

COMMISSION OF THE EUROPEAN COMMUNITIES

COM(94) 107 final
Brussels, 15.04.1994

94/0112 (SYN)

Proposal for a
COUNCIL DIRECTIVE

on the interoperability of the European high speed train network

(presented by the Commission)

EXPLANATORY MEMORANDUM

JUSTIFICATION IN TERMS OF SUBSIDIARITY

- (a) What are the aims of the intended activities as compared with the Community's obligations?

The aims of the activities lie in the creation of a regulatory framework which contains mandatory technical specifications for interoperability (TSI) and harmonized standards for the purpose of ensuring interoperability on the European high speed train network while meeting the essential requirements by helping to open up transport-service and equipment contracts and to enhance the competitiveness of the railway sector overall.

- (b) Do the intended activities fall within the exclusive competence of the Community or within a competence that is shared with the Member States?

The activities in question are a matter of shared competence in accordance with Article 129d of the EC Treaty.

- (c) What is the Community dimension of the problem (for example how many Member States are involved and what solution has been applied so far)?

The Community dimension is the outcome of the master plan for the European high speed train network, which concerns all of the Member States. Hitherto interoperability has not been achieved by each Member State individually.

- (d) Comparatively speaking is the Community or the Member-State approach more efficient?

Whether by intergovernmental agreement or standardization the Member States are not in a position to provide the operational and regulatory technical conditions needed for interoperability.

- (e) What practical added value do the intended Community activities provide and what would be the cost of inaction?

At the moment it is only possible for high speed trains to make cross-frontier journeys by juxtaposing national operating techniques and rules and by complying with all of the national regulations. This generates an excessive need for investment in those links. While initially requiring a great deal of investment Community action will, in the medium to long term, enable a considerable reduction to be made in the cost of those links since it simplifies and eases access to the network and enables both operators and the industry to achieve economies of scale.

(f) What forms of action is the Community able to take?

The Community is able to prompt standardization, harmonization of essential requirements and the adoption of measures to implement the technical parameters.

The Member States have national laws based on differing philosophies as regards safety, health, consumer or environmental protection, reliability/availability, and technical and operational compatibility. Operators must work to differing mandatory technical parameters. An adequate level of interoperability requires harmonization of the basic technical parameters.

(g) Is a uniform body of regulations needed or would a directive laying down general aims and transferring implementation to the Member States be sufficient?

The measure adopted in the case of the European high speed train network is that of a Directive based on Articles 129d - third indent - of the EC Treaty. It is total as regards the aspects relating to sensitive constituents and to subsystems, where any authorization for the incorporation into the network can only be ensured via a less restrictive measure (standards, mutual recognition). As regards sensitive constituents the Directive provides for a Community procedure based on the principles arising from Decision 90/683/EEC of 13 December 1990 on the use of modules.

In order to meet interoperability needs the Directive provides for a Community procedure for the placing in service of subsystems. In both contexts harmonization covers both the essential requirements and the technical specifications for interoperability and leaves the implementation to the Member States and to European standardization.

INTRODUCTION

1. The gradual building-up of the European high speed train network starting from existing or planned national networks, requires interlinking and interoperability from infrastructures, static equipment, logistical systems and stock.
2. Before the development of high speed trains the cross-frontier rail traffic between the national networks was restricted to passenger coaches and goods wagons, while the general rule is still that locomotives and foot plate staff are still changed at frontiers. That situation is incompatible with the concept of a high speed train running on an integrated, coherent European network.

Hitherto each network had been operated and trains had been moved within the national frontiers on the basis of and in compliance with regulations and technical and operational requirements that differed and were very broadly incompatible from one Member State to another. This is particularly the case as regards safety, the environment, the physical characteristics of infrastructures and in particular loading gauge, electricity supply systems, signalling and the control/command of traffic movements, together with the operating rules.

3. The outcome is that the Member States have not been in a position individually to take the steps that would permit interworking on the European high speed train network. The necessary interoperability is essentially Community-wide in scale and this is intensified by the provisions concerning the opening up of procurement procedures in the transport sector (Directive 90/531/EEC) and the development of the Community's railways (Directive 91/440/EEC).

This body of reasons has caused the Commission to undertake Community action, which it put into practical form by drawing up a proposal for a directive, the provisions of which are intended to provide and ensure interoperability within the European high speed train network.

This proposal is covered by the provisions of Articles 129b, 129c and 129d of Title XII (Trans-European networks) of the EC Treaty.

EARLIER ACTIVITIES

4. The Commission's activities concerning the European high speed train network formally began in early 1990 in response to a request from the Council of Ministers.

In its Resolution of 4-5 December 1989 the Council had invited the Commission to set up a high-level working party consisting of representatives of the Member-State governments and of the European railway operators, who were subsequently joined by the European railway industry. This working party was to be consulted in order that, before 31 December 1990, a master plan could be drawn up for submission to the Council for its approval.

The working party had also been consulted on the common technical standards and characteristics enabling modern trains to move about that network and ensuring technical and infrastructure compatibility between the various parts of that network.

5. The high-level working party delivered its report by the deadline set, namely during November 1990. This is a document concerning a representative master plan for the European high speed train network which opted for the year 2010 as the reference date for its implementation. This plan is not intangible in nature but must, on the contrary, evolve and be constantly adaptable to the Community's political, economic and social development of the Community.

Examination of the national plans provided the starting point for mapping out the plan, which only includes the lines needed to build up the European network and which should enable both the cohesion of the European network and the integration of the essential parts of Community territory to be ensured.

6. The report by the group of senior officials devotes a great deal of attention to determining the level of technical compatibility needed in order that high speed trains may travel on lines having different characteristics. For historical reasons the current situation displays a great deal of infrastructure and equipment diversity.

In the chapter devoted to technical compatibility, the overall system has been broken down into subsystems which were analysed in great detail and the basic components of each of them classified as a function of their origin and of the importance and urgency attached to their harmonization.

7. In its Resolution of 17 December 1990 the Council gave a favourable reception to the work carried out with a view to drawing up a master plan setting out in detail the activities to receive priority in setting up the European network. It also noted the progress made in laying down the conditions needed in order to ensure the compatibility of infrastructures, equipment and rolling stock and to permit the international movement of trains, or in other words, to ensure that the network displays interoperability. More particularly the Council has noted the Commission's intention to prepare a draft directive on the approximation of the laws, regulations and administrative provisions concerning the movement of trains and to stress the need, as soon as possible, for common action on the harmonization of control-command systems.

THE MASTER PLAN

8. The distinguishing feature of the European high speed train network is an improvement in operating speeds and thus shorter journey times. The maximum speed at which "high-speed" trains may travel varies depending upon the geographical, demographic and economic characteristics of the regions to be served. It is generally in excess of 160 km/h and may exceed 300 km/h.
9. According to the Group of Senior Officials' definition the European high speed train network is made up of links which can be traversed by railway rolling stock that is suitable for high-speed running.

A distinction is made, on this network, between three types of line:

- lines laid out for speeds of generally not less than 250 km/h;
- lines designed for speeds of about 200 km/h;
- the other lines making up the European network.

The urban sections of line, whatever their characteristics, are treated on the same basis as the lines of which they are extensions.

10. The master plan extending up to the year 2010 covers the lines that are essential components of the European network. In the December 1990 report the master plan covered:

- 9000 km of lines;
- 15000 km of upgraded lines;
- 1200 km of links.

Since it performs a coordinating and guidance function the master plan must periodically be amended to take account of political, economic and social changes within the Community. The master plan is currently being updated.

WHAT MARKET FOR A RAILWAY INDUSTRY

11. The cost of the infrastructures for the network has been estimated at ECU 150 000 million, and that of the rolling stock at ECU 50 000 million.

These overall amounts do not include existing achievements and in particular the ICE in Germany, the AVE in Spain, the SAV in Italy, or the activities in progress: EUROSTAR Transmanche and PBKA. The two latter projects are the first true constituents of the trans-European network.

12. If one restricts oneself to high speed trains which have, in principle, been designed to achieve or even exceed 300 km/h, three different systems have been developed - mainly in order to meet the conditions of the national networks operating them.

These are:

- the French TGV for the SNCF;
- the German ICE for the DB;
- the Italian ETR 500 for the FS

The three other types in operation, in build or on order are TGV derivatives.

These are:

- the AVE being operated in Spain by the RENFE;
- the Transmanche EUROSTAR being built for the SNCF, BR and the SNCB;
- the PBKA on order by the SNCF, SNCB, the NS and the DB.

Table 1 below described the state of the existing or planned stock and the main characteristics of each system.

Table I - HIGH SPEED TRAINS IN THE CE

Country/System	In operation (Op)	Train sets				Overall value
		Type	Composition P: power car T: trailer	Power supply	Number	million ecus
FR/TGV (ES'81)	TGV - South East (Op)	Articulated	2P + 8T	Dual-voltage	108	930
	(ES'89)	TGV - Atlantic (Op)	Articulated	2P + 10T	Dual-voltage	105
(ES'93)	TGV - Network (Bt)	Articulated	2P + 8T	Dual & Triple voltage	90	1060
(ES'95)	TGV - 2 Levels (Bt)	Articulated	2P + 8T	Dual-voltage	100	1450
E/TGV (ES'92)	AVE (Op)	Articulated	2P + 8T	Dual-voltage	16	310
F,GB,B/TGV Trans- manche (ES'94)	EUROSTAR (Bt)	Articulated	2P + 18T	Triple voltage	38	1160
F,B,NL,DE (ES'96)	P.B.K.A. (Or)	Articulated	2P + 8T	Quadruple voltage	37	690
D/ICE (ES'91)	(Op)	Non-articulated	2P + 14T	Single-voltage	60	1460
I/ETR 500	(Bt)	Non-articulated	2P + 12T	Dual-voltage	30	720

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13. Each of the three base systems: TGV, ICE, ETR 500, is built by the national industry in the country of the operating network.

During the last five years those national industries have concentrated heavily, mainly around large companies in the heavy electrical-engineering sector:

- GEC-ALSTHOM (F, GB, B, E) for the TGV, the AVE, EUROSTAR and the PBKA;
- SIEMENS, ABB, AEG Westinghouse for the ICE;
- ANSALDO, BREDA, ABB and FIAT for the ETR 500.

The major assemblers draw upon a wide range of equipment manufacturers comprising basically small and medium-sized companies.

Except in the case of GEC-ALSTHOM, where the figure is 19%, the proportion of the main European groups' turnover in 1991 was only a few per cent, as shown in Table II below.

Table II

Group	Total turnover		Portion accounted * for by * rail transport *	
	ECU '000 million	Year	ECU '000 million	%
GEC-ALSTHOM	7	1991	1.3	19
ABB	21	1990	1	4
SIEMENS	37	1990	0.6	2
FIAT	32	1990	0.2	< 1

14. Outside the European Community high speed rail travel had been vigorously developed in Japan since 1964 via the Shinkansen which, following a rapid slowdown before the privatization of the Japanese railways in 1988 and their division into several regional companies, has now regained more than its former vigour.

Having gained strength from that experience the Japanese railway industry is in competition with the European manufacturers. That has been the case in Spain, is currently so in South Korea and Taiwan, and in the future will doubtless be so in North America, Central and Eastern Europe and the CIS.

Table III gives the main characteristics of the most advanced projects. On those markets the promoters of the European TGV and ICE systems are fiercely competing with each other.

Table III - MAJOR PROJECTS OUTSIDE EUROPE AND JAPAN

Country	Project	Entry into service	Distance km	Max speed km/h	Total cost x '000 million	Number of sets	No of seats per set	Cost of rolling stock x 1 million
Australia	Sydney - Melbourne	Postponed	850	350	Aus \$ 7 ECU 4.5			
Canada	Quebec Montreal Ottawa Toronto Windsor	2000	1215	300	CAN \$ 7.1 ECU 5.1			
South Korea	Seoul - Pusan	1998/2000	445	300	US\$ 8.3 ECU 6.9	48	1000 - 1300	US\$ 1300 ECU 1080
Taiwan	Taipei - Kaoshiung	1997/1999	400	280/300	US\$ 17.5 ECU 14.6	50	800	US\$ 2100-2600 ECU 1750-2170
Texas (US)	Dallas - Houston San Antonio	1998	980	320	US\$ 5.7\$ ECU 4.75U	34		US\$ 900 ECU 790

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INTEROPERABILITY AND SUBSIDIARITY

15. As already stressed above the railway network in each country has over the last 150 years been set up as a totally integrated system on the responsibility of a national company to which, against a general legal background, the overseeing authority has delegated very broad authority as regards management, operation and development. The resultant compartmentalization does not enable high speed trains to run continuously on the various parts of the network infrastructure that are due to the juxtaposition of the national networks.
16. The cohesion of a network of this type presupposes a sufficient level of harmonization of:
 - in the national regulations, the differences contained in the relevant provisions on, in particular, safety, health, the environment and consumer protection;
 - the technical characteristics, relevant to the interfaces of:
 - . infrastructures
 - . power supply and collection systems
 - . maintenance facilities
 - . control-command systems
 - . rolling stock
 - operating conditions and the provisions concerning users' essential needs.
17. This does not mean that it is necessary to aim at the production of a universal system. However, in the absence of a certain level of harmonization, the establishment of the European network as envisaged in the master plan will encounter very great technical, operational and economic difficulties. The work in progress or on order bears witness to this.

This applies to the Cross-Channel TGV, known as the "TMST" (Trans Manche Super Train) also dubbed "EUROSTAR" or the PBKA (Paris-Brussels-Cologne-Amsterdam).

18. It is almost always possible to build a system which is able to meet differing requirements and specifications. For this it is necessary to bring together the components needed to cater for several types of power supply, collection and control-command systems, and also for several regulations governing, for example, fire proofing, noise, electromagnetic compatibility, etc. ...

However, this not only leads to high extra development and building costs, but also longer deadlines and often delays and thus higher capital investment, and also to higher operating, maintenance and servicing costs. This makes the reliability and availability of the system, and thus the quality of the service provided to the customer, less dependable.

All of this impairs the economic viability and thus the competitiveness of the system - especially since, for each new link, it could be necessary to launch new developments.

19. The provision of an adequate level of interworking, i.e. at a level providing an optimum balance between cost and benefits for all operators involved, including users, must thus be sought. Table IV illustrates the effects of an inability to interwork on the cost, per seat, of the rolling stock.

As such the ability to interwork does not mean that each train must be able to follow any route on the European high speed train network but must enable any transport operator so wishing, under Title XII of the EC Treaty and Directive 91/440/EEC, to run a commercial service on any route of his choice at the best economic cost.

20. Moreover, from the point of view of the stock and equipment of all types making a system, it is necessary that the conditions governing the setting-up of an open, competitive market be met, more particularly on the basis of Directive 90/531/EEC on the opening up of contracts in previously excluded sectors.
21. All of the above shows that achieving the intended capacity for interworking on the high speed train network requires harmonization at Community level.

These activities concern the basic technical parameters, the interfaces between the various parts of the system, the provisions linked with operation and those contained in the national regulations on safety, health, the environment and consumer protection.

22. These activities are intended to guarantee the existence of mutual operational relationships between the various constituent parts of the European high speed train network. It is all of these mutual relationships together which give practical shape to the concept of interoperability, the achievement of which requires the provision of a Community framework.

That Community framework should enable a body of essential requirements, basic parameters, in particular at interface level, and procedures to be defined which are to link together all operators involved, i.e. in the first instance the Member States, but also economic operators and in particular the infrastructure operators, the railways and the industry which are to cooperate.

23. Such a vehicle requires the drawing-up, in line with the principle of subsidiarity, of a directive on the interoperability of the European high speed train network. Neither the deliberate preparation of technical standards by the economic operators themselves, nor the mutual recognition of existing national provisions are able to resolve the political and technical problems standing in the way of the integration, coherence and interoperability of a transEuropean network such as that envisaged.

TABLE IV: EFFECTS OF INABILITY TO INTERWORK ON THE COST OF ROLLING STOCK

TYPE	Composition of train sets P: power car T: trailer	Train sets: number of seats	Train sets: unit cost FF x 1 million	Unit seat cost	
				ECUS	Index
SOUTH-EASTERN TGV (SNCF)	2 P + 8 T	386	± 70	±27.000	84
ATLANTIC TGV (SNCF)	2 P + 10 T	480	± 80	±25.000	78
TGV NETWORK (SNCF)	2 P + 8 T	377	± 80	±32.000	100
TGV - 2 N (SNCF)	2 P + 8 T	545	±100	±27.500	86
TMST - EUROSTAR (SNCF, BR, SNCB)	2 P + 18 T	794	±210	±40.000	125
P.B.K.A. (SNCF, DB, SNCB, NS)	2 P + 8 T	377	±130	±52.000	162
Base 100: TGV - NETWORK (Dual and triple voltage)					

ARCHITECTURE AND CONTENT OF THE DIRECTIVE

24. The proposal for a directive on interoperability is the basic component of a three-level architecture:
- the proposal for a directive as such;
 - the technical specifications for interoperability (TSI);
 - all of the other European specifications and in particular the European standards drawn up by the European standardization bodies: CEN, CENELEC and ETSI.
25. The proposal for a directive considers the European network in its entirety and complexity and applies to the infrastructures, static equipment, logistical systems and rolling stock and their components which play a critical part in terms of interoperability.

For operational reasons, the overall system has been broken down into subsystems:

- infrastructure;
- energy;
- maintenance;
- signalling control-command;
- rolling stock;
- environment;
- operation;
- users.

The components, i.e. the constituents or interfaces playing a critical part from the point of view of interoperability within each subsystem, were listed, as they already had been in the report by the Group of Senior Officials in December 1990.

26. The proposal then defines in a general manner, in terms of a mandatory result, the essential safety, health, environmental protection, consumer protection, technical compatibility and operational requirements needed to ensure interoperability of the system.

Where necessary those essential requirements will be set out in detail for each subsystem in the "technical specifications for interoperability".

27. The specifications for interoperability (TSI) themselves will form the second level of the proposed architecture.

If necessary, the TSI thus set out in detail, the essential requirements, lay down the fundamental parameters (loading gaugers, voltage, etc...), for each subsystem and determine (a) the constituents and interfaces which play a critical part in relation to interoperability, and (b) the procedures governing the assessment of conformity or suitability for use.

The TSI are drawn up to the order of the Commission by the railway and industry experts and are adopted by means of the procedures laid down in the directive.

28. The technical specifications needed for the constituents and the conditions at the interfaces which are critical for interoperability will be drawn up by the specialist bodies, particularly as regards the European standards, by the CEN, CENELEC and ETSI.

In such instances conformity or suitability for use will be assessed, at the manufacturers' request, by the bodies that have been identified for that purpose by the Member States, and the manufacturer will draw up the EC declaration of conformity in accordance with the conditions laid down in the directive, and on the basis of the modules referred to in the corresponding TSI.

As required by Directive 90/531/EEC on the opening up of contracts in excluded sectors, where there is a European specification the assessment must without fail be based on this.

29. It must be noted here that, in the case of the railways, the assessment of the absolute conformity of the constituent, considered in isolation, to the relevant technical specifications is not the only aim in view.

Indeed, in several cases, it is the assessment of the suitability of use of a component, considered in its railway environment, and in particular together with its interfaces, which must be checked in relation to technical operational specifications. In terms of form, this latter instance does not differ from the previous one and the modules defined in Decision 90/683/EEC are to be used in implementing a procedure, provided that the necessary technical specifications are available.

30. Checking of the conformity of the subsections with the essential requirements is in line with the TSI report, the procedure defined to that end in the directive being followed.

That procedure is examined by a notified body at the request of an assessment body which draws up the EC inspection declaration. It is on the basis of that declaration that the Member State concerned authorizes the placing in service of the subsystem in question.

It must be stressed here that the suitability of a complex system for delivering a given level of performance is not equal to the sum, extended to all of the constituents, of the individual abilities to meet the performance requirements of each intended use within a subsystem.

It is for this reason that each subsystem must be considered as such, including its operation and a more specific instance where it is intended to perform the public service.

31. The notified bodies must meet the criteria set out in the directive. In the present case of the railways, the role of the approved bodies is assumed by the railways themselves which are therefore both judge and defendant. On entry into force of Directive 91/440/EEC on the development of the Community railways and the provisions of Title XII of the EC Treaty concerning the trans-European network this situation can no longer continue and the designation of notified bodies is required. However, in the majority of Member States, there are, outside the railways, few bodies having the material and human resources needed in order to accomplish this task. In order to deal with this situation while providing the required independence, the directive provides that the infrastructure operators could continue those activities provided that they specifically make arrangements to meet the criteria of the directive.

COOPERATION

32. Although cooperation between all those involved, i.e. Member States, railways and the industry is one of the aims of the directive and thus forms part of its content, its importance with regard to the setting up of the transEuropean networks requires that this should emerge in its own right.
33. Cooperation between Member States who are required to be regulators takes place, in particular, within the "Standing Committee" set up under the directive in order to discuss all matters deriving from the implementation of the directive. This is essential in ensuring an integrated, coherent expansion of the European high speed train network bearing in mind the possible increase in the number of railway companies which will result from the changes already being considered in several Member States.

That increase will also result from the foreseeable developments which will arise both from Directive 91/440/EEC on the development of the Community's railways and from the provisions of Title XII (Trans-European networks) of the EC Treaty. That type of problem is above all encountered in the United States where scores of railway companies - generally private - use existing infrastructures in common and where, in particular, matters of safety are the responsibility of the FRA (Federal Railroad Administration).

At European level there is also an intergovernmental agreement that was signed back in 1882. This is the Technical Unit, the most recent decisions concerning which were taken in 1938 and are currently out of date.

Furthermore, not all of the Member States are signatories to the agreement which, moreover, includes non-member states.

34. There is cooperation between the economic operators - in the main the railways and industry, within the common representative body in order to draw up the Technical Specifications for Interoperability (TSI).

Hitherto there had been no cooperation between railways and industry. Only the railways cooperated among themselves within the UIC (International Union of Railways) and via the CCFE (Community of European Railways) on matters linked with Community policy.

35. Thus technical matters and in particular those relating to international movements of passenger coaches and goods wagons are covered by the UIC notes. For the moment the existing UIC notes do not cover problems concerning high speed. Moreover, account being taken of the procedure followed in order to prepare and adopt them, they do not in principle seem able to be used as such under Directive 90/531/EEC. For that to be possible it would be necessary to convert them into European specifications and, in particular, European standards within the technical committees set up by the CEN, CENELEC and ETSI, which constitute another forum for cooperation between the railways and industry.

In order to be able to take part, as such, in all of the activities the European railway industry has reorganized its trade body - the European Railway Industries Union (UNIFE) - on an operational basis.

36. Finally, the proposal for a Directive introduces cooperation between the notified bodies on the assessment of conformity or suitability for use of components, and the EC checking of subsystems.

This cooperation is particularly important on the trans-European networks, in particular those carrying passengers, which are very much the responsibility of the states. Indeed, ensuring system interoperability, i.e. ensuring mutual operational links between its various parts or subsystems within a geographical area covering the Community in its entirety and, subsequently, all of Europe within an open competitive market, requires a guarantee of the greatest possible transparency as regards certification.

That transparency can only be effective if the notified bodies are cooperating as vigorously and as closely as possible.

IN CONCLUSION

37. It must be noted from all of the above that the proposal for a Directive on the interoperability of the European high speed train network constitutes the Community framework needed to allow the creation and operation of an integrated trans-European network that is integrated, coherent, and interoperable under optimum conditions of economic efficiency as far as the states, industry and the operators are concerned, without forgetting the essential factor: its users.

COMMENTS ON THE ARTICLES

38. In view of the above factors the enacting terms of the Directive have been divided up into six chapters.

39. CHAPTER I - GENERAL PROVISIONS

Article 1

This Article concerns the aim of the Directive which consists in achieving interoperability on the European high speed train network at the various stages of its design, construction, gradual placing in service and operation.

In geographical terms the Directive applies to those railway lines forming part of the master plan for the European high speed train network.

Article 2

This Article describes in detail the scope of the harmonizing provisions. Those provisions only concern the parameters, constituents, interfaces and procedures that are needed and adequate in order to ensure and guarantee interoperability on the European high speed train network.

Article 3

This Article defines the network as a system comprising a body of infrastructures, trackside installations, logistical equipment and rolling stock. This system itself is subdivided into subsystems which bring together the interoperability problems as established in the report by the committee of senior officials.

This Article defines the concept of a constituent as being typified by its suitability for incorporation into the network.

It also defines the concept of interoperability as being designed in such a way as to permit access to the network to all authorized operators. The overall cohesion of the network is indeed an essential condition for the creation of a competitive market.

Article 4

This requires compliance with the essential requirements referring to all of the conditions which must be met in order to ensure interoperability.

The essential requirements concerning safety, reliability, human health, environmental protection, consumer protection and technical compatibility and operation are defined in general terms in Annex III.

Article 5

This Article introduces the concept of "Technical Specifications for Interoperability" (TSI). These set out in detail the essential requirements, determine the basic components of each subsystem and identify, in particular, the constituents which play a critical part in terms of interoperability. This Article also lays down the procedure to be followed in drawing up and adopting TSIs.

40. CHAPTER II: SENSITIVE CONSTITUENTS

Articles 6 - 12

These Articles bring together the provisions which must be met if sensitive constituents are to be used and concern, in particular, compliance with the essential requirements, the European specifications and the resultant standards, assessment of conformity or suitability for use, the use of the EC checking declaration, the safeguard clause and also the notified bodies and the cooperation among these.

41. CHAPTER III: SUBSYSTEMS

Articles 13 - 19

This Chapter is one of the most specific of the Directive in connection with the interoperability problems facing the European high speed train network. The constituent articles deal with the assignment of the roles and prerogatives to the Member States, the assessment bodies, manufacturers and identified bodies. They contain provisions concerning authorizations to place in service, the EC checking procedure and the EC checking statement as compared with the essential requirements and the TSI, the role of the notified bodies and cooperation among these.

42. CHAPTER IV: NOTIFIED BODIES

Article 20

This article sets out, in detail, the provisions applying to the notified bodies and the corresponding obligations that are incumbent upon the Member States.

43. CHAPTER V: COMMITTEE

Article 21

This committee is advisory in nature: It will assist the Commission in any matter concerning the implementation of the Directive. It is consulted on the mandates concerning the TSI and the relevant safeguard clause.

44. CHAPTER VI: FINAL PROVISIONS

Articles 22 - 24

The articles of this final chapter, on the final provisions, do not raise any particular problems as compared with what was being encountered in other directives that are already in force.

45. Eight annexes dealing with the following specific areas are associated with the chapters of the enacting terms:

ANNEX I : "Geographical and physical data".

ANNEX II : "Subsystems".

ANNEX III : "Essential requirements".

ANNEX IV : "Basic parameters".

ANNEX V : Sensitive constituents
"CE" declaration
- of conformity
- of suitability for use.

ANNEX VI : Subsystems
"CE" checking declaration.

ANNEX VII : Subsystems
"CE" checking.

ANNEX VIII : Minimum criteria which must be taken into account by the Member States when notifying bodies.

PROPOSAL FOR A DIRECTIVE OF THE COUNCIL OF THE
EUROPEAN UNION ON THE INTEROPERABILITY OF THE
EUROPEAN HIGH SPEED TRAIN NETWORK

"THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 129d(3) thereof

- Having regard to the proposal from the Commission¹
- In cooperation with the European Parliament²
- Having regard to the opinion of the Economic and Social Committee³
- *- Having regard to the opinion of the Committee for the Regions⁴

Whereas in order to enable citizens of the Union, economic operators and regional and local authorities fully to benefit from the advantages deriving from the establishing of an area without internal frontiers, it is appropriate, in particular, to further the interlinking and interoperability of the national networks of high speed trains, together with access to those networks;

Whereas a Group of Senior Officials consisting of representatives of the governments of the Member States, of the European Railways and of the European Railway Industry convened by the Commission in order to meet the request expressed by the Council in its resolution of 4-5 December 1989 drew up the master plan for a European high speed train network;

Whereas in December 1990 the Commission sent to the Council a communication on this high speed train network, and whereas the Council gave a favourable reception to this communication in its Resolution of 17 December 1990;⁵

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5 OJ No L33, 8.2.1991, p. 1.

Whereas Article 129c of the Treaty provides that the Community shall embark upon any activity which may prove necessary in order to ensure network interoperability, particularly in respect of the harmonization of technical standards;

Whereas the operation in commercial service of high speed trains requires that there is excellent coherence between the characteristics of the infrastructure and that of the rolling stock; whereas performance levels, service quality and cost depend upon that coherence and that, in particular, the interoperability of the European high speed train network is founded upon that coherence;

Whereas Council Directive 91/440/EEC of 29 July 1991⁶ on the development of the Community's railways means that the railway companies must have increased access to the network, which in turn requires infrastructure, equipment and stock interoperability;

Whereas the Member States are responsible for ensuring compliance with the safety, health and consumer protection rules applying to the railway networks in general during the design, construction, placing in service and operation of those railways; whereas, together with the local authorities, they also have responsibilities in respect of rights in land, regional planning and the protection of the environment; whereas that is also especially pertinent with regard to high speed train networks;

Whereas Directive 85/337/EEC⁷ requires an assessment of the impact on the environment of the building of lines for long-distance rail traffic;

Whereas the national regulations and the railways' internal rules and the technical specifications that they apply contain major differences; whereas these national regulations and internal rules incorporate techniques that are specific to the national industry; whereas they require specific dimensions and devices and lay down special characteristics; whereas the situation runs counter to complete trains being able to run normally without changing locomotives at frontiers throughout the European network;

Whereas, over the years, this situation has forged very close links between the national railway industry and the national railways, to the detriment of the genuine opening up of contracts; whereas, in order to enhance its competitiveness at world level that industry must benefit from an open, competitive European market;

Whereas it is therefore appropriate to define basic safety, health, environmental and consumer protection, technical compatibility and operating requirements for all of the Community which will apply to the European high speed train network;

Whereas, in view of the extent and complexity of the system comprising the high speed train network; whereas for operating reasons it has proved necessary to break this down into sub-systems; whereas for each of these sub-systems it is

6 OJ No L 237, 24.8.1991.

7 OJ L 175, 5.7.1985.

necessary to describe in detail the essential requirements, lay down the basic parameters and determine the technical specifications needed for the whole of the Community, and in particular in respect of the constituents and interfaces, in order to meet the essential requirements;

Whereas the European high speed train network falls within the scope of Council Directive 90/531/EEC of 17 September 1990 on the procurement procedures of entities operating in the water, energy, transport and telecommunications sectors;⁸ whereas in order to comply with that directive the procurement bodies must include technical specifications in the general documents or in the specifications for each contract; whereas it is necessary to build up a body of European specifications in order to serve as references for those technical specifications;

Whereas, within the meaning of Directive 90/531/EEC, a European specification is a common technical specification, a European technical approval or a national standard transposing a European standard; whereas a harmonized European standard is to be drawn up by a European standardization body, such as the CEN, the CENELEC or the ETSI, to the order of the Commission and that its reference will be published in the Official Journal of the European Communities;

*Whereas an international system of standardization which is able to generate standards which are actually used by those involved in international trade and which meet the requirements of Community policy are attractive to the Community; whereas the European standardization bodies must therefore continue their cooperation with the international standardization bodies;

Whereas the procurement bodies shall draw up the additional specifications needed in order to supplement the European specifications or other standards; whereas those specifications must not prevent the essential requirements that have been harmonized at Community level and which the European high speed train network must satisfy, from being met;

Whereas the procedures governing the assessment of conformity or of suitability of use of constituents must be based on the use of the modules covered by Council Decision 90/683/EEC of 13 December 1990;⁹ whereas, as far as possible and in order to promote industrial development, it is appropriate to expand the procedures involving a system of quality assurance; Whereas the notion of constituent covers both tangible objects and intangible objects such as software;

Whereas the suitability for use of the most critical constituents as regards safety, availability or system economy should be assessed;

Whereas the procurement agencies will, in their specifications, lay down, in particular for the constituents, by referring to the European specifications, the characteristics which must be met, in contractual terms, by the manufacturers; whereas, this being the case, constituent conformity is mainly linked to their area of use in order to ensure and guarantee the interoperability of the system, and not only with their free movement on the Community market;

Whereas it is therefore not necessary that the manufacturer should affix the CE logo to constituents that are now subject to the provisions of this Directive but, that whereas on the basis of the assessment of conformity and/or suitability for use conducted in accordance with the procedures provided for that purpose in the Directive, the manufacturer's declaration of conformity is sufficient; whereas that does not prejudice the obligation on the part of manufacturers

8 OJ No L 297, 29.10.1990.

9 OJ No L 380, 31.12.1990.

to affix the CE mark to certain components in order to certify their compliance with other Community provisions relating to them;

Whereas the subsystems constituting the European network must be subjected to a checking procedure; whereas that checking must enable the responsible authorities authorizing their placing in service to be assured that at the design, construction and placing in service stages the result is in line with the regulations and technical and operational provisions in force; whereas that must also enable manufacturers to be able to count upon equality of treatment whatever the country; whereas it is therefore necessary to lay down a module defining the principles and conditions applying to the EC checking of subsystems;

Whereas the EC checking procedure is based on the technical specifications for interoperability (TSI); whereas those TSI are drawn up to the order of the Commission by the joint body representing the infrastructure managers, the railway companies and the industry; whereas the reference to the TSI is required in order to ensure interoperability in the network and whereas those TSI are subject to the provisions of Article 13 of Directive 90/531/EEC;

Whereas the notified bodies responsible for examining the conformity assessment procedures or that applying to the use of constituents, together with the procedure for the assessment of sub-systems must, in particular in the absence of any European specification, coordinate their decisions as closely as possible; whereas the Commission must ensure that this is indeed the case by enlisting, in particular, the opinion of the parties concerned and that of the Committee comprising representatives designated by the Member States as set up by the Directive;

Whereas the Council Directive on the development of Community railways (91/440/EEC) requires a separation of activities, in accounting terms, between transport service operation and those concerning railway infrastructure management; whereas, this being the case, the specialized services provided by the railway infrastructure managements designated as notified bodies should be structured in such a way as to meet the criteria which must apply to this type of body; whereas other specialized bodies may be notified where these meet the same criteria;

Whereas interoperability within the European high speed train network is Community-wide in scale; whereas the Member States are in no position, on an individual basis, to take the action needed in order to achieve that interoperability; whereas it is therefore necessary that this action be taken at Community level;

HAS ADOPTED THIS DIRECTIVE:

CHAPTER I

GENERAL

ARTICLE 1

1. This Directive applies to the conditions which must be met in order to achieve interoperability within the European high speed train network.
2. It concerns the design, construction, gradual placing in service and operation of the high speed train network.
3. The high speed train network consists of links likely to be travelled by railway rolling stock that is suitable for high speeds.

The overall geographical and physical data relating to the system comprising the European high speed train network is as follows:

- master plan;
- different types of line;
- rolling stock;
- coherence of infrastructures and rolling stock,

as described in Annex I.

ARTICLE 2

1. This Directive applies to the provisions concerning, for each sub-system, the parameters, constituents, interfaces and procedures needed and adequate in order to ensure and guarantee interoperability within the European high speed train network, while at the same time meeting the essential requirements of Article 4.
2. The provisions of this Directive shall apply without prejudice to the relevant provisions of other Community directives, in particular with regard to the European specifications concerning constituents save where, particularly in the case of sensitive constituents, the meeting of the essential requirements of this Directive requires the use of individual European specifications drawn up for that purpose.

ARTICLE 3

1. For the purposes of this Directive:
 - 1.1 The expression "European network" means the European high speed train network.

1.2 The European network shall be subdivided into eight "subsystems" as follows:

- * infrastructure;
- * energy;
- * maintenance;
- * signalling control/command;
- * rolling stock;
- * environment;
- * operation;
- * users

as described in Annex II.

1.3 The term "constituents" means any elementary component, group of components, sub-assembly or complete assembly of equipment incorporated or intended to be incorporated into a subsystem.

1.4 The term "sensitive constituents" means constituents upon which the interoperability of the European network depends either directly or indirectly.

2. Within the meaning of this Directive interoperability within the European high speed train network refers to all of the regulatory technical or operational conditions which must be met in order to ensure, without interruption, movements by high speed trains on infrastructure within that network which accomplish the specified levels of performance.

ARTICLE 4

1. The European network or any parts of that network, subsystems and their constituents to which this Directive applies shall meet the essential requirements set out in Annex II.
2. The additional technical specifications, referred to in Article 13(4) of Directive 90/531, needed in order to supplement the European specifications or the other standards in use within the Community, must meet the basic requirements.

ARTICLE 5

1. Each of the subsystems referred to in Article 3 (1.2), is covered by a mandatory technical specification for interoperability (TSI).
2. Where necessary in order to achieve interoperability within the European network the TSIs:
 - * lay down the essential requirements in detail;
 - * establish the basic parameters and in particular those set out in Annex IV;

- * determine the sensitive constituents and interfaces which must be covered by European specifications, the European standards for which are needed in order to achieve interoperability within the European network while meeting the essential requirements;
 - * state, in each case under consideration, which of the modules defined in Council Decision 90/683/EEC are to be used in order to assess either conformity or suitability for use.
3. The TSIs shall be drawn up to the order of the Commission by the joint body representing the infrastructure managers, railway companies and the industry. Those orders shall be drawn up in accordance with the procedure laid down in Article 21(2).
 4. When these have been drawn up by the body provided for in paragraph 3 the TSI should be adopted in accordance with the procedure laid down in Article 21(2). The TSI shall be published by the Commission in the Official Journal of the European Communities.

CHAPTER II

SENSITIVE CONSTITUENTS

ARTICLE 6

Member States shall take all necessary steps to ensure that the sensitive constituents referred to in Article 5(2):

- are only placed on the market if they enable interoperability to be achieved within the European network while at the same time meeting the essential requirements referred to in Article 4;
- are used in their area of use as intended and are suitably installed and maintained.

ARTICLE 7

Member States may not, on their territory and on the basis of this Directive prohibit, restrict or hinder the placing on the market of sensitive constituents, where intended for use on the European network, if they comply with the Directive.

ARTICLE 8

1. Member States shall consider as complying with all of the essential provisions of this Directive those sensitive constituents referred to in Article 5 which bear the "CE" declaration of conformity or suitability for use, the components of which are set out in Annex V.
2. Compliance of a sensitive constituent with the essential requirements applying to it is established in relation to any relevant European specifications that may exist.
3. The references to European specifications, which are either common technical specifications or European technical approvals, within the meaning of Directive 90/531/EEC, or are national standards transposing European standards, shall be published in the Official Journal of the European Communities.

Member States shall publish the references to the national standards transposing the harmonized standards.

4. In the absence of any European specifications without prejudice to the provisions of Article 12, Member States shall inform the other Member States and the Commission of the Standards and Technical Specifications in use in order to implement the essential requirements.

ARTICLE 9

Where it emerges, at the request of a Member State or on the initiative of the Commission that the European specifications referred to in Article 8(2) do not fully meet the essential requirements referred to in Article 4, a Decision shall be taken as to whether to withdraw, or otherwise, the European specifications concerned from the publications referred to in Article 8(3) in accordance with the procedure laid down in Article 21(2), after consulting the Committee set up under Directive 83/189/EEC, where European standards are concerned.

ARTICLE 10

1. Where a Member State confirms that a sensitive constituent covered by the "CE" declaration of conformity or suitability for use as referred to in Article 8(1) and placed on the market is likely, when used as intended, not to meet the essential requirements referred to in Article 4, it shall take all necessary steps to restrict its area of use or to prohibit said use. That Member State shall forthwith inform the Commission of the measures taken and shall state its reasons for its decision stating, in particular, whether the failure to conform is due to
 - (a) failure to meet the essential requirements;
 - (b) incorrect application of the European specifications referred to in Article 8 where application of the specifications is invoked;
 - (c) where the European specifications referred to in Article 8 are inadequate.
2. The Member State shall consult the parties concerned as quickly as possible. Where, following that consultation, the Commission establishes that the measure has been justified, it shall forthwith inform the Member State that has taken the initiative, together with the other Member States, thereof. Where, following that consultation the Commission establishes that the measure is unjustified it shall forthwith inform the Member State having taken the initiative, together with the manufacturer or his authorized representative established within the Community, thereof.

Where the decision referred to in paragraph 1 is justified by the existence of a gap in the European specifications referred to in Article 8 the procedure defined in Article 9 shall apply.
3. Where a non-complying sensitive constituent bears the "CE" declaration of conformity referred to in Article 8 the competent Member State shall take the appropriate measures against whomsoever has drawn up the declaration and shall inform the Commission and the other Member States thereof.
4. The Commission shall ensure that the Member States are kept informed of the progress made by and the results of the said procedure.

ARTICLE 11

1. In order to be able to draw up the "CE" declaration of conformity or suitability for use of a sensitive constituent, its manufacturer or his authorized representative established within the Community shall apply the modules deriving from Decision 90/683/EEC under the conditions set out in the TSIS referred to in Article 5.
2. Where so required by the TSIs the assessment of conformity or suitability for use of a sensitive constituent shall be introduced by the notified body referred to in Article 20 with which the manufacturer or his authorized representative established within the Community has lodged the application.
3. Where the sensitive constituents are covered by other Community Directives covering other aspects, the "CE" declaration of conformity or suitability for use shall, in such instances, state that the constituents also meet the requirements of those other Directives.
4. Where neither the manufacturer nor his authorized representative established within the Community have not met the requirements of the preceding paragraphs those obligations shall rest upon any person who places that sensitive constituent on the market. The same obligations shall apply to whomsoever assembles sensitive constituents or parts of sensitive constituents having diverse origins or who manufactures the sensitive constituents for his own use.
5. Without prejudice to the provisions of Article 10:
 - (a) in each instance where a Member State confirms that the CE declaration of conformity has been drawn up improperly the manufacturer or his authorized agent established within the Community shall be required to restore the sensitive constituent to a state of conformity and to terminate the infringement under the conditions laid down by that Member State;
 - (b) where the non-conformity persists the Member State shall take all appropriate steps to restrict or prohibit the placing on the market of the sensitive constituent at issue, or to ensure that it is withdrawn from the market in accordance with the procedures provided for in Article 10.

ARTICLE 12

1. In order to ensure coherent application of this Directive in the assessment of conformity or suitability for use of sensitive constituents the Commission shall ensure that the decisions by the notified bodies shall be closely coordinated, especially where there are no European specifications.
2. The coordinating meetings by the notified bodies shall be held at the request either of the Commission, or of the Committee referred to in Article 21, or on their own initiative.

At the request of the Commission each Member State may be called upon to appoint, in restricted terms, the notified bodies taking part in the coordinating meetings.

3. The activities conducted within the coordinating meetings may lead to the laying down of common technical specifications which describe, in particular, all of the operations needed to confirm compliance of the sensitive constituents with this Directive

CHAPTER III

SUB-SYSTEMS

ARTICLE 13

Each Member State shall authorize the placing in service of those subsystems, referred to in Annex II, constituting the European network which are located on its territory or which pass through it.

For this purpose Member States shall take all necessary steps in order that the subsystems to which this Directive applies may only be placed in service if they are designed, constructed and installed and/or operated in such a way as not to hinder the meeting of the essential requirements concerning them.

ARTICLE 14

Member States may not, on their territory and on the basis of this Directive, prohibit, restrict or hamper the construction, placing in service and operation of subsystems constituting the European network and complying with the essential requirements of this Directive.

ARTICLE 15

1. Member States shall consider as being interoperable and meeting the essential requirements concerning them, as referred to in Article 4, those subsystems constituting the network which are covered by the "CE" checking declaration, the components of which are given in Annex VI, accompanied by the technical file provided for in Article 17(4).
2. Where any of the TSIs referred to in Article 5 exist reference shall be made to these when checking that interoperability meets the essential requirements of a sub-system constituting the European network.
3. In the absence of TSIs and without prejudice to the provisions provided for in Article 18, Member States shall send the other Member States and the Commission a list of the technical rules in force in order to implement the essential requirements.

ARTICLE 16

If it emerges, at the request of a Member State or on the initiative of the Commission that the TSIs referred to in Article 5(2) do not fully meet the essential requirements referred to in Article 4, a Decision shall be taken as to whether to withdraw those TSIs, or otherwise, from the publications in accordance with the procedure laid down in Article 21(2).

ARTICLE 17

1. In order to be in a position to draw up the "CE" declaration of conformity, the procurement entity or its official representative shall apply the "CE" checking procedure defined in Annex VII.
2. The "CE" checking procedure shall be examined at the request of a procurement entity, or its official representative, by the notified body referred to in Article 20, which it has selected for that purpose.
3. The activities of the notified body responsible for the "CE" checking of a sub-system shall begin at the design stage and shall cover all of the manufacturing period up to the type approval stage before a sub-system is placed in service.
4. The notified body shall build up the technical file that has to accompany the "CE" declaration of conformity. That technical file must contain all of the necessary documents relating to the characteristics of the sub-system and, where appropriate, all of the documents certifying conformity of the sensitive constituents. It must also contain all of the aspects relating to the conditions and limits of use and to the instructions concerning servicing, constant or routine monitoring, adjustment and maintenance.

ARTICLE 18

1. In order to ensure consistent application of the "CE" subsystem checking procedure the Commission shall ensure that the decisions of the notified bodies referred to in Article 20 are closely coordinated.
2. The meetings of the notified bodies shall be held at the request of the Commission, of the Committee referred to in Article 21, or on their own initiative.
3. The activities conducted within the coordinating meetings may lead to the laying down of technical specifications which describe, in particular, all of the operations needed to confirm compliance of the subsystems with this Directive.
4. These technical specifications are TSIs which are subject to the provisions of Article 5(3) and (4).

ARTICLE 19

1. Where a Member State feels that a subsystem covered by the CE declaration of conformity accompanied by the technical file does not fully comply with this Directive and in particular does not meet the essential requirements referred to in Article 4, it may request additional checks before authorizing the placing in service of that subsystem on its territory.

2. Where a Member State feels that a subsystem having received the CE declaration of conformity accompanied by the technical file does not fully comply with this Directive and in particular does not meet the essential requirements referred to in Article 4, and its placing in service is likely to hamper the capacity for interworking within the European network, it may ask the Member State on the territory of which the subsystem is located that additional checks be carried out before authorizing its placing in service.
3. The Member State making the request shall forthwith inform the Commission of any additional checks requested and summarize the justifications for this. The Commission shall without delay initiate the procedure provided for in Article 18.

CHAPTER IV

NOTIFIED BODIES

ARTICLE 20

1. Member States shall notify the Commission and the other Member States of the bodies responsible for carrying out the procedure for the assessment of conformity or suitability for use referred to in Article 11 and the checking procedure referred to in Article 17, stating for each of these the area of competence.

The Commission shall assign identification numbers to these and shall publish, in the Official Journal of the European Communities, the list of those bodies and their identification number, and shall keep this updated.

2. Member States shall apply the criteria provided for in Annex VIII for the assessment of the bodies to be notified. Any bodies meeting the assessment criteria provided for in the relevant harmonized standards in the EN.45.000 series shall be assumed to meet said criteria.
3. Any Member State which has appointed a body must withdraw its notification if it confirms that that body no longer meets the criteria referred to in Annex VIII.

CHAPTER V

COMMITTEE

ARTICLE 21

1. The Commission shall be assisted by an Advisory Committee on guided transport systems consisting of representatives of the Member States and chaired by the Commission's representatives.
2. The Committee may have laid before it any matter arising from the implementation and practical application of this Directive, in accordance with the following procedure.

The Commission's representative shall submit to this Standing Committee a draft of the measures to be taken. Said Committee shall deliver its opinion on this draft within a deadline which the Chairman may lay down in the light of the urgency of the matter at issue, where appropriate by taking a vote. That opinion shall be entered in the record; moreover each Member State has the right to ask that its own position be set out in that record.

The Commission shall take the fullest account possible of the opinion delivered by the Committee. It shall inform said Committee of the manner in which it has taken account of that opinion.

3. The Committee may discuss any matter whatsoever concerning the interoperability of the European high speed train network.
4. Should it prove necessary, the Committee may set up working parties to aid it in carrying out its tasks.

CHAPTER VI

FINAL PROVISIONS

ARTICLE 22

Any decision taken in implementation of this Directive which restricts the awarding of contracts and/or the use within a subsystem of constituents, the checking of subsystems constituting the European network, and any decisions taken in implementation of Articles 9, 10, 16 and 19 shall be justified in detail. The interested party shall be notified thereof as quickly as possible, together with a statement of the remedies offered by the laws in force in the Member State concerned and the deadlines within which those remedies may be introduced.

ARTICLE 23

1. Member States shall amend and adopt the laws, regulations and administrative provisions in such a way as to authorize the use of sensitive constituents and the placing in service and operation of subsystems which comply with this Directive by, at the latest, 30 June 1997, and shall forthwith inform the Commission thereof.
2. When the Member States adopt the provisions referred to in paragraph 1, the latter shall contain a reference to this Directive, or shall be accompanied by such a reference on their official publication. The details of that reference shall be laid down by the Member States.

ARTICLE 24

This Directive shall enter into force 21 days after its publication in the Official Journal of the European Communities.

Done at Brussels,

For the Council
The President

ANNEX I

EUROPEAN HIGH SPEED TRAIN NETWORK

GEOGRAPHICAL AND PHYSICAL DATA

1. The master plan

The master plan for the European high speed train network, which is restricted to the reference features that are essential to its structuring, is that set out in the report by the group of senior officials.

It includes new and upgraded lines and links.

This master plan, which the Council received favourably in its Resolution of 17 December 1990 in order to complete this by the year 2010, is periodically reviewed in accordance with the procedures drawn up for that purpose.

2. The lines

A distinction is drawn in the master plan between three types of line:

- lines equipped for speeds of generally not less than 250 km/h;
- lines arranged for speeds of about 200 km/h;
- other lines making up the European network.

The urban sections of line, whatever their characteristics, are treated on the same basis as the lines of which they are extensions.

3. Rolling stock

The high-speed advanced-technology trains must be designed in such a way as to guarantee a high level of comfort and safety at the following speeds:

- at least 250 km/h on the new lines;
- of about 200 km/h on the existing upgraded lines;
- the highest level possible on the other lines.

4. Cohesion between infrastructures and rolling stock

High speed train services presuppose the existence of excellent cohesion between the characteristics of the infrastructure and those of the rolling stock. Performance levels, service quality and cost depend upon that cohesion.

ANNEX II

EUROPEAN HIGH SPEED TRAIN NETWORK

SUBSYSTEMS

1. For the purposes of this directive the system constituting the European network is broken down into eight subsystems, as follows:

- 1.1 structural subsystems:

- * infrastructures
- * energy
- * maintenance
- * control-command
- * rolling stock

- 1.2 operational subsystems:

- * environment
- * operation
- * users

2. The aspects of each subsystem linked with the interoperability of the European network are as follows:

- 2.1 Infrastructures

Base parameters: speed and gradients

- 2.1.1. Profile

1. Loading gauge
2. Radii of curvature
3. Tunnel geometry
4. Bridges and viaducts
5. Track pitch
6. Side protection

- 2.1.2 Track

1. Gauge and tolerances
2. Cant and cant inadequacy
3. Length of junctions
4. Rail turnouts
5. Axle loadings and stressing withstood
6. Permissible defects and wear limits
7. Equipment (geometry and crossing speed)

2.1.3 Stations

1. Platform geometry

2.2 Energy

2.2.1 Electricity supply system

1. Type of current (voltage and frequency)
2. Permissible swings and surge voltages
3. Protection of installations

2.2.2 Catenaries

1. Geometry and components
2. Power factor
3. Catenary/pantograph dynamics
4. Materials used

2.3 Maintenance (dépôts, workshops)

- 2.3.1 Train washers
- 2.3.2 Toilet emptying system
- 2.3.3 Hoisting equipment
- 2.3.4 Specific equipment

*2.4 Signalling control and command

- 2.4.1 Cabin signalling system
- 2.4.2 ATP* (speed control)
- 2.4.3 ATO** (automatic train operation)
- 2.4.4. Information required on board
- 2.4.5 Track-train information transmission
- 2.4.6 On-board information processing and visualization for the driver
- 2.4.7 Telecommunications:
 - ground-train radio
 - passenger telephone

* Automatic Train Protection.

** Automatic Train Operation.

2.5 Rolling stock

2.5.1 Definition of train sets

1. Composition of train
2. Mass
3. Loading gauge
4. Shell-structure characteristics
5. The leak-tightness requirements in respect of pressure variations
6. Aerodynamic characteristics

2.5.2 Wheel-rail contact

1. Wheel profile and wear criteria

2.5.3 Traction

1. Acceleration performance and residual acceleration
2. Maximum hill start (normal and degraded state)

2.5.4 Braking

1. Braking performance
2. Conditions under which braking safety is assured
3. Possible use of supplementary brakes not affecting grip
4. Performance of anti-lock devices

2.5.5 Current collection (as a function of the type of current used)

- See Item 2.2.2, catenaries

2.5.6 Passenger safety

1. Safety of door-close monitoring system
2. Fire protection
3. Alarm signal

2.6 Environment

2.6.1 Noise emission

2.6.2 Vibrations

2.6.3 Outside electromagnetic interference

2.7 Operation

2.7.1 Staff and regulations

1. Ergonomics of drivers' cabin
2. Regulations (under normal and degraded situations)
3. Language used

2.7.2 Technology

1. On-board diagnostic system
2. Transmission of data between train and ground
3. Reliability criteria
4. Availability level
5. Hot-box detectors

2.8 Users

2.8.1 Quality of on-board service

1. Internal noise level
2. Characteristics of air conditioning
3. Passenger information
4. On-board services (including restaurants)
5. Luggage capacity
6. Accessibility for handicapped travellers

2.8.2 Marketing

1. Reservation system
2. Information system

ANNEX III

ESSENTIAL REQUIREMENTS

1. Nature of requirements

The essential requirements which the European high speed train network and its constituents must meet cover the following areas:

1.1 Safety

In addition to obeying the general safety rules system safety is ensured when the risk of derailment or collision between trains or other obstacles have been overcome.

This means that account must be taken of the consequences of any safety component failures.

1.2 Reliability - availability

The commercial operation of a high speed train service requires the permanent maintenance of a sufficient level of availability of the relevant functions, and thus of guaranteeing an adequate level of reliability for all of the components.

The consequences of any failures of those components must be taken into account, thus enabling the degraded situations that are permissible to be defined.

1.3. Human health

It is a matter in this case of envisaging the consequences of the presence and operation of the system under abnormal or exceptional conditions in relation to persons, whoever they may be: users, railway staff, track side dwellers, etc....

1.4 Environmental protection

The requirements in this area are intended to define a framework to be maintained in view of the fact that the construction, presence and operation of a high speed train system necessarily change their environment, whether in visual, physical, noise, vibratory, electromagnetic etc. terms.

1.5 Consumer protection

This area concerns consumer expectations as regards the level of quality of high speed train services and the transparency of the transport conditions.

1.6 Technical compatibility

This area covers the technical measures enabling the network to operate. These measures are grouped together in two complementary categories of condition:

- conditions permitting continuity of travel by a train from one point to another on the network. These conditions require that any train moving within the network encounters installations that are compatible with its own characteristics and the performance that it must achieve;
- conditions which, on a given section, permit satisfactory operation of the system in respect of performance, reliability and specified safety. At each point in the network these conditions require control of the interfaces between the constituent subsystems.

2. General requirements

2.1 Safety

- 2.1.1 The design, construction or assembly, maintenance and monitoring of safety-critical components, and more particularly of the components involved in train movements must guarantee safety at the level corresponding to the aims laid down for the network, including the specific degraded situations.
- 2.1.2 The parameters involved in the wheel/rail contact must meet the stability requirements needed in order to guarantee safe movement at the maximum authorized speed.
- 2.1.3 The components used must withstand any normal or exceptional stressing that has been specified during their period in service. The repercussions on safety of any fortuitous failures must be limited by appropriate means.
- 2.1.4 The design of installations and rolling stock and the choice of the materials used must be aimed at limiting the generation, propagation and effects of fire and smoke in the event of a fire.

- 2.1.5 Any devices intended to be manipulated by users must be designed in such a way as not to impair their safety if used in a foreseeable manner that is not in accordance with the posted instructions.

2.2 Reliability - availability

- 2.2.1 The monitoring and maintenance of static or moveable components that are involved in train movements must be organized, carried out and quantified in such a manner as to sustain their operation under the intended conditions.
- 2.2.2 The design of the train services and of the devices used to provide user information must guarantee reliable, quality commercial operations.

2.3 Human health

- 2.3.1 The materials used in trains and infrastructures must not constitute a health hazard to those persons having access to them.
- 2.3.2 Those materials must be selected and used in such a way as to restrict the emission of harmful and dangerous fumes, particularly in the event of fire.

2.4 Environmental protection

- 2.4.1 The repercussions on the environment of the provision and operation of the European high speed train network must be assessed and taken into account during the design of that network. In accordance with the provisions of Directives 85/337/EEC, * 79/409/EEC** and 92/43/EEC.***
- 2.4.2 The materials used in the trains and infrastructures must avoid the emission of fumes or gases which are harmful and dangerous to the environment, above all in the event of fire.
- 2.4.3 The rolling stock and energy supply systems must be designed and produced in such a way as to be compatible, in electromagnetic terms, with the public or private installations, equipment and networks with which they might interfere.

* Directive on the assessment of the effects of certain public and private projects on the environment, OJ L 175, July 1985.

** Directive on the conservation of wild birds, OJ L 103, 25.4.1979.

*** Directive on the conservation of natural habitats and of wild fauna and flora, OJ L 206, 22.7.1992.

2.5 Consumer protection

- 2.5.1 The design of the service offered on the European high speed train network must guarantee that users receive reliable and quality commercial operation.

2.6 Technical compatibility

- 2.6.1 The technical characteristics of the infrastructures and static installations must be compatible with each other and with those of the trains intended to travel within the European high speed train network.

- 2.6.2 Adherence to these compatible technical characteristics is obligatory for all new infrastructures and rolling stock that is to travel within the European high speed train network.

If adherence to these characteristics proves difficult on certain sections of the network, temporary solutions, which ensure compatibility in the future, may be implemented.

3. Requirements specific to each subsystem

3.1 Infrastructures

3.1.1 Safety

Steps must be taken to avoid access to or undesirable intrusions into the installations for the lines that are travelled at high speed.

Steps must be taken to restrict the dangers to which persons are exposed, particularly in stations through which trains are passing at high speed.

Infrastructures to which the public has access must be designed and produced in such a way as to restrict any human health hazards (stability, fire, access, evacuation,...).

3.1.2 Consumer protection

The geometrical characteristics of the platforms must permit safe access to the carriages making up the trains for all categories of passenger.

3.1.3 Technical compatibility

Station platforms must be compatible with access to the rolling stock serving them.

3.2 Energy

3.2.1 Safety

Operation of the energy supply systems must not impair the safety either of high speed trains or of persons (users, operating staff, track-side dwellers and third parties).

3.2.2 Environmental protection

The functioning of the energy supply systems must not interfere with the environment beyond the specified limits.

3.2.3 Technical compatibility

The electricity supply systems used throughout the European high speed train system must:

- enable trains to achieve the specified performance levels;
- be compatible with the collection devices fitted to the trains.

3.3 Maintenance

3.3.1 Health

The technical installations and the procedures used in the maintenance centres must not constitute a danger to human health.

3.3.2 Environmental protection

The technical installations and the procedures used in the maintenance centres must not give rise to nuisances with regard to the surrounding environment.

3.3.3 Technical compatibility

The maintenance installations for the high speed trains must enable the safety, health and comfort operations to be carried out on all of the trains for which they have been designed.

3.4 Signalling control-command

3.4.1 Safety

The signalling control-command used on the European high speed train network must enable trains to travel at the safety level intended for the network.

3.4.2 Technical compatibility

All new high speed infrastructures and all new high speed stock manufactured or developed after adoption of compatible signalling and automatic stopping systems must be tailored to the use of those systems.

*The signalling control-command equipment installed within the train drivers' cabs must permit normal operation, under the specified conditions, throughout the European high speed train network.

3.5 Rolling stock

3.5.1 Safety

The rolling stock structures and those of the links between vehicles must be designed in such a way as to protect the passenger and driving compartments in the event of collision or derailment.

The electrical equipment must not impair the safety and functioning of the control-command and signalling installations.

The braking techniques and the stresses exerted must be compatible with the design of the tracks, trackside structures and signalling systems.

Measures will have to be taken to prevent access to electrically-live constituents in order not to endanger human life.

In the event of danger a device must enable passengers and accompanying staff to contact the driver.

The access doors must incorporate an opening and closing system which guarantees passenger safety.

Emergency exits must be provided.

3.5.2 Human health

The interior appointments of the carriages must guarantee a high level of passenger and staff safety.

3.5.3 Reliability - availability

The design of the vital, running, traction and braking equipment together with control-command must, in a specific degraded situation, enable the train to continue without adverse consequences for the equipment remaining in service.

3.5.4 Consumer protection

The performance of high speed trains must guarantee high quality commercial operation.

3.5.5 Technical compatibility

The electrical equipment must be compatible with the operation of the control-command and signalling installations.

The characteristics of the current collection devices must enable trains to travel under the energy supply systems for the European high speed train network.

3.6 Environment

3.6.1 Health

Operation of the European high speed train network must remain within the noise-nuisance limits laid down.

3.6.2 Environmental protection

Operation of the European high speed train network must not cause ground vibrations which are able to have adverse effects on activities and the environment passed through that are close to the infrastructure and in a normal state of maintenance.

3.7 Operation

3.7.1 Safety

Alignment of the network operating rules and the qualification of drivers and on-board staff must guarantee safe international operation.

The operations and maintenance intervals, the training and qualification of maintenance staff and the quality assurance system set up in the maintenance centres of the operators concerned must guarantee a high level of safety.

3.7.2 Reliability - availability

The operations and maintenance periods, the training and qualification of the maintenance staff and the quality assurance system set up by the operators concerned in the maintenance centres must guarantee a high level of system reliability and availability.

3.7.3 Technical compatibility

The alignment of the operating rules of the networks and the qualification of drivers, on-board staff and the management of traffic must guarantee operating efficiency on the European high speed train network.

3.8 Users

3.8.1 Safety

An emergency lighting system having a sufficient intensity and duration is an absolute requirement.

Trains must be equipped with an internal telephone system permitting two-way communication between the driver and on-board staff.

ANNEX IV

EUROPEAN HIGH SPEED TRAIN NETWORK

BASIC PARAMETERS

Infrastructures

- Minimum loading gauges
- Minimum radii of curvature
- Track gauge
- Maximum track stressing
- Minimum platform length
- Platform height

Energy

- Power supply voltage
- Catenary geometry

Signalling control-command

- ERTMS* characteristic

Rolling stock

- Axle loading
- Maximum train length
- Loading gauge
- Minimum braking characteristics
- Boundary electrical characteristics
- Boundary mechanical characteristics

Environment

- Boundary characteristics linked with noise
- Boundary characteristics linked with vibrations
- Boundary characteristics linked with electromagnetic interference

* European Rail Traffic Management System.

Users

- Boundary characteristics linked with inside noise
- Boundary characteristics linked with air conditioning
- Characteristics linked with the carriage of invalids

ANNEX V

SENSITIVE CONSTITUENTS

"CE" declaration

- of conformity
- of suitability for use

1. Sensitive constituents

The "CE" declaration applies to the sensitive constituents involved in interoperability on the European network, as referred to in Article 2. these may be:

1.1 Multiple use constituents

These are constituents that are not specific to the railway system and which may be used as such in other areas.

1.2 Multiple use constituents having specific characteristics

These are multiple use constituents which are not as such specific to a railway system, but which must display specific performance levels when used for railway purposes.

1.3 Specific constituents

These are constituents that are specifically intended for railway applications.

2. Scope

The "CE" declaration covers:

- either the assessment by a notified body or bodies of the intrinsic conformity of a sensitive constituent, considered in isolation, to the technical specifications to be met;
- or the assessment/judgment by a notified body or bodies of the suitability for use of a sensitive constituent, considered within its railway environment and in particular in the case where the interfaces are involved, in relation to the technical specifications, and in particular those of a functional nature, which are to be checked.

The assessment procedures implemented by the notified bodies at the design and production stages shall draw upon the modules defined in Council Decision 90/689/EEC of 13 December 1990¹ in accordance with the conditions referred to in the following TSIs.

3. Contents of the "CE" declaration

The "CE" declaration of conformity, or of suitability for use, and the accompanying documents must be dated and signed.

That declaration must be written in the same language as the instructions and must contain the following;

- The Directive references.
- The name and address of the manufacturer or his authorized representative established within the Community (give trade name and full address and in the case of the authorized representative also give the trade name of the manufacturer or constructor).
- Description of sensitive constituent (make, type, etc.).
- Description of the procedure followed in order to declare conformity, suitability for use⁽¹⁾ (Article 11).
- All of the relevant descriptions met by the sensitive constituent and in particular its conditions of use.
- Name and address of notified body (bodies) involved in the procedure followed in respect of conformity or suitability for use⁽¹⁾ and date of examination certificate together, where appropriate, with the duration and conditions of validity of the certificate.
- Where appropriate, reference to the European specification.
- Where appropriate, names and specifications referring to the common technical specification (Article 12).
- Identification of signatory having received powers to engage the manufacturer or his authorized representative established within the Community.

¹ OJ No 380, 31 December 1990.

ANNEX VI

SUBSYSTEMS

"CE" DECLARATION OF VERIFICATION

The "CE" declaration of verification and the accompanying documents must be dated and signed.

That declaration must be written in the same language as the technical file and must contain the following:

- the Directive references;
- name and address of the procurement entity or its authorized representative established within the Community. (Give trade name and full address, and in the case of the authorized representative also give the trade name of the procurement entity.);
- brief description of subsystem;
- name and address of the notified body which has conducted the "CE" inspection referred to in Article 17;
- the document references contained in the technical file;
- all of the relevant temporary or final provisions to be met by the subsystems and in particular, where appropriate, any operating restrictions or conditions;
- if temporary: duration of validity of the "CE" declaration;
- identity of signatory;

ANNEX VII

SUBSYSTEMS

"CE" CHECKING

1. CE checking is the procedure whereby a notified body checks and certifies, at the request of a procurement entity or its authorized representative within the Community, that a sub-system:
 - complies with the Directive;
 - complies with the other regulations deriving from the EEC Treaty.
2. The subsystem is checked in accordance with each of the following stages:
 - overall design;
 - structure of sub-system, including, in particular, civil-engineering activities, constituent assembly, overall adjustment;
 - final testing of the subsystem.
3. The notified body responsible for CE checking shall draw up the certificate of conformity intended for the procurement entity or its authorized representative within the Community, which in turn shall draw up the CE checking declaration intended for the supervisory authority in the Member State within which the subsystem is located and/or operated.
4. The technical record accompanying the checking statement shall be made up as follows:
 - infrastructures: engineering-structure plans, approval records for excavations and reinforcement, testing and inspection reports on concrete;
 - for the other subsystems: general and detailed drawings in line with execution, electrical and hydraulic diagrams, control-circuit diagrams, description of data processing and automatic systems, operating and maintenance manuals, etc.;
 - list of constituents, as referred to in Article 2, incorporated into the subsystem;

- copies of the "CE" declarations of conformity or suitability for use with which said constituents must be provided in accordance with Article 11 of the Directive, accompanied where appropriate by the corresponding calculation notes and a copy of the records of the tests and examinations carried out by the notified bodies on the basis of the common technical specifications;
- certificate by the notified body responsible for "CE" checking stating that the project complies with this Directive, accompanied by corresponding calculation notes referred to by itself, and stating, where appropriate, the reservations recorded during performance of the activities and which would not have been raised, and accompanied by the inspection visit and audit reports written as part of those activities, as stated in detail in items 5.3 and 5.4 below.

5. Monitoring

- 5.1 The aim of the "CE" monitoring is to ensure that the obligations deriving from the technical record have been met during production of the sub-system.
- 5.2 The notified body responsible for checking production shall have constant access to building sites, production workshops, storage areas and, where appropriate, prefabrication or testing facilities and, more generally, all premises which could be considered necessary for the accomplishment of its intended purpose.

The procurement entity or its authorized representative within the Community must send it or have sent to it all of the documents needed for that purpose and in particular the implementation plans and technical records concerning the subsystem.

- 5.3 The body notified in order to check implementation shall periodically carry out "audits" in order to confirm compliance with the Directive. It shall provide those responsible for implementation with an audit report. It may require access to certain stages of the building operations.
- 5.4 In addition, the notified body may pay unexpected visits to the worksite or to the production workshops. At the time of such visits the notified body may conduct complete or partial "audits". It shall provide the persons responsible for implementation with a visit report and, if appropriate, an audit report.

- 6. The complete record referred to in paragraph 4 shall be lodged with the procurement entity or its authorized agent within the Community in support of the certificate of conformity delivered by the notified body responsible for checking the sub-system in working order. The record shall be attached to the "CE" checking declaration which the procurement entity shall send to the supervisory authority in the Member State concerned.

A copy of the record shall be kept by the procurement entity throughout the service life of the sub-system. It shall be sent to any other Member States who so request.

7. Each body shall periodically pass on relevant information concerning the following:

- the requests for CE checking received;
- the certificates of conformity issued;
- the certificates of conformity refused.

8. The records and correspondence relating to the CE checking procedures shall be written in an official language of the Member State in which the procurement entity or its authorized representative is established within the Community, or in a language accepted by the Community.

ANNEX VIII

MINIMUM CRITERIA WHICH MUST BE TAKEN INTO ACCOUNT BY THE MEMBER STATES
WHEN NOTIFYING BODIES

1. The body, its Director and the staff responsible for carrying out the checking operations may not become involved either directly or as authorized representatives in the design, manufacture, construction, marketing or maintenance of the sensitive constituents or of the subsystems or in their use. This does not exclude the possibility of an exchange of technical information between the manufacturer or constructor and that body.
2. The body and the staff responsible for inspection must carry out the checking operations with the greatest possible professional integrity and the greatest possible technical competence and must be free of any pressure and incentive, in particular of a financial type, which may affect their judgment or the results of their inspection, and in particular those generated by persons or groups of persons affected by the results of the checks.
3. That body must employ staff and possess the means that are required in order adequately to perform the technical and administrative tasks that are linked with the conducting of checks. It should also have access to the equipment needed for exceptional checks.
4. The staff responsible for checking shall possess:
 - proper technical and vocational training;
 - a satisfactory knowledge of the requirements relating to the checks that it carries out and sufficient practice in those checks;
 - the abilities needed in order to draw up certificates, records and reports which are the tangible outcome of the inspections conducted.
5. The independence of the staff responsible for inspections must be guaranteed. No official must be remunerated either on the basis of the number of inspections performed or on the results of those inspections.
6. That body shall take out civil liability insurance unless that liability is covered by the State under national law or unless the inspections are carried out directly by that Member State.

7. The staff of that body are bound by professional confidentiality with regard to everything that they learn in the performance of their functions (with the exception of the competent administrative authorities in the State where they perform those activities) in pursuance of this Directive or any provision of national law implementing the Directive.

FINANCIAL STATEMENT

SECTION 1: FINANCIAL IMPACT

1. TITLE OF OPERATION

Proposal for a Council Directive on the interoperability of the European high speed train network.

2. BUDGET HEADINGS INVOLVED

B 5.300: completion of the internal market (partial funding of the preparation of the TSIs in 1994).
Budget heading B2-704 could possibly be called upon to contribute.

3. LEGAL BASIS

Article 129d of the EC Treaty.

4. DESCRIPTION OF OPERATION

4.1 General objectives

Definition of objectives, scope, essential requirements and procedures.

Drawing-up of a body of technical specifications for interoperability (TSI) that are mandatory in nature, and of harmonized standards in order to ensure interoperability within the European high speed train network while meeting the essential requirements.

4.2 Period covered

The budgetary request covers spending from 1993 onwards. It is specific with regard to the drawing-up of the harmonized standards and the management of the adaptation of the technical specifications governing interoperability. It is restricted in time to 1997 in respect of the preparation of the technical specifications for interoperability (TSI).

4.3 Target population

In mobility terms: the general populace and economic operators; in terms of the interoperability of the European network: the administrative staff of the railway companies and of the industry.

5. CLASSIFICATION OF EXPENDITURE OR REVENUE

5.1 Compulsory/non-compulsory expenditure

Non-compulsory

5.2 Differentiated/non-differentiated appropriations

Differentiated

5.3 Type of revenue involved

Nil

6. TYPE OF EXPENDITURE OR REVENUE

6.1 100% subsidy

No

6.2 Subsidy for joint financing with other sources in the public and/or private sector

Yes

6.3 Interest subsidy

No

6.4 Other

Nil

6.5 Should the operation prove an economic success, is there provision for all or part of the Community contribution to be reimbursed?

No

6.6 Will the proposed operation cause any change in the level of revenue?

If so, what sort of change and what type of revenue is involved?

No.

7. FINANCIAL IMPACT

7.1 Method of calculating total cost of operation

A distinction should be drawn between expenditure arising from the preparation of the technical specifications for interoperability (TSI) and those linked with the drafting of the standards needed in order to implement the TSI.

As part of the budget procedure concerned, provision should be made, with regard to the TSI, for the corresponding means for coordinating the activities of the ten working parties set up by the industry and railways (CCFE and UIC/IUR) responsible for drawing up the technical specifications for interoperability (TSI) concerning the following eight sub-systems: infrastructure, power supply, maintenance, control-command, rolling stock, environmental, operation, users. There will also be two coordinating groups: "sub-system interfaces" and "conformity assessment". The main technical activities of the working parties will be carried out by the industry and the railways. The Commission will provide financial support for these working parties' activities. The Commission will also pay for the meetings of the technical committee. The Community contribution to the drafting of a TSI is an estimated ECU 250 000.

The number of standards will be specified in each TSI. Once a TSI has been adopted the remit for drawing up standards will be conferred upon the CEN and CENELEC. Estimate: +/- 300 standards, the estimated cost of a standard being ECU 50 000.

7.2 Itemized breakdown of cost

Breakdown	budget year 93	budget year 94	1995	1996	1997
TSI:	-	MECU 1	MECU 1	MECU 0.5	-
Standards:	-	-	-	MECU 1.5	MECU 3
Total:	-	MECU 1	MECU 1	MECU 2	MECU 3

7.3 Operating expenditure for studies, expert meetings, etc., included in part B

Breakdown	1993	1994	1995	1996	1997	Total 1993-1997
expert meeting	-	MECU 0.03	MECU 0.03	MECU 0.03	MECU 0.03	MECU 0,120

7.4 Indicative schedule of appropriations for commitment

1993 budget	1994 budget	Indicative programming			Total 1993- 1997
		1995	1996	1997	
	MECU 1.03	MECU 1.03	MECU 1.03	MECU 1.03	MECU 7,120

State if any initial forecasts are contained in the financial statement.

8. FRAUD PREVENTION MEASURES PROVIDED FOR IN THE PROPOSED ACTION

Any inspection and audit procedures will be included in the framework contract linking the Commission with the CEN and CENELEC.

The Commission's departments will check subsidies or the receipt of services of preparatory, feasibility or assessment studies ordered before payment, while taking account of the contractual terms and the principles of economy and sound financial or overall management.

Anti-fraud measures (inspection, forwarding reports, etc. ...) are included in all of the agreements or contracts between the Commission and the recipients of payments.

9. ELEMENTS OF COST-EFFECTIVENESS ANALYSIS

9.1 Objectives

Specific objective(s): links with the more general aims and the other activities put forward in the indicative financial programme.

There are currently no common measures that are essential to the movement of high-speed trains, and there is no standardization. As part of the creation of the European high speed train network and of the completion of the internal market by opening up public contracts and improving the competitiveness of this industrial sector, these activities are intended to pave way for the Community measures and harmonized standards needed to achieve network interoperability while meeting the essential requirements.

9.2 Grounds for the operation

The regulations and technical rules currently applying preclude the movement of HSTs within the European network.

The forging of international links such as Transmanche and the PBKA (Paris-Brussels-Cologne-Amsterdam) which were negotiated on a step by step basis, results in a sharp increase in the cost of rolling stock as compared with those applying on a national network. The differences between the existing national arrangements, as regards both components and the overall system at issue, require manufacturers, just like the specific requirements, to redefine their equipment for each contract, and thus counter to any economies of scale.

This situation thus restricts the development of any European high speed train network. It makes it more difficult to boost the competitiveness of a European industry on world markets. It prevents railway components and stock from being produced and used at European level.

It is not possible to contemplate either voluntary standardization by those involved or a mutual recognition of the national regulations. The absence of both a common regulatory philosophy and of common criteria does not enable a European network to be set up or an open-competitive market to be provided without prior definition of essential requirements and basic parameters.

- 9.2.1 Cost
- 9.2.2 Knock-on effects
(Impact beyond the specific aim(s)).
- 9.2.3 Multiplier effects
(Capacity for mobilizing other sources of finance)

9.3 Monitoring and evaluation of the operation
N/A

9.4 Coherence with financial programming

9.4.1 Is the operation incorporated in the DG's financial programming for the relevant years?
Yes

9.4.2 To which broader objective defined in the DG's financial programming does the objective of the proposed operation correspond?
- trans-European networks;
- technical harmonization;
- internal market.

9.4.3 Main factors of uncertainty which may affect the specific outcome of the operation.
N/A

10. ADMINISTRATIVE EXPENDITURE (PART A OF THE BUDGET)

This section of the financial statement must be sent to DGs IX and XIX. DG IX will then forward it to DG XIX for its opinion.

10.1 Will the proposed operation involve an increase in the number of Commission staff?
N/A

10.2 Indicate the amount of staff and administrative expenditure involved in the proposed operation. Explain the method of calculation.

Item	Breakdown	1995	1996	1997	1998 and subsequent periods
A 2510	Committee	85 000*	85 000*	85 000*	85 000*
A 250	Coordination**	-	85 000*	85 000*	85 000*

* 12 EG ECU 7418 x 5 meetings = 37 090
12 EP ECU 9420 x 5 meetings = 47 100
Basis for calculation: EG: ECU 618
EP: ECU 785

** Coordination of the notified bodies as part of the Article 18 procedure.

IMPACT ASSESSMENT

IMPACT OF THE PROPOSAL ON BUSINESSES AND
IN PARTICULAR SMALL AND MEDIUM-SIZED BUSINESSES

TITLE OF PROPOSAL:

Directive of the Council of the European Union on the interoperability of the European high speed train network

DOCUMENT REFERENCE NUMBER:

THE PROPOSAL:

1. Subsidiarity: Need for Community provisions
Main objectives

There are at the moment no common means of ensuring the movement of high-speed trains throughout the European network. The proposed action is intended to prepare the Community arrangements and the harmonized standards needed for achieving interoperability within the European high speed train network as part of the opening up of contracts and the boosting of the competitiveness of the railway sector as a whole.

The regulations and technical and operational arrangements currently in force do not enable complete high-speed trains to move throughout the European network. The links such as Transmanche and PBKA (Paris-Brussels-Cologne-Amsterdam), which were negotiated on a step-by-step basis, greatly increases the cost of rolling stock as compared with that achieved on a national network. The differences between the existing national arrangements as regards both constituents and the system viewed as a whole and also the specific requirements require manufacturers, to redesign their equipment for each market, thus undermining the achievement of economies of scale.

This situation therefore restricts the development of a European high speed train network. It makes it more difficult to boost the competitiveness of the European industry on the world markets. It hampers the production and use of railway equipment at European level.

Voluntary standardization by those involved and the mutual recognition of national regulations cannot be contemplated. The absence of both a common regulatory philosophy and of common criteria does not enable a European network and an open, competitive market to be set up without prior definition of essential requirements and basic parameters.

IMPACT ON COMPANIES

2. Who will be affected by the proposal?

- Which business sectors?

Railway equipment manufacturers, railway companies, infrastructure management, building contractors.

- What sizes of company?

Railway-equipment production is centred on large companies which will have to adjust to the technical specifications for interoperability. SMBs are involved in the shape of subcontractors.

Market share held by large companies and by SMBs for all types of railway rolling stock/estimated value for 1990

GEC Alsthom	ABB	SIEMENS	SMBs
23%	17.5%	10.5%	approx. 20%

Number of persons employed by railway equipment manufacturers:

interurban	urban suburban	signalling	track side structures
50 000	25 000	15 000	15 000
Total: 105 000 persons			

- Are these companies located in specific geographical areas of the Community?

The producers of high-speed railway equipment are mainly spread among Belgium, France, Germany, Italy and the United Kingdom.

3. What action must companies take in order to comply with the proposal?

Manufacturers: implementation of the technical specifications for interoperability, of the harmonized standards and of the conformity procedures.

The procurement agencies: reference to the technical specifications for interoperability and the harmonized standards when concluding contracts.

The railway companies and the infrastructure management: checking of subsystems before placing in service in line with essential requirements, on the basis of the technical specifications for interoperability. Mutual recognition of declarations of conformity.

4. What is the likely economic outcome of the proposal?

- on investments and the creation of new companies:

the interlinking and interoperability of the high speed train network will permit better access to cities, and more particular those of medium size, which will enable, in particular, SMBs to expand and develop their activities towards and from these.

- on jobs:

by promoting the occupation of new premises and growth of activities by the SMBs, interconnection and interoperability will help to create jobs. This should help to expand the tertiary sector.

- on company competitiveness:

interoperability will help to improve the competitiveness of large companies and of SMBs at Community level and at world market level. Interoperability will help, above all, in opening up contracts, which will enable SMBs further to specialize in their production and to maintain commercial relationships with several producers whereas they are currently most often linked to just one. They will therefore be able to benefit more from longer production runs and thus boost their own competitiveness.

5. Does the proposal contain any measures intended to take account of the specific situation of small and medium-sized businesses?

No.

6. List of bodies consulted on the proposal and having explained their basic situation:

- Member State government experts have expressed wide agreement on the need for a directive and on the approach selected, more particularly as regards the drawing-up of technical specifications for interoperability having regulatory force, and cooperation between the Commission, industry and railways in any such preparatory work, and the conformity-assessment procedures.
- The UNIFE and the main railway-equipment manufacturers were actively involved in drafting the proposal for a directive.
- The CCFE (Community of European Railways) and the UIC (IUR International Union of Railways) approve the proposal for a directive with in respect of both its necessity and structure.

ISSN 0254-1475

COM(94) 107 final

DOCUMENTS

EN

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Catalogue number : CB-CO-94-131-EN-C

ISBN 92-77-67207-2

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