COMMISSION OF THE EUROPEAN COMMUNITIES

TOWARDS A DYNAMIC EUROPEAN ECONOMY

GREEN PAPER

ON THE DEVELOPMENT OF THE COMMON MARKET

FOR TELECOMMUNICATIONS SERVICES AND EQUIPMENT

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(Communication by the Commission)

PRESENTATION OF THE GREEN PAPER

ON TELECOMMUNICATIONS

Information, exchanges of knowledge, and communications are of vital importance in economic activity and in the balance of power in the world today. Policy makers are therefore concentrating on ways of acquiring, processing, storing and transmitting information. Telecommunications is the most critical area for influencing the "nervous system" of modern society. To flourish, it has to have optimum environmental conditions. In this respect, the convergence of telecommunications, computing and applications of electronics in general has now made possible the introduction of a wide variety of new services. The traditional form of organsation of the sector does not allow the full development of the potential of these new services. In order to create an open and dynamic market in this area it therefore seems necessary to introduce regulatory changes to improve the sector's environment. These changes should allow the full development of the supply of services and equipment, thus making it possible for industry to take full advantage of this potential. In particular, national frontiers should not be allowed to hamper the development of a consistent communications system within the European Community. The purpose of the Green Paper on telecommunications is to initiate wide-ranging discussions with all those concerned so as to help the Community and its Member States to introduce the necessary changes to their systems of regulation.

THE INEVITABLE TREND

For more than a century, telecommunications policy has been conducted by the Telecommunications Administrations. In general a fair balance has been achieved between national research and development, and industrialisation capacities for user equipment and services. Apart from the establishment of the single market scheduled for completion by 1992, there are many reasons why telecommunications structures and policies now need to be fundamentally reviewed. The earlier balance is now being upset by several phenomena with a variety of effects :

- the speed of technological diversification (signal digitisation, optical cables, computer networks, cellular telephony, satellites, etc.) ;

-   <u>the expanding range of new forms of access to sources of information</u> (television, data bases and banks, knowledge banks, image banks, expert systems, etc.) ;

-   <u>the explosive growth in communications requirements</u> (financial and commercial transactions, research networks, international tourism, cultural exchanges, world wide interdependence, etc.) ;

-   <u>the major importance of scale effects</u> through multinational participants.

    Under pressure of events the authorities concerned are being forced to review telecommunications regulations thoroughly, partly in response to the measures taken in the United States and Japan. These reviews must not ignore the Community dimension which alone can make them consistent and optimise their effects.

<u>The issues at stake</u>

Telecommunications are already, and will increasingly be of critical importance to economic, social and cultural development in Europe.

<u>In economic terms</u>, the importance of the sector can be seen from the following figures. The conglomerate sector of the management and transport of information already represents more than ECU 500 billion for the whole world. The world market for telecommunications equipment had reached ECU 90 billion by 1986, of which ECU 17.5 billion was accounted for by the Community.

In 1985 world revenue from telecommunications services was almost ECU 300 billion, of which the Community represented ECU 62.5 billion.

While in 1984 the telecommunications sector was slightly over 2% of Community GDP, this proportion may rise to 7% by the end of the century; between now and the year 2000, over ECU 500 billion will have been invested in telecommunications in the Community. Growth and investment in the sector on this scale will inevitably have major effects on such crucial areas as data-processing, electronics, software production, the supply of services, and broadcasting.

<u>In social and cultural terms</u>, the accessibility to economic actors of an effective system of production and transport of information will give rise to profound transformations in the organisation of production, its geographic location, and in the efficiency and nature of services, with a beneficial effect on both the level and the nature of employment, as on life-styles.

The telecommunications sector (manufacturing and service provision) currently supplies 1.3 million jobs, and it is further estimated that the competitiveness of over 60 million jobs will be highly dependent on information services and telecommunications by the end of the century.

THE CONVERGENCE OF CERTAIN TRENDS AT NATIONAL LEVELS

The Green Paper provides an analysis of the ideas and positions, which are already well defined in some cases , of the various partners in the Community. The undoubted complexity of the situation is due to several factors: the effects of new technological influences; the understandable attachment of staff, manufacturers and users to established traditions that they are reluctant to discard; and the diversity of the new services that will have to be provided. On analysis, however, this complexity shows a number of converging features that can and must prepare the way for consensus. These include agreement on the need :

- to promote the development of new services by setting them in a more competitive framework ;

- to safeguard the role of the Telecommunications Administrations, operators of national public or private networks, in the supply of infrastructure to carry information and to this end to assure them of the resources to make them financially viable ;

- to allow these administrations to compete alongside other suppliers in the provision of new services ;

- to approach the decision-making process through consultations with other parties directly concerned (users, equipment manufacturers, Telecommunications Administrations staff) ;

- to ensure the necessary transitions with regard to all European manufacturers accustomed to living in symbiosis with their Telecommunications Administrations ;

- to ensure the interoperability of networks, terminals and services by actively promoting the standardisation policy conducted at European level since 1984.

THE BASES FOR COMMUNITY ACTION

In the past the telecommunications monopoly was bound up with the idea of national policy and public service. The new regulations that have to be developed in each Member State to obtain consistency throughout the Community are therefore a particularly difficult problem. It seems out of the question to define in the near future a complete set of criteria governing all the new regulations. The Member States have therefore embarked upon a lengthy process of an iterative nature. Technology and its applications are setting out on a course of continuing development in which there are still many unknown factors.

Some rules and principles adopted and implemented at Community level will, however, supply the criteria which define the direction of this movement :

- as regards terminals, gradual but complete opening up of the market to competition ;

- as regards networks and provision of services, complete freedom of access from any connection point ;

- complete separation of the regulatory and operational functions ;

- as regards the social impact, close consultations with all those involved to ensure a smooth transition and optimum utilisation of network and service developments to create new jobs ;

- as regards coherence, assistance in the opening up and economic development of outlying regions through the advantages of the new telecommunications services ;

- as regards competition, application of the provisions of the Treaty to all those concerned ;

- as regards international decisions, the preparation of common positions for negotiations within the organisations concerned (CEPT, ITU, GATT, etc.).

THE COMMISSION'S PROPOSALS FOR ACTION

The Commission has for some years been examining Community measures
for European telecommunications. The Green Paper sets out the
history of the decisions adopted by the Council. The development of
a broad-band network for the new integrated services is not the
sole objective of the RACE programme. Its main advantage is the
creation of a climate of co-operation between the various
Telecommunications Administrations working on its design and
implementation and between those administrations and the industry.
Like ESPRIT which laid the foundations for sound co-operation
between European manufacturers and researchers in computing, RACE
is essential to establish mutual confidence between the public and
private sectors in telecommunications. The rapid adoption of the
main phase of the RACE project is therefore a priority goal. As
regards cohesion, the situation is similar with the STAR programme,
designed to bring the outlying regions out of their isolation and
reduce development inequalities. The Green Paper also recommends
the rapid adoption of proposals on Digital Mobile Communications
and the full application of Recommendation 86/659/EEC on the
Co-ordinated Introduction of the Integrated Services Digital
Network (ISDN).

The extension of Directive 86/361/EEC is also proposed. It covers
the mutual recognition of tests required for type approval.
Recommendation 84/550/EEC on the gradual opening up of access to
public contracts should become a directive.

Alongside these proposals, (already familiar to specialists) the
implementation of which is to be speeded up, the Commission is
putting forward a number of proposals designed to promote the
transition towards a more competitive environment on a
Community-wide scale. The Green Paper therefore proposes :

--   reinforcement of the rapid development of standards and
      specifications at national and European level. This should be
      supported by the creation of a European Telecommunications
      Standards Institute ;

--   definition of the conditions needed for Open Network Provision
      to service providers and users ;

--   the stimulation of the development of new services and setting
      up of an information market ;

--   definition of a coherent European position on satellite
      communications ;

--   common definition of a consistent concept on relations with
      non-member countries ;

- comparative analysis of the economic and social impact in the different Community countries (acceptance by staff and users, international division of labour, etc.) and common study of the social consequences and impact on life-styles of the combined applications of telecommunications, computing and audiovisual facilities.

CONCLUSIONS

Decisions are urgently required. Under pressure from the measures already adopted by the United States and Japan, and under pressure from users, anxious to reduce state dominance and give a freer reign to competition, several Community governments are now defining their deregulation / reregulation policies. These must take account of the requirements of the Single Act and its application. In turn, European integration can move forward only if it has at its disposal efficient networks of information systems and services accessible at low cost that will make a vital contribution to the establishment of the single market, the competitiveness of its industry and the internal and external cohesion which the Community has adopted as its goals.

The Green Paper acknowledges the differences in current situations and the variety of trends. It proposes essentially a "hard core" of proposals designed to ensure Community consistency in telecommunications. The proposed process is iterative; it accepts the existence of a movement, not all aspects of which can be defined today. The fundamental purpose of the measures is therefore to set off a dynamic process that will give the political, economic and social actors involved a better understanding of their own interests and to optimise their activities in the construction of the Community. After consulting these actors, the Commission will, before the end of 1987, present proposals allowing the Community and the Member States to ensure the regulatory consistency required for the best possible development of telecommunications as the target of 1992 approaches.

TOWARDS A DYNAMIC EUROPEAN ECONOMY

SUMMARY REPORT

concerning the

GREEN PAPER
ON THE DEVELOPMENT OF THE COMMON MARKET
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I. INTRODUCTION

The strengthening of European telecommunications has become one of the major conditions for <u>promoting a harmonious development of economic activities and a competitive market throughout the Community</u> and for achieving the completion of the Community-wide market for goods and services by 1992.

The current wave of technical innovation resulting from the convergence of telecommunications and computer technology has now led to reviews in all Member States, and elsewhere, of the future organisation of the telecommunications sector and its necessary regulatory adjustment. The Commission considers it timely to aim at achieving maximum synergy between current developments and debates in the Member States, drawing fully on the potential offered by them to meet the objectives of the Treaty.

This report is intended to launch a debate and to attract comment from a broad spectrum of opinion : the Council ; the European Parliament and the Economic and Social Committee ; the Telecommunications Administrations and Recognized Private Operating Agencies, hereinafter referred to as the "Telecommunications Administrations" ; the European telecommunications, data processing and services industry ; the users who must be the main beneficiaries of the new opportunities ; and the trade unions and other organisations who represent the social interests in this area.

Ensuring that the varying national situations are fully taken into account in a European approach requires a wide-ranging debate over the whole of the Community.

The Paper advances proposals for common positions and lines of action, in order to ease the current transition.

The overriding aim is to develop the conditions for the market to provide European users with a _greater variety_ of telecommunications services, of _better quality_ and at _lower cost_, affording Europe the full internal and external benefits of a strong telecommunications sector.

II. ACHIEVEMENTS OF COMMUNITY TELECOMMUNICATIONS POLICY TO DATE

A technically advanced, Europe-wide and low-cost telecommuni-
cations network will provide an essential infrastructure for
improving the competitiveness of the European economy, achieving
the Internal Market and strengthening Community cohesion – which
constitute priority Community goals reaffirmed in the Single
European Act. Telecommunications have a great influence not only
on services in general, such as financial services, transport and
tourism, but also on trade in goods and on European industrial
co-operation.

The emerging new telecommunications services – and notably
so-called value-added and information services – will have a major
impact on the future tradeability of services in general and on
the location of economic activities.

By the end of the century up to seven per cent of the Gross
Domestic Product of the Community will result from
telecommunications, as against over two per cent today. The
combined world equipment and services market for
telecommunications and information technology already represents
more than ECU 500 billion. It is estimated that, via information
technology, more than 60% of Community employment may depend on
telecommunications by the end of the century.

Since 1984, the Community has made substantial progress in this field, by implementing a policy aimed at :

- promoting the creation of an advanced European telecommunications infrastructure ;

- contributing to the creation of a Community-wide market for services and equipment ;

- contributing to the competitiveness of European industry and service providers.

In following these objectives, the Commission has, within the last two years, made proposals and achieved rapid agreement by Council along five main lines :

- co-ordination regarding future development of telecommunications in the Community and common infrastructure projects. This concerns in particular the principal future stages of network development - the Integrated Services Digital Network (ISDN), digital mobile communications, and the introduction of future broadband communications ;

- creation of a Community-wide market for terminals and equipment. This concerns in particular the promotion of Europe-wide open standards, in order to give equal opportunity to all market participants ;

- the launch of a programme of pre-competitive and "pre-normative" R&D covering the technologies required for integrated broadband communications (the RACE programme) ;

- promoting the introduction and development of advanced services and networks in the less-favoured peripheral regions of the Community ;

- building up common European positions with regard to international discussions in this area.

During 1986 alone, Council achieved agreement, on proposal by the Commission, on six major measures which will become fully effective during 1987. Fig. 1 gives an overview of decisions taken and of proposals currently before Council.

In parallel, the Commission has taken up a number of cases, related to the opening of telecommunications markets, under the Treaty's competition rules.

Figure 1

COUNCIL DECISIONS TAKEN IN THE FIELD OF TELECOMMUNICATIONS

SINCE 1984

COUNCIL RECOMMENDATION OF 12 NOVEMBER 1984 concerning the implementation of a common approach in the field of telecommunications (84/549/EEC)

COUNCIL RECOMMENDATION OF 12 NOVEMBER 1984 concerning the first phase of opening up access to public telecommunications contracts (84/550/EEC)

COUNCIL DECISION OF 25 JULY 1985 on a definition phase for an R&D programme in advanced communications technologies for Europe (RACE) (85/372/EEC)

COUNCIL RESOLUTION OF 9 JUNE 1986 on the use of videoconference and videophone techniques for intergovernmental applications (86/C 160/01)

COUNCIL DIRECTIVE OF 24 JULY 1986 on the initial stage of the mutual recognition of type approval for telecommunications terminal equipment (86/361/EEC)

COUNCIL REGULATION OF 27 OCTOBER 1986 instituting a Community programme for the development of certain less-favoured regions of the Community by improving access to advanced telecommunications services (STAR programme) (86/3300/EEC)

COUNCIL DIRECTIVE OF 3 NOVEMBER 1986 on the adoption of common technical specifications of the MAC/packet family of standards for direct satellite television broadcasting (86/529/EEC)

COUNCIL DECISION OF 22 DECEMBER 1986 on standardisation in the field of information technology and telecommunications (87/95/EEC)

COUNCIL RECOMMENDATION OF 22 DECEMBER 1986 on the co-ordinated introduction of the Integrated Services Digital Network (ISDN) in the European Community (86/659/EEC)

III CURRENT ADJUSTMENT OF INSTITUTIONAL AND REGULATORY CONDITIONS

To complement the progress achieved to date, it now seems timely to initiate a common thinking process regarding the fundamental adjustment of the institutional and regulatory conditions which the telecommunications sector now faces. This world-wide transformation is due to the profound technical change which is currently taking place : the progressive merger of telecommunications and computing technology, and the growing integration of spoken, written and audio-visual communication..

Telecommunications has taken 140 years to develop from a single service to a dozen services in the early eighties. The new technological capabilities will now lead to considerable growth and multiplication of services and applications within a single decade. [Fig. 2]

Mastering this transformation requires certain readjustments in the organisation of the sector in all Member States. The form of these adjustments must take into account the particular position of European countries and the requirements of the establishment of a unified market.

As set out in this Green Paper, the Community must make sure that :

-   the necessary European scale and dimension are introduced into the current phase of transformation ;

-   no new barriers are created within the Community during the adjustment of regulatory conditions ;

Figure 1 (continued)

PROPOSALS CURRENTLY BEFORE COUNCIL

PROPOSAL FOR A COUNCIL REGULATION OF 29 OCTOBER 1986 on a Community action in the field of telecommunications technologies (RACE)

PROPOSAL FOR A COUNCIL REGULATION OF 1 DECEMBER 1986 introducing the preparatory phase of a Community programme on trade electronic data interchange systems (TEDIS)

PROPOSAL FOR A COUNCIL RECOMMENDATION OF 9 FEBRUARY 1987 on the co-ordinated introduction of public pan-European digital mobile communications in the European Community and PROPOSAL FOR A COUNCIL DIRECTIVE on the frequency bands to be made available for the co-ordinated introduction of public pan-European digital mobile communications in the European Community (*).

(*) approved by Council on 11th June 1987

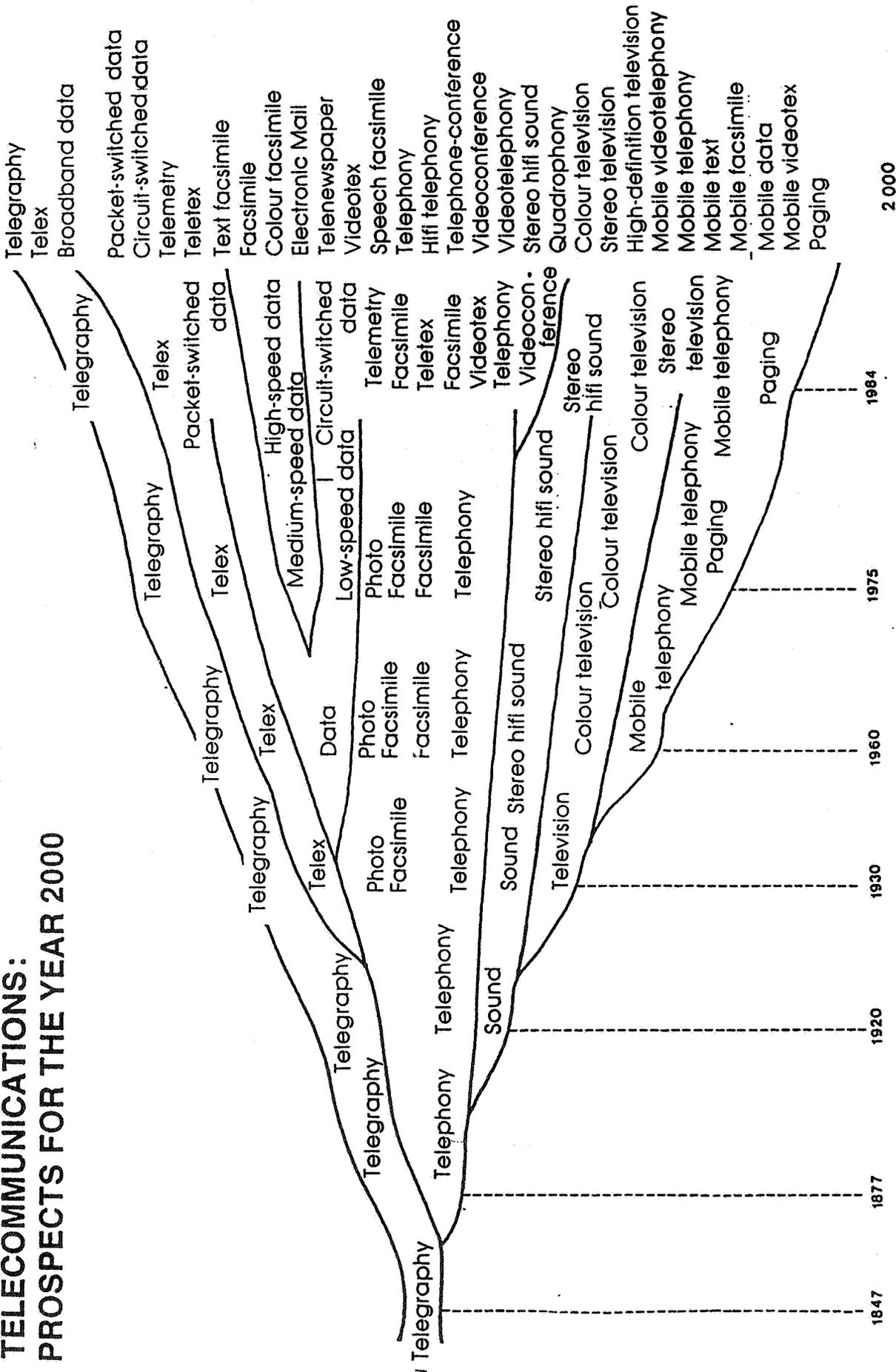# TELECOMMUNICATIONS:
PROSPECTS FOR THE YEAR 2000

Fig. 2   Source: Consortium British Telconsult/Consultel/Detecon/Nepostel/Sofrecom et al.

- existing barriers are removed in the course of this adjustment.

The search for common positions in the complex field of future regulation of the telecommunications sector must take into account a number of major requirements, if it is to contribute to strengthening the European economy :

- firstly, differing regulatory traditions in the sector. Careful analysis of current reviews and debates in the Member States must identify those areas on which common positions can be reached. It is on those areas that efforts towards developing consensus should be concentrated, in order to increase convergence over time in the Community ;

- secondly, opportunities and obligations deriving from the Treaty, in particular regarding : the free movement of goods ; the freedom to provide services ; competition rules ; the common commercial policy ;

- thirdly, the external relations of the Community, in particular regarding its major trading partners - the EFTA countries, the United States and Japan, the Third World. The opportunities and obligations deriving for the Community from the GATT agreement and the new GATT round must be taken into account. The impact on the Community's industrial and trading position must be kept clearly in mind ;

- fourthly, the evolution of social perceptions in the Member States regarding the new technologies. This concerns the social consequences of the new technologies and associated regulatory policies, the conditions for the integration of these technologies into both private and work life, and measures to facilitate the transition by generating new employment opportunities and protecting legitimate interests.

The convergence of telecommunications, data processing and audio-visual technologies is outdating traditional boundary lines between the telecommunications network and the terminals sector, and between services traditionally provided under monopoly and those provided in a competitive environment. Satellites are now able to provide services within and between countries, at a world level.

There are now many service functions and features that can be performed either by the public network or by a private network or the terminal equipment attached to the network. All countries are confronted by two options :

- either to try to maintain the current regulatory framework, which would imply imposing additional and permanent restrictions and regulations on the use of data processing equipment connected to the network ;

- or to define the telecommunications regulatory framework more narrowly and to give more room for competition.

The worldwide trend points towards the latter.