

## COMPANY OVERVIEW

CEMCORP (Canadian Educational Microprocessor Corporation) was established in 1981. CEMCORP was formed to design, manufacture and supply a standard family of microprocessor computers suitable to the long-term needs of Canadian schools.

## EXPERIENCE

The specifications of the CEMCORP family of products coincide with the Ontario government's specifications. CEMCORP has been awarded a \$10 million contract to deliver prototype and production units to school boards throughout the province.

## PRODUCTS AND SERVICES

CEMCORP offers a family of computers which integrates into a network in which the resources of any node may be shared in various ways by any other node. Thus, an aggregate of relatively low-cost units may be integrated into an extremely powerful system.

The CEMCORP network initially contains two basic units:

- The *ICON* is a low-cost student workstation which includes a display unit, keyboard and 256K memory, using an INTEL 80186, 16-bit processing unit. This machine may operate as a completely self-contained computer (with a one-megabyte diskette) or as a node in a low-cost network, the *iNet*.

- The *Lexicon* is a fileserver that fulfills two functions. It provides access to mass storage devices (floppy or hard disks) and the resources of the operating system (QNX). It also provides flexible peripheral expansion capability by supporting a system expansion bus. The *Lexicon* maintains the network file-structure and provides a high-speed network interface to the *ICON* workstations.

CEMCORP's workstations incorporate a standard user interface. An interface for trackball is provided to support graphical and pointer interaction. Speech synthesis output is included to provide voice-guided interaction within programs and HELP functions. The keyboard supplied is English-French compatible and incorporates a HELP key. Support of the NAPLPS standard specification is also provided.

CEMCORP offers the Waterloo Systems Languages developed at the University of Waterloo, Ontario. Various high-level languages are implemented by means of interpretive language processors. The initial package includes BASIC, PASCAL, FORTRAN, COBOL, and APL. Also supported are C and Logo.

CEMCORP will offer the QNX operating system as its standard educational operating system. QNX is a UNIX look-alike system written in C language. CEMCORP will enhance and extend the QNX operating system user interface to allow easier interaction by naive users and to promote efficiency of application programs. As well, it will give attention to a graphics protocol

that enforces program portability between machines of varying graphics potential.

The CEMCORP product has a fundamental advantage in its network structure. Unlike the personal computer market, or perhaps even the small business market, the educational market is not one of individual sales. The use of a number of computers in the classroom requires standardization and compatibility. This can only be met by introducing higher level software than is common on personal computers.

## FUTURE DIRECTIONS/ TARGET MARKETS

Scheduled for mid-1984, the third unit of CEMCORP's product line, the *Advanced Student Microcomputer*, will be a high-performance workstation which does not normally operate as a stand-alone computer, but uses the mass storage facilities of the LEXICON fileserver through the high-speed *iNet* interface. The *Advanced Student Microcomputer* will include a 32-bit processing unit which supports demand-paged virtual memory operation.

Application software and courseware written for the *ICON* will be able to be migrated to the 32-bit processing unit. The CEMCORP computer is the first North American hardware and software system designed exclusively for the educational market.

## FOR MORE INFORMATION

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