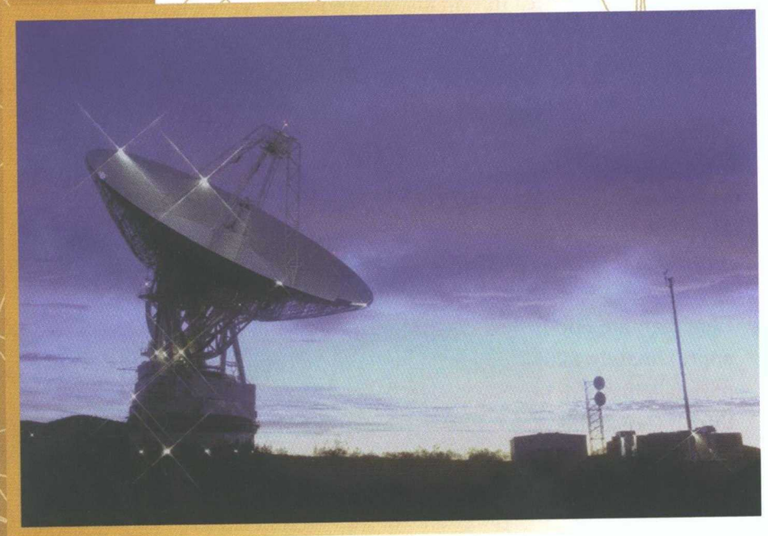
Information and Communication Technologies



Leading-edge information and communication technologies (ICT) are key elements of a country's infrastructure and of its international competitiveness. Working from a sophisticated domestic base, Canadian companies have helped upgrade information and communication systems around the world.

Canadians have been setting the pace in some of these industries for more than a century. The very first telephone call was placed in Canada by Alexander Graham Bell, the Canadian inventor of the telephone. Canadian ICT companies continue to win contracts throughout the world, particularly in the highly competitive U.S. market.

One need only look at a map to see that Canada's communications systems have always had to overcome challenging geography and climatic extremes. Canada's recent telecommunications breakthroughs have coincided with information technology advances in software, computers, peripherals, instrumentation and services, multimedia, geomatics and electronic components. Canadian ICT suppliers are also responding to the growing

CANADIAN TELECOMMUNICATIONS "FIRSTS" INCLUDE:

- **THE WORLD'S FIRST ALL-OPTICAL NATIONAL R&D INTERNET (2000)**
- **THE WORLD'S MOST POWERFUL GEOSTATIONARY MOBILE COMMUNICATIONS SATELLITE (1996)**
- **THE WORLD'S MOST COMPREHENSIVE FIBRE-OPTIC NETWORK (1994)**
- **THE WORLD'S LARGEST POINT-TO-POINT ASYNCHRONOUS TRANSFER MODE (ATM) NETWORK (1993)**
- **THE WORLD'S LARGEST CONTIGUOUS CELLULAR NETWORK (1990)**
- **THE WORLD'S FIRST NATIONAL GEOSTATIONARY SATELLITE (1972)**
- **THE WORLD'S FIRST PACKET-SWITCHED NETWORK (1972)**
- **THE WORLD'S FIRST DOMESTIC DIGITAL MICROWAVE NETWORK (1971)**

market demand for electronic commerce products by advancing their traditional expertise in document management, data-mining, multimedia tools and other areas to the Internet environment. At the same time, Canadian companies are developing a worldwide reputation in new areas like encryption.

COMMUNICATION TECHNOLOGIES

Canadians are the largest users of telephones in the world — 99 percent of households have telephones and more than 90 percent have been digitized. As well, 92 percent of Canadians have access to multiple television channels through cable networks.

Canada has the lowest Internet access costs in the world. It is tied with the United States in Internet use per capita, is second only to the U.S. in Internet hosts per capita, and leads the world in the use of electronic banking.

Coast-to-coast fibre-optic networks provide a full range of commercial services as well as the necessary bandwidth required to develop and test tomorrow's high-speed multimedia services. The spiralling need for high-capacity data connectivity and the trend toward carrier consolidation have encouraged many Canadian companies to invest in and develop broadband technology, which will allow them to offer a wider range of voice and data services.

Canadian telecommunications companies are active in such countries as the United States, the United Kingdom, Brazil, China, Thailand and the Philippines, installing the same efficient communications networks that Canadians have come to depend upon at home.

Over the next 10 years, Canada's local and long-distance networks will be upgraded to interactive, two-way broadband capacity, at which time about 85 percent of all businesses and homes in Canada will have access to the multimedia traffic lanes and technologies of the information highway. Canada's goal is to build the highest-quality, lowest-cost information network in the world.