

Similarly, the major software publishers are all represented in Mexico. According to industry experts, approximately 90 percent of the packaged software sold in Mexico comes from foreign firms, but imports claim a smaller share of the custom software and services market.

### **Mexican Competitors**

Mexico has no major domestic software firms. About 500 small software developers focus on specialized applications, especially for office automation and government administration. Their share of the overall software and services market is as high as 30 percent. About half of the software they produce is for personal computers, about 30 percent for minicomputers and the rest for mainframes.

The private sector requires accounting software appropriate for the Mexican tax environment, and this has created a demand for domestically produced software. Many Mexican firms concentrate on adapting and customizing foreign products for the Mexican market.

## **TRENDS AND OPPORTUNITIES**

The devaluation of the peso in December 1994 resulted in a sharp reduction in the demand for imported products. According to industry observers, the demand for computer technology fell by at least half in the first few months of the year. Hardware has borne the brunt of the decline. Sales of software and services will continue as users try to get the most out of recent hardware purchases. Most observers see the present situation lasting until the end of 1995 and gradually improving in 1996.

### **Geomatics**

Decision makers interviewed for this summary stressed the long-term

## **Major Computer Companies in Mexico, 1995**

| <b>Company</b>                       | <b>Principal Activity</b> |
|--------------------------------------|---------------------------|
| <b>Medium</b>                        |                           |
| APEMEX                               | software house            |
| Autodesk Inc.                        | software representative   |
| Computadoras y Capacitación Integral | consultants               |
| Grupo TEA                            | software house            |
| Megaplan                             | software house            |
| Microsoft México                     | software representative   |
| Moore de México                      | software representative   |
| SIGA Desarrollos                     | software representative   |
| UNISYS de México                     | hardware distributor      |
| <b>Large</b>                         |                           |
| Digital Equipment de México          | hardware manufacturer     |
| Oracle de México                     | software distributor      |
| Tecnología en Desarrollo de Sistemas | software house            |
| Universidad Ibero Americana          | academic                  |
| <b>Very Large</b>                    |                           |
| AT&T, GIS México                     | hardware distributor      |
| Hewlett Packard de México            | hardware manufacturer     |
| IBM de México                        | hardware manufacturer     |
| Novell de México                     | software house            |

Source: *Asociación Nacional de la Industria de Programas para Computadoras (ANIPCO)*, National Association of the Computer Programming Industry, 1995, based on membership data.

need in Mexico for some sort of integration of geographical information systems (GIS). Ideally, all geographic information would be accessible through a single server platform. Advanced data analysis techniques, data conversion systems and specialized methodologies such as orthomapping will also be needed as the country's backlog of raw data grows.

The expected lull in equipment purchases creates an opportunity for selling knowledge-based services. Many of the larger buyers have already bought hardware, making education and training a top priority. The provision of training services provides both an immediate market and an opportunity to raise awareness of Canadian technologies.

### **Industrial Automation**

Industry experts interviewed for this study agreed that a trend towards computer integrated manufacturing

(CIM) is only in its infancy in most Mexican industries. Many companies have automated parts of their operations, but few have gone all the way and integrated their process control and planning functions.

Observers believe that there will be a gradual shift towards fully integrated systems over the medium term. In the short run, however, they agree that smaller-scale projects with fast results will dominate the market. Products that can be run on high-end personal computers rather than workstations will be in particular demand. Most companies have access to PCs but cannot afford workstations. Solutions in the US \$6,000 range will have the greatest potential.

Consulting opportunities are concentrated predominantly in general technical services, including training, as well as in systems integration services.