## Foreign Vendors Show MCA Clones

Companies Say Market Is Ready for Low-Cost Alternatives to PS/2

BY ROBERT SNOWDON JONES

LAS VEGAS — A handful of small Asian and European companies at last week's Comdex took roads that most of their larger counterparts have feared to tread when they introduced Micro Channel Architecture (MCA) clones.

Apricot of the United King-

dom, Mitac International Corp. of Taiwan, Normerel of France, and Korea Computer Inc. gamely showed their PS/2-compatible wares. Advanced Logic Research Inc., owned by a Singapore-based firm, and Memorex Telex Corp., owned by a Dutch firm, also rolled out PS/2 clones.

Admittedly, these clone

makers aren't the giants of the industry — Compaq and Zenith aren't quaking yet. But collectively they could make a stir in the marketplace when their machines start flowing from the factory in the first quarter of next year. Tandy was the only major PC vendor to show an MCA-based computer at the show.

MCA clone makers believe the market is ripening for a cheaper alternative to IBM's PS/2 MCA line. Invariably they have taken lessons from Compaq by souping up their machines to give them a technical edge.

Normerel, for example, has set a retail price of \$7,013 for its NS 70, which comes with a 70-megabyte hard disk, 4 megabytes of RAM, and a color monitor.

Advanced Logic Research designed its Model 80 compatible from the ground up, using a proprietary 64K cache that has a 128-bit-wide data path, according to the company. "You can't have just a me-too product," said Dave Kirkey, Advanced Logic's vice president of sales.

For the most part, the clone makers said they have obtained the proper licenses and have avoided having to pay the 5



Normerel unveiled a series of MCA PCs, including the NS 50 and NS 70. The high-end NS 70 comes with a 70-megabyte hard disk.

percent royalties through crosslicensing of patents. Normerel got its license from IBM on October 1.

"IBM was unusually helpful," said Marc Frouin, Normerel's executive vice president of product marketing.

For the MCA clone companies at Comdex, the decision to launch is burgeoning demand.

"All major European accounts are buying MCA from IBM," said Francois Martel, Normerel's chairman and president. The company will sell a Model 50, a Model 70, and a high-speed Model 60 version in the United States through its Orlando, Florida-based Normerel U.S.A. Inc. unit.

Mitac introduced a Model 80 compatible and a preliminary

version of its Model 50 Z. Full production will begin in the first quarter, according to the company. "We believe that PS/2 with the MCA bus is one of the standards of the future," said Francis Tsai, Mitac's vice president.

Advanced Logic will primarily target European customers who want high-performance file servers and multiuser systems when it starts shipping its Microflex 7000 early next year, said Vic Sangveraphunsiri, the company's vice president of system engineering.

Advanced Logic is small, Sangveraphunsiri said. Even if it sells only 5,000 to 10,000 systems the first year, it will consider the MCA machine to be successful.

## PIC Demonstrates MCA Bus Master Fax Board

LAS VEGAS — Pacific Image Communications (PIC) demonstrated last week what it claimed to be the first Micro Channel bus master fax board at IBM's Comdex booth here.

The unnamed board is scheduled to ship in the second quarter of 1989 for less than \$900. As a bus master, the board can send and receive faxes in the background while a Microsoft Windows application executes in the foreground without requiring a multitasking operating system, according to Tim Santillan, PIC's vice president of marketing.

Since the board uses the

Windows interface, users will need to run Windows-compatible applications, Santillan said.

A major feature of the MCA bus is that smart boards or peripherals can coexist in the same system. "On a PS/2 Model 80 you can have up to eight fax cards running concurrently," Santillan said.

Instead of a single chip—such as the one Intel is said to be developing—the board uses several discrete chips to achieve bus mastering capabilities. (See "MCA Multiprocessing in the Works at Intel," November 14, Page 1.)

- Stuart J. Johnston

## 1-2-3, Release 3.0 Will Make it Easy To Manipulate Data in 3-D Worksheets

BY RACHEL PARKER

Lotus Development Corp. is working on ways to make three-dimensional worksheets easy to use and manipulate in its pending upgrade of 1-2-3, officials said last week at Comdex.

Like many other spreadsheet publishers, Lotus has announced support for 3-D modeling in 1-2-3, Release 3.0. But Lotus hopes to differentiate itself by allowing users to automatically define ranges across multiple worksheets, using only a few more keystrokes than they would to define a range in a two-dimensional worksheet, according to Chris Randles, director of marketing for Lotus' PC spreadsheet division.

"With 3-D, users can define a range as a cube, with automatic links between the cells and the formulas across worksheets," Randles said. The automatic links between spreadsheet items will also move with data when new columns or worksheets are added to the spreadsheet.

In a demonstration for *Info-World*, Randles showed that the difference between automatic and manual linking is most

apparent when users create files with similar or identical worksheets and want to preserve the relations between cells and formulas. For example, when an organization adds a new division to a budget center, the additional row can be added across all the related worksheets by adding it to a consolidation sheet. Not only are the columns changed to only are the columns changed to reflect the new entry, but formulas move with the data, Randles said.

The automatic links in Release 3.0 will also improve the reliability of large worksheets. Instead of forcing users to enter a formula for every worksheet in a file, they will be able to automatically specify a group of worksheets, reducing the chance of error in entering the formula.

Although Lotus is committed to adding hundreds of new functions to 1-2-3, the publisher is more concerned with improving professionals' productivity, Randles said.

In addition to improving the graphics and printing support, Lotus is adding network support for several network systems, including those from Novell and

## **Emerald Bay Server in Final Testing**

Ratliff Admits First Release Was Rushed to Market Prematurely

BY SCOTT MACE

The Emerald Bay Database Server is now in its final testing, Wayne Ratliff said last week. Ratliff is the program's creator.

"I really want this product to be absolutely rock solid. I'm not personally in any hurry to let it out," Ratliff said.

Ratliff now acknowledges that the first release of Emerald Bay technology, including the Dbase-like Eagle programming language, was prematurely rushed to market. "The product two months later was the product we should have shipped [originally]," he said. The multiuser server requires even more stringent standards, he added.

Emerald Bay products are marketed and sold by Migent Inc. of Incline Village, Nevada.

Support for multiple servers has been added to the Database Server since its announcement early this year. Users will also be able to conserve memory by using a remote-only personal engine option, which reduces the Emerald Bay engine technology from 130K to 58K per workstation, and also keeps data on the centralized server.

The Emerald Bay Database Server will support Netbios networks and Ratliff said the development team is close to implementing support for Novell's IPX, a transport-level protocol offering greater performance than Netbios emulation on Novell.

In a reversal of previous claims for total transparency between single-user and multi-user applications, Ratliff said applications built in Eagle will require "some work" to run on the Emerald Bay server. "Nothing will break if you don't do the conversion, but I will bet that any single-user program must undergo some changes to become a good multiuser program," Ratliff said.

Southern California Edison of San Onofre, California, which has a Novell network of 30 servers and 1,500 workstations, is one customer considering switching to Emerald Bay. The Jet Propulsion Laboratory, in Pasadena, California, has decided to convert a procurement tracking package from Clipper to Emerald Bay.

The database server will be introduced at \$700 but the price

will probably rise to above \$1,000, Ratliff said.

In related news, Michael Plesset, of Migent's board of directors, admitted that Migent's financial health has been "very poor." Through private financing, the company plans to raise enough money to pay a down payment to creditors and establish a payment plan to pay off its debt.

"That's going well," Plesset said. Still, a number of Migent creditors have filed suits against Migent, Plesset added.

To let Migent focus on Emerald Bay and Ability Plus, the company is phasing out some products and returning rights to their creators in some cases.

Even if Migent cannot resolve its problems, Ratliff said he owns Emerald Bay "totally." One of Migent's assets is its contract to market Emerald Bay products, but if Migent files for bankruptcy Ratliff would recover the rights to the program and could have other companies market it.

"Emerald Bay will go on," Ratliff said. "As long as Migent is viable and healthy, it will be marketed through Migent."