

talking about doing some elaborate text printing where the letters would be done using a graphics rather than text approach—allowing italics, simulated script, proportional spacing and other appealing goodies. MPI has promised to lend PC one of these printers for further evaluation, and a report on it will be in a future issue.

Another item we admired at COMDEX has already arrived at the PC offices for a closer look—a Color II video monitor from Amdek. This monitor is of the "RGB direct drive" type and produces spectacularly crisp, clear and stable images. The improvement over the "baseband" type display we had been using before is dramatic; text at the 80-column width is quite distinct and readable. It caught our eye at Amdek's booth not only because of the great picture, but also because the cabinet design and color fit so harmoniously with the PC. We'll have more on this and other color monitors in an upcoming issue too.

Awards for both a great idea and great graphics are due to a Silicon Valley company by the name of Destek, which was promoting its Desnet "local network" for interconnection of microcomputers. Desnet was being touted as "the key to computer city" and the accompanying artwork was uncommonly handsome for the computer world. The network arrangement, which connects into the PC and other microcomputers using a \$100 plug-in card, will supposedly string together several different brands and models of computer into a system working as a unified whole. There was a demonstration that showed this on at least a superficial level, but it will take a more thorough look before we can figure out how much compatibility Desnet really creates.

M.B.A.s for Sale

In the software department, one trend we noted favorably was the appearance of integrated groups of programs that serve multiple purposes. The groundbreaker in this area is a suite of programs being sold under the name *MBA* by Context Management Systems of Torrance, California.

MBA was still in the working stages for an anticipated spring release, but we got a preview look at its combination of an electronic spreadsheet, data base manager, graphics displaymaker, word processor and communications handler. The idea, as Context's Gib Hoxie explained it, is that managers can go into a data base to draw out a selected set of facts, then "change contexts" to move those facts into the spreadsheet program. There they can manipulate them in typical "what-if"

spreadsheet fashion, then change contexts again to display the results in graphic form. In theory, they might then switch contexts again to frame a memo around the digested data using the word processor... and ultimately use the communications handler to send the whole thing off to a colleague at another location.

At COMDEX, many of these ambitious offerings were on display only as an enthusiastic gleam in Hoxie's eyes. But we did see a demonstration showing good progress on the general theory—even including the ability to split the screen into multiple segments and show operations from four different "contexts" simultaneously. Context appears to have made a heavy investment in promoting their concept, and if a similar investment underlies their final development effort we shall have a finished Context product to tell you about before long.

More executive software for the PC was on display at the booth of Target Software, an Atlanta company recently acquired by Comshare, who makes software for big computers. Target's big gun is called *MasterPlanner*, and is described as an evolutionary upgrade of earlier spreadsheet programs. PC was treated to an enlightening explanation by Target's Bob Ranson about the different design philosophies for such programs. Ranson described three categories he says the "gridsheet" programs can fall into—"cursor driven (*VisiCalc*), logic driver (*T-Maker*), and procedure driven (*Desktop Plan*)"—and showed how *Masterplanner* incorporates strong points of all. His comments will be expanded upon in our next issue, when we do a comparative evaluation of spreadsheet programs.

Challengers Begin to Gather

A last item of interest at COMDEX was the appearance of other microcomputers

aimed at or near the PC's territory and with similar capabilities. Victor Business Systems introduced a desktop system built around the same 8088 chip as the PC. It is said to be capable of using software designed for the PC, though it can't read PC diskettes since the drives are incompatible. Its disk storage capacity is double that of IBM's machine, and the Victor also has an optional display format capable of showing much more information—132 columns by 40 rows.

A microcomputer introduced by Fortune Systems, a new company, had slick office styling of the same type as the PC's, and was designed around the allegedly more powerful 68000 processor chip. This machine garnered a great deal of attention from the crowds on the floor, and more will likely be heard about it. PC also took interested note of the Otrona Attache microcomputer, which we had plenty of time to view since their booth was right across from ours. The Attache, a portable microcomputer selling for about \$3,700, packs a lot of power and appeal into an impressively small package. It seemed to us that people who admire the IBM approach to personal computers would find much to admire in this one if they absolutely had to have a portable.

As for all of the COMDEX exhibitors who had nothing to display for the IBM PC, it seemed like more than half of those we asked claimed they were in the process of getting something together.

With a year for them all to work on it, and judging by how much has happened in the first couple of months, COMDEX's second year of the PC Era promises to be full of worthwhile things to write about. And PC, naturally, will be there to write about it.

It's going to be exciting. In fact, it already is.

—Jim Edlin and David Bunnell

TecMates

Tecmar unveils a plug-in smorgasbord

THERE IS A SAYING THAT DEFINES LUCK as "the intersection of opportunity with preparedness." If that is so, then Tecmar, Inc., in Cleveland, is a very lucky company. Because when IBM presented them with an opportunity, in the form of the Personal Computer, Tecmar met it with seemingly faultless preparedness. The

result, a mere three months after IBM's official announcement of the PC, was Tecmar's COMDEX announcement of 20 add-ons, expansions accessories and enhancements for it.

The company's ads could almost be headed, "Everything you always wanted

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Comdex: The Year 1 PC

to add to your IBM PC," except Tecmar didn't leave people time to have wanted anything for very long. The product line, christened "TecMates," includes:

- a plug-in clock/calendar module
- a BSR X-10-type device control module, and a stepper-motor controller
- a speech synthesizer module
- a module to let several PCs share a printer
- an expansion cabinet with a design matching the PC System Unit
- a Winchester-type hard disk system with controller card
- a video digitizer, and three modules for analog/digital conversion
- a selection of modules for various kinds of input, output and memory
- and aids to custom circuit-board design.

Tecmar president Martin Alpert says his company's preparedness was the result of previous work developing scientific and industrial electronics for use in microcomputer systems that are based on the Intel 8086 microcomputer systems that are based on the Intel 8086 processor. The 8086, he says, has the same internal architecture as the 8088 chip used in the PC.

When IBM announced the PC, Alpert realized Tecmar was well positioned to develop products for it. He began planning immediately. Alpert tells how Tecmar people flew to Chicago and "camped on the doorstep" of the Sears Business Systems Center to get two PCs on the first day they were available. "We got our logic analyzer on it and figured out the bus," he says. "It didn't take very long; it's very straightforward with only a few confusing lines." According to Alpert, between 40 and 50 people took part in getting the products ready for previewing at COMDEX.

While Tecmar does offer a hard disk system, software allowing it to be used under the PC-DOS operating system is still lacking. "We'll be talking to Microsoft about that very soon," Alpert said. He anticipated the hard disk system would be available for delivery toward the end of February, with all the other products available a month or two sooner.

A PC Twin

Perhaps the most striking feature of the TecMate line, apart from its breadth and its speedy development, is the expansion cabinet's design as a near-identical twin of the IBM System Unit. Tecmar has even copied IBM's color scheme; the only



Martin Alpert, Tecmar president, showing off the TecMate line of 20 PC accessories.

detectable difference (besides the nameplates) is a slight variation in the detailing of the front panel's small, slotted grille. Commenting on the close resemblance, Alpert said, "The IBM system has been done right, and everything we do has to be done right too."

The TecMate item that performs the neatest trick is the Device Master module that combines clock, calendar and the sort of device controller that sends signals over electrical wiring to activate lights, appliances and the like. According to Alpert, the module, which has its own battery power, can be used to control the outlet from which the Personal Computer itself receives power. The Device Master can store a command ordering the com-

puter to be turned on at a certain time, then execute a command to turn the computer off, and then—using its own power—turn the computer back on at a preset time. Whereupon, if appropriate autostart software is in the computer, new times can be set and the whole cycle repeated. This trick, like those novelties whose switch activates a mechanical hand that then turns the switch back off, isn't particularly useful, but it is neat. We expect we will have many more practical uses for Tecmar's products to report on before long.

—Jim Edlin

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Mathemagic

A Reverse Twist: Turning Your Computer into a programmable calculator.

THE DEMONSTRATION STARTED DECEPTIVELY, like a juggler tossing one ball. Joe Luciano, one of the creators of the *Matbemagic* program, showed how his new software could take the formula $6 + 1$ and—watch carefully now—actually add the numbers together to come up with (ta-daa!) 7.

Wow! That's just what you spent thousands of dollars on your computer for,

right? Well don't applaud yet folks, because the show gets lots more exciting. In the course of a 50-minute demonstration for PC, Luciano used his computer keyboard to have *Matbemagic* pick up one figurative ball after another until it seemed like a fountain of a dozen were coursing through the air. At the end of the show my applause was for real.

Matbemagic is billed as software to