COMMISSION OF THE EUROPEAN COMMUNITIES

Com(89) 643 final

Brussels, 18 December 1989

Draft

COUNCIL RESOLUTION

on the Trans-European Networks

(presented by the Commission)

Towards Europe-wide Networks
Objectives and possible applications
Commission Communication

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Introduction

The Commission initiated an appraisal of the theme of Europe-wide networks on the basis of a working document (1). The present Communication has the purpose of extending this appraisal by specifying the suggested objectives and illustrating them in a way which offers the basis of a work programme.

The present document is divided into three parts. The first lists the points made in the original document. The second part illustrates, with examples, the approach adopted in this document with the aim of providing the Community with a system of infrastructures adapted in size, technology and coherence to the new dimension of the Community economy in the perspective of 1993. Finally, the third part raises the problems inherent in the financing of such projects.

1. Infrastructures adapted to the Internal Market

The realisation of the Internal Market, set out in the 1985 White Paper, involves :

- on the one hand, the complete elimination of obstacles to the free circulation of goods, capital, services and people;
- and the implementation of a series of accompanying measures geared to the foundation of this market on technological research and development capacities, to the strengthening of economic cohesion and to giving the single market a social dimension.

But the benefits of the elimination of these obstacles to trade will not be optimised if the operation of the internal market cannot rely on compatible physical and intangible infrastructures conceived in the light of a large market of continental proportions.

As things stand at the moment, European infrastructures, even though amongst the highest performing in the world, suffer from two handicaps :

- they only inter-communicate with difficulty ; and
- they have been conceived almost exclusively in the light of national needs.

Responsibility, in relation to the conception and financing of infrastructures, rests primarly with the Member States. In the case of financial planning, private sector participation is of increasing importance. The Community role is essentially one of the co-financing of certain of these infrastructures; this co-financing taking various forms (structural funds, R&D framework programme (2), loan instruments). In addition, it is relevant to recall that, within the framework of Article 10 of Regulation 4254/88 concerning ERDF (3), the Commission is to undertake studies on the evolution of the European area and the elements to establish a prospective outline of the utilization of Community territory. The Commission will be presenting a strategy document in 1990.

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(1) SEC (89) 1670 of 4 October 1989.

(2) The current proposal for the period 90-94 contains work on telematic systems of general interest.

(3) OJ L 374/88

1.1. The missing links in existing infrastructures

Benefitting clearly from the positive effects resulting from the completion of the internal market implies ensuring the inter-connection and inter-operability of existing infrastructure networks. In the particular case of telecommunications, the inter-connection of infrastructures must extend to the essential services permitting the carrying out of their various applications.

The existing networks and services have been developed on the basis of national needs and conceptions. The integration of each national area into the Community area without frontiers reveals de facto the missing links. In parallel, the new needs of economic operators who are seeking to exploit the opportunities offered by the completion of the internal market highlight these lacunae.

Any action seeking to remedy the consequences of the missing links must take account of the fact that these are not only physical but also relate to the inadequate compatibility of systems. In other words, the standards and regulations which determine the conception and the conditions of operation of, and the means of access to, the infrastructure systems in place are directly at the source of the missing links.

Moreover, the Commission will continue its efforts with a view either to the harmonisation of standards or to the elimination of the most excessive anti-competitive practices which contribute to the persistence of these missing links.

Some action must therefore be undertaken in relation to the conception, but also the conditions of use, of infrastructures in order to make the most of existing networks in relation to the common needs of all administrations and other operators.

1.2. An optimal conception of the development of new infrastructures

Creating the conditions in which, from its conception, any new infrastructure incorporates the European dimension must enable the avoidance of the creation of new missing links and respond to the wishes of businesses to minimise their costs. It is, in fact, more costly to inter-connect after the event than to ensure an integrated connection from the start. This also requires a re-orientation function to ensure that researchers think European as a natural reflex. This responsibility falls directly on national adminstrations.

The projects presented in the second part of this Communication illustrate this approach which would offer a more efficient environment to business.

1.3. Responding to a complex economy

The operation of all our economies necessitates at the same time higher and higher performing technologies, but also human resources which must, thanks to their training, be able to stand the test of world economic competition. Europe, through its traditions for the passing-on of knowledge, possesses a competitive advantage in this area.

The opportunity to develop training networks will clearly permit us to profit from playing the main trump-card for business represented in well-qualified staff.

1.4. A factor in reducing regional disparities

The establishment of networks will bring a positive contribution to the whole fabric of the economy if their positioning in the regions is taken into account in a positive way to avoid the risks of creating new divergences :

- excesses of density (large neighbouring urban areas);
- inadequate servicing of regions continued by gaps in the most modern infrastructures (high-speed networks, hi-tech telecommunications);
- inadequate co-ordination between modes of transport.

Particular attention given to routes, notably when they are transnational, and to the technicalities of inter-connections, will permit the economic exploitation and use of the networks to the benefit of the regions crossed.

2. **The requirements of the new rules of operation of the European economy**

The new rules of operation of the European economy necessitate the putting into place of infrastructures permitting business to benefit fully from the completion of the White Paper programme. This process depends on the establishment of trans-European systems of data exchange.

2.1. Relying on a system of inter-connected telecommunications

The operation of the European economy will be particularly affected by a circulation of information freed from the barriers which still exist at the present time.

It is essential, for this to be achieved, to reconcile the incompatibilities between systems of information processing. But beyond the inter-connection and inter-operability of existing systems, it is necessary that the Community is able to provide itself with high-performance infrastructures responding to a common conception.

i. **The establishment of an integrated services digital network (ISDN)**

This would particularly facilitate the realisation of a system of information exchange services between central administrations.

For the moment, the lack of inter-connections between national ISDN networks constitutes a missing link and risks delaying the completion of a trans-European ISDN, bringing with it prejudicial economic consequences for the completion of the large market. The inter-connection of a range of important centres will serve as the catalyst in this area, creating significant traffic as a result of demands which are already apparent today.

The action to be taken must first give priority to the establishment of a clear common specification for the required information exchanges. This can be achieved through the study, with the principal departments concerned, of needs in relation to the exchange of information and the drawing up of agreements concerning the acquisition, storage and transfer of data.

To have maximum effect, the project will mobilise network operators, equipment manufacturers and the other persons concerned who, on the basis of the extension to Europe of their national operational systems, or systems in the course of development, will quickly establish a planned inter-connection which will also respond to requirements already expressed by users.

In parallel, the progressive development of trans-frontier broad-band telecommunications networks and the creation of "electronic motorways", such as the Commission advocated in June 1988 (4), will, before 1993, increase the performance and efficacy of trans-European projects, while relying on the lessons drawn from the RACE programme.

ii. **The establishment of a trans-European telematic videotex network**

This responds to the growing need of economic operators to be able to use on-line systems for the telematic exchanging of information and questioning of data bases. For the moment, each national videotex network has been developed in a partitioned fashion involving a total incompatibility between systems.

The Commission has taken up with the main persons concerned the study of solutions which would enable these incompatibilities to be overcome and allow the offering of a European videotex network capable of responding to the demands of the large market. The flexibility of the uses of videotex renders it particularly adapted to the realisation of trans-European applications which must be accessible to non-specialist users. On the other hand, the improved performance brought about by ESPRIT in terminals and by RACE in networks will also permit a considerable improvement in information exchanges.

iii. **The creation of a trans-European electronic data service (EDI)**

Such a system allows, for example, the exchange of contracts and bills through a standardised electronic format. This system is already well-established in the USA where it counts more than 10,000 users. It is beginning to become available in Europe, but the pressure of demand has led the user sectors at the national level, and sometimes even at the international level, to establish incompatible systems.

The backwardness of Europe compared with the USA in the development of applications gives rise to the likelihood of an absence of European competitors, as harmful for suppliers as users. The extended TEDIS Community programme could serve to support the launching of this project.

Even so, the complexity of the operation will not permit progress beyond pilot or demonstration projects before the 1992 deadline. The above-mentioned project for customs management constitutes a pilot area which could be perfect for the trans-European EDI service.

These applications constitute the basis of a communications infrastructure on which it will be difficult to build specific trans-European projects. It is therefore essential that they receive a degree of political support commensurate with the urgency of the situation.

(4) COM (88) 341 of 21 June 1988.

2.2. Contributing to the elimination of physical barriers

The completion of the single market requires an accompanying policy in relation particularly to increased co-operation between national administrations in a large number of areas. The completion of the INSIS programme could offer a specially useful instrument for such co-operation. Three priority projects, concerning police co-operation, customs management and the compatibility of systems of emergency health-care, can be examined in this context. The transmission of data which these projects call for must be based on a secure system for the protection of private information.

i. Police co-operation

The abolition of police controls at the internal frontiers of the Community calls for an increased effort in police co-operation, in particular to maintain a comparable level of public security in all the Member States and to ensure a reinforced fight against traffic in drugs and criminal activity. This co-operation presupposes the rapid diffusion of information respecting differing legislative rules in relation to the confidentiality of information on data-bases. This objective requires the establishment of a complex, inter-operable system which is sufficiently rapid to be adapted to the new methods used by criminals and traffi cers. Such a system is already envisaged in the draft complementary convention drawn-up within the framework of the "Schengen" group and should be discussed within the "Co-ordinators" group; the "Schengen" information system (SIS) is already of great significance as it could serve as the basis for a common system among the twelve Member States.

ii. Customs management

The operation of the single market depends on the common application of customs rules in a manner which avoids all risks of distortion resulting from divergent practices. The Commission is currently in the course of proposing a true European customs code. Such common management also presupposes the rapid diffusion of information in matters of transit and the fight against fraud. In these areas the establishment of a network for the transmission of data must reinforce the efficiency of national administrations.

On the other hand, the objective of a network linking the different customs posts - which has been the aim of the CD project within the framework of the CADDIA programme - could be the subject of a first stage comprising the installation of a network linking the central customs administrations and the Commission. Such a network would have a dynamic impact on the realization of the particular project and the broader CADDIA programme itself.

iii. The compatibility of emergency health-care information systems

The increasing number of trips to and from foreign countries undertaken by Community residents has to be accompanied by a continuity of medical health cover. The Commission will therefore be working towards the establishment of a system which, while safe-guarding medical ethics and confidentiality, would permit the inter-

connecting of national administrations' treatment networks (access, cover, payment....) and the consultation of medical records, as conditions precedent to all medical treatment. The activities of pre-standards research will be undertaken thanks to the AIM programme, within the framework programme of technological research and development.

2.3. Contributing to the elimination of technical barriers

Most of the sectors of the European economy are affected by the elimination of technical barriers. That applies for transport, energy and financial services, which have to adjust to the Community dimension in order to offer a service and support adapted to the new needs of European business.

2.3.1. **In the area of transport**, it is a question of having high-performance infrastructures available throughout the whole of the territory of the Community, indeed of Europe, and of organising the rational use of transport capacities.

i. **A system of air traffic management**

The noticable decline of the punctuality of flights the cost of which has risen to several billion ECU and the risk of a reduction in safety margins can be attributed directly to the infrastructure of air traffic control in Europe, based on difficult co-ordination between the multiple centres of control (42 in Europe, compared to 20 in the USA, which manages 3 times the traffic). Within Europe, there are 22 different national systems and incompatible techniques.

The growth of traffic is no longer compatible with such a system made up of a juxtaposition of costly and inefficient national systems.

A solution can be found through :

- a European approach which rationalizes the system and allows advantage to be taken of the best of the emerging new technologies, notably in the area of telecommunications; and
- the definition of an integrated-systems architecture, in close liaison with the European organisations concerned, through a global concept erasing physical frontiers and ensuring adequate technical and administrative coherence.

The Commission regrets that to-date the Council has not reached any conclusions on the Commission's proposal to reinforce the role of EUROCONTROL.

The Commission contributes to this work by means of a study of an integrated concept of communications, navigation and control, the conclusions of which should be available towards the end of 1990.

ii. **A European network of high speed trains**, on which the Commission has recently tabled some proposals, will encourage the joining-up of the different networks established by the Member States. Priority will have to be given to two links :

-one link between Paris and London, on one side, and Frankfurt and Amsterdam, on the other, via Brussels; and
-a link between Lisbon, Madrid, Barcelona and Lyon, permitting an extension to Strasbourg, Hamburg and

Copenhagen, on the one side, and Turin and Milan on the other.

With the realization of these two axes, 9 of the 12 countries of the Community will be linked-up and a large number of extensions or connections in national networks will easily be possible. The completion of these two axes goes hand-in-hand with the modernisation of the networks which will also contribute to their inter-connection.

In parallel, the work of technical harmonization (standards, signalling, construction of equipment, reservation systems) between the networks will have to be undertaken 'up-stream' to avoid simple cohabitation and to favour a true inter-connection.

iii. **A European combined transport network**

This involves an ideal technique to respond to diverse demands because it relies on the complementarity of different terrestrial means : road, rail and maritime. It combines the specific advantages of these different modes of transport : flexibility, reliability, speed and protection of the environment. Two main principles are already to be found co-existing in Europe :

- "roll-on/roll-off", adapted to the crossing of natural obstacles; and
- unaccompanied combined transport.

A study being carried out between the partners concerned (transport operators, the railway companies and the Commission) shows the competitivity of such methods of transport compared with a single road link.

vi. **A system of road safety, information and traffic management (IRIS)**

The implementation of this project would enable a response to be made to the worrying increase in road accidents and would permit the optimization of road traffic management. It would take place through harmonized systems of information and communication for road management applications which, moreover, would contribute to the protection of the environment.

This action will further the co-ordinated management of international planning for certain transnational road axes and the establishment of accessible information banks not only for fixed-position use, but also for use from vehicles themselves, leading on to systems of on-board navigation. These actions will be undertaken in connection with the pre-standards research begun in the DRIVE programme, within the framework programme.

2.3.2. **In the area of the production and distribution of energy**, a priority effort must be undertaken in favour of reinforcing the large networks for the transport of natural gas and electricity in the Community interest. The needs in infrastructure remain considerable and certain priority developments for the proper functioning of the internal market, as for the economic cohesion of the Community, are necessary. This will involve :

- the introduction of a transport network for natural gas in Greece and Portugal in order to allow these Member States to participate fully in the energy balance-sheet of the Community;

- the inter-connection of sea gas supply systems between the Republic of Ireland, the United Kingdom and France, as well as between the Italian peninsula, Corsica and Sardinia.

- the inter-connection of land gas pipeline systems between Spain and Portugal, on the one hand, and between Spain and France, on the other (gas from Lacq and Catalonia/Midi-Pyrennees);

- the reinforcement of the inter-connections between electricity networks between France, Spain and Portugal; and

- electricity inter-connection between the Republic of Ireland and the United Kingdom as well as between Italy and Greece.

On the other hand, an integrated approach to projects for the inter-connection of certain networks of the Community with third country suppliers or consumers around the Mediterranean and North and East Europe, will ensure a rationalization of energy choices, profitability of investments in reception and transit infrastructures and a reinforcement of the security of supplies.

2.3.3. **The completion of the internal market will also be achieved through a better mobilization of the financial resources of the Community, by the liberalization of capital movements and an improvement of banking services to business.**

The evolution currently under way must as a matter of urgence be accompanied by an ambitious policy for the development of techniques of management and user-protection. Priority must be given to the establishment of permanent network inter-connections between stock exchanges and the development of money markets as well as prudential controls in the context of the free provision of services.

These processes are, of course, linked to progress in the realisation of data tranfers.

In addition, the catalytic effect of networks will favour the emergence of a real European financial integration by allowing new synergies in business affairs and the implementation of strategies to conquer the market.

2.3.4. **Infrastructures for the access and diffusion of data can reinforce the efficiency of environmental protection;** an objective to which a growing priority is being accorded.

In this respect, the Commission suggests the setting-up of a European agency for the environment, for which the means of action will have to be defined as soon as possible. From this point of view, the inter-connection of national networks for the collection of data and systems of alert concerning the environment should constitute an essential working instrument.

3.3.5. **Training networks**

The strategic importance for the Community as a whole of the development of human resources has underlined its priority character and the need for a re-evaluation of the subject of training as a crucial factor of economic success. Improvement of the quality of training is essential to provide a substantial guarantee of the future quality of human resources. Unless Europe invests in having well-

qualified individuals now and in the future, it will find its capacity for innovation, its competitiveness and its ability to create wealth and prosperity weakened.

In the area of training, the notion of a network applies above all to the establishment of networks of human resources, the importance of which lies in exchanges of views and the bonds of common experience. A whole series of networks have already been set up under different action programmes (COMETT, EUROTECNET, PETRA, LINGUA, ERASMUS....). In order to take advantage of the completion of the internal market, these networks need to be consolidated and reinforced with a view to the development of Community action in the area of training and notably continuing professional training and distance training.

3. Financing corresponding to the characteristics of the projects

The imperative of operability and the requirement of coherence mean that it is presently necessary to work with existing technologies. Nevertheless, most of the projects cannot be implemented except through an additional research effort.

As a consequence, the structure of the cost of these projects will systematically reveal parts comprising feasibility studies, applied research and a larger part of infrastructure expenditure.

These projects are directed to satisfying the needs of everyone. From that, it often becomes incumbent on public authorities to take the initiative and identify the relevant needs in a way which permits industry to work towards satisfying these needs through appropriate technologies.

These projects need to respond to needs which have been clearly identified, to the requirements of potential consumers or users who are prepared to participate in the costs to obtain the service, whether it facilitates established functions or enables the growth of new activities. There must be some economic profitability such as can be guaranteed for the operators, public or private. This profitability will allow adequate recourse to financial markets.

The development of infrastructures must be capable of being assured at the regional, national and Community level, or even more widely internationally, according to the proper features of the project. In this respect, the intervention of the Community is only justified if it can be shown that the same efficacity cannot be attained at other levels, in the application of the principle of subsidiarity. But the Community does not dispose of financial resources capable of catering for all needs. Financing will therefore have to take place either through the intervention of public authorities, in accordance with the Treaty, or through private means, or a combination of the two.

In the light of these criteria, the interventions will largely depend on the feasibility and profitability of projects. It will therefore be advisable, in all cases, to ensure that they relate to a Community need. To this end, a declaration of European interest would prove useful to facilitate access to capital markets and, on this basis, to limit public authority intervention.

CONCLUSION

4.1. The first document addressed to the Council and the present Communication directed to the Council and the Parliament allows the airing of two principal aspects of the problem of the adaptation of infrastructures to the emergence of new data on the European economy :

- the very real connection between the demands of economic operators and the priorities established by public authorities to make the most of the gains flowing from the process of the completion of the internal market; and

- the interconnection, in the different areas invoked, of the existing infrastructures before the extension of the current initiative to the next generation of infrastructures.

4.2. This process will be fed by the contributions from the first rank of industrial circles amongst which figure the proposals of the Round Table of Industrialists on Information Technology.

4.3. At this stage, the Commission considers that a particular priority should be accorded to the development of trans-European networks in the areas of transport, energy, telecommunications and training, with a view to inter-operability and inter-connection.

4.4. A debate associating the Council and the Parliament in the whole issue and the accepted priorities should permit the quickest evolution of a mode of operation, itself enabling the establishment of a programme of work.

To this end, the Member States should designate, within their administrations, an official responsible for the co-ordination of the work for the completion of the trans-European networks. These officials will constitute a working group which the Commission will convene with a view to establishing a programme of work which will permit :

- the verification whether Community intervention is justified or if the projects should rather be conducted by other public or private bodies;
- the establishment of a timetable for completion;
- the identification of possible regulatory obstacles;
- the evaluation of financing problems; and
- the provision, if needed, of a consultation procedure to precede the establishment of projects.

The projects will be presented in a way which reflects, in particular, the following aspects :

- definition of users' demands;
- identification of the specific actions to be taken;
- evaluation of the expected economic gains;
- identification of the specific technology to be respected; and
- the sketching of a feasibility study oriented to the establishment of a clear picture and decisions on financing.

The programme shall be presented before the end of 1990.

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TABLE OF ABBREVIATIONS

AIM	-	Advanced Informatics in Medicine in Europe
CADDIA	-	Co-operation in Automation of Data and Documentation for Imports/Exports and Agriculture.
CD	-	Coordinated Development of Computerized Administrative Procedures
COMETT	-	Community Action Programme for Training in New Technologies
DRIVE	-	Dedicated Road Infrastructure for Vehicle Safety in Europe.
ESPRIT	-	European Strategic Programme for Research and Development in Information Technologies
ERASMUS	-	Community Action Programme for Student Mobility
EUROTECNET	-	Action Programme in the Area of New Technology and Vocational Training
INSIS	-	Community inter-institutional Integrated Services Information System
IRIS	-	Integrated Road Safety Information and Navigation System
ISDN	-	Integrated Services Digital Network
LINGUA	-	Action Programme for Training in Foreign Languages
PETRA	-	Action Programme for Vocational Training and the Preparation of Youth for Adult and Active Life
RACE	-	Research and Development in Advanced Communications Technologies in Europe
TEDIS	-	Trade Electronic Data Interchange Systems

DRAFT RESOLUTION ON THE TRANS-EUROPEAN NETWORKS

THE COUNCIL OF THE EUROPEAN COMMUNITIES

- Having regard to the Treaty establishing the European Economic Community,

- Having regard to the draft Resolution submitted by the Commission,

- Considering that the process of the completion of an area without frontiers provided for in Article a of the Treaty has reached a stage of irreversibility,

- Considering that administrations and business must be able to use communication infrastructures to enable them to make the most of the principle of free circulation within the Community,

- Considering that the development of trade and the movement of people and the requirements of economic and social cohesion necessitate new networks of communication,

- Considering that infrastructures are currently conceived and developed principally at national level and that, consequently, gives rise to problems of compatibility and inter-operability which effect their efficiency,

HEREBY ADOPTS THIS RESOLUTION:

1. The Council considers that a particular priority should be given to the development of trans-European networks notably in the areas of transport, energy, telecommunications and training, all with a view to their inter-operability and inter-connection;

2. The Council invites the Commission to submit to it, before the end of 1990, a programme of work structured on the following points :

   - verification whether Community intervention is justified or if projects should rather be conducted by other public or private bodies;
   - the establishment of a timetable for completion;
   - the identification of possible regulatory obstacles;
   - the evaluation of financing problems; and
   - the provision, if needed, of a consultation procedure to precede the establishment of projects.

3. The Member States are invited to designate a person responsible, within their administrations, for co-ordinating the work on the realisation of trans-European networks : these will constitute a working-group to be convened by the Commission whenever necessary in order to establish a continuous dialogue.

ISSN 0254-1475

COM(89) 643 final

DOCUMENTS

EN 07

Catalogue number : CB-CO-89-620-EN-C

ISBN 92-77-56358-3

Office for Official Publications of the European Communities
L-2985 Luxembourg