

telephone companies, either privately or publicly owned—the Alberta Government Telephones, the British Columbia Telephone Company, the Manitoba Telephone System, the Maritime Telegraph and Telephone Company Limited, the Saskatchewan Government Telephones, the Avalon Telephone Company Limited, the Bell Telephone Company Limited, and the New Brunswick Telephone Company Limited. In addition, there are nearly 2,000 independent telephone companies providing private service in smaller communities across the country, many of which link into the Trans-Canada Telephone System for world-wide telephone access. Each company has a monopoly within its own territory and is subject to government regulations at the appropriate level—federal, provincial or municipal.

CN Telecommunications, the largest single telecommunications system in Canada on the basis of area served, provides telephone service for residents in the Yukon and Northwest Territories, in parts of Newfoundland, and in northern sections of British Columbia and Manitoba. In all, there are some 30,000 subscribers on the CNT telephone network. Without exception, all the CNT exchanges are of the automatic dial type. Subscribers in the Far North have access to the outside world via CNT-operated long-distance toll centres at Whitehorse, Y.T., Fort Nelson, B.C., and Hay River and Inuvik, N.W.T. In some areas, such as the Mackenzie River delta, short-haul long-distance calls are handled by automatic toll ticketing similar to that used by the large telephone companies in the major southern Canadian centres. A recent multi-million-dollar expansion program has brought telephone service to an additional fifty communities in Newfoundland, and many isolated settlements now have as modern a telephone service as any in Canada.

The latest telephone innovation is the electronic exchange and the touch-tone telephone, developed in the United States. The dial is replaced by push-buttons, each of which, when pressed, emits a tone that activates the exchange to contact the desired party. Electronic exchanges are now being used in some areas by the Trans-Canada Telephone System and CN-CP Telecommunications are using a similar touch-tone application in their Broadband Exchange Service (see p. 864).

Public Telegraph Service.—Canada's telegraph systems are operated by CN and CP Telecommunications. These companies operate telegraph offices, often amalgamated, in all ten provinces and in the Yukon and Northwest Territories and messages can be sent to and from any point in Canada or throughout the world via the overseas cable services (see pp. 871-872). At one time, much of the CNT and CPT revenue came from telegraph message traffic but the proportion now accounted for by such traffic is only about 20 p.c. Even so, the reduced telegraph message traffic is handled by the most up-to-date facilities. Messages are transmitted by teleprinter and facsimile equipment, and telegraph networks over which public messages flow are controlled by computers. In other words, 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.

Telex Service.—Telex, by far the largest teletypewriter service in Canada, is provided by CN-CP Telecommunications. Its network of more than 13,500 subscribers in Canada interconnects with the Western Union Telex network in the United States and with European and world-wide networks of at least 250,000 subscribers. Telex is a direct distance dial teleprinter system which permits a subscriber to directly dial any other subscriber on the network. Two speeds are offered to customers—66 words a minute and 100 words a minute—at costs determined on a time-used and distance basis. There is no minimum charge. CN-CP Telecommunications were the first to introduce this dial-and-type service in Canada 11 years ago.