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COMMISSION GREEN PAPER ON  
THE DEVELOPMENT OF EUROPEAN STANDARDIZATION :  
ACTION FOR FASTER TECHNOLOGICAL INTEGRATION  
IN EUROPE

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## INTRODUCTION

The credibility and success of the White Paper on completing the internal market do not come from the fact that three hundred subjects were identified for legislative harmonization, but that a thousand or more Community Directives were abandoned which might have been necessary if the old approach, based on detailed harmonization, had been followed.

The new approach is based on two principles:

- mutual recognition of national rules is the basic principle. This presupposes that the objectives of national legislation - health, safety and so on - are equivalent and that only the means of achieving them are different;
- legislative harmonization at Community level only occurs exceptionally in those areas where the objectives of national legislation are not equivalent; when harmonization is necessary, Community legislation must be limited to laying down essential requirements for safety, health, and so on. It is up to producers to choose by what means they wish to comply with these requirements.

Let us take domestic electrical appliances as an example. Technical safety requires the presence in the electrical lead of a third wire, connected to the earth. Before taking legislative initiatives, the Commission will see whether the twelve Member States all require this third wire. If so, there is no need for legislation to be harmonized; if not, Community legislation will provide for an earth connection for this type of appliance throughout the Community, without going into the details of whether the third pole should be round or square, or placed in the middle or at the edge of the plug.

This policy will bring about a single Europe for traders, but not for manufacturers or consumers. A Community citizen may purchase a washing-machine in the country-next-door and bring it across frontiers without difficulty, but he may still find that the plug of the appliance does not fit the socket in his house.

Thus neither mutual recognition nor the new approach to harmonization can operate satisfactorily unless manufacturers come together and agree upon common instruments - plugs and sockets - which are intended to achieve the legislator's objectives. That is the role of the standardization organizations.

Only European standards will bring about a common economic area. National standards on the contrary compartmentalise the common market. They cannot be the subject of mutual recognition, since, not laid down by the authorities, they are not obligatory; each producer is free to fulfill

essential requirements by other means and no purchaser can be obliged to recognize foreign products. Standards will only fulfill their role in the common market if they are agreed at the European level and published as European standards.

That is why the Community encourages the work of CEN, CENELEC and ETSI, which brings together the standardization bodies of the eighteen member countries of the Community and EFTA.

The output of the European standardization bodies has risen spectacularly. Over 800 standards have been adopted in the last six years, three times as many as in the previous twenty years. But the completion of the Internal Market requires the adoption of at least 800 additional standards, or about one standard a day until 31 December 1992.

The Commission is responsible for the operation of the common market, not only for traders but also for producers and consumers. In order not to have to return to the old approach of detailed harmonization, it wishes to assist standards organizations to respond to the growing demand for standardization in anticipation of 1992. In this Green Paper, the Commission proposes for discussion suggestions for improving the efficiency of standardization organizations as well as their cooperation and cohesion.

COMMISSION GREEN PAPER ON THE DEVELOPMENT OF  
EUROPEAN STANDARDIZATION

EXECUTIVE SUMMARY

The single Community market will become a reality for European Industry only insofar as common technical standards can be developed progressively at European rather than national level.

Less than 900 days from the Community's deadline for achievement of the internal market, European standardization has become central to that objective. Hundreds of European Standards are today being drawn up to accompany the Community's technical legislation which will come into force before 1 January 1993. This is the immediate goal of the European standardization process.

But as the regulatory barriers to the free circulation of industrial products within the Community are removed, differences in national technical standards still constitute a significant obstacle to the acceptability of those products in the market.

Although under Community law Member State authorities are required to accept on their market products which conform to the legislation and standards of other Member States where these are intended to achieve equivalent objectives, the same principle of "mutual recognition" cannot be applied to the individual purchaser in the market, who remains free to set his own requirements, often by reference to national standards. Only through the gradual voluntary harmonization of standards can the Community market fully achieve the economic rationalization and competition which are prime objectives of the EEC Treaty.

The objectives of the Green Paper

The main purpose of this Green Paper - a consultation document addressed to all interested parties - is to draw to the attention of producers and users of industrial products in the private and public sector the strategic significance of European standardization for the realization of the internal market. Nothing less than the future technological environment for products on the European market is at stake.

A second purpose of this Green Paper is to accelerate the delivery of European standards, especially those required for the implementation of EEC product legislation. The European standardization bodies have made major efforts to respond to the increased demand for their services in recent years, for which they are to be congratulated, but demand for European standards is outstripping supply.

A third objective of this paper is to stimulate debate on how to ensure long-term dynamism and stability in European Standardization so that this economically-important activity can be sustained at the pace which will be required during the next decade.

#### Contents of the Green Paper

The Green Paper examines a number of issues relating to the organizational structure, financing and policies and practices of standardization bodies, both at European and national level, and assesses what changes may be needed to make standardization serve the European market more effectively.

It is divided into two parts.

Part One identifies the challenges and problems facing European standardization. Section I explains the importance of European standardization for the Community's Internal market, both for EEC Directives adopted under the so-called New Approach to technical harmonization and in terms of common technical standards in the Community market. Section II briefly describes the structure and operation of the European standardization bodies, CEN, CENELEC and ETSI.

Part Two puts forward possible solutions to the challenges facing European standardization in the 1990's and addresses the role of European industry and other parties in the standardization process, the organization of European standardization and the role of public authorities.

The Commission's main recommendations can be summarized as follows:

European Industry is called upon to give European standardization a much higher priority in its strategy for the internal market. Without greater involvement of industry in standardization work, and the commitment of more money and expertise to that process, the ambitious objectives which the Commission and European standardization bodies have set themselves may not be met. Lack of involvement at a strategic level by European industry is likely to be a high-cost option, and will reduce the potential of the internal market.

- . Standardization bodies are asked to take further steps to improve their efficiency and to consider restructuring the European standardization system to permit sectoral autonomy in standards-making while ensuring coordination through new European-level structures (a European Standardization Council and Board) which will lay down the strategic direction of European standardization.
- . Other recommendations include greater direct participation of interested parties in European standardization work, the creation of self-standing European Standards and a long-term policy for the financing of European standardization bodies, which should allow future Community funding of European standardization to decline from its present high levels over the next few years.
- . The Commission also recommends measures by which the European Standardization bodies might respond to their changing external environment, especially in Eastern Europe.
- . Governments are asked to step up their promotion and support of standardization at national and at European level. At the Community level, the Commission recommends that the Council of Ministers should decide upon the basic principles for future cooperation between the European standardization system and public authorities and commit itself to long-term financial support.

(A full summary of Commission recommendations is given in Section V of the paper).

#### Follow-up to the Green Paper

This Green Paper will be widely distributed by the Commission. Interested parties will be consulted in the three months following publication, with a view to identifying the main points of consensus.

The Commission will at the same time consult the European standardization bodies on the priority issues (efficiency, new structures and external relations) with a view to agreeing appropriate action as soon as possible.

The Commission will, in the light of the discussion of the Green Paper, also consider making proposals to the Council of Ministers for decisions to formalize its recognition and support of European standardization.

For further copies of the Green Paper, please apply preferably by letter or telefax to:  
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**PART ONE: THE CHALLENGE**



I. THE IMPORTANCE OF EUROPEAN STANDARDIZATION FOR THE INTERNAL MARKET

1. The elimination of technical barriers to trade has been recognized at the highest political level of the Community as a priority task in the programme for the completion of a market without internal frontiers by 31 December 1992. Since the adoption by the Council of the so-called "New Approach to technical harmonization and standardization" in 1985, the harmonization of European industrial standards in the areas covered by Community technical legislation has become an essential instrument in achieving that objective.

As 1993 approaches, European standardization is also being perceived as a tool by which to obtain the full economic benefits of that market. As well as being a means of eliminating regulatory barriers to trade, European standards are becoming an economic objective in their own right.

(1) European standards for legislation

2. In the Council Resolution of 7 May 1985 on the new approach to technical harmonization and standardization, which is now the basis of most Community technical legislation, reference to voluntary standards was accepted as the appropriate method of giving technical expression to the essential requirements of Community Directives. Under the new approach, EEC legislation confines itself to laying down the essential requirements to which products must comply in order to ensure the protection of public health or safety, of the environment or the consumer. European standards are developed in respect of each Directive in order to provide manufacturers with a set of technical specifications recognized in the Directive as giving a presumption of conformity to the essential requirements. The European standards concerned, the so-called "harmonized standards", remain voluntary; manufacturers are still able to put on the Community market products which either met other standards or no standards at all, subject to fulfilling the procedures for assessment of conformity laid down by the Directive.
3. The Council has now adopted several Directives based on the new approach (toys, simple pressure vessels, construction products, electro-magnetic compatibility, machines, personal protective equipment and gas appliances). Further Directives for medical devices and telecommunications terminal equipment are likely to be adopted this year. A large amount of work has been given to the European standardization bodies by means of individual "standardization mandates" from the Commission, which, after consultation of the standardization body concerned, establish the scope of the work, lay down any supplementary guidelines and fix the timetable by which the standards should be adopted.

(It should be noted that the EFTA countries, whose national standardization bodies are also members of the European standardization organizations, have consistently supported the Community's approach and contribute to the financing of mandated standardization work).

4. In a separate initiative, the Community has given harmonized European standards a prominent role in the opening up of public procurement markets. The revised Community Directives on public supplies and works<sup>(1)</sup>, and the proposed Directive which will shortly extend the same disciplines to such sectors as telecommunications, transport, energy and water supply, require purchasing entities to refer to national standards transposing European standards where they exist, subject to some limited exceptions.
5. The final success of the new approach and of the use of European standards in public procurement policy depends largely on the European standardization bodies. The pace at which the Community has adopted its legislation has resulted in an unprecedented increase in their workload. Since 1986 about 30 standardization mandates related to EEC legislation have been given to the two main European standardization bodies, CEN (Comité Européen de Normalisation) and CENELEC (Comité Européen de Normalisation Electrotechnique) for approximately 800 European Standards, most of which are to be completed by 1993<sup>(2)</sup>. More mandates are being prepared, which are likely to bring the total to over 1,000 standards. This demand for new standards work has led to a doubling of CEN/CENELEC Technical Committees and working groups; between December 1987 and December 1989 the number of Technical Committees alone rose from 122 to 239. The number of draft European standards in course of development in CEN rose from 220 in 1986 to 950 in 1989. Several thousand people currently participate in standardization work directly related to mandated European Standards.
6. Despite this response from the standards bodies the overwhelming part of this standardization work for the EEC internal market still has to be done before 1993. The annual output of new European standards is still low (about 150 were published by CEN/CENELEC in 1989) compared to the target of at least 800 additional standards needed for EEC legislation or the production of national standards in the main standards-producing countries of the Community<sup>(3)</sup>. Even though current CEN/CENELEC output represents a rapid increase from previous levels (19 in 1985, 102 in 1988), demand for European standards is increasing faster than supply.

(1) Reference: OJEC N° L 127, 20/5/88, p. 1.

(2) A list of the subjects for which standardization mandates have been given is contained in Annex I.

(3) Purely national standards published by France, Germany and the United Kingdom in 1989 were approximately 350, 650 and 400 respectively.

(II) European standards in an integrated market

7. The Community's interest in common European standards is not limited to those to which can be referred to in Community product legislation. More European standardization will benefit the single European market in all sectors, not only in those subject to regulation, by bringing about the very economic rationalization and competition which are prime objectives of the EEC Treaty.
8. The main motive for promoting any standardization activity is economic. The motivation for standardizing products, processes or services at the national level - namely, to reduce costs for producers and to improve transparency of the market for consumers - clearly exists at the European level. Given the current fragmentation of the European market, economic gains should be much higher from European standardization than from further national standardization. Common European standards will reduce research, production and distribution costs for producers, and promote more intensive competition, to the benefit of consumers, in respect of the non-standard features of products.
9. A second reason is that, even in the absence of technical regulations imposed by governments, national standards inhibit intra-Community trade and add to costs for manufacturers. National standards tend to shape customer preference for products. Important customers in national markets, such as government agencies, reinforce this effect by favouring national standards in public procurement. Pressure in favour of known national standards is also exercised by bodies such as insurance companies. More European standardization can gradually eliminate these hidden technical barriers to trade, by building up a degree of commonality in technical specifications where the market considers it useful.
10. For newly-developing technologies (information technology, telecommunications or new industrial materials) standards are often a pre-condition for industrial production or marketing. It is crucial that in these sectors, where markets are becoming global, standardization should, where possible, proceed at the international or at least the European level from the outset.

While Europe may have to come to terms with an inheritance of conflicting national standards in more traditional technologies for some time, it must not repeat history in the technologies of tomorrow. Standards for new technologies must also be delivered more quickly than ever before if they are to meet the needs of the market.(1)

11. For all the reasons alluded to above, the work which the European standards bodies are being called upon to do is extensive and growing quickly. For most of it (two-thirds of CEN's activity and one-half of CENELEC's is covered by standardization mandates from the Community and EFTA) the European standards bodies have contracted to complete the job within the next two-and-a-half years. This task alone requires more than doubling the current annual output of European standards. To this must be added the growing demand from industry for European standards in other areas, which, although perhaps less urgent, is of long-term economic importance.

European standardization is faced with a huge challenge. It is unlikely to succeed without a heightened level of commitment from those who want the standards and from the standardization bodies themselves.

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(1) The Community's research and development programmes already have an important role in pre-standardization. One of the objectives of the Community Bureau of Reference (BCR) is to facilitate the implementation of standards, and links between research, standardization and certification policies are currently being reinforced.

## II. EUROPEAN STANDARDIZATION TODAY

In this Section the origin and current structure of the three European standardization bodies (CEN, CENELEC and ETSI) is briefly reviewed, and the main constraints on expansion of their activity are identified.

### ( 1 ) CEN and CENELEC

#### Establishment and early development

12. The European standardization organizations were set up to ensure more effective implementation of international standards by national standardization bodies in Europe, the harmonization of divergent national standards or the preparation of standards where none existed. An association of European national standards, bodies from the member countries of the EEC and EFTA, the Comité Européen de Normalisation - CEN, was established in 1961, to be followed in 1962 by a similar organization for the electrotechnical area (CENELCOM, which became CENELEC in 1973).
13. In the first twenty years the output of these European organizations was low. CEN adopted 96 European standards between 1961 and 1982; CENELEC adopted in the same period 37 European standards and 303 harmonized documents (texts which, while containing common elements, allow for national deviations on a permanent or temporary basis). An important distinguishing feature of both organizations, however, was that their decisions on common European standards, once adopted, became binding on those members which had voted for them. Outside the limited area covered by common standardization work, national standardization bodies continued to develop their own standards independently.

#### Recognition by the Community

14. A stronger regional orientation was given to European standardization after 1983, as a result of initiatives taken by the Community in order to eliminate technical barriers to intra-Community trade.

15. The first of these was the adoption, on 28 March 1983, of Council Directive 83/189/EEC laying down an information procedure for standards and technical regulations. This Directive established the procedures for cooperation between the members of CEN/CENELEC and the Commission which still apply today. In particular, it provided for:

- the collection by the European standardization bodies of information from their members concerning their planned and current activity (Articles 2 and 4);
- requests from national standards bodies to be associated with the work of another body, or to have work taken up at European level (Article 3);
- a Standing Committee on Technical Regulations and Standards, composed of Member State representatives and chaired by the Commission, in whose work the European and national standards organizations could participate (Article 5);
- requests from the Commission, after consultation of the Standing Committee, to the European standardization bodies to draw up standards on specific subjects (Article 6) ;
- best efforts by Member State authorities to ensure that national standardization did not continue on subjects for which the Commission had requested European standards (Article 7).

Directive 83/189/EEC provided a mechanism through which national standardization could become open to collective scrutiny and the Community authorities could initiate European standardization work.

16. The Council of Ministers has formally recognized the role of European standardization in Community legislation. The Conclusions of the Council on Standardization of 1984 and the Resolution on the New Approach of May 1985 refer to the place to be given to voluntary standardization in future Community legislation, to the advantages of standardization for industrial competitiveness in the Community and in external markets, and to the need for "a very rapid strengthening of the capacity to standardize, preferably at European level".

17. In 1984 the Commission defined its relationship with CEN/CENELEC in General Guidelines for Cooperation. The Commission committed itself to following the New Approach as widely as possible, and to giving financial support to CEN/CENELEC. CEN/CENELEC agreed to coordinate their activity, to increase their resources, to align as far as possible with international standards, to ensure that all interested parties were associated with their work, and to maintain an effective information service. The financial aspects of Commission-CEN/CENELEC cooperation were laid down in a Framework Contract, first agreed in 1985 and renewed in 1989.
18. Following ratification of the European Single Act in 1987, the internal regulations of CEN/CENELEC were revised at the request of the Commission to permit the adoption and obligatory transposition of European standards by weighted majority vote. Under CEN/CENELEC rules, a draft European standard which receives a favourable vote from a qualified majority of member bodies is deemed to be adopted and is implemented by all. In the event that a standard does not receive a favourable vote from a majority of the entire CEN/CENELEC membership, the votes of members from the EEC Member States are counted separately and a qualified majority in favour requires the adoption of the standard by all EEC Member bodies and those EFTA member bodies which had voted in favour.<sup>(1)</sup> A similar procedure is also provided for in the rules of the European Telecommunications Standardization Institute (ETSI).

Present structure

19. The structure of CEN and CENELEC is that of associations of national standards bodies or electrotechnical committees, which have the last word on all questions relating to standardization activity at the European level. The budget of each European organization is voted by the national members, as are its internal rules, work programmes, and decisions on the allocation of resources. In contrast to the situation at national level, the governing bodies of CEN contain no direct representation of other interests than of professional standardizers (such as public authorities, manufacturers, or other users of standards), although CENELEC is closely associated with the electrotechnical industry and appoints some of its office-holders from industry.

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(1) It should be noted, however, that the weighted majority voting procedure used in CEN/CENELEC is not identical to that of the EEC Treaty. In particular, the condition for a proposal to be adopted that no more than 3 members may vote negatively constitutes a more restrictive approach than that of Article 148. The Commission has asked, so far unsuccessfully, for this condition to be removed from the CEN/CENELEC regulations.

20. CEN and CENELEC have responded with energy and commitment to the increasing demand for common European standards. The secretariats of both organizations have expanded quickly ; In the period 1985 - 89, staff members have increased from 10 to 70 in CEN, from 13 to 32 in CENELEC. A comparison of the annual output of the organizations in 1989 with that of, say, 1982 is also eloquent: CEN last year adopted almost seven times as many standards as in 1982 (130 instead of 19) and CENELEC six times as many standards and Harmonized Documents (126 compared to 20). But the distance between today's achievement and tomorrow's goal is still great. There are today about 1250 adopted European standardization documents of which about 800 in the electrotechnical area ; the number of national standards in Germany, France and United Kingdom, is about 20,000, 13,000 and 10,000 respectively (a significant proportion of these is identical to or related to international or European standards).
  
21. CEN and CENELEC have in recent years recognized the value of using the services of other organizations, the so-called "Associated Standardization Bodies" (ASB's), in the preparation of technical documents destined to become European Standards. A number of such bodies have been given this status, such as ECISS - European Committee on Iron and Steel Standardization, AECMA - Association Européenne des Constructeurs de Matériel Aérospatial, and EWOS - European Workshop for Open Systems, and have been responsible for the programming and drafting of documents which have only to be submitted to public enquiry by CEN and voting and CENELEC before becoming European Standards. Some of these bodies provide for direct participation in their work of interested parties at the European level. Approximately 100 European Standards so far adopted by CEN and CENELEC have been provided by ASB's.
  
22. Despite this impressive response to the challenge, the limits to CEN and CENELEC's flexibility are becoming apparent as European activity has intensified:
  - In spite of the introduction of weighted majority voting for final decisions on standards, a concern to achieve consensus on draft standards has led to long delays ;



- CEN/CENELEC have not yet applied the "project team" approach to work up initial drafts of standards system outside information technology field; instead the organizations continue to apply a "collegiate" system, in which every stage of the standardization process assures parity of treatment on a national basis:
- Procedures for public enquiry, examination of comments and final voting are widely judged to be slow and to delay the delivery of European standards, particularly for new technologies ;
- The requirement that adopted European standards be transposed as national standards in each member country before they can be applied leads to delays in their availability for use ;
- Procedures for the collection and distribution of information on national standardization activity under Directive 83/189/EEC have been applied loosely (in 1989 an independent report described the information as not responding to the needs of the market);
- Information on European standardization activity is not yet made available in a clear and comprehensive way to European industry.

These and other difficulties are the subject of further analysis and recommendations for change in PART TWO of this document.

(II) ETSI (European Telecommunications Standards Institute)

23. In its Green Paper on the development of a Community telecommunications policy (1987) the Commission proposed that the development of harmonised specifications would be accelerated by the creation of a new European standardization body. In response, the members of the European Conference of Postal and Telecommunications Administrations (CEPT) decided to establish such a body, which represented a radical change in approach to European standardization insofar as it provided for the direct participation at European level of all interested parties in standardization work rather than for representation through national delegations headed by the national standards body.

24. The establishment of ETSI in March 1988 outside the CEN/CENELEC framework posed a number of problems for the coherence of European standardization. In the first place, coordination between ETSI and CEN/CENELEC was necessary to avoid duplication of effort in standardization, particularly as the extension of telecommunications technology into other technologies made overlapping increasingly likely. A second problem was the need to ensure that the basic principles of standardization, such as transparency and independence of particular interests, were respected by the new body. Finally, there was a concern to ensure that the standards produced by ETSI would be effectively integrated into the corpus of European and national standards.
25. During 1988 and early 1989 the Commission negotiated with ETSI in order to resolve these issues. This led to amendments to the ETSI rules of procedure and to a commitment by ETSI to cooperate with CEN and CENELEC. Two years after the establishment of ETSI, the three European standardization bodies have recently decided to establish a Joint Presidents Group in which matters of common interest can be discussed, and have negotiated a cooperation agreement for the handling of technical work. Because of the pragmatic approach followed in recent months the dangers of duplication of work appear to have been avoided. At the time of writing, however, the Commission is still concerned that the role of national standards bodies in ETSI's standardization activity should be fully recognized.
26. ETSI has in two years already developed into a substantial organization. It currently has 212 members and 31 observers, representing PTT administrations, public network operators, manufacturers, users and other organizations. Its programme of work aims to deliver nearly 300 European Telecommunications Standards, of which 40 will be adopted this year and a further 260 are at the stage of public enquiry. The Commission has provisionally concluded a framework agreement with ETSI for one year, and has issued nine standardization mandates to it.

PART TWO: MEETING THE CHALLENGE

