

HIGHWAY

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data networks, interconnected with satellite, cellular telephone and mobile radio networks. Telephone service is virtually universal throughout the country, reaching 99 per cent of households.

Businesses and homes are served by three national telecommunications networks. The Stentor Alliance of nine major telephone companies and Unitel Telecommunications Inc. provide telephone services. In addition, 50 smaller companies serve other regions of the country. Teleglobe Canada provides the connections for international long-distance service and Telesat Canada operates Canada's satellite communications networks.

active two-way broad-band capability.

In undertaking Beacon, Stentor is giving special attention to meeting the needs of companies based in Canada. As Stentor's Chairman, Brian Canfield, puts it, the purpose of the program is "to give Canadian business the edge it needs to compete effectively — both at home and in the global marketplace." Specifically, says Canfield, that means "seamless end-to-end service on a global basis."

When Beacon is complete, 80 to 90 per cent of all businesses and homes in Canada will have access to the multimedia traffic lanes and technologies of the Information Highway.

Canadian telecommunications firsts

Canada has been in the forefront of telecommunications pioneering for a long time.

The milestones of leadership include:

- 1874** Invention of the telephone in Ontario.
- 1948** World's first commercial microwave relay system.
- 1971** World's first domestic digital microwave network.
- 1972** World's first national geostationary satellite-based telecommunications network.
- 1985** World's longest fibre optic communications network.
- 1990** World's longest contiguous cellular network.

**Staying in the lead**

Recent developments confirm that Canada will maintain its Information Highway lead.

Last November, the Stentor Alliance announced it will spend a total of \$8 billion over the next 10 years on its "Beacon Initiative," a program to upgrade Canada's local and long distance networks to inter-

The Beacon plan includes replacing copper wire with fibre-optic cable to bring services to neighbourhoods and coaxial cable to cover the last lap to home.

About \$500 million of the Beacon investment will be spent on installation of advanced switches and other equipment needed for delivery of broad-band audio, video and data services.

Information technologies: a solid industrial base

Canada's telecommunications and information technology is one of the fastest growing sectors in the economy.

Comprising over 13,500 firms, the sector employs an estimated 300,000 people and accounts for 35% of all industrial research and development done in Canada. It includes Canada's multinational giant, Northern Telecom, internationally prominent firms such as Newbridge Networks, Mitel and SHL Systemhouse and the subsidiaries of several foreign multinationals including IBM and Digital Equipment.

Counting telecommunications equipment and services, software and computer services and the manufacture of computers, peripherals and components, the sector produces more than \$40 billion worth of goods and services each year.

Meeting business needs

The Stentor plan also calls for developing innovative new services to meet business needs. As part of the Beacon initiative, the Alliance announced last year that it will set up a venture capital fund of up to \$50 million to help software and other companies develop multimedia applications and products for use on the Information Highway.

Stentor will also spin off a new company to act as a broker for products and applications. The company will be active in such areas as distribution of multimedia equipment and software, and third-party service support, including content storage and billing, and the development of directories and customer databases.