

# Chapter 16

## Communications

### 16.1 Telecommunications

The size, topography and climate of Canada have significantly influenced the development of telecommunications in this country. Vast networks of telephone, telegraph, radio and television facilities are necessary to provide efficient communications among Canadians and between Canada and the rest of the world. Canada possesses a unique mix of telecommunications systems — federal, provincial, municipal and investor-owned — whose operations are co-ordinated to carry messages to all parts of the country by land lines, microwave, tropospheric scatter, high-frequency radio and satellite communications systems and to other parts of the world by undersea cables and international satellites.

The almost universal availability of telecommunications service at low cost has been a major factor in stimulating Canada's economic growth and a positive force in binding the country together. The requirements for more and better telecommunications services keep pace with the increase in population, and keeping costs and rates low necessitates constant innovation.

Canada's telecommunications carrier industry, with \$10.3 billion invested in plant, is expanding at the rate of more than \$1 billion a year. Investment for 1974 was \$1.25 billion, a figure expected to reach \$2.5 billion a year by 1980, increasing to \$4 billion a year by 1985.

The Canadian Telecommunications Carriers Association (CTCA), established in 1972, provides the framework for co-operation on an industry-wide basis for the major telecommunications carriers in Canada. The Association consists of 22 telecommunications carrier organizations, each represented on the board of directors by a senior officer. It brings together in one organization, the Trans-Canada Telephone System and its eight members, the Canadian Independent Telephone Association, eight other telephone companies, Canadian National and Canadian Pacific Telecommunications, Teleglobe Canada and Telesat Canada.

CTCA is active in the affairs of the Geneva-based International Telecommunication Union and attempts to secure, through the federal Department of Communications, the compatibility of the Canadian telecommunications system with those of other countries.

#### 16.1.1 Telecommunications media

##### 16.1.1.1 Voice communications

**Telephony.** There are more than 12 million telephones and 14 million miles of circuits in Canada. About 11 million telephones of the national total are provided by the eight member companies of the Trans-Canada Telephone System: Alberta Government Telephones, British Columbia Telephone Company, Bell Canada, Manitoba Telephone System, Maritime Telegraph and Telephone Company Limited, The New Brunswick Telephone Company, Limited, Newfoundland Telephone Company Limited and Saskatchewan Telecommunications. Almost a million telephones are provided by Edmonton telephones, The Island Telephone Company Limited, Northern Telephone Limited, Okanagan Telephone Company, Ontario Northland Communications, Québec-Téléphone, Télébec Ltée, Téléphone du Nord de Québec Inc., Thunder Bay Telephone Department and Canadian National Telecommunications. In addition, there are about a thousand smaller telephone companies.

Canadian National Telecommunications, geographically the largest single system in Canada, provides telephone service for residents in the Yukon Territory and Northwest Territories, parts of Newfoundland and in northern sections of British Columbia.

Each Canadian telecommunications organization is responsible for service within its own territory and for integrating its facilities with those of all other telephone companies.

Collectively, these companies operate the world's longest microwave system and have access to Canada's domestic satellite system — a telecommunications mesh which carries telephone conversations, radio and television programs and computer data coast to coast. Through international connections the Canadian system can reach nearly all of the world's 336 million telephones.