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****I**

R E P O R T

of the Committee on Economic and Monetary Affairs and Industrial Policy
 on the Commission proposal for a Council Directive on the adoption of standards for satellite broadcasting of television signals
 (COM(91) 0242 final - C3-0290/91 -SYN 350)

Rapporteur: Mr Gérard CAUDRON

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PE 152.350/fin.

A Series: Reports - B Series: Motions for Resolutions, Oral Questions - C Series: Documents received from other Institutions (e.g. Consultations)

*

= Consultation procedure requiring a single reading

**II

= Cooperation procedure (second reading) which requires the votes of a majority of the current Members of Parliament for rejection or amendment

**I

= Cooperation procedure (first reading)

= Parliamentary assent which requires the votes of a majority of the current Members of Parliament

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By letter of 5 August 1991 the Council consulted the European Parliament, pursuant to Article 100a of the EEC Treaty, on the Commission proposal for a Council directive on the adoption of standards for satellite broadcasting of television signals.

At the sitting of 9 September 1991 the President of Parliament announced that he had referred this proposal to the Committee on Economic and Monetary Affairs and Industrial Policy as the committee responsible and to the Committee on Youth, Culture, Education, the Media and Sport, the Committee on Energy, Research and Technology and the Committee on the Environment, Public Health and Consumer Protection for their opinions.

At its meeting of 22 May 1991 the Committee on Economic and Monetary Affairs and Industrial Policy had appointed Mr Caudron rapporteur.

At its meetings of 18-20 June 1991, 11 July 1991, 17 September 1991, 24-26 September 1991, 10 October 1991, 15-16 October 1991, 21 October 1991, 30-31 October 1991 and 7-8 November 1991 it considered the Commission proposal and draft report.

At the latter meeting it adopted the draft legislative resolution by 23 votes in favour to 7 votes against with 10 abstentions.

The following took part in the vote: Beumer, chairman; Desmond, vice-chairman; Caudron, rapporteur; Barton, Bernard-Reymond, Bofill Abeilhe, Braun-Moser (for Gallenzi), Cassidy, Cox, De Donnea, Denys (Art. 111.2), De Vries (for Punset i Casals), Donnelly, Falconer (for Ford), Fayot (Art. 111.2), Fitzgerald (for Lataillade), Friedrich, Gasoliba i Böhm (for Visentini), Herman, Hoppenstedt, Junker, Lulling, Martinez (for Megret), Matteos Sierra (Art. 111.2), Mattina, Merz, Metten, Miranda da Silva (Art. 111.2), Newens (Art. 111.2), Patterson, Peijs (for Pinxten), Rogalla, Roumeliotis, Randzio Plath (for Read), Siso Cruellas, Smith A. (for Tongue), Speciale, Van Hemeldonck (for Hoff), von Wogau and Wettig.

The opinions of the Committee on Energy, Research and Technology, the Committee on the Environment, Public Health and Consumer Protection and the Committee on Youth, Culture, Education, the Media and Sport are attached.

The report was tabled on 8 November 1991.

The deadline for tabling amendments will appear on the draft agenda for the part-session at which the report is to be considered.

A

Commission proposal for a Council directive
on the adoption of standards for satellite
broadcasting of televisions signals

Commission text¹

Amendments

Amendment No. 1
Third recital

Whereas Council Directive 86/529/EEC, in particular in Article 2, established a dual regime by a limitation of the application of the Directive to only one type of satellite, and as a consequence a dual market appeared with the use of MAC standards in Broadcasting Satellite Service (BSS) and mainly PAL and SECAM in Fixed Satellite Service (FSS);

Whereas Council Directive 86/529/EEC, in particular in Article 2, established a dual regime by a limitation of the application of the Directive to only one type of satellite, and as a consequence a dual market appeared with the use of MAC standards in Broadcasting Satellite Service (BSS) and mainly PAL and SECAM in Fixed Satellite Service (FSS); whereas this must be avoided, in order to prevent a split between the satellite broadcasting services markets and the satellite market itself;

Amendment No. 2
Eighth recital

Whereas services established during the period of application of Directive 86/529/EEC according to its provisions should not be forced to a compulsory stop or change; however; incentives may be provided in order to support, in addition; the use of MAC standards, in particular through simultaneous transmissions ('simulcast');

Whereas services for satellite television broadcasting using 4 : 3 aspect ratio format should not be forced to a compulsory stop or change so as not to jeopardize the present market or inconvenience users; however, incentives may be provided in order to support, in addition, the use of the D2-MAC 16:9 standard, in particular through simultaneous transmissions ('simulcast')

Whereas it is essential to ensure adequate availability, in both qualitative and quantitative terms, of audiovisual programmes adapted to the new 16:9 format; whereas to this end Community funding should also be provided to promote vocational training in the new technologies;

¹ COM (91) 0242 final - OJ No. C 194, 25.7.1991, p.20

Amendment No. 3
New recital after eighth recital

Whereas the capacity of satellite systems and their cost do not in the medium term allow for the generalized simultaneous transmission of all programmes; whereas, therefore, it is necessary to select the programmes the simultaneous transmission of which is to be encouraged, on the basis of the criteria of the largest possible audience and uniform distribution throughout the Community;

Amendment No. 4
Ninth recital

Whereas in the interests of the consumer it is necessary to establish a common standard for conditional access systems for D2-MAC and HDTV services;

Whereas in the interests of the consumer it is necessary to establish a common conditional access system compatible with D2-MAC and HD-MAC services, without hampering the technological development of these systems; whereas, therefore, the best solution is a system consisting of a common access unit to which one or more smart cards can be added;

Amendment No. 5
Twelfth recital

Whereas broadcasters, satellite operators, equipment manufacturers and cable operators are fully committed to the earliest possible introduction of 16:9 D2-MAC services, in conformity with the objectives set out in Decision 89/337/EEC and, accordingly, have declared their intention to enter into a Memorandum of Understanding to which the Commission will also be a party;

Whereas it is essential that there should be complete agreement between broadcasters, satellite operators, equipment manufacturers and cable operators about the introduction as soon as possible, of 16:9 D2-MAC services in conformity with the objectives set out in Decision 89/337/EEC and whereas such agreement might be reached by means of a letter of intent involving the Commission, provided that the letter automatically becomes a Memorandum of Understanding;

Amendment No. 6
Fourteenth recital

Whereas European research efforts must stay in the forefront of all new significant developments such as a trend towards digital television broadcasting emissions and Europe has to consolidate its research efforts through collaboration;

Whereas European research efforts must stay in the forefront of all new significant developments such as a trend towards digital broadcasting emissions and an appropriate level of Community funding should be allocated to such research;

Amendment No. 7
Sixteenth recital a (new)

Whereas the Community has laid down a strategy for European manufacturers and the latter have made significant investments involving many jobs,

Amendment No. 8
Article 1

Member States shall take all measures to promote and support the introduction and development of advanced satellite broadcasting services for television programmes, using the HD-MAC standard for High Definition Television transmission and the D2-MAC standard for other transmission in the 16:9 aspect ratio format.

Member States shall take all measures to promote and support the introduction and development of advanced satellite broadcasting services for television programmes, using the HD-MAC standard for not completely digital High Definition Television transmission and the D2-MAC standard for other not completely digital transmission in the 16:9 aspect ratio format.

Amendment No. 9
Article 2

1. For any transmission of a television service in the High Definition Television format only the HD-MAC standard may be used.

2. For any transmission of a 625 line satellite television service receivable by viewers using domestic satellite receiving equipment, even if such transmissions are intended to be redistributed by cable networks, only the D2-MAC standard may be used:

- in respect of any service in the 16:9 aspect ratio format;
- in respect of any service carried by a satellite using the BSS frequency band (11.7 to 12.5 GHz);

- in respect of any satellite transmission of a service, starting after the date of implementation of this Directive, or using a satellite brought into operation after the date of implementation of this Directive.

1. For any transmission of a television service in the High Definition Television format that is not exclusively digital only the HD-MAC standard may be used.

2. For any transmission of a 625 line satellite television service receivable by viewers using domestic satellite receiving equipment, even if such transmissions are intended to be redistributed by cable networks, only the D2-MAC standard may be used:

- in respect of any service in the 16:9 aspect ratio format;
- in respect of any service carried by a satellite using the BSS frequency band (11.7 to 12.5 GHz), with the exception of satellites whose footprint is not exclusively European;

3. In respect of all other satellite transmissions of services as defined in the second indent of paragraph 2, starting after the date of implementation of this Directive and using a satellite brought into operation after the date of implementation of this Directive, the D2-MAC standard shall also be used with meaningful funding from the Community.

4. With regard to services in existence prior to the date of implementation of this Directive, extension of D2-MAC transmissions will be sought with meaningful funding from the Community:

- encrypted services from 1 January 1994 onwards; these services may also be simulcast using other standards (PAL, SECAM or D-MAC) in parallel.

- non-encrypted services from 1996 onwards after an evaluation of the situation by the Commission and reconsideration by the Community bodies concerned.

Amendment No. 10
Article 3

Satellite services in operation on 31 December 1991 and using D-MAC, PAL or SECAM standards, may continue to use the same standard for 625 lines 4:3 format transmissions after the date of implementation of this Directive, notwithstanding the provisions set out in the third indent of Article 2(2).

Deleted

Amendment No. 11
Article 4

Member States shall take all measures to ensure that as from 1 January 1993, all new television sets with a screen size greater than 52 cm and all new satellite receivers for sale within the Community have included within them the necessary means to receive D2-MAC signals.

Member States shall take all measures to ensure that as from 1 January 1994, all new television sets and all new domestic satellite receivers for sale or rent in the Community:

- in respect to all television sets with 16:9 format possess a D2 MAC decoder;

- in respect of all other such equipment, possess at least a standardized socket by means of which a D2 MAC decoder may be connected to the equipment permitting an Open Inter Face Standard.

Amendment No. 12
Article 6

In the case of all services using the D2-MAC standard, which are encrypted and employ a conditional access system, Member States shall take all the necessary measures to ensure that only a conditional access system fully compatible with D2-MAC and standardized as such by a European standardization organization by the date of implementation of this Directive is used.

In the case of all services using the D2-MAC standard, which are encrypted and employ a conditional access system, Member States shall take all the necessary measures to ensure that only a conditional access system fully compatible with D2-MAC and standardized as such by a European standardization organization by 1 January 1993 is used.

Amendment No. 13
Article 7

This Directive shall apply until 31 December 2001. Every two years, the Commission shall submit to the European Parliament, to the Council and to the Economic and Social Committee a report on the application of this Directive and, if necessary, make further proposals to adapt it to developments in the field of satellite television broadcasting.

This Directive shall apply until 31 December 1997. Every two years, the Commission shall submit to the European Parliament, to the Council and to the Economic and Social Committee a report on the application of this Directive. Before the date when this Directive is finalized the Commission shall submit proposals to the Council on a policy of standardization for HDTV, in accordance with the objective of achieving total harmonization of all television broadcasting media, whether analogue or digital; by satellite; cable or terrestrial redistribution. These proposals should take into account the results of European collaboration in research and development and the work of the relevant standardizing organizations in Europe.

Amendment No. 14
Article 7a (new)

7a. The rules laid down in this Directive shall be accompanied by simultaneous financial measures designed to support the creation of a European market for the D2-MAC; 16:9 and HD-MAC standards and commercial measures based on the signing, by the parties concerned; of a Memorandum of Understanding coordinating the actions of the various signatories.

Amendment No. 15
Article 8(1)

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive no later than three months after the date of its notification. They shall forthwith inform the Commission thereof.

When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive no later than six months after the signing of the Memorandum of Understanding or the notification of this Directive, whichever is the later. They shall forthwith inform the Commission of these measures.

When Member States adopt these provisions, these shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States.

DRAFT LEGISLATIVE RESOLUTION
(Cooperation procedure: first reading)

embodying the opinion of the European Parliament on the Commission proposal for a Council directive on the adoption of standards for satellite broadcasting television signals

The European Parliament,

- having regard to the Commission proposal to the Council (COM(91) 0242 final - SYN 350)¹,
 - having been consulted by the Council pursuant to Article 100a of the EEC Treaty (C3-0290/91),
 - having regard to the report of the Committee on Economic and Monetary Affairs and Industrial Policy and the opinions of the Committee on Youth, Culture, Education, the Media and Sport, the Committee on Energy, Research and Technology and the Committee on the Environment, Public Health and Consumer Protection, (A3-0308/91),
 - having regard to the Commission position on the amendments adopted by Parliament,
1. Approves the Commission proposal subject to Parliament's amendments and in accordance with the vote thereon;
 2. Calls on the Commission to amend its proposal accordingly, pursuant to Article 149(3) of the EEC Treaty;
 3. Calls for the conciliation procedure to be opened if the Council should intend to depart from the text approved by Parliament;
 4. Asks to be consulted again should the Council intend to make substantial modifications to the Commission proposal;
 5. Calls on the Council to incorporate Parliament's amendments in the common position that it adopts in accordance with Article 149(2)a of the EEC Treaty;
 6. Instructs its President to forward this opinion to the Council and Commission.

¹ OJ No. C 194, 25.7.1991, p. 20.

EXPLANATORY STATEMENTIntroduction

1. The rapporteur first looks at the documents which form the basis of the Commission proposal COM(91) 242 final, mainly the Council directive of 1986 on standards for direct satellite television broadcasting and the Council decision of 1989 on high-definition television. He also summarizes the main comments made by the European Parliament in its relevant reports.

2. The rapporteur summarizes the main points of the Commission proposal. He describes the approach adopted by the Committee on Economic and Monetary Affairs and Industrial Policy in considering these proposals (including the hearing of 18 September 1991) and the timetable for their adoption.

3. In the third section the rapporteur considers the implications for the EC of adopting or rejecting the Commission proposal on high-definition television. He declares himself to be in agreement with the Commission's general strategy but takes the view that the Commission's specific proposals are too rigid and must therefore be modified. He has tabled amendments accordingly, believing that the only way to achieve the objectives set out is to seek a broad consensus.

Developing a promotion strategy

4. For a long time Parliament has been actively concerned with the development of common European standards for satellite broadcasting and the promotion of high-definition television.

In its opinion of 22 October 1986 (DE VRIES Report A2-108/86) on the adoption of the MAC/Packet family of standards for direct satellite television broadcasting (COM(86) 1 final) the European Parliament made several important recommendations.

It called for common European transmission standards for DBS to be adopted in order to avoid a repetition of the division of the European market between PAL and SECAM and stressed that the adoption of a European HDTV standard (paragraph 7) was a more important policy issue.

It noted (paragraph 8) that a Japanese conquest of the HDTV market would have very serious consequences for the European electronics industry but that the outcome of the May 1986 Dubrovnik meeting of CCIR (where the Japanese HDTV standards were not adopted as the world norm) gave the European industry a breathing space, which must be fully used and not wasted. It also called (paragraphs 10 to 13) for the adoption of a European strategy on HDTV.

5. Nonetheless, the next Council directive (86/529/EEC of 3 November 1986) was inadequate in two respects, firstly because it created a double set of rules for satellite broadcasts (with compulsory use of the MAC/Packet system for broadcasts by high-powered satellites but not for the others) and, secondly, for institutional reasons, the final text of the directive being very different from that on which Parliament had been consulted.

6. However, over the next few years a European response to the HDTV challenge was formulated, notably through a consortium of European undertakings in the context of EUREKA (EUREKA 95 project), so that rapid progress in the development of new technologies was achieved. There were also some setbacks, arising particularly from the important decisions taken by ASTRA, which used the loophole in the 1986 directive to develop the PAL system rather than MAC.

7. By 1989 enough progress had been made for the Council to be able to adopt a decision on HDTV (89/337/EEC of 27 April 1989) defining the objectives of an overall strategy for the introduction of HDTV in Europe. On the basis of the report by Mr DE VRIES (A2-13/89), Parliament gave its backing to this strategy but stressed that its success depended not only on the hardware but also on the existence of the appropriate software. The European Parliament stressed that competition should not in any way create production or market domination monopolies and called for an appropriate role to be given to consumer organizations.

The Commission proposals in COM(91) 242 final

8. The directive currently in force (86/529/EEC) expires at the end of 1991. The aim of the Commission's proposals in COM(92) 242 final is to replace this directive with a new one which would lead gradually to the development of HDTV using the HD-MAC standard as the only European standard, with D2-MAC as the intermediate stage.

All new services and satellites (from the date of implementation of the directive onwards) would have to use D2-MAC exclusively. All services in PAL/SECAM in operation on 31 December 1991 would be allowed to continue, but there would be a Community financial incentive to use simulcast (simultaneous transmission of such services in D2-MAC). All equipment (satellite receivers and television sets with a screen size greater than 52cm) placed on the market would have to include within them the necessary means to receive D2-MAC signals; standardization by a European organization could be used. The directive would apply for 10 years, with biennial assessment reports for the Council and Parliament.

9. The Commission also seeks to couple the directive with a Memorandum of Understanding, which could be signed by the main economic operators involved and by the Commission and could include binding reciprocal legal undertakings by the broadcasters, satellite operators, equipment manufacturers and cable operators to take measures to promote 16:9 D2-MAC with the ultimate aim of introducing HDTV. A consortium of the signatories could be established and funding could be provided by the Community. This agreement would have a lifetime of five years with the possibility of renewal.

10. The Commission did not adopt this proposal until 5 July 1991, leaving Parliament little time in which to consider this complex subject. However, the rapporteur and Parliament's Economic Affairs Committee, conscious of the possibility of a legal vacuum if a directive is not adopted by the end of the year, have reacted as quickly as possible. A meeting of the committee was held in Strasbourg to consider the proposals as early as 11 July; at this meeting the rapporteur put five general and five specific questions to Mr Pandolfi (his written replies have been published in PE 152.371). It was decided at the same meeting that a special hearing in committee would be held on 18 September. No formal invitation would be issued by the committee but

all those interested in commenting on the Commission proposals would have the opportunity to do so.

11. The usefulness of this initiative was shown by the fact that representatives of 41 organizations contributed to this hearing (see Annex) and a large number of other organizations sent observers. A wide variety of opinions was expressed there, ranging from those who gave their full support to the Commission proposals or considered that they should be made stronger to those who considered them useless and likely to be overtaken by future technological developments. Between these two extremes there was a considerable number of organizations which supported many aspects of the proposal but had reservations as to some of the measures proposed (most of the contributions to the hearing had been written down in advance and were distributed to the members present).

12. Since the hearing the Commission has also held a meeting with Mrs Maij-Weggen, President-in-Office of the Council, who emphasized the importance which the Netherlands presidency attached to the proposals and the need to adopt them by the end of the year. One factor is complicating our task, namely the lack of progress in adopting a Memorandum of Understanding. A vicious circle has developed because some parties do not want to sign a Memorandum of Understanding if the directive is not adopted, but the adoption of the directive is conditional upon the signing of the Memorandum of Understanding. The Netherlands Minister envisaged the possibility of signing a letter of intent to be followed by a Memorandum of Understanding.

Comments on the directive

The implications for the European Community

13. In 1986, in response to the Japanese attempt to impose its MUSE standard as the world standard, the Europeans, who were determined to back the MAC family of standards, succeeded in warding off a decision in Japan's favour.

They did this by adopting a directive (86/529/EEC) making broadcasting in MAC/Packet compulsory for all satellites for direct broadcasting of the TDF1, TDF2 and TVSAT types.

Unfortunately this directive did not achieve its aim because, by using satellites not subject to the directive, some large European broadcasters were able to develop systems on the basis of the existing standards (PAL/SECAM) which were incompatible with the MAC standards.

14. Let us consider again the advantages of the D2-MAC system: the image quality it provides is a marked improvement on earlier standards, mainly because of its ability to receive images in 16:9 format; other advantages are its digitalized sound and the quality of its hi-fi. In addition, four sound channels are available, making multilingual broadcasts possible. The D2-MAC decoder will make it possible to receive HD-MAC broadcasts in 625 lines, which will ease the transition to the European HDTV standard.

Following on from D2-MAC, HD-MAC allows images to be broadcast in 1250 lines, giving quality equivalent to that of 35-mm films. The digital sound is the same as that of the D2-MAC standard.

The establishment of the HD-MAC standard as part of the EUREKA project has encouraged the Europeans to unite in technological research and develop synergies.

For those who support the MAC system as the way to a single HDTV standard, what is at stake is the future of the European consumer electronics and semi-conductor industry. Its opponents regard it as too great and too expensive a risk. In their view, Europe does not have the resources to succeed in this uncertain venture.

15. It must be realized that the television market and its industrial and cultural implications are exceptionally important.

In 1990 there were 300 million black-and-white televisions and 800 million colour televisions in the world. A figure of 1 billion colour televisions is forecast for the year 2000.

It should be added that a high-definition television set contains 10 times as many electronic components as a traditional set, which represents a market of crucial importance to our semi-conductor industry.

However, the introduction of a single European HDTV standard has much wider implications than Europe's stake in the television market:

The implications for industry:

If no European standard is introduced, leaving the field free for the Japanese and the Americans, Europe's technological mastery of the electronics of the future will be put at risk. Europe currently appears to be about 10 years ahead of the American digital standard and, in the view of many people, HD-MAC is already completely digital. Many Europeans believe that we must not let slip this opportunity, leaving others to dominate a key strategic sector, which would jeopardize Europe's technological, strategic and cultural independence.

But Europe's cultural independence is also at stake:

If no common European standard is adopted, there is no doubt where the programmes which will be broadcast in high definition will originate. Japan is currently building up a stock of programmes in the MUSE standard. If we wish to maintain and foster European culture by providing it with television outlets, we must adopt a Community standard. If we do not, the Japanese will have a virtual monopoly of our screens.

High-definition television will lead to the creation of new forms of expression and cultural broadcasting.

There is no doubt that the choice of a European standard, far from eroding the rights of consumers, will increase their freedom by offering them greater choice. A single standard is the only way of unifying and rationalizing the European market in broadcast programmes, even encrypted ones. And it is the only means of giving consumers a real choice.

Finally, the fact that the system would evolve from D2-MAC to H2-MAC would enable the consumer to change his equipment gradually, so that his investments and purchases would not lose their value. Furthermore, he would have the

benefit of the lower prices resulting from a single, unified and competitive market.

Let it be said, however, for the sake of completeness, that high-quality services and equipment in PAL and SECAM have been developed as a result of the loopholes in the 1986 Directive and that it would be unreasonable to dismiss these from one day to the next as 'profits and losses'.

They must be adapted and used to broaden the range of European equipment.

16. With regard to the Memorandum of Understanding, the rapporteur states that in his view, since the funding to be sought from the EEC must be of a reasonable level and limited in duration, it should be targeted at making available production, satellite broadcasting and cable relay programmes.

The basis of funding would therefore be:

- the cost differential arising from the introduction of 16:9 D2-MAC into production equipment;
- in the case of satellite broadcasting, part of the cost of simulcasting to be borne over a limited period determined, for example, with reference to a D2-MAC audience parameter;
- the additional expenditure devolving on cable operators who incorporate 16:9 D2-MAC.

17. The revision of the 1986 MAC Directive currently under consideration is neither aimed at nor should lead to the choice of a single European MAC standard being called into question.

It seems to me, in my capacity as rapporteur, to be an attempt to improve on the 1986 system in order to progress more rapidly and more effectively towards D2-MAC and HD-MAC, taking into consideration all of the situations and all of the parties involved in Europe, including some of the fears expressed at the hearing of 18 September 1991.

AMENDMENTS PROPOSED BY THE RAPPORTEUR

18. Most of the criticisms of the Commission proposal, including the many comments made at the hearing of 18 September, focused on Articles 2, 3 and 4. The rapporteur has therefore tabled amendments to these Articles.

19. The current Articles 2 and 3 have the major disadvantage of distinguishing between old and new services. The third indent of Article 2 refers to the mandatory use of D2-MAC by all satellites transmitting in 625 lines services starting after the date of implementation of the directive, whereas Article 3 allows 4:3 format services in PAL, SECAM or D-MAC to continue broadcasting indefinitely if they were in operation before 31 December 1991.

Your rapporteur proposes differentiating between old and new services in a different way. In the case of Article 2, he considers that Article 2(1), having received general support, should be retained in its present form, so that only HD-MAC may be used for HDTV and D2-MAC only for broadcasts in 16:9 aspect ratio format, the development of which is important for the years to come.

A more controversial question is what to do with the satellite services in 4:3 format. Should it be mandatory for them to be broadcast in D2-MAC immediately or after a certain time has elapsed, with or without the possibility of simulcasts? To remove this obligation would eliminate the limitation which has been criticized by some organizations and would have the advantage of considerably reducing the Community subsidies needed for simulcast. On the one hand, your rapporteur considers that this solution would reduce the efficacy of this directive and prevent it from having its full impact. The market would be given a misleading signal and the development of the wide screen and HDTV might be held up.

Nevertheless, your rapporteur proposes (Amendment 6) that satellite services in 4:3 should be compelled to use D2-MAC but be allowed to broadcast in D2-MAC and D-MAC/PAL/SECAM in parallel. This would apply to all new services. Old services would have to broadcast in simulcast as from 1 January 1993. If Amendment 6 is accepted, your rapporteur suggests (Amendment 7) that Article 3 be deleted.

20. The other Article which has been criticized is Article 4, which states that Member States should take measures to ensure that as from first January 1993 all new television sets with a screen size greater than 52 cm and all new satellite receivers for sale within the Community have included within them the necessary means to receive D2-MAC signals.

In its present form, this is an arbitrary ruling and should be amended. Your rapporteur has tabled an amendment (Amendment 8) which proposes that only sets capable of receiving satellite channels or those equipped with receivers for specialized cables should be provided with a standard socket to receive a D2-MAC decoder.

21. The third point which was the subject of a heated debate at the hearing of 18 September was the question of decrypting, which is covered by Article 6 of this Directive. Some people said very emphatically that this Article would

lead to a de facto monopoly and that the other conditional access systems should be given the chance to demonstrate their compatibility with D2-MAC.

Your rapporteur has therefore tabled Amendments 1 and 9 in order to give these systems the opportunity to demonstrate their compatibility with D2-MAC by 1 January 1993.

22. The rapporteur has tabled other amendments: Amendment 2 modifies the Commission text on the subject of the Memorandum of Understanding, which states that the parties are fully committed to the introduction of D2-MAC; the amendment says that it is essential for there to be full agreement between the various parties and proposes that the Memorandum of Understanding be preceded by a letter of intent.

Finally, your rapporteur would like to add that any Memorandum of Understanding should be open to all interested parties and not only to a few large operators. At the hearing some of those who spoke said that they had not been consulted. Your rapporteur considers that this situation should be remedied and that any Memorandum of Understanding should be as broad as possible (Amendment 2).

Amendment 3 seeks to make more precise the wording of Recital 14, which deals with one of the supplementary measures which should be taken. The rapporteur considers that the Community should support the Commission strategy on HDTV and should continue research on digital techniques. Projects such as those already established in the framework of RACE and EUREKA need ongoing financial support from the Community.

O P I N I O N

(Rule 120 of the Rules of Procedure)

of the Committee on Energy, Research and Technology

for the Committee on Economic and Monetary Affairs and Industrial Policy

At its meeting of 15 July 1991 the Committee on Energy, Research and Technology appointed Mr SÄLZER draftsman of the opinion.

The committee considered the draft opinion at its meeting of 28/29 October 1991 and adopted the conclusions contained therein by 8 votes to 6 with 2 abstentions.

The following took part in the vote: La Pergola, chairman; Sälzer, vice-chairman and draftsman; Adam, vice-chairman; Bettini, Caudron (for Hervé), Chiabrando, Desama, Ford Goedmakers (for Iacono), Lannoye, Mayer, Newman (for Sanz Fernandez), Pierros, Pompidou, Quisthoudt-Rowohl, Regge, Rinsche, Røvsing, Samland (for Linkohr), Schlee and Seligman.

Background

The strategic plan to supply Europe with a uniform, improved, and advanced television system, and at the same time to create internationally compatible standards, moved into its decisive phase in 1986.

Shortly after the International Radio Consultative Committee (CCIR) had, in May 1986, under pressure from Europe, postponed a decision on HDTV standards for four years until 1990, the major European media electronics manufacturers, the appropriate ministries in the Member States and the European Community agreed on an emergency programme to develop a European HDTV system. For Europe it was and is a matter of not leaving this field to Japan or the USA, either in technological or commercial terms. Japan in particular had developed its 'Hi Vision' version of HDTV earlier, and is in the process of pushing ahead with it.

The EUREKA '95 project adopted at the 1986 Ministerial Conference laid down the following principles for HDTV development in Europe: an evolutionary approach should be adopted, i.e. it should be compatible from the start with existing TV sets and thus consumer-friendly; and it was to build on the basis of a D2-MAC standard for direct satellites applying throughout Europe. It was to be introduced in stages at affordable prices, while competition from Japan and the USA was to be kept at bay.

The European Parliament confirmed and expanded this philosophy in its resolution on the Commission proposal for an action programme. It stressed the need to develop hardware and software in tandem, and calls for the avoidance of monopolies, despite the uniform standards, for the representatives of consumer organizations to be involved, and for the complementary development of a cable and satellite industry.

The main features of the Commission's 1989 action programme for 1991-1995 (MEDIA), are as follows:

- to develop a comprehensive strategy for a European HDTV;
- to begin a broadly-based campaign to promote and have adopted a European HDTV system;
- to create conditions in which European industry will feel confident enough to begin installing a working HDTV system applicable throughout Europe.

In its opinion in letter form on the proposal for a Council decision, the Committee on Energy, Research and Technology stressed the need for:

- political priority for a European HDTV standard,
- compatibility with existing receivers,
- compatibility between European and Japanese standards and
- a support programme for HDTV software.

The May 1990 CCIR Conference in Dusseldorf attempted to settle 27 contentious issues relating to a world-wide HDTV standard. In essence the following varying standards were to be brought into line:

NTSC (now in use in the USA and Japan) : 525 lines
PAL/SECAM (in use in Europe) :
625 lines
MAC (used in European satellite television) :
625 lines

with better resolution
MUSE (the Japanese HDTV standard) :
1125 lines
HDTV (proposed by the Europeans) :
1250 lines

Some peripheral areas, such as the provisions governing shade (colour) and, more importantly, screen size, have been standardized. This has given manufacturers the green light to prepare for the new developments. Agreement was not reached on the number of lines, of pixels per line, or of frames per second. The parties have again adjourned until 1995.

The proposal for a directive

1. This proposal is for a directive to review and broaden the scope of the current Directive (86/529/EEC) of 3 November 1986, which required the use of the MAC system in the Community, without discriminating between satellites broadcasting at different power levels and without laying down other standards or transitional periods.

2. The difficulty at present is twofold. The present directive expires on 31 December 1991 and a successor has to be drawn up, recognizing and extending its basic principles, providing continuity and reliable guidelines for consumers, broadcasters and equipment manufacturers. New developments representing a break with the coordinated technical progress which was the rule in the past have to be taken into account. Both new and traditional developments, which in their many forms have produced greater variety in practice, and in some measure fragmented the market, have to be reconciled with the goals and philosophy of the original directive.

There is the further need that not only should the successor directive meet or at least seek to accommodate the often conflicting interests of the parties involved, but that the Community as a whole, in the light of its scientific and technological position and its economic and industrial potential, has to realize the historic importance of this directive.

3. The old objectives, continuity, compatibility and competitiveness still apply. New objectives have been added: there now has to be standardization and introduction of a high-definition television technology. Moreover, technically widely disparate systems, which are at different development stages, have to be coordinated. Conventional PAL/SECAM generation television sets, satellite operators and film and programme makers must continue to have a market, and yet the road must be open to the future HDTV via D2-MAC, and finally, scientists and researchers must not be prevented from coming up with new, as yet unthought of solutions.

4. Assessment of the proposed directive

The Committee on Energy, Research and Technology approves the general thrust of the proposed directive. It maintains the continuity of progress towards

European adoption of HD-MAC via D2-MAC as the intermediate stage; it introduces a new 16 : 9 format for high definition television and obliges television set manufacturers to make all sets above a certain screen size capable of receiving D2-MAC from a not too distant date (1 January 1993).

The standards and deadlines are to be welcomed. The parties involved and their interests differ too widely for market forces alone to be enough to ensure the breakthrough and dissemination of the new technology. HDTV in Europe would be sacrificed on the altar of vested interests. Europe has decided in favour of the HD-MAC system and it makes sense to use guidelines to coax industry, public institutions and consumers into using the new technology. Finally, by their impact on industry, research and investment, standards, carefully applied, can be instrumental in technical reform and renewal for the global competitive struggle.

5. The committee does however suggest to the committee responsible that more options be left. Thus, in addition to the technical commitment to D2-MAC and HD-MAC, broadcasting and receiving under PAL/SECAM standards should continue to be allowed. The technical conversion would be too extensive, the break too abrupt, and the proposed abrupt across-the-board changeover possibly technically too inflexible, if D2-MAC is the only standard allowed to be used for new services.

6. Although the 'simulcast' principle could initially be unlimited in time, financial aid for conversion should not, so that the parties involved might have a direct incentive to adopt the new technologies.

The inclusion of the financial measures in the Memorandum of Understanding may be adequate for the parties concerned, but the MOU, being difficult to challenge, is no substitute for the Directive. The committee responsible is asked to have the financial measures provided for by way of support for conversion to D2-MAC and HD-MAC directly incorporated in the directive. Linking financial incentives to signature of the MOU will not persuade many to sign if they are dissuaded from doing so by other criticisms. It might however deter others, who are prepared to accept the directive.

7. The interim D2-MAC stage and the provisional decision in favour of analogue rather than digital transmission will encourage gradual technological innovation and development. Renewal of major, complex and heterogeneous systems such as television in the European Community tend to be evolutionary rather than revolutionary. If we balk at the time and cost but also the opportunities and experience of a learning curve there is a risk that technical innovation and progress will fall by the wayside.

Adopting analogue transmission technology does not at all rule out further development and the subsequent introduction of digital technology. Research strategy does however dictate progress and exploitation across the whole spectrum of technology from the outset. HDTV can therefore be of the utmost importance to medicine, meteorology, environmental monitoring and analysis, geography, photography and many other fields as well as television in the stricter sense.

The Committee on Energy, Research and Technology requests the committee responsible, the Committee on Economic and Monetary Affairs and Industrial Policy to incorporate the following amendments in its report:

Commission proposal

Amendments

(Amendment No. 1)

Seventh recital

Whereas services established during the period of application of Directive 86/529/EEC according to its provisions should not be forced to a compulsory stop or change; however, incentives may be provided in order to support, in addition, the use of MAC standards, in particular through simultaneous transmissions ('simulcast');

Whereas services established during the period of application of Directive 86/529/EEC according to its provisions should not be forced to a compulsory stop or change; however, incentives will be provided over a period of at least 5 years in order to support the conversion to simultaneous transmissions ('simulcast');

(Amendment No. 2)

Article 2(2) and (2a) (new)

2. For any transmission of a 625 line satellite television service receivable by viewers using domestic satellite receiving equipment, even if such transmissions are intended to be redistributed by cable networks, only the D2-MAC standard may be used:

- in respect of any service in 16 : 9 aspect ratio format;
- in respect of any service carried by a satellite using the BSS frequency band (11.7 to 12.5 GHz);
- in respect of any satellite transmission of a service, starting after the date of implementation of this Directive, or using a satellite brought into operation after the date of implementation of this Directive.

2. For any transmission of a 625 line satellite television service receivable by viewers using domestic satellite receiving equipment, even if such transmissions are intended to be redistributed by cable networks, the D2-MAC standard may be used:

- in respect of any service in 16 : 9 aspect ratio format;
- in respect of any service carried by a satellite using the BSS frequency band (11.7 to 12.5 GHz);

Deleted

2a. All satellite services beginning after the date the Directive is brought into force, or using a satellite which becomes operational after the date the Directive is brought into force, may simulcast in D2-MAC, as well as PAL, SECAM or D-MAC, for which the European Community has offered funding in certain circumstances.

(Amendment No. 3)
Article 3

Satellite services in operation on 31 December 1991 and using D-MAC, PAL or SECAM standards, may continue to use the same standard for 625 lines 4:3 format transmissions after the date of implementation of this Directive, notwithstanding the provisions set out in the third indent of Article 2(2).

Satellite services in operation on 31 December 1991 and using D-MAC, PAL or SECAM standards, may continue to use the same standard for 625 line 4:3 format transmissions on the same scale as before, after the date of implementation of this Directive.

(Amendment No. 4)
Article 4

Member States shall take all measures to ensure that as from 1 January 1993, all new television sets with a screen size greater than 52 cm and all new satellite receivers, for sale within the Community have included within them the necessary means to receive D2-MAC signals.

Member States shall take all measures to ensure that as from 1 January 1993, all new television sets have a socket to allow a D2-MAC decoder to be fitted internally as an optional extra at the time of purchase or at any time after purchase. Charges for the use of a D2-MAC decoder should be on a monthly basis for those users who do not use their television all the year round.

(Amendment No. 5)
Article 5, second indent

Not applicable to English text

OPINION

(Rule 120 of the Rules of Procedure)

of the Committee on the Environment,
Public Health and Consumer Protection

for the Committee on Economic and Monetary Affairs
and Industrial Policy

Draftsman: Mr Hemmo Muntingh

At its meeting of 27 September 1991 the Committee on the Environment, Public Health and Consumer Protection appointed Mr Hemmo Muntingh rapporteur.

At its meetings of 16 October 1991 and 29 October 1991 it considered the draft opinion.

At the last meeting it adopted the conclusions as a whole by 23 votes to 1 with 2 abstentions.

The following took part in the vote:

Schleicher (Vice-Chairman), Scott-Hopkins (Vice-Chairman), Iversen (Vice-Chairman), Muntingh (Draftsman), Alavanos, Alber, Banotti, Bjornvig, Bowe, Canavarro, Caudron (for Avgerinos), Ceci, Green, Car. Jackson, Jensen, Junker (for di Rupo), Kuhn, Langenhagen (for Chanterie), Monnier-Besombes, Partsch, Pimenta, Roth-Behrendt, Rothe (for Bombard), Santos (for de la Camera Martinez), Simmonds, Vittinghoff,

Introduction

What is High Definition Television?

HDTV will provide a sharper, better quality television picture. The European version will be broadcast in 1250 lines and with 50 pictures a second as compared to the present standard which has 625 lines with 50 pictures a second.

The colour system in use in the UK and most of Europe (apart from France), is known as PAL. There is another family of colour systems which is more technologically advanced, known as MAC. Two variants of this group are known as D-MAC and D2-MAC. Both these give a significant improvement on PAL in colour quality and picture sharpness.

Unlike the Japanese HDTV system (MUSE), which is already operational in Japan, the European HDTV can be compatible with existing PAL and SECAM standards, which means that viewers will be able to receive HDTV programme on their current television sets, although they will need to purchase a decoder to receive transmissions and, of course, will not receive the better quality definition.

New widescreen television sets to take advantage of the new technology have already appeared on the market. With these, the width and height are in the ratio 16:9, instead of the current 4:3. The 16:9 format - the same as is used in the cinema - is apparently better suited to the human eye. It should be noted, however, that the 16:9 format can be used by several different broadcasting standards, including D2-MAC (which is available now), PAL Plus (which will be available soon), HD-MAC (which should be available in the mid to late 1990s, and a fully digital system (which may be available shortly thereafter).

There is general agreement that the 16:9 format and HDTV are where the future lies. There is no agreement, however, about how (ie by using which standard) we should get there.

Background

In 1986, the Council of Ministers adopted a Directive¹ which advocated a step-by-step approach to the introduction of High Definition Television (HDTV) in Europe. The route chosen was MAC - D2-MAC - HD-MAC. The Directive was intended to oblige satellite operators, producers and television stations to adopt the MAC standard for high power Direct Broadcasting Satellites (DBS), this being the first step along the chosen route to HDTV. At this time DBS systems were thought to be the only ones capable of transmitting signals to small receiving dishes situated on individual households. Rapid technological advances very quickly opened up a loophole in the Directive, since it became possible to transmit TV signals from medium power telecommunication satellites, which were not covered by the Directive.

It was this loophole that was exploited by the Luxembourg based Societé Europeen des Satellites (SES), the owners of the Astra satellites, in offering the possibility to broadcasters such as Sky TV to transmit in conventional PAL

¹ Council Directive 86/529/EEC, OJ No L 311, 6.11.1986, p.28

format directly to dishes on peoples' homes. PAL is the dominant colour TV system currently operating in Europe (with the exception of France, which uses the SECAM system), and so most consumers did not need to change or modify their TV sets in order to watch these programmes. (Direct Broadcasting Satellites transmitting MAC signals oblige an upgrading of existing TV receivers.)

The 1986 Directive therefore essentially failed in its purpose. The vast majority of viewers of satellite TV programmes do so using the old existing TV transmission standard. The first step along the road to HDTV has not really yet been taken. What are we to make of this? Have consumers been denied an opportunity to experience better quality pictures (at a price), or have they indicated their preference for a "cheap and cheerful" technological strategy rather than more expensive technological virtuosity? It seems to this Committee that the answer is quite clearly the latter. The Commission attempted to direct the market place, and the market place cleverly found a way of evading this direction. Such, we suspect, is the fate of most dirigiste approaches to technological developments.

The new proposed Directive

The new proposal from the Commission is quite clearly dirigiste: it is attempting once more to tell the market place what it wants - HDTV via D2-MAC and HD-MAC. It does this by closing the previous loophole, requiring new services and satellites coming into service to use the D2-MAC standard, and specifies that TV receivers sold in the EC after 1 January 1993 must contain a decoder for receiving D2-MAC.

Alongside the proposed Directive, the Commission has drawn up a draft Memorandum of Understanding (MOU) which is to be signed by representatives of the audiovisual industry, satellite and cable operators, broadcasters and equipment manufacturers. The MOU lays down a number of guidelines including the promotion of the D2-MAC standard in the 16:9 format. It also promises financial incentives to encourage companies to broadcast simultaneously in both PAL and D2-MAC, by helping to pay for new equipment, programmes and processes. In the explanatory memorandum to the Commission proposal, it is stated that:

"The Commission envisages the commitment to this purpose of a sum of the order of about 100 mECU per year over a five-year period. The informal discussions around the MOU have taken this direction. As far as 1992 is concerned, the PDB already foresees a sum of this order of magnitude under several lines."²

Commentary

The Committee on the Environment, Public Health and Consumer Protection can hardly believe its eyes. It has been arguing for years for the establishment of a European Fund for the Environment, and this year finally we have the LIFE programme with its budget of some 30 mECU. Europe faces enormous environmental problems demanding massive investment in re-structuring, conservation, and clean-up operations, yet the Community resources allocated to such measures pale into insignificance compared with the sums it is apparently prepared to

² COM(91) 242 final, p.9

pay for a marginal improvement of picture quality on television sets. This is a ridiculous state of affairs, Why on earth should public money be used to subsidise such a development? If the manufacturers, broadcasters and satellite operators think this is what the public wants, then they should be prepared to finance these developments themselves. The reason they are not prepared to do so is quite clear: there is serious disagreement between the different sectors of the industry about the appropriate strategy to pursue. Where does this leave the consumer?

The implications for consumers

1. Consumers will have to incur extra expenses to receive the improved HDTV picture. Although changing to D2-MAC standard will not mean that all television sets will need to be replaced, consumers will need to purchase a decoder for a PAL television to receive transmissions broadcast in MAC. To obtain the advantage of the improved picture quality of MAC, the consumer will also need a television fitted with a SCART socket which keeps separate the red, green and blue signals that go to make up the colour picture. However, to receive HDTV broadcast pictures in HDTV quality, the consumer will need a new television set when HDTV becomes available in 1996.
2. If all television sets marketed after 1 January 1993 have to be fitted with a D2-MAC decoder it is estimated that this could force up the price of a 22 inch television set to more than 1 100 ECU³.
3. The consumer will only derive the benefit from this new television if he subscribes to satellite television. D2-MAC is not suitable for terrestrial broadcasting. Therefore most purchasers of new TV receivers will be paying for the inclusion of a device which they do not want and cannot use.
4. The later generation of HDTV sets will be expensive, since the technology is very sophisticated. It is extremely unlikely that consumers will be prepared to spend around 7 000 ECU for a television set. A recent report⁴ suggests that consumers will not be prepared to buy HDTV sets at a price more than 800-900 ECU.
5. It would seem that the benefits of HDTV only become evident on a TV screen larger than 75cm. The report mentioned above states that a set of this size could not be moved through a domestic doorway, and it is debatable who many consumers actually want a TV screen that large.

Moreover, cathode ray-tube technology inevitably means that the set itself would be large and heavy. Large screen TVs will probably only become popular when they can be hung on walls as flat screens. This innovation still seems to be a long way off.

6. Consumers, as taxpayers, will also have to bear the cost of the 500 mECU that the Commission is proposing to spend to make the transition from PAL to HD-MAC.
7. It is far from obvious that the purchase of 'intermediate' TV receivers incorporating D2-MAC technology makes any sense, since such receivers could

³ Television week magazine of 19 June 1991

⁴ By Dermot Nolan of Coopers & Lybrand Deloitte Media Group

not in future receive HD-MAC. Consumers need to consider whether it is in their interests to adopt D2-MAC now and to proceed gradually to HDTV, or to stay with PAL and go straight to HD-MAC HDTV, or stay with PAL, enhanced PAL and the wide-format screen and develop digital HDTV in Europe.

8. One approach which has been advocated is that HDTV should be achieved in a number of stages without having to use the MAC standard. This would include promoting the 16:9 format television sets. Companies should start to broadcast in HDTV when it is ready, whilst continuing to transmit, at the same time, in the older standards (simulcast). It should be noted that there is no necessary connection between the 16:9 format and D2-MAC - HD-MAC. The 16:9 format can be used for other standards, such as PAL Plus. Nor is the link between D2-MAC and HD-MAC quite as obvious as it might seem from the nomenclature.

The digital alternative

The most rapid technological advances in recent years, and particularly during the last two years, have been in the area of digital HDTV. Whereas the Japanese MUSE system is analogue based, and the HD-AC is partly analogue, both seem threatened by recent work in the USA and in Europe on fully digital systems. The fact that the Japanese MUSE TV receivers cost about 30 000 ECU might also explain their less than impressive market performance.

It is extremely difficult to forecast the pace and direction of technological advance, but there are strong indications that digital HDTV technology, by analogy with the rapid spread of digital electronics in recent years, will present a powerful and possibly overwhelming challenge to the HD-MAC system. The Commission may therefore be backing the wrong horse and forcing European consumers to do the same. The major interests in this horse are European: Philips of the Netherlands and Thomson of France. Yet in the USA the same two firms are part of a joint venture confidently developing digital HDTV.

One of the standard arguments produced by the advocates of on-going technological development programmes which have begun to look a little suspect in terms of potential market-place payback, is to say: "Look at how much we have already spent! We can't waste all of this money by switching to a completely different approach!" We heard this about Concorde. We heard it again about fast-breeder reactors. It comes as no surprise that precisely these arguments are being used by supporters of the new Commission proposal.

The representative of Eureka 95 HDTV (the HD-MAC project) at the recent hearing conducted by the Committee on Economic and Monetary Affairs and Industrial Policy observed that:

"By the end of 1989, in Phase 1, more than 2000 man years had gone into the project. Phase 2 - up to 1992 - involves another 3400 man years

"It is sometimes suggested that we should now discard all this work and start again with the development of a digital system. Frankly, those who say this have not studied the reality as we have."

The Committee on the Environment, Public Health and Consumer Protection does not know whether we should now discard all this work. But it wants the question to be asked. It wants a critical independent appraisal of the

different HDTV technological strategies. It wants this to be carried out before any decision is made on the new proposal. It does not believe that the Commission is capable of carrying out or organising such an appraisal, since it is clearly identified with one of the technological strategies to be investigated.

The Committee therefore requests Parliament's STOA Programme to organise this appraisal, since it was precisely for this kind of task that STOA was established - to give advice to Parliament which is independent of the Commission.

Previous investment of time and money in particular technologies is irrelevant. The question to ask is, "what is the likely investment, and what is the likely return on this investment, from today onwards?"

The key point is that real world technologies are social as well as technical phenomena - successful innovation occurs when serious account is taken of the social and market realities which will determine the acceptability of the new technology, whereas technologies which are developed in social isolation from potential customers and users often do not take this aspect seriously. We saw this with Concorde, we are seeing it with satellite remote sensing, and we are seeing it with bovine somatatrophin.

We do not think that the Commission has taken this point sufficiently seriously in its attempt to force the market to accept its chosen technological strategy. It seems to us that certain manufacturers' interests and commitments have been given more weight than those of broadcasters, satellite operators, and consumers. We think that it is too early to decide definitely on the standard which should be applied in Europe. We do not accept that the situation is urgent, since we do not think that consumers will show much interest in HDTV until cheap flat large screen TVs are available. In the meantime, they are likely to be more concerned about programme quality than picture quality: the prospect of being able to watch moronic game shows in even better detail is not one to set the pulse racing. Furthermore, attempts to protect European manufacturers from Japanese and American competition by Fortress Europe non-tariff barriers such as idiosyncratic standards setting is not a very intelligent policy: the real outcome will be determined by rapid product innovation, efficient manufacturing processes, and forceful marketing.

Conclusion

The Committee on the Environment, Public Health and Consumer Protection requests the Committee on Economic and Monetary Affairs and Industrial Policy to reject the Commission proposal, pending a full and independent appraisal of competing HDTV technologies to be carried out for Parliament by STOA.

O P I N I O N

(Rule 120 of the Rules of Procedure)

of the Committee on Youth, Culture, Education, the Media and Sport
for the Committee on Economic and Monetary Affairs and Industrial Policy

Draftsman: Mr HOPPENSTEDT

At its meeting of 16 July 1991 the Committee on Youth, Culture, Education, the Media and Sport appointed Mr Hoppenstedt draftsman.

At its meetings of 22 October and 30 October 1991 and it considered the draft opinion and adopted the conclusions by 10 votes to 4 with 3 abstentions.

The following took part in the vote: Barzanti, chairman; Simeoni, vice-chairman; Banotti, vice-chairman; Hoppenstedt, rapporteur; Barrera I Costa; Coimbra Martins; Estgen; Gil Robles Gil Delgado (for Gangoiti Llaguno); Gröner; Junker (for Galle); Kellest-Bowman (for Stewart-Clark); Lauga; Maibaum (for Kostopoulos); Oostlander; Pack; Schwartzenberg (for Gallo) and Mebrak-Zaidi.

BACKGROUND

The MAC-Packet Directive of November 1986 (86/529/EEC) requires the use of a MAC-packet family transmission standard for Member States' satellites broadcasting within the frequency range laid down by WARC 77. National or international satellites operating in the fixed satellite services (FSS) frequency range were not affected by this provision.

Article 3 of the Directive lays down that by 31 December 1991 the Commission should submit to the Council of Ministers a proposal adapting or revising the directive in force.

CURRENT SITUATION IN THE INDUSTRY

Since 1986 satellite broadcasting in Europe has given rise to a new industry that differs sharply from the plans and suppositions of the late 1970s and early 1980s, which underlay the WARC 77 decisions and the directive on MAC-packet standards.

1. Satellite systems

The development of national broadcasting satellites (direct television satellites) has been quite different from what was expected in 1977. As a result of advances in technology, satellite television using smaller aerials and reduced transmission power has become feasible. The 1977 plan was not, however, simply overtaken by the advance of technology; it failed to meet the new requirements for regional and Europe-wide markets on account of its rigid preoccupation with national footprints. Moreover, the national allocation of five transmission channels per satellite turned out to be uneconomic, especially with regard to the move towards a single market for 'television without frontiers' (EC Directive 89/552/EEC).

The growing gap between planning and reality was not without consequences: the sole private satellite project fell through, and the future of the state-subsidized broadcasting satellites, which are competing for markets as well as for customers, is most uncertain.

The successful European satellite systems Eutelsat, Intelsat, DFS, Kopernikus, France Télécom and ASTRA all operate in the fixed satellite services (FSS) frequency range. These medium- and low-powered satellite systems were designed to satisfy market requirements. They offer the necessary footprints, and reasonably priced equipment is available for individual reception or for connecting to cable networks. More than 26 million cable households receive programmes from a selection of 50 channels distributed via these satellites; in addition more than 2 million households today receive a variety of programmes direct through dishes via the ASTRA and DFS Kopernikus satellites. This contrasts with the negligible number of households catered for exclusively by DBS satellites.

2. Transmission standards

Unlike terrestrially distributed television, which uses amplitude modulation (AM), satellite transmissions employ frequency modulation (FM). Consequently, it is necessary to buy a special receiver in order to receive such programmes

direct, offering - in theory - a unique opportunity to introduce a new transmission standard.

This was the background to the development of the MAC standard, which is not compatible with existing standards for terrestrial transmission. The MAC directive made MAC transmissions compulsory for broadcasting satellites (DBS). In the mid-1980s, MAC also won the backing of satellite operators planning the launch of medium-power satellites and of a number of programme suppliers.

Yet two drawbacks prevented MAC from receiving the general support of the industry.

- (a) The EC Member States could not agree on a common MAC standard, paving the way for fragmentation of the market even before programme transmissions started.
- (b) The European industry was not under any obligation to provide the necessary equipment in time, nor did it supply the equipment required by the market, the programme suppliers or the satellite operators to coincide with the start of operations.

Thus it was that the industry came to select PAL as the de facto standard for most national markets (comprising about 28 million households by now), and the 50 or so European suppliers use FSS satellite systems to distribute their programmes.

IMPROVED TELEVISION SERVICES

One market-oriented step, fully consistent in terms of industrial policy, in the transition to HDTV entails the introduction of the 16:9 screen format on new wide-screen sets. Receivers of this type may be compatible with HDTV and there are no technical obstacles to employing PAL and/or MAC for wide-format transmissions.

It would be shortsighted and economically unjustifiable to concentrate on the current MAC receiver market (or rather the market it is hoped to create with the law's help) in order to guarantee the success of wide-format sets - in the belief that impeding the market is useful - by forcing programme suppliers to transmit in a new, virtually non-existent standard, without heeding the economic consequences for suppliers and consumers. What is more, this strategy would fail to build and capitalize on the realities of the European television market. The current television market is structured as follows:

- A 130 000 000 Viewers throughout Europe, receiving programmes in PAL or SECAM supplied by the economically strongest companies;
- B 100 000 Viewers receiving MAC programmes via DBS satellites;
- C 25 000 000 Viewers receiving programmes in PAL or SECAM via cable networks, supplied by medium- and low-power satellites;
- D 2 500 000 Viewers receiving PAL programmes direct from medium-power satellites.

These figures clearly show that market segment A offers the greatest potential for new services, particularly wide-format broadcasts. On the other hand, market B may profit from the existing MAC directive and the patent protection linked to it, in competition against hostile rivals; but it has the least potential by far with regard to wide format and HDTV. Market segment D is admittedly somewhat larger, but still represents only a small fraction of the market. The faster growth shown by this segment is due to its consistent commercial orientation. As already explained, a strategy running counter to the market would jeopardize the development of this market segment. From this it is quite clear that the launch of wide format via both standards - PAL and MAC - is the best strategy. This does not seal off any options with regard to the development of a future HDTV standard.

CONCLUSION

The revision of the EC directive should be carried out in the knowledge that - regardless of the standard selected for European HDTV - success is not only not threatened by the continued use of PAL in satellite broadcasting but, indeed, can only be guaranteed by the economic success of the suppliers. Given all the terrestrial programmes, the introduction of HDTV will only be feasible if parallel broadcasting in the existing standard is employed, and must not lead to market losses for suppliers relying on satellite distribution.

The Committee on Youth, Culture, Education, the Media and Sport calls on the Committee on Economic and Monetary Affairs and Industrial Policy, as the committee responsible, to incorporate the following amendments in its report:

Commission proposal

Amendments

(Amendment No. 1)
Fourth recital a (new)

Whereas the success of the European strategy for High Definition Television depends on the development of European programme production;

(Amendment No. 2)
Fifth recital a (new)

Whereas the global strategy for European HDTV standards must provide for measures designed to protect the people of Europe from cost increases involved in the purchase of the new equipment needed;

Commission proposal

Amendments

(Amendment No. 3)
Sixth recital

Whereas HD-MAC has been developed as the European transmission standard for HDTV services based on those criteria of compatibility and evolution and D2-MAC offers the best available path towards the development of HDTV with wide-screen 16:9 D2-MAC as the main step in that direction;

Whereas HD-MAC is to be developed as the European transmission standard for HDTV services based on those criteria of compatibility and evolution and D2-MAC is to be introduced as a possible path towards the development of HDTV with wide-screen 16:9 D2-MAC as a major step in that direction;

(Amendment No. 4)
Seventh recital

Whereas there is a need to establish common standards for satellite transmission as an enabling element for effective free market competition taking into account that standards promote competitiveness by lowering costs for producers, shaping customer preferences for products by their familiarity, and enabling the emergence of new markets, particularly for developing technologies, where they are becoming a pre-condition for industrial production or marketing;

Whereas there is a need to establish and move as rapidly as possible towards the adopting of common standards for satellite transmission as an enabling element for effective free market competition taking into account that standards promote competitiveness by lowering costs for producers, shaping customer preferences for products by their familiarity, and enabling the emergence of new markets, particularly for developing technologies, where they are becoming a pre-condition for industrial production or marketing;

Commission proposal

Amendments

(Amendment No. 5)
Eighth recital a (new)

Whereas the establishment of a single European high definition standard would be one way of facilitating the development of European productions, which would help to enhance a cultural Europe;

(Amendment No. 6)
Eighth recital b (new)

Whereas it is in the interests of consumers and European people in general for the Community to assist the development of European high definition television programmes;

(Amendment No. 7)
Eighth recital c (new)

Whereas it is essential to ensure adequate availability in both qualitative and quantitative terms of audiovisual programmes adapted to the new 16:9 format; whereas to this end Community funding should also be provided to promote vocational training in the new technologies;

Commission proposal

Amendments

(Amendment No. 8)
Eighth recital d (new)

Whereas one of the fundamental purposes of Community audiovisual policy is to offer the people of Europe access to the greatest possible variety of television channels;

(Amendment No. 9)
Eighth recital e (new)

Whereas worldwide satellite television broadcasting systems must be compatible, to enable consumers, in particular those in Central and Eastern Europe, to have access to as many programmes as possible;

(Amendment No. 10)
Ninth recital

Whereas in the interests of the consumer it is necessary to establish a common standard for conditional access systems for D2-MAC and HDTV services;

Whereas in the interests of the consumer it is necessary to establish compatible standards for conditional access systems for D2-MAC and HDTV services;

Commission proposal

Amendments

(Amendment No. 11)

Twelfth recital

Whereas broadcasters, satellite operators, equipment manufacturers, and cable operators are fully committed to the earliest possible introduction of 16:9 D2-MAC services, in conformity with the objectives set out in Decision 89/337/EEC and, accordingly, have declared their intention to enter into a Memorandum of Understanding to which the Commission will also be a party;

Whereas broadcasters, satellite operators, equipment manufacturers, and cable operators are fully committed to the earliest possible introduction of 16:9 services, in conformity with the objectives set out in Decision 89/337/EEC and, accordingly, have declared their intention to enter into a Memorandum of Understanding to which the Commission will also be a party;

(Amendment No. 12)

Thirteenth recital

Whereas the Memorandum of Understanding will set out the obligations of the respective parties for the development and promotion of 16:9 D2-MAC services in Europe in accordance with the terms and provisions of this Directive and will constitute an integral part of the overall strategy for the introduction of HDTV;

Whereas the Memorandum of Understanding will set precise detailed rules and deadlines for the obligations of the respective parties for the development and promotion of 16:9 and D2-MAC services in Europe in accordance with the terms and provisions of this Directive and will constitute an integral part of the overall strategy for the introduction of HDTV;

Commission proposal

Amendments

(Amendment No. 13)
Article 1

Member States shall take all measures to promote and support the introduction and development of advanced satellite broadcasting services for television programmes, using the HD-MAC standard for High Definition Television transmission and the D2-MAC standard for other transmission in the 16:9 aspect ratio format.

unchanged

To speed up the introduction of 16:9, other standards are to be introduced which are compatible with terrestrial distribution.

(Amendment No. 14)
Article 2(1)

1. For any transmission of a television service in the High Definition Television format only the HD-MAC standard may be used.

1. For any transmission of a television service in the High Definition Television format the HD-MAC standard is to be used as soon as it is clearly defined and compatible with the D2-MAC standard and has been standardized as such by a European standardization organization The Community shall provide appropriate incentives for this.

Commission proposal

Amendments

(Amendment No. 15)

Article 2(2)

- | | |
|---|--|
| 2. For <u>any</u> transmission of a 625 line satellite television service receivable by viewers using domestic satellite receiving equipment, even if such transmissions are intended to be redistributed by cable networks, only the D2-MAC standard <u>may</u> be used; | 2. For <u>the</u> transmission of a 625 line satellite television service receivable by viewers using domestic satellite receiving equipment, even if such transmissions are intended to be redistributed by cable networks, only the D2-MAC standard <u>should</u> be used; |
|---|--|

(Amendment No. 16)

Article 2(2) - first indent

- | | |
|---|--|
| - <u>in respect of any service in 16:9 aspect ratio format;</u> | - <u>if this service is transmitted in 16:9 aspect ratio format;</u> |
|---|--|

(Amendment No. 17)

Article 2(2) - third indent

- | | |
|---|---|
| - in respect of any satellite transmission of a service, starting after the date of implementation of this Directive, or using a satellite brought into operation after the date of implementation of this Directive. | - <u>Any satellite transmission of a service entering into operation after 1 January 1994 must be broadcast using the D2-MAC standard: transmission in PAL/SECAM or DMAC shall be possible.</u> |
|---|---|

(Amendment No. 18)

Article 2(3) (new)

3. The continuation or installation of satellite services using PAL or SECAM standards shall be unaffected.

Commission proposal

Amendments

(Amendment No. 19)

Article 3

Satellite services in operation on 31 December 1991 and using D-MAC, PAL or SECAM standards, may continue to use the same standard for 625 lines 4:3 format transmissions after the date of implementation of this Directive, notwithstanding the provisions set out in the third indent of Article 2(2).

Deleted

(Amendment No. 20)

Article 4

Member States shall take all measures to ensure that as from 1 January 1993 all new television sets with a screen size greater than 52 cm and all new satellite receivers, for sale within the Community have included within them the necessary means to receive

D2-MAC signals. Member States shall take all measures to ensure that as from 1 January 1994 all new television sets using the new 16:9 format put on sale in the Community shall have the necessary equipment for receiving D2-MAC satellite transmissions.

(Amendment No. 21)

Article 5

Member States shall take all measures to ensure that:

Member States shall take all measures to provide financial support for cable operators who decide to redistribute in 16:9 format programme receivable in D2-MAC or HD-MAC standard:

Commission proposal

Amendments

- any new terrestrial redistribution system, or any existing terrestrial redistribution system having the necessary technical capability, shall be configured in such a way that HDMAC signals can be transmitted through the network from head-end to individual homes: in the case of cable TV and SMATV systems channels in the hyperband (300-450 MHz) each having 12 MHz bandwidth shall be allocated for this purpose; existing terrestrial redistribution systems not having the necessary technical capability, shall be configured as indicated above when their operators decide on a technical upgrading of the network;

- any new terrestrial redistribution system, or any existing terrestrial redistribution system having the necessary technical capability, shall be configured in such a way that HD-MAC signals can be transmitted through the network from head-end to individual homes: in the case of cable TV channels in the hyperband (300-450 MHz) each having 12 MHz bandwidth shall be allocated for this purpose; existing terrestrial redistribution systems not having the necessary technical capability, shall be configured as indicated above when their operators decide on a technical upgrading of the network;

[rest unchanged]

(Amendment No. 22)

Article 6

In the case of all services using the D2-MAC standard, which are encrypted and employ a conditional access system, Member States shall take all the necessary measures to ensure that only a conditional access system fully compatible with D2-MAC and standardized as such by a European standardization organization by the date of implementation of this Directive, is used.

Further details shall be laid down in a separate Memorandum of Understanding, on which the effectiveness of this Directive depends. The European Community shall make funding available for the additional expenses arising from the voluntary transmission in parallel of 16:9-D2-MAC services for a period of at least 5 years.

Commission proposal

Amendments

(Amendment No. 23)
Article 6b (new)

The Member States and the Commission shall take all measures necessary to set up a fund to provide assistance for the production of programmes in 16:9/D2-MAC.

(Amendment No. 24)
Article 7

This Directive shall apply until 31 December 2001. Every two years, the Commission shall submit to the European Parliament, to the Council and to the Economic and Social Committee a report on the application of this Directive and, if necessary, make further proposals to adapt it to developments in the field of satellite television broadcasting.

This Directive shall apply until 31 December 2001 and shall be subjected to a review of its principles on 1 January 1994. This should involve consultation of the operators concerned, so as to ascertain whether, as a result of the development of new technologies and market developments the Directive needs to remain in force.