



Ottawa, Canada's capital city and the Canadian computer industry's biggest centre. At its heart, the turreted Chateau Laurier Hotel and the old Union Station—now the Government Conference Centre—contrast strikingly with the modernistic National Arts Centre in the foreground.

Canadians Develop the Potential of CAL

COMPUTER-AIDED learning (CAL) will undergo a dramatic shift this decade, changing from being a little-used and high-cost part of modern computer technology to being both affordable and widely used.

As with telecommunications, Canadian companies can legitimately claim to be among the world leaders in the field and they possess a number of unique advantages for exploiting the educational software (or "courseware") side of the business.

Canadian penetration of two potentially major markets, the educational and the corporate training fields, is not far off. A paper describing the marriage of Telidon and a special CAL language called Natal, which stands for National Author Language, was presented recently at the Viewdata-81 Conference in London.

Developed by the National Research Council (NRC) of Ottawa, Natal is a special computer language used to create educational courseware for computers, and applicable to computer systems manufactured by a number of major companies.

Initial results of an experiment linking Telidon and Natal suggest that a mass audience for computer-assisted learning can be reached. Because videotex technology could provide an effective means of distribution, CAL—precursors of which have existed since the 1950s—will come into its own in the 1980s.

The on-line interactive and individua-

lized capabilities of CAL can cut corporate training times by 25 per cent, as well as significantly increasing students' comprehension of subject matter.

CAL promises to be a multi-billion-dollar market in Canada alone. But the world—and especially the Third World—is considered a potential market.

The primary CAL market is industrial because commercial and military retraining markets are more lucrative than the school systems at this stage.

Although CAL does not replace all forms of training, it is estimated that in the military alone, five per cent to 50 per cent of the millions spent on training could involve computers.

School textbook manufacturers have not been blind to the potential of computer-assisted learning. Much of the impetus for the development of the software side of the business is coming from publishing companies.

Commodity Information is Now On-Line

Agriculture Canada has begun a new computer service to provide commodity information to Canadian agricultural organizations.

Called FARMBANK, the service is a time series data base, which was designed primarily to assist market analysts in government offices, trade organizations, producer groups, businesses and other organizations.

FARMBANK contains detailed information on prices, production, stocks, consumption, imports and exports for all major grains, livestock, dairy, and poultry and egg products on a regional, national and international basis. It also contains farm income statistics, retail prices and general economic data. The service provides selected weekly, monthly, quarterly and annual data, dating in some cases as far back as 1965. It is available on-line

Mitel is Growing Mightier

THE fast-growing Canadian telecommunications firm, Mitel Corporation is establishing a wholly-owned subsidiary in France.

The company was granted approval by the French government to establish the subsidiary in the Bosges region, where it will employ more than 1,000 people by the end of 1985 in the manufacture of a complete line of Mitel superswitch telephone switching equipment.

Apart from its ultra-modern Ottawa headquarters, Mitel has plants in New York, Vermont, and Florida, in the United States, as well as in Britain and Ireland. Recently, the corporation announced plans to build a \$90-million plant in Wales and a \$20-million facility in Mexico, and to establish three more Canadian manufacturing plants—one costing \$28.6 million in Renfrew, northwest of Ottawa, and two at \$48 million in Bouctouche, north of Moncton, New Brunswick. The latter two are expected to begin operations in 1983 and 1984 and to employ 1,000 people.

Meanwhile, Mitel has been granted approval by the Italian telecommunications authority to market its SX-200 private automatic branch exchange equipment for a ten-year period. The company will begin to market the systems through ETE of Milan. In addition, British Telecom and the British Department of Industry have accepted the SX-200 digital communications system for installation in field trial sites to be selected in Britain during the second half of 1982.

Also, in Britain, the corporation's subsidiary, Mitel Telecom Limited, has won a contract worth a minimum of \$22 million from British Telecom. The one-year contract is for the provision of a stored program, fully electronic, PABX known as the Regent, a version of the Mitel SX-200 superswitch product.