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Communication to Parliament and the Council
on encouraging audiovisual production
in the context of the strategy for
high-definition television

(presented by the Commission)

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1. Introduction

On 26 June the Commission adopted a proposal for a Council Directive on standards for the satellite broadcasting of television signals.¹ In so doing, it laid the foundations for an important pillar of the overall strategy for the introduction of high-definition television services in Europe as confirmed by the Council in 1989.²

To promote the practical development of HDTV while maintaining compatibility with existing systems, the Commission is proposing to enter a transitional stage with two instruments which are inextricably linked:

first, the Directive, which will lay down basic rules on HDTV broadcasting using the HD-MAC standard and provide for a transitional stage using D2-MAC, whose format of 16:9 has major advantages over conventional standards;

second, a Memorandum of Understanding (MOU), in which those involved in the industry (equipment manufacturers, satellite and cable operators and broadcasters) will make reciprocal commitments to develop services and equipment which conform to the new standards and promote them on the market.

This crucial development in the "standards side" of the overall strategy needs to be matched by progress in other areas, as indicated in point 21 of the explanatory memorandum to the proposal for a Directive, "In parallel with the broadcasting standards side of the European HDTV strategy, implemented through the joint effect of the MOU and the Directive, the development of the programmes side is also a priority both for the promotion of the 16:9 format and for the effective introduction of HDTV services from 1995 onwards."

1 COM(91)242 final.

2 Council Decision 89/357/EEC of 27 April 1989 on high-definition television, OJ L 142, 25.5.89.

The purpose of this communication is to inform the Council and Parliament of the policy the Commission intends to implement to enable the European programme industry to play a full part at all stages of the HDTV strategy.

2. The vital importance of audiovisual programmes

In comparison with the decisive role played by software in the introduction of new technologies, the weakest link in the HDTV strategy appears to be the programme element:

- progress on the technological side has resulted in the definition and production of a complete range of HDTV equipment which conforms to European standards;
- on the broadcasting standards front the Commission has adopted a new twin-track approach (the Directive and MOU);
- on the programmes side the only progress so far has been in setting up structures for preparation and research rather than concrete action (see Annex 1).

One of the declared aims of the Media programme, approved by the Council on 21 December 1990, is "to promote access to and use of the new communications technologies, particularly European ones, in the production and distribution of audiovisual material".⁵ It thus provides a useful framework for measures already introduced to develop this sector.

The Community must build on this basis and, as soon as it possibly can, implement a dynamic policy to enable the European programmes industry to meet the quantitative and qualitative requirements of broadcasters who commit themselves to HDTV and MAC 16:9.

Now that the decision has been taken to introduce HDTV in Europe by a gradual strategy, policy on programmes should be given a twofold objective:

- the promoters of new services in D2-MAC must have access to attractive programmes using the new 16:9 format;
- the introduction of HDTV from 1995 means that there is an urgent need to create a stock of programmes using the European standards.

A number of individual initiatives have already made it possible to gauge the increased demand for specific programmes generated by the strategy. However, the combined effect of MOU and the Directive on broadcasting standards will inevitably speed things up: the Community must take this into account in developing appropriate instruments.

⁵ Council Decision 90/388/EEC, CS L 380, 31.12.1990, p. 37.

To give some idea of the scale of the demand, suffice it to say that European satellite broadcasters transmitted 205 000 hours of programmes in 1990.⁴ Given that rebroadcast material accounts for around 25% of the total, an impressive number of programmes will be needed for transmission using D2-MAC in 16:9 format, especially if we consider that the bulk of televised programmes are produced using standards incompatible with the new 16:9 format.

Use of the 16:9 format - the determining factor in television broadcasting in D2-MAC (over and above the improvement in image and sound quality) - must meet with an appropriate response from the programme industry.

The new format, which is close to "Cinemascope", can be used to enhance all 35mm cinematographic productions and the new HDTV productions, but most television productions in the 4:3 format remain unsuitable for promotion of the new services (see Annex II).

Of course, Europe already has a considerable stock of cinematographic productions which could be used by the first D2-MAC services in 16:9 format. They would have to be transferred but this would merely be a question of hardware. Films could be broadcast in 16:9 D2-MAC using telecine equipment (the film version is used directly in transmission) which should be available in sufficient numbers. The technical, economic and legal implications of mastering (producing a master video from film) should also be examined.

If the European programme industry does not come up with an appropriate response, the launch of 16:9 D2-MAC services might actually strengthen the hand of American producers who not only dominate the cinema market but are the only ones to produce television series on 35mm (e.g. Dallas and Dynasty). It would then be paradoxical to apply the rules on Community preference laid down in the broadcasting Directive⁵ when there was a lack of European programmes compatible with the D2-MAC broadcasting standard encouraged by the Community as part of its HDTV strategy.

To avoid such a conflict between the Community's technological policy and the general objectives of its audiovisual policy, it is vital that close consideration be given to developing the programmes side of the overall strategy.

3. The stages of a programmes strategy

If the programmes side is to be fully integrated into the successive phases of introducing the new services, it must take account not only of increased demand but also of the availability of production equipment and budgetary resources.

4 This estimate includes programmes transmitted by satellite broadcasters to cable networks.

5 Council Directive 89/552/EEC of 3 October 1989, OJ L 298, 17.10.1989, p.23.

The availability of HDTV production equipment in the short term is extremely limited since virtually all of it has been reserved for 1991 and will be used to cover major events in 1992 (Olympic Games in Albertville and Barcelona and the Seville World Fair).

Initiatives for the production of HDTV programmes must therefore continue on an experimental basis (see Annex I - HD Media), the main effort being concentrated on the use of conventional standards which are compatible with transmission in 16:9 D2-MAC.

Increased availability of production equipment from 1993 (due to the combined effect of the MOU and the release of equipment used for the coverage of events in 1992) will gradually enable the Community to step up support for the production of HDTV programmes. At the same time progressive investment in the necessary hardware will make it possible to devote more resources to the development of a specific "programmes strategy" in line with market demand.

A twofold approach should therefore be adopted to the programmes side of the European HDTV strategy: resources now available should be devoted to short-term objectives (Media 16:9) while the usefulness and details of a general medium-term action plan ("HD programmes") should be examined in consultation with interested parties.

4. Measures to be taken

Media 16:9

As well as support for the development and supply of hardware (production equipment, telecine machines, transponders, decoders and receivers) provided under the MOU, significant support for the production of programmes in 16:9 format is vital for the successful launch of the new services.

The aim of Media 16:9 is to concentrate available resources on projects liable to help broadcasters committed to 16:9 D2-MAC obtain enough programmes to fill their broadcasting schedules and of sufficient quality to attract viewers and persuade them to buy the new equipment conforming to these standards.

Action will be focused on two main areas:

- implementation of special support mechanisms under point 2.3 of the Media programme, "Use of new technologies, in particular European ones, in the production of programmes";
- a "vertical" priority - to promote awareness of the production of television programmes in 16:9.

The aim is not to give a new direction to the Media programme, which has just entered its main stage, but to promote production in 16:9 format using the measures already provided for in the programme in accordance with the objectives set out in Article 2 of the Council Decision.

A) Support mechanisms for the production of programmes in 16:9 will be developed from 1991 onwards under point 2.3 of the Media programme. They will be based on the following principles:

- Contribution to additional costs

Since the Media programme is not designed to finance productions directly, Community support will only be provided as a supplement to investment by other partners. It will take the form of a contribution towards the additional costs incurred by the use of new standards and new formats as against the normal modes of production. Assistance along these lines should lead to a substantial increase in the number of programmes available from 1992. Particular encouragement will be given to international co-productions which are often the best way of securing the necessary finance for television productions.

- Partners committed to HDTV and 16:9

In choosing partners, special consideration should be given to satellite broadcasters who, under the MOU, have committed themselves to a certain volume of production in 16:9 within a set time-frame. Partnership with these broadcasters has the double advantage of ensuring that productions are initially and fully exploited in 16:9 with D2-MAC quality and of securing the early involvement of independent producers in new developments.

- "Independent production" priority

It is of fundamental importance that independent producers play an active part in harnessing the new technologies. Although most satellite broadcasters already make abundant use of independent producers, it will still be necessary to ensure that, where broadcasters have their own production facilities, a substantial proportion of 16:9 programmes are produced by independents. Independent producers, with their widely-recognized capacity for innovation, must be allowed to play an important role in the process.

- Versatility of programmes

The aim of these measures is to support the production of programmes rather than experimentation with materials. The fact that programmes may be experimental because a new technology was used should not prevent them being viable on existing markets. The projects supported must therefore present a credible plan for commercial exploitation covering all existing networks.

- Lifespan of programmes

Since HDTV services are to be introduced in Europe from 1995, conventional productions which can be broadcast with HD quality (36mm) must have a lifespan long enough for a substantial stock of material to be built up.

B) The aim of the vertical priority is to extend the 16:9 and HDTV objectives gradually to all the TV sectors of the Media programme. Throughout the various stages of the production process, from writing to distribution, the introduction of a new format and a new technology will mean adjustments to newly-emerging markets. The production of television programmes in 16:9 will be established as a priority which could then be implemented by a system of preferential points and premiums but also by specific action on a larger scale, in particular measures to train professionals and increase their awareness.

C) In implementing these measures, account must also be taken of the need to encourage producers in countries with a smaller capacity for audiovisual production to make programmes in 16:9 or high-definition. Otherwise there is a danger that professionals in these countries could trail irretrievably behind in a process which will revolutionize not only the economics of programme production but also programme-making techniques.

D) Care will be taken to ensure that Community efforts and action by national authorities complement each other (see Annex I).

Budget appropriations totalling around ECU 16 million have been earmarked for these measures in 1991 and 1992. This comprises ECU 8 million under point 2.3 of the Media programme (the amount provided for in the Council Decision) and ECU 8 million for the vertical priority, without the need for a transfer between different measures. These amounts are either already available in the 1991 budget or entered in the 1992 preliminary draft, so no adjustment in the budget is needed for these two financial years.

5. "HD Programmes" action plan

The various measures implemented as part of "Media 16:9" between now and 1992 will make it possible to make a start on building up a stock of programmes and to define the most effective means of supporting the programmes industry in the run-up to the introduction of HDTV services in Europe. However, because of the resources available, these experimental measures will not suffice to meet the challenge which the launch of the D2-MAC, 16:9 and HDTV services represents for programme producers.

What is needed therefore is a specific initiative providing a consistent framework for all the measures to be taken in this area and dovetailing with the "programmes strategy" (MOU and the Directive). It should be given the necessary resources to make a significant impact.

From 1991 there will be wide-ranging consultation with professionals (producers, broadcasters, equipment manufacturers) and various agencies concerned ("Vision 1250", the Media Investment Club and national bodies) with a view to the presentation of detailed proposals, if appropriate, for a major action plan to be implemented from 1993.

The aim of these consultations will be to:

- review progress on the "vertical priority 16:9";
- review progress on measures launched under Media 16:9 and determine the resources needed to step up these measures to meet the growing demand for programmes;
- review progress in HD Media with a view to stepping up the initiative in its main stage;
- assess requirements for production equipment and the technical possibilities offered by the new generations of prototypes;
- examine requirements for the training of producers and directors and awareness-raising measures;
- study the technical, economic and legal implications of mastering films;
- examine the prospects for using videocassettes and videodiscs for HDTV productions;
- explore interfaces between HDTV and other new technologies used for audiovisual production (3D images, interactive compact discs);
- explore the possibilities of using HDTV for cinematographic production or exploitation.

On the basis of the outcome of these consultations, suitable proposals will be drawn up as part of an overall plan taking account of:

- measures to step up the HD Media initiative in its main stage;
- measures to reinforce Media 16:9;
- the launch of new pilot projects;
- the development of the "vertical priority 16:9" and its gradual gearing towards HDTV production;
- dovetailing of all these measures with the MOU and the Directive.

The additional resources required from the Community budget after 1993 will be determined on the basis of the results of this process. If appropriate, the action plan will form the basis of a proposal for a Council Decision.

6. TIMETABLE

1991-92: continuation of HD Media;

launch of new measures and implementation of the vertical priority 16:9 and HDTV within the present limits of the Media programme (Media 16:9) with special consideration for broadcasters who have made commitments under the MOU;

consultation with interested parties and detailed proposals for a plan of action, "HD Programmes";

1993: in the light of these consultations, adoption and implementation of the "HD programmes" plan of action including measures to reinforce Media 16:9.

7. Conclusion

The Commission asks Parliament and the Council to take note of the information given in this communication and consider it in the context of the overall strategy for high-definition television.

EXISTING STRUCTURES

1. At Community level, there are already two major instruments:

- EEIG "Vision 1250" is a project aimed at the gradual build-up of a reserve of equipment which is then made available to members to produce HDTV programmes and organize demonstrations of the European system.

Because of the predominance of broadcasters among the member producers and the priority given to coverage of the major events in 1992, the resources available will be used initially to cover special events, leaving little capacity for other types of programme.

After 1992 the EEIG should have a considerable stock of production and demonstration equipment at its disposal. This could be made available to producers (including non-members under certain conditions) for a wider range of productions.

- HD Media is a new initiative launched by the Media Investment Club as part of the Media programme. The list of measures set out in the Council Decision setting up the programme includes action to make greater use of new technologies including "support for measures designed to promote the production of films and programmes using the European HDTV standard (in liaison with Audiovisual Eureka and Vision "1250")".

The initiative consists of a series of invitations to submit projects for the production of high-definition video programmes using European standards for commercial distribution. Because of budgetary constraints no more than ten projects can be selected in 1991. The scheme has aroused great interest, demand far outstripping the funds available to the Commission in 1991.

2. There are also national bodies in various Member States (Netherlands, Germany, France and Belgium).

The aims, competences and resources of these bodies vary from country to country. They form a network which is still in its infancy but will surely become an important player in any future policy for the promotion of HDTV in Europe.

As these structures are developed, it will be necessary to ensure that Community efforts and action taken at national level complement each other.

ANNEX II

STANDARDS, FORMATS AND COMPATIBILITY

The launch of new services using the new D2-MAC standard in 16:9 format presupposes the use of compatible production standards to make the best possible use of this valuable transitional step which represents considerable progress in terms of quality. Indeed, for the stock of programmes which have a sufficient lifespan, production standards must be such as to allow optimal use in HD-MAC transmission.

The attached table gives an indication of the levels of compatibility between existing production standards and transmission in D2-MAC, 16:9 and HD-MAC.

- The additional cost is estimated by comparison with the average cost of producing a video in 4:3 format and is expressed in the form of bands, the intensity of which varies according to the type of production concerned.
- The format is expressed in terms of compatibility with transmission in 16:9.
- Sound quality is compared to the quality offered by transmission in D2-MAC and HD-MAC (stereo and compact disc quality).
- Image quality is compared with the improvement offered by the D2-MAC standard (625 lines - 720 pixels per line) and the HD-MAC standard (1250 lines - 1440 pixels per line).

STANDARD	SURCOUT	FORMAT	Qualité diffusion D2 - MAC	Qualité diffusion HD MAC
			Son	Image
			Image	Son
4:3 standard	-	-loss of 30% image source -able to produce 16:9 format with adaptive lenseg or change of scanning frequency	monophone 625 standard loss of quality	monophone 625 standard not compatible
16mm film	10-15 %	- possible telecine transfer	monophone loss of quality	monophone loss of quality
super 16mm film	10-15 %	-possible via telecine transfer	stereo some loss but image quality compatible	stereo some loss of quality
35mm film	15-20 %	-negligible loss of 2 % image source on sides	stereo image quality compatible	stereo image quality compatible
16:9 HDTV	25-40 %	- complete compatibility	stereo higher image quality	stereo image quality required