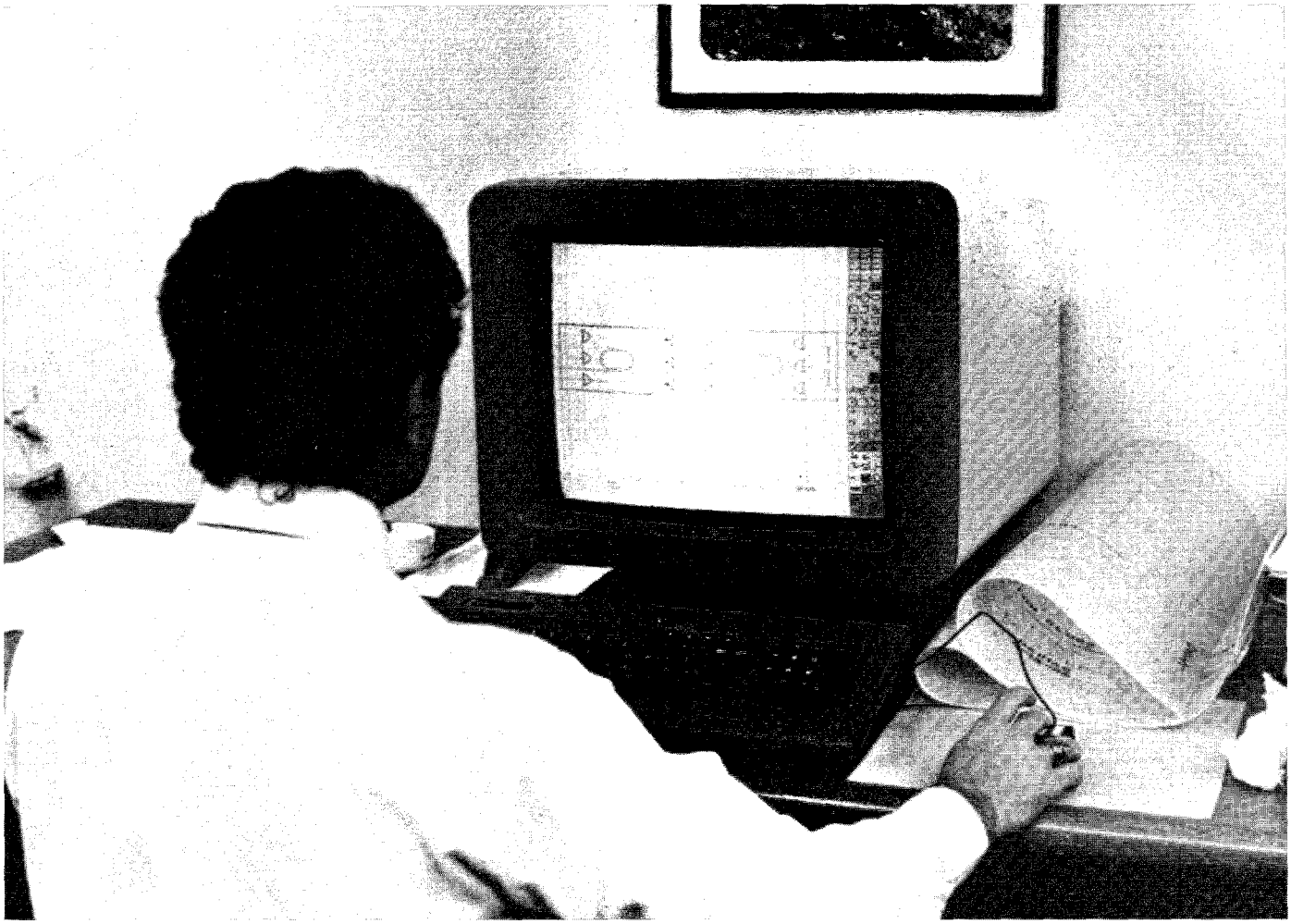
New CAD/CAM System Set to Improve Productivity and Efficiency



Project Manager Ken Nourolahi uses the mouse pointing device, right, to begin working on a package design on the new CAD/CAM system.

The new CAD/CAM system in the product development, packaging engineering and die services areas just might make the phrase "back to the drawing board" obsolete at Mead Packaging. It's not that designers and engineers will never again come up with a design they want to change. But the actual drawing boards they've worked on for so long may not be needed at all as they transfer over to designing cartons by computer.

The computer assisted design/computer assisted manufacturing system (CAD/CAM) is the first of this scope in the Mead Corporation. And, according to Project Manager Ken Nourolahi, it is thought to be the first among secondary packaging firms as well. It is still quite unusual for companies in the mechanical design area to utilize such a system and is more common in high-tech industries and aerospace firms.

CAD/CAM systems are composed of computer hardware and software that can create, edit, store and retrieve graphic data, such as engineering drawings and related information. "The system," said Nourolahi, "helps engineers to do their work faster, more accurately and with less drudgery."

The CAD/CAM system in the division's new product development, packaging engineering and die services areas is part of an overall strategy aimed at improving division-wide productivity. According to Nourolahi and Vice President, Manufacturing Charlie Maynard, the system will greatly improve the design engineers' efficiency. It will enable them to: design new cartons and dies and produce necessary related engineering drawings; modify existing cartons and dies; draw master templates, glue/varnish pattern templates and other multiple copies of carton drawings used by production art and the plants. The system will also improve efficiency in the die services area, they noted. It will be used in programming the laser and the numerically-controlled milling machine to: make new dies for soft drink, beer and cluster systems products; modify existing dies; design new female (J) plates; modify existing J-plates and design embossing male and female dies. It enables the designers to send their work to the die

area, directly through their terminals.

The system is composed of five separate engineering work stations, manufactured by CIMLINC, INC in Chicago. The five stations are connected via an Ether-net network, said Nourolahi, to exchange data. The system was selected as part of a group research project originally headed by Director, Strategy Bob West and including engineering, package design, marketing and accounting. At one point, 11 different vendors were being examined before one was selected to meet Mead's specific needs for software capability, hardware capability, training, service and system management. The system is also one that we can build upon in the future. The entire product design staff participated extensively in evaluation of the various systems and in selecting the one best suited to Mead Packaging's specific needs. The project team included Al Rinehart, Jay Newman, Prentice Wood, Jim Stout, Jim Oliff, Bob Plaxico, George Mabee, Jimmy White and Gary Baugus. The important thing about the system in its first months of use, said Nourolahi, is that the design engineers who had never used a computer before in their work are finding it "user-friendly."

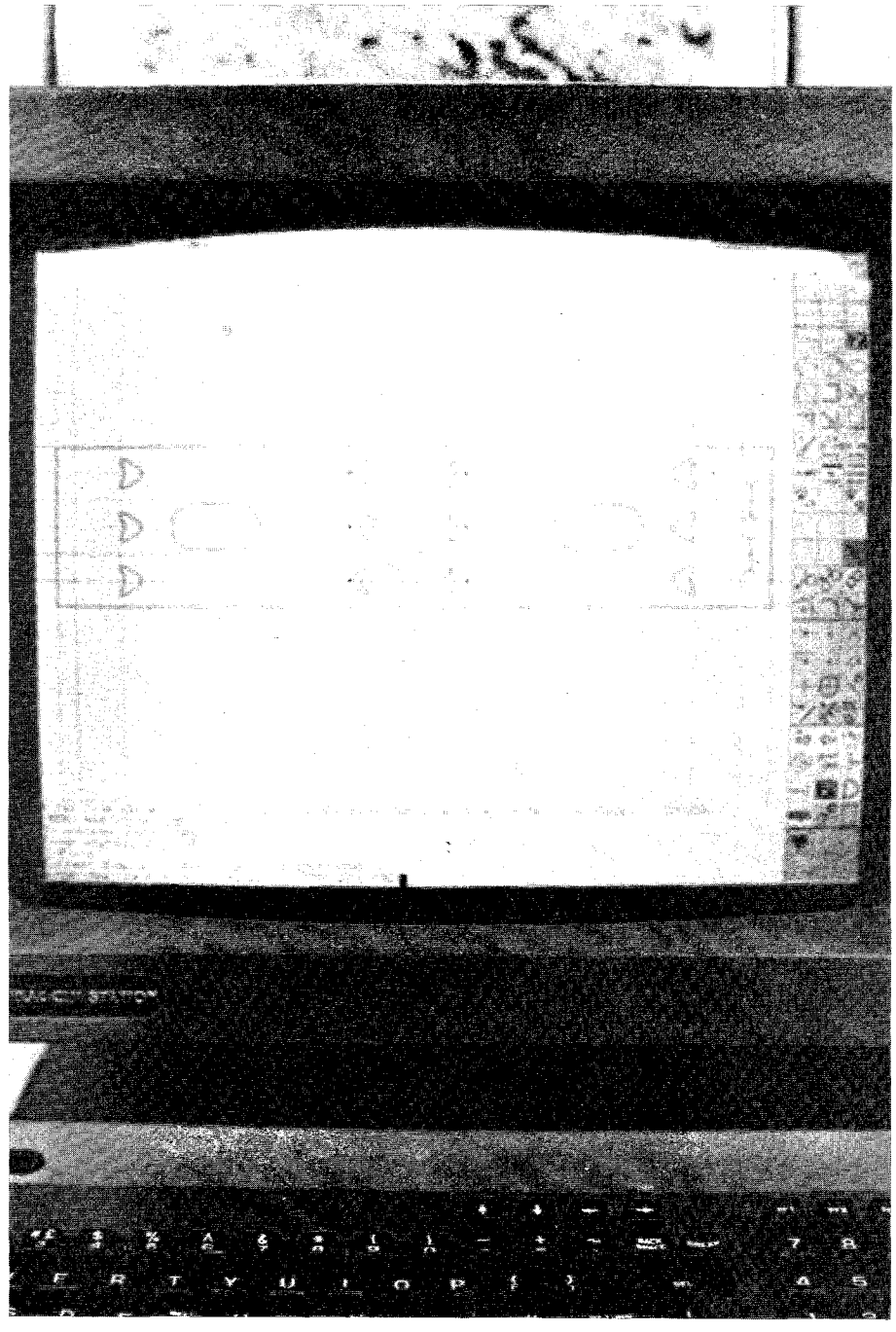
Nourolahi explained that the CAD/CAM system, with a three-key "mouse" pointing device and multiple-window capability provides a high degree of flexibility and productivity.

It is expected to have an effect on departments and programs not yet involved in its use. It will reduce turn-around time on die designs and modifications; provide quicker service and stimulate creativity.

In the future, if the art area is joined to the system, time to check if changes in dies affect artwork will be reduced from two weeks to five days, as will time to receive multiple drawings. If production is included, they will receive the needed templates and drawings quickly. And errors will be reduced, as computers figure the rule heights on dies.

Funds have already been approved for a station for Mead Packaging International to be used by Senior Package Designer John Holley.

"The best way to get results in the shortest time possible, is to provide our manufacturing and design engineers with high-technology tools that enhance their abilities and help them do the jobs at which they are experts," said Nourolahi.



Close-up of the screen and keyboard shows the carton design, and, at right, the icons, or shortened versions of frequently used commands. The icons appear in color.

impressions

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