## ICL 2900 Series, Models 2960 — 2980 New Product Announcement

On June 14, 1978, ICL further expanded and enhanced the large-scale end of the 2900 Series of general-purpose computer systems. In addition to announcing a new model, the 2972, ICL introduced an enhanced version of the 2976, new memories composed of 16K-bit chips, an enhanced version of the DME (Direct Machine Environment) emulator, and a new "mixed-processor" configuration that can run both 1900 Series and 2900 Series programs.

All of these new products and features, except the new memories, are designed to help current 1900 Series users upgrade to the 2900 Series large-scale systems. In the first phase of the transition, the user installs a DME-equipped 2960 with a new memory configuration called a "common storage system." All 1900 Series programs are moved to the 2960 system and the 1900 system is removed. In the second phase, the common memory is expanded and a 2972 or 2976 processor is added. The user now can run 1900 Series programs on the 2960 and new, 2900 Series programs on the 2972/76 at the same time. Memory and peripherals are switched between the two processors as necessary. In the third phase, after all 1900 Series programs have been converted, the 2960 is removed, leaving the user with a 2972/76 system.

The new 2972 has a 2976 order code processor (central processor), up to 6 megabytes of the new 16K RAM memory, up to three store multiple access controls (SMAC's), and up to two store access controls (SAC's). Memory interleaving is not available. A basic system sells for between £1.3 million and £1.8 million. A 2972 can be field upgraded to a 2976.

The enhanced 2976 has a maximum memory size of 8 megabytes, up to four SMAC's, and up to two SAC's. Memory interleaving is standard. A basic system sells for between £1.5 million and £2 million. Memory on the original 2976 was limited to 6 megabytes of 1K RAM memory, only three SMAC's were accommodated, and interleaving was optional.

The new 16K RAM memory, which also can be fitted to installed 2970 and 2976 systems, is less expensive and more reliable than the older 1K RAM memory. The new memory modules also take up much less space. Two megabytes of memory now fit into two cabinets instead of six.

The enhanced version of DME, called DME+, provides about 25 percent better performance than the original DME, which is now called DME/1900. DME, a firmware/software combination that enables medium-scale 2900 systems to execute programs written for the older 1900 Series systems, is very popular. ICL says it has received orders for more than 100 DME-equipped 2960's. The large-scale 2972/76/80 models cannot be fitted with DME because their processors have hard-wired logic. Previously, ICL solved this problem by offering an attached processor that could run 1900 Series code, but this option was not popular with users. The new solution, under which a 2960 and a 2972/76 share memory and peripherals but are kept physically separate, appears to be functionally superior.

ICL also announced a new peripheral, the MT 1250 magnetic tape system. Available for 2970 and larger systems running under the VME/B operating system, the MT 1250 uses the 6,250 bpi Group Coded Recording format and has a transfer rate of 1.25 megabytes per second. A dual-mode option enables the MT 1250 to handle 1,600 bpi PE tapes.□