Europe and the global information society

Recommendations to the European Council

In its Brussels meeting of December 1993, the European Council requested that a report be prepared for its meeting on 24 - 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, ,.he Council will adopt an operational programme defining precise procedures for action and the necessary means.

Brussels, 26 May 1994

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An Action Plan - summary of recommendations

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.

1. The information societynew ways of living and working together
A revolutionary challenge to decision makers

Throughout the world, information and communications 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 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 work together and the way we live together.

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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, 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 informa tion society will reap the greatest rewards. They will set the agenda for all who must follow. By contrast, countries which temporise, or favour half-hearted solutions, could, in less than a decade, face disastrous declines ininvestment and a squeeze on jobs.

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

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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 calls into being 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 minimising 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 organisation, 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; t*
he new products and services.

- *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 organisation and to reinforce cohesion.

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The information revolution prompts profound changes in the way we view our societies and also in their organisation 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 compartmentalisation. 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, maximising benefits*

Thus, we have to find ways to master the risks and maximise 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 finds its full justification. In order best to raise awareness, regional and local initiatives - whether public or private should be encouraged.

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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 work place. This concerted effort should reflect new relationships at the work place 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.

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

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

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.

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 .

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 winners and losers. Given the power and pervasiveness of the technology, this market is global.

"The market will drive ... the prime task of government is to safeguard competitive forces...."

The prime taslk 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 energise 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 standardised 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 organisation 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 reorganisation and for adapting relationships with suppliers, contractors and customers. We have a lot of pent up demand to fill.

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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, handling an electronic requisition is one tenth 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 encounters a number of obstacles and uncertainties.

Given the initial high cost of new pay-perview 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-per-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 (I - 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 utilisation. 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 (an American) dedicated 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 organisational 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 starts 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.

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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.

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 mobilising 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 liberalisation 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 timtables and dead lines 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 recognised 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:

- subsidising 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 de signed 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 levle of an authority whose items of reference will require a 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 a 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 market place will then be in a position to anticipate the forthcoming framework, and the opportunity will exist for those wishing to move rapidly to beneft 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 the 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 conditions for network access and service use 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 world-wide. 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

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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-a-vis nonEuropean 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 standardisation 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 standardisation 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 standardisation 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 standardisation! process in order to increase its speed and responsiveness to markets.

• *Urgent action to adjust tariffs*

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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 versus 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 industrialised regions.
Adjustment of tariffs should be accompanied by the fair sharing of public service obligations among operators.

Two elements should accompany the process:

· TOs freed 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.

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 liberalisation, 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 liberalisation 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.

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.

It is an essential recommendation of the Group that governments support accelerated liberalisation 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.

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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 like intellectual property, privacy and media ownership is required at the European level in order to maximise 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 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 establisch a common and agreed regulatory framework for the protection of intellectual property rights, privacy and security of informations, 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 globalisation and multimedia and must continue to have a high piority 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.

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

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 realised. 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 transfrontier control of new technologies and services.

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 beleives that without the legal security of a Union-wide approach, lack of consumer confidence will cerrtainly undermine the rapid development of hte information society. Given the importance and sensitivity of the privacy issue, a fast decision from Member States si 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 harmonisation 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.

The Group recommends acceleration of work at European level on electronic and legal protection as well as security

On the other hand, governments may need powers to override encryption for the purposes of fighting against crime and protecting national security.

An answer given at a national level to this and to the hacking issue will inevitably prove to be insufficient because communications reach beyond national frontiers and because the principles of the internal market prohibit measures such as import bans on decoding equipment.

Therefore, a solution at the European level is needed which provides a global answer to the problem of protection of encrypted signals and security. Based on the principles of the internal market it would create parity of conditions for the protection of encrypted services as well as the legal framework for the development of these new services.

Media ownership

In addition to ownership controls to prevent monopoly abuse, most countries have rules on media and cross media ownership to preserve pluralism and freedom of expression.

In practice, these rules are a patchwork of inconsistency which tend to distort and fragment the market. They impede companies from taking advantage of the opportunities offered by the internal market, especially in multimedia, and could put them in jeopardy vis-a-vis non-European competitors.

In current circumstances, there is a risk of each Member State adopting purely national legislation in response to the new problems and challenges posed by the information society. Urgent attention has to be given to the question of how we can avoid such an undermining of the internal market and ensure effective rules which protect pluralism and competition.

Rules at the European level are going to be crucial, given the universality of the information society and its inherently transborder nature. The Union will have to lead the way in heading off deeper regulatory disparity. In so doing it will reinforce the legal security that is vital for the global competitiveness of Europe's media industry.

The Group believes that urgent attention should be given to the question of how we can avoid divergent national legislation on media ownership indermining the internal market. Effective rules must emerge to protect pluralism and competion.

The role of competition policy

Competition policy is a key element in Union strategy. It is especially important for consolidating the single market and for attracting the private capital necessary for the growth of the trans-European information infrastructure.

Areas of the information society are beset by intense globalising pressures. These affect both European and nonEuropean companies operating inside the Union. If appropriate, the notion of a global, rather than a Union-wide, market should now be used in assessing European competition issues such market power, joint ventures and alliances.

Competition Policy is a key element in Europe's strategy. The Group recommends that the application of competition rules should reflect the reality of the newly emerging global markets and the speed of change in the environment.

The aim should not be to freeze any set of regulations, but rather to establish procedures and policies through which the exploding dynamism of the sector can be translated into greater opportunities for wealth and job creation.

Like other commercial players, companies involved in the supply of technologies and services must be in a position to adapt their strategies and to forge alliances to enable them to contribute to, and to benefit from, overall growth in the sector in the framework of competition policy.

Technology

The technological base in Europe today is sufficient to launch the applications proposed in this reports without delay. They must focus on realistic systems on a sufficient scale to explore the value of the services offered to the user, and to evaluate the economic feasibility of the new information systems.

However, new technologies do still have to be developed for their full-scale introduction following these demonstrations. In particular, the usability and cost-effectiveness of the systems must be improved, and the consequences of mass use further investigated.

The research programmes of the Union and of Member States, in particular the Fourth Framework Programme, should be implemented in such a way as to tal<e into account market requirements. Technical targets and the timing of projects must be defined with appropriate user involvement.

4 The building blocks of the information society

Communications systems combined with advanced information technologies are keys to the information society. The constraints of time and distance have been removed by **networks** (e.g. telephone, satellites, cables) which carry the information, **basic services** (e.g. electronic mail, interactive video) which allow people to use the networks and **applications** (e.g. distance learning, teleworking) which offer dedicated solutions for user groups.

The opportunity for the Union - strengthening its existing networks and accelerating the creation of new ones

• ***ISDN: a first step***

The traditional telephone network is changing its character. Having been built as a universal carrier for voice, it now has to meet the communication requirements of a modern economy going far beyond simple telephone calls.

One important development is the Integrated Service Digital Network ISDN. This offers the opportunity to send not only voice, but also data and even moving images through telephone lines.

ISDN is particularly suited for the communications needs of small and medium sized enterprises. It permits, for example, direct PC to PC communication, for instant, low-cost transmission of documents. Teleworking using ISDN services can be attractive to a wide range of businesses. ISDN is also an ideal support for distance learning.

EURO-ISDN, based on common standards, started at the end of 1993. A number of European countries have a leading position which should be exploited.

The Group recommends priority extension of the availability of EURO-ISDN in line with current Commission proposals, and reductions in tariffs to foster the market.

• ***Broadband: the path to multimedia***

ISDN is only the first step. New multimedia services, for instance high quality video communications, require even more performance. ISDN is showing the way, and the next technological wave aims for the multimedia-world. This is integrated broadband communications, providing an opportunity to combine all media in a flexible way. The lead technology to implement this is called Asynchronous Transfer Mode (ATM).

European industry and telecoms operators are at the forefront of these technological developments and should reap the benefits.

Europe needs to develop an ATM broadband infrastructure as the backbone of the information society. Multimedia services offered through these networks will support the work and leisure activities of all our citizens.

In many European countries, highly developed broadband distribution already exists in the form of cable and satellite networks, or it is being deployed. Application of currently available sophisticated digital techniques, such as picture compression and digital signal transmission, will easily enable these networks to fulfill mainstream demands for interactive individual information and leisure uses.

The present situation is mainly characterised by national and regional initiatives. The first trials of transnational networks have taken place only recently.

The Group recommends that the Council supports the implementation of the European broadband infrastructure and secure its interconnectivity with the whole of European telecom, cable television and satellite networks.

A European Broadband Steering Committee involving all relevant actors should be set up in order to develop a common vision and to monitor and facilitate the realisation of the overall concept through, in particular, demonstrations and, choice and definition of standards.

• **Mobile communication: a growing field**

Mobile communication is growing at breathtaking speed. The number of mobile telephone subscribers has doubled over the past three years to 8 million. At current growth rates of 30-40%, the Union will soon have 40 million users.

Europe is becoming an important leader in mobile communications through adoption around the world of its standards for digital communications. In particular, GSM is an excellent demonstration of how a common Europe-wide public/private initiative can be successfully transformed into a market driven, job creating operation.

In Germany, the country where GSM is currently having most success, about 30,000 new jobs have been created. On similar assumptions, Europe-wide introduction on the same scale would generate more than 100,000 new jobs.

• ***Satellites: widening the scope of communications***

Satellites are mainly used for television broadcasting, Earth observation and telecommunications. The crucial advantage of satellites is their wide geographical coverage without the need for expensive terrestrial networks. Satellites have many advantages for providing rural and remote areas with advanced communications.

Full exploitation of satellites can only be achieved by a new phase in the Union's satellite policy. The objective should be to develop trans-European networks.

With regard to mobile and satellite communications, the Group recommends:

-a reduction in tariffs for mobile communications;
-promotion of GSM, in Europe and internationally;
-the establischment of a regulatory framework for satellite communications;
-urging the European satellite industry to develop common priority projects and to participate actively in the development of worldwide systems.

New basic services are needed

New basic services such as e-mail, file transfer and interactive multimedia are needed. The necessary technology is available. New networks are developing, such as ISDN, eliminating the present limitations of the telephone network.

Two basic elements are needed for such services: unambiguous standards and critical mass. The attraction of a telecommunications service depends directly on the number of other compatible users. Thus, a new service cannot really take off until a certain number of customers has subscribed to the service. Once this critical mass has been achieved, growth rates can increase dramatically, as in the case of INTERNET.

INTERNET is based on a world-wide network of networks that is not centrally planned. In fact, nobody owns INTERNET. There are now some 20 million users in more than 100 countries. The network offers electronic mail, discussion fora, information exchange and much more. INTERNET is so big, and growing so fast, that it cannot be ignored.

Nevertheless, it has flaws, notably serious security problems. Rather than remaining merely clients, we in Europe should consider following the evolution of INTERNET closely, playing a more active role in the development of interlinkages.

The Group recommends urgent and coherent action at both European and Member State levels to promote the provision and widespread use of standard, trans-European basic services, including electronic mail, file transfer and video services.

The Commission is recommended to initiate the creation of a "European Basis Services Forum" to accelerate the availibility of unified standards for basic services.

Significant advantages for the whole economy could be realised quite quickly through extension of Europe-wide compatible basic services.

Blazing the trail - ten applications to launch the information society

Today technology is in search of applica- However, confident as we are of the netions. At the same time, societies are searching for solutions to problems based on intelligent information.

Tariff reductions will facilitate the creation of new applications and so overcome the present low rate of capacity utilisation. Voice lines operate, for instance, an average of 20 minutes in 24 hours, while some value-added network services are only working at 20% of capacity.

However, confident as we are of the necessity to liberate market forces, heightened competition will not by itself produce -or produce too slowly- the critical mass which has the power to drive investment in new networks and services.

We can only create a virtuous circle of supply and demand if a significant number of market testing applications based on information networks and services can be launched across Europe to create critical mass.

• Demonstration Function

Initiatives taking the form of experimental applications are the most effective means of addressing the slow take-off of demand and supply. They have a demonstration function which would help to promote their wider use; they provide an early test bed for suppliers to fine-tune applications to customer requirements, and they can stimulate advanced users, still relatively few in number in Europe as compared to the US.

It is necessary to involve local, metropolitan and regional administrations in their development. Cities can have an extremely important role in generating early demand and also in promoting an awareness among their citizens of the advantages of the new services. In certain cases, local administrations could demonstrate the benefits by assuming the role of the first mass user.
To be truly effective, such applications need to be launched in real commercial environments, preferably on a large scale. These initiatives are not pilot projects in the traditional sense. The first objective is to test the value to the user, and the economic feasibility of the information systems.

As the examples in the following pages demonstrate, it is possible to identify initiatives which will rapidly develop new applications and markets, while also impacting positively on the creation of new jobs and businesses.

The private sector is ready to embark on the initiatives needed.

Priority applications can be divided in
~ main blocks, according to final users:

- the personal home market (interactive and transaction applications related to teleshopping, telebanking, entertainment, leisure) business and social applications.

Priority applications should also contribute to a number of macro-economic objectives:

- strengthening industrial competitive ness and promoting the creation of new jobs
- promoting new forms of work organisation
- improving quality of life and quality of the environment
- responding to social needs and raising the efficiency and cost-effectiveness of public services.

APPLICATION ONE

TELEWORKING

More jobs, new jobs, for a mobile society

What should be done? Promote teleworking in homes and satellite offices so that commuters no longer need to travel long distances to work. From there, they can connect electronically to whatever professional environment they need, irrespective of the system in use.

Who will do it7 If the telecom operators make available the required networks at competitive prices, the private sector will set up new service companies to supply teleworking support.

Who gains? Companies ~both large and SMEs~ and public administrations will benefit from producbvity gains, increased flexibility, cost savings. For the general public, pollution levels, traffic congestion and energy consumption will be reduced. For employees, more flexible working arrangements will be particularly beneficial for all those tied to the home, and for people in remote locations the narrowing of distances will help cohesion.

Issues to watch? Problems arising from decreased opportunities for social contact and promotion will have to be addressed. Impact on labour legislation and social security provision will need to be assessed.

What target? Create pilot teleworking centres in 20 cibes by end 1995 inwlving at least 20,000 workers. The aim is for 2% of white collar workers to be teleworkers by 1996; 10 million teleworking jobs by the year 2000.

APPLICATION Two

DISTANCE LEARNING

Life long learning for a changing society

What should be done? Promote distance learning centres providing courseware, training and tuition services tailored for SMEs, large companies and public administrations. Extend ad vanced distance learning techniques into schools and colleges.

Who will do it? Given the required network tariffs at competibve prices, industry will set up new service provider companies to supply distance learning services for vocational training. European Commission should support quality standards for programmes and courses and help create a favourable environment Private sector providers and public authorities will enter the distance education market, offering networked and CD-I and CD-ROM interactive disk based programming and content at affordable prices.

Who gains? Industry (specially SMEsJ and public administrations, by cost reductions and optimisation of the use of scarce training and education resources. Employees needing to upgrade their skills by taking advantage of lifelong learning programmes. People tied to the home and in remote locations. Students accessing higher quality teaching.

Issues to Watch? Need to engage in a major effort to train the trainers and expand computer literacy among the teaching profession.

What target? Pilot projects in at least 5 countries by 1995. Distance learning in use by 10% of SMEs and public administrations by 1996. Awareness campaigns among the professional associations and education authorities.

APPLICATION THREE

A NETWORK FOR UNIVERSITIES AND RESEARCH CENTRES

Networking Europe's brain power

What should be done? Development of a trans-European advanced network ~high bandwidth, high definition, carrying interactive multimedia services~ linking universities and research centres across Europe, with open access to their libraries.

Who will do it ? Providing broadband networks and high speed lines are available at competitive rates, universities and research centres will set up the networks. Private companies, large and small, could also link their laboratories with universities and research centres. A trans-European public library network can also be envisaged.

Who gains? The producbvity of research programmes through broader team creation leading to synergies between institutions. Society in general through more efficient diffusion of research findings and knowledge.

Issues to watch? Giving due consideration to IM protection as the accumulated stock of human knowledge becomes more readily accessible.

What target? Thirty per cent of European universities and research centres linked through advanced communications networks by 1997. Extension to other European countries as this becomes technologically feasible.

APPLICATION FOUR

TELEMATIC SERVICES FOR SMEs

Relaunching a main engine for growth and employment in Europe

What should be done? Promote the widest possible use of telematic services ~E-mail, file transfer, EDI, video conferencing, distance learning, etc.~ by European SMEs, with links to public authorities, trade associations, customers and suppliers. Raise the awareness of added value services, and communicabons in general, among SMEs. Increase access to transEuropean data networks.

Who will do it ? If the necessary ISDN networks are available at competibve rates, the private sector will provide trans-European value-added services tailored for SMEs. Local goVeMment, Chambers of Commerce and trades associations linking SMEs will mount programmes for integrating information networks at the local and regional level promoting awareness campaigns for the services available.

Who gains ? SMEs will be able to compete on a more equal basis with larger companies and capbve contractor-supplier relabonships will be weakened. They will be more competibve, will grow faster and create more jobs. Relationships with administrations will be simpler and more producbve. The category will gain in public standing and influence.

What target ~ Access to Trans-European telemabc services for SMEs available by end 1994-1995. 40% of SMEs (firms with more than 50 employees~ using telemabc networks by 1996. SME links with administration networks prioritised.

APPLICATION FIVE

ROAD TRAFFIC MANAGEMENT

Electronic roads for better quality of life

What should be done? Establish telemabc solutions on a European scale for advanced road traffic management systems and other transport services /driver information, route guidance, fleet management, road pricing, etc.~.

Who will do it? European, national and regional administrabons, user groups and traffic operators will create a Steering Committee and define a common open system architecture for advanced telemabc services with common user interfaces.

Who gains? Drivers, local communities (especially in heavily congested areas) and industry will benefit from reduction in traffic, increased road safety, lower environmental costs, energy and time saving.

What target? Implementation of telemabc systems for road traffic management in 10 metropolitan areas and 2,000 km of motorway by 1996. 30 metropolitan areas and the transEuropean motorway network by the year 2000.

APPLICATION SIX

AIR TRAFFIC CONTROL

An electronic airway for Europe

What should be done? Create a European Air Traffic Communicabon System providing ground-ground connections between all European Air Traffic control centres ~ATC) and air-ground connections between aeroplanes, ATC-centres across the European Union and the European Civil Aviation Conference, with the alm of achieving a unified trans-European air traffic control system.

Who will do it? The European Council should promote energetically the creation of a reduced number of networked European Air Traffic centres, as defined byEUROCONTROL.

Who gains? TheEuropeanairtransportindustry - and its millions of passengers - will benefit from better air traffic management and significantly reduced energy consumption. A safer system, with less congestion and subsequent reductions in time wasted, noise and fume pollution.

Issues to watch? There is a need to coordinate closely with the defence sector.

What target? Set up a Steering Committee with representatives of public authorities, civil and militaryaviation authorities, the airtransportindustry and unions by end 1994. Definition of standards for communicabon procedures and the exchange of data and voice messages between ATC-centres as well as between ATC-centres and aeroplanes. A functioning trans-European system before the year 2000.

APPLICATION SEVEN

HEALTHCARE NETWORKS

Less costly and more effective healthcare systems for Europe's citizens

What should be done? Create a direct communication "network of networks" based on common standards linking general practitioners, hospitals and social centres on a European scale.

Who will do it?The private sector, insurance companies, medical associabons and Member State healthcare systems, with the European Union promoting standards and portable applications. Once telecom operators make available the required networks at reduced rates, the private sector will create competitively priced services at a European level, boosting the productivity and costeffectiveness of the whole healthcare sector.

Who gains? Citizens as patients will benefit from a substantial improvement in healthcare (improvement in diagnosis through on-line access to European specialists, on-line reservation of analysis and hospital services by practitioners e~ftended on European scale, transplant matching, etc.~. Tax payers and public administrations will benefit from tighter cost control and cost savings in healthcare spending and a speeding up of reimbursement procedures.

Issues to watch? Privacy and the confidentiality of medical records will need to be safeguarded.

What target? Major private sector health care providers linked on a European scale. First level implementabon of networks in Member States linking general practitioners, specialists and hospita/s at a regional and national level by end 1995.

APPLICATION EIGHT

ELECTRONIC TENDERING

More effective administration at lower cost

What should be done? Introduction of electronic procedures for public procurement between public administrations and suppliers in Europe followed by the creation of a European Electronic Tendering Network. This programme will funcbon as a strong enabling mechanism for attaining critical mass in the telematic services market in Europe.

Who will do it? European Council and Member States decide to agree on common standards and to introduce a mandatory commitment to electronic handling of information, bidding and payments related to public procurement Telecom operators and service providers will enable users to access to the European Electronic Tendering Network.

Who gains? Public Administrations will benefit from cost savings in replacing paper handling with electronic handling and from the more competitive environment between suppliers drawn from the wider inteMal market Small and medium sized enterprises will benefit from participating in trans-European public procurement and from the diffusion of telemabc services.

Issues to watch? Data security, the need to ensure open access particularly for SMEs, to avoid electronic procurement developing into a hidden form of protectionism. Take proper account of similar programmes developed in third countries, particularly the US ~CALS).

What target? A critical mass of 10% of awarding authorities using electronic procedures for their procurement needs could be attained in the next two to three years.

APPLICATION NINE

TRANS-EUROPEAN PUBLIC ADMINISTRATION NETWORK

Better government, cheaper government

What should be done? Interconnected networks between Public Administrations networks in Europe, aiming at providing an effective and less expensive ~replacement of paper by electronic means) information interchange. Subsequently extended to link public administrations and European citizens.

Who will do it? European Union and Member States should strengthen and speed up the implementation of the programme for Interchange of Data between Administrations ~IDA). The private sector will increase its co-operation with the European Union and Member States in defining technical solutions for the provision of interoperable services and interconnectable networks, while supporting national and local authorities in the testing and implementation of networks and services for citizens.

Who gains? The unificabon process for the single market, with general benefits in lower costs and better relations between public administrations and European citizens.

What target? Implementation of interconnected networks allowing interchange in the tax, customs and excise, statistical, social security, health care domains, etc., by 1995-96.

APPLICATION TEN

CITY INFORMATION HIGHWAYS

Bringing the information society into the home

What should be done?7 Set up networks providing households with a network access system and the means of using on-line multimedia and entertainment services on a local, regional, and national and intemational basis.

Who will do it? Groups of content and service providers ~broadcasters, publishers~, network operators ~telecoms organisations, cable~, system suppliers/integrators ~e.g. consumer electronic industry~. Local and regional authorities, citizens groups, chambers of commerce and industry, will have very important roles to play.

Who gains? Consumers will enjoy early experience of complexnewservices, particulary multimedia services, and will be able to express their preferences in the fields of entertainment (video on demand), transaction-oriented services (banking, home shopping etc.) as well as gaining access to informabon services and teleworking or telelearning.

Public authoribes will gain experience with issues such as privacy, IPR protection, standardisation which will be helpful in defining a single legal and regulatory environment

Private sector participants will gain early hands-on experience of consumer preferences for programmes, software and services. User interfaces can be tested and improved in practice.

What target? Install and operate in up to five European cities with up to 40,000 households per city by 1997.

5 Financing the information society a task for the private sector

It is neither possible nor necessary at this stage to be precise about the amount of investment that will be generated by the development of the information infrastructure and related services and applications. Analyses made of the US market remain highly questionable, although there is no doubt that the total investment required over the next 5 to 10 years will be considerable.

The Group believes the creation of the information society in Europe should be entrusted to the private sector and to market forces.

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Private capital will be available to fund new telecoms services and infrastructures providing that the different elements of this Report's Action Plan are implemented so that:

- market liberalisation is fast and credible
- rules for interoperability and reciprocal access are set
- tariffs are adjusted
- the regulatory framework is established

There will be no need for public subsidies, because sufficient confidence will have been established to attract the required investment from private sources.

Ultimately, it is market growth that is perceived as the real guarantee for private investors, rendering subsidies and monopolies superfluous.

Public investment will assume a role, but not by any increase in the general level of public spending - rather by a refocusing of existing expenditure. Indeed, some of the investment that public authorities will have to undertake to develop applications in areas of their own responsibility will generate productivity gains and an improvement in the quality of services that should, if properly handled, lead to savings.

In addition to some refocusing of expenditure on R&D, modest amounts of public money may also be useful to support awareness campaigns mainly directed at small and medium sized businesses and individual consumers.

The Group recommends refocusing existing public funding more specifically to target the requirements of the information society. At the Union level, this may require some reorientation of current allocations under such headings as the Fourth Framework Programme for research and development and the Structural Funds.

The same is true for expenditure at the European Union which can achieve important results by a better focusing of existing resources, including finance available under both the Fourth Framework Programme funding R&D, and under the Structural Funds.

The Commission has also proposed limited support for some of the services and applications included in the Group's Action Plan from funds linked to the promotion of trans-European networks. These proposals deserve support.

6 Follow-up

With this Report the Group has completed its mandate and provided recommendations for action. Our recommendations should be regarded as a coherent whole, the full benefits of which can only be reaped if action is taken in all areas.

Given the urgency and importance of the tasks ahead, the Group believes that at Union level there must be one Council capable of dealing with the full range of issues associated with the information society. With this in mind, each Member States may wish to nominate a single minister to represent it in a Council of Ministers dedicated to the information society. The Commission should act similarly

The Group calls for the establishment by the Commission of a Board composed of eminent figures from all sectors concerned, including the social partners, to work on the framework for implementing the information society and to promote public awareness of its opportunities and challenges. This Board should report at regular intervals to the institutions of the Union on progress made on the implementation of the recommendations containded in this report.

An Action Plan - summary of recommendations

Regulatory Framework

Evolving the regulatory domain

Member States should accelerate the ongoing process of liberalisation of the Telecom sector by:

-opening up to competition infrastructures and serc=vices 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.

An authority should be established at European level whose terms of reference will require prompt attention.

Interconnection and Interoperability

Interconnection of networks and interoperability of services and applications should be primary Union objectives. The European standardisation process should be reviewed in order to increase its speed and responsiveness to markets.

Tariffs

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

Critical Mass

Public awareness should be promoted. Particular attention should be paid to the small and medium-sized business sector, public administrations and the younger generation.

Worldwide Dimension

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 should be taken to guarantee equal access
Completing the agenda

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

IPRs

Intellectual property protection must rise to the new challenges of globalisation and multimedia, and must continue to have a high priority at both European and international levels.

Privacy

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

Electronic protection, legal protection and security

Work at the European level on elctronic and legal protection as well as security should be accelerated.

Media ownership

Urgent attention should be given to the question of how we can avoid divergent national legislation on media ownership indermining the internal market. Effective rules must emerge to protect pluralism and competion.

Competition

Competition is a key element in Europe's strategy. The Group recommends that the application of competition rules should reflect the reality of the newly emerging global markets and the speed of change in the environment.

Building Blocks

Networks

Priority has to be givern to the extension of the availibility of EURO-ISDN, in line with current Commission proposals, and reductions in tariffs to foster the market.

The Council should support the implementation of the European broadband infrastructure and secure its interconnectivity with the whole of European telecom, cable television and satellite networks.
A European Broadband Steering Committee involving all relevant actors should be set up in order to develop a common vision and to monitor and facilitate the realisation of the overall concept through, in particular, demonstrations and, choice and definition of standards.

With regard to mobile and satellite communications:
- tariffs for mobile communiocations should be reduced
- GSM should be promoted in Europe and internationally
- a regulatory framework for satellite communications should be established
-the European satellite industry should be urged to develop common priority projects and to participate actively in the development of world-wide systems

Basic services

The provision and widespread use of standard, trans-European basic services, including electronic mail, file transfer and video services, should be promoted by urgent and coherent action at both the European and Member State levels.

The Commission should initiate the creation of a "European Basis Services Forum" to accelerate the availibility of unified standards for basic services.

Applications

Initiatives in the application domain are the most effective means of addressing the slow take-off of demand and supply. They have a demonstration function which would help promoting their use. The Group has identified thew following initiatives:

- teleworking
- distance working
- university and research
- telematic services for SMEs
- road traffic management
- air traffic management
- health care networks
- electronic tendering
- trans european public administration network
- city information highways

Financing

The creation of the information society should be entrusted to the private sector and to the market forces.

The existing public funding should be refocused more specifically to target the requirements of the information society. At the Union level, this may require some reorientation of current allocations under such headings as the Fourth Framework Programme for research and development and the Structural Funds.

Follow-up

Given the urgency and importance of the tasks ahead, there must be at Union level one Council capable of dealing with the full range of issues associated with the information society. With this in mind, each Member States may wish to nominate a single minister to represent it in a Council of Ministers dedicated to the information society. The Commission should act similarly

A Board composed of eminent figures from all sectors concerned, including the social partners, to work on the framework for implementing the information society and to promote public awareness of its opportunities and challenges. This Board should report at regular intervals to the institutions of the Union on progress made on the implementation of the recommendations containded in this report.