

Geotechnica	13-16 May 1997, Cologne International trade fair for geotechnics
Achema	9-14 June, 1997, Frankfurt International Meeting on Chemical Engineering, Environmental Protection and Biotechnology Fair
Globe	March, 1998, Vancouver International Environmental Trade Fair and Conference
Envitec	2-6 March 1998, Düsseldorf

Information technologies

Computer hardware and software

Overview—hardware

The German computer hardware market is the largest in Europe with annual sales of \$33 billion. Since 1994, the hardware market has been growing faster than that for software, 10% compared with 8%. This is due mostly to growth in PC and PC printer sales for the home market, as well as work-station and network service sales.

Two-thirds of the 15 million installed PCs are equipped with CD-ROM drives. Integrated and external modem sales have also increased rapidly due to interest in Internet and on-line services. One-third of PCs are in private households, a market penetration of only 14%, giving the home sector potential for remarkable growth.

The leading manufacturers/sellers of PCs in Germany: Siemens-Nixdorf, Compaq, IBM, Vobis.

Market opportunities and constraints—hardware

The market looks particularly favourable for data communication products, graphics and sound cards, multimedia hardware, LAN and mobile LAN products, mobile computing, CTI solutions, UPS systems as well as PC add on and peripheral products.

The German market is wide open to imports, which cover 70% of demand, except for PCs where German companies hold a strong market position. Integrated modems require approval by German authorities. PCs need approval on EMC (Electro-Magnetic Compatibility) under EU regulations. This approval is valid for all the EU.

It is recommended that Canadian companies cooperate with local representatives or distributors who operate on a national level and can provide necessary technical support. There is a trend in the hardware market towards large distributors who are active in other European countries also.

In general the retail side shows strong room for growth in both the hardware and software sectors, but recent events suggest an increased need for caution when filling large credit orders. Among several of the large retail chains, rapid expansion and aggressive pricing aimed at increasing market share have cut deeply into profits. The recent bankruptcy of Escom is seen by some analysts as symptomatic of deeper structural problems in the industry. Field intelligence indicates that some suppliers are reducing lines of credit extended to some retailers and are insuring receivables as a matter of course.

Overview—software

The German software market is the largest in Europe, representing \$41 billion in annual sales, and continues to show excellent potential with a 7% growth rate in 1995. Home software potential is illustrated by the low PC penetration figures for the home market and the fact that Internet access providers have only recently come into the market in significant numbers. Business users have more sophisticated requirements where integrated solutions and network systems play a key role. Sub-sectors such as financial software, database, networking/client server tools, multimedia and the SOHO (Small Office/Home Office) market are also growing well. Some experts would place various portions of the industry as being up to two years behind North America, thus North American software producers are well positioned in the market. Many Canadian firms such as Corel, Hummingbird, Delrina, Alias Research and Eicon Technologies have already gained considerable market share. The software distribution network is largely in the hands of a few large suppliers.

The market for CBT (computer based training) and educational software appears to be one to two years behind North America. The size of the educational software industry is estimated to be \$3 billion in 1995.

The market includes three main groups:

- a) the home market including both adult and school-age users shows a rapidly growing demand for programs that increase skills or scholastic performance;
- b) the school market involving software used in the classroom or by teachers preparing lessons. It remains noticeably underdeveloped with little prospect of significant growth in the near future;
- c) the market for professional training, either public or private. In the public sector a ready acceptance of CBT is evident and significant growth is expected. In the private sector where large firms have also accepted the benefits of CBT, small and mid-sized firms have made very little use of CBT. However, rapid growth is expected in this area. It is also believed that sharply rising training costs will prevail over lingering resistance to the new method.