I&T
MAGAZINE
News Review

THE INFORMATION SOCIETY

CHILDREN IN THE INFORMATION SOCIETY

Over 160,000 schoolchildren in more than 700 schools throughout 15 European countries will take their first steps into the information society in a project financed in part by the Commission. At the initiative of Commissioner Martin Bangemann, responsible for information and communication technology, the Commission will provide 414,740 ECU of support for an innovative pilot action combining education, culture and advanced technologies by introducing children to the new possibilities of multimedia.

This pilot action is part of the project "Schools Adopt Monuments", which is coordinated by the Pegasus Foundation, an organisation founded by Members of the European Parliament to promote the European identity primarily through actions in education.

Within this action, the students will be able to experiment with multimedia workstations, software applications, the Internet, digital cameras, scanners, and video equipment in the production and communication of materials related to the historical monument that they have symbolically adopted. This

Accelerating telecoms liberalisation: full competition by 1998 agreed

On 29 February, at the initiative of Commissioners Martin Bangemann and Karel Van Miert, the Commission agreed to adopt the directive implementing in EU law the commitment to full competition in the EU telecommunications market by 1st January 1998.

Issued under Treaty Article 90, the directive fixes the date for full liberalisation into EU legislation and sets out deadlines for progress in national implementation in preparation for this goal. Underpinning the directive is the recognition that competition, in the presence of necessary regulatory safeguards, enhances the provision of universal service. Member States must notify the Commission of measures to ensure universal service by 1 July 1997 at the latest.

Global momentum in all areas

In line with the broader interests of global information society coordination, adoption of this new EU legislative framework comes just four weeks after final agreement in the US of the 1996 Telecoms Act which fully modernises US telecoms regulations and market structure.

In addition to the 1998 date for opening up the markets in voice telephony and public network infrastructure, the directive accelerates the liberalisation in all other areas: the lifting of all remaining Member State restrictions which do not require major changes in legislative and regulatory

frameworks must be achieved this year (1996). Restrictions have already been abolished in satellite, cable and mobile communications. The current directive thus removes the last hurdle before the final gate is opened: as of 1 July 1996 use of all alternative infrastructure (such as the telecoms networks of railways, energy and water companies which are currently only authorised for restricted "in-house" purposes) must be liberalised for carriage of commercial telecoms services. This provision excludes public voice telephony service which may be reserved to the national telecoms organisation until 1998.

The original date put forward by the Commission of 1 January 1996 for lifting restrictions on alternative

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direct-involvement, transdisciplinary approach will give them a unique opportunity to use the technological tools necessary to create and master data, to navigate in a sea of knowledge, and to develop a deeper understanding of their own cultural heritage and its European context, by sharing their work with their fellow European students.

List of cities involved:
Amsterdam (NL), Athens (GR), Brussels (B), Canterbury (UK), Copenhagen (DK), Dijon (F), Dresden (D), Dublin (IRL), Luxembourg (L), Naples (I), Rauma (SF), Santarem (P), Stockholm (S), Toledo (E), Vienna (A).

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Full competition (continued)

infrastructure has been moved back six months as a compromise to the Member States. Two factors were taken into consideration here:
- the time needed to achieve the implementation requirements
- bringing the date in line with the agreement conditions set down by the Commission in important competition cases.

As regards the deadlines of July 1996 and January 1998 ' for alternative infrastructure and full competition respectively, Member States with less developed networks shall be granted, upon request, additional implementation periods of up to five years provided that this is needed to achieve the necessary structural adjustments. Member States with very small networks may be granted up to two years under the same conditions.

Alongside the lifting of government restrictions, the Full Competition directive also sets down broad competition principles as regards the appropriate national regulatory frameworks for the post 1998 environment. This concerns, in particular, interconnection, licensing and financing of universal service. Such regulatory instruments should be transparent, non-discriminatory and as least restrictive of competition as possible whilst still achieving important policy goals of public service, interoperability and use of limited resources such as spectrum and rights of way.

Universal service is in fact the subject of the recently adopted Parliament and Council directive applying open access rules to voice telephony. In the coming weeks, the Commission will issue a detailed Commission Communication which will set out the scope of universal service and the future approach of the Commission in this regard.

The harmonisation requirements of Member State rules in these areas fall under the EU's ONP (Open Network Provision) framework which is concerned with open and efficient access to, and use of, the public telecoms networks and services. ONP Council and Parliament legislation in these areas, issued under Article 100A, is currently under discussion.

The Commission has ensured that the Article 90 framework is fully coordinated and coherent with the draft ONP framework.

In the meantime, before implementation of ONP rules is achieved and/or in areas where their application is limited, the rights of new entrants to liberalised markets under the Treaty competition rules should not be compromised.

Size and growth of telecoms markets and impact of competition

Telecommunications is one of the largest and most profitable economic sectors in the world. In 1992 public telecoms services revenue reached $505 billion. The global telecoms equipment market came to $120 billion in the same year. At a time when nearly all large industrial and service corporations faced general economic slowdown, the telecoms sector has thrived. In 1993, for example, the largest 25 public telecoms operators in the developed world were more profitable than the largest 100 commercial banks.

Where telecoms services (data, long distance and mobile) have been subjected to the greatest level of competition is where the greatest revenue growth and new employment have been created. In those countries in the EU and around the world with the longest experience of liberalisation, it is demonstrable that telecoms employment by new service suppliers offsets jobs shed by incumbent PTOs as they take on the productivity gains of new technology.

At the same time, the increasingly strong link between efficient telecoms service and the whole national economy is shown in the growing reliance which business in general places on telecoms. Over the last ten years the ratio of business telecoms links to employees was around one to nine, now it is more than one to three.

The benefits to business of telecoms competition are of course well known. It is important to underline that residential users also see significant benefits when competition is introduced.

Towards greater competition in the Mobile and Personal Communications Market

On 16 January 1996 the Commission formally adopted the Article 90 directive opening the EU mobile and personal communications market to full competition, put forward by Commissioner Van Miert in cooperation with Commissioner Bangemann.

The directive is based on the discussion process launched last year by the Green Paper on Mobile and Personal Communications. It requires Member States to abolish all exclusive and special rights in the area of mobile communications and, wherever this has not yet been achieved, to establish open and fair licensing procedures to authorise the launch of the digital services GSM, DCS 1800 and DECT.

This includes lifting the restrictions on current licensees for one of these frequencies from applying to extend their services into the others. The directive stipulates that Member States must cease to restrict the combination of the mobile technologies or systems, in particular where multistandard equipment is available, while also taking into account the benefit of ensuring effective competition between operators in the relevant markets by allowing new entrants to gain a foothold.

The directive also removes all existing restrictions on use of facilities for mobile networks, allowing new mobile operators to make full use of their own infrastructure as well as that provided by third parties such as utilities' networks. Use of infrastructure other than those controlled by the incumbent telecoms operator is essential to the success of new entrants to the mobile market as it gives them much greater control over their cost base. Leasing capacity currently represents a cost factor for second operators of between 30 and 50%. The right to set up their own networks and choose alternative infrastructure and connections also gives mobile operators significantly more flexibility representing an strong push towards further development and innovation in the mobile market.

Greater efficency and choice bought about by competition in the mobile market is particularly important in the run up to 1998 full telecoms liberalisation as it will dampen the potential for increases in (fixed) local charges to the consumer. The increasingly commercial incumbent (fixed link) operations are now set to position themselves to make the most of their local loop monopoly before the effects of full network competition are felt. However, the rapidly decreasing price of competitive mobile services will set an effective ceiling for the wire based local tariffs.

The Commission will be paying close attention to price adjustments in the telecoms sector between now and 1998 in order to secure the maximum benefits of liberalisation for consumers across the EU.

From the moment the directive enters into force, in addition to what has already been achieved in opening up the GSM licencing process across the Union, Member States must open licence allocation procedures for all public access/Telepoint applications, including systems operating on the basis of the DECT standard.

By 1 January 1998, at the latest, the Member States must also have opened up the licencing of mobile systems according to the DCS 1800 standard.

Restrictions on infrastructure and direct interconnection for mobile communications must be abolished immediately. However, Member States with less developed networks may apply for derogations of up to five years to take account of their specific situations. This affects Portugal, Greece, Spain and Ireland.

Mobiles: some figures

The directive means that the EU market will be the first region in the world to enjoy the combination of liberalisation of services and networks, together with the deployment of harmonised, leading edge, digital standards over such a large area.

The standards confirmed for the EU are GSM, DCS 1800 (the two frequencies available for digital mobile services) and DECT (for digital cordless telephony within a fixed radius). This both reflects and further establishes the global momentum behind the take-up of this technology for the second generation digital mobile systems. The wireless market is now set to become a core component of the information society and the development of true person-to person-communications.

Dynamic market

The mobile sector is by far the most dynamic in the telecoms market in the EU experiencing levels of growth of over 60%. In the last year the number of cellular subscribers in Europe has grown from around 12 million to over 20 million, clearly outstripping growth in numbers of fixed subscribers.

The vast majority of the new mobile customers are enjoying digital services, particularly GSM, which allows them to roam throughout Europe with the same handset and is also much more efficient concerning use of the frequency spectrum.

On top of very substantial analogue networks in countries such as the UK, Italy and Scandinavia, the growth potential of GSM is now also evident in nearly all the Member States. In France, for example, GSM subscribers grew from around 337,000 to around 797,000 over the past year. In Belgium there were around 53,000 GSM subscribers at the end of 1994 and there are now nearly 146,000. Italy saw growth over the same period from 45,000 in 1994 to 170,000 in October 1995. Germany still remains by far the most important market with almost three and a half million users, of which over two and a half million are now on the GSM network.

However, progress in countries with less developed networks is also notable. Over the last 12 months GSM subscribers in Greece increased from 125,000 to 255,000, and in Portugal, from 122,000 to 241,000. The Scandinavian countries are now also experiencing massive growth in take up of GSM. Most impressive is Sweden where the GSM market has grown from around 200,000 to 905,000 over the past year.

In total, Commission studies predict 38 million cellular mobile users in Europe by the year 2000 and around 80 million by 2010.

Technology transfers: Commission adopts new rules to promote distribution of technological innovations throughout EU

On 31 January the Commission adopted new rules on technology transfer agreements, to enter into force on 1 April 1996, with the aim of promoting innovation and the dissemination of technical knowledge throughout the European Union.

The essential role of technology transfers in the development of technological innovation and their part in boosting the competitiveness of European industry, and thus economic growth, were highlighted in the Commission's White Paper *"Growth, Competitiveness, Employment - The Challenges and Ways forward into the 21st Century"*.

The new rules contribute to this by considerably simplifying the arrangements governing licensing agreements. The previous rules on pure and mixed know-how and patent licensing agreements are to be merged into a single legal instrument, thus ensuring that they are all governed by the same arrangements.

The new regulation is the culmination of a long consultation process with the Member States, the other institutions and economic interests. The Commission, anxious to adopt rules which reflect contract practice, has held an ongoing dialogue with the interested parties. It has reworked the wording of provisions constantly with the aim of producing modern legislation which, while ensuring that competition rules are applied effectively to licensing agreements, avoids unnecessary red tape and safeguards the legal security of companies, thus helping to promote the dissemination of new technologies.

The main features of the new concept presented by Mr Van Miert can be summarized as follows:

- automatic exemption is granted to all licensing agreements which provide for territorial restrictions between parties or between licensees. Licensing agreements containing such restrictions do not need to be notified to the Commission;

- a certain number of obligations which the parties may lawfully include in their contracts (such as the right for licensors to terminate the agreement in the event of the licensee challenging the validity of the patent, the secret or substantial nature of the licensed know-how or the obligation for licensees to use their best endeavours to manufacture and market the licensed product);

- a "blacklist" of clauses or restrictions whose insertion in an agreement prevents block exemption being granted (restrictions on price and quantities, a ban on exploiting competing technologies, customer restrictions between competing manufacturers, obligation on licensees to assign improvements to the technology concerned, territorial restrictions for a longer duration than those exempted);

- an opposition procedure extending exemption to agreements containing additional restrictions on competition not specified in the regulation. This is on condition that such agreements are notified to the Commission and that the Commission does not oppose the application of the exemption within four months (as opposed to six previously).

Clauses previously outlawed (such as an obligation on licensees to procure from the licensor supplies which are not essential for a technically proper exploitation of the licensed technology) are subject to this procedure.

In short, the new arrangements reduce the disparities which existed between the rules on patent licensing agreements and those on know-how licensing agreements.

They also abolish a number of clauses in these rules which prevented block exemption or transfer them to the opposition procedure and provide for new legal clauses with a view to promoting the contractual freedom of parties.

However, this more flexible approach, which will benefit the vast majority of Community operators, will be accompanied by a clear warning for companies with a strong position on the market. Provision is made for a threshold - namely a 40% market share- beyond which companies will not benefit from the regulation if they have obtained exclusive licensing agreements and thereby monopolized the market for the product in question and prevented access by third parties to the new technologies.

When it started working on this regulation, the Commission initially thought it appropriate to guard against these risks by also stipulating that agreements granting an exclusive licensing agreement to a very powerful licensee would not benefit from exemption.

However, having heard the objections raised by economic interest groups, the Commission eventually concluded that its main concern, namely to ensure a broader dissemination of new technologies, could be achieved by less rigid methods.

Accordingly, it dropped the obligation that licensing agreements should automatically be notified whenever the aforementioned 40% threshold was reached.

Pending the entry into force of the new rules (1 April 1996), the continuity of patent licensing agreements covered by the 1984 arrangements will be safeguarded by transitory provisions.

Satellite personal communications services (S-PCS): Commission proposes action

The "Proposal to the European Parliament and Council for an action at Union level in the field of satellite personal communications services", put forward by Commissioner Martin Bangemann, was adopted by the European Commission in November of 1995. The proposal could be adopted by the European Parliament and the Council by the middle of 1996.

Satellite personal communications services will provide data and/or voice services (and in the future also video services) into a fixed or protable personal terminal approximately the size of today's terrestrial cellular phones. They will achieve this using new types of satellite systems such as Low Earth Orbit (LEO) constellations of some 40-70 satellites overflying the surface of the earth at around 1000 km. These systems will enable global interconnectivity and mobility via the use of personal communications equipment as a complement to world-wide mobile terrestrial networks (in particular GSM).

European action needed urgently

There is a significant opportunity for European mobile and space industry in both equipment and services in satellite PCS. Current European industry contracts are valued at about 500 million ECU, while potential further contracts are estimated to reach tens of billions of ECU, especially in handsets.

In view of the limited availability of frequency spectrum resources and the number of satellite PCS systems already announced, there is a need to come to a co-ordinated selection of satellite PCS systems worldwide, taking due account of the economic, industrial and social implications of the proposed services.

The operation of the satellite systems is subject to two inter-related sets of issues:

- formal notification to the ITU (International Telecommunications Union) for the purpose of technical frequency coordination, and

- selection and authorisation of the systems in nations where the space segment capacity is to be used.

Successful completion of the ITU frequency coordination process does not provide any guarantee that the satellite system will indeed be authorised to provide space segment capacity for use in a particular country.

In the United States, the Federal Communications Commission (FCC) has considered six applications. In early 1995 the FCC issued orders selecting and licensing three of the proposed concepts for global service provision, namely Globalstar, Iridium, and Odyssey.

Regulatory measures, including licensing, are yet to be taken in other parts of the world, although many countries are evaluating the issues arising from the introduction of these services.

In the European Union, the Commission has undertaken a number of initiatives. It organised a hearing in September 1992 where the industry presented their plans to interested regulators, industry and users. In its Communication on Satellite Personal Communications of April 1993, the Commission underlined the strategic importance of satellite personal communications systems and services.

There needs to be compatibility between any European spectrum usage and usage in other regions of the world. The spectrum is to some extent controlled by those who lay first claim on the spectrum in the context of the ITU procedures, and there is a danger that unless precautions are taken, systems capable of providing service in Europe may be selected by a process outside European jurisdiction. Therefore a European approach for licensing is urgently needed, in order to use the limited frequency resource most efficiently and to strengthen the combined European position on this matter.

The proposed action

The objectives of action shall be to ensur, within a period of three years:

- the selection of satellite PCS space segment operators;
- the adoption of common conditions to be attached to authorisations for satellite PCS space segment operators;

- the harmonisation of conditions for authorisations;
- the establishment of a dialogue and, where appropriate, negotiations between the European Union and third countries with the aim of establishing international cooperation in order to promote development of satellite personal communications services and remove the obstacles to their development.

As a first step, the Commission has decided to publish a Call for Information in the Official Journal, addressed to prospective consortia and other relevant industry planning to provide satellite personal communications services and/or equipment in the European Union.

Through this Call for Information the Commission seeks detailed information on all relevant matters which may assist the definition of the scope and modalities of a selection and authorisation process, including suitable criteria for selection and conditions for authorisation.

The Commission may ask the European standardisation bodies such as the European Telecommunications Standards Institute (ETSI) and Cen/Cenelec, as well as the European Radio Committee (ERC), and the European Committee for Telecommunications Regulatory Affairs (ECTRA), via work requirements under the relevant existing framework agreements with those organisations, to study the necessary technical criteria and conditions.

Finally the Commission, assisted by an advisory and a regulatory Committee, will adopt Decisions on:

- common conditions to be attached to the authorisations of the selected satellite personal communications space segment operators;
- harmonised conditions for the authorisation of providers of satellite personal communications services, gateway operators, and, if required, for the circulation and use of equipment;
- any other measures aimed at facilitating the development of satellite personal communications services.

On the international front, the Commission monitors developments outside the Community and consults with third countries on the coordinated introduction of satellite personal communications at a global level.

Whenever the Commission establishes that the situation may require negotiations with third countries, it will start appropriate negotiations in view of these aims. The principle of Community action will be aimed at ensuring effective and comparable access for Community organisations in all markets.

Time schedule for measures

Sept. 96 Establishment of categories of satellite personal communications services for which a selection of satellite systems is required;

publication of a Call for Declarations of Interest in the Official Journal;

Oct. 96 Adoption of criteria for the selection of satellite systems and the principles for the authorisations for these systems;

Dec. 96 Based on a comparative bidding process and subsequent

evaluation, selection of satellite systems used for the provision of categories of satellite PCS services;

Adoption of common conditions for the authorisation of the selected systems;

Mar. 97 Adoption of harmonised conditions for the authorisation of all aspects of satellite - personal communications as they concern inter alia service provision, equipment, interconnection, numbering, and gateway access.

INTERNAL MARKET

The Single Market in 1995 - Commission Report reviews progress

Considerable progress was made in 1995 towards making the Single Market fully operational, but there are still problems to be resolved. A number of important measures to complete the legislative framework were either adopted by the EU's Council of Ministers or proposed by the Commission, and consultations on a number of new policy issues were launched.

However, some Member States are still too slow at implementing Directives or fail to apply them properly. There are also persistent barriers to the free movement of people, goods, services and capital within the Single Market, which the Commission is determined to tackle. These are the main conclusions of the Report on the Single Market in 1995, which has been adopted by the Commission on the initiative of Commissioner Mario Monti. The detailed report expands on the brief report submitted to the European Council at its Madrid meeting in December 1995.

The Commission's policy in 1995 was organised along six lines of action to boost the Single Market:
(i) completing and streamlining the legislative framework of the Single Market;
(ii) making the Single Market work;
(iii) confirming the Single Market as the cornerstone of Economic and Monetary Union;

(iv) securing a Single Market for the citizen;
(v) adapting the Single Market to technological and other change; and
(vi) preparing the Single Market for enlargement.

Key Single Market developments in 1995 included:

•**Trade barrier transparency** - the Parliament and Council Decision on transparency of exceptions to the principle of free movement of goods, adopted in November 1995, will set up a new system for the exchange of information in this field as of 1 January 1997. Whenever a Member State take steps to prevent the entry to their markets of products lawfully produced or marketed in another Member State, they will have to notify the Commission. The system should ensure the principle of mutual recognition of different national technical rules is respected, thereby avoiding the need for wholesale technical harmonisation at the EU level.

• **Penalties** - the Commission's 3 May 1995 Communication on the role of penalties in implementing Community internal market legislation called on the Council and the European Parliament to ensure penalties imposed under national law for violating Single Market rules

were transparent and efficient. The Council responded positively in a Resolution of 29 June 1995;.

• **Removing frontier controls on people** - three proposals for Directives to abolish controls on people crossing internal borders within the EU were put forward by the Commission on 12 July 1995. The application of a series of accompanying measures to ensure citizens' security (e.g. concerning external frontiers and police cooperation) is a pre-condition for lifting internal border controls on people.

•**Information Society - databases** - In July 1995, the Council reached a Common Position on the proposal for a Directive on the legal protection of databases. The Directive will create a new 'sui generis' right for creators of databases, valid for 15 years, to protect their investment of time, money and effort, irrespective of whether the database is innovative. The Directive will also harmonise the copyright law applicable to database structures. Definitive adoption of the Directive is now imminent.

•**Information Society - copyright** - the Commission published a "Green Paper on copyright and related rights in the Information Society" in July 1995, and invited comments from Member States and interested parties. The Green Paper examines a range of

issues arising from the impact of new technologies and the Information Society on copyright and related rights, particularly as regards the effects of measures in this area on the free movement of information society services. The results of the consultations are now being assessed by the Commission.

• **Information Society - personal data protection** - The Council and the European Parliament adopted Directive 95/46/EC of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.

This Directive, based on the principle that the subject of the data must be able to verify data held on them and give prior consent to the processing of that data, will help to ensure the free flow of Information Society services within the Single Market by fostering consumer confidence and minimising differences between different national rules. The Directive is applicable from 1998.

• **Enlargement** - The Commission adopted on 3 May 1995 a White Paper on the preparation of the associated countries of Central and Eastern Europe for integration into the Internal Market.

This White Paper provides guidelines for these countries to help them to align their legislation and administrative structures with those of the Union. A Technical Assistance Exchange Information Office has been established in Brussels to provide practical help and advice.

The Commission broadly welcomed the report's general recommendations, but indicated that it would have welcomed more commitment from the Group in analysing and assessing the impact of national legislation.

The Regulatory Report published by the European industrialists grouping UNICE, prepared with financial assistance from the Commission,

confirmed that much of the regulatory burden on business is the responsibility of Member States rather than of the Community.

Remaining problems

Among the remaining problems to be resolved are certain gaps in the legislative framework.

For example, European business cannot yet benefit from the European Company Statute, the absence of which the Ciampi Report estimated costs business ECU 30 Billion a year.

However, the Commission is hopeful that Directive 94/45/EC, which provides for the establishment of European Works Councils or procedures in Community scale undertakings and groups of undertakings, can act as the basis for a resolution of this issue and lead to the adoption of the Regulation in the near future.

Similarly, companies and cross-frontier workers increasingly complain about the problems of double taxation. Yet, the Commission's proposals on these issues remain blocked despite the European Council's repeated insistence on the importance of improving the fiscal and legal environment for business, in particular SMEs.

Competition is particularly important in certain key areas if the full advantages of the Single Market are to be realised. In the telecommunications sector, the deadline of 1998 remains as the date by which full liberalisation will have been achieved, while the use of alternative infrastructures for liberalised services will be allowed two years earlier.

In 1995, there has been a welcome acceleration in the pace of liberalisation and competition in the telecommunications sector, enabling it to play its pivotal role in making the Information Society a commercial reality in the EU.

Although the basic framework of the single transport market is in place, further measures are needed, especially for airport ground-handling facilities, railways and inland waterways. The Commission has tabled proposals to this effect during 1995.

Complaints and notifications

The Commission continues to receive a significant volume of complaints about the failure of Member States to respect Single Market rules.

Despite the existing body of EC rules on technical standards, the Commission continues to receive a large number of notifications from Member States under Directive 83/189/EEC of draft technical regulations which may hinder the free movement of goods. The level of notifications reveals that Member States are still coming forward with significant numbers of new draft rules affecting business.

Economic impact of the Single Market

An overall analysis of outstanding problems will form part of a major evaluation of the impact and effectiveness of Single Market legislation which the Commission is currently carrying out, as requested by the Council in 1992.

Over 40 independent studies got under way during 1995 and these will form the basis for a report later in 1996. This analysis will permit the Commission to orientate its Single Market strategy and to fine-tune the legislative framework.

Green Paper on legal protection for encrypted services in the single market

On 6 March the European Commission adopted a Green Paper on the legal protection of encrypted services on the initiative of Mario Monti, Commissioner responsable for the Single Market, in agreement with Mr Oreja and Mr Bangemann.

The Green Paper notes that the fragmentation or absence of rules is preventing the Single Market from operating properly and is holding back the development of a European market in encrypted services. These services comprise not only pay-television, but also new information society services such as video-on-demand, games supplied on request and interactive teleshopping. The Green Paper will form the basis for wide-ranging consultations to be held with interested parties between now and 31 May in order to enable the Commission to take a final decision, in the course of this summer, on whether Community action is needed and, if so, what form it should take.

"By presenting this Green Paper, we are taking a further step towards establishing a regulatory framework for the information society in the single market on the basis of the action plan we drew up on 22 March 1995", Mr Monti said.

"The viability of encrypted services and the development of the information society in Europe would be undermined if there were no protection against the pirating of these services throughout the Single Market. The consultations we are going to hold on the basis of the Green Paper will help us find coordinated solutions at Community level to the problems of reception without payment, while keeping any new legislation to the strict minimum."

The Green Paper covers all services which are encrypted in order to ensure payment of a fee, in other words all services, transmitted or re-transmitted by any technical means, whose signal is scrambled or otherwise modified so as to restrict its reception to specific users. This category includes traditional encrypted broadcasts (pay television), new broadcasting services (digital television, pay-per-view, near video on demand) and certain information society services (video on demand, games supplied on request and interactive teleshopping).

This is a fast developing market, thanks in particular to the advent of digital technology, which will allow communication capacity to increase. Moreover, because of their specialized nature, these services are bound to need a cross-border market. Their growth is, however, being jeopardized by piracy, with a booming unofficial decoder manufacturing industry springing up alongside authorized manufacturers. It produces and markets, without the consent of operators, unlawful devices (decoders, smart cards) that enable individuals to gain access to the service without paying the subscription or fee.

To put an end to this practice, some Member States have adopted specific rules prohibiting the manufacture and distribution of illicit decoders. Some are in the process of doing so, and others do not yet have any specific legislation.

After analysing the different approaches taken in national rules, the Green Paper concludes that the fact that the Member States do not all have an equivalent level of legal protection prevents the Single Market from operating properly. This creates a number of obstacles to the free movement of encrypted services and decoders and numerous distortions of competition between operators in the various Member States. The present fragmented approach to legislation is seen by the trade as a major barrier to the development of a European market in the new encrypted services. Given this situation, the Green Paper considers the case for the Commission proposing an initiative to harmonize national laws in this area.

Such an initiative should prohibit the manufacture, sale, importation from third countries, possession for either commercial or personal use, installation and commercial promotion of decoders designed to permit access to encrypted services without the encryptor's authorization. The unauthorized decoding of encrypted services would also be banned.

Member States would have to adopt effective, proportionate and deterrent penalties for any breaches of these rules and would have to enable any interested party to make a claim for damages.

Legal protection of databases directive adopted

On 26 February 1996 the Directive on the Legal Protection of Databases was definitively adopted by the EU's Council of Ministers. The Directive creates a new exclusive 'sui generis' right for database creators, valid for 15 years, to protect their investment of time, money and effort, irrespective of whether the database is in itself innovative.

The Directive will also harmonise copyright law applicable to the structure of databases. The Directive's provisions will apply to both electronic and paper-based databases.

"This innovative and comprehensive measure will ensure an appropriate level of protection for database creators and investors throughout the EU", commented Single Market Commissioner Mario Monti. "Such protection is essential to encourage the investment necessary to make the information society a commercially viable reality in Europe. By adopting this Directive, the EU has shown an example in this field to the rest of the world". The Directive is due to be implemented by Member States no later than 1 January 1998.

With the advent of the information society, the protection of databases takes on added importance, as most services will be provided from an electronic database available on-line or off-line (CD-ROM, CD-i, etc). Databases will also have a major impact on the creation of new multimedia products. It is therefore essential that the EU provides a clear and well-defined level of protection

for databases so as to ensure an attractive environment for investment while safeguarding users' interests.

The main feature of this new Directive is the creation of a new exclusive economic right protecting substantial investments made by manufacturers of databases. This new 'sui generis' right will be granted to database creators to protect their investment of time, money and effort to establish a database, regardless of whether the database is in itself innovative. In addition, the Directive will provide for harmonisation of elements of copyright law applicable to the structure of databases.

On the basis of the new Directive,

manufacturers of databases will be in a position to prohibit the extraction and/or reutilisation of the entirety or substantial parts of the database by third parties. However, this new form of protection should not affect the rights of traditional rightholders, in particular of creators of works incorporated in the contents of a database.

The 'sui generis' protection is valid for a period of 15 years, subject to renewal when new substantial investments take place. The same level of protection is available within the Single Market for all databases manufactured within the Community. Such protection may be extended in the future to databases manufactured in third countries, if their legislation

provides for a similar level of protection for Community databases.

The Directive strikes a balance between the interests of the manufacturers of databases and the legitimate interests of their users. Particular account has been taken of situations in which the extraction of contents of databases is required for teaching purposes as well as for scientific research. It is expected that this legal innovation will receive significant attention from the Community's most important trading partners, as well as in international institutions dealing with intellectual property rights.

PROGRAMMES IN ACTION

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Project reports on the way to the information society: jobs, regional development, lifestyle changes, growth and trade

One important basis for European union policies on growth and employment is the belief that a rapid transition to an "Information Society" through fast deployment of advanced communications infrastructures and services will generate competitive advantages for business greater flexibility in employment and more jobs and new sustainable economic growth.

It is extremely difficult to substantiate this belief in quantitative terms. Much of the change involved in developing an information society is structural, and simple extrapolation of past trends is not a reliable guide to the future.
The transition will also be associated with great volatility : some business sectors will decline, others will grow,

and yet more will appear on the scene. Many traditional jobs will disappear but (we hope) even more new jobs will be created.

The four research projects for which the key results are summarised here all looked in different ways at the possible impacts of advanced communications deployment :

· the AD-EMPLOY project at the impact on jobs
· the ACCORDE projects at the impact on regional development and European cohesion
· the SOCIAL TRENDS project on changes in lifestyles and on use of electronic media
· the METIER project on growth and trade.

This summary report is distributed as a contribution to the debates about the Information Society. Full texts of the final reports from all projects are available from DGXIII - B. The views expressed are not necessary those of the Commission.

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Telematics Applications Programme: Telematics Engineering (Area D/Sector 11)

Results of Second Call for Proposals

Telematics Engineering is a horizontal sector within the Telematics Applications Programme which is essentially concerned with the identification, collection, collation, adaptation, validation and diffusion of methods, techniques, and tools for the best ways to implement telematics applications successfully. It comprises tasks in five areas:

1. **Process Re-Engineering**, - focuses on methods for aiding designers and end-users to take into account changing business processes in organisations that will use telematics applications.
2. **Requirements Specification Engineering**, - addresses the need to provide telematics applications projects with adequate support and guidelines, in their analysis and definition of user requirements and human/computer interfaces.
3. **Application Engineering**, - makes available methods, techniques, tools and building blocks or generic components for the development of telematics applications.
4. **Legal, Ethical and Socio-Economic Issues** in Telematics Applications,- aims at raising awareness at European Union level of the impact of telematics applications on society by investigating the major non-technical factors which may influence the large-scale uptake of the information society in Europe.
5. **Diffusion and Feedback** of Telematics Engineering Results, - will compile results, distribute them as widely as possible and collect user feedback, in order to maximise the influence of this sector's results on the entire Telematics Applications Programme.

All the tasks in Sector Telematics Engineering were open in the Call of 15 March 1995 (closed on 15 June 1995). 50 proposals were received, of which 11 were retained for funding.

The overall quality of the received proposals was good. The retained proposals address all the areas above, sometimes through a combination of two to three tasks in one or two areas.

The duration of the retained proposed projects will be typically 24 or 36 months. The overall funding will be 8.52 million ECU.

A very brief overview of the main objectives of the 11 selected projects follows:

1. Provide support for value system redesign, at the level of inter-company supply chain

2. Develop a proposal for a regulatory framework for industrial relations in telework.

3. Provide a method and tool for the self-assessment and consolidation of core competencies of organisations including the application of best practices in the development and operations of telematics systems and services.

4. Identify cultural factors and inhibitors in the adoption of telematics by end-users, and develop method for taking into account cultural values in the development and implementation of telematics systems and services.

5. Structure the contents of the EU Data Protection Act on a CD-ROM, clarify its relationship to existing national data protection rules. The information should be usable by developers of telematics applications.

6. Develop a gateway between EDIFACT and the X.509 standard for electronic mail, providing authentication certificates across the gateway.

7. Develop tools for group cooperation using the World Wide Web.

8. Provide practical guidelines and tools for the quality assessment during validation of user interfaces in telematics systems, and evaluate them by providing support to selected Telematics Applications projects in different sectors.

9. Provide guidelines for the requirements engineering of telematics systems, starting from the user needs capture phase and ensuring the quality through the whole development cycle. Validate the guidelines by providing support to selected Telematics Applications projects in different sectors.

10. Develop reusable and general intelligent user interfaces to decision support systems.

11. Operate a WWW server where the public results of the Telematics Engineering sector are made available to the projects in the Telematics Applications Programme, and more generally to the industry, administrations and research institutions. Animate an electronic forum for telematics engineering issues in the Telematics Applications community.

The contract for the above eleven projects are being negotiated with the concerned project consortia. The projects are planned to be launched in early 1996.

The key issues and challenges faced by the projects in this sector are:

- to provide as a core "enabling discipline" for all sectors of the Telematics Applications Programme the necessary focus on best practices for the most efficient and effective way to develop and implement telematics applications successfully by stimulating the natural coalescence and consolidation of telematics R&D results and practical experience.
- to contribute from a pure engineering angle to the identification, investigation, and evaluation of all technical, regulatory, legal, ethical and socio-economic factors affecting the provision and operation of telematics infrastructures as a basis for the take-up of the Global Information Infrastructure and Society in Europe.

Exploratory action: "Telematics Applications and Services in the Domain of Environment"

In the 4th Framework Programme (1994-1998) of the European Union the Specific RTD Programme of "Telematics Applications of Common Interest" includes a total of twelve sectors, among them a new sector, Telematics for the Environment. With a total budget of 20 MECU, the exploratory action on the Environment aims to investigate and demonstrate the potential added-value and the appropriateness of multi-media telematics solutions to improve environmental management, and to support corresponding EU policies.

As a result of the first call of proposals (which closed on 15 March 1995) 18 projects have been retained and were included in the Commission Decision of 26 July '95. Twelve demonstrator projects started their work in January '96 in a number of environmental applications, such as: integrated air quality control, water quality monitoring, public environmental information services, catalogue of data sources, eco-auditing, or forest fire management. These applications are based on existing technologies such as: Geographical Information Systems, Data Base Management Systems, Multi-media Graphical Interfaces, Client Server Systems, Remote Sensing, Satellite Communication, ISDN, World Wide Web/Internet, etc.

Telematics applications are addressed in two major environmental domains: first, environmental monitoring, information and control systems for the purpose of improved reporting, planning, forecasting, and decision making, and second, global emergency management systems to improve prevention, risk assessment, risk analysis and crisis management for time critical events, in case of man-made and natural disasters.

Furthermore, European environment information services and applications are being pursued in support of the objectives of the European Environment Agency (EEA) and the Centre of Earth Observation (CEO).

Environmental managers from public authorities from more than 25 European regions and 20 European cities are involved in the projects in form of public-private partnerships, ensuring an efficient implementation of the 'user-driven-approach', stipulated as one of key objectives of the Telematics Applications Programme. A second call for proposals in the sector of Environment Telematics will be launched probably in June 1996.

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Information Engineering Study Reports now available

A selection of recently completed studies on topics of interest to Information Engineering are now publicly available. Carried out between January and June 1995 as part of the Exploratory Actions in Multimedia Publishing, the studies cover a wide variety of technical, organisational and commercial disciplines and provide important baseline information to sector participants and to the information engineering community at large.

The following study reports are available free of charge on request from the European Commission:

- ELPUB 101: EC-wide high-capacity information network: What is available? (Ovum Ltd)

- ELPUB 102: Information Transaction (Templeton College)
- ELPUB 103: Project Organisation, Structure and Management (Bureau Van Dijk)
- ELPUB 104: Telepublishing Survey (TFPL Ltd)
- ELPUB 105: Usability Study (ACit GmbH)
- ELPUB 2001: Identifying the influential technologies and their impact (Meta_Generics Ltd)

A summary of each study is available on the World Wide Web at: http://www.echo.lu/programmes/en/fact_sheets/elpubproj.html/. To request a copy of a particular study report, please contact the address given below. Please specify the reference number and title of the study you wish to obtain.

For further information on the Information Engineering sector, please consult the World Wide Web pages at http://www.echo.lu/ie/en/iehome.html/.

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Information Engineering announces projects for 1996-98

Following the 2nd Call for Proposals under the Telematics Applications Programme published on 15 March 1995, Information Engineering has concluded contracts worth over 30 MECU with a number of consortia to carry out shared-cost pilot applications addressing RTD tasks in industrial, consumer and educational domains.

The following successful projects were selected from over 130 proposals received in response to the call.

- IE 2005 AQUARELLE - Sharing Cultural Heritage in Multimedia Telematics
  Duration: 36 months
  Coordinator: ERCIM (FR)

- IE2037 GEOMED - Geographical Mediation Systems
  Duration: 30 months
  Coordinator: Intecs Sistemi (IT)
- IE2044 EUROPE MMM - Efficient Usage of Remote and Online Publication of Electronic Multimedia Materials
  Duration: 36 months

Coordinator: John Wiley & Sons (UK)
- IE2069 MAGICA - Multimedia Agent-Based Interactive Catalogues
  Duration: 24 months
  Coordinator: Olivetti (IT)
- IE2077 WATIS - Work and Training Information System
  Duration: 24 months
  Coordinator: VDAB (BE)
- IE2081 MBLN - Multimedia as Business Option for Local Newspapers
  Duration: 36 months
  Coordinator: Fraunhofer-IAO (DE)
- IE2093 MULTIMEDIA BROKER - Creating Critical Support Tools for Multimedia Publishing
  Duration: 36 months
  Coordinator: Ibermatica (ES)
- IE2101 MAID - Multimedia Assets for Multimedia Design
  Duration: 36 months
  Coordinator: CITE (UK)

- IE2108 TWENTY-ONE - Development of a Multimedia Information Transaction and Dissemination Tool
  Duration: 36 months
  Coordinator: Getronics Software (NL)

The successful pilots will run for up to three years, with the majority starting early in 1996. As well as addressing specific tasks in the Information Engineering sector, each project aims to achieve a significant contribution to 4th Framework Programme objectives by piloting new telematics applications which will benefit both the citizen and industry, with a particular emphasis on the needs of the elderly and disabled.

Further information about the projects can be obtained from the address below. For additional information about the Information Engineering sector, please consult the World Wide Web pages at:
http://www.echo.lu/ie/en/iehome.html/.

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IMO Working Papers available on topical issues

The Information Market Observatory (IMO), within the framework of the IMPACT programme, has recently published three new working papers on the following subjects:

- *"The Quality of Electronic Information Products and Services"* (IMO report 95/4)
Quality is now an issue of increasing importance in the information community. The paper provides an overview of quality issues in the provision of electronic information products and services; and how they are likely to affect the European information industry. It covers established electronic products and services, such as online and CD-ROM, and also the Internet. The paper outlines the history and background of the issue, the major concerns of users, types of quality, quality criteria and evaluation, the industry's approach to quality, and implications for the future.

- *"The Role of the Content Sector in the Emerging Information Society"* (IMO Report 95/5)

A strong content sector is crucial to the economic success of the Information Society in Europe. Key sectors of the content market are dominated by non-EU companies. This paper discusses many of the obstacles to be overcome if Europe is to develop a multimedia content sector capable of competing on a global stage. It considers the publishing, broadcasting and audiovisual industries, and interactive entertainment; the role of hardware, software and communications companies; and mergers and acquisitions.

- *"The Emergence of a Mass Multimedia Market"* (IMO Report 95/6)
The paper discusses the development of a mass market for information services in Europe and internationally. Traditionally, information service providers such as database operators and CD-ROM publishers have catered predominantly for the business sector, which remains the largest market for information services in terms of revenues generated. However, 1993 and 1994 saw the beginnings of a true mass consumer market for information and multimedia services which is expected to exceed the business services market in the long term.

Copies of these working papers are available free-of-charge from the address below. Alternatively, they may be obtained from the National Awareness Partners (NAPs) for the IMPACT programme throughout the EEA. The series of working papers can also be downloaded from the I'M-Europe WWW server:
(http://www.echo.lu/).

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IMPACT

IMO Studies addressing information society related themes

The Information Market Observatory (IMO) has recently finalised three important studies initiated within the IMPACT programme.

- *"Study on Information and Citizenship in Europe"*

Only by being well informed is it possible for citizens to exercise their rights, fulfil their responsibilities and play their full part in the democratic process. This study was carried out in six countries (United Kingdom, Germany, Ireland, Netherlands, Portugal and Norway). It analyses the demand for and supply of citizenship information, policy developments and the use and role of information and communication technology. The study concludes with policy implications and recommendations. A 40-page overview summarises the findings. This overview, as well as the six national studies, is available free-of-charge on request from the address below.

- *"Study on the European Electronic Information Services Market"* (Member States Study)

Studies based on a common methodology have been undertaken on the information services market in the 17 countries of the European Economic Area. The studies were carried out by national organisations and co-financed by the European Commission. They have included investigation of the economic, technical, legal and political environment. The national findings have been consolidated in a European Report which is available free-of-charge on request from the address below.

- *"Study on the Future of Media and Advertising"* (ADMEDIA)

This study was launched by the European Commission in November 1994 and undertaken by IEPRC (International Publishing Research Centre), EAAA (European Association of Advertising), FEDIM (Federation of European Direct Marketing) and EPC (European Publishers Council). The purpose of the study was to provide a strategic framework for the EC (DG XIII/E) and for those using or providing advertising in the context of changes in the marketplace brought about by the introduction of new media as a potential channel for advertising.

The Executive Summary contains a summary of the conclusions and recommendations drawn from the investigation. The full ADMEDIA report comprising eight parts addresses the following issues: statistical trends in advertising, trends and changes in technology, regulatory, sociological and demographic issues, scenarios on advertising and the impact of new media, and strategies for responding to new media advertising.

The Executive Summary is available free-of-charge, while the full report can be ordered at a price of ECU 200. The 30 National Awareness Partners (NAPs) serve as order and distribution points for the Executive Summary and the main report. For contact details of the NAP organisation in your country or region, please consult the I'M-Europe WWW server (http://www.echo.lu/) or contact the address below.

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New Business and Industry information projects

Seventeen projects are now being supported by the IMPACT 2 programme as a result of its final call for proposals for projects to develop new information services for business and industry. Altogether 105 organisations are working on the projects, for which the total development cost is estimated at over 15 million ECU. The Community financial support will amount to just under 40% of costs.

The projects include three new ones, in addition to the 14 announced in I&T Magazine News Review No. 17, made possible thanks to a Community budget transfer at the end of 1995. The additional projects are:

• ALTO (Advanced links for trade and tourism operations) which will provide local information to global information distribution systems
• NEWCON, an electronic news service for the construction industry

• INTERBUSINESS, providing business information from different sources.

The aim of the action is to contribute towards establishing a European competitive capability for the supply of electronic information content. Further efforts are still required to stimulate the extraction, processing, exchange, delivery and exploitation of large quantities of data, given the dispersion throughout Europe of source data, differing customs, regulations, formats and languages, and the fragmentation of markets.

The projects will therefore focus on obtaining and refining information from different relevant sources and using varied technologies, including World Wide Web, to deliver the information to targeted business users.

The new programme, INFO2000 (COM(95)149 final), which will shortly be adopted by the Council, will allow the Commission to carry further its efforts to stimulate the development of a European multimedia content industry and to encourage the use of multimedia content in the emerging information society.

Fact sheets on the various projects are available on the I'M Europe WWW server (http://www.echo.lu/).

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Following Calls for tender in July and August 1995, the final training actions implemented under IMPACT 2 have recently got under way. The TRAIN-SME and TRAIN-EDUC initiatives address training in electronic information provision via two kick-off projects.

TRAIN-SME

The objective of this project is to develop and test a methodology for providing appropriate infrastructures for the transfer of information to SMEs, thus ensuring that SMEs have access to the information they need in order to defend and develop their competitiveness.

Such infrastructures should take the form of strategic information resource centres which can advise SMEs about matters concerning information as a strategic resource, as well as being able to act as competent information professionals who can implement appropriate information infrastructures among SMEs themselves (information audit).

The project will consist of *four phases*:

1. analysis of information needs and basic initial training;
2. definition of services to be performed by the appropriate infrastructures in the future (information provision and information audit) and establishing a business plan for these, including creation of awareness among groups of SMEs about the infrastructure and its components;
3. development of a methodology for assisting SMEs to establish an appropriate framework for information provision (information audit) and testing this methodology in practice with two SMEs within each of the associations;
4. evaluating the project.

The project will be carried out by a consortium led by the Chambre de Commerce et d'Industrie de Bruxelles. The partners are:

- Chamber of Commerce of Northern Ireland
- two sectoral associations: GTTA (Northern Ireland) and Centexbel (Belgium)
- one National Awareness Partner: aBaCus Partnership (Northern Ireland)
- one association of information experts: EEIG GAVEL
- DECADE (Belgium)
- four SMEs in the textile and garment sector.

The project began in December 1995 and is of 10 months' duration.

TRAIN-EDUC

The objective of this initiative is to develop and test a methodology for introducing training concerning electronic information provision into existing course curricula in universities.

In order to develop and test the methodology, the project comprises four university departments in four different countries. All the departments are working within the same subject area, namely English within Modern Language Departments.

The project will consist of *six phases*:

1. analysis of information needs and basic initial training of the participating departments;
2. development of a general module and a "globally" specialised module;
3. development of "locally" specialised modules;
4. production of a Lecturer's Manual (on CD-ROM);

5. implementation of modules in normal curricula;
6. evaluation of the project.

The project will be carried out by a consortium led by ZERES Gmbh, Zentrum für Elektronische Ressourcen Europäischer Sprachen. The consortium consists of departments of English Studies in:

- Westfälische Wilhelms-Universität, Fachbereich 12, Anglistik, Münster, Germany
- Panepistimio Athinion, Department of English, Athens, Greece
- Universidad la Rioja, Departamento de Filologias Modernas, Rioja, Spain
- Kingston University, School of Humanities, Kingston, United Kingdom, plus three partners for technical support:
- Kingston University, School of Information Systems
- Westfälische Wilhelms-Universität, Arbeitsbereich Linguistik
- Espoo-Vantaa Institute of Technology, Department of Information Technology, Finland.

The project began in December 1995 and will be of 15 months' duration.

Further details of these two initiatives and contact information for the consortia may be obtained from the following address.

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OII Standards and Specifications List

The Open Information Interchange (OII) initiative, as part of the IMPACT 2 programme, has aimed at promoting the awareness and use of standards for the exchange of information in electronic form. The OII Standards and Specifications List provides background information on formal standards and specifications commonly used to exchange information in electronic form. The current issue of the List is available on DG XIII/E's WWW server, I'M-Europe (http://www.echo.lu/). In addition, printed copies will be provided on request from the contact address below.

The list is constantly being expanded in its coverage and is recognised as a useful source of reference information for standards developers, product and service providers as well as the end-users of these products and services. Information is currently provided under the following categories:

· Vector Graphic Interchange Standards
· Raster Graphic Interchange Standards
· Audio Interchange Standards
· Multimedia/Hypermedia Interchange Standards
· Document Interchange Standards
· Character Set Standards
· OSI Data Transfer Standards
· Internet Communication Protocols
· Product Description Standards
· Electronic Data Interchange (EDI) Standards
· Library Information Interchange Standards
· Geographical Information Standards
· Scientific Data Exchange Standards
· Miscellaneous OII Standards.

Although the IMPACT 2 programme concluded in December 1995, the new INFO2000 programme of DG XIII/E will build on the achievements and results of IMPACT 2, including those of the OII initiative. The OII Standards and Specifications List will be maintained and expanded, on a monthly basis, during 1996 and beyond.

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Multilingual Information Society (MLIS) programme to promote language diversity

Businesses and citizens, whatever their language, should enjoy equal opportunities for participation in the new information age. In recognition of this, on 8 November 1995 the European Commission approved a proposal for a multi-annual Community programme covering language aspects of the information society. The programme will run for a period of three years (1996-1998) and have a budget of 15 MECU.

If European citizens and SMEs are to take full advantage of the global information society, they will need multilingual facilities for creating, exchanging and accessing information, wherever they happen to be. In the near future, health and financial information, laws and regulations, travel information, patents and directions for use will become increasingly available in electronic form. Although access to such data banks may be restricted for reasons of confidentiality, automatic tools will become available that rapidly interpret texts in a foreign language into the citizen's language.

Interactive transactions, for example in telebanking and teleshopping, can progressively be conducted in the citizen's language, written or spoken.

Authors drafting reports in their own language or in a foreign language will have more automated tools available to facilitate their work, such as electronic dictionaries and more powerful grammar and style checkers.

Translators and interpreters will be reached via networks wherever they are, whatever languages they are handling, and can thus be consulted during meetings or legal and business negotiations.

The opportunities are unlimited, but the realisation requires a dedicated and sustained effort by developers and service providers. Europe has a solid scientific and technological base in this field which has been strengthened by Community research and technological development (RTD) programmes, in particular the programmes relating to information and communications technologies (ICT) and telematic systems of general interest.

However, the European market lags behind when it comes to exploiting the advances made by research in the area of language engineering. A concerted effort needs to be made to speed up the process of getting new language processing technology on to the market, particularly to disseminate and exploit the results of research carried out under the Commission's Fourth Framework Programme and the specific programmes.

The three action lines proposed in the Multilingual Information Society programme seek to create an environment which is conducive to the expansion of the language industries such as language engineering and translation industries.

Action Line 1: Supporting the construction of an infrastructure for European language resources
Language resources such as dictionaries, terminological databanks, grammar books, collections of texts and voice recordings are essential raw material for linguistic research, for the development of language-processing tools integrated into data processing systems and for improving translation services.

Considerable amounts of money have already been invested by the Member States, the Commission and some private companies on producing language resources of varying size and

complexity. The full utilisation of these resources is currently being hampered by the fact that they are mainly monolingual and mutually incompatible, thus limiting their wider use. In addition, they are often difficult to locate.

The aim of this action line is to support efforts to construct a European infrastructure for multilingual language resources.

Action Line 2: Mobilising and expanding the language industries

The aim of this action line is to spur the language industries into action by stimulating technology transfer and demand through a limited number of shared-cost demonstration projects which could act as a catalyst in certain key sectors.

For example, the Commission will promote the use of networks by the translation and interpretation industries. These give access to advanced tools, including electronic

dictionaries, improve logistics, allow integration with other functions, and generally improve the functioning of the translation market.

A call for proposals will ask for the definition and implementation of electronic translation directory services and for pan-European tele-translation and tele-interpretation demonstrators.

Action Line 3: Promoting the use of advanced language tools in the European public sector

The European institutions, and the Commission in particular, through their daily translation activities are compiling important multilingual language resources in the various fields of Community activity. Transferring the experience acquired by the European institutions in the processing of multilingualism to the administrations in the Member States and sharing the language resources which each produces can help achieve economies of scale and reduce the cost of multilingual communication.

The aim of this action line is to encourage cooperation between administrations in the Member States and the European institutions in order to reduce the cost of multilingual communication in the European public sector.

Calls for tender will be issued for the development of tools and systems which help reduce translation time by making it easier to locate and re-use texts or sections of documents which have already been translated, as well as on access to terminological databanks.

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Libraries sector supplements projects with concerted actions

The Telematics for Libraries sector of the Telematics Applications Programme is augmenting the impact of its projects which are being supported within the Fourth Framework Programme by launching a number of concerted actions. These actions come under the umbrella of accompanying measures, namely measures which help the main projects by supportive activities such as obtaining agreement on common objectives. The actions represent a coordinated approach, which seeks to harness and exploit the considerable yet diversified interest in certain aspects of library operations which has become evident in the project proposals submitted to date.

The concerted actions include the following:

• CoBRA+, an action involving national libraries in Europe, building on a concertation activity (CoBRA) set up in 1993, with the goal of promoting initiatives and actions in

the area of national bibliographic services at European level. CobRA+ will continue work already under way but will widen its focus beyond national bibliographic services to include collection based issues, particularly those concerned with deposit collections of electronic publications and related service developments in national libraries.

• ECUP+, a concerted action to enhance awareness among information professionals of copyright issues. ECUP+ builds on earlier activities which included the establishment of a European copyright user platform for libraries. Considerable attention will be given to the increasing problems confronting libraries concerning copyright in electronic services. The action will include provision of a help desk and information server.

• PUBLICA, a concerted action for public libraries, with the objectives of stimulating more public library

participation in the current programme; assisting the European Commission in ensuring public libraries benefit from the results of projects; and reducing disparities between public library services in the different Member States. This action will, in particular, encourage public libraries to address information society issues. As public libraries constitute half of some 100,000 libraries throughout the EU, the Commission is keen to ensure that they are fairly represented.

• CAMILE, a concerted action on management information for libraries in Europe, addressing performance measurement and decision support. Drawing on the experience and expertise of four existing Libraries Programme projects and a study on performance indicators, this action should lead to long-term consensus, the development of common approaches and the application of new standards.

• HARMONICA, an action on creating a common framework for networked music services in libraries. Issues requiring attention will include: current practice for access to digital music and related multimedia services; standards for cataloguing, encoding music scores and compression techniques; networking options; user-friendly interfaces; services giving access to digitised musical resources; fostering consensus between music publishers, music libraries, rights holders, etc. for sheet music, sound and reference; copyright issues.

In addition, the support action EFILA (European Forum for Implementors of Library Applications) will take the form of an implementors' group on networking standards and related standards for libraries. It will serve as a common platform for all Libraries projects dealing with these issues. Further details of the concerted and support actions are available on the I'M-Europe WWW server (http://www.echo.lu/) and also from the contact below.

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ECHO introduces further user-friendliness in databases on the Internet

ECHO (European Commission Host Organisation) is planning to offer user-friendly and uniform access to its European databases on the Internet by developing a generic interface on the World Wide Web (WWW).

This new development is in line with ECHO's role of demonstrating the integration of Internet and conventional technology to access electronic information. The generic interface will dispense with the requirement for users to learn any search command language such as the CCL (Common Command Language).

In addition, users will not be required to complete any formalities such as registration.

The Watch-ECHO application (announced in News Review, No. 17) already introduced a user-friendly graphic user interface (GUI) to many ECHO databases for X.25 users who installed the necessary software on their personal computer. The new generic interface will provide access to the same databases on the Internet without the need for any dedicated software.

For those familiar with the Watch-ECHO Windows-based application, many of the functionalities of the WWW generic interface will be similar. Access to the range of databases available via the generic interface will, of course, be free-of-charge. Users will be able to access them from the ECHO home page on the I'M-Europe WWW server (http://www.echo.lu) and from the individual WWW servers of the network of IMPACT National Awareness Partners (NAPs) and subsequent INFO2000 network of awareness and demonstration organisations. Initially, the Eurodicautom terminology databank will continue as a separate application, but will eventually be accessible via the generic interface.

For readers who are not yet familiar with ECHO databases, examples include the I'M-Guide directory of information products and services available in Europe; the CORDIS (Community R&D Information Service) databases; I'M-Forum, a partner-finding database for those interested in cooperating in European information market projects; and the online version of I&T Magazine and News Review/

Users will have a choice of two modes of access - standard user mode for the general, less experienced user, and expert mode for more sophisticated queries. The latter will give the same degree of search refinement and selectivity as CCL, which many experienced information researchers continue to prefer to use even when options such as menu-driven searching and natural language are offered.

Current planning foresees beta testing of the new interface with selected databases at the end of March 1996.

Further information is available from the following address.

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The European Telecommunications Standards Institute (ETSI)

ETSI is an independent, self-funding organisation bringing together nearly 500 European and global organisations active in the telecommunications, broadcasting and information technology industries.

It was set up in 1988 in response to a Green Paper published by the European Commission, to accelerate the process of technical harmonization across the whole area of telecommunications and, in cooperation with other standarization bodies, across the related fields of broadcasting and office information tehcnology.

ETSI's task is to set common voluntary standards for Europe, linking networks and services and ensuring interoperability of equipment on a European basis. By relating its work to developments on the global scene, ETSI is also helping to work towards establishing telecommunications standards world-wide.

It provides the standards and other technical documentation necessary to support the development of the fully integrated range of telecommunications products and services for Europe.

ETSI has recently celebrated the publication of its 1000th deliverable: a European Telecommunication Standard (ETS) relating to the Global System for Mobile communication (GSM) telephone system (2nd phase). This standard defines the tasks to be undertaken by a GSM mobile station when in idle mode, i.e. not making or receiving a call. It also describes the corresponding network functions.

When a mobile station is switched on, it attempts to make contact with a GSM Public Land Mobile Network (PLMN), either automatically or manually. The mobile station looks for a suitable 'cell' of the chosen PLMN and chooses that cell to provide available services, and tunes to its control channel. From then on, the network knows where the mobile user is, and can deal with calls to and from that station as the user moves around.

The ETSs relating to this system are being revised continually to reflect the pace of implementation solutions. Hence this ETS updates one first published in February 1995.

ETSI's deliverables

ETSI produces two broad categories of deliverable - standards and technical reports.

A standard is a document that contains technical specifications laying down the characteristics require of a product, such as levels of quality, performance, safety or dimensions, testing and test methods. It is characterized by its acceptance by a wide body of users as the agreed way of working. The process of approving the standard for publications includes a public enquiry and vote operated by the National Standards Organisation in each of the European countries.

The use of ETSI's ETSs is voluntary in principle, although a number are the subject of European Commission or national regulations, or of Commission Directives, and may in such cases acquire a mandatory status. Included in the set of ETSI standards are so-called Interim ETSs (I-ETSs) which are published when the standard is only a provisional solution and is to be further developed, or when it is an early draft which requires a period of trial.

As a source of more general information, ETSI Technical Reports (ETRs) provide background comment or guidance on matters relating to but outside the scope of an ETS or I-ETS. ETRs do not undergo public enquiry and vote and are published once they have been approved by the Technical Committee charged with their drafting.

Two other types of technical report, destined principally for use inside ETSI, are also published; these are referred to as TC-TRs (Technical Committee Technical Reports) and TCR-TRs (Technical Committee Reference Technical Reports).

ETSI is active in all areas of telecommunications and in parts of the associated technologies of broadcasting and informatics. Major areas include the Integrated Services Digital Network (ISDN), together with its broadband, high capacity evolution, (B-ISDN), and the GSM mobile phone system. These are the subject of a large proportion of ETSI's published works.

An increasing number of other subject areas have been added to these two traditional ETSI strongholds, whilst ETSI has continued to produce a large number of individual standards and reports.

Since its creation, ETSI has published: 586 ETSs, 104 I-ETSs, and 238 ETRs. The remainder of the 1000 deliverables consists of internal technical reports (TC-TRs and TCR-TRs) and a small number of special documents produced for the European Commission, known as Technical Bases for Regulation. The total figure is increasing at a rate of about one a day.

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Six information society projects in standardisation get Commission support

During December 1995 the Commission decided to grant contributions for a total of ECU 4.175 million to six standardisation projects linked to the Information Society. In all cases the projects either challenge existing novel standards or develop or specify potential new standards.

Whether data exchange is quick, efficient and cost-effective depends largely upon compatibility. Standards therefore play an important part in the efficient functioning of the emerging information market place.

Too few standards means the market will lack the necessary stability that gives users the confidence to invest.

Too many standards, particularly if they are trailing product evolution, can suppress innovation, and put the brakes on development.

The Commission is currently reviewing European standardisation policy, and exploring new methods to ensure that the necessary and sufficient standards are in place on time.

Pilot actions have been launched aimed at identifying user and supplier needs for standardisation. Areas covered include : the media industry, city administration, bioinformatics, and electronic commerce.

Feedback from these projects is expected to provide valuable pointers for future lines of action in ICT standardisation.

The six projects accepted during December 1995 are :

UNITEL (1 Mecu) - This project will produce the specifications for the architecture of a universal set-top unit (the device which forms the bridge between data streams from broadcast, cable, or telecom sources and the screen in the home).

The European Broadcasting Union will conduct the work in cooperation with consumer groups (BEUC), city administrations (e.g. Milan, Helsinki), and standardisation, fora (DAVIC).

EUKIOSK (1.275 Mecu) - Initiative of 5 city administrations (Brescia, Hannover, Linz, Stockholm, Thessaloniki), in partnership with local industry, to provide multimedia information services to their citizens.

A network of information kiosks will be established based on a common platform employing a mixture of existing and novel standards.

EUROMED (1 Mecu) - Development of visualisation suites for images produced by the most recent medical imaging techniques (i.e. X-ray CAT, PET, MR, SPECT, DSA) will be carried out.

The project aims at developing standard techniques for fusing and processing images from multiple sources and presenting 3-D models to the specialist.

The work will be carried out by a group of European universities and medical research facilities under the coordination of the National Technical University of Athens.

BIOSTANDARDS (0.7 Mecu) - Project conducted by the European Bioinformatics Institute (a branch of EMBL - the European Molecular Biology Laboratory in Heidelberg, Germany) to establish and promote standards - through trial applications using them - for the storage, processing, and exchange of complex biological data. The sort of data objects concerned are DNA fragment sequences and protein structures.

The project has the strong support of a number of major European Pharmaceutical companies.

SPAN (0.1 Mecu) - Activity carried out by Scottish Enterprise targeted at promoting awareness among SMEs in the Highlands region of the benefits of electronic commerce. The project will establish a pilot ATM network making use of EDI according to the UN-EDIFACT standard. An exchange of experience and mutual review will take place with the KALIMEDIA initiative.

KALIMEDIA (0.1 Mecu) - Activity targeted at promoting awareness among a large network of SMEs in the North of France region of the benefits of electronic commerce. The project will conduct seminars and provide information services to business advising them of the available possibilities for electronic commerce based on the use of EDI according to the UN-EDIFACT standard.

An exchange of experience and mutual review will take place with the SPAN initiative.

Glossary of terms

ATM	Asynchronous Transfer Mode
BEUC	Bureau Européen des Unions de Consommateurs
CAT	Computer Axial Tomography
DAVIC	Digital Audio-Visual Council
DSA	Digital Subtraction X-ray Angiography
EDI	Electronic Data Interchange
MR	Magnetic Resonance imaging
PET	Positron Emission Tomography
SPECT	Single Photon Emission Computed Tomography
UN-EDIFACT	United Nations EDI for administration, commerce and transport

Digital Video Broadcasting (DVB): specifications agreed

The European DVB Project currently consists of 195 member organsiations from 23 countries representing broadcasters, content providers, network operators, manufacturers and regulatory bodies. Its aim is to make digital television possible in the near future.

In December 1995 the DVB Steering Board agreed on the specifications for terrestrial broadcasting of digital television signals, named DVB-T. The choice was made in favour of a compromise between the simple 2K/DAPSK system (inexpensive but requiring several frequencies to cover a whole country) and the more ambitious 8K/QAM system (capable of covering an entire country on a single frequency). The chosen system should be compatible with both. The introduction of DVB-T in Europe will probably start in the UK.

The Steering Board also agreed on the specifications for a digital broadcasting system using a digital multipoint video distribution system (MVDS). MVDS can become an important means of delivering a lareg number of channels to private households, especially in areas where the installation of cable is not commercially viable. MVDS is transmitted from the top of tall buildings and can be reached by inexpensive receivers. the new specification, named DVB-MS, is based on the existing specifications for the transmission of DVB signals by staellite and can be received by DVB transmitters which have been equipped with small MVDS converters.

The specifications agreed by the DVB group were sent to ETSI to be developed into official standards. They are expected to be completed around September 1996.

EUROPEAN DIMENSION

The world of widescreen TV:
European action plan to help Austria, Denmark and Italy to enter

Following a proposal of Mr. Martin Bangemann, Commissioner for Industry, Information Technologies and Telecommunications, the Commission has decided to grant a contribution of ECU 4.395 million to support 2000 hours of wide-screen television broadcasting by seven television stations in five European countries. The decision will enable the Austrian Orf, the Italian Telenuovo, Synthesia and Videolina and the Danish Danmarks Radio to present widescreen TV to their viewers for the first time. The Danish service will also be the first wide-screen service to start using the digital satellite TV standard developed by the European Digital Video Broadcasting Group. Veronica from Holland and Granada from the UK will also receive support from the programme.

The Commission decision is a part of the Action Plan for the Introduction of Advanced Television Services in Europe. The new cinema-like format, also called 16:9-format because of the relation between the width and the hight of the screen, is wider than the old 4:3-format. The overall objective of the Action Plan is to accelerate consumer uptake of wide-screen TV by overcoming the "chicken and egg" problem: broadcasters would not transmit 16:9 without TV sets while manufacturers would not produce them without broadcasting. The Action Plan breaks the vicious circle by contributing towards broadcasters' and producers' extra costs incurred in introducing 16:9. Broadcasters in countries with no wide-screen services until now qualify for funding up to 80% of their expenses, in other countries up to 50%.

Television Station	Hours allocated	Total in ECU	Country
80% Grants			
Telenuovo	300	740,000	Italy
Synthesia	200	540,000	Italy
Videolina	200	540,000	Italy
Orf	360	860,000	Austria
Danmarks Radio	400	940,000	Denmark
Veronica	400	587,500	Holland
50% Grants			
Granada	150	187,500	United Kingdom
Synthesia	200	540,000	Italy
Videolina	200	540,000	Italy

IRISI: Regional developments of the Information Society

A little more than a year after signing a Memorandum of Understanding to collaborate with one another in the development of regional Information Society strategies, six EU regions met last week at the Saxony Office in Brussels to celebrate their achievements and to share their experience with others.

The six regions of Central Macedonia, Nord-Pas de Calais, North West of England, Piemonte, Saxony and Valencia formed the Inter-Regional Information Society Initiative (IRISI) a year ago, with the support of the Commission, in order to define their path towards the information society. Each region has undertaken an extensive programme of awareness-raising about the challenges and opportunities presented by the information society along with widespread consultation on the formulation of a regional strategy.

They have now completed the development of their strategy, and last week briefed MEPs and Commission Officials on this innovative action.

The six regions have collaborated closely in developing their strategies through a network, supported by a Network Bureau located in Brussels. The exchange of experience and expertise has been a critical factor in reaching this stage, and as a consequence the learning process has been made easier and shorter.

Whilst the information revolution is global in its impact, the regions represent are a powerful motor for its development. Most people spend the majority of their time in their own area and region, and so the region is an appropriate focus for the development of strategies that will shape the use of new information and communications technologies.

IRISI has become a model for this focus on regions in the development of information society applications and services within the wider context of regional economic and social development. Having built a consensus of support for their strategies, the IRISI regions are now about to implement them. The lessons learned, however, will be valuable to other regions seeking to follow in their footsteps. The Commission will therefore soon announce its support for 20 or so more regions to follow this development path.

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SMEs and state aid for R&D: a transparent and dynamic system for the EU

Over the next five years, when grants of state aid for research and development in the European Union are appraised, emphasis is to be placed on projects of benefit to SMEs in general, to businesses investing in underdeveloped regions of the Union, or projects coming within the terms of the Community Framework for state aid for research and development (1994-98) and its specific priorities, for example research for an AIDS vaccine.

While as a rule the allowable level of aid is 25% of total eligible costs in the case of applied research projects which are near the market place and 50% of costs in the case of fundamental research projects, bonuses may also be available for projects involving SMEs (an extra 10%), underprivileged regions (an extra 10% or more) and projects undertaken as part of the Community Framework for R&D (an extra 15%).

Moreover, the allowable aid intensity may be increased by 10% for projects which, while not coming under the Community framework for state aid for R&D, provide spin-off for business as a whole, i.e. projects involving cross-border cooperation between independent partners, wide dissemination of research results and cooperation between universities and businesses.

Lastly, if it is established that a competitor in a non-Member State has received more aid, the new rules will enable that amount to be taken into account.

The rules will make it possible, in particular cases and where the Commission's authorization has been secured, to reach the aid ceilings for R&D settled in the final act of the Uruguay Round, i.e. 50% for applied research and 75% for fundamental research when justified by the general interest.

These are the principal features of the Community Framework for state aid for research and development which has been approved by the European Commission to which it was presented by Mr Van Miert, the Member of the Commission with special responsibility for competition, acting in conjunction with Mrs Cresson, who has special responsibility for research.

The new Framework will also significantly reduce the administrative burden or businesses and Member States, which will be able to halve the number of notifications of aid cases to the Commission.

For example, prior notification will be required only in the case of

individual research projects costing more than ECU 25 million in receipt of aid of more than ECU 5 million.

Some comparative figures for the EU and the USA

In 1992 in the USA total national expenditure on R&D by businesses, universities, research institutes, etc. amounted to around US$ 167 billion while the comparable figure for the European Union was US$ 123 billion.

Nevertheless, looking at the public financing of R&D as a whole, which in the Union's case involves taking account of national and Community aid, the Union and the USA are in the same league: the percentage of expenditure is 20.3% for the USA and 19.5% for the Union.

Moreover, in the Union public financing of civil R&D exceeds that provided in the USA: 45.5% as opposed to 38.9%.

In fact, expenditure on military R&D is the main reason why absolute expenditure on R&D in the USA is higher than in Europe.

New Edition of Panorama of EU Industry

On 29 February the 6th edition of the *Panorama of European Union Industry*, the European Commission's annual update on European industry, was presented by Industry Commissioner Martin Bangemann.

Each edition of this European Commission annual publication contains a 'Special Features' section taking a global view to a selection of subjects of topical interest for European industry. This year's edition includes analyses of the trade competitiveness of the EU manufacturing industry, trends in employment by sector in the EU, recent trends in European strategic alliances and the transnationalisation strategies of EU firms in non-EU countries.

The second part of the 1,500 page book offers up-to-date sectorial analysis, statistics and forecasts. Each sectorial profile includes a detailed description of trends in terms of production, employment, trade, and structural change. It also treats the most important aspects of the regulatory framework applying to the sector concerned. In addition, it contains an appreciation of the impact of the EU's Internal Market on sectorial performance, and identifies remaining barriers to a fully integrated European market.

The most relevant findings are the following:

Trade performance of the EU manufacturing industries

Between 1982 and 1994, the EU's trade balance for goods and services has continuously been in surplus, first shrinking between 1986 and 1989 then growing rapidly, reaching as much as 3.6% of GDP in 1994.

The trend in the manufactured goods balance has, however, failed to match the positive development on the balance for goods and services. The surplus on the manufactured goods balance shrank more or less continuously between 1985 and 1991, only recovering partly between 1992 and 1994.

The EU has experienced a reduction in labour cost competitiveness and market share in high-tech, fast growth electronics sectors, as well as in mechanical engineering and automotive equipment.

Innovation and intellectual property are the strongest drivers of competitive achievement. There are clear statistical links between R&D, management capability, intellectual property, innovation, customer preference and market focus, and rising market share, growing added value and jobs created.

Non-cost factors, which have significantly influenced the EU's recent trade performance include the sectoral structure of European industry and R&D spending:

The US and Japan are much more specialised in the scope of their exports, compared with the EU which has a broad base of sectors in which it exports. Sectors which account individually for more than 3% of total exports represent less than 30% of total EU manufacturing exports, compared with 51% for the US and 62% for Japan.

Compared with the US and Japan, European R&D appears to suffer from an over-emphasis on fundamental research at the expense of commercial innovation. New registered patents in the aerospace, other transport equipment, pharmaceuticals and engineering sectors are strong in the EU.

However, the EU's share of new patents has been falling steadily, particularly in the electronics sector, a sector in which R&D is most intense at world level.

Strategic alliances

In order to improve their competitiveness, European companies are increasingly seeking alliances, and there is a growing tendency for these to be service-oriented. Complementary alliances, linking firms in different product/market segments, make up 30% of the total for the period 1986-93.

Strategic alliances help European companies to improve their competitiveness, and now cover businesses in almost all economic sectors.

Whereas in the past, their purpose was often to share the burden of high capital or R&D costs in industries like automobiles and aerospace, many recent alliances are service orientated with strong marketing and development agendas.

Analysis suggests that, in general, alliances do not seek to reduce competition as a primary goal, or have that result in the majority of cases. 'Complementary' alliances which are between firms in different product/market segments often emphasising new product development are now 30% of the total for the period 1986-93.

Improvements in computer systems and telecommunications have also facilitated worldwide coordination of activities on a day-to-day basis and new market opportunities are rapidly emerging with the convergence of previously distinct business segments (e.g., media, telecoms and IT to create multimedia).

The geographic spread of alliances is broadening to include multicultural deals with companies from different linguistic and historical background.

About 25% of all inter-firm cooperation involve intra-EU agreements while about another 40% involve Europe plus another partner. A growing number of alliances involve a European plus another non-US, non-Japanese partner from Asia, East or West Europe.

Transnational investment of firms outside the EU

EU firms' investment strategies outside Europe have mainly been driven by the desire to establish a presence or expand in a new or fast growing market. This trend has been reinforced by the effects of recession which prompted manufacturers to look for new outlets for their products.

The *Panorama* is available in English, French, or German, price 130 ECU excl VAT, and can be bought from local agents of the Office for Official Publications (EUR-OP) in your own country. For a complete list of agents please refer to page 19 of the last issue of the News Review (issue n°18, October/November 1995), or write to:

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BELGACOM: Commission approves strategic investment

The European Commission has approved the acquisition of a strategic investment in Belgacom by Ameritech International, Tele Danmark and Singapore Telecom. This decision was taken under the Merger Regulation.

The sale of the stake was by the Belgian State, which retains 50% plus one share of the shares of Belgacom. Ameritech, Tele Danmark and Singapore Telecom, acting through ADSB Telecommunications, a newly formed acquisition vehicle for the stake, will hold 50% minus one share. The three companies plus the Belgian state will jointly control Belgacom.

Belgacom has monopoly rights for a number of basic telecommunications services in Belgium and enjoys high market shares (some exceeding 90%) for other services. As it has these rights, there is no possibility for any addition of market shares for those markets until the market is liberalised, which should take place before the beginning of 1998 according to the timetable established by the Commission. A telecommunications regulatory system is already in place and further regulatory measures will be added to ensure that the proper competitive conditions exist in Belgium.

There are some minor overlapping activities in Belgium between Belgacom and Ameritech for non-reserved services - in industrial directories and certain electronic commerce services - which are not significant or do not overlap directly. As a consequence the operation does not raise any serious doubts as the creation or strengthening of a dominant position.

Potentially, all the parents and Belgacom itself will in the future compete on the European wide markets which should follow liberalisation. However, this will not raise any major competition issues as in those markets they will be faced with numerous and strong competitors such as BT, France Telecom, Deutsche Telekom and Unisource.

Alternative Telecoms network authorised in Germany after Commission intervention

Following the introduction of a legal procedure (under Article 90 of the EC Treaty) by the Commission, the German Ministry of Posts and Telecommunications has granted a new licence for the establishment and operation of a major alternative telecommunications network.

Vebacom is the telecommunications subsidiary of the VEBA AG, a German utilities holding company. The former filed a complaint with the Commission's Directorate General for competition in April 1995 after several unsuccessful attempts to obtain a licence for a broadband telecommunications network based on SDH (Synchronous digital hierarchy) technology, which would allow the transfer of data between 36 different sites of the German public television broadcaster ARD.

The Commission took the preliminary view that the complaint was justified, in particular since Vebacom intends to offer a service based on a new technology (SDH) which is not offered by Deutsche Telekom AG, the holder of the infrastructure monopoly in Germany. The refusal to authorize the new offering is thus holding back technical progress.

After informal discussions with the Commission the German Ministry of Posts and Telecommunications has now agreed to grant the licence as requested.

Alternative telecommunications infrastructure refers in general to the telecommunications networks owned and run by companies other than traditional telecommunications operators, like utilities and railways. Currently regulatory restrictions in most Member states limit the use of these networks to the internal needs of the company who owns it. That is, they are not allowed to lease spare capacity to the third parties. These restrictions constitute a major obstacle for the introduction of a fully liberalised regulatory environment for the telecommunications sector up to 1998 since such leased capacity is in great demand but mostly only available from a monopoly.

In order to avoid legal action in similar cases the Commission proposed on the initiative of Commissioner Van Miert in a Draft Directive of 19 July 1995 to liberalise alternative infrastructures. The draft Directive was published on 10 October in the Official Journal for a two-month public consultation period.

America Online/Bertelsmann/Deutsche Telekom: Commission opens an enquiry

Commissioner Karel van Miert has asked the Directorate-General for Competition of the Commission (DG IV) to analyse the creation of a new alliance in the field of online services. It brings together the companies America Online (market leader in the United States), Bertelsmann (premier publishing group in Germany and in Europe) and Deutsche Telekom (dominant telecommunications operator in Germany and largest in Europe); it could also be opened to another German publisher: Axel Springer.

A letter of intent has already been signed by the partners, and specific contracts are being prepared. The agreement envisages in particular cross-shareholdings between AOL / Bertelsmann on the one hand, and Telekom Online on the other hand, as well as the acquisition of shares in America Online in the United States by Deutsche Telekom. The partners intend to segment their offerings, Telekom Online specializing in services to businesses, and AOL in services to private consumers. An

extension of the alliance to include Springer is also under discussion, and other partners from other countries could join it as well.

The importance of the alliance lies in the size of its partners. Deutsche Telekom, in particular, holds a dominant position on the German market of online services (through its subsidiary Telekom Online, comprising the BTX and DATEX-J services), and also controls networks that are essential for the development of competing online services .

DG IV's objectives in relation to online services are to prevent the establishment of anti-competitive situations which could slow down the development on-line services and of the 'Information Society'.

In the case of AOL / Bertelsmann / Deutsche Telekom, the Commission wishes to know in particular under which conditions (i) competing online services would be able to obtain access to the content of publications controlled by the partners, or to purchase advertising space to promote new services; (ii) publications not belonging to the partners would be able to propose their content online; (iii) other online service companies would be able to use the networks and services of Deutsche Telekom; (iv) agreements with other online services companies might exist.

DG IV has asked the alliance partners to provide the information necessary for this enquiry. This enquiry in no prejudges the final position of the Commission. In accordance with its opinion on the information society, the Commission is ready to provide the conditions for the greatest possible innovation, including alliances and joint-ventures, while respecting competition rules. It will take into particular consideration the advantages that the emergence of new online services brings for consumers.

Background

In addition to numerous existing companies, at least two other international online services are currently being established in several European countries in parallel: Europe Online (grouping the German publisher Burda and several Luxembourg financial institutions) and Microsoft Network (MSN). DG IV opened an enquiry into Europe Online in September 1995, the answers to which are being examined, and MSN is being monitored closely both by the Commission and by the American authorities. On a more national or local basis many other new entrants hope to reach the critical mass of subscribers which makes an online service commercially viable.

The commercial online services provide a "bridge" connecting Personal Computers (PCs) with a broad range of online services, including a screen interface, telecommunication access through local telephone numbers, and access to the services themselves.

These services are provided either by the partners themselves, or by other companies taken under contract, such as other publishers, or via the worldwide network Internet.

Currently, such services concern mainly electronic mail, specialized databases providing publications and other data, access to bulletin boards, to discussion groups and to interactive games. However, online services develop quickly and, in the future, will comprise more sophisticated audio-visual communications such as video-on demand, videoconference as well as "virtual shopping malls" including teletransactions from home (purchases, banks, travel and entertainment reservations). Access to such services will improve gradually, from PCs, from cable TV and from videotex systems like France's Minitel.

These services, which mark the beginning of the 'Information Society' were identified by the Commission's White Paper on 'Growth, competitiveness and employment' as important sectors for European economic growth. To ensure stronger innovation, investments and the interests of the consumers, careful monitoring is necessary, including in particular compliance with competition rules. Today, the European market for online services is less than half that of the United States. Europe is also a few years behind in terms of new services availability and consumer interest. But this gap is narrowing, particularly as new services become available in all European languages. The European market for online services is expected to double between now and the year 2000, reaching approximately 5 to 6 billion ECU.

Greek telecoms and postal services: Commission adopts operational programmes

Acting on a proposal from Monika Wulf-Mathies, Commissioner responsible for regional policies, the Commission has decided to grant assistance of 250,718 million ECU from the European Regional Development Fund and the European Social Fund for operational programmes in the fields of telecommunications and postal services in Greece.

The Telecommunications Programme will run until the end of 1999 and is to receive Community assistance of ECU 172,743 million (ECU 142,243 million from the ERDF and ECU 30.5 million from the ESF) within a total volume for the programme of ECU 321,821 million.

The objectives of this programme are to develop telecommunications infrastructures, harmonize national legislation with Community legislation, digitalize the telecommunications network, provide vocational training in advanced services and develop new telecommunications services.

The programme is structured around six subprogrammes based on their technical operational features: legislation, digitalisation of the network, advanced services, modernisation schemes, training, and technical assistance.

The Postal Services Programme also runs until the end of 1999 and is to receive Community assistance worth

ECU 77,957 million (ECU 70,857 million from the ERDF and ECU 7.1 million from the ESF), within a total volume of ECU 117,134 million.

This programme concentrates on implementing an integrated investment plan for the Greek postal service with the aim of improving the quality of service offered, reorganizing and upgrading operations and procedures within the postal service and overhauling the relevant legislative framework.

It is structured around six subprogrammes, revision of legislation, computerisation and automation, infrastructure, training, restructuring of services provided, and technical assistance.

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Music piracy: EU tackles Japan

The European Union has decided to take action in the World Trade Organisation against Japan's failure to give sufficient intellectual property (IP) protection to European recordings sold on the Japanese market. WTO rules require all WTO countries to give at least 50 years of IP protection to producers and performers of sound recordings released since 1946.

Japanese rules introduced last month only extend this protection back to recordings released since 1971. This means that many of Europe's most successful releases which were produced between 1946 and 1971 -ranging from The Beatles to the Berlin Philharmonic - do not enjoy adequate IP cover in Japan. The EU has therefore formally requested consultations with Japan this morning in Geneva.

The European Union decided to act following an attempt by the Commission on February 1 to persuade the Japanese authorities, in a 'note verbale' to the Japanese Foreign Ministry, to adapt their new law to become compatible with the WTO rules on intellectual property. The United States requested formal consultations with Japan on February 9. For practical reasons, the EU has chosen to request joint EU-US consultations with the Japanese. WTO consultations are designed to give all sides a 60-day period in which to resolve their disagreements one last time before the complainants can resort to a full WTO Disputes Panel.

The period between 1946 and 1970 includes some of Europe's most successful sound recordings in both pop and classical music. The repertoire includes The Beatles, The Rolling Stones, Rod Stewart, The Who, Cliff Richard and Eric Clapton, as well as recordings by Herbert Von Karajan, Sir Georg Solti, and Karl Bohm with major European orchestras and opera companies. The European phonogramme industry estimates that yearly losses resulting from lack of IP protection in Japan during that period may be over US $ 120 million.

The Trade-Related Intellectual Property (TRIPs) Agreement, concluded in the framework of the Uruguay Round, obliges all WTO members to protect producers and performers of phonogrammes for a period of 50 years from the end of the year in which the recording was released or the performance took place. For example, a recording released in 1947 should enjoy cover up until 1997, while a 1998 release should be covered up until 2048.

PUBLICATIONS

EC Information Technology Law

by Robbie Downing, MA, Lic Spec en Droit européen, published by John Wiley and Sons for Chancery Law Publishing Ltd, ISBN 0471 95049 1 @ £50 excl.p&p

The EU is responding to novel legal issues generated by the commercial exploitation of Information Technology by adopting specific measures for the hardware, software, services, telecommunications and data protection industries. A working knowledge of the EU's approach to IT law has become increasingly critical to everyone involved in using, selling and advising on IT systems.

This book examines that approach and provides analyses of present and forthcoming legislation, setting legislative developments within their competition law context. It also includes the full text of existing and proposed legislation.

It is aimed at lawyers specialising in EC intellectual property law and competition law, in-house legal departments and other advisers to the IT industry as well as to academics and researchers.

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Internet's role in a changing information world

INTERNET: a New Medium for a New Millennium is in the series Infonortics In-depth Briefings, published January 1996 by Infonortics Ltd. of Calne, UK, ISBN: 1-873699-28-X, price £95/$150

Internet, a New Medium for a Millennium concentrates on "Network Publishing", the use of the Internet as a new and major communications and publishing medium. The new study sets out definitions of network publishing; pacesetters in the new medium (an examination of best-of-types such as InforSeek, Point, Trade Points, Pathfinder, The Spot); networks and publishing; new publishing tools; Internet and intranet technology; security and the new medium; valuing network publishing companies; and vectors of change.

The book underlines Arnold's view that the Internet heralds a communications revolution, rather than simply gradual changes: "Employment, social constructs, human relationships and organisational dynamics are heading for more change. Technologies do not merely converge, thus simplifying life: technologies blend. They breed and create further technologies that follow their own vectors. The interactions of these vectors yields sudden, surprising change."

It is aimed at everyone involved in the broad area of information communication; broadcasters, publishers and communicators, businesses, professions, public bodies and educational establishments.

"Technology's impact cannot be predicted", Arnold points out. "Small innovations and incremental improvements interact almost organically and behave in complex ways. The use of those technologies and the impact of those instrumental applications of what appear to be harmless inventions, create a new type of information environment.

We are experiencing the emergence of a new medium. Like all technologies, the new medium has no conscience. Like any technology, we let it loose upon the world without any idea of its benign or malignant effects. We do not know what will come next. Many aspects of digital life seem unpredictable. They are."

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AGENDA

WWW '96 PARIS
6-12 May 1996

The fifth international conference on the World Wide Web will take place in Paris, France, at La Défense in May. Organised by INRIA (Institut National de Recherche en Informatique et en Automatique) with the support of several organisations including the European Commission, it will comprises a seminar day on the latest software developments, a developers and programmers day, 3-day scientific programme and a 2-day forum for SMEs entitled 'Business on the Web'. This latter event, sponsored by the Commission, will offer a global view of markets and technologies in non-technical and business-oriented terms. It aims to help SMEs improve performance and broaden their scope with the aid of the WWW.

In addition, conference participants can visit an exhibition with all the latest equipment, systems, software, services, applications and publications on show.

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European site:
http://www5conf.iria.fr

American site:
http://www.w3.org/pub/Conferences/WWW5

European Directory Publishers and the Electronic Challenge
Monaco, 23-24 May 1996

Organised by the European Association of Directory Publishers for everyone interested in the electronic challenge to printed directories, the conference will focus on:
- the transition from print to off-line and on-line directories;
- the evolution of electronic publishing through two studies, (The Member States Study by Infratest Burke on information products and services for professional use, and The Admedia Survey on new media and advertising, commissioned by DGXIII of the European Commission);
- the evolution of the directories' market: generating new revenue streams, examining strategies for global markets, putting directories on the WWW;
- the information society in the 21st century: shifts in the traditional role of the publisher; public information and copyright in electronic publishing; development of innovative directory services for the Internet.

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Conference on Access to Public Information: A Key to Commercial Growth and Electronic Democracy

27-28 June 1996
Stockholm, Sweden

In the current debate about the Information Society, it is becoming increasingly clear that one of the most important issues is information content. The public sector produces a great deal of information, much of which is of interest for commercial purposes or for informing citizens as part of the democratic process, but the framework for making that information available is not always in place.

The Commission will be releasing a Green Paper on this subject, and this conference will be an opportunity to hear and give reactions to the issues raised in the company of a wide selection of experts. High-level speakers will be present from the European Commission, European Parliament and Member States and from the United States. Speakers and participants will include representatives of public and private sector suppliers and users of information. Among the themes covered will be:

- Public access to public sector-held information and dissemination policy
- Improving the synergy between the public and private sectors in the information market
- The information society and democracy in Europe.

Who should attend:

- Policy makers (elected political representatives and their advisers)
- Public-sector officials in charge of collecting and disseminating information (at national, regional and local level)
- Information suppliers in the private sector
- Publishers in traditional and electronic publishing
- Lawyers (academic, corporate, private practice) dealing with issues of access to information
- Information intermediaries (brokers, documentation centres, libraries)
- Information users.

The conference is organised by DG XIII of the European Commission with the assistance of the Joint Interpretation and Conference Service (SCIC).

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Information Society Forum with Central and Eastern Europe

Prague, 12-13 September 1996

Prague, capital of the Czech Republic, will be the venue for a two-day Forum on the Information Society and Central and Eastern Europe this September. Hosted by the Czech government, it is being organised jointly with the European Commission. Participants will include Ministers and senior representatives from government, industry and research of the Central and East European countries, as well as major interested partners from Western Europe.

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Internet Forum Europe 96
Frankfurt am Main

9-11 October 1996

A new trade show called Internet Forum Europe 96 covering all technical and business aspects of the Internet will take place in Frankfurt, Germany, in the Sheraton Conference Centre at Frankfurt Airport this autumn. Located in the same venue as Object World Frankfurt 96, it will consist of a day of tutorials (October 9), a two-day conference and a two-day exhibition (October 10-11).

Contact

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ESPRIT Annual Conference on Integration in Manufacturing (IiM) Galway, Ireland, 2-4 October 1996

This year's annual ESPRIT conference on Integration in Manufacturing will be held during October in Galway, Ireland. Entitled "Information technology and manufacturing partnerships - delivering the promise", it is organised jointly by ESPRIT, the EU's information technologies RTD programme, and FORBAIRT, the Irish government agency which provides state support services to Irish industry.

Success in manufacturing requires close collaboration among customers, suppliers and distributors. The conference theme reflects the fact that IT and the emergence of a powerful global information infrastructure can enable manufacturing industries throughout Europe to develop collaborative partnerships by the sharing of information at all phases of the business cycle, across the supply chain, and across national and international boundaries. It is also the theme of a major Call for Proposals in Integration in Manufacturing scheduled for 15 September 1996.

The 3-day conference addresses European manufacturing, engineering and management information systems managers, manufacturing, quality and process engineers, as well as IT suppliers/vendors, academic researchers, technology transfer centres and industrial associations. Its aim is to present opportunities arising from RTD results and experiences, and to increase synergies among those currently participating in ESPRIT. It also wishes to lower barriers for newcomers to the programme, in particular SMEs. It will be structured into plenary and parallel sessions and the language will be English.

A Call for Participation has been published, inviting submissions of technical papers, case studies, workshops, demonstrations and posters, by 24 May 1996.

Topics for case studies
- supply-chain partnerships enabled by information technology
- co-operative design enabled by information technology
- logistics for integrated manufacturing and distribution
- best practice in IT-based manufacturing and engineering for SMEs

For technical papers, workshops, demonstrations and posters
- IT infrastructure/design of IT platforms to support partnerships across the supply chain
- Design tools to create manufacturing partnerships
- Modelling of distributed manufacturing planning and control systems
- IT tools to support learning and change in organisation, product, and/or business processes
- IT support for life cycle management, including product takeback
- The business case for virtual/extended enterprises
- Information technology issues in the extended/virtual enterprise, including :
- Performance and value added measurement across the value chain
- Quality issues
- Reduction of time to market for new products
- Methods and tools for capture and sharing of engineering and enterprise knowledge

For keynote/invited presentations
- Factors of competitiveness to support the manufacturing base
- Towards customer-driven manufacturing

- Time-based competition including shorter times to market, rapid product development, customer order fulfilment
- The business case for R&D programmes and "intangible investments"
- Manufacturing systems for the 21st Century
- Opportunities for international cooperation

The full text of the Call for Participation and all further conference announcements will be found on Internet at the URL address: http://www.cordis.lu/esprit/src/iim96.htm

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