

respective provincial governments in 1908-09. The seven major telephone systems that developed across Canada worked together to establish long-distance service on a national basis and in 1931 they founded the Trans-Canada Telephone System, which now has eight full members including both shareholder-owned companies and provincial government systems. They are as follows:—

The Avalon Telephone Company Limited (joined in 1957)
Maritime Telegraph and Telephone Company Limited
The New Brunswick Telephone Company Limited
The Bell Telephone Company of Canada (serving Ontario and Quebec)
Manitoba Telephone System
Saskatchewan Government Telephones
Alberta Government Telephones
British Columbia Telephone Company.

These eight systems, together with the Island Telephone Company (P.E.I.), Québec Téléphone (lower St. Lawrence), Ontario Northland Communications and the Okanagan Telephone Company, comprise the Telephone Association of Canada. This organization was established to ensure general co-operation in telephone matters.

As already mentioned, the steadily rising demand for local and long-distance service has called not only for general expansion of Canadian telephone systems but for the constant introduction of modern facilities and services. A number of Canadian companies have developed what is called "Extended Area Service" in many of the communities they serve. This plan eliminates long-distance charges between the larger centres and their suburbs, or between two or more places with close community of interest.

As part of the transmission facilities needed to carry the great volume of long-distance traffic as well as network television programs, the members of the Trans-Canada Telephone System collaborated to build a microwave radio relay network spanning Canada from coast to coast. The longest such network in the world, it was placed in operation on July 1, 1958. It is maintained jointly, each system member being responsible for the section falling in its operating territory. This network, ultimately capable of carrying 2,400 long-distance conversations and two television programs at the same time, is steadily being expanded toward the limit of its capacity. In addition, extensions to the original network have been made, bringing long-distance telephone service and television programs to many more remote areas.

For several years operators have been dialing many long-distance calls direct to the wanted telephone. The modern switching system that makes this possible also permits customer dialing of long-distance calls. Known as Direct Distance Dialing, customer dialing of long-distance calls has been in effect for some time in several Canadian communities and more centres are being added to the list each year. A long-range international plan, developed by the telephone companies of Canada and the United States, eventually will allow practically every telephone-user in North America to dial direct to almost any other telephone on the Continent. Direct dialing, an added convenience for telephone customers, will allow Canadian telephone companies to handle economically the ever-growing volume of long-distance calls.

This volume of long-distance calls will be augmented by a new machine-to-machine communications method which uses the direct distance dialing switching network. Machine-to-machine communication on a large scale has been made possible by the Data-Phone—a device which, when associated with a telephone and a business machine such as a teletype, transmits information over long distances—information supplied by the business machine is converted by the Data-Phone into tone-signals which are carried over the