## IBM ANNOUNCES UNIX ON THE PC

On Thursday, January 12, IBM announced UNIX on the IBM PC. Based on System III, developed for IBM by **Interactive Systems Corp.**, of Santa Monica, California, <u>Personal Computer Interactive Executive (PC/IX)</u> features:

o    A full screen editor, based on Interactive's <u>INed</u> editor;

o    All of the standard UNIX functions including networking, command languages, file monitoring, text processing (likely to be nroff), a hierarchical file system, and many program development tools;

o    The "C" programming language (no Fortran);

o    **Multitasking, but not multiuser capabilities.**

Yates Ventures will review the product in February and compare it to the other IBM PC based UNIX versions currently offered by independent software vendors.

PC/IX will run on the **IBM <u>PC/XT</u>** without hardware modifications. It will run on the regular PC if an expansion box is purchased. The minimum configuration is 256K RAM and a 10 MB hard disk. **Both PC-DOS and UNIX will be able to co-reside on the same machine.** They will not be able to co-process at the same time. This combination is the first move towards an MS-DOS to UNIX connection, confirming our prediction of IBM's future multiple window, multiple operating system environment (see December's <u>Yates Perspective</u>.)

PC/IX will be available in early April. It will be sold with the PC for **$900, enduser quantity one.** Note that the current DOS version costs only $40. PC/IX will initially be sold by the IBM National Accounts Division, with general distribution to follow. **Anticipate IBM signups of dealers by mid-year.**

<u>Impact on AT&T</u>

Why is IBM having anything to do with their newest computer competitor? Because offering UNIX as one of several operating systems on IBM computers gives them **the greatest advantage in a side-by-side comparison sale.** AT&T may respond by offering MS-DOS as well as UNIX on their products.

IBM's UNIX introduction will expand the UNIX market for all vendors, just as its PC introduction expanded the whole PC market. **The impact on AT&T depends largely on which UNIX version IBM selects as its standard.** They have CPIX (UNIX V-7) on the Series One, XENIX on the CS9000, and now PC/IX (UNIX System III) on the IBM PC. Will they endorse the AT&T standard, or will they go their own way? **AT&T could lose control of the UNIX standard if IBM decides to take its own course.** AT&T could find itself in a reactive position, trying to play catch up while IBM introduces UNIX innovations on IBM computers.

The degree of commitment of IBM to UNIX will largely determine its success in the microcomputer market, and the positive impact on AT&T's UNIX-based personal computers. A major thrust by IBM virtually assures the acceptance of IBM's version of UNIX as the defacto <u>standard</u> operating system for multiuser, multivendor networked systems. **UNIX could possibly become the OS base for multi-operating/multi-window systems.** But how much importance does IBM place on UNIX as a product? Is UNIX just another one of many PC operating systems?

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## Impact on Interactive Systems

Christmas came a little late at Interactive this year, but when it did!!! The IBM announcement catapults Interactive into a powerful position similar to the one held by MicroSoft with PC-DOS. The arrangements are strikingly similar. Interactive is free to sell their IS/3 product, on which IBM's PC/IX is based, to anyone. According to Interactive Systems President Tom Cull, **IS/3 is completely compatible with PC/IX.** A quick check of UNIX microcomputer vendors turns up 15 with immediate interest in switching. Interactive will soon be swamped with porting requests from "IBM lookalike" manufacturers.

Interactive's base of application products are even more important than UNIX. The December _Yates Perspective_ included an in-depth review of Interactive's e2 application, which is designed to run over IS/3 on both the IBM PC and IBM minicomputers. **e2 may become the most popular user interface and application environment on UNIX** if IS/3 licensees buy it in conjunction with IS/3. e2 is available in our lab for all multiclient subscribers to test, courtesy of Interactive Systems.

## Impact on Microsoft

Why didn't IBM choose XENIX for the PC? IBM often chooses small companies as suppliers since this makes it easier for IBM to control the supply of the product and by implication control the market. Had IBM gone with Microsoft, it would have given Microsoft control over two major IBM operating systems. This would have strained the already overtaxed resources of Microsoft. Any large manufacturer wants several suppliers of products, especially a product as critical to success as an operating system.

## Conclusion

**IBM** is the big winner in this announcement, expanding their market and creating interest in the IBM PC among UNIX endusers and software developers. **Interactive Systems** will cease to be a small unknown company and will become a major player in microcomputer software. Remember, Microsoft's biggest boost came when IBM bought MS-DOS. The same will hold true for Interactive.

AT&T gains greatly increased revenues from UNIX licenses, but may find itself reacting to IBM's UNIX standard if IBM doesn't support System V. Losing out is **Microsoft,** who apparently will not control both of the IBM PC's major operating systems. **Intel** is clearly a big winner. Its 8088 chips gain stature in the UNIX market. The popular Motorola 68000 chip loses out on PCs, but don't count them out of the game. **Digital Research,** which just entered the UNIX market, treads water. DRI already has its hands full with ports to Motorola and Intel chips.

_Good Luck at Uniforum!_