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Anik A Series



The Department of Communications of the Federal Government ran a competition across Canada to name Telesat's first series of satellites. In November 1969, the winner of the contest was announced. A St. Leonard, Quebec, supermarket employee, Mary Frances Czaplá suggested ANIK which means "brother" in the language of the Inuit. It was selected as the winning entry by a panel of judges which included Marshall McLuhan.

In September, 1970, Telesat awarded a contract for three Anik A Series spacecraft to Hughes Aircraft Company of Los Angeles, California. Major Canadian subcontractors included Northern Electric Company, Lucerne, Quebec and SPAR Aerospace Products Ltd. of Malton, Ontario. Canadian content in the contract was approximately 20 per cent, with provision for Canadian construction of similar value in future Anik-type satellites sold by Hughes in the world market.

Each satellite had 12 transponder channels in the 6/4 GHz band (transmitted at frequencies of 4 GHz (billion hertz) and received at 6 GHz) and were located at 104°W, 109°W and 114°W longitude. The satellites were stabilized in orbit by the technique known as spin-stabilization, in which the communications antenna and associated platform are de-spun so that the antenna points continually toward Earth.



Anik A1 was launched in November 1972, which culminated 39 months of meticulous, demanding effort by Telesat's 212 employees. Meanwhile, on trucks, trains, ships and barges, weekly shipments of glass fibre containers were leaving the Raytheon Canada plant in Waterloo, Ontario for destinations across the length and breadth of Canada.



On site, the containers were anchored to previously prepared foundations where they became the permanent shelters for the earth station electronics.

When Anik A2 was launched in April 1973, a complex system of 37 earth stations (transmit/receive antennas) were providing a variety of television, radio and telephone services for five major Canadian customers.

The Canadian Broadcasting Corporation (CBC) was one of these early customers, giving Canada the world's first national satellite television system when, in 1973, it provided live television to the remote Canadian north for the first time.



In addition, CBC Radio listeners were treated to higher quality sound. Network services were provided to all major regional centres across southern Canada, as well as to several northern communities, appropriately adjusted for time zones and regional content.

January 1973 saw the commencement of commercial services for Bell Canada and the participating carriers, when the first reliable, long distance telephone service to Resolute Bay and Frobisher Bay (now Iqaluit) was established over satellite, replacing radio circuits. One month later, the first of several 'Thin Route' services was provided to Igloolik and Pangnirtung, providing long distance service to these communities for the first time. Using the Anik A1 satellite, telephone subscribers in the North were able to make long distance calls to the South over satellite toll trunks providing the same quality as those in the South, with the added benefit of increased reliability. Also in 1973, a 960-circuit message service between Toronto and Vancouver was introduced to provide additional capacity to the existing terrestrial-based toll trunk network.

In 1974, Telesat inaugurated service for the Canadian Overseas Telecommunications Corporation (now Teleglobe). This service was used to interconnect overseas long distance calls from central and western Canada to the transatlantic cable terminating near Halifax. Anik A3 was launched in May 1975, at the time when Telesat began to implement 'transportable' earth stations for TV transmission as well as remote/transportable telephony transmission.



In 1976, working with the CBC, Telesat relayed live remote television transmissions from Banff, Alberta, the site of the Provincial Premier's Conference. Later that year, Telesat's satellite facilities also played a major role in providing live television coverage for the Olympic Games held in Montreal.

In 1977, a six-month pilot project was initiated to provide a video teleconference link between Calgary, Toronto and other cities. This was the first video conferencing link of its kind and proved to be the forerunner of one of today's common applications of satellite communications technology.

In 1978, within hours of the crash of a Russian nuclear powered satellite in the Northwest Territories (NWT), Telesat installed a transportable telephony earth station for the coordination of recovery activities. A year later, Telesat had 19 such transportable telephony earth stations in operation throughout the country. Global and CTV television networks made the move to satellite transmission in 1978, both making extensive use of satellite transmission for news gathering and program syndication purposes.