

Telecommunications

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The size, topography and climate of Canada have influenced the development of Canadian telecommunications. Vast networks of telephone, telegraph, radio and television facilities are necessary to provide efficient communication among Canadians and between Canada and the rest of the world. Canada possesses a 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 cable and international satellites.

Canada's telecommunications carrier industry, with \$14.5 billion invested in plant, is expanding at the rate of more than \$2 billion a year. Investment for 1977 was \$2 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 major telecommunications carriers. The association consists of 21 telecommunications carrier organizations, each represented on the board of directors. It brings together in one organization the TransCanada Telephone System and its 10 members, the Canadian Independent Telephone Association, six other telephone companies, Canadian National and Canadian Pacific Telecommunications and Teleglobe Canada.

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

Telecommunications media

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Voice communications

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Telephony. There are more than 14 million telephones and 22.5 million kilometres of circuits in Canada. Close to 12.5 million telephones are provided by the 10 member companies of the TransCanada Telephone System (TCTS): Alberta Government Telephones, British Columbia Telephone Company, Bell Canada, the Island Telephone Company Ltd., Manitoba Telephone System, Maritime Telegraph and Telephone Company Ltd., the New Brunswick Telephone Company Ltd., Newfoundland Telephone Company Ltd., Saskatchewan Telecommunications and Telesat Canada. Almost a million telephones are provided by edmonton telephones, Northern Telephone Ltd., Okanagan Telephone Company, Ontario Northland Communications, Québec-Téléphone, Télébec Ltée, Thunder Bay Telephone Department and Canadian National Telecommunications. There are also about 1,000 smaller companies.

Canadian National Telecommunications 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 company is responsible for service in its own territory and for integrating its facilities with those of all other telephone organizations.

Collectively, these companies operate the world's longest microwave system and have access to Canada's domestic satellite system — a telecommunications blend which carries phone conversations, radio and television programs and computer data coast to coast. Through the integrated North American network and Teleglobe Canada's intercontinental connections, the system can reach nearly all the world's 425 million telephones.

Each year Canadians place some 5.4 million telephone calls to countries outside North America. In September 1976 TCTS and Teleglobe Canada introduced direct