

EDITORIAL

Network computers: a threat to traditional PCs?

Launched only recently and heralded by leading US computer firms, the concept of cheap "network computers" to surf the Internet is quickly gaining momentum.

Priced less than 400 Ecus, so-called network computers would consist of computers stripped of their hard drive that would only be able to perform the routine functions of a PC but would allow users to easily exploit on-line resources via a high-speed modem.

Hence, all the software that is normally contained in a PC's hard drive would be accessed via the network, thereby giving all the intelligence to the network.

Behind this new concept are software and equipment firms such as IBM, Netscape, Oracle and Sun Microsystems. What they have in common are their rivalry with Microsoft and Intel, which dominate the PC software and microprocessor markets.

Over the last ten years or so, the ever increasing power of chips has led to the shift from IBM's centralised model of simple terminals depending on a mainframe to a decentralised model of interconnected PCs with their own computing power.

Proponents of the network computer are now proposing to move towards a new model where terminals would rely on the vast resources of the global information infrastructure.

The concept may be appealing to consumers, for whom the purchase of a PC remains an important expenditure, but certainly not for Microsoft and Intel who would see the product on which they have founded their dominance vanish. Indeed, network computers would not rely on Microsoft's Windows operating system nor on Intel's chips.

Take the example of Netsurfer, a network computer that should be marketed by Britain's Acorn by mid-1996: it would use Acorn's own chip and operating system. The US chip manufacturer LSI Logic too has developed a cheap chip for network computers.

Besides network computers emerges a new kind of hybrid multimedia terminals, which could pose a similar threat. Connected to the TV set, they combine at least the functions of a game station, a basic PC, a photo-CD and CD-Rom player, and a network computer.

The Italian computer group Olivetti is already marketing its hybrid, Envision, while America's Apple plans to launch its own hybrid, Pippin, in 1996. Their prices are very contrasted: worth 400-800 Ecus, Pippin's price would compare with that of network computers. Envision's price on the contrary (1,300-2,300 Ecus) is closer to that of a PC.

Despite their apparent rivalry, these products could in fact prove complementary. Indeed, they seem at first glance to meet the expectations of different clienteles.

If they hold they promises, network computers and hybrids could be an alternative for people who don't have the need for the computing power of a PC or who can simply not afford buying one. Furthermore, network computers and hybrids look more adapted for a family use and PCs for a professional use, whether in the office or at home.

EUROPE

Trends: For once European computer groups seem to be front-runners with the announced launch by Acorn of a network computer, the Netsurfer. Also important was Belgium's final decision on the privatisation of 49.9% of Belgacom.

MULTIMEDIA APPLICATIONS AND PRODUCTS

Britain's Acorn, which is 58% owned by the Italian computer giant Olivetti, said it would launch a 400 Ecus worth network computer, the Netsurfer, by mid-1996.

The Netsurfer would be based on Acorn's A-7000 multimedia PC stripped down of its hard drive and monitor. It would use cheap ARM microprocessors which are produced by Acorn's subsidiary Advanced RISK Machines as well as Acorn's own operating system.

Olivetti said it is holding licensing talks with the US computer groups IBM, Oracle and Sun Microsystems. The ARM chip is already produced under license around the globe by companies such as Digital Equipment, NEC, Samsung and Sharp.

The German national telecoms operator Deutsche Telekom has agreed to offer the customers of its own on-line service T-OnLine direct access by the click of a mouse to the rival European commercial on-line service Europe OnLine.

Europe OnLine said that Telekom agreed to provide the access because of the launch by the European Commission of an anti-trust investigation into a planned rapprochement between Telekom and its potential on-line rivals America OnLine and Bertelsmann.

LEGISLATION AND POLICIES

The European Commission has decided to open an investigation into a planned alliance between the German media giant Bertelsmann, the US on-line service America OnLine (AOL) and the German national telecoms operator Deutsche Telekom, to find out whether it would hinder competition in the German market for on-line PC services.

The preliminary accord mentions that Telekom would take stakes in AOL and in AOL-Bertelsmann's joint German and European on-line operations. Their respective on-line services, T-OnLine and AOL-Germany, would specialise in different market segments, respectively corporate and residential services, to avoid confrontation.

The Commission is particularly concerned about the involvement of Telekom which has a dominant position in the German on-line market through its T-OnLine subsidiary and controls networks that are essential to the development of rival on-line services.

The Belgian government has decided to sell a 49.9% stake in the national telecoms operator Belgacom to an international consortium led by the US regional telecoms group Ameritech and comprising the Danish national telecoms operator Tele Danmark and Singapore Telecom. The consortium will pay 1.9 billion Ecus for the share.

The Swiss government has said it will liberalise its telecoms services and infrastructures in parallel with the European Union by January 1, 1998.

MARKET AND COMPANIES

The German publisher Burda and the US media giant Viacom have agreed to set up a joint venture specialising in audiovisual production for the German television market.

The move would mark a further diversification of Burda's activities after the setting up of the commercial on-line PC service Europe OnLine. As for Viacom, the alliance would allow it to step into Europe's most lucrative but increasingly crowded TV market.

The three-week long strikes in France, especially in public transports, have led to an increase of telecoms traffic, whether it concerns voice telephony or on-line services.

The national telecoms operator France Télécom for instance has noted a 5% overall increase of communications use, including 40% for the urban mobile system bi-bop and 30% for professional videoconferencing and phone-conferencing services.

Supplier of Internet access such as FranceNet or ImagiNet have observed a boost of about 20% of Internet traffic. As for Internet subscriptions, they have surged by about 50%, especially as a result of corporate demands. Traffic increase is comparable for commercial on-line PC services such as CompuServe (15%).

NORTH AMERICA

Trends: The Internet is increasingly becoming the main battlefield of the computer industry's war for leadership in the information age. The battle is heating up with new initiatives by AT&T and HP to jointly develop new on-line products as well as by Netscape and Sun to challenge Microsoft's supremacy over PC software. The launch of network computers is also part of the drive to erode Microsoft and Intel's domination. While he had so far neglected the Internet, Bill Gates has just unveiled a new Internet-focused strategy which aims at regaining the initiative and be a front-runner in the "Internet goldrush". In parallel, Gates continues to diversify its activities, this time through a new venture with NBC. Separately, the FCC has cleared Phoenix.

MULTIMEDIA APPLICATIONS AND PRODUCTS

The US computer group Apple has announced the launch in 1996 of Pippin, a hybrid multimedia terminal for connection to the television set which would combine the functions of a game station, a PC, a network computer and a optical disk player.

Pippin would be based on Apple's Macintosh operating system and a PowerPC microprocessor jointly developed with IBM and Motorola. It would use the Navigator, the Internet browser of Netscape, the world's leading supplier of Internet browsers.

Pippin would first be marketed under license in Japan by the Japanese game maker Bandai and would sell for less than \$500. The European version is expected to be compatible with new digital video disks and cost about \$800-1000.

Intuit, a US producer of financial software, has said it will launch an on-line banking service on the Internet in the second half of 1996 which will allow users to check bank accounts and pay bills on-line with any of Intuit's 21 bank partners.

In September, Intuit agreed to launch a similar service in the first half of 1996 with the US on-line PC service America

OnLine (AOL).

LEGISLATION AND POLICIES

The US Federal Communications Commission (FCC) has given its green light to Phoenix, a planned global telecoms venture between the French and German national telecoms operator and Sprint, the third largest US long distance operator.

The European Commission's decision on Phoenix will be finalised in the summer 96.

In separate votes, the US House and the US Senate have endorsed measures to introduce the so-called V-chip, an electronic device that would allow parents to protect their children from exposure to violent or sexually explicit television programming.

The V-chip measures would require TV manufacturers to install V-chips in all TV sets while broadcasters would be given one year to set up a programme rating system. If they fail to do so, the Federal Communications Commission would draw its own guidelines.

A code corresponding to a programme's rating would be transmitted along the TV signal, thus allowing the V-chip to stop programmes carrying ratings parents want to ban.

The V-chip measures would be included in a much awaited draft bill overhauling the US communications legislation which is still pending before the US Congress.

MARKET AND COMPANIES

Bill Gates, the chairman of America's Microsoft, the world's leader in PC software, has unveiled plans to become the leading provider of Internet software.

The move is a departure from Gates' previous strategy, which focused on commercial on-line services with the launch of the Microsoft Network (MSN) instead of the Internet.

Tacitly acknowledging the success of its rivals in setting up Internet standards, Gates announced technology licensing agreements with Oracle and Sun Microsystems.

Yet Gates rejected his competitors' claim that the Internet will mark a shift from PCs to network computers with little computing power relying on network resources.

Instead, Gates said that Microsoft would reinforce the integration between PCs and the Internet both through new products and

the reorientation of existing ones.

For instance, Microsoft will release in 1996 a piece of software (netware) allowing PC users to co-work on the Internet and in 1997 a new Internet-oriented version of its operating system Windows. It will also increasingly link MSN to the Internet.

Microsoft, the world's leader in PC software, and NBC, one of America's four TV networks, have agreed to jointly launch by mid-1996 MSNBC, an all-news cable channel, as well as an on-line "news-on-demand" service available on the Microsoft Network.

MSNBC would be based on NBC's America's Talking cable TV channel, in which Microsoft has just bought a 50% stake worth \$220 million. As for the on-line service, it would provide access to NBC's 200,000-hour video library dating back to the 1940s.

Each partner would invest \$200 million in the two ventures over five years. The venture would in fact expand a strategic multimedia alliance set up by Microsoft and NBC in May 1995 to jointly develop and market on-line products.

AT&T Network Systems, the telecoms equipment arm of the US telecoms giant AT&T, has agreed to join forces with the US computer company Hewlett-Packard to develop communications equipment and software for telecoms and cable TV operators.

The collaboration will particularly focus on high-speed Internet-based data services and the development of the next generation of on-line interactive video services.

Netscape, the world's leader in Internet navigational software, and Sun Microsystems, a US supplier of Internet servers, have unveiled Javascript, an easy-to-use programming language that would allow Internet users to create their own multimedia applications.

Javascript, which can be run on any operating system, will be distributed free of charge over the Internet. Netscape and Sun have also agreed to join forces with the US software developer Silicon Graphics to adapt its Virtual Reality Modelling Language (VRML), a three-dimensional (3-D) imaging software, for use on the Internet.

ASIA AND PACIFIC

Trends: The spotlight in Asia is on Japan, where multiplying signs are suggesting that the reform of the telecoms regulatory framework could be launched soon.

LEGISLATION AND POLICIES

Issei Inoue, the Japanese Minister of Posts and Telecoms, has outlined plans to overhaul Japan's telecoms legislation towards more competition and openness.

A determinant element of the reform would consist in removing the regulatory distinction between international, long-distance and local services that splits the industry.

The change would in particular concern the national telecoms operator Nippon Telegraph and Telephone (NTT) and the main international communications carrier Kokusai Denshin Denwa (KDD), whose respective role would have to be redefined.

If carried out, the reform would stimulate competition and facilitate the entry of new competitors. It would also facilitate market access for foreign firms, provided the relaxation of foreign ownership restrictions is confirmed.

Yet the reform would have to go through a lengthy and complex process involving the Japanese Parliament since it would require an adaptation of Japan's fundamental laws.

The Japanese Administrative Reform Committee (ARC), a government advisory body, has recommended far-reaching measures to liberalise the country's telecoms market.

ARC has advised in particular that the national telecoms operator Nippon Telegraph and Telephone (NTT) be split up, that the regulatory distinction between international, long-distance and local services be removed, and that foreign investment rules be simplified to boost competition in the telecoms market.

ARC is responsible for making non-binding recommendations to Prime Minister Tomiichi Murayama in view of a three-year deregulation plan to be approved in 1996.

The South Korean government has unveiled plans to authorise foreign ownership of South Korean telecoms companies of up to 33% from 1998 instead of 15% today.

That however would only apply to joint ventures set up after 1998. For other companies, the current ceiling of 15% could be increased to 20% or 25% in 1998. So far, foreign ownership of up to one-third was only authorised for wireless communications.

As for the privatisation of the state-owned telecoms operator Korea Telecom, due to start in 1996 and be completed by 2000, foreign ownership would be limited to 20%.

DG XIII - The content of the press review does not necessarily reflect the European Commission's views.