- to collect and disseminate market intelligence and information on business and investment opportunities;
- to promote exports of high-quality paper and actively pursue market opportunities for value-added, wood-based construction materials;
- to co-operate with the Canadian Pulp and Paper Association (CPPA), which is developing an action plan for China, the Pulp and Paper Research Institute of Canada (PAPRICAN), FORINTEK, FERIC and counterpart Chinese associations and research institutes;
- to use the renewal of the forestry
   Memorandum of Understanding (MOU)
   between Canada and China to put forward
   projects leading to the export of forest
   products and services;
- to target projects supported by international financial institutions (IFIs) and assist in finding other financing sources;
- to use the proposed Canada Mortgage and Housing Corporation (CMHC) demonstration project in Shanghai, to promote Canadian value-added construction materials, housing technology and related services;
- to encourage a Team Canada approach to the China market by facilitating contact among Canadian equipment manufacturers, service providers and pulp, paper and value-added product suppliers;
- to assist Canadian companies in finding local representatives, agents, and joint venture and other business partners in China; and
- to work more closely with the private sector to market pulp and paper products in China and Hong Kong.

# Information Technologies and Telecommunications

Significant developments in China's information technologies and telecommunications (IT&T) sectors are reinventing Chinese society.

Government policy and planning can hardly keep pace with changes in the market. This pace is particulary evident in markets that have a direct impact on consumers, such as telecommunications services (e.g. mobile telephone, cable television, Internet) and personal computers.

Chinese government and private-sector organizations are taking advantage of fierce international competition to accelerate technology transfer and acquire technology and equipment. Intellectual property protection, project financing and a complex product-approval process constitute major challenges to doing business in the Chinese market.

As a regional communications hub and crucial source of venture capital, Hong Kong plays an active, complementary role in China's information technology sector. Hong Kong is also a major market in its own right for a spectrum of information technology goods and services. Several international firms use Hong Kong as a base for marketing ventures in Greater China and Asia.

Direct local representation or a qualified and reputable agent/distributor are critical to a successful business strategy. Frequent visits and an investment of time are also required to establish business relationships in China, making the cost of doing business very high. Only companies that are committed to a long-term presence in this market should contemplate exporting to China.

Opportunities in advanced technology fall under three broad categories:

- Telecommunications
- Computers and Software
- Space

## **Telecommunications**

### **Business Environment**

The Ministry of Posts and Telecommunications (MPT) and the increasingly independent Provincial Telecommunications Administrations (PTAs) are the key players in this market. Other ministries and large state-owned enterprises are also active, and contribute significantly to the development of this competitive sector. The MPT is clearly maintaining its dominant position over China Unicom, a carrier that was created in 1994 to introduce competition in the telecom operation business.

All areas of the national public telecommunications network developed significantly in 1996. Spectrum availability has been improved as a result of joint agreement between the MPT and the People's Liberation Army, which also maintains spectrum ownership.

#### Data Profile

- The total switching capacity has increased by 15 million lines to exceed 100 million lines.
- By 1996, subscribers had surged from 44 million to 53 million, for a national penetration rate of 6.2 percent, 22 percent for cities.
- The government's objective for the year 2000: 170 million lines with a national penetration rate of 10 percent, and reaching between 30 to 40 percent in the cities.

## **Mobile Telephones**

- Currently, 70 percent of mobile phone technology is based on GSM (Global System for Mobile Communications). China has deployed, at least on a trial basis, a number of mobile technologies (D-AMPS and CDMA), both based on North American standards.
- By the year 2000, mobile phone users, currently estimated at 6.84 million, should reach 18 million.

#### Data Communications and the Internet

- China's packet switched data network (ChinaPAC) has a capacity of 120 000 terminals and currently has 50 000 users. The public digital data network (ChinaDDN) has 40 000 users and a total capacity of 100 000.
- China's Internet sector counts four national points of entry, with more than 100 Internet service providers offering a wide range of on-line services. There are now only 150 000 Internet users in China.
- As many as one million Internet users could be based in Beijing alone by the year 2000, according to MPT predictions.

## **Market Opportunities**

## China

It is estimated that China will spend more than \$50 billion over the next five years on telecommunications and network infrastructure. The traditional telephone infrastructure sector will remain a pillar of Canadian exports to China, particularly in the context of the rapid development of the GSM network, trunk lines and rural telecommunications.

