

efficient use of existing circuits and ensures greatly improved accuracy, vital in high-speed data transfer.

The provision of data communications in Canada is undertaken competitively by the two major national carriers, CNCP Telecommunications and the Trans-Canada Telephone System. Data communication between Canada and points outside North America is provided through the facilities of Teleglobe Canada. In cooperation with the British Post Office, Teleglobe inaugurated the Canada-UK Data Link on January 1, 1976. Work is under way to expand the service to other countries with the aim of ultimately introducing a public data network in conjunction with the domestic carriers and foreign telecommunications administrations.

16.1.1.4 The network

Three microwave routes and a satellite system form the backbone of Canada's telecommunications network. Two of the routes belong to the Trans-Canada Telephone System, the third to CNCP Telecommunications. Canada's first coast-to-coast microwave system, completed in 1958 by TCTS, and extending almost 4,000 miles (6 400 km) carries the bulk of network traffic. Telesat Canada provides additional facilities throughout Canada over satellite communications, and Teleglobe Canada uses Intelsat satellites, as well as undersea cables to provide the global connection.

Telesat Canada launched Anik I, the world's first domestic geostationary commercial communications satellite on November 9, 1972. A back-up satellite, Anik II, was launched in April 1973, and another, Anik III, in May 1975.

Initial commercial service to Telesat customers began during January 1973 through a network of earth stations strategically located across Canada. Basically, satellite communication is a long microwave link; transmission is comparable to that of existing microwave systems with the added advantage of the capability of transmitting virtually all forms of telecommunications to those areas which had not previously been well served by more conventional means.

The Anik series provides television distribution to all parts of Canada and improved telephone communications to the North, and supplements existing microwave systems. The Anik generation of satellites has a projected seven-year life cycle.

The satellites used by Telesat and Teleglobe Canada are stationed about 22,300 miles (35 900 km) above the earth. Although Anik is exclusively a Canadian domestic system, other satellites in the Intelsat international system and the vast network of undersea cables make it possible for Canadians to communicate with virtually all countries in the world.

Satellite transmission made its debut with the launching of Telstar in 1962, 10 years after the first long distance telephone and multi-purpose submarine cable in the world (TAT I) was laid across the Atlantic by Teleglobe Canada and three other carriers. CANTAT I was laid in 1961 with 80 circuits but now CANTAT II, with 1,840 circuits, meets growing demand for overseas telecommunications.

16.1.1.5 Telecommunications in the North

Anik, the Inuit word for "brother", is appropriate to the Canadian satellites series. The advent of Anik I opened a new era of telecommunications in the North providing reliability, flexibility and new services, including television broadcasting, to remote communities not served by terrestrial communications facilities. Previously, northern communication was accomplished mainly by tropospheric scatter systems and high-frequency radio. Both methods, as well as microwave and land line facilities, are still used as dictated by circumstance.

Telecommunications services in the remote North are operated by Ontario Northland Communications, British Columbia Telephone Company, CN Telecommunications and Bell Canada. BC Tel provides telecommunications services along the west coast to Alaska.