

CHAPTER 14

COMMUNICATIONS

Numerous elements in the lives of Canadians are shaped and reshaped by the remarkable progress of science and technology. Work, leisure and educational, health care and social services are all influenced by the technical revolution, a revolution propelled by the convergence of two of the most powerful technological forces in the world today: telecommunications and information technology.

New applications of combined computer/communications technologies are changing Canada's workplaces. "Information workers", who create, process, store, distribute, analyze and otherwise handle information, comprise a major portion of Canada's workforce. Automated tellers, point of sales terminals and inventory control systems have provided numerous conveniences.

Canada's strength as a world leader in telecommunications provides a solid basis for realizing countless applications of innovative technologies, and the country's excellent telecommunications system, its "electronic highway" for moving information, keeps pace with new technologies and incorporates new services as they become available.

In the current "information age", knowledge and information resources underlie economic, social and cultural prosperity — resources to be fostered and applied in solving such challenges as improving the quality and delivery of our social, educational and health care services, creating new jobs in information-related fields, and increasing the productivity of industries that face intense international competition.

14.1 Telecommunications system

The Canadian telecommunications system is composed of private and public elements operating under federal and provincial jurisdictions. It includes nine major and many smaller telephone companies, a telegraph-based company that competes with the telephone companies in everything but public telephone services, a domestic satellite carrier, an overseas carrier and hundreds of cable television companies. In addition, teletext

and datacasting services, sending information on television signals, are likely to be implemented in the near future.

On a per capita basis, Canada has the most extensive telecommunications system in the world. It stretches into virtually every community of the world's second largest country. In 1986, over 98% of Canadian homes had telephones, and more than half of these had two or more telephones. In 1986, the assets of the Canadian telephone industry totalled more than \$23 billion and its operating revenues were approximately \$11 billion.

Communications in Canada contributed 2.8% (\$10.3 billion) of the country's Gross Domestic Product (GDP) in 1986 (in constant 1981 dollars).

14.1.1 Carriers

Canada's telecommunications carriers own and operate the networks, equipment and services of the national system. While some carriers are private companies, a significant number are publicly owned. All are required, by law, to carry user calls, messages and other information at a reasonable cost without changing the content.

Although the majority of carriers are telephone companies, they also provide other services, including data transmission. Investment in plants, equipment and buildings owned and operated by the carriers is ongoing; a significant proportion of it is used to implement new computer and communications technologies and to modernize infrastructures.

Telecom Canada is a consortium of large carriers, linking the regional networks of 10 telecommunications companies across Canada. Six are privately owned telephone companies and three are provincially owned, by the governments of Alberta, Saskatchewan and Manitoba. The tenth member of the consortium, Telesat Canada, owns and operates Canada's satellite communications system.

CNCP Telecommunications, another major carrier, provides services other than public telephone service across Canada in competition with Telecom Canada. Teleglobe Canada is the