

Growth, competitiveness and employment

White Paper follow-up

Report on Europe
and the global information society

Interim report on trans-European networks

Progress report on employment

Extracts of the conclusions of the Presidency
of the Corfu European Council

This document reproduces the information society report on pages 5-39 and the Presidency conclusions on pages 126-134. The other two reports are available as separate documents on AEI-EU.

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Europe and the global information society
Recommendations of the high-level group
on the information society to the Corfu European Council
(Bangemann group)

In its Brussels meeting of December 1993, the European Council requested that a report be prepared for its meeting on 24 and 25 June 1994 in Corfu by a group of prominent persons on the specific measures to be taken into consideration by the Community and the Member States for the infrastructures in the sphere of information. On the basis of this report, the Council will adopt an operational programme defining precise procedures for action and the necessary means.

The following were members of the group chaired by Mr Martin Bangemann, Member of the Commission:

Peter L. Bonfield (Chairman and Chief Executive, ICL), Enrico Cabral da Fonseca (Presidente Companhia Comunicações nacionais), Etienne Davignon (Président, SGB), Peter J. Davis (Chairman, Reed Elsevier), Jean-Marie Descarpentries (Président Bull), Carlo De Benedetti (Presidente Amministratore Delegato, Olivetti), Brian Ennis (Managing Director, IMS), Pehr G. Gyllenhammer (former Executive Chairman, AB Volvo), Hans Olaf Henkel (Chairman and Chief Executive Officer, IBM Europe), Anders Knutsen (Administrerende Direktor, Bang & Olufsen), Pierre Lescure (Président Directeur, Général Canal +), Constantin Makropoulos (former Managing Director, ELSYP (Hellenic Information Systems)), Pascual Maragall (Alcalde de Barcelona, Vicepresidente de POLIS), Lothar Hunsel (designierter Vorsitzender der Geschäftsführung DeTeMobilfunk GmbH), Romano Prodi (Presidente Direttore Generale, IRI), Gaston Egmont Thorn (Président du Conseil d'administration du CLT), Jan D. Timmer (Voorzitter, Philips Electronics), Cándido Velázquez Gastelu (Presidente, Telefónica), Heinrich von Pierer (Vorsitzender des Vorstandes, Siemens AG).

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This report urges the European Union to put its faith in market mechanisms as the motive power to carry us into the information age.

This means that actions must be taken at the European level and by Member States to strike down entrenched positions which put Europe at a competitive disadvantage:

- it means fostering an entrepreneurial mentality to enable the emergence of new dynamic sectors of the economy
- it means developing a common regulatory approach to bring forth a competitive, Europe-wide, market for information services
- it does NOT mean more public money, financial assistance, subsidies, *dirigisme*, or protectionism.

In addition to its specific recommendations, the group proposes an action plan of concrete initiatives based on a partnership between the private and public sectors to carry Europe forward into the information society.

Chapter 1: The information society — new ways of living and working together

A revolutionary challenge to decision makers

Throughout the world, information and communication technologies are generating a new industrial revolution already as significant and far-reaching as those of the past.

It is a revolution based on information, itself the expression of human knowledge. Technological progress now enables us to process, store, retrieve and communicate information in whatever form it may take, whether oral, written or visual, unconstrained by distance, time and volume.

This revolution adds huge new capacities to human intelligence and constitutes a resource which changes the way we both work and live together.

Europe is already participating in this revolution, but with an approach which is still too fragmentary and which could reduce expected benefits. An information society is a means to achieve so many of the Union's objectives. We have to get it right, and get it right now.

Partnership for jobs

Europe's ability to participate, to adapt and to exploit the new technologies and the opportunities they create, will require partnership between individuals, employers, unions and governments dedicated to managing change. If we manage the changes before us with determination and understanding of the social implications, we shall all gain in the long run.

Our work has been sustained by the conviction expressed in the Commission's White Paper, 'Growth, Competitiveness and Employment', that '...the enormous potential for new services relating to production, consumption, culture and leisure activities will create large numbers of new jobs...'. Yet nothing will happen automatically. We have to act to ensure that these jobs are created here, and soon. And that means public and private sectors acting together.

If we seize the opportunity

All revolutions generate uncertainty, discontinuity and opportunity. Today's is no exception. How we respond and how we turn current opportunities into real benefits, will depend on how quickly we can enter the European information society.

In the face of quite remarkable technological developments and economic opportunities, all the leading global industrial players are reassessing their strategies and their options.

A common creation or a still fragmented Europe?

The first countries to enter the information society will reap the greatest rewards. They will set the agenda for all who must follow. By contrast, countries which temporize, or favour half-hearted solutions, could, in less than a

decade, face disastrous declines in investment and a squeeze on jobs.

Given its history, we can be sure that Europe will take the opportunity. It will create the informa-

tion society. *The only question is whether this will be a strategic creation for the whole Union, or a more fragmented and much less effective*

amalgam of individual initiatives by Member States, with repercussions on every policy area, from the single market to cohesion.

What we can expect for . . .

Europe's citizens and consumers:

A more caring European society with a significantly higher quality of life and a wider choice of services and entertainment.

The content creators:

New ways to exercise their creativity as the information society welcomes new products and services.

Europe's regions:

New opportunities to express their cultural traditions and identities and, for those standing on the geographical periphery of the Union, a minimizing of distance and remoteness.

Governments and administrations:

More efficient, transparent and responsive public services, closer to the citizen and at lower cost.

European business and small and medium-sized enterprises:

More effective management and organization, access to training and other services, data links with customers and suppliers generating greater competitiveness.

Europe's telecommunications operators:

The capacity to supply an ever wider range of new high value-added services.

The equipment and software suppliers; the computer and consumer electronics industries.

New and strongly-growing markets for their products at home and abroad.

The social challenge

The widespread availability of new information tools and services will present fresh opportunities to build a more equal and balanced society and to foster individual accomplishment. *The information society has the potential to improve the quality of life of Europe's citizens, the efficiency of our social and economic organization and to reinforce cohesion.*

The information revolution prompts profound changes in the way we view our societies and also in their organization and structure. This presents us with a major challenge: either we grasp the opportunities before us and master the

risks, or we bow to them, together with all the uncertainties this may entail.

The main risk lies in the creation of a two-tier society of have and have-nots, in which only a part of the population has access to the new technology, is comfortable using it and can fully enjoy its benefits. There is a danger that individuals will reject the new information culture and its instruments.

Such a risk is inherent in the process of structural change. We must confront it by convincing people that the new technologies hold out the

prospect of a major step forward towards a European society less subject to such constraints as rigidity, inertia and compartmentalization. By pooling resources that have traditionally been separate, and indeed distant, the information infrastructure unleashes unlimited potential for acquiring knowledge, innovation and creativity.

Mastering risks, maximizing benefits

Thus, we have to find ways to master the risks and maximize the benefits. This places responsibilities on public authorities to establish safeguards and to ensure the cohesion of the new society. Fair access to the infrastructure will have to be guaranteed to all, as will provision of universal service, the definition of which must evolve in line with the technology.

A great deal of effort must be put into securing widespread public acceptance and actual use of the new technology. *Preparing Europeans for the advent of the information society is a priority task. Education, training and promotion will necessarily play a central role.* The White Paper's goal of giving European citizens the right to life-long education and training here

Time to press on

Why the urgency? Because competitive suppliers of networks and services from outside Europe are increasingly active in our markets. They are convinced, as we must be, that if Europe arrives late our suppliers of technologies and services will lack the commercial muscle to win a share of the enormous global opportunities which lie ahead. Our companies will migrate to more attractive locations to do business. Our export markets will evaporate. We have to prove them wrong.

Tide waits for no man, and this is a revolutionary tide, sweeping through economic and social life. We must press on. At least we do not have the usual European worry about catching up. In some areas we are well placed, in others we do

finds its full justification. In order best to raise awareness, regional and local initiatives, whether public or private should be encouraged.

The arrival of the information society comes in tandem with changes in labour legislation and the rise of new professions and skills. Continuous dialogue between the social partners will be extremely important if we are to anticipate and to manage the imminent transformation of the workplace. This concerted effort should reflect new relationships at the workplace induced by the changing environment.

More detailed consideration of these issues exceeds the scope of this report. The group wishes to stress that Europe is bound to change, and that it is in our interest to seize this opportunity. The information infrastructure can prove an extraordinary instrument for serving the people of Europe and improving our society by fully reflecting the original and often unique values which underpin and give meaning to our lives.

At the end of the day, the added value brought by the new tools, and the overall success of the information society, will depend on the input made by our people, both individually and in working together. We are convinced that Europeans will meet this challenge.

need to do more. However this is also true for the rest of the world's trading nations.

The importance of the sector was made evident by its prominence during the Uruguay Round of GATT negotiations. This importance is destined to increase.

We should not be sceptical of our possibilities for success. We have major technological, entrepreneurial and creative capabilities. However, the diffusion of information is still too restricted and too expensive. This can be tackled quickly through regulatory reforms.

Public awareness of the technologies has hitherto been too limited. This must change. *Political attention is too intermittent. The private sector expects a new signal.*

An action plan

This report outlines our vision of the information society and the benefits it will deliver to our citizens and to economic operators. It points to areas in which action is needed now so we can start out on the market-led passage to the new age, as well as to the agents which can drive us there.

As requested in the Council's mandate, we advocate an action plan based on specific initiatives involving partnerships linking public and private sectors. Their objective is to stimulate markets so that they can rapidly attain critical mass.

In this sector, private investment will be the driving force. Monopolistic, anticompetitive environments are the real roadblocks to such involvement. The situation here is completely

different from that of other infrastructural investments where public funds are still crucial, such as transport.

This sector is in rapid evolution. *The market will drive*, it will decide on winners and losers. Given the power and pervasiveness of the technology, this market is global.

The prime task of government is to safeguard competitive forces and ensure a strong and lasting political welcome for the information society, so that demand-pull can finance growth, here as elsewhere.

By sharing our vision, and appreciating its urgency, Europe's decision-makers can make the prospects for our renewed economic and social development infinitely brighter.

New markets in Europe's information society

Information has a multiplier effect which will energize every economic sector. With market driven tariffs, there will be a vast array of novel information services and applications:

from high-cost services, whose premium prices are justified by the value of benefits delivered, to budget price products designed for mass consumption;

from services to the business community, which can be tailored to the needs of a specific customer, to standardized packages which will sell in high volumes at low prices;

from services and applications which employ existing infrastructure, peripherals and equipment (telephone and cable TV networks, broadcasting systems, personal computers, CD players and ordinary TV sets) to those which will be carried via new technologies, such as integrated broadband, as these are installed.

Markets for business

Large and small companies and professional users are already leading the way in exploiting the new technologies to raise the efficiency of their management and production systems. And more radical changes to business organization and methods are on the way.

Business awareness of these trends and opportunities is still lower in Europe compared to the US. Companies are not yet fully exploiting the potential for internal reorganization and for adapting relationships with suppliers, contractors and customers. We have a lot of pent up demand to fill.

In the business markets, teleconferencing is one good example of a business application worth promoting, while much effort is also being dedicated worldwide to the perfection of telecommerce and electronic document interchange (EDI).

Both offer such cost and time advantages over traditional methods that, once applied, electronic procedures rapidly become the preferred way of doing business. According to some estimates the handling of an electronic requisition is one tenth of the cost of handling its paper equivalent, while an electronic mail (E-mail) message is faster, more reliable and can save 95% of the cost of a fax.

Electronic payments systems are already ushering in the cashless society in some parts of Europe. We have a sizeable lead over the rest of the world in smart-card technology and applications. This is an area of global market potential.

Markets for small and medium-sized enterprises

Though Europe's 12 million SMEs are rightly regarded as the backbone of the European economy, they do need to manage both information and managerial resources better.

They need to be linked to easy access, cost-effective networks providing information on production and market openings. The competitiveness of the whole industrial fabric would be sharpened if their relationships with large companies were based on the new technologies.

Networked relationships with universities, research institutes and laboratories would boost their prospects even more by helping to remedy chronic R&D deficiencies. Networking will also diminish the isolation of SMEs in Europe's less advantaged regions, helping them to upgrade their products and find wider markets.

Markets for consumers

These are expected to be richly populated with services, from home banking and teleshopping to a near-limitless choice of entertainment on demand.

In Europe, like the United States, mass consumer markets may emerge as one of the principal driving forces for the information society.

American experience already shows that the development markets encounter a number of obstacles and uncertainties.

Given the initial high cost of new pay-as-you-view entertainment services, and of the related equipment, as well as the high cost of bringing fibre optics to the home, a large mass consumer market will develop more easily if entertainment services are part of a broader package. This could also include information data, cultural programming, sporting events, as well as telemarketing and teleshopping. Pay-as-you-view for on-line services, as well as advertising, will both be necessary as a source of revenue. To some extent, existing satellite and telephone infrastructure can help to serve the consumer market in the initial phase.

At the moment, this market is still only embryonic in Europe and is likely to take longer to grow than in the United States. There, more than 60% of households are tapped by cable TV systems which could also carry text and data services. In Europe, only 25% are similarly equipped, and this figure masks great differences between countries, e.g. Belgium (92%) and Greece (1 to 2%).

Another statistic: in the United States there are 34 PCs per hundred citizens. The European figure overall is 10 per hundred, though the UK, for instance, at 22 per hundred, is closer to the US level of computer penetration.

Lack of available information services and poor computer awareness could therefore prove handicaps in Europe. Telecommunication networks are, however, comparable in size and cover, but lag behind in terms of utilization. These networks, therefore, can act as the basic port of access for the initial services, but stimulation of user applications is still going to be necessary.

Such structural weaknesses need not halt progress. Europe's technological success with CD-ROM and CD-I could be the basis for a raft of non-networked applications and services during the early formative years of the information society. These services on disk have considerable export potential if Europe's audio-visual industry succeeds in countering current US dominance in titles.

In terms of the market, France's *Minitel* network already offers an encouraging example that European consumers are prepared to buy information and transaction services on screen, if the access price is right. It reaches nearly 30 million private and business subscribers through six million small terminals and carries about 15 000 different services. Minitel has created many new jobs, directly and indirectly, through boosting business efficiency and competitiveness.

In the UK, the success of the Community-sponsored 'Homestead' programme, using CD-I, is indicative, as is the highly successful launch of a dedicated (American) cable teleshopping channel.

Meanwhile in the US, where the consumer market is more advanced, video-on-demand and home shopping could emerge as the most popular services.

Audio-visual markets

Our biggest structural problem is the financial and organizational weakness of the European programme industry. Despite the enormous richness of the European heritage, and the potential

of our creators, most of the programmes and most of the stocks of acquired rights are not in European hands. A fast growing European home market can provide European industry with an opportunity to develop a home base and to exploit increased possibilities for exports.

Linguistic fragmentation of the market has long been seen as a disadvantage for Europe's entertainment and audio-visual industry, especially with English having an overwhelming dominance in the global market — a reflection of the US lead in production and, importantly, in distribution. This lead, which begins with cinema and continues with television, is likely to be extended to the new audio-visual areas. However, *once products can be easily accessible to consumers, there will be more opportunities for expression of the multiplicity of cultures and languages in which Europe abounds.*

Europe's audio-visual industry is also burdened with regulations. Some of these will soon be rendered obsolete by the development of new technologies, hampering the development of a dynamic European market.

As a first step to stimulating debate on the new challenges, the Commission has produced a Green Paper on the audiovisual industry.

Chapter 2: A market-driven revolution

A break with the past

The group is convinced that technological progress and the evolution of the market mean that Europe must make a break from policies based on principles which belong to a time before the advent of the information revolution.

The key issue for the emergence of new markets is the need for a new regulatory environment allowing full competition. This will be a prerequisite for mobilizing the private capital necessary for innovation, growth and development.

In order to function properly, the new market requires that all actors are equipped to participate successfully, or at least that they do not start with significant handicaps. All should be able to operate according to clear rules, within a single, fair and competitive framework.

The group recommends Member States to accelerate the ongoing process of liberalization of the telecom sector by:

- opening up to competition infrastructures and services still in the monopoly area
- removing non-commercial political burdens and budgetary constraints imposed on telecommunications operators
- setting clear timetables and deadlines for the implementation of practical measures to achieve these goals

Ending monopoly

This is as true for the telecommunications operators (TOs) as for others. It is now generally recognized as both necessary and desirable that the political burdens on them should be removed, their tariffs adjusted and a proper regulatory framework created. Even the operations of those TOs whose status has already evolved over recent years are not fully in line.

It is possible to end monopoly. In future, all licensed public operators should assume their share of public service responsibilities (e.g. universal service obligation and the provision of equal access to networks and services).

A competitive environment requires the following:

- TOs relieved of political constraints, such as:
 - subsidizing public functions;
 - external R&D activities;
 - contributions to land planning and management objectives;
 - the burden to carry alone the responsibility of universal service;
- a proper regulatory framework designed to achieve:
 - market regulation to enable and to protect competition;
 - a predictable environment to make possible strategic planning and investment;
- adjustment of tariffs.

Enabling the market

The group recommends the establishment at the European level of an authority whose terms of reference will require prompt attention.

In order for the market to operate successfully, the group has identified the following objectives and recommendations:

Evolution in the regulatory domain

Identify and establish the minimum of regulation needed, at the European level, to ensure the rapid emergence of efficient European information infrastructures and services. The terms of reference of the authority which will be responsible for the enforcement of this regulation is a question that will require prompt attention.

The urgency of the matter is in direct relation to the prevailing market conditions. A clear requirement exists for the new 'rules of the game' to be outlined as soon as possible. The marketplace will then be in a position to anticipate the forthcoming framework, and the opportunity will exist for those wishing to move rapidly to benefit from these efforts.

The authority will need to address:

the regulation of those operations which, because of their Community-wide nature, need to be addressed at European level, such as licensing, network interconnection when and where necessary, management of shared scarce resources (e.g. radio-frequency allocation, subscriber numbering) and advice to Member States' regulatory authorities on general issues.

a single regulatory framework valid for all operators, which would imply lifting unequal conditions for market access. It would also ensure that the conditions for network access and

service use would be guided by the principles of transparency and non-discrimination, complemented by practical rules for dispute resolution and speedy remedy against abuse dominance.

Interconnection and interoperability

Two features are essential to the deployment of the information infrastructure needed by the information society: one is a seamless interconnection of networks and the other that the services and applications which build on them should be able to work together (interoperability).

In the past the political will to interconnect national telephone networks resulted in hundreds of millions of subscriber connections worldwide. Similar political determination and corresponding effort are required to set up the considerably more complex information infrastructures.

Interconnection of networks and interoperability of services and applications are recommended as primary Union objectives.

The challenge is to provide interconnections for a variety of networking conditions (e.g. fixed and new type of networks, such as mobile and satellite) and basic services (e.g. integrated service digital network (ISDN)). Currently, the positions of monopoly operators are being eroded in these fast-developing areas.

Joint commercial decisions must be taken by the TOs without delay to ensure rapid extension of European basic services beyond telephony. This would improve their competitive position vis-à-vis non-European players in their own markets.

The European information society is emerging from many different angles. European infrastructure is evolving into an ever tighter web of networks, generic services, applications and equipment, the development, distribution and maintenance of which occupy a multitude of sources worldwide.

In an efficient and expanding information infrastructure, such components should work together.

Assembling the various pieces of this complex system to meet the challenge of interoperability would be impossible without clear conventions. 'Standards' are such conventions.

Open 'systems standards' will play an essential role in building a European information infrastructure.

Standards institutes have an honourable record in producing European standards, but the standardization process as it stands today raises a number of concerns about fitness for purpose, lack of interoperability, and priority setting that is not sufficiently market-driven.

Action is required at three different levels:

at the level of operators, public procurement and investors:

Following the successful example of GSM digital mobile telephony, market players (industry, TOs, users) could establish memoranda of understanding (MoU) to set the specifications requirements for specific application objectives. These requirements would then provide input to the competent standardization body. This type of mechanism would adequately respond to market needs.

Operators, public procurement and investors should adopt unified open standard-based solutions for the provision and the procurement of information services in order to achieve global interoperability.

at the level of the European standards bodies:

These should be encouraged to establish priorities based on market requirements and to identify publicly available specifications, originated by the market, which are suitable for rapid transformation into standards (e.g. through fast-track procedures).

at the level of the Union:

European standardization policy should be reviewed in the light of the above. When the market is not providing acceptable technical solutions to achieve one of the European Union's objectives, a mechanism should be sought to select or generate suitable technologies.

World-wide interoperability should be promoted and secured.

The group recommends a review of the European standardization process in order to increase its speed and responsiveness to markets.

Urgent action to adjust tariffs

Reduction in international, long distance and leased-line tariffs will trigger expansion in the usage of infrastructures, generating additional revenues, and simultaneously giving a major boost to generic services and innovative applications.

In most cases, the current unsatisfactory tariff situation results from the TOs' monopoly status and a variety of associated political constraints.

The introduction of competitive provision of services and infrastructures implies that TOs would be able to adjust their tariffs in line with market conditions. Rebalancing of international and long-distance tariffs against local tariffs is a critical step in this process.

The group recommends as a matter of urgency the adjustment of international, long distance and leased line tariffs to bring these down into line with rates practised in other advanced industrialized regions. Adjustment of tariffs should be accompanied by the fair-sharing of public service obligations among operators.

Two elements should accompany the process:

- TOs released from politically imposed budgetary constraints;
- a fair and equitable sharing of the burden of providing universal services between all licensed operators.

Fostering critical mass

Market segments based on the new information infrastructures cannot provide an adequate return on investment without a certain level of demand. In most cases, competition alone will not provide such a mass, or it will provide it too slowly.

A number of measures should be taken in order to reach this goal:

- cooperation should be encouraged among competitors so as to create the required size and momentum in particular market areas. The already mentioned GSM MoU is an archetypal example of how positive this approach can be.
- agreement between public administrations to achieve common requirements and specifications, and a commitment to use these in procurement at national and European levels.

- extensive promotion and use of existing and forthcoming European networks and services.
- awareness campaigns, notably directed at public administrations, SMEs and educational institutions.

It is recommended to promote public awareness. Particular attention should be paid to the small and medium-sized business sector, public administrations and the younger generation.

In addition, everyone involved in building up the information society must be in a position to adapt strategies and forge alliances to enable them to contribute to, and benefit from, overall growth in the field.

Secure the world-wide dimension

The group recommends that the openness of the European market should find its counterpart in markets and networks of other regions of the world. It is of paramount importance for Europe that adequate steps are taken to guarantee equal access.

Since information infrastructures are borderless in an open market environment, the information society has an essentially global dimension.

The actions advocated in this report will lead to a truly open environment, where access is provided to all players. This openness should find its counterpart in markets and networks of other regions of the world. It is obviously of paramount importance for Europe that adequate steps are taken to guarantee equal access.

Towards a positive outcome

The responses outlined above to the challenges posed by the deployment of the information society will be positive for all involved in its creation and use.

Telecommunications, cable and satellite operators will be in a position to take full advantage of market opportunities as they see fit, and to expand their market share.

The service provider and content industries will be able to offer innovative products at attractive prices.

Citizens and users will benefit from a broader range of competing services.

Telecommunication equipment and software suppliers will see an expanding market.

Those countries that have already opted for faster liberalization, are experiencing rapidly expanding domestic markets that provide new

opportunities for TOs, service providers and industry. For the others, the price to pay for a slower pace of liberalization will be a stiffer challenge from more dynamic foreign competitors and a smaller domestic market. Time is running out. If action is not accelerated, many benefits will arrive late, or never.

It is an essential recommendation of the group that governments support accelerated liberalization by drawing up clear timetables and deadlines with practical measures to obtain this goal.

In this context, the 1993 Council Resolution remains a useful point of reference. Even before the specified dates, governments should take best advantage of its built-in flexibility to seize the opportunities offered by a burgeoning competitive market. They should speed up the opening to competition of infrastructures and of those services that are still in the monopoly area, as well as remove political burdens imposed on their national TOs.

Chapter 3: Completing the agenda

Several policy issues have to be faced in parallel with actions needed to create an open, competitive and market-driven information society. Disparate national regulatory reactions carry a very real threat of fragmentation to the internal market.

Here there are two different sets of issues and problems: one relating to the business community, the other more to individuals and the information society, with specific reference to privacy.

As we move into the information society, a regulatory response in key areas such as intellectual property, privacy and media ownership is required at the European level in order to maximize the benefits of the single market for all players. Only the scale of the internal market is

sufficient to justify and attract the required financing of high performance trans-European information networks.

Therefore, applying the single market principle of freedom of movement of all goods and services, to the benefit of Europeans everywhere, must be our key objective.

The information society is global. The group thus recommends that Union action should aim to establish a common and agreed regulatory framework for the protection of intellectual property rights, privacy and security of information, in Europe and, where appropriate internationally.

Protection of intellectual property rights (IPR)

While there is a great deal of information that is in the public domain, there is also information containing added value which is proprietary and needs protection via the enforcement of intellectual property rights. IPRs are an important factor in developing a competitive European industry, both in the area of information technology and more generally across a wide variety of industrial and cultural sectors.

Creativity and innovation are two of the Union's most important assets. Their protection must continue to be a high priority, on the basis of balanced solutions which do not impede the operation of market forces.

The global nature of the services that will be provided through the information networks means that the Union will have to be party to international action to protect intellectual property. Otherwise, serious difficulties will arise if regulatory systems in different areas of the world are operating on incompatible principles which permit circumvention or create jurisdictional uncertainties.

The group believes that intellectual property protection must rise to the new challenges of globalization and multimedia and must continue to have a high priority at both European and international levels.

In this global information market-place, common rules must be agreed and enforced by everyone. Europe has a vested interest in ensuring that protection of IPRs receives full attention and that a high level of protection is maintained. Moreover, as the technology advances, regular world-wide consultation with all interested parties, both the suppliers and the user communities, will be required.

Initiatives already under way within Europe, such as the proposed Directive on the legal protection of electronic databases, should be completed as a matter of priority.

Meanwhile, in order to stimulate the development of new multimedia products and services, existing legal regimes — both national and Union — will have to be reexamined to see whether they are appropriate to the new information society. Where necessary, adjustments will have to be made.

Privacy

The demand for the protection of privacy will rightly increase as the potential of the new technologies to secure (even across national frontiers) and to manipulate detailed information on individuals from data, voice and image sources is realized. Without the legal security of a Union-wide approach, lack of consumer confidence will certainly undermine rapid development of the information society.

Europe leads the world in the protection of the fundamental rights of the individual with regard to personal data processing. The application of new technologies potentially affects highly sensitive areas such as those dealing with the images of individuals, their communication, their movements and their behaviour. With this in mind, it is quite possible that most Member States will react to these developments by adopting protection, including trans-frontier control of new technologies and services.

In particular, the ease with which digitized information can be transmitted, manipulated and adapted requires solutions protecting the content providers. But, at the same time, flexibility and efficiency in obtaining authorization for the exploitation of works will be a prerequisite for a dynamic European multimedia industry.

Disparities in the level of protection of such privacy rules create the risk that national authorities might restrict free circulation of a wide range of new services between Member States in order to protect personal data.

The group believes that without the legal security of a Union-wide approach, lack of consumer confidence will certainly undermine the rapid development of the information society. Given the importance and sensitivity of the privacy issue, a fast decision from Member States is required on the Commission's proposed Directive setting out general principles of data protection.

Electronic protection (encryption), legal protection and security

Encryption is going to become increasingly important in assuring the development of the pay services. Encryption will ensure that only those who pay will receive the service. It will also provide protection against personal data falling into the public domain.

International harmonization would assist the market if it were to lead to a standard system of scrambling. Conditional access should ensure fair and open competition in the interests of consumers and service providers.

Encryption is particularly important for telecommerce, which requires absolute guarantees

in areas such as the integrity of signatures and text, irrevocable time and date-stamping and international legal recognition.

However, the increased use of encryption and the development of a single encryption system will increase the returns from hacking into the system to avoid payment or privacy restrictions. Without a legal framework that would secure service providers against piracy of their encryption system, there is the risk that they will not get involved in the development of these new services.

