

## EDITORIAL

### America takes the lead in the promising 3-D image market

In the past year, American companies have acquired a leading position in virtual image software, a highly promising market which concerns all branches of industry.

Virtual imaging, a technique that allows to visualise digitised three-dimensional pictures on computers, is becoming an important factor to increase productivity and efficiency in a great number of sectors ranging from architecture to entertainment, marketing, advertising, medicine and research.

Vehicle manufacturers such as France's Renault and America's Caterpillar already use virtual images to design future models. While the technique doesn't replace prototypes, it allows savings of 10 to 15% in conception time.

The widespread use of virtual reality is only just taking off and many businesses still find it difficult to get accustomed to the new technology. However, the market is expected to grow by 80 to 100% a year, an opportunity companies such as the world's software leader, America's Microsoft, want to seize.

Last February, Microsoft announced the purchase of Softimage, a Canadian producer of 2-D and 3-D software, for \$130 million. Separately, rival American software producer Wavefront took over France's Thomson Digital Image (TDI) last October.

Together with Alias, another US company, Microsoft and Softimage are unrivalled in the top segment of the software market for virtual images. Their cumulated turnover amounts to \$150 million and is expected to grow by 45% to \$220 million in 1996.

Microsoft, Softimage and Alias are also forging new alliances to increase their grab on the 3-D picture market. Microsoft, for instance, has joined forces with Japan's video game giant Nintendo to develop the next generation of 3-D game-stations.

In Europe, Great Britain is ahead of its partners with small companies such as Division and Virtuality. America's IBM and Motorola both have a stake in Virtuality, which has also sealed an alliance with the other big Japanese video game producer, Sega.

Europe's universities are also active in the sector. The University of Eindhoven, for instance, has developed a software that allows to "visit" houses before they are built, while Coventry University is collaborating with car makers Ford and Rover.

The involvement in virtual imaging of giants such as Microsoft confirms the bright future of the 3-D industry. It also highlights that despite Europe's expertise in the sector, there are no big European players in this promising market segment.

## EUROPE

Trends: Germany tops the news with a major initiative backed by the government to boost the development of information superhighways in Germany and Europe. Other events have shown a continued move towards liberalisation and privatisation in Europe's telecoms landscape with the upcoming sell-off of part or all of Telecom Italia, KPN and OTE as well as a call from Competition Commissioner van Miert for a rapid liberalisation of services offered on TV cable networks.

## INFRASTRUCTURE

A task force of businessmen and scientists headed by Siemens ' chairman Heinrich VON PIERER has been set up to study ways of bringing information superhighways to Germany and give the country's industry a lead in the multimedia sector.

Mr. von Pierer said the group will mainly focus on network improvements, standards for linking computers and digital networks and the launch of multimedia projects.

Technology Minister Paul KRUEGER said the initiative will not lead to a surge of public aid for the industry. He called instead for more deregulation and competition.

Mr. Krueger said Germany would use its six-month presidency of the European Union in the second half of the year to push for progress on the issue at a European level.

He also stressed the importance of multimedia for the German economy. "Around half of future economic growth will come from this area," he said. "In Germany, telecommunications, with around 5% of gross national product by 2005, will make almost as big an economic contribution as the car industry".

## APPLICATIONS

Multivision, a pay-per-view television service, will be launched in Paris on May 30 and become available to 200,000 French cable subscribers before the end of the year.

Multivision will broadcast films as well as sport and musical events every two hours at a price of 4.4 Ecus per movie. It hopes to generate a 6 billion Ecus revenue in 1994 and 9 billion Ecus in 1995.

## LEGISLATION

On June 13, the Dutch State will start trading 30% of the capital of the state-owned national telecoms company Koninklijke PTT Nederland (KPN).

The sell-off is expected to raise between 2.8 and 3.7 billion Ecus.

The Greek government will privatise next October 25% of the national telecoms company OTE.

The flotation is expected to generate 875 million Ecus.

Italy's five specialised telecoms companies SIP (local), Italcable (inter-continental), Telespazio (satellite), SIRM (radiomaritime) and Iritel (Europe and the Mediterranean) have merged within a new company, Telecom Italia, which will be privatised in August.

Telecom Italia, which will become operational on August 18, will be the world's sixth telecoms company with a turnover of 14 billion Ecus.

The European Union Commissioner in charge of competition, Karel VAN MIERT, called for a rapid liberalisation of access to cable networks in order to extend available services beyond the scope of radio and television,

Mr. van Miert said cable operators and other companies should be allowed to offer new services such as on-line databases, with the exception of voice telephony. He added that the move wouldn't harm telecoms companies' ability to provide universal service.

## MARKET

Dutch electronics group Philips, America's electronics company Zenith Electronics and US video-conferencing specialist Compression Labs have agreed to join forces to develop and market TV set-top boxes capable of receiving analogue and digital signals for future interactive television.

## NORTH AMERICA

Trends: After a period of doubts over the future of the NII, optimism could come back on the other side of the Atlantic with good news on the infrastructure projects front: Bell Atlantic will go ahead with its plans to set up an interactive multimedia network and BellSouth's has launched its own info-superhighway. On the technology side, a major breakthrough was achieved by IBM respectively regarding digitised information storage while Microsoft unleashed its "Tiger". An important alliance between EDS and Sprint could also be in the making, thus becoming a landmark event on the way to convergence.

## INFRASTRUCTURE

The US regional telecoms operator Bell Atlantic has chosen US telecoms equipment manufacturer AT&T and US electronics group General Instruments (GI) as the main suppliers for its new multimedia network which will cost \$11 billion over five years.

Bell Atlantic's network aims at delivering interactive data, voice and video services to one million users at the end of 1995 and more than 8 million by the turn of the century.

The system will be based on optical fibre supplied by AT&T for the backbone network and coaxial cable for wiring up households.

For AT&T, the deal amounts to the largest supply agreement in telecoms history. AT&T will also serve as a systems integrator and project contractor, while GI will supply an initial one million set-top terminals and data-encryption systems.

The US regional telecoms operator BellSouth has unveiled plans to spend \$18 billion until the year 2000 on building a digital broadband network to provide interactive multimedia services in nine US states.

## APPLICATIONS

The US regional telecoms company Nynex will use digital decoders supplied by Zenith Eletronics for the New York video-on-demand experiment it launched in May.

Nynex is currently limiting its trial to analogue V-O-D in 50 households but will switch to digital technology and expand its users sample to 800 before the end of the year.

## MARKET

Sprint, the third largest US long distance operator, and America's Electronic Data Systems (EDS), General Motors' data-processing unit, are investigating possible ties to compete in the multimedia sector.

Linkups between Sprint and EDS could take several forms ranging from partnerships on limited projects to an exchange of stakes or a complete merger.

## TECHNOLOGY

America's computer giant IBM has achieved a technological breakthrough that will allow to multiply by 10 the amount of information stored on an optical disk.

The technique used by IBM consists in piling up several layers of plastic surfaces containing digitised information. Each layer is then read by a directional laser ray.

This new form of three-dimensional storage system will soon allow to store as much as 20 to 30 times the amount of information currently stored on a disk of the same size.

Microsoft, the world's leading PC software producer, has demonstrated a prototype "media server" system, Tiger, that can handle interactive video and audio signals using personal computers for one-tenth of the cost of rival systems.

Companies such as IBM, Hewlett-Packard, Digital Equipment, Silicon Graphics and Oracle have put in doubt the idea that PC hardware has sufficient communication and processing capacity to perform interactive multimedia functions needed for video-on-demand, and are instead testing media servers based on mainframes and super-computers.

In the demonstration, Tiger allowed viewers to choose films from a choice of over 50 and control the video signal as if they were running a home video cassette recorder.

While Tiger may not be appropriate for big companies with huge and complex needs, Microsoft says it would match the demand of SMEs and public networks.

US leading cable operator TCI and Canada's biggest cable television operator Rogers Cablesystems have already agreed with Microsoft to test Tiger in interactive TV trials.

## ASIA AND PACIFIC

Trends: A new trunk of a global information superhighway is in the making following a MITI decision to establish a direct link between the NII and its computerised public facilities. As regards the building up of the information society, Asia tops the news with the launch of a tele-pricing system for cars in Singapore and a breakthrough in digitised fingerprint recognition in Taiwan.

## LEGISLATION

The Japanese Ministry for International Trade and Industry (MITI) has drafted a Enhanced Computerisation programme aimed at computerising public sector facilities and providing direct access to America's National Information Infrastructure (NII).

The programme, which is expected to be launched in 1995, lists five priority areas for computerisation, including education and research, and plans to establish a direct computer link between the so created electronic libraries and databases and the NII.

Indian authorities have unveiled a document analysing the country's future telecoms policy that calls for the opening up to foreign companies of India's telecoms sector, currently under the control of a national telecoms monopoly.

The cost of modernising India's infrastructure is estimated at 12 billion Ecus over three years, from which 6 billion would come from the Indian government.

## INFORMATION SOCIETY

Singapore has launched an electronic pricing system trial to reduce car congestion in its traffic-plagued capital.

Devices installed in selected areas of Singapore will send signals to an electronic card fixed to vehicles when they cross into a restricted circulation area. A certain amount of money will then be automatically deduced from the card's value.

If a car has no card, or if a card is empty, the system will automatically take a photography of the rear number plate of the offending vehicle.

Startek, a Taiwanese company, is manufacturing a computerised fingerprint recognition system for building access that could have unlimited security uses such as verifying credit cards, authorising computer-network access or opening car doors, and eventually replace passports and identity cards.

The device consists of a camera placed behind a small panel that scans fingerprints, and automatically digitises them. The digital code is then sent to a personal computer where it is checked against records.

Startek's system is faster and more convenient than swiping a card-key through an automatic reader and offer greater security as fingerprints cannot be stolen.

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