

The northeastern region is already far ahead of this level. Line density in Nuevo León stands at almost 19 per 100 persons and new services are being added. But there is considerable room for long-term growth. Canada and the United States have telephone line densities of about three times Monterrey's level. Foreign companies are limited to 49 percent ownership of telecommunication companies, and a number of new joint ventures have been created as a result of the newly deregulated environment.

Grupo Alfa, one of Monterrey's large conglomerates, has partnered with AT&T to form *Alestra*, which will enter the long distance market. *Alestra* will also offer wireless communication services. The partners will invest US \$1 billion over the next 5 years. Other telecommunication companies with offices in Monterrey include *Avantel*, a partnership of *Banamex* and MCI, and *Marcatel*, which includes Radio Beep, Westel and Teleglobe.

In spite of the deregulation, *Telmex* retains a monopoly over local telephone services, and remains an important customer for telecommunication equipment. *Telecom de México* is expected to privatize a number of services including public fax, telegram, electronic mail and satellite communications. It will retain its core function as the provider of Mexico's telecommunication backbone.

COMPUTER TECHNOLOGIES

As a result of the government's trade liberalization initiatives, Mexican companies have been forced to modernize their operations. There was a surge in sales of computers and related software in 1992, when import restrictions were rescinded. But there were still only about 45 personal computers for every 1,000 inhabitants in 1994. This compares with about 250 in the United States.

Nuevo León is far ahead of these national trends. As home to many large *grupos* and multinational enterprises, Monterrey established itself long ago as a leading computer user. In 1990, there were just over 17,000 computer professionals working in Mexico, according to estimates from *Instituto Nacional de Estadística, Geografía e Informática (INEGI)*, National Institute for Statistics, Geography and Informatics. Nuevo León, with 3.8 percent of the population had 19 percent of the professionals. At that time, about one of every 1,000 inhabitants of Nuevo León was a computer professional, compared with one out of every 1,700 in Mexico City.

Monterrey-based companies continue to be intensive consumers of computers, especially for management information systems (MIS) and industrial automation. Geomatics is also an emerging application, especially with the new environmental initiatives of the Nuevo León government. The many technological universities and colleges in the region are also important customers.