

Canada's computer industry continues to grow



Telidon — an innovative design in Canadian computer technology.

The Canadian computer industry is a burgeoning sector of the Canadian economy that is moving towards becoming a major force on the world scene — both as user and supplier. In 1982 its revenues totalled some \$4.5 billion in retail computer and office machine sales, representing an annual growth rate of about 20 per cent. In addition it generated \$1.2 billion in revenue from computer services.

The several hundred companies in the computer equipment field supply a variety of products such as microcomputers, large mainframes, peripherals and operating software. The services subsector provides a wide range of systems design services, data processing by service bureaus, on-line data bases, consulting and custom software. There are more than 1 400 companies providing computer services, employing more than 20 000 people. At least 90 per cent are Canadian-owned: it is estimated that Canadians produce 82 per cent of the total service industry revenues. An average growth rate exceeding 20 per cent has been realized in recent years and shows no sign of abatement.

The Canadian market for computing equipment is largely supplied by imports. In 1982 Canada imported computer equipment worth \$3 billion, the bulk of which originates in the US. In a complementary manner, about 90 per cent or \$900-million worth of the output of

domestic production was exported by the industry. Canada is the fifth largest import market and eighth largest exporter of computing equipment.

Innovative designs

Canadian firms have generally chosen not to compete with multinationals in the production of general purpose computers. They have, instead, concentrated on the design of innovative products with a wide range of applications incorporating the latest advances in microprocessors.

The following Canadian products and services have met with particular international success:

- word processing systems, now sold in more than 80 countries;
- "intelligent" terminals, such as the (computer-aided design/computer-aided manufacturing) special high resolution terminal developed for Telidon;
- data communications products to link computers to data networks, including packet switching;
- CAD/CAM graphics with specialized terminals and software languages;
- custom-built on-line computer systems;
- proprietary software packages;
- desk-top microprocessors for financial management applications in small businesses;
- specialized data bases; and
- microcomputers capable of receiving a wide variety of software services through cable television networks.

Babies' better chance to live

A team of Winnipeg, Manitoba doctors is earning an international reputation for its success in preventing infant deaths during or just after birth.

Using a unique ultrasound evaluation and amniocentesis screening process pioneered in Manitoba, the doctors have been instrumental in reducing the province's infant mortality rate to 1.3 per cent of babies born — one of the lowest rates in the world. Dr. Frank Manning and his team recently combined skills with Dr. John Bowman, a world leader in treatment and prevention of Rh disease, to successfully complete intrauterine blood transfusions on twins with Rh factor disease.

This procedure was not new to the Winnipeg doctors. Hundreds of patients from across the country and throughout the world have been referred to them. By using sophisticated, high-resolution ultrasound scanning, they are able to monitor the path of the needle through the wall of the uterus and into the abdomen of the fetus. Before ultrasound, the procedure was done "blind" and presented a much greater risk to both mother and fetus.

Dr. Manning and his associates have used the same method to identify and treat fetuses with abdominal and bladder obstructions. On another occasion the screening program discovered two fetuses that had developed fluid in their lungs at the time of delivery, needles were used to remove the fluid and save the lives of the babies.

Provincial medical care officials point to the program as a significant factor in helping to reduce the province's infant death rate to 13.3 per 1 000 births of infants who weigh over 500 grams, a 46 per cent decrease in the death rate since 1977.

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