

panies do play an important part in this sector, there are a growing number of Canadian-owned firms which have established themselves successfully in the market. These companies have developed excellent capabilities in software, data communications and specialized hardware products, primarily in terminal equipment and small business systems.

The Canadian-owned firms can be classified as small to medium in size, since most have annual sales of less than \$10 million. These firms have generally chosen not to compete with multinationals in the production of general purpose computers, but have instead concentrated on the design of innovative products which meet needs not fulfilled by other equipment. Generally, such products cover a wide range of applications and incorporate the latest in micro-processing technology.

The following capabilities have met with particular international success:

- Canadian-designed word processing systems;
- personal microcomputers;
- small business microcomputer and minicomputer systems for financial houses, hospitals, libraries, restaurants, manufacturers, etc.;
- "intelligent" terminals, especially those suited to graphics, computer-aided learning and industrial data collection. A special high-resolution terminal has been developed for "Telidon" applications;
- data communication products developed to link computers to data networks, including packet switching;
- proprietary software packages in data base management, file retrieval, and "user friendly" software productivity tools;
- desk-top microprocessors for financial management applications in small businesses.

Recent Canadian Marketing Activity

Several of the more aggressive Canadian firms have already penetrated the European market. Each year, the Canadian government sponsors a stand at a major European electronics show at which eight to ten computer equipment firms are invited to exhibit. In 1981 and 1982, Canadian firms participated in the Salon International de l'Informatique, Télématique, Communication, Organisation de Bureau (SICOB) in Paris.

A number of Canadian firms have gained acceptance of their products in the French market and are actively involved in expanding sales and services. A.E.S. Data Ltd., the best known Canadian computer equipment firm in France, markets its word processing machines through its agent SMH-ADREX. Micom products are sold under the brand name of the parent company, Philips. Other Canadian firms, notably Northern Telecom, Comterm, Gandalf, Mitel, GEAC, Systemhouse, Quasar, Volker-Craig, Memotec and Electrohome are also present in the French mar-

ketplace. It should also be mentioned that service companies such as I.P. Sharp and Hamilton are recognized in France (see Table IV for export statistics).

Market Considerations

In this fast-developing field, tariffs are not a significant impediment but non-tariff barriers (e.g. procurement regulations) control access to the very large computer and telecommunications market. This evolving market does not yet present a problem of standards compatibility. The major requirements for continued sales of computer equipment are quality and performance, provided that the price is competitive. All import/export documents must be in French.

In the videotex field, the French technology (ANTIOPE) and the Canadian technology (Telidon) have not yet penetrated each other's territories, but have collided head-on in numerous other markets. Each technology has obtained some successes, but in general, results are still inconclusive.

The Canadian view is that both countries, and probably others as well, would benefit from an agreement on a truly international or supra-national standard. This would enable users in all countries to share the contents of all available videotex data bases. At present, this is not possible, although recent events, such as the development of a dual mode alpha geometric/alpha mosaic decoder by Austria's MEC MUPID Electronic GmbH. will facilitate at least a measure of mutual database accessibility.

Canadian firms have made some marketing impact on the computer sector in France. However, a great deal of educational work remains to be done to promote Canadian capabilities.

The distance to France is not a major limiting factor, in view of the experience of the U.S. and Japan who are successful foreign suppliers to the French computer industry. The products should be shipped directly from Canada to French distributors and dealers. For representation, the Canadian supplier should seek a distributor or good software house with branch operations throughout France who can service the equipment.

The Competition and Competitor Activity

Canadian companies will face increasing local competition as the French government is providing massive help to the industry in order to recoup its domestic market and expand its share of the world market. The major competitor for the time being is the U.S. which takes up the larger share of imports (about 50 per cent compared to the closer competitor, Germany, with 16 per cent)⁽¹⁾.

(1) These percentages are based on 1981 imports of data processing machines and exclude typewriters, calculators, etc., where Japan is the leading exporter.