OpenEdition MVS: The System, the Strategy, the Significance: Part III — Observations and Conclusions

THE PERILS OF OPEN SYSTEMS

If the quest for open systems can be called a movement, then X/Open (now part of the OPEN GROUP) has clearly become the movement’s most visible advocate. X/Open is dedicated to the advancement of open systems. Regarding the numerous setbacks experienced by the "open systems" movement thus far, X/Open’s World Wide Web home page includes the following candid admissions that set the stage for the ascendency of OpenEdition MVS into the UNIX limelight:

"...Contributing to the slow implementation of open systems in the recent past, however, have been a fragmented operating system environment and confusion about standards for linking those disparate systems together. Users have been confronted with a number of different "open" operating systems, each offering its own features and benefits. They have also faced a bewildering array of graphical user interfaces (GUIs), application interfaces, connectivity schemes, and distributed-processing architectures. In fact, users typically spend more of their budget dollars on this "integration factor" than on the computer systems themselves during the course of a given year."

So contrary to the claims found in vendor glossies, ads, articles, and vendor-funded not-so-white papers, the much vaunted open systems movement heretofore has been met with limited success. Even for those companies with highly-skilled staff, open systems remains a precarious undertaking, and has been a waste of money for many.

For example, one unsuspecting CIO thought he had purchased an "open system" after buying Hewlett-Packard (HP) hardware, the HP-UX (UNIX) operating system, and Oracle software. The problems began when a system crash resulted in the "unrecoverable loss of one-and-a-half-days worth of business data"! Dissatisfied with HP's handling of the situation, not to mention the stress and difficulty experienced explaining to superiors how so much critical business data could have been lost, the manager decided to exercise his rights as a user of "open systems" by replacing the HP system with one from DEC.

Though it cost several hundred thousand dollars to re-host the company applications, this was deemed a prudent move under the circumstances. But problems compounded as soon as the DEC equipment arrived, because the Oracle-based business applications failed to run on the new system. In a state of panic, the manager contacted Oracle, who then informed him that his company’s applications use unique Oracle features that only work when Oracle is running under HP-UX. Oracle couldn't offer the same features in its DEC version, because DEC's version of UNIX is different from HP's version. Not surprisingly, when asked to provide free services to help the customer migrate the applications, Oracle declined, stating it would have told the customer the port wouldn't have worked had they had been asked.
OPEN UNIX SYSTEMS, CLOSED DISCUSSION

UNIX vendors are far from being models of candor when discussing true UNIX limitations, especially in the areas of performance and scalability. This explains why so many UNIX projects have resulted in utter disaster. Performance problems occur regularly on high-end servers, so much that vendors of open systems do everything possible to prevent open discussion. For example, Oracle's Software License and Services Agreement, under section 7.1 titled Non-Disclosure, paragraph two, states "Customer shall not disclose the results of any benchmark tests of the Programs to any third party without Oracle's prior written approval." A sales representative for Oracle told ACTS that such approval must come from the CEO, and is rarely granted.

Customers are naive if they don't anticipate performance problems when they enter into a license agreement that prohibits free and open discussion of a product's performance. In contrast, MVG performance and scalability has always been openly discussed and debated in public forums. IBM and its user community conduct multiple conferences yearly where customers are free to speak about problems and other technical issues.

IN PURSUIT OF A DEFINITION

So what exactly is an open system? Grappling to nail down a definition, Xephon Company Limited, a world-wide research and publishing firm based in Newbury, England, in October 1994, surveyed 455 executives, asking them to define the term open, as in "open systems." Only four definitions were the same: "not proprietary", "non-proprietary", "platform independent", and "not sure". Each of these answers was given by two people. Every other definition was unique. Eighteen responses were sarcastic, such as "a buzzword to sell products" and "a silly term having no technical meaning, just marketing hype."

In an attempt to classify the definitions, Xephon came up with three distinct categories: portability, interoperability, and adherence to non-proprietary standards. Of the remaining responses that could be classified under these three headings, interoperability came in first with 40 percent of the responses, portability was second with 33 percent, non-proprietary standards third with 25 percent, and only 3 percent of the respondents cited all three aspects in their definition.

THE COST OF VAGUENESS

Vagueness and lack of clarity can extract a toll. Detail begins by defining the terminology used. Too many trends are described using buzzwords that do not have widely agreed-upon definitions and lack any significant detail. People use buzzwords to give the appearance of being in touch with the times, but too often, discussion of IT strategy ensues before taking time to agree on exactly what the terms being used really mean. It is not enough merely to agree that access to information needs to be more flexible, users need to be empowered, applications need to be developed more quickly and be more portable once deployed, systems need to be interoperable, or companies need competitive advantage. The details must be provided.

Lack of detail has caused many to fail while chasing the fads called client/server and open systems, or "open client/server solutions." Increasingly, those launching sweeping IT changes have put both their companies and their careers at risk. Vendors hyping open systems closely resemble politicians who deliver stirring speeches about what needs to change but provide voters with little or no details on how to get from point A to point B. The problem is compounded because so many IT strategists and technology decision-makers simply follow the crowd and do not think for themselves, relying on what they think others are doing.

PORTING BETWEEN PLATFORMS

Vendors of UNIX variants almost all claim they support multi-vendor environments and that porting of open systems applications is assured. It is more accurate to say that porting applications from one UNIX variant to another is a possibility, not a guarantee.

A port may even be easy if the application was written in C, provided the application stayed within the boundaries set forth in accepted de facto and de jure standards for UNIX. However, ease-of-porting is ultimately determined by the application's use of UNIX services, and the degree these services are software extensions developed apart from any standards that are unique to that version of UNIX code.

Since porting applications from one version of UNIX can be met with varying degrees of difficulty, the majority of UNIX variants are more accurately labeled as "closed" operating systems. Figure 1 provides a partial list of UNIX variants.

THE VENDOR’S DILEMMA

There is a very fundamental question people should be asking, "is standardization always a good thing?" ACTS contends that de facto standards that are well documented and allow vendors to innovate freely serve the computer industry much better than legislated (de jure) standards.

Very little is written about the downside of open systems and legislated standards. One exception is Charles Ferguson's and Charles Morris' 1993 book "Computer Wars", which contains this warning:

"For many years, computer users and even industry experts have argued that non-proprietary standards are in the best interest of users. That is emphatically not true..."
a commodity market, where the same product is available from many sources, the most common way to differentiate a product at that point is by lowering the price; price wars become common, and profit margins all but disappear. On the other hand, having the option of adding functional extensions to a product becomes a means of offering added value, justifying higher prices, as well as deterring an installed-base of customers from switching vendors. Microsoft certainly isn’t willing to let standards slow its momentum, and it’s easy to understand why UNIX vendors have been dragging their feet on creating a single UNIX.

Many UNIX vendors are also competing in the highly competitive PC marketplace, and don’t want to see their UNIX platforms go the way of the PC. In commodity market research and development cut backs are inevitable as profit margins evaporate. As profits are squeezed, innovation is greatly hindered as from being a commodity, vendors are pressured from yet another direction — development costs increase as they port products to dozens of different UNIX systems. For example, it is very expensive to keep Oracle7 running on more than 80 distinct platforms and more than 40 different versions for UNIX.

When a vendor’s future no longer depends on R&D breakthroughs, the competitive edge swings to companies that have superior marketing clout.

**WHO WILL DRIVE THE ENTERPRISE?**

The UNIX Foundation was formed in July 1995 as a not-for-profit organization to promote the use and development of the UNIX operating system, and to "counter the impending onslaught of Microsoft’s Windows NT marketing effort." Quoting from its mission statement, posted as a WWW home page to recruit members, the Foundation hopes to educate others about:

"...the stability, proven track record and cost-effectiveness of the UNIX operating system vis-a-vis the new Microsoft Windows NT platform in the marketplace. The UNIX Foundation has been formed to fill up a perceived vacuum in the marketing of UNIX. While Windows NT and OS2 have strong and aggressive parents pushing for their progeny’s acceptance, UNIX singularly has led an orphan-like existence. The sale of USL by AT&T to Novell and the subsequent anemic UNIX-related marketing efforts by Novell has led to a perilous decline for the once dominant, open, operating system. However, the emergence of the Internet as the computer telecommunication standard has rejuvenated interest in UNIX. This is the time for all UNIX vendors and UNIX adherents in the user community to rally to the cause of UNIX and contribute to positioning UNIX as a stable, proven and reliable operating systems solution that offers significant advantages over other platforms including the RAM-hungry new kid on the block from Microsoft (Windows NT).

"The Foundation has been founded in the belief that the software industry needs a viable alternative operating system for mission-critical high-end servers. The [proposed] Windows NT platform may be suitable for some situations, but UNIX has established a track record for precisely this environment. There is no reason for users to jump ship to the costlier Microsoft Windows NT platform just because of the GUI interface and ease of use. The operating system kernel and the stability of the operating system in running mission-critical systems ought to be the determining factor in the selection of the operating system for such servers.

"Lack of effective competition for the Microsoft Windows NT operating system could be lethal for the rest of the software industry. Not only is the operating systems market for the client/server marketplace at stake, but left unchecked, Microsoft’s threatening dominance in this market could spell dire consequences for all other software utilities and applications developers."

It is very important to note that the preceding statements were not comparing UNIX to MVS, but Windows NT. UNIX has many strengths when compared to NT, but neither system rivals MVS as a reliable, stable, and proven alternative.

Indeed, there are many who say "Forget about UNIX, forget about MVS. Microsoft’s Windows NT is the system of the future!" Such na"ive thinking prevailed at National Westminster Bank of England, resulting in a horror story of major proportions.

**NT HORROR STORY**

Microsoft has squandered a golden opportunity to demonstrate its leadership qualifications. Microsoft’s dismal performance on behalf of what is probably its largest corporate customer illustrates why customers should exercise extreme caution when choosing a platform.

ACTS began following the story after spotting an article, "Running on NT," by Rochelle Gardner in Computerworld’s Client/Server Journal, August 1994, page 20. The article highlighted differences of opinion between Microsoft and a research analyst regarding the capabilities of NT. Here are a few excerpts that will set the stage for what follows:

"... Today as Windows NT approaches its first birthday, Microsoft’s most ambitious project has affected the client/server market far less — and potentially more profoundly — than industry observers originally predicted.

"Except for some lame installations that got sucked into Microsoft LAN Manager, most sites use NT only as an application server," said John Faig, senior research analyst of group, Inc. in Westport, Conn. The reasons, Faig said, are applications, stability, and tested scalability — and the lack thereof. "Sure, some of Microsoft’s hallmark accounts have rolled out two or even three dozen servers, but that’s far from being thoroughly tested. And until it is, there is no way Microsoft can guarantee NT will stay up 99.9 percent of the time," he said.

Microsoft begs to differ.

"Today, Microsoft internally runs well over 1,000 NT servers and will use it to run our business," said Richard Tong, Microsoft’s general manager for Business Systems Division, marketing. "Besides, the real issue is not how many servers our customers are running but how many users does each NT server support — and the average is 500.

"We have quite a few accounts who consider NT to be extremely reliable and who bet their business on it every day. National Westminster Bank in London relies on NT to pass more than 4 million credit-card transactions each month. And if that isn’t mission-critical, I don’t know what is," Tong said.

Finding the claims of 500 users per NT server hard to believe, ACTS looked into the Microsoft claims by contacting National Westminster Bank (NatWest) in July 1995. A reliable source at the bank told ACTS that the NT project was in serious trouble and was being cut back. The project had been headed by a Microsoft “champion” who had recently left the company. The contact confirmed that the bank indeed had grandiose plans for NT, and was in fact using NT for a corporate card system where corporations settle small bills through NatWest and then pay a single monthly charge. The system did process about 4 million transactions per month, but was a data-entry-type application that did not run in real time. Since this was the application that the Microsoft executive told Client/Server Journal was mission-critical, ACTS inquired as to how many mission-critical online credit card applications are still processed on the mainframe. The answer is 7 million transactions every day! ACTS also learned that the number of users on each NT server averaged between 20 and 30. NatWest confirmed there were a couple of office-type systems with close to 500 users per server, but explained that these systems experienced very light traf-
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hang to the lure of Gates mania. In came a group of zealots promis-
ing a new dawn for branch banking based on
Windows NT system. The leader of the
zealots said he counted Bill Gates among
his friends, and he assured the bank's top
brass that Gates was committed to helping
corporate customers and would make sure
NatWest got its new branch systems. NT
was to form the heart of a revolution, giving
tellers and other branch staff instant infor-
mation on customers, the bank's products,
and the latest financial advice."

The article reports that "NatWest is wedded to a poorly supported piece of Microsoft software," and, contrary to the official line put out by the bank's public relations people, "behind the scenes things are likened to the Titanic after hitting the iceberg." Trials at 21 branches are performing miserably, so much that the bank is refusing any interviews with the press. The leader of the pro-
Microsoft zealots has since quit.

According to Business Age, the NT project will cost more than $300 million (U.S.), and calls for 30,000 users to eventually run
Windows NT at 2,500 branches. The bank must decide whether to wait for Microsoft to over-
haul NT, or to scrap the project and start over.

"If (NatWest) scraps the project, then
customers will end up receiving substandard
service well into the next millennium. If
they hang on to Microsoft's promises of a
better Windows NT in the new year, customers
will not see a fully operational system in every
branch before the year 2000 — three years
later than planned."

In February 1996, similar problems with
Windows NT had surfaced at Commonwealth
Bank of Australia (CBA). In July 1993, CBA
touted its plans to move from OS/2 to NT. Now
CBA had fired its NT zealot in the face of
implementation failures and runaway costs.

CTS is still searching for a legitimate NT
implementation running hundreds of users,
doing mission-critical work.

Now that these projects have progressed from
where the "rubber meets the sky" to where
the "rubber meets the road," the painful fact is
that Microsoft was unable to deliver on its
commitments. Despite all of the well-wishers
writing about Windows NT, NT is at best a
distant blink on the radar screen when compared
technically to MVS. In any honest, head-to-
head comparison with either MVS or UNIX
supporting any heavy-duty workload, it
would be generous even to call Windows NT
a fledgling operating system.

NOVELL'S ABOUT-FACE

What about Novell? Consistent with ACTS' predictions, Novell has struggled over the last
two years to deliver on the promises it made
for UNIX. On September 20, 1995, Novell
shocked users by announcing a new UNIX
alliance between Novell, HP, and SCO, Inc.,
with plans to eventually merge their three
respective versions of UNIX into one.

To summarize, SCO purchased the
UNIXWare business from Novell who in turn
takes a minority equity position in SCO.
SCO plans to merge its SCO OpenServer sys-
tem and Novell's UNIXWare. The merged sys-
tem will be a UNIX variant designed to run on
Intel-based processors while maintaining inter-
face-level compatibility with HP-UX. HP, in
turn, will pursue development of an Intel
processor-based 64-bit UNIX operating system.

HP and Novell will work together to develop
and integrate several networking products between
HP-UX and NetWare. Thinking optimis-
istically, if these vendors bring the scalability,
stability, and manageability of these products up
to par with MVS, then they will one day repre-
sent legitimate alternatives to OpenEdition
MVS. Working in alliances, if they can be sus-
tained, has the additional benefit of allowing alliance partners to share research and develop-
ment costs. The customer must evaluate both
short-term and long-term implications of these
strategies, as well as the likelihood that they will
succeed. Is Novell's move to dump UNIX an
admission that it could not pull together the
fragmented UNIX market? Perhaps, but a more
likely explanation is that Novell has decided to
focus more resources on its NetWare operating
system to stem further market-share erosion at
the hands of Windows NT.

WHAT SYSTEMS DO MAJOR VENDORS USE?

Many vendors peddling mainframe alter-
natives follow a "do as I say, not as I do" philos-
ophy, because they are quick to suggest others
scrap their mainframe while clinging to their
own. Even though terms like reliability and
scalability appear in marketing literature, they
simply don't mean the same thing from one
platform to the next, or from one vendor to the
next. Intel, Hewlett Packard, and Sun
Microsystems all rely heavily on mainframes
to run their own businesses. If taking the
mainframe and throwing it on the junk heap
were really such a great idea, these vendors
would be first in line to do so. Such a move
would convincingly prove their claims that
mainframes are obsolete technology.

Intel has tried for years to become self-
reliant on their own x86 systems and two
years ago, Intel's CEO, Andy Grove, was cited
by the New York Times as stating Intel had just
bought its last mainframe, yet Intel has
upgraded its mainframes twice since that
bogus public declaration. The fact remains
that while Intel makes great microprocessors,
the company relies heavily on mainframes to
run its own business.

Being misled by hype-sters can be both
time-consuming and expensive. One company
spent more than two years evaluating a strategy
to move all applications to midrange and
desktop systems. A large portion of that time
was spent investigating a UNIX-based hard-
ware platform from AT&T GIS, selected
because this platform is renowned in the
UNIX world for its reliability and serviceability
features. They also selected Oracle as the
RDBMS for UNIX. Rigorous testing ensued.
The hardware had to be upgraded to twice its
originally-projected size, but still could not
handle the company's test transaction wor-
load. The last straw came when they discov-
ered that to make engineering changes to the
hardware, which used Intel 486 processor
chips, would require the entire box be down
for several hours longer than they could toler-
ate in their production environment. They
decided to cut their losses and have since set
downsize the project aside. The expensive
lesson learned was that terms like reliability
and scalability appear in most brochures, but
they don't always mean the same thing.

WHO WILL DRIVE THE ENTERPRISE?

With so many apparent choices and the
stakes so high, those considering putting their
fortunes into the hands of any one vendor, IBM
included, should look very carefully before tak-
ing the leap. ACTS has observed dozens of cus-
tomer experiences that indicate that neither
NetWare, Windows NT, or traditional UNIX is
ready to compete with MVS to satisfy the heavy
demands of large enterprise computing.

A BRIDGE TO THE FUTURE

Electronic Data Systems Corp. (EDS),
among others, is relying on the S/390 platform
to play a major role in the company's distributed
environment, both now and into the future.
"Enabling MVS with DCE and POSIX will pro-
vide our customers with a bridge to the future,"
states John Wolfert, technology manager, EDS
Operating Services Group. "We are putting the
intuitive GUI interface on the desktop while
providing a seamless computer infrastructure behind the scenes. The POSIX standards and OSF DCE technology will help us provide the vision of fully integrated computer resource access anywhere, anytime," he says.

EDS has been involved with the MVS DCE since 1992. Wolfert's group was involved in an Early Customer Involvement Program (ECIP) for MVS DCE with the IBM Toronto Labs. He explained that EDS got involved with MVS DCE to support a customer application that required access to CAD [Computer Aided Design] data on multiple platforms in multiple CAD formats. The data was classified as sensitive, therefore, DCE was chosen for its robust security features. Prior to this application, the end-user engineer performed a 20-plus step process to find, move, and translate the data for their use. This application is now in production, with two MVS images configured into a DCE cell. The MVS platform performs both client and server functions.

Wolfert reports that EDS has written its own DCE application server code specifically to meet the customer requirements. "The POSIX standards and OSF DCE technology are key components of our globalization strategy to fully integrate the MVS platform into the client/server architecture," he says.

THE ESSENTIAL BUILDING BLOCK

In today's world of telecommunications and multi-media applications, the demand for data is virtually exploding. For example, the trend has been for the next breakthrough in messaging to consume successively more resources than the messaging technology it replaced. For example, on today's popular email system, if a user types for one minute at 50 words per minute, the resulting text-only email message occupies about 250 bytes of storage. By comparison, creating a one-minute message using voice technology requires roughly 1,000 times more storage (.25MB). A full-motion video message requires about .75MB of storage per frame and generates 30 frames per second. At this rate, one minute of uncompressed full-motion video will occupy approximately 1.32GB of storage. Even compressing the video to 1/100 of its original size, sending a one-minute video message would still occupy 33,750 times more storage than what could be created in one minute typing a text-only email message!

PCs, microprocessors, LANs, notebook computers, etc., are each wonderful tools in their own right, and when used properly can be of great value. However, the computing needs of an organization of less than 100 users are vastly different than an organization with several hundred or several thousand users, so careful consideration should be given to blending the right systems together. For example, in the large organization, even before the insatiable demands for storage created by multi-media applications, storage devices, and automated backup procedures for the typical MVS system overzealously gigabytes (GB), even terabytes (TB) of data. Fred Moore, corporate vice president of strategic planning at Storage Technology Corp., cites internal surveys that indicate 75 percent of large-scale processors, when used as the primary server on a network, support in the vicinity of 60GB of data.

Numerous large companies have broken through to the terabyte-level. For example, an executive at MCI Communications Corp. told ACTS that MCI has more than 50TB of data spread across its data centers, and estimates that to satisfy normal processing demands at least 15TB of that data is ‘in flight’ at all times. To help others understand just how big a terabyte of data really is, Moore estimates a terabyte of text on paper would consume 42,500 trees. Furthermore, at 12 characters per inch, 1TB of data in a straight line would circle the earth 56 times and stretch 1.4 million miles.

OpenEdition MVS will help prove to skeptics that mainframes may have been emotion-ally and politically maligned, but have never been technically misaligned or obsolete. Quite the contrary; there has never been a worse time to try to abandon the mainframe in light of the need for a high-powered server. A client/server approach is of no value unless clients can access the necessary data. Much of the data used to run both the private and public sectors comes from transaction processing environments, and since 1975, MVS has been the industry’s premier transaction processing system.

To handle this onslaught of data, S/390 parallel query servers and transaction processors can be configured into what IBM calls a Parallel Sysplex to help with voluminous data mining queries and high volume transaction and messaging rates. In this role, MVS will continue to out-perform any data server and transaction server on the market, at least for the next five years, and give the lowest cost per user with several hundred users active.

MAINFRAME RESURGENCE

The 1994 and 1995 surge of mainframe sales surprised many a pundit, many of whom still are unwilling to admit that their predictions were wrong. Similarly, the content and tone conveyed in so many articles indicates that the vast majority of journalists still haven’t figured out that so many products being billed as mainframe alternatives simply do not compete with MVS on a functional level.

Mainframe computing capacity is in greater demand than it has ever been, fueled in part by the increase in networked computing. Mainframe hardware prices have been lowered and images consolidated causing revenues to drop considerably, but customers are certainly not complaining about the better prices!

With the 1995 IBM announcement of the PC Server 500 S/390, targeted initially to become an application development and testing platform for software vendors, these systems could become extremely attractive as small servers offering substantial growth and dependability. People are revisiting their definition of a mainframe now that S/390 comes on a chip or on a micro-channel card for the PC. The Server 500 S/390, including software, sells for less than $100,000 and has been tested with 30 database users (IMS and DB2) running various business applications, 50 TSO users doing program development, and as many as 140 CICS users doing simple business transactions.

On the high end, the S/390 product line still offers large water-cooled systems, but IBM has supplemented its S/390 offerings with new CMOS-based processors that cost less to make yet are rapidly closing the performance gap and catching up to water-cooled processors. In addition, CMOS processors can use up to 97 percent less energy. Parallel S/390 processors have also been added.

MVS OpenEdition will be a player on all of these platforms. As mentioned previously, mainframes are designed to handle thousands of I/Os per second, while the biggest UNIX servers heretofore handle only hundreds of I/Os per second. American Airlines, soon after installing new CMOS S/390 servers, experienced peak transaction rates in excess of 4,100 per second, with no problems, during a fare war when transaction loads were 30 percent above average.

ENTERPRISE SERVERS

If necessary, for those operating in fashion-conscious circles, it may be prudent to discontinue using the word "mainframe" altogether and call these systems "Enterprise Servers," regardless of what you call it, the S/390 has become the cornerstone of successful client/server computing strategies for large organizations. OpenEdition MVS becomes the ultimate network server, providing the networking capacity, speed, and the added advantage that it can carry all the protocols possible. For the data base and distributed data base clients, OpenEdition MVS is a cross-platform intelligent server. Novell's popular NetWare and IBM's OS/2 LAN Server are both supported.

Customers often have to learn the hard way that while PCs can now store gigabytes of data on hard disks, it is another thing to be able to manage that much data efficiently. One automotive manufacturer brought in a new Windows PC-based application for use by 300 employees (indeed a small system by MVS standards). They needed a good server, and consequently selected an Intel dual-Pentium
openEdition MVS: A Milestone in Computing Achievement

If user departments are buying applications to run on UNIX, or are insisting on using a UNIX environment, openEdition MVS is UNIX. The key points of differentiation are quality, proper code, no trapdoors, no viruses, worms, or other distractions. Removing these distractions means the industry can get on with the job of computing.

To the client/server devotee, it is no exaggeration to describe MVS as the super-server. It makes sense to let the desktop computer handle user-interface logic, and as much of the application development load as is feasible, but the centralized large server's role is to keep the rest of the work manageable while keeping costs down. For those who have already deployed UNIX platforms, openEdition MVS brings the disciplines and tools necessary to develop distributed applications and to better manage the distributed environment.

Joe Zemke, president of Amdahl Corporation, while addressing the September 1995 Amdahl User Group Meeting in San Francisco, told customers, "openEdition MVS will dominate the high-end marketplace for the next 10 years." Considering Amdahl has almost 15 years experience marketing a mainframe version of UNIX, plus the fact that Sun Microsystems formed an alliance to gain access to Amdahl's UNIX advancements for the mainframe, this was indeed a well qualified and perhaps surprising endorsement.

Largely, executives of hardware companies that build mainframes have done a poor job of defending their turf. Obviously, they chose to believe the popular thinking rather than their own technologists.

When asked how customers should proceed with openEdition MVS, Mark Renfer, S/390 Brand Manager for IBM Canada in Toronto, replied, "First, customers should plan to enable openEdition with MVS 5.2.2 and satisfy themselves that this really is UNIX. openEdition should be part of every MVS refresh. Second, start with a moderately sized UNIX application to gain some experience with openEdition. Third, but probably most importantly, customers should challenge their application vendors to provide openEdition solutions. If a UNIX application is not supported under openEdition, then the customer should ask 'why not?'"

With all of the pressure on so many organizations to bring UNIX into their environment, at a low cost, IBM's move to combine MVS and UNIX is a very timely one. From this point forward, the destiny of openEdition MVS will be determined by IBM's marketing and sales efforts. Since it's not the best technology that wins the day, IBM must quickly discern what the market will buy and clearly articulate to customers why openEdition MVS opens up so many opportunities and provides so many advantages.

Bill Carico has more than 20 years of experience in the computer industry. He is co-founder and president of ACTS Corporation, which specializes in consulting and education. For more information, visit http://www.actscorp.com.

Willem J. van der Zel is a member of the ACTS advisory board and a recognized authority on UNIX, especially in the graphics arena. He also has several years of experience working with MVS. Before becoming an independent consultant in 1994, Willem worked for IBM for 13 years, as a systems engineer and in various technical support roles.

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