Development heading for a client-server future: two industry experts discuss the hot issues for '90s application development - George Schussel, president of Digital Consulting Inc. and Jeff Tash, president of Database Decisions - at Database '90 Conference in Toronto

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TORONTO -- Two software futurists put their views on the line in a debate over industry issues at Database '90 held here earlier this month. If attendees expected a battle, they were disappointed as George Schussel, president of Andover, Mass.-based Digital Consulting Inc., and Jeff Tash, president and founder of Database Decisions in Newton Centre, Mass., generally agreed on most issues.

The role of the mainframe will change in 1990s computing as more processing power is available on workstations, both predicted. "The word mainframe becomes obsolete," said Schussel. "It really becomes a server."

Tash described two main computing environments he sees unfolding in the '90s. The first is based on IBM's Systems Application Architecture (SAA) and involves PS/2s hooked up to mainframes. The other approach will be Unix and its open systems concept which will probably consist of X-terminal workstations connected to RISC-based (reduced instruction set computing) Unix hosts, he said.

The real difference, said Tash, is that with IBM's strategy, the processing power will be on the desktop, while in the Unix world, it will reside on the backend.

Both Schussel and Tash pointed to the Unix solution as the less expensive way to go in terms of cost per MIPS. But they indicated the real issue is software.

"All hardware goes into museums; all software goes into production every night," commented Tash, adding if SAA has an advantage over Unix it's in the "huge installed base" of software already out there.

Schussel said most companies will continue to run their mainframe software, even if they plan on moving to a Unix environment. "That's your challenge," he told his audience. "How do you maintain compatibility with the past yet develop with new technologies?"

With IBM's promise of a link between SAA and its AIX Unix platform, Schussel doesn't predict any problems. "If you have IBM mainframes and you're running there now, you will be able to maintain compatibility and migrate fairly easily," he said. "New products will come along with the promise of increased performance if you're willing to sever those ties with the past."

When asked where IBM's AS/400 midrange solution fits in, Schussel admitted he's an "anti-AS/400 bigot. The bottom line is going to be that the AS/400 is off the path in terms of where the mainstream is migrating," he said.
He added that the AIX offering will be significant competition to the AS/400 within two years.

Tash had a different view of the AS/400. Calling it "a wonderful machine from a programmer's point of view," he said it's a good platform because of all the software solutions available on it.

But the AS/400 isn't a good choice as a server, he added. "When you talk about servers, you're talking about portability and scalability and therefore you want the cheapest processor you can find," said Tash. "If you want to run a Vax or AS/400, you're paying premium price -- Unix really fits the bill for servers."

One point the two disagreed on was whether or not Unix has taken off in the commercial world. Tash said he's still waiting while Schussel stated it has already happened. "I don't think Unix is going to overwhelm SAA in North America soon, but it will be important," said Schussel.

Looking out into the future, both see a different software architecture for application development. "The right way to build applications is to take data communications and decode it out of the application, modularize it and put it in a separate part of your program," Schussel explained. "Those who do this will have applications that will be more flexible and portable."

"We're really raising the level of programming to the level of protocols," said Tash. He added that IBM's Application Development/Cycle (AD/Cycle) strategy will be based on a highly interoperable data dictionary-driven capability that will make it easier to program.

Object-oriented approaches will also abound in the '90s. Schussel called object-oriented "a different world" and said he doesn't know how it will end up in two years.

Tash said object-oriented has become a homonym with one definition applying to graphical user interfaces at the frontend and the other concerning repositories containing permanent objects at the backend.

"It's really taking data-driven one more step up in this evolution," he commented.

Both futurists agreed the real issue is to start planning for a client-server environment regardless of which machines will serve as the host.

The trend to watch, said Schussel, is for more processing power to be available at the microcomputer level so that machines running DOS and OS/2 can run at the same speed as 3090 mainframes. "There will be a transitional period where PCs will evolve ... and more and more full blown corporate-wide applications will be pushed on those smaller platforms."

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