

16.1.1.2 Record communications

Public telegraph service. Canada's telegraph systems are operated by CNCP Telecommunications. This company, a fusion of the telecommunications branches of the Canadian National and Canadian Pacific railways, offers telegraph service in all provinces and in the Yukon Territory and Northwest Territories. Messages can be forwarded or received from any point in Canada or throughout the world via the overseas cable services. Messages are transmitted by cathode ray tube (CRT) teleprinter and facsimile equipment and telegraph networks over which the flow of public messages is controlled by computers. Messages are taken in and forwarded automatically in accordance with special programs stored in the computer's memory. The computer determines where the message is to be sent and sends it as soon as the circuits are free.

The most recent innovation is the use of cathode ray tube displays at all the larger message centres. Basically, CRT displays have television-like screens placed above a keyboard similar to a typewriter which is connected to the message-switching computer. As the operator receives a telephoned telegram message, she types it on the keyboard to read the message back to the caller and, with editing capabilities built into the displays, may make changes to the text if required. When the message is confirmed, the push of a button sends it into the message-switching computer for transmission to its destination.

Telex, the largest teletypewriter service in Canada, is also provided by CNCP Telecommunications. Its network of 29,500 subscribers in Canada interconnects with the Western Union and RCA Alaska Communications Telex networks in the United States and with European and world-wide networks of more than 500,000 subscribers in 177 countries. Telex is a direct distance dial teleprinter system which permits a subscriber to directly dial any other subscriber on the network. A multiple address service was offered to Telex users in 1971 through CNT's message-switching computer complex located in Toronto.

A medium-speed Telex service is offered exclusively by CNCP Telecommunications operating in the speed range of 100 to 250 words a minute. The subscriber may connect his own computer or data sending-receiving equipment or lease terminal equipment from CNCP. This service provides a direct dial interconnection with subscribers anywhere in Canada to achieve a medium-speed range transfer of data from one location to another. The toll rates to subscribers are the same for standard-speed and medium-speed Telex service and are based on time used and distance. A variety of speeds and codes can be handled, making this service useful for data transmission.

Telepost. CNCP and the Canada Post Office introduced a new communications service called Telepost on October 1, 1972 which fills a gap between telegrams and first-class mail. It is available to CNCP Telex and Telenet subscribers, and enables them to send messages electronically by Telex to a post office centre for delivery to the addressee.

Telex terminals have been installed in post offices across the country, where messages are placed in specially designed tri-colour envelopes and delivered through the normal mail stream. Next-day delivery is provided to virtually any postal address in Canada. There is no restriction on the length of the message. The charge is 75 cents for the service, in addition to regular Telex charges. A special delivery Telepost can be sent for an additional 40 cents.

Teletypewriter exchange service (TWX) is provided in Canada by TCTS companies. The service provides for switched, dial-up communication on a two-point or conference basis between teletypewriters at a speed of 100 words a minute or 10 characters a second. Both terminals can send and receive on the same connection, but not simultaneously. TWX basic service is a standard teletypewriter for use with relatively simple message transaction application. TWX premium service has all the basic features and in addition is designed for more complex order-writing systems requiring a heavy-usage terminal capable of handling forms, form tabulation and multi-copies. There are 4,600 TWX subscribers in Canada and almost 40,000 in the United States. TWX subscribers can connect with overseas teletypewriter customers through International Telex.

Private wire teletype systems. Although private wire services are still significant in the telecommunications industry, the prime communications users are supplanting their private wire systems with computer-controlled store-and-forward systems.