

Paris show highlights office systems that have enhanced business functions

The 27th annual Salon Internationale de l'Informatique de la Communication et de l'Organisation du Bureau (Sicob), being held in Paris from Sept. 23 to Oct. 1, is showing consumers little that is revolutionary in office-equipment systems. However, the range of existing products has evolved extensively, and the competition is increasing. Jacques Namur, head of the Computer division of Telex Computers SA, a subsidiary of Telex Corp. of Tulsa, Okla., says, "The trend is to show more integrated office-computer systems, which can serve more purposes at a lower cost, rather than forcing untried products on the market."

Telex Computers SA will display the Lockheed System III office-computer system it has just arranged to distribute in France. Although the Lockheed system is similar to the IBM System/3 and 32 computers, Telex says its after-sales service will enable it to compete with IBM, which traditionally has about 60% of the data-processing market in France.

Introductions. Similarly, Texas Instruments France, although displaying nothing completely new, will use Sicob as a marketing entrée for calculators and processors not yet disclosed in Europe.

France's ITT subsidiary Compagnie Générale de Constructions Téléphoniques, Thomson-CSF's affiliate T-VT, and IBM will likewise display new terminals, printers, and screens. "The companies call them new," says an industry observer, "but most of the items at Sicob are improvements on already existing systems."

An example of how companies are expanding existing systems is Philips' P851M Micromini computer, developed at Philips Laboratories in Rambouillet, France, which completes Philips' P800 office-computer family. "We call it a microminicomputer because it's micro due to size and mini due to software," says Phil-

ips' minicomputer-department head Claude Lacaille.

Philips is also introducing a computer system based on magnetic-tape cassettes for transaction-oriented magnetic ledger-card data processing, peripherals for its entire range of P300 computers, and a new video display unit for its PTS-6000 line.

Microtechnology. The P851M, like most add-ons to existing systems, uses microtechnology, including Philips-developed Locmos large-scale integration, which reduces component count and card size, improves noise immunity, and lowers

power consumption. These benefits make the computer acceptable for industrial applications with the support of proven software, industrial-interface capabilities, and peripherals.

The P851M comes with a 19-inch rack that has space for peripheral controllers, standard input/output, and user-designed boards with the Eurocard format. The general-purpose bus of the Micromini has expansion possibilities for standard I/O controllers and an I/O processor, which ensures rapid data transfer and direct-memory access. □

Around the world

Mitsubishi's 4-k RAM has good power-delay product

A fast 4,096-bit dynamic random-access memory made by diffusion self-aligned (DSA) MOS technology is scheduled for completion by year-end at Mitsubishi Electric Corp. in Japan. First deliveries are slated by mid-1977, upon completion of quality-assurance tests. Access time is 60 nanoseconds.

DSA technology produces the shortest delay of any MOS technology that Mitsubishi can produce economically. It gives a much smaller delay-power product and a smaller chip than bipolar technologies. What's more, the use of ion implantation for deposition of dopants prior to drive-in ensures precise control of the doping concentrations on the chip surface, so that the company is confident it can fabricate the devices commercially.

This is the first known use of ion implantation to control all active-area dopant concentrations. The threshold voltage is sensitive to base-channel-surface doping concentrations, and control of the threshold voltage is necessary to get a low power-delay product and the high yield necessary.

Associative technique yields speed in ICL disk controller

International Computers Ltd. in the UK has built a developmental model of a memory controller that makes a standard disk store act like an associative memory, yet only off-the-shelf transistor-transistor-logic and MOS random-access-memory chips are used. The content-addressable-file store (CAFS) accesses multiple data channels from the disk store and selects for display only the information requested. Like an associative memory, storage locations are identified by the information content. Each word to be stored is simultaneously compared with all previously stored words to determine its correct location by tags such as name and age. Unlike conventional retrieval systems that operate "by remembering where you put it," CAFS accesses information "by what it looks like as well," ICL says.

The CAFS comparator circuit checks the tagged data stream coming off the disk against what the user wants and plucks out only the data with matching tags. The controller, which uses time-division multiplexing, handles data at the rate of 2.5 megabits per second or about 300 kilobytes per second for each channel. With 10 channels, CAFS is estimated to be 10 times faster than conventional disk controllers.