

Logistic View - [Logistic Dispatch]									
Logistic Center		Dispatch		Order Step		Problem		Configure Help	
Center:	TOOLING	Last Checked:	02/03/94 10:44	Step Detail					
Dep.:	LOGISTICS	Current Probs:	3	Problems					
Desc.:	TOOL ROOM	New Probs:	0	Status					
WorkOrder# WO1011									
Part Number:	50	Priority:	3	Step Queue:	01/19/94 15:17				
Part Desc.:	DISK GEAR	Date Avail.:	02/04/94	Step Start Date:	01/20/94 17:59				
Customer:		Due Date:	02/03/94	Start From Now:	(13:16:44)				
Group Code:		Planner:		Latest Fulfill:					
WorkCenter:	MILLING [400]	No. Reqs:	1	No. UnComp.:	1				
Status:	IN-QUEUE								
Work Order	Number	Seq#	Part Number	Req/Need	Start Date				
U01011	400	50		1/1	01/20/94 17:59				
U01004	300	60		1/1	01/20/94 18:00				
U01014	500	20		1/1	01/21/94 07:00				
U01020	300	50		2/2	01/24/94 21:56				
U01020	400	50		1/1	01/25/94 11:14				
U01005	500	20		1/0	01/28/94 07:30				
U01004	500	60		1/1	02/04/94 10:52				

One feature of the Internal Logistics Module is a capability to display a prioritized dispatch list to all logistics centers, which shows when and where logistical items will be required to run a job on the shop floor.

February 1993, page 21).

"The critical path to the customer should have nothing but value-added activities on it," says Skevington. In reality, however, most factories have value added only 2% of the time an order is in the shop. "The rest of the time is spent just sitting in queues."

The FACTory System version 3.1 includes a new Internal Logistics Module. This module provides the ability to identify and communicate when and where logistical items such as tools, materials, and engineering drawings are required to

run a job. These items are incorporated into the scheduling process because they constitute constraints to the scheduler and the shop floor.

"The shop-floor operator spends 35% to 40% of his time getting the process going, which involves locating and gathering the 'stuff' needed to run a job," says Skevington.

"In manufacturing you have the need for finite capacity scheduling, but even more important, we have found that you also need coordination and the visibility of the thousands of efforts going on simultaneously.

Finite capacity scheduling without the coordination efforts is not shop-floor execution." The two combined will help create a value-added path to the customer, he maintains.

Another new feature in The FACTory System 3.1 is a Performance Analysis Module, which is a set of reporting and analysis tools that graphically display how well the shop is performing for a specific time, focusing mainly on utilization and throughput.

The FACTory System is designed for discrete manufacturing of such products as machinery, textiles, instruments, metal parts, glass, and others. It is a PC-based system and runs on client-server architecture with a UNIX-based workstation as the server and Microsoft Windows as the client.

MES Roundtable Documents User Benefits

BY MARTY WEIL

CHICAGO—Since its inception in 1992, the Manufacturing Execution System Association (Pittsburgh, PA) has been building a case for manufacturing execution systems (MES). The first-ever MES Roundtable, sponsored by MESA and held recently in Chicago, helped define how MES designates products and services to control plant-floor operations in ways that integrate with other related manufacturing operations.

"As the installed base of MES applications grows, potential and new users are asking vendors to support their claims with quantifiable evidence that MES does have a positive impact on the financial performance, the corporate mission, and on day-to-day operations within manufacturing companies," said Mike Wells, MESA International chairman and executive vice president of Industrial Computer Corp. (Atlanta, GA). "The MES Roundtable sets the stage for those interested in MES to learn how these things are achieved."

For the more than 100 attendees (mostly directors of operations and vice presidents of manufacturing from Fortune 1,000 companies), the proof of MES's value was provided in a series of presentations and discussions that addressed the key operational issues of MES and highlighted the experience of current users.

MESA used the occasion to unveil the results of a white paper study on the benefits of manufacturing execution systems. The study documented that "virtually all of the manufacturers who have installed integrated MES over the last five years are receiving measurable benefits to the production process." Wells noted that "respondents to our study identified multiple benefits to the discrete and batch process manufacturing operation, as we anticipated." The most frequently cited benefit was reduced manufacturing cycle time. The average reduction in cycle time achieved by the survey's respondents was 45%.

To support the conferences, a number of MES vendors including Andersen Consulting, BBN, Camstar, Consilium, Intellution, Intermec, Effective Management Systems, Harnischfeger Engineers, Industrial Computer Corp., and RWT demonstrated how their products and services shorten lead times, increase production capacity and equipment utilization, minimize order processing errors and management scheduling time, and bring about other benefits.

The MES Roundtable featured such notable industry experts as Tony Friscia, president of Advanced Manufacturing Research; Steve Zailyk, a vice president with RWT Corp.; Mike Dunham, president of Effective Management Systems; Dave Cone, president of Camstar; and Jonathan Golovin, chairman of Consilium.

"By uniting plant management systems, MES technologies provide a full picture of what is being produced and all that affects it as it moves toward the customer," said Wells. "This means reduced time to market, improved productivity, enhanced quality, and reduced cost." MA

FACT Gets a New Friend

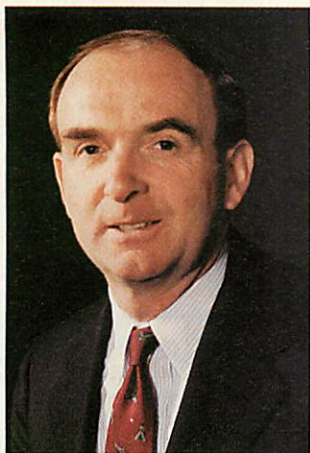
FACT Inc. has a new president, Joe Trino, and a major investment partner, E.M. Warburg Pincus & Co. (New York, NY). In June, Warburg Pincus announced an equity investment in FACT totaling \$7 million.

Trino, who is also chief operating officer, says the firm was looking for a software market in which its investment would have impact. MRP II was "saturated," says Trino. Manufacturing execution systems looked promising. Warburg Pincus has also recently invested in other software firms such as The System Works (Atlanta, GA) and Industri-Matematik (Tarrytown, NY), companies it considers leaders or potential leaders in their markets.

"We talked to better than half of FACT's customer base and gave a thorough review to all of them, some on site," he says. "What impressed us about FACT's customers was that a lot of them could tell exactly what their return on investment was and how soon they got it."

FACT's chairman, Craig Skevington, who founded FACT in 1988, had entertained other offers of investment. "It was clear Warburg Pincus was looking beyond just the business plan and into what it will take to own the market." He says the partnership will allow FACT to explore new platform and database strategies while expanding the functionality of its existing real-time tracking and finite scheduling products.

Trino, who was formerly president of MSA Advanced Manufacturing and Dun & Bradstreet Software, will be based in Atlanta, where FACT will open a sales and support office.



Paul White, president of AEG Modicon, asserts that AEG Schneider Automation's sales places it in the No. 2 position among the five major PLC vendors in the world.

Maintaining the many programmable logic controller technologies that the two companies bring together becomes an issue for existing customers. White cites Modicon's hallmark of system migration and compatibility: "We're never go-

ing to give that up. The Modicon and AEG lines of PLCs have been integrated, and we expect to migrate all PLC technologies to a compatible platform." The forces of open architecture and industry standards that influenced the new joint venture will help combine the technologies.

AEG Schneider Automation will rely on a combination of its own research and development resources as well as those of its parent companies. Last year Modicon spent 11% of revenues on R&D and had a record high in new product developments. The combined research capabilities of the new company could foreshadow an even greater rate of progress.

North American headquarters will be situated in North Andover, MA. European offices will be in Frankfurt, Germany, and Nice, France. Company headquarters will be in Frankfurt. Although technology still plays a role in the automation market, the formation of AEG Schneider

Automation changes the competitive landscape by bringing the scale of business and distribution to the forefront.

Software Does Finite Capacity Scheduling in Real Time

BY BILL McILVAINE

LATHAM, NY—Manufacturers questing for more utilization out of their shop-floor operations have a brand-new tool at their disposal: dynamic finite capacity scheduling. This is a new feature embedded in The FACTory System, a manufacturing execution system (MES) from FACT Inc. (Latham, NY).

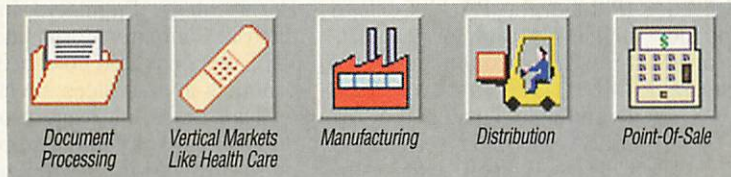
One of the strongest features of the system is its ability to monitor all shop-floor processes continually. To do this, finite capacity scheduling is essential. "Most finite capacity

schedulers available today only run once or twice a day," says Craig Skevington, Ph.D., chairman and founder of FACT. The FACTory System's finite capacity scheduler runs constantly throughout the day.

The scheduler provides shop-floor operators with a prioritized order list to help them determine when one job has been completed and what order is to be worked on next. If, at any point, the operator is unable to follow the dispatch schedule, it is immediately visible to the entire organization. Thus, reaction time is faster and less time is wasted, Skevington explains.

The FACTory System's dynamic finite scheduling system complements a process developed by FACT called the Value-Added Path. This, explains Skevington, is a new way of looking at the manufacturing process to find the fastest, most efficient route through the factory for the product to reach the customer (*Managing Automation*, Feb-

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