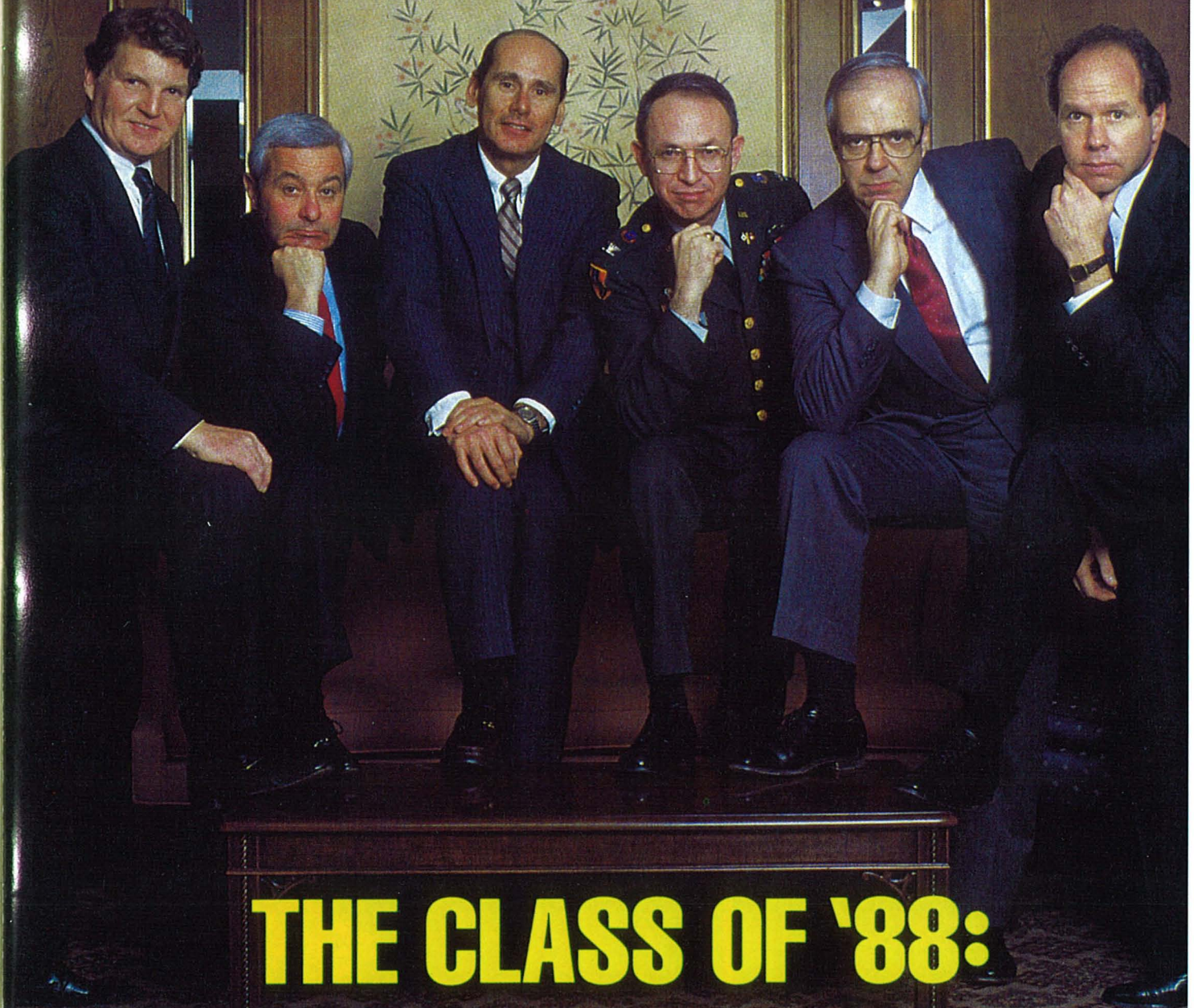


InformationWEEK®

SPECIAL *Bonus* ISSUE



THE CLASS OF '88:

TOP 50 SOFTWARE VENDORS

SOFTWARE DEBATE: SIFTING THE MARKETPLACE

SOFTWARE HALL OF FAME



THE GREAT

Software Debate II

Sorting out the sticky issue of MIS-vendor relationships

The debate is back. In December 1987 InformationWEEK sponsored its first Great Software Debate, in which vendors and top MIS chiefs met to hash out the issue of promises: those made by vendors and the very promise of software itself. It's only fitting that in an issue focusing on the top software vendors we gather the leading lights from MIS and vendordom in the hope they can shed some light on how information executives can best wade through the ever-expanding ocean of software offerings. Intriguing insights and much lively commentary were offered throughout the debate.

InformationWEEK managing editor Nancy Houghtaling, senior editor Tom Ewing, and assistant editor Christopher Maynard met with MIS leaders Col. Roy F. Busdiecker of the U. S. Army's Information Systems Engineering Command; Richard Johnson, president of Fidelity Information Systems; and F. Richard Lennon, vice president of information management at United Technology Corp.'s Defense Space Systems Group.

Representing the vendor point of view were Stuart Miller, president and CEO of Software AG Systems; and Tom Nies, president of Cincom Systems Inc. Consultant George Schussel, president of Digital Consulting Inc., also participated in the discussion.

Maynard: It's time to take a close look at the marketplace that tries to draw the information chief's attention. IS managers sit in the unenviable position between users who demand instantaneous processing, a corporation that tells him not to spend any money, and a parade of vendors that can be difficult to sort out.

The main question of the day, and I will start with you, Mr. Lennon, is:



Debate participants (l.-r.): F. Richard Lennon, Richard Johnson, Stuart Miller, Tom Nies,

How does the information chief tackle the job of sifting through the industry?

Lennon: I have a very narrow focus. I have eliminated what I call the masses. I am down to a handful of people who are going to work in a particular niche.

Typically, one of the first things I will do is not to go touch or feel or work with any specific vendors, but I will start talking to, in my particular area, all the aerospace companies that we do business with. Even though they are competitors, in most cases we are a group of corporations all doing the same thing with virtually the same requirements. By the very definition, if you are talking strategic you are not talking about something off-the-shelf. That is going to have to be developed internally. So the way I get down to a short list is by really talking to the aerospace companies and finding out what they are doing, where most of them are, what their experiences have been, then I will start talking to specific vendors that I want. And at some point I am going to get a comfort level, very non-scienti-

fic, that I am comfortable with those types of companies based on their size, their track record, how long they have been in business and, to some degree, a personal relationship.

I am down now to two or three companies. Then we will bring in some users and we will start talking about levels.

Maynard: Colonel Busdiecker, how does your process compare?

Busdiecker: We have a variety of needs in the Army. The biggest ones, of course, are met by very formal processes where we will go to great lengths with the users, functional users of a particular system, describe the requirements in rather excruciating detail, and then go through a formalized process.

Johnson: We are pretty much an entrepreneurial type company and we don't have a formal process. Our needs are driven by the needs of our users, perceived through new products or new services. But we have also relied heavily on an advanced technology group.

Our criteria for systems or applica-



Tom Ewing, Chris Maynard, George Schussel, Nancy Houghtaling, Roy Busdiecker

tions to fulfill business needs has to fit very well with an architectural model that we have developed that in essence provides navigation through all of our systems. It makes no difference where that information may be or on what medium.

Maynard: Mr. Nies, how does the vendor stand out in the crowd? Does he show up with a solution? Or does he wait to hear from the information chief?

Nies: I think that the software community has the responsibility to try to bring information, education, service and support to the various managerial personnel. Our belief is that the better the information available, the more knowledge on the part of the discerning buyer, and the more objective his decision, the easier it is to make a good decision, the surer he is of his decision, and the better decision he is going to make.

I think most of the major software companies are doing that today, and they are making valuable contributions to helping the management people find out what is going on besides what traditionally has been fed to

them the last 20 or 25 years. It is a process of software education.

Lennon: We shouldn't make it as scientific as we try to. I think this process has in some cases become one of the biggest traps for the MIS community. If you say that a unit has a business problem and the answer is a software package or application or computer solution, almost by definition, you have to say that problem exists today. I think sometimes one of the biggest problems that the MIS community faces is that they study

Are the differences between today's top software vendors just skin deep, or are they worth lengthy investigation?

this thing to death; when they are done they have lined the walls with a great deal of study material. On any given day one package may have an imperceptible advantage over the others, but tomorrow that reverses itself and that is the nature of the competitive business. And so we lose time.

So I go at it from a standpoint of: Do I have confidence in two or three of the main vendors? They're all about the same. Really, when you get down to it, you are studying very minor differences. You are losing sight of the business picture you are there to solve. You have got frustrated and your community is saying, "Come on, enough. Let's get on with it."

Maynard: Mr. Miller, do you find customers spending too much time trying to find the perfect solution and the perfect package?

Miller: When it does get down to it, I think we have found—and I think this is true of most systems software vendors—that they depend very heavily on the track record of what other customers have done with the software that has been provided.



THE GREAT SOFTWARE DEBATE II

Even though you may be able to discard a bad situation later on, with strategic software, systems software, I think it can be painful to do that. It is practicality that people are looking for.

Lennon: My point is, they look at

some of our divisions and they get down to infinitesimal detail in terms of evaluating this system. This particular system has this amount of functionality above that one. And you say "Great." Every day you sit there

and worry about that. There is more revenue being lost. Just get on with it.

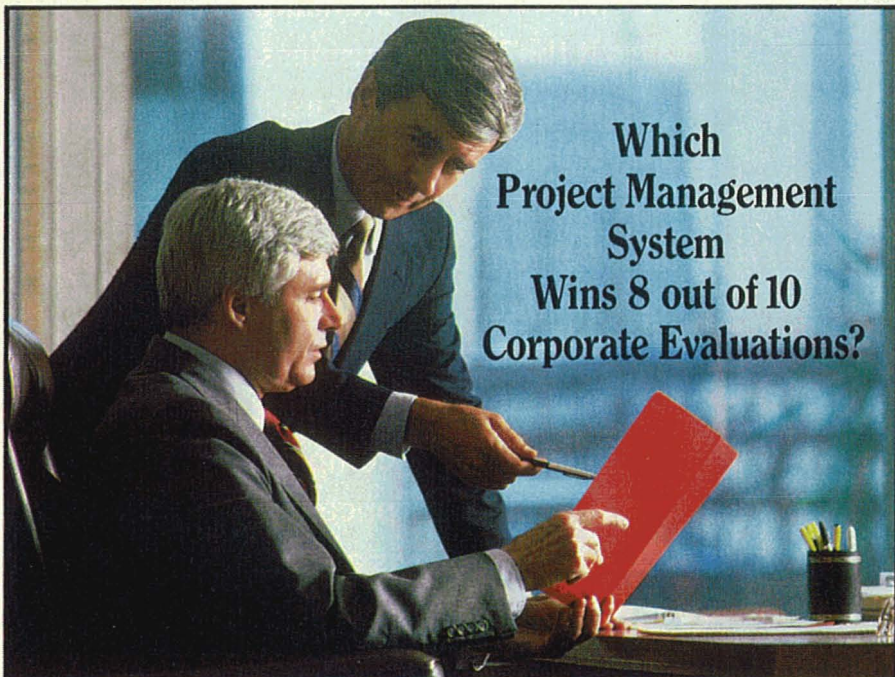
Ewing: Do you think there are any factors that would prohibit your feeling comfortable with a given vendor? For instance, the size of the company, its revenue strength, is that a factor?

Lennon: I think all those are factors: The size, how long have they been in business, what is their track record with some of our aerospace competitors? Sometimes it is a personal relationship with some of the people who are going to be supporting us. I want to know that they are mentally and psychologically bought into solving our problem and making it work. I do not want something dropped off at the front door, as happens too often, in a box, and they wash their hands very nicely [as if to say] "Right, it's your problem." It is not my problem. It is the solution I bought. I want you to help me put it in.

Ewing: I'd like to hear the vendors' point of view. Have you ever declined to do business on the basis of a lack of comfort level?

Nies: I think we are more uncomfortable with the user than they are uncomfortable with the vendor. That is not an indictment of the user. Many of these things are done over and over again.

All our software companies are do-

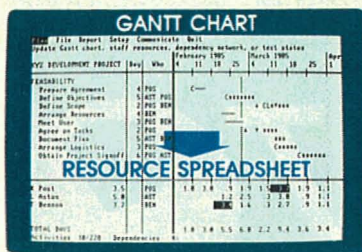


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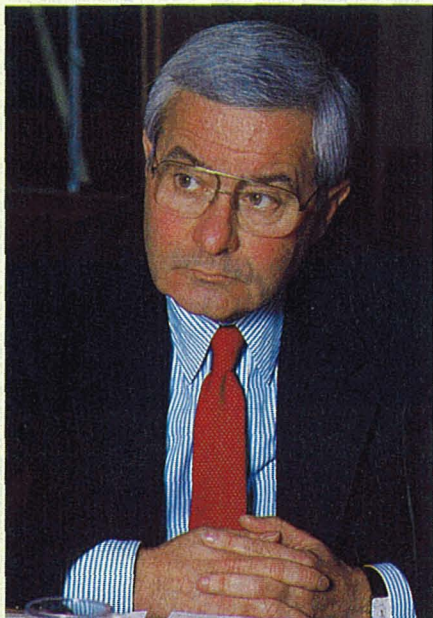


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Busdiecker: Finding one vendor that spans a whole realm is Mission Impossible



Lennon: What vendors do you know that don't claim they are here to help?

ing it over and over again. I felt very uncomfortable with the comment, "Well, there is not much difference. They are all about the same."

I think with varying degrees, when we look at the software products from any number of different software companies, you are going to find similar types of results, some better than others, but I would say that differences would be very substantial. They are not all about the same. And I think it is worth careful investigation.

Johnson: I think there are major differences. I personally feel that the vendors in general have really done a 180-degree turn in the way they want to do business. There is a sincere effort, some of it more marketing oriented in reality, but I think vendors are more willing and have demonstrated an ability to get into the business and learn the business and recognize the fact that needs that exist today for the most part may be superficial to the real needs. Vendors generally are more willing to enter into a "partnership"—to use the IBM term—and I am not speaking of IBM. I am speaking of vendors that have unique products, some of which are not fully developed, which they are willing to joint develop.

Busdiecker: I think it is probably

time we clarify the fact that there are several kinds of products we are talking about. We have talked about applications programs. Clearly, we have talked about systems level software. I get the feeling in listening to Tom describe his products that we might be getting into the so-called fourth-generation languages, which are a whole subject to their own.

Getting to the initial question as to whether vendors are all alike, certainly there are points of differentiation in each of those categories for each vendor. By the same token, if you are forced into doing business the way we do—I don't necessarily recommend that private industry go that way—you find that for each kind of product there are at least several folks that do have capabilities that are fairly similar. So while it may be unfair to lump a whole group of vendors together within each class or a category, I would say that you can always find two or three or four that offer a similar kind of capability.

Let me launch off a little bit, if I may, in this area of the 4GLs, so-called I say, because the more I think about them, the less I am sure of what they are. And my problem is that I see a spectrum of continuity between the so-called 4GLs and a robust program development environment, a software development environment.

We have a particular problem in the government in general and that is our requirement that we not establish a long-term cozy relationship with one vendor who, by definition, becomes big and rich because of that relationship. There has been increased emphasis in recent years on getting competition and ensuring that all vendors with good products have a shot at getting to us.

I am leaning more toward getting a better nonproprietary program development environment, software development environment tools that help programmers crank out code much faster at a kind of rate productivity that you are talking about.

Miller: This is one area where the systems suppliers are at a disadvantage in a sense and where I guess the independent software suppliers have an advantage. Independent software

suppliers for years continually depended for their existence on the fact that the software products would be used on a variety of different architectures. They shouldn't be locked into one particular architecture. For a software company to be successful now, it must be innovative. It must offer its products in such a way that applications are interchangeable between hardware architectures. And it must offer products that offer different sizes of architecture to connect with each other.

I agree with you completely. There is an obvious shift in the 30 years that I have in the industry now to where the decision on software is a much more strategic one than it ever used to be.

Schussel: I am coming at it from the point of view of the education business. We are trying to help

I don't see that there is ever going to be this utopia when standards arrive. It's a moving target.

people develop a model for how to select software and to do it intelligently. I think Stuart's comment about architecture is fundamental. In a three-tier architecture, whether you are using minis or mainframes, you have to have an idea of the direction that your company is moving in for computing environment. Once you have got the basic architecture in, you have to be thinking hard and long about the software architecture. Software architecture is more important. It is more abstruse and it is going to be hardest to get a handle on.

The kind of thing I think Roy was saying can be helped a lot by the emergence of standards. In the database field, the most important thing in the past 15 years has been the emergence of the SQL languages as a database standard. What it is going to do



THE GREAT SOFTWARE DEBATE II

is help movement away from a tie-in with a partnership on a software vendor, away from strategic toward a tactical kind of decision. And the industry will benefit, both users and sellers. The benefit to the users is obvious: Roy talked about how he will not be locked into that vendor. If they can have a standard software database language, they will then be able to look at two or three or four different products, look at them in different areas and yet won't be incompatible with each other, from the term of view of the suppliers. The emergence of a standard cleans away a lot of puffery and marketing hype and gets the discussion more on the issues.

Busdiecker: George, I would like to back that up 100% and take it just a step or two further. Certainly the movement toward SQL, which hasn't been fully realized yet by anyone, has a very great potential to help us. Likewise, so does the industry movement toward a common operating system, at least for smaller machines in the Posix standard that is currently evolving.

But just as hardware and software has to be able to operate and interact together so must the standards. We have a need to be able to access an SQL database from an Ada environ-



Nies: I think we are more uncomfortable with users than they are with us

ment, and the government, academia, and industry are striving very hard to get to that and get to it quickly. It is a contentious area because some of the strengths of the Ada standard, strong typing, for example, are not supported inherently by something like SQL.

Schussel: We are 30 years into the area of computing. Certainly the Army, using computers, is 40 years into it. I do not see that there is ever going to be this utopia when standards arrive. It is a moving target.

Busdiecker: We talk about a three-tiered approach in the Army. I am not sure it isn't really four or five, at least. We have been moving into the small-computer age like gangbusters, and that leads into our whole discussion here about software. Because we have centralized software development and centralized acquisitions that are

The IBM sword can be used to great advantage by MIS—*de facto standards can be a blessing.*

big, visible and important. By the same token, there are many products that are purchased locally, both in computer operating systems generally bundled with them, database management or fourth generational language kind of products, and the challenge for us in the information business is to keep up with those folks at the grass-roots level who say you have taken too long. Even though you are moving as quickly as you can, I am tired of waiting for you and we are going to develop something for ourselves.

Nies: Could I offer that in this business there is one company and one company only that is strong enough to dictate to customers what they do and that company has the idea of account control as a foundation principle of its operations for as long as any



Johnson: Vendors have made a complete reversal in their business practices

of us can ever remember. But when we talk account control, we usually think about controlling options to the customer, if he doesn't have options of doing what he wants. Even more important is the ability to control and dominate thinking so that the customer doesn't think about new ideas and new ways. So the idea of SQL, George, which I think is a wonderful principle you make, is a standard database accessing approach, but everyone has some uniqueness in SQL, as you know. For example, DB2 is not an ANSI standard. Everyone has a DB standard. We try to fulfill SQL requirements, but we try to make it unique to ourselves so we can, in effect, lock in the customer to that option so he can't readily move away.

Schussel: The IBM sword can be used to great advantage by a typical customer. We can look, for example, at what happened in the PC industry when customers started buying it. The popular companies were Eagle, Columbia, Victor, and so forth. They all sold slightly different operating systems, slightly different architectures. The IBM PC became a standard, certainly, for American business. What happened was a great many of those initial companies went out of business. Some had good products.

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What has happened has been very instructive. There has been a whole new group of companies that have come up really effectively to compete with IBM: NEC, Hyundai, Epson. They have adopted the IBM standard. We are starting to see the emergence of that in software. SQL is becoming a standard placed in the public domain. They are the only company that has that power. But I think the survival of the software industry and users are better served, really, to take that fact as a given. We all know that SQL has serious problems and there are proprietary database languages that have been developed that are almost unanimously thought to be better. SQL is what we have. That is what IBM developed. That is a standard. As vendors offer that to their customers they say "We can offer more value," for example, "than IBM can because we have proprietary advantages. We have a faster engine or we have better 4GLs" and so forth. That fosters more competition. That is what we need to compete and I hope the software industry follows the example set in the hardware wars.

Miller: I think we have to focus on something that Tom said. SQL is a subset of what people need to build



Miller: We have to be careful that no standard is controlled by one entity

My hope is that we in MIS continually make new mistakes instead of repeating the old ones.

complete applications systems. Its existence with all its deficiencies and so on does potentially foster more competition within that subset. No argument whatsoever. I think the problem has arisen, however, that a lot of people assume that SQL is a lot broader than it really is.

Lennon: What vendor do you know—including IBM, if you want to do some IBM bashing—that doesn't say they are here to help you? I have heard that story so many times I can almost repeat it verbatim. What makes us unique is that you have to step back and look at the totality of the business company you are doing business with. I don't want to overuse the word intuition. I don't want to imply it is a dart board, but to some degree there has got to be the development of rapport and honesty in terms of what you are trying to achieve and whether that product will really fit and whether that vendor can really make it work in that particular specific environment.

Busdiecker: I think there is another issue and it kind of ties into one that started a while ago about who can you talk to and who has the breadth of understanding to see all the issues when you are getting into some of the interconnectivity issues that Dick raised a while ago. It would appear to me that neither the MIS guys nor the users nor somebody in any one geographical location would have sufficient breadth to see the whole problem.

I know we've got an awful lot of unique situations just within our own house, and getting a handle on all of those and finding a single product or a

Continued on page 32



THE GREAT SOFTWARE DEBATE II

Continued from page 28

single vendor that spans a whole realm sounds an awful lot like a Mission Impossible.

Lennon: I would agree with that. I do not think you are going to find a solution that solves everybody's problem. Certainly, like the U.S. Army, our business is very diverse. Trying to establish a standard or select a product that is going to solve all of those is a Mission Impossible. I go at it from a specific niche point of view. I make it a point not to look at software for general answers; I'm looking for an answer to a specific problem that is found in our business. I am not going to spend a lot of time doing anything until I know whether I have initiated a need or I have a customer who initiated a need.

Miller: Does that mean that standards are less important to you because of the difficulty of imposing them?

Lennon: No. I think I'd very much like to see standards. It's just the nature of the business we are in, and a culture of the organization, that is not going to allow me to impose or mandate a standard. I have to accept the reality of that.

Busdiecker: From my perspective, it is not so much a case of imposing standards as it is having something that gives a common point of reference and allows us to look at the greater number of vendors.

My hope is that we continually make new mistakes instead of repeating the old ones. We have found every kind of commitment and every kind of pitfall that you can fall into. It appears that we are groping our way forward in the standards area. Several of us have commented on the fact that there are several different standards.

Ultimately
we want to
translate raw data
into information
and put it in the
hands of end users.

If you think there is any contentiousness in here, get into the standards community and see those folks taking out after each other.

Miller: As an industry we have to be very careful that any standard or any architecture is not controlled by one entity, one dominant entity. That brings with it a problem in our industry because there is a dominant entity. In the past there have been de facto standards. Some of them good, some of them not so good.

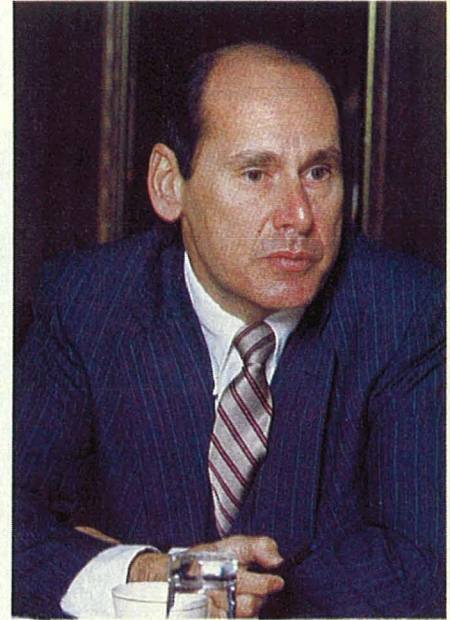
Take Unix as an example. Do we really want to run the risk of AT&T controlling that standard downline and changing the system interface definition? Obviously not. So, therefore, we should be supporting the Posix IEEE activity, as long as AT&T will relinquish control of that definition.

Busdiecker: Do you really see AT&T having to relinquish their control of Unix in order for the industry to coalesce around Posix, which is not really the same? My own evaluation had been, until you said this, that it was really immaterial, that AT&T would be more or less forced to join the crowd unless they wanted to fight everyone.

Miller: I would have thought as a user you need to believe in whatever product you are buying. Whether it conforms to Posix specifically or totally, or whether it conforms to System V interface definition, you need to believe whatever decision you make will carry you forward with little risk of change.

I think you are assuming that your decision will be for Posix in that context, because you believe it's an industrywide definition. I don't disagree with that. But what about the person next door who says, "Well, I like the System V ID a little better," and maybe they have been working with X/Open people in Europe and haven't yet quite jumped on the Posix bandwagon. Now what happens if they decide they are going to go with System V ID and then five years from now AT&T says, "Well, guess what guys, the next change, we are going to change some of the interfaces on the System V ID." And then you're stuck.

Maynard: As more responsibility goes to end users, how is the role of MIS changing with regard to software



Schussel: Eventually MIS will become a utility, providing the plug in the wall

acquisition?

Schussel: The MIS department doesn't go away, ever, but eventually computing becomes a utility service, so the MIS department doesn't do applications and really becomes more technical in essence, provides the computer power potential, like a plug at a wall.

Lennon: We set a goal when I was in one of the divisions that 75% of our applications would be designed by end users in five years. The numbers weren't important—75% or 50%, five years or 10 years. We had a vision that ultimately we wanted to take the translation of raw data into information and put it right out at the hands of the end users and leave the central group to worry more about the technical issues and the management of the network to capture the management of the data in its raw form.

Busdiecker: Utility theory holds that 80% to 85% of all computer needs probably could be met by a DBMS if it had the right data. To that extent, if the end user can create his own way of interacting with the utility kind of central system, then I would go a long way with the end user. But the maintenance of that strategic facility, the communications question, the interaction and interoperating of parts, will all require centralized MIS professionals. **50**