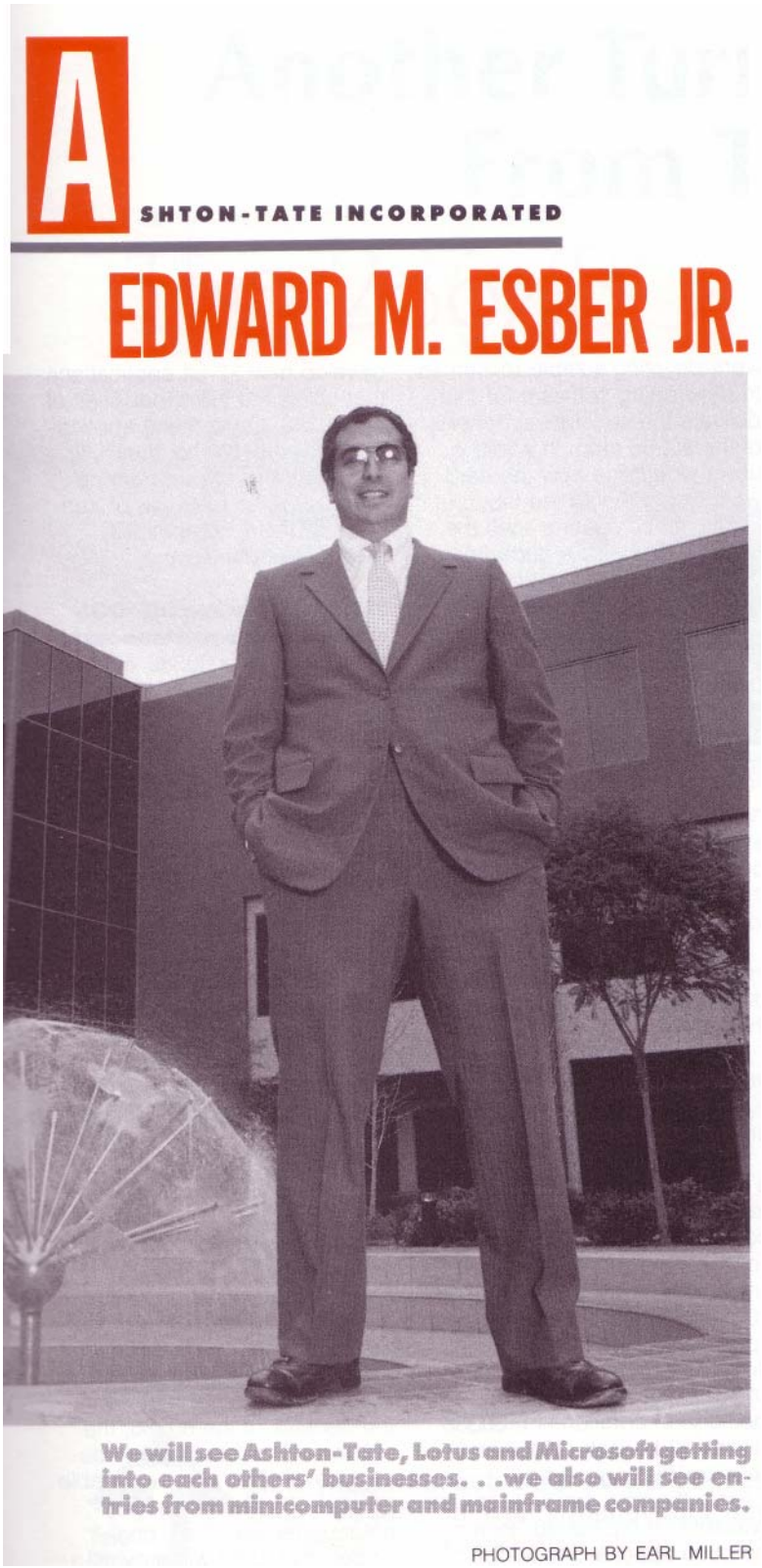

As the industry heads into 1987, companies are grappling with two important issues, the consequences of which will set the stage for years to come; When will operating systems for the 286 micro-processor arrive, and what will be the graphics standard for the IBM environment?

Because of this, 1987 will be both the year of "DOS 286" and the year IBM must make significant decisions that will determine its strength in the computer business for the long term.

The arrival of DOS 286 will determine when the cadre of machines based on the technology rolls out, the kind of soft-ware that will be developed to run on those machines, and the growth rate of the industry. All of these factors will affect world-wide computer industry shipments and how IBM plays its hardware hand. If DOS 286 and the graphics standard for the IBM environment do not arrive in 1987, IBM's numbers will de-cline as the clonemakers gain greater market share.

For software companies, there is usually a window of about three to nine months after a new DOS version is introduced before introduction of applications software to run under it. If DOS 286 arrives in the third or fourth quarter, then the new applications software won't be introduced until early 1988. According to this scenario, 1987 will be a development year for software for the 286.

The development process for major software companies must be both evolutionary and revolutionary. They must continue to perpetuate the standards. Yet if they are constrained by those standards, they risk missing the opportunity to take advantage of new hardware platforms.

The other big question is a graphics standard for the IBM environment. Will it be a formal endorsement of MS-Windows, an IBM proprietary graphics environment, or something else? It is important that IBM declare its choice. The earlier it decides, the less trauma there will be among software vendors—and more for competing hardware vendors

I believe IBM will come out with a proprietary environment, although it is still possible it could adopt Windows. With the advent of 386 machines, it is likely that IBM will move to diminish the strength of the hard-ware clonemakers by developing its own operating system for the 386 and building a bridge back to support the 286.

If IBM quickly brings out a new machine with its own operating system, companies will have to write software for that system, but the alternative of using DOS still will be provided.

For Ashton-Tate, the key areas of emphasis in 1987 are networking and developing products for the 286.

In 1986, we saw increased placements of connectivity hardware. But most users are not implementing true networking environments. Most personal-computer networks primarily have been resource-sharing networks, because there has been little real network software or multiuser software.

Now we want to go beyond resource sharing. The trend of wiring machines will continue, but 286 software will allow users to take advantage of the multi-tasking capabilities that network software was designed to support_

We are taking a leap in technology from the 8088/8086 to the 286/386 architectures, which will have a longer life than the six-year span of the 8088/8086. Possibly, as machines based on their technology are delivered at lower prices, a true home and education market will emerge.

A challenge that both Ashton-Tate and the software industry in general will face in 1987 is in-creased competition. We will see Ashton-Tate, Lotus and Microsoft getting into each others businesses, and we also will see entries from minicomputer and mainframe companies.

Within this scenario, the challenges for Ashton-Tate are to develop the next-generation database for the 286-and-above environments.
The personal computer can't be viewed as a closed box any-more.

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Computer Reseller News, "1987 Computer Business Outlook", January 1987