## Information and Communication Technologies



In 1998, Canada sold over \$11.8 billion in telecommunications equipment, mostly to the United States, China and the United Kingdom. Canadian companies specialize in several areas of telecommunications, including switching systems, broadband and multimedia products and services, fibre-optic cabling, rural communications, submarine cable systems, satellite networking, computer telephony integration and mobile and cellular phones. In fact, there are very few ICT areas in which Canadian companies are not at the forefront.

The willingness to form strategic alliances and transfer technology is an essential characteristic of a good partner. Many joint trade and investment

opportunities have been realized after representatives of other countries visited Canada through the Telecommunications Executive Management Institute of Canada education program. Countries are moving toward the creation of more open economic systems, welcoming healthy competition from abroad and joint enterprises within their own borders.

Canada itself encourages both competition and outside investment. Its regulatory agency, the Canadian Radio-television and Telecommunications Commission, has effectively opened competition for local telephone and international long-distance service to all suppliers, including cable companies, resellers and wireless providers. As a result, telecommunications companies can now provide new information and multimedia services such as home banking and shopping, distance education and telehealth.

## INFORMATION TECHNOLOGIES

Canadian exports of information technology products, including computers, consumer electronics, peripherals and software products, are on the rise. With Canadian firms recording strong performances and demonstrating growing capacity, offshore investors and companies are eager to form alliances in Canada.

Canada's expertise in information technologies has traditionally been, and continues to be, in software and multimedia products and in geomatic solutions. Revenues of the top 100 Canadian software product companies totalled over \$3.1 billion in 1999 (up 26 percent from 1998), of which 77 percent came from exports. Similarly, revenues of the top 50 professional service firms grew by 39 percent, reaching \$4.8 billion in 1999. Many of these



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MANAGEMENT.

companies have formed strategic alliances with foreign partners to enhance their distribution capabilities and foster new product development.

Canada has established leading positions in specialized markets such as graphics, Internet tools, document management, geographic information systems, systems development and information technology management. The SchoolNet program, a co-operative venture among federal, provincial and territorial governments, is integrating the Internet into virtually every classroom, library and community across the country to help Canadians develop the skills to meet the demands of today's information-and knowledge-based economy.

In the field of new media or multimedia, Canadian firms are developing high-quality training and educational products and are also excelling in specialized areas such as animation, 3D simulation and photo applications. In fact, about 60 percent of the software used for movies in Hollywood, including *Apollo 13*, *Titanic* and *Godzilla*, was developed in Canada.

The United States is still the largest foreign market for Canada's software and new media industries, but Canadian companies are quickly building international alliances in countries such as the United Kingdom, Brazil, Peru, Norway and Singapore.

Geomatics, an area in which Canada has become recognized as an international leader, involves the acquisition, storage, analysis, distribution and management of geographically referenced information. This technology can be used to manage information in such diverse areas as natural resources, weather and tax collection. Canadian industry-government alliances have successfully captured a number of international geomatic projects.

Canada is also well positioned to compete in electronic commerce with its enviable policy framework, which includes an encryption policy, privacy and digital signature legislation, a framework for consumer protection currently under development by industry and consumer representatives, tax neutrality, and a comprehensive review of intellectual property rights.



