

The gallows frame telephone was developed by Alexander Graham Bell. It transmitted the first speech sounds on June 3, 1875.

Anik B, a Canadian communications satellite launched in December 1978, makes 12 channels available for commercial domestic use. The satellite weighs 923 kilograms and is 1.8 metres wide and 11.3 metres high with its solar panels extended.



## The electronic bond

Canadian determination to overleap vast distances and difficult geographical barriers electronically emerged early. In 1852, Canada became the first country in North America to lay a submarine telegraph cable — between New Brunswick and Prince Edward Island on Canada's Atlantic seaboard. The first long-distance telephone conversation in history was carried in 1876 between Brantford and Paris, Ontario, on lines provided by the Dominion Telegraph Company of Canada. The first transatlantic radio signals, resulting from research substantially funded by the Government of Canada, were received in Newfoundland.

Canada now has a total telecommunications capacity greater in nearly every category than any country in the world. As a proportion of total population, Canada has more telephone subscribers, broadcast receivers, broadcast channels available by cable and cable television subscribers than any other nation.

With a small population scattered throughout a vast country divided by formidable natural barriers, the creation of an elaborate and highly sophisticated telecommunications system was a vital necessity. These factors also set their impress upon the system and shaped it in a unique way. There were too few people and too much territory in Canada for private investors to finance the construction of such a system almost wholly out of their own pockets, as was largely the case in the United States. On the other hand, the tradition of private enterprise was too strong throughout much of this country for Canadians to imitate many European examples in which nearly the entire telecommunications plant was owned and operated by a state agency. Instead, Canadians opted for a mix of public and private enterprise, with the latter predominating. The public sector still plays a key role on the Canadian prairies and in the provision of such special services as overseas and space communications.

In the case of telegraphic communications, Canada's two transcontinental railroad companies - the publicly owned Canadian National Railways and the privately owned Canadian Pacific Railways - had taken over most of the business by 1920. Now, with their telecommunications divisions united under the name "CNCP Telecommunications", a unique blending of public and private enterprise operates the Canadian public message telegraph service, as well as Canada's telex traffic, a national data communications system. Though 250 telephone companies still survive in Canada, two private companies and their subsidiaries own and operate most of the facilities in the west coast province of British Columbia and in central and eastern Canada. On the prairies, agencies of the three provincial governments own and operate telephone systems serving an area of 1,763,142 square kilometres. In the area of broadcasting, the publicly owned Canadian Broadcasting Corporation operates six national networks in two languages, in competition with a vibrant private sector. Canada's extensive satellite system is owned and operated by Telesat Canada, a corporation jointly owned by the Government of Canada and a consortium of Canada's major telecommunications carriers, both public and private. Teleglobe Canada, owned by the Government of Canada, links the Canadian telecommunications system with its counterparts in countries all over the world.