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FROM THE EDITOR

What's So New About Clients and Servers?

by Richard F. Walters

Richard F. Walters

The improved performance of M-based client-server configurations is the focus of this issue of *M Computing*. Client-server is a term that is widely used and little understood. To give you some appreciation of the depth of misunderstanding, consider a *Washington Post* article (Oct. 17, 1994) that took a good look at IBM's resurgence in sales and profitability. The authors looked at surveys of many Fortune 500 companies, none of which found major improvements by moving to client-server architecture. They concluded that a growing number of businesses have "tried" distributed computer systems using micro- or minicomputers, and after a period of experimentation, are returning to large mainframe systems, and consequently, to IBM hardware.

They argued that mainframes can perform better in database systems because of more mature disk access operating systems and faster, cheaper processing of large batch jobs.

A key point in the article is that the "new business model attempts to integrate the mainframes of yore with the new machines of today, rather than to replace either." This revealing thought sadly is dropped as the authors describe abandonment of client-server and the "return" to mainframes. The article does stress that Amdahl officials are striving to design a "mix of mainframe and smaller machines," and enumerates attempts at software integration in these environments.

The need for heterogeneous architectures to solve large database problems is not new. People in M Technology have come to expect their M implementations to run on multiple-vendor, hierarchical implementations. Integrating M with other programmatic solutions is a way of life in a growing segment of M applications. No, these are not new ideas.

What *is* new in the M world is that client-server systems can indeed outperform very large (and expensive) mainframes or mainframes with small front-end systems in terms of efficiency for practically all large scale database system operations.

We believe that the articles in this issue by Fred Hiltz and Lee Hirz offer thoughtful insights into ways that M can be the glue that holds together very large database operations. Fred Hiltz's arguments in favor of PC-based multi-gigabyte distributed database environments demonstrate that it would be extremely difficult, if not impossible, to extract comparable performance from a monolithic mainframe database architecture, even if it is augmented by smaller machines serving as front ends.

What the authors of *The Washington Post* article missed was a counter example to show that a distributed, PC-based architecture can outperform mainframe systems. Why did they miss this point? Most obviously, because they did not

include M-based solutions in their research. Here is yet another example of the need to increase the visibility of M-based solutions for major database problems. As noted by Lee Hirz, M is not the only component in many of these solutions, but M *is* the central element in efficient database management. We hope you will be inspired to carry that message to the rest of the IT world.

This issue also contains interesting commentaries on M and its entry into other worlds of computing. The growing interest in Windows-based applications is given another twist in Art Lee's description of a metaphor graphics-M environment. New developments in FileMan are described by Rick Marshall, while Feng Huang describes the steps he and the late Professor Zheng Te took to create an operational version of Fileman in Chinese.

We also have Bill Moore and Jules Berman's review of a new product with far-reaching potential: a run-time royalty-free license option for applications developers of inexpensive software. This should leapfrog M's visibility by virtue of creating vast opportunities for new M-based applications. And Susan Johnston with Fred Kohun offers a management overview on software metrics.

Finally, we take some pride in having caught up with the task of indexing three years of *M Computing* and its forerunner. Keyword and Author references appear beginning on page 43. Your editor's goal is to create a comprehensive index going back much, much further, but that task may take a little time. Yes, the indexing was done with an application package written in M (the basic components are on Mugpal Disk 1, but I modified it slightly to meet the requirements of this indexing operation).

As I reach the end of my second year as executive editor of *M Computing*, I thank you, the readers, for your support, encouragement, and above all for the growing number of articles you have submitted for publication in this journal. With your help, we are climbing ever higher in our quest for excellence. Thank you, and please keep it up! M

Dick Walters is a professor at the University of California, Davis, and the executive editor of the journal. Write to him in care of the M Technology Association.