EDITORIAL

Rivalry between the PC and the Network Computer heats up

Five leading US computer and software groups, Oracle, IBM, Sun Microsystems, Apple and Netscape, have formed a broad alliance including 50 world leading telecoms, computer and electronics firms to develop network computers (NCs).

The partners have endorsed open technical specifications based on Internet standards, the so-called Network Computer Reference Platform 1 (NCRP). These non-proprietary specifications would insure that NCs are not tied to a single microprocessor or operating system design, thus allowing to erode the market dominance of Microsoft and Intel.

NCs are easy-to-use PCs with no or only limited hard drive capacity, priced about 400 Ecus. Instead of relying on their own computing power, NCs tap resources available on-line, for instance on the Internet, thereby giving most of the intelligence to the networks.

This new and cheaper concept may appeal to private or corporate users who do not need the large computing power of PCs. The NC is therefore likely to find its place next to the PC, without replacing it, as each will meet different user needs, even considering the launch of low-price PCs such as the 800 Ecus worth Avantage! of AST Research.

Given the reliance of NCs on networks, the corporate market may be the most promising, at least in the short-to-medium term, since many businesses but only few households enjoy high-speed telecoms connections. In fact, the growth of the residential market for NCs is likely to depend upon the generalisation of broadband networks.

The fact that 50 major firms have said that they will manufacture or market NC terminals, software and components tends to confirm that the NCs is indeed a promising product. They include America's AT&T, Digital and Motorola, Europe's BT, France Télécom, Nokia and Olivetti as well as Japan's Hitachi, Mitsubishi, NEC and NTT.

IBM is aiming at the business market with the development of a line of NCs designed for specific applications, for instance in the automotive, airline or banking sectors.

Apple instead is targeting the residential market with its Pippin, a hybrid multimedia terminal combining the functions of an NC, a game station and an optical disc player.

Sun and Netscape expect to largely benefit from this new market, respectively as the leading provider of network programming language with Java, and the leading supplier of Internet navigation software. As for Oracle, the leading supplier of database software, it will create a subsidiary, Network Computers, to license NC software to manufacturers.

At the end of the day, the take-off of NCs would foster fresh competition in the communications terminal market, offer additional growth opportunities for the communications sector, open a window of opportunity for newcomers, and, arguably, democratise access to the information society for the citizens and schools.

EUROPE

LEGISLATION AND POLICIES

A Conference on copyrights and related rights gathering over 250 representative of government, industry and users in Florence on June 2-4 closed the consultation process initiated by a European Commission Green Paper on copyrights in the information society and set the basis for Commission-proposed initiatives in coming months.

Participants agreed that strong and appropriate copyright protection must be provided through clear and harmonised rules in the single European market and internationally, and that a balance must be struck between the interests of copyright holders and users.

The conference stated that there is no need for new copyright concepts in the context of the information society but that some existing rights must be adapted to take into account the global dimension of digital communications as well as the greater potential opened by new technologies for both facilitated piracy and enhanced protection.

The European Commission organised a Ministerial Conference on the Euro-Mediterranean partnerships in the information society on May 30-31 in Rome to launch a permanent dialogue with Europe's Mediterranean neighbours and cooperate on key issues such as communications, training, education and research.

The Norwegian government has adopted draft legislation to fully liberalise its telecommunications market and abolish the infrastructure monopoly of the national operator Telenor by 1998 in accordance with European Economic Area requirements.

The new Italian Prime Minister, Romano Prodi, has said that Italy would speed up its privatisation programme,

especially as regards the partial sell-off of the national telecoms holding company STET. Separately, STET has called upon the government to remove regulatory obstacles preventing it from supplying broadcast television.

MARKET AND COMPANIES

RSL Communications, a US supplier of communication services for medium-sized businesses, has launched operations in Britain, Germany, Finland, France and Sweden.

RSL's business in France and Germany will be based on the purchase of the communications and sale operations of Sprint, America's third largest long distance operator, which it had to sell as a condition for finalising its global telecoms alliance with the French and German national telecoms operators, Global One.

The leading British telecoms operator BT and the British satellite broadcaster BSkyB, a subsidiary of the US media giant News Corp., are reported to be holding negotiations on the setting up of a joint venture specialising in digital TV in the United Kingdom.

The two partners would jointly develop a TV set-top box to access via BT's telecoms network or BSkyB's satellite dishes a bouquet of 200 digital channels which BSkyB intends to launch in 1997. The two partners would eventually provide new interactive services such as home banking and home shopping as well as high-speed Internet access.

NORTH AMERICA

Trends: In face of the worldwide success of the Internet, commercial on-line services have to migrate to the Internet. After Prodigy and MSN, it is now the turn of Compuserve to do so. AOL will be the last leading US on-line service provider to rely on a propietary access platform. This trend is taking place against the background of the struggle for the dominance of the fast emerging market for Internet software between, on one side, Microsoft, and on the other, companies such as Netscape, Sun and Oracle.

MULTIMEDIA SERVICES AND PRODUCTS

Intel, the world's leader in chips, has unveiled a low-cost videoconferencing system which allows to place video calls over regular phone lines, while previous systems relied on ISDN networks. The word's leading PC maker, Compaq, is expected to be the first company to ship camera-equipped PCs later this year for an additional $200.

Intel's system would display a low-quality image of 10 by 13 centimetres. Yet it is capable of transmitting high-quality still pictures, and the use of high-speed networks such as cable TV networks via a cable modem would boost video quality.

MARKET AND COMPANIES

The US commercial on-line service Compuserve said it would license Normandy, a new technological platform developed by the world's leader in PC software, Microsoft, which allows on-line service providers to offer access to their services via the Internet. In exchange, direct access to Compuserve would be offered via Windows 95.

The move would strengthen Microsoft in its drive towards becoming a leading provider of Internet software based on its operating system Windows NT, and is part of Compuserve's strategy to migrate its services to the Internet.

SOCIAL, SOCIETAL AND CULTURAL

The computers of the US Department of Defence have been subject to 160,000 hacker attacks in 1995, according to a report of the General Accounting Office (GAO).

The report warns of the emergence of information warfare whereby third countries or criminal organisations could use computers to diminish the US capacity to act militarily as well as disrupt the economy or strategic services such as communications and electricity.

It also notes that 65% of the 38,000 attacks led by the US Defence Information Systems Agency (DISA) on government computers to test security levels were successful, amongst which only 4% were detected and even fewer reported to DISA.

At the end of 1995, 38 million or 38.5% of US households were equipped with at least one PC, compared with 33% in 1994 and 26% in 1993, according to a report of the US research group Computer Intelligence. This represents a jump of 16% in 1995.

Most striking is the fast penetration of PCs amongst lower-income homes and seniors, a trend which seems to be eased by the growing availability of cheap second-hand PCs.

ASIA AND PACIFIC

Trends: Competition is gaining yet more momentum in Japan with industry plans to launch cable-based telephony. So is the Japanese information society with government plans to facilitate infrastructure deployment and introduce networking in

schools. Singapore too has unveiled ambitious information society plans.

INFRASTRUCTURE

The Japanese Ministry of Construction (MOC) said it would invest 52 billion Ecus between 1997 and 2010 in the building of conduits for the installation by private companies of fibre optic networks underpinning Japan's information superhighway.

MARKET AND COMPANIES

Two Japanese telecoms operators, Tokyo Telecom Network (TTN) and Japan Telecom, have unveiled plans to offer flat-rate high-capacity data transmission services in 1997 in competition with a similar service due be launched at the same time by Open Computer Network (OCN), a subsidiary of Nippon Telegraph and Telephone (NTT).

To provide a nation-wide service, both operators would have to lease lines from OCN and other Japanese operators, thus building on the Japanese government's pledge to establish a new interconnection regime by the end of 1997.

Two leading Japanese cable TV operators, Jupiter and TITUS, have unveiled plans to offer cable-based residential telephony and new interactive multimedia services. The two companies intend to launch a flat-rate phone service in 1997 and would soon launch trials.

Jupiter is a joint venture between the trading house Sumitomo (60%) and the US cable operator TCI (40%), while TITUS is a joint venture between the trading house Itochu (28.4%), the Japanese electronics group Toshiba (28.4%), the US cable operator Time Warner (25.3%) and the US regional telecoms operator US West (17.9%).

The German national telecoms operator Deutsche Telekom is strengthening its global operations with two major Asian deals respectively in Malaysia and Kazakhstan.

Telekom said it would pay 460 million Ecus for a 20% to 22% stake in Technology Resources Industries (TRI), the leading of five Malaysian telecoms operators.

It also won a 49% voting share in the national operator Kazakhtelecom and nine-year management control against 430 million Ecus in cash, debt repayment and investment.

Mobile telephony has exploded in Japan in the last year with almost a tripling of mobile subscribers to 11.7 million in March 1996 from 4.3 million a year before.

TECHNOLOGY

The Japanese telecoms operator Nippon Telegraph and Telephone (NTT) has started selling a powerful encryption microprocessor that could give it a global leadership in the fast-growing security market as European and US competitors face government restrictions for national security reasons in the trade of encryption technology.

SOCIAL, SOCIETAL AND CULTURAL

The Japanese Ministry of Education (MoE) and the country's domestic telecoms operator Nippon Telegraph and Telephone (NTT) have agreed to jointly connect 1,000 schools to the Internet over the next two years as part of the MoE's plans to install 900,000 network-equipped personal computers in schools by the year 2000.

NTT would install high-speed connections, give each school 2,250 Ecus for communications software and help familiarise teachers with the new technology. There are currently 600,000 PCs in Japanese schools but only 2% are connected to the Internet.

Singapore has unveiled plans worth 47 million Ecus to develop a nationwide information infrastructure, Singapore ONE (One Network for Everyone), which would be put into place between 1996 and 2001. Use by schools, businesses and citizens would be promoted by government and commercial services introduced from 1999 onward.

LATIN AMERICA

SOCIAL, SOCIETAL AND CULTURAL

The Peruvian Scientific Network (PSN), a non-profit organisation created five years ago, has set up Peru's first Internet access service which enables owners of a PC to get on-line for 32 Ecus a month and other people to use one of the 35 publicly-available terminals at PSN's headquarters in Lima for 12 Ecus month and 4 Ecus an hour.

PSN, which received an initial 5,500 Ecus from the United Nations Development Fund, now claims 22,000 subscribers and over 3 million Ecus worth of equipment.

WORLD-WIDE

MARKET AND COMPANIES

Hollywood studios have launched talks with world leading electronics groups to discuss copyright protection in view of the launch of Digital Video Discs (DVD).

Hollywood fears that the possibility to make perfect copies could damage its interests and therefore seeks a long-term protection of copyrights. The launch of DVD players, planned after the summer, could be delayed if the two industries fail to strike a deal.

The risk of pirating DVDs is limited in the short term as DVD players would not have a recording facility for a few years. Yet the issue might arise in 1997 with the launch of DVD-ROMs, which would allow for computer-based copying.