

## EDITORIAL

### Clinton wants all US classrooms to go cyber by 2000

On September 29, 1995 US President Bill Clinton called for a nationwide effort based on public-private partnerships to connect all classrooms to the information superhighway by 2000 as well as to make technological literacy an educational standard.

President Clinton said the US federal government would act as a catalyst but that no public money would be contributed from the federal budget. The financial effort would therefore be entirely left to the private sector and local governments.

On October 10, Mr. Clinton unveiled concrete measures based on these principles. Technology Learning Challenge Grants worth \$370 million will go to 19 five-year projects involving 120 firms, 134 schools, 34 universities, 10 museums and 5 libraries.

Mr Clinton praised California's plans to connect all the state's classrooms to the Internet by the year 2000 and to incorporate technology into school curricula, adding that this initiative should set a nationwide example. By the end of 1995, all of California's 12,000 schools and 20% of the classrooms will have an Internet access.

California's effort is driven by the state's estimate that by the turn of the century 60% of new jobs will require technological skills currently held by only 20% of the workforce.

California also has the backing of Education First, a \$100 million worth programme sponsored by Pacific Bell, a subsidiary of the regional telecoms company Pacific Telesis, as well as a dozen leading high-tech firms, including America OnLine, Apple, AT&T, 3COM, MCI, Oracle, Silicon Graphics, Sprint, Sun Microsystems and Xerox.

Since January 1995, Education First, America's most ambitious private-funded effort, has helped wire up 215 schools out of 9,000 in Pacific Bell's territory. By June 1996, it aims to have connected 50,000 classrooms in 2,500 schools to the Internet. It also offers free equipment and a one-year ISDN connection, and contributes to teachers' training.

The US approach bears many similarities with that of the European Union, which also stresses that private investment must be the driving force of the information society while government must play a catalytic role. An important difference however is that the Union is committed to provide financial support in public interest domains, in particular education, where

initial demand may be insufficient to allow for commercial viability.

Yet the emphasis placed on education on both sides of the Atlantic strongly suggests that adapting educational systems and using new information tools in education is a crucial issue for a fast, coherent and balanced development of the information society.

## EUROPE

Trends: The bulk of European news relates to legislation and politics, with Denmark's intention to move forwards with telecoms liberalisation, Germany's new TV ownership plans, as well as the award by the Czech Republic and Poland of new GSM licenses.

### LEGISLATION AND POLICIES

Danish Research Minister Frank Jensen said he intended to put forward legislation to liberalise Denmark's telecoms by mid-1996 and that the government should then sell off its remaining 51% stake in the national telecoms operator Tele Danmark.

Mr. Jensen said he hoped to reach a broad political consensus with opposition parties on telecoms deregulation before Christmas. That would enable him to bring forward total liberalisation to mid-1996 instead of 1998 as is requested by the European Union.

He added that it would not be reasonable for the state to go on controlling Tele Danmark once telecoms are liberalised. A 49% stake of the firm was privatised in 1994.

The premiers of Germany's 16 states are drafting new media ownership rules that would allow a firm or individual to own 100% of one TV channel, 50% of a second and 25% of a third, while no company could control more than 30% of the overall TV market.

Current rules restrict ownership to 50% of one channel and 25% of another two. The premiers' proposal should be finalised at a heads of states meeting to be held in December. The new legislation would then have to be approved by the state parliaments.

Unlike telecoms, which are regulated by the federal government, radio and TV broadcasting falls into the scope of culture for which the states are responsible.

The Czech government said it will open on November 15, 1995 a tender to award two GSM cellular mobile phone licenses. The tender should be closed in March 1995.

The first license would associate a foreign partner to the state-owned TV and radio broadcaster Ceske Radiokomunikace (CRA) in a joint venture owned 51% by CRA. The second would go to Eurotel, a joint venture of the Czech national telecoms operator SPT Telecom and the US regional telecoms companies US West and Bell Atlantic.

The Polish government said it will open on November 3, 1995 a tender to award two GSM cellular mobile phone licenses. Foreign participation into the consortia that will bid for the licenses will be limited to 49%. The tender is expected to be completed within 49 days and the networks to be operational by mid-1996.

## MARKET AND COMPANIES

Veba, a German energy-based conglomerate with telecoms assets, intends to take a 10% stake in Europe OnLine, a European on-line service to be launched later this year.

Europe OnLine was set up in 1994 by the German, French and British publishers Burda, Matra-Hachette and Pearson. More recently, the US telecoms giant AT&T agreed to take a 10% stake in Europe OnLine and so did the German publisher Axel Springer. Meanwhile, Hachette and Pearson said they intended to reduce their stakes.

As part of its restructuring effort, the French telecoms equipment, transport and engineering group Alcatel Alsthom has agreed to hand over its media assets to Havas, France's leading publisher, in exchange for a 21% stake in Havas.

The venture would turn Alcatel into Havas' main shareholder and Havas into the world's fifth largest media group. Alcatel's media operations, whose value is estimated at 725 million Ecus, include the leading French news magazines L'Express and Le Point, as well as radio and television broadcasting, and cable TV assets.

## NORTH AMERICA

Trends: US news focus on on-line services and technology, with a new venture between AT&T and CNN, new Internet software unveiled by Vocaltel, and a new technology developed by Intel that brings together TV broadcasting and the Internet.

## MULTIMEDIA APPLICATIONS AND PRODUCTS

The US telecoms giant AT&T has signed an exclusive agreement with the US media group Turner Broadcasting System to distribute the international news channel CNN's financial programming over its new on-line business service AT&T Business Network.

As a result of the accord, rival US commercial on-line PC service Compuserve will have to remove CNN business news from the information services it supplies.

A similar distribution accord signed last June by Microsoft, the world's leader in PC software, and NBC, one of America's four TV networks, resulted in the pull out of NBC programming from the US commercial on-line services America OnLine and Prodigy.

The US subsidiary of Vocaltel, an Israeli PC software manufacturer, has unveiled Internetwave (IWave), a piece of software that allows radio stations or media groups to broadcast high audio-quality music or shows over the Internet

Earlier this year, Vocaltel released Internetphone (IPhone), a \$69 worth piece of software that allows to place phone calls over the Internet anywhere in the world at a local call's price. Shortcomings are that IPhone requires a microphone and loudspeakers (but the possibility to use a regular handset should come soon) and a time lag of one to two seconds on the line. Yet Vocaltel believes it will have 7 million users by mid-1996.

## TECHNOLOGY

Intel, the world's leader in microprocessors, has unveiled Intercast, an electronic card that would allow broadcasters to transmit digitised data at a high-speed in a portion of the analogue television signal known as the vertical blanking interval.

Equipped PCs would benefit from a transmission speed of 96,000 bits per second compared to 28,000 for the fastest analogue modems. Since TV broadcasting works only one-way, interaction would be achieved via a conventional Internet connection.

A dozen US firms, including the computer group Packard Bell, the media groups CNN, NBC, QVC and Viacom, the cable TV operator Comcast, the on-line service America OnLine and the software firm Netscape, said they would endorse Intercast.

## ASIA AND PACIFIC

## MULTIMEDIA APPLICATIONS AND PRODUCTS

Microsoft, the world's leader in PC software, and a consortium of five Chinese media companies led by Shanghai Sunjoy Information, have unveiled plans to jointly develop China's first interactive television service trial in the city of Shanghai.

The Shanghai project would ultimately supply services such as pay-per-view, home shopping and educational programmes to the city's 1.5 million cable subscribers. Microsoft's primary responsibility would be to bring its technological know-how.

## LATIN AMERICA

Trends: A striking trend in Latin America is the rapid development of television distribution systems, particularly in the area of satellites and cable networks.

## INFRASTRUCTURE

NahuelSat, a Latin American communication satellite due to be launched in 1996 by the European consortium Arianespace is gaining momentum as it comes closer to securing a 19 million Ecus worth participation by the Mexican, Paraguayan and Uruguayan national telecoms operators, Telmex, Antelco and Antel.

The NahuelSat consortium has been awarded a 24-year license to occupy Argentine's orbital position from 1997. The satellite, which would cover most of Latin America, would use 60% of its transmission capacity to supply direct-to-the-home broadcasting in Spanish and Portuguese and the remaining 40% for voice and data communications.

NahuelSat is a 40 million Ecus worth venture whose current partners include the German bank Lampe Bank International (21.5%), the German, French and Italian aerospace groups DASA (20%), Aérospatiale (19%) and Alenia (19%), the operator Telecom Argentina (11%) and the commercial arm of the World Bank (9.5%).

## MARKET AND COMPANIES

Telefonica Internacional (TISA), the international arm of Spain's national telecoms operator Telefonica de Espana, is significantly reinforcing its positions in Latin America through cable ventures in Argentina and Chile, and a telecoms venture in Mexico.

The US telecoms group GTE has agreed to sell TISA half of its 49% stake in Unicom, a Mexican telecoms venture whose other

partners include the Mexican bank Bancomer and the Mexican investment group Valores Industriales.

Unicom plans to invest close to 700 million Ecus over 10 years in developing a fibre optic network. It will start offering data transmission services in 1996 and bid for a long distance license once the national telecoms operator Telmex loses its monopoly in 1997.

Separately, TISA has agreed to buy over three years a 25% stake worth 120 to 150 million Ecus in Multicanal, an Argentine cable TV operator which is owned 70% by the Argentine media group Clarin and 30% by America's Citicorp Equity Investment. The move would leave Clarin with 52.5% and Citicorp with 22.5%.

Multicanal's main competitors are Cablevision, which is 80% controlled by the leading US cable operator TCI, VCC, a subsidiary of TCI's main rival Time Warner. Argentina is Latin America's most cabled country (40% of Argentinean households).

Finally, TISA's Chilean cable TV subsidiary Intercom will merge its operations with rival Metropolis in a deal worth 75 million Ecus.

## AFRICA AND MIDDLE-EAST

## INFRASTRUCTURES

Matra Marconi Space (MMS), a satellite joint venture between Britain's GEC-Marconi and France's Matra, has won a 120 Ecus worth contract to build Nilesat, Egypt's first digital direct TV broadcasting satellite, as well as two reception stations.

Nilesat, which is due to be launched by the European space consortium Arianespace towards the end of 1997, will allow for the transmission of 57 television channels.

## WORLD-WIDE

## TECHNOLOGY

Four of the world's largest semiconductor manufacturers, Germany's Siemens, Japan's Toshiba and America's IBM and Motorola, have said that they are holding talks on a possible alliance to jointly develop the next generation of chips.

The development of these new "dynamic random access memory" (D-Ram) chips, called one-gigabit (1Gb) chip because they would have the capacity to store one billion bits, is not likely to be completed until after the turn of the century.

The scope of the planned alliance emphasises the financial and technological risk involved in the development of a new generation of chips. It would largely build on the joint ventures set up in 1991 between Siemens and IBM to develop 64Mb D-Rams (which will not be marketed before late 1997) and in 1992 between Siemens, IBM and Toshiba to develop 256 Mb D-Rams (which were unveiled in June 1995).

The cost of developing the 256 Mb D-Ram is evaluated at 75 million Ecus. But the technological challenge of developing a 1Gb D-Ram, in particular miniaturisation, is of such magnitude that the cost is likely to go skyrocketing.

Other leading chip producers too have established partnerships to share costs. Japan's NEC has agreed to join forces with America's AT&T and South Korea's Samsung, while Japan's Hitachi has formed an alliance with America's Texas Instrument.

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