

## OPERATING SYSTEMS

The most striking recent innovation in computer operating systems is the introduction of Unix which has the flexibility ("portage") to be used with different operating systems. Nonetheless, Unix will not mean the elimination of operating systems specific to one manufacturer or one line of computers: MVS and VM at IBM or VMS at Digital, for example. In the micro-computer domain, it is likely that MS-DOS and OS/2 will continue to coexist and dominate a large share of the market.

## SOFTWARE AND SERVICES

Software remains the most thriving computer market. Growth of over 20% is expected through 1992 prompted by the prospects of increased demand from the single European market. The fastest growing sector is software designed for specific operations (e.g., management, electronic data interchange). This software represents a third of the total market for software and related services.

The software and services market in France (software includes packages) is dominated by two key groups: hardware manufacturers, and companies providing only software applications and service known as SSII (Sociétés de Services et d'Ingénierie en Informatique).

The various hardware manufacturers cover France through 500 companies. The total number of SSII, regardless of their size, account for 4,600 firms. These suppliers are mainly located in three important regions: Ile-de-France, Rhône-Alpes, and Provence-Côte d'Azur.

Over 50% of the software used in France is developed by an SSII; 32.5% are developed by hardware manufacturers, and 16% by universities or independent users. The major SSII groups in France are: Cap Gemini Sogeti, the leader in Europe and 6th company worldwide; Sligos, CGI Informatique, Métrologie.

## EXTERNAL TRADE

In 1990, France's deficit in the computer equipment sector totalled 18,5 billion FF (\$4 billion). With production worth 66,6 billion FF (\$14,5 billion), exports were 31,1 billion FF (\$6,8 billion); imports amounted to 49,6 billion FF (\$10,8 billion). The total software development and service industry in France represented a total of \$16,5 billion in 1990. The share held by the SSII firms amounted to 53.5% of the total.

## OUTLOOK FOR 1993

The computer industry is experiencing a crisis world-wide. American companies are concerned about the implications of the single European market and protectionist barriers. In Europe, market growth is greater than in the United States, and most of the prominent companies are seeking to enter the European market. IBM has set up in Ireland; Hewlett Packard is already established in France and produces all its equipment in Europe; and Digital is located in Scotland. Medium-size companies, such as Apple and Compaq, are also thinking of investing in Europe.