

BILL GATES—SETTING THE STANDARD

Microsoft has become, in one short decade, the world's most influential supplier of microcomputer software. It was courted by the world's biggest supplier of computers, IBM, and effectively helped shape the specification of the IBM PC, the world's largest-selling personal computer.



COURTESY OF MICROSCOPE

TONY SLEEP

GUIDING PRINCIPLES

In 1970, at the age of 28, Shiina Takayoshi abandoned a promising career in the military and formed the Sord Corporation (1982 sales: \$40 million). He immediately formulated 11 guiding principles to help him govern his new computing business. These included:

- *The company's foremost obligation is to humanity.
- *The company must do its best to determine what products and services are best for society, and provide these at a reasonable cost.
- *There must be no division between labour and management. All persons in the company must respect one another and co-operate for the benefit of all

The Microsoft company, now a multi-million dollar operation, is a classic story of enthusiasts made good. Bill Gates, at 28 the chairman of the board, was in 1972 only a talented amateur.

At Seattle High School, where the parent-teacher association had the foresight to equip the students with a timesharing terminal attached to the popular DEC PDP-11 minicomputer, Bill learned about the workings of computers. He went to Harvard University and on his graduation went into business back in Bellevue with schoolfriend Paul Allen. The firm they set up was called Traff-O-Data, and their work was to monitor traffic flow for the Seattle public authorities. It was a momentous period in the development of the microcomputer: the first microprocessors were making an appearance and those with imagination and enthusiasm saw a great future for devices such as Intel's 4004 and, later, 8008 chip. Bill was by now thoroughly familiar with the DEC PDP-11 and one of his first jobs was to track down bugs in this computer. It occurred to him that it would be a good idea to adapt its BASIC for use on the 8080. He had no development system, and the first occasion on which the code and the machine were mated was when Gates took the tapes down to Altair in Albuquerque, New Mexico. Incredibly, it ran first time. Thus was born MBASIC, which has ever since been the standard to beat.

Microsoft was becoming known as a software house with expertise at fitting new computers with operating systems — filling the empty box, as it were — and IBM contacted Gates to ask for his

advice on how to specify and equip a single-user personal computer. Initially, Gates suggested that Gary Kildall of Digital Research, riding high on the burgeoning success of CP/M, was the man for the job. But eventually IBM came back to Microsoft. Microsoft rewrote PASCAL, FORTRAN and MBASIC for the 16-bit implementation, and also came up with the GW (for 'gee-whizz') BASIC with its extended music and graphics capabilities.

At the same time, Gates realised that an untidy but powerful multi-user OS by Bell Laboratories could be usefully adapted for the more powerful micros based on the new 16/32-bit microprocessors, and transformed Unix into Xenix. Both Tandy and Apple adopted Xenix in their own 16/32 bit models in 1983. It even transpires that Microsoft did much of the work for Apple's newest creation, Mackintosh.

Microsoft has a firm footing in the hobby market, too. In 1981 it set up ASCII-Microsoft with a keen young Japanese, Kay Nishu, to sell their OS and BASIC to far Eastern manufacturers of the new generation of lap-held micros like the NEC PC 8201 and Tandy Model 100. Out of the Japanese manufacturers' desire for a common standard, not only in languages, but in interfaces to desirable home peripherals such as colour plotters and printers, lightpens, joysticks, trackballs, robot arms, FM tuners and so forth, came the common MSX standard. Now, it seems, we shall soon have a standard common disk format from Microsoft that will enable data to be transferred among the three principal operating environments — MSX, MS-DOS, and Xenix. With its emphasis on software that is easy to use, illustrated in such phenomenal advances as screen windows and the mouse, Microsoft would appear to have a bright future ahead of it.

Industry Standard

BASIC — Beginners' All-purpose Symbolic Instruction Code — was developed in 1965 at Dartmouth College, US, by J Kemeny and T Kurtz, and thus predates the microprocessor by at least seven years. While many dialects of this language have been formulated, MBASIC, Microsoft's own version, has come to be recognised as the industry standard.

Microsoft established its reputation with the success of MBASIC, and has continued to thrive by producing a serious challenger to Digital Research's CP/M in MS-DOS, an operating system designed to be applicable to a wide range of microcomputers.

Following the lead given by Xerox's Star terminal system, and developed by Apple with Lisa, Microsoft has now diversified slightly and produced a package that combines software with a hardware device necessary to its operation — MS-WINDOWS and the mouse. Microsoft's mouse, like that of its two competitors, uses a trackball-like arrangement coupled with two selectors to move the cursor around the screen