

Information Society Trends

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EUROPE

Trends: At infrastructure level, the focus in Europe is on the launch of TEN-155, the pan-European equivalent to the US Internet 2. At market level, the main news are Olivetti's hostile bid to take over Telecom Italia and the Alcatel/3Com alliance in wireless computing.

INFRASTRUCTURE

Dante, a non-profit organisation founded to organise and manage the provision of Internet connectivity for the European research community, has announced the official launch of TEN-155, the new pan-European high-speed research network. TEN-155, which is co-funded by the European Commission, interconnects 17 national European university networks at a capacity of up to 155 Mb/s and provides links to the USA. An upgrade of the existing TEN-34 network, TEN-155 provides the bandwidth and quality of service needed by European researchers for real-time multimedia applications. Its quality and service features are thus comparable to the US Internet 2 (www.dante.net).

The leading UK operator BT and its European partner have launched a pan-European fibre optic network which links up the national networks of seven operators, including BT, France's Cegetel, Germany's VIAG Interkom, Italy's Albacom, the Netherlands' Telfort, Switzerland's Sunrise and BT Belgium. In a second phase, the network would encompass Ireland, Spain and the Nordic countries, and would be extended to cover Southern and Eastern European countries in a third phase.

MARKET AND COMPANIES

The French telecoms equipment manufacturer Alcatel and the US networking company 3Com said they have agreed to team up to jointly develop new products based on the convergence of handheld computing and mobile telecoms devices. This would also encompass the development of a new software platform for wireless computing as well as the launch of an open industry forum to develop a standard Application Programming Interface (API). The move creates a three-way rivalry with Symbian and Microsoft to set an industry standard for wireless communication devices.

Symbian is a joint venture set up by Psion, a leading UK manufacturer of hand-held computers, two world leaders in mobile phones, Finland's Nokia and Sweden's Ericsson and the US telecoms equipment maker Motorola, to promote Psion's EPOC operating system (OS). Symbian has also forged partnerships with other leading industry players such as the US computer groups Oracle and Sun Microsystems, and the Japanese mobile operator NTT DoCoMo. EPOC competes for with Windows CE, the OS promoted by US PC software giant Microsoft, which has also been endorsed by leading players such as the US supplier of wireless products Qualcomm, the UK telecoms operator BT or the French electronics group Thomson Multimedia.

The Italian stock-market watchdog Consob has given the green light to an over 50 billion euro hostile bid by the Italian telecoms group Olivetti to take over the incumbent Italian telecoms operator Telecom Italia. To help finance the deal, Olivetti said it would sell its shares in the Italian fixed-line and cellular telecoms groups Infostrada and Omnitel Pronto Italia to its German partner Mannesmann for about 8 billion euro, provided the take over bid is a success. This would give Mannesmann a 100% ownership of Infostrada and a 55% controlling stake in Omnitel, up from currently 28%, alongside the US operators Bell Atlantic and AirTouch.

Brokat and Me Technology, two German leaders in secure electronic banking and electronic business solutions have unveiled

plans to merge in 1999. As a first step, the two companies said they would combine existing products and platforms modules as well as coordinate their global development strategies. Me would then be merged into Brokat.

TECHNOLOGY AND STANDARDS

The German energy and communications group RWE said it has developed together with the Swiss telecoms equipment manufacturer Ascom a new communications system based on Powerline Communication (PLC) technology, which allows for the transmission of voice and data over electric power lines. The new technology would eventually be rolled out commercially by RWE's energy and telecoms divisions, RWE Energie and RWE Telliance. Supplied services would range from high-speed Internet access to power grid-based telephony and remote management of household and commercial devices as well as plants. The development of PLC could also draw upon the partial liberalisation of the Internal Market for energy in the European Union.

Using power lines for data services is also the strategy followed by Nor.Web, a joint venture set up by Norweb, a subsidiary of the UK water and energy utility United Utilities, and the Canadian telecoms operator Northern Telecom (Nortel).

Nor.Web has developed a new technology, Direct Power Link (DPL), which allows for high-speed Internet data. However, DPL only works for data transmitted in packets, which is typical of the Internet, but not for a continued stream of data, such as phone calls.

LEGISLATION, POLICIES AND COMPETITION

The European Commission has cleared the creation of Télévision par Satellite (TPS), a French digital satellite TV platform, by four French broadcasters, TF1, M6, France 2 and France 3, the incumbent French telecoms operator France Télécom, and the French water and communications group Suez Lyonnaise des Eaux. TPS will compete with Canal+'s CanalSatellite and AB-Sat.

The European Commission has decided to send five reasoned opinions to Greece, which has not yet lifted all restrictions to

the operation of mobile telecoms services and has not yet liberalised satellite services and alternative networks.

SOCIAL, SOCIETAL AND CULTURAL

Unison, the UK's largest trade union representing over 1.3 million public service employees, said it has decided to offer free Internet access to all of its members

NORTH AMERICA

Trends: At service level, the main focus in the USA is on the take-off of the high-speed Internet access market. At market level, the main trends concern new ventures in the networking industry (Alcatel/Xylan, GEC/Reltec) and a further consolidation of the North American telecoms industry (Global Crossing/Frontier; AT&T-Canada/MetroNet). Also important is the further momentum gained by Linux.

MULTIMEDIA SERVICES AND PRODUCTS

America Online (AOL), the world's leading on-line service provider, and the US regional operator SBC Communications said they have agreed to form a partnership to offer broadband connectivity to AOL subscribers in SBC's region based on the DSL technology, which allows for high-speed data transmission over regular phone lines. A similar agreement was recently sealed between AOL and another Baby Bell, Bell Atlantic. Meanwhile, the Baby Bell BellSouth and the US networking company 3Com have announced the roll-out on a large scale of a DSL-based high-speed Internet service, BellSouth.net Fast Access. The service, which is to be launched in the spring of 1999, would initially be available over 5 million regular telephone lines.

These moves indicate that DSL services are now being rolled out on a large scale by US telecoms operators in response to

growing competition from cable TV operators in the high-speed Internet access market. This points at growing consumer demand for high-speed Internet connectivity, which is rapidly emerging as a mass market. It also indicates that consumers are ready to pay more to enjoy faster Internet access based on a flat-fee.

The US on-line book selling pioneer Amazon.com said it has bought a 46% stake in Drugstore.com, a US on-line seller of health, beauty and wellness products. The move further diversifies Amazon.com's activities, which already encompass musical CDs, videos and gifts, in an aggressive move to become a diversified e-commerce company.

MARKET AND COMPANIES

The French telecoms equipment manufacturer Alcatel said it has agreed to spend \$2 billion on purchasing Xylan Corp., and \$350 million on acquiring Assured Access Technology (AAT), two fast-growing US networking company. The move would substantially strengthen Alcatel's networking and Internet business as well as boost its US presence. It follows the purchase in 1998 of two other US networking groups, DSC Communications for \$4.4 billion and Packet Engines for \$315 million. Xylan would bring a portfolio of 4,000 customers including leading operators such as America's BellSouth, Bell Atlantic and Teleport, Canada's MetroNet and Sweden's Telia.

The British electronics and engineering group General Electric Company (GEC) said it has agreed to spend \$2.1 billion on buying the US networking group Reltec Corp. Reltec would be combined with Marconi Communications, the communications equipment arm of GEC, in a move to bolster its networking activities and to gain an established presence in the North American market. Reltec's customers include major US operators such as AT&T, BellSouth, Bell Atlantic, SBC, MCI WorldCom and Sprint.

Global Crossing, a Bermuda-based company which builds and operates a global high-speed network for voice, data and video traffic, said it has agreed to spend \$12.5 billion to buy the US local and long-distance corporate telecoms services provider Frontier. The merger would combine Global Crossing's trans-Atlantic, trans-Pacific, trans-American and trans-European networks, and Frontier's US-wide, Canadian and UK operations. This would give rise to a company offering global voice, Web

hosting, private virtual network and high-speed Internet services in 159 cities in 20 countries.

The US telecoms giant AT&T has agreed to merge its Canadian subsidiary AT&T Canada with MetroNet Communications, a leading Canadian competitive local exchange carrier (CLEC), in a transaction worth \$7 billion. The merged company would be the first Canadian operator offering a full range of local, long-distance, wireless, data, Internet and electronic commerce services on the basis of its own nationwide network. It would be owned 31% by AT&T and 69% by MetroNet shareholders. AT&T has also secured the eventual purchase of the shares held by MetroNet shareholders, the timing of which would depend on the future evolution of Canada's foreign ownership regulation, which currently sets a one-third limit on foreign ownership of Canadian companies.

Intel, the world's leading chip manufacturer, has announced that it would acquire Level One Communications, a leading US manufacturer of semiconductors for data networks, in a \$2.2 billion worth stock-for-stock merger. The move would significantly strengthen Intel in the supply of silicon solutions for high-speed telecoms and networking applications in local (LAN) and wide area networks (WAN).

The free and open-source operating system (OS) Linux has gained further support from leading US computer groups. IBM, for instance, said it would provide technical support for Linux users and start shipping Linux-compatible products in 1999. As for Intel, it said it would work with VA Research, a leading supplier of Linux-based hardware, software and services, to ensure compatibility with its future high-end Merced chip. Linux is also backed by Hewlett-Packard and Silicon Graphics. Derived for the Unix OS in the early 1990s, Linux is seen as an alternative to Microsoft's Windows.

The US computer giant Hewlett-Packard (HP) has announced that it will split up into two independent companies, one focused on the measurement business and the second on computing and imaging. The measurement company, which has not yet been named, would be comprised of HP's test and measurement, components, chemical analysis and medical activities. The new computing and imaging company, which would continue to operate under the HP name, would include HP's enterprise computing systems, software and services, personal computer, printing and imaging solutions businesses.

The Japanese long-distance and mobile operator DDI has announced the setting up of wholly owned subsidiary in the USA which would start operations in the spring of 1999. The move is aimed at boosting DDI's US-Japanese services.

LEGISLATION, POLICIES AND COMPETITION

The US Federal Communications Commission (FCC) has approved a planned merger between the leading US long-distance operator AT&T and the leading US cable TV operator TCI. The merger, which had already been given a green light by the European Commission, was also approved by the two companies' shareholders.

The US Supreme Court has lifted an 8th Circuit Appeals Court order that barred the US Federal Communications Commission (FCC) from imposing strict competition rules on the five US regional telecoms operators, or Baby Bells, as a prerequisite for allowing them to enter the long-distance market. The move follows the Supreme Court's recent ruling that the 1996 US Telecoms Act authorises the FCC and not the federal states to set rules governing interconnection rates.

ASIA AND PACIFIC

MARKET AND COMPANIES

UUNet Technologies, a world leading corporate Internet service provider (ISP) and a unit of the second-largest US long-distance operator MCI WorldCom, has said it would set up a Japanese subsidiary in March 1999. UUNet intends to become Japan's leading corporate ISP based on the setting up of 22 access points nationwide within three years.

LATIN AMERICA

MARKET AND COMPANIES

The leading UK operator BT has said it would take a 20% stake worth in ImpSat, a leading Latin American telecoms operator specialised in corporate services. ImpSat's network covers key cities in Argentina, Brazil, Colombia, Ecuador, Mexico and Venezuela. It would become a distributor of Concert, BT's global corporate arm.

WORLDWIDE

TECHNOLOGY AND STANDARDS

A group of 15 leading North-American, European and Japanese technology companies have agreed to form a new alliance to create and maintain the Open Service Gateway (OSG) specifications, the industry's first open interface for connecting consumers and small business appliances with Internet services. The OSG is to be entirely based on the Java universal programming language of Sun Microsystems. It would be designed to provide a common foundation for Internet service providers, network operators and equipment manufacturers to supply and manage secure wireless and wired voice, data and multimedia communications products and services to and from the home. The OSG partners include Alcatel, Cable and Wireless (C&W), Ericsson, IBM, Lucent Technologies, Motorola, Nortel, Oracle, Philips, and Toshiba.

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