gear) is basically the backbone for carrying that information," says Jeremy Yost, engineer for Toyota. "It has given us the ability to respond quickly to many quality issues."

Although not the first to offer a solution that addresses the idea of DTU, APS is one of the first doing it in such a centralized fashion, according to Korfhage.

"We are not claiming to be the first to market, but rather than taking a sledgehammer approach to the idea, we have created more of a hammer approach to it," he says.

—Mike Carrozzo

