

Report from the Commission to the Council, the European Parliament and the Economic and Social Committee on the implementation and effects of Directive 91/250/EEC on the legal protection of computer programs /* COM/2000/0199 final */

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Executive Summary

On the occasion of the adoption of a common position on Council Directive 91/250/EEC (13 December 1990) the Commission made a political commitment to produce a report on the implementation and effects of the Directive. As this was the first Directive in the field of copyright and related rights the provision of a review clause in the Directive itself had not yet become standard practice.

The present report is substantially based on a study carried out by external consultants and finalised in 1997, together with the Commission's own findings, including comments from interested circles.

The overall results show that the objectives of the Directive have been achieved and the effects on the software industry are satisfactory (demonstrated for example by industry growth and decrease in software piracy). On the basis of these results there appears to be no need to amend the Directive.

As far as implementation by Member States is concerned, some flaws have become apparent. While not all of these merit attention by the Commission, others may need to be investigated further with a view to possible infringement proceedings.

Some specific issues raised by industry (the distribution right and communication to the public, back-up copies, remedies, and technical devices) are also addressed. While the Commission concludes that no amendment of the Directive in these respects is appropriate at present, this is not to rule out the possibility of adjustment at a later stage in the light of other developments.

Finally reference is made to related Community initiatives, specifically the patentability of computer software (which would complement the existing copyright protection) and the Green Paper on combating counterfeiting and piracy in the single market, which would be the appropriate context for further action on software piracy. Member States' attention is drawn in particular to the importance of government policies on the use of legal software.

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I. The mandate for the report

On the occasion of the adoption of the common position on Council Directive 91/250/EEC on the legal protection of computer programs on 13 December 1990 the Commission made the following statement:

"The Commission agrees to make a report to the Council, the European Parliament and the Economic and Social Committee on how the Directive is working by the end of 1996."

The present communication is intended to honour this political commitment. It is somewhat delayed because only three of the Member States met the implementation deadline of the Directive of 1 January 1993.

This document is in part based on an independent study commissioned in 1997 for the purpose of collecting all the available facts on Member States' implementing legislation under Directive 91/250/EEC and on the practical application thereof. In addition, conclusions have been drawn from the views expressed by interested circles, in particular on the operation of the Directive and its impact on the computer programs industry as well as other interests at stake, and the Commission's own views and analysis.

Furthermore, the present communication also takes account of ongoing separate Commission initiatives concerning the legal protection of computer programs.

II. The background for the Directive

The computer programs Directive was first announced in the Commission White Paper entitled "Completing the Internal Market" [1] and its substance has been influenced inter alia by the results of a comprehensive consultation exercise undertaken in the context of the June 1988 "Green Paper on Copyright and the Challenge of Technology - Copyright Issues Requiring Immediate Action" [2].

[1] COM (85) 310 final, point 149

[2] COM(88) 172 final, 10.11.1988

Following this exercise the proposal for a Directive of April 1989 was intended to provide harmonisation of Member States' legal provisions in the field concerned by defining a minimum level of protection, and was formulated as a balance between the interests of rightholders, of their competitors and of users of

computer programs. At the time, the disparity amongst Member States on the matter of protection of computer programs was quite significant. In fact, since the issue was then a rather recent development, there were no provisions expressly protecting computer programs in the copyright legislation in seven out of the then 12 Member States.

In its explanatory memorandum accompanying the proposal for a Directive the Commission indicated that such differences in the level of protection could no longer be maintained, since this might not only adversely affect the operation of the Common Market by perpetuating or creating barriers to intra-Community trade in computer programs but would also negatively impact on the creation of software companies in the Community and result in distortions of competition.

As set out in this document the aim of the Directive was to establish legal protection of computer programs in those Member States where it did not yet exist and to ensure that the protection in all Member States is based on common principles.

These principles can be summarised as follows:

- computer programs are protected as literary works by exclusive rights under copyright;
- the person entitled to the right is specified;
- restricted acts requiring authorisation of the rightholder and acts which do not constitute an infringement are determined and
- conditions for protection of the program are defined.

Whilst all such objectives were finally achieved, the Directive did not provide for total harmonisation but left some room for Member States to use their discretionary powers in the light of subsidiarity where such national measures do not affect the proper functioning of the Internal Market.

III. The content of the Directive

Council Directive 91/250/EEC gives copyright protection to computer programs as literary works within the meaning of the Berne Convention for the Protection of Literary and Artistic Works (Paris Act, 1971). The question of authorship is widely left to the EU Member States. Employers are entitled to exercise the economic rights in programs created by their employees. Moral rights are excluded from the scope of the Directive.

The striking feature of the Directive is that the level of originality (eligibility criterion for copyright protection) has for the first time been harmonised at the Community level for a specific category of copyrightable work. The program must be the "own intellectual creation of its author". No other criteria are allowed. This uniform level has required 12 Member States to lower the threshold for granting protection and the remaining three to "lift the bar". It should also be noted that protection under the Directive is strong and that in particular no home copying exception may apply.

The rightholder has a number of exclusive rights: the right to do or authorise reproduction, translation, adaptation, arrangement, and any form of distribution to the public, including rental.

However, some exceptions to these exclusive rights are listed. Normal activities by 'lawful acquirers' of the program are free.

Certain reverse engineering techniques are also specifically allowed. The person having a right to use a copy of a computer program shall be entitled, without the authorisation of the rightholder, to observe, study or test the functioning of the program in order to determine the 'ideas and principles' underlying any element of the program, so long as this does not result in an infringing copy.

Moreover, the Directive provides that such 'rights of the rightful possessor' cannot be overridden by contract.

The most important exception is the possibility of decompiling a program to make it interoperable with other programs. This point was the subject of intense debate and resulted in a pragmatic compromise which has the effect in practice that the information required for establishing interoperability is made available.

A number of conditions aim at limiting decompilation to the minimum which is necessary in order to achieve interoperability without prejudicing the rightholder's legitimate interest by developing, for example, a program which has not been independently created or a program infringing its copyright. Such restrictions involve inter alia that the decompilation exception can only be invoked by a licensed user or by someone else acting on his behalf, that the required information is not already readily available, that those parts of the program that are not necessary to achieve interoperability must not be decompiled, that the information obtained must not be used to develop, produce or market a program which infringes copyright in the decompiled program, that the rightholder's legitimate interests are not unreasonably prejudiced and that the use does not conflict with a normal exploitation of the computer program.

The Directive also provides that any contractual provisions contrary to the decompilation exception are null and void.

With respect to law enforcement, rules on seizure of infringing copies and on means to circumvent encryption / copy protection systems are prescribed.

IV. State of implementation of the Directive

Whilst only three Member States met the implementation deadline (1 January 1993) all of them have to date adopted the required domestic laws, regulations and administrative provisions.

A table of such implementation measures is set out below.

>TABLE POSITION>

V. Review of implementation by Member States

1. Object of protection (Article 1)

Article 1 of the Directive sets out to define the scope of copyright protection granted for computer programs. Six of the Member States (Belgium, Germany, Greece, Ireland, Italy and Spain) have complied with the requirements of this Article, although all but two have seen fit not to implement the portion of "No other criteria shall be applied to determine (the computer program's) eligibility for protection". The latter clarification is foreseen under Article 1 (3) and relates to the definition of originality as a prerequisite for copyright protection.

Germany has expressly incorporated Article 1 (3) [3] and has thus abandoned the "Inkassoprogramm" case law of its Supreme Court [4] which previously required the existence of a (high) level of creativity ("Schöpfungshöhe"). This changed level of originality has since then been confirmed by constant case law [5] and the German eligibility criterion has thus been brought in line with the Directive's terms.

[3] sec. 69a (3) of the German Copyright Act.

[4] BGHZ 94, 276

[5] BGH [1994] GRUR 39 "Buchhaltungsprogramm", BGH [1994] GRUR 363 "Holzhandelsprogramm".

(a) Protection of computer programs as literary works

Computer programs are to be protected as literary works within the meaning of Article 2 of the Berne Convention. Article 4 of the WIPO Copyright Treaty (WCT) uses the same formulation as the Directive. Such provisions are also on a par with Article 10 (1) of the TRIPs Agreement.

All Member States appear to have implemented this requirement.

(b) Inclusion of preparatory design material

Further to Article 1 (1) (2) the term "computer programs" shall include their preparatory design material. The vast majority of the Member States have implemented this provision without providing for a definition of computer programs. Apparently, only France and Germany have such a definition on their statute book. It should be noted however that the Directive itself did not define the notion of computer program. Nevertheless, some guidance is provided by recital 7 and the explanatory memorandum to the initial Commission proposal of April 1989.

Denmark and Finland have not implemented the preparatory design material requirement at all. The UK has included preparatory design material within literary works rather than computer programs. It would appear that the UK provision, whilst going further than the Directive which is limited to computer programs, is compliant and that in Denmark and Finland no difficulties linked to this issue have arisen in practice.

(c) Expression in any form

According to Article 1 (2) protection shall apply to the expression in any form of a computer program. Ten of the Member States have implemented this requirement, whereas Denmark, Finland, France, Luxembourg and the Netherlands have not done so explicitly. At present it is not clear what effect this has on the protection of computer programs in the Member States concerned.

(d) Ideas and principles

Ideas and principles which underlie any element of a computer program are not protected by copyright. This traditional exclusion from copyright is reiterated by virtue of Article 1 (2) (2) and recitals 13 and 14 of the Directive. Eight Member States (Austria, Finland, France, Luxembourg, Netherlands, Portugal, Sweden and the UK) have not implemented these provisions. It would appear, however, that it is standing practice of such Member States to apply the idea / expression dichotomy as a general principle of copyright law.

(e) The author's own intellectual creation

As mentioned above Article 1 (3) defines the level of originality required for the grant of copyright protection. The Community criterion refers to "the author's own intellectual creation". Six Member States have not explicitly implemented this requirement. Of these Denmark, Finland, Luxembourg, the Netherlands and Sweden apparently consider that it is an implied requirement of their legislation to take account of the wording of the Directive. This principle does not appear so far to have been called into question by interested parties.

However, the Commission had to take issue with the UK implementation because this latter Member State traditionally only requires skill and labour and permits copyright to protect computer generated works. The Commission has noted that as a result of the adoption of Directive 96/9/EC on the legal protection of databases [6] the UK now provides for a legal definition of originality for the purposes of a literary work consisting of a database [7]. A similar clause for computer programs is still lacking. It remains to be seen whether this will lead to an over-extensive protection of computer programs in the UK.

[6] OJ L 77, 27.3.1996, p. 20

[7] Sec. 3 A (2) CDPA 1988 as amended by the Copyright and Rights in databases Regulations 1997, S.I. 1997/3032 of 18.12.1997

(f) No other criteria

Only Belgium and Germany have transposed this feature of the Directive. It would appear, however, that it is not strictly necessary to implement this safeguard *expressis verbis* since the Directive clearly indicates that the "author's own intellectual creation" suffices. Furthermore, recital 8 provides for a reminder that in respect of the criteria to be applied in determining whether or not a computer program is an original work, no tests as to the qualitative or aesthetic merits of the program should be applied. In practice, it is assumed that the tribunals of the Member States will have recourse to such provisions for guidance when they construe the Directive's Articles.

2. Authorship of computer programs (Article 2)

Article 2 contains three mandatory requirements: namely on individual authorship, on joint authorship and on employees' works. Furthermore there is one, on collective works, which is left to the Member States' discretion. France, Italy, Spain and Portugal have made use of this option.

All Member States have included in their legislation rules implementing the mandatory provisions of Article 2.

3. Beneficiaries of protection (Article 3)

Since this Article refers for the purpose of determining beneficiaries of protection to national copyright legislation concerning literary works it is largely confirmatory. Notwithstanding this nature of the provision it would appear that all Member States have explicitly brought computer programs under copyright protection as a literary work, which will imply that normal rules on authorship apply.

4. Restricted acts (Article 4)

Seven Member States (Belgium, France, Germany, Ireland, Italy, Luxembourg and Spain) have implemented all of the requirements of Article 4.

(a) Reproduction (Article 4 (a))

Under the Directive's terms permanent or temporary reproduction of a computer program by any means and in any form, in part or in whole, is a restricted act. In some Member States, however, there appears to be no specific implementation of "permanent or temporary reproduction" (Austria, Denmark, Finland, the Netherlands and Sweden). In the light of comments from industry, this discrepancy may need further investigation.

Similarly some of these Member States (Denmark, Finland, Greece, Sweden and the UK) have not implemented the "in part or in whole" requirement. Finally a number of Member States (Austria, Denmark, Finland, Portugal and Sweden) have omitted to include "loading, displaying, running, transmission or storage of the computer program" within the scope of the reproduction right. This omission appears to be inconsistent with the Agreed Statement concerning Article 1 (4) of the WCT according to which it is understood that the storage of a protected work in digital form in an electronic medium constitutes a reproduction within the meaning of Article 9 of the Berne Convention.

(b) translation, adaptation, arrangement or any other alteration of a program (Article 4 (b))

A number of Member States (Austria, Denmark, the Netherlands, Sweden and the UK) have apparently omitted to implement expressly the "any other alteration" phrase. In those Member States the scope of the right may be narrower than foreseen in the Directive.

(c) any form of distribution to the public, including rental (Article 4 (c) (1))

All the Member States provide for restricted acts covering the distribution of the original or a copy of a computer program. A rental right is likewise afforded.

(d) Community exhaustion (Article 4 (c) (2))

As set out in Commissioner Monti's response of 11 July 1995 to Oral Question H-0436/95 by Arthur Newens, MEP [8], the Commission has constantly taken the view that Directive 91/250/EEC prevents Member States from applying a concept of international exhaustion in relation to the distribution of computer programs. Article 4 (c) establishes an exclusive distribution right which is subject to Community exhaustion where the sale of the program was made in the Community. Since no provision is made for that exclusive right to be exhausted within the Community by a first sale outside the Community, Member States are not free to provide for such exhaustion in respect of computer programs.

[8] Debates of the European Parliament (EN ed.) No. 466, p. 174.

The implicit restriction of parallel imports of computer programs into the Community has not been expressly implemented by Denmark, Finland, the Netherlands and Portugal. Furthermore, it would appear from the wording of the statute that the exhaustion concept retained by Luxembourg does not only apply to the distribution right. Interested circles have expressed concerns in relation to these issues.

It is to be noted, however, that as a consequence of case law construing the Dutch copyright statute in the light of the Directive Community exhaustion is now likewise applied in the Netherlands [9]. According to the President of the district court of The Hague in the Novell case, the Dutch copyright statute which does not provide any rules on exhaustion, must be construed as far as possible in accordance with the provisions of the Directive. Under these circumstances he arrived at the conclusion that as of 1 September 1994 a copyright regime has to be applied for computer programs in the Netherlands which provides for Community exhaustion only.

[9] District Court of The Hague, summary judgement of 7 July 1995 in case KG 95/591 (Novell, Inc. vs. America Direct B.V.), computerrecht 1995/96, p.281 et seq.

5. Exceptions to the restricted acts (Article 5)

Nine Member States have implemented all of these mandatory provisions, either verbatim or very closely (Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Spain and Sweden). Details on each provision are given below.

(a) Normal use by the lawful acquirer and error correction (Article 5 (1))

This provision stipulates that in the absence of specific contractual provisions, the restricted acts, with the exception of distribution and rental, shall not require authorisation by the rightholder where they are necessary for the use of the computer program by the lawful acquirer in accordance with its intended purpose, including error correction.

Most Member States have made it clear that contracting out is permitted in relation to the scope of Article 5 (1). Divergences of views subsist however as to the meaning of "lawful acquirer". Several Member States have transposed this notion by using the term "lawful user" i.e. a person having a right to use the program.

The Commission shares the view of some commentators that 'lawful acquirer' did in fact mean a purchaser, licensee, renter or a person authorised to use the program on behalf of one of the above. This argument also draws from Articles 6 and 8 of the database Directive (Directive 96/9/EC) which use the term "lawful user" and which were modelled along the lines of Article 5 (1) of the computer programs Directive [10].

[10] Explanatory memorandum, COM (92) 24 final, 13.5.1992, item 8.4.

In the view of the Commission, what was intended by Article 5 (1) and recital 18 was that it should not be possible to prevent by contract a "lawful acquirer" of a program doing any of the restricted acts that were required for the use of the program in accordance with its intended purpose or for correcting errors. It is, however, possible for a contract to include specific provisions that "control" the restricted acts which may be carried out by the user of the computer program.

In the implementations by Austria, Finland and the UK there is no reference to "in the absence of specific contractual provisions". In the case of the UK it would appear that this is to do with the fact that this Member State applies a comprehensive concept of freedom of contract which goes far beyond the area of copyright exceptions affecting the protection of computer programs. The Austrian and Finnish statutes appear to be inconsistent with Community requirements by providing broader exceptions than permitted under the Directive.

Furthermore, the Portuguese and UK implementations omit "in accordance with its intended purpose". The Commission is not aware that any practical difficulties have arisen as a result of this shortcoming.

(b) making of back-up copies (Article 5 (2))

Article 5 (2) provides that the making of a back-up copy by a person having a right to use the computer program may not be prevented by contract insofar as it is necessary for that use.

The provision has been implemented by all Member States. [11]

[11] Some industry concerns are reflected in VII.2.

(c) observing, studying or testing the functioning of a program (Article 5 (3))

Under Article 5 (3) the person having a right to use a copy of a computer program shall be entitled, without the authorisation of the rightholder, to observe, study or test the functioning of the program in order to determine the ideas and principles which underlie any element of the program if he does so while performing any of the acts of loading, displaying, running, transmitting or storing the program which he is entitled to do.

All Member States have complied with these terms except Finland and the UK which both have omitted the phrase "which he is entitled to do". This omission is significant in that the phrase "which he is entitled to do" ensures appropriate limitation of the permitted acts which can be performed by the legitimate user to observe, study or test the functioning of the program.

(d) Private copying

The Directive in Article 5 (1) provides specific exceptions allowing use under certain circumstances. Private copying of computer programs was excluded by the Community legislator from the scope of permissible exceptions from the restricted acts. However, some Member States have not expressly repealed their private copying exceptions. Rightholders consider that this is an important issue and steps should be taken to bring these Member States into alignment with those countries that have repealed their private copying exceptions for computer programs.

So far there is no evidence of major problems in practice in this area and no formal complaints have been received. However the situation does appear to demonstrate some legal uncertainty and may need further investigation.

6. Decompilation (Article 6)

Generally speaking this is the Article implemented to the fullest extent by the Member States. Most

implementations are verbatim or near verbatim. However, Article 6 (3) concerning the limitation of the decompilation exception has been omitted in six Member States (Austria, Denmark, Finland, Netherlands, Sweden and UK). This limitation is important because it stems from the Berne Convention's "three steps test" (originating in Article 9(2) Berne Convention). Under the Directive, this limitation ensures that the decompilation exception shall not be used in a manner which unreasonably prejudices the rightholder's legitimate interests or conflicts with a normal exploitation of the computer program. The omission of any such explicit limitation could lead to unreasonable detriment to the rightholder.

In respect of other matters covered by Article 6, the implementations by Portugal, Sweden and the UK are the only ones which do not seem to be wholly consistent with the Directive.

As to the Portuguese implementation it appears that firstly there is no equivalent to Article 6 (1) (c). This omission is serious because in an infringement case a party may need to be able to show that access to parts of a program not required for interoperability was an unauthorised act and therefore infringing. Secondly Article 6 (2) (a) has not been implemented. Contrary to the Directive it is therefore not ruled out that decompiling acts may be used for goals other than to achieve the interoperability of an independently created computer program. Finally, the implementation of the three steps test requirement is by no means fully compliant with the wording of Article 6 (3).

The Swedish implementation is only defective in that the phrase "independently created program" is missing from the transposition of Article 6 (1). It would appear, however, that this omission has a significant effect. The missing element was provided in the Directive to ensure that any decompilation of a target program does not occur before the independently created program exists (even if only in preparatory design material form).

The UK implementation may also be non-conforming in that firstly "lawful user" is used which appears not to include "a person authorised on behalf of the licensee or person having a right to use a copy of the program". Secondly "reproduction of the code and translation, of its form" has been implemented as "expressed in a low level language to convert it into a higher level language", thirdly there is no restriction to "parts" of the decompiled program, the restriction is "to such acts as are necessary to achieve the permitted objective" and finally there is no express implementation of the three steps test under Article 6 (3).

7. Special measures of protection (Article 7)

Article 7 (1) specifies a number of acts against which Member States have to provide "appropriate remedies in accordance with their national legislation". Such acts involve (a) putting into circulation of infringing copies, (b) possession for commercial purposes of infringing copies and (c) putting into circulation, or possession for commercial purposes of, any means the sole intended purpose of which is to facilitate the unauthorised removal of technical protection devices.

Article 7 (2) deals with seizure of infringing copies and Article 7 (3) with seizure of means permitting facilitating the unauthorised removal or circumvention of technical protection devices.

A number of Member States (Germany, Greece, Italy, and Portugal) have not transposed every detail of Article 7 although only Greece has not implemented the discretionary provision of Article 7 (3). It would appear that generally speaking this lack of precision has only resulted in minor practical difficulties in the context of law enforcement.

In relation to Article 7 a number of important court decisions have been noted. In a German landmark decision it was ruled that the altering of the programming of a computer program protected with a hardware lock (dongle) in order to remove the program protection constitutes an act of copyright infringement [12].

[12] Karlsruhe Court of Appeals, [1996] WRP 587; confirmed by Federal Supreme Court (BGH) [1996] CR 737

8. Term of protection (Article 8)

Article 8 was repealed by virtue of Article 11 (1) of Directive 93/98/EEC harmonising the term of protection of copyright and certain related rights [13]. Further to Article 1 (1) of the term Directive authors of a literary or artistic work within the meaning of Article 2 of the Berne Convention now benefit from a harmonised copyright term of 70 years post mortem auctoris. This provision also applies in the case of authors of computer programs.

[13] OJ L 290, 24.11.1993, p. 9

All Member States have complied with the terms of the Directive.

9. Continued application of other legal provisions (Article 9)

Article 9 (1) contains a without prejudice clause in relation to other legal provisions affecting computer programs such as legislation on patents, trademarks, unfair competition, trade secrets, semi-conductor products or contracts. Furthermore, it stipulates that any contractual provisions contrary to Article 6 (decompilation) or to the exceptions provided for in Article 5 (2) and (3) shall be null and void.

The failure of the Netherlands and Spain to specifically implement these latter requirements may however be mitigated by these Member States' concepts in relation to public policy considerations, which are likely to attain the Directive's goal.

A significant number of Member States (Austria, Belgium, Denmark, Finland, France, Italy, Luxembourg, the Netherlands, Sweden and the UK) have refrained from implementing *expressis verbis* the "without prejudice to other provisions" clause. It is understood, however, that the other legal provisions concerned will continue to apply in such Member States by virtue of the principle of *lex specialis*. This omission is therefore unlikely to have any negative effect that might be inconsistent with Community requirements.

International software producers have recognised the decompilation requirements of the Directive in their Licensing Agreements. However, there are licence agreements from some US and European sources that are not consistent with Articles 5, 6 and 9 of the Directive. Given the mandatory nature of certain exceptions and 'users rights' set out in the provisions concerned, such contracts may be invalid.

VI. Overview of the effects of implementation

1. Overall satisfaction among interested circles with the basic features of the current regime

Apart from a number of new developments in the aftermath of the presentation of the Commission proposal for a Directive on the harmonisation of certain aspects of copyright and related rights in the Information Society [14], which are discussed below, there is no pressure from interested circles to change the Directive in any substantial way. Without exception the interests interviewed in the context of the 1997 study were of the opinion that the Directive had had a significant harmonising effect by setting standards for the protection of computer programs by copyright as literary works.

[14] OJ C 108, 7.4.1998, p. 6 and amended proposal at OJ C 180, 25.06.1999, p. 6

2. The impact on the computer programs industry

The adoption of the Directive has promoted the computer programs industry in relation to four important points:-

A reduction in piracy (decline throughout Western Europe from an average rate of 78% in 1990 to 36% in 1998) [15]

[15] BSA/SIIA Piracy Statistics 1998; SIIA Global Software Piracy Report 1999.

An increase in employment (European software industry grew from 19 billion ECU in 1992 to 31 billion in 1997) [16]

[16] Price Waterhouse Report

A move towards open systems (see results of the work undertaken by the EU working group on Open Software at <http://eu.conecta.it>), and

Harmonisation for employee-created computer programs.

3. The impact on third country legislation

The Directive has been used as a model in a significant number of Central and Eastern European States as well as in Hong Kong, the Philippines and Australia.

The Directive appears to provide a similar scope of protection to that provided in the legislation of the Community's major trading partners.

It has been claimed that one specific issue on the scope of copyright protection for computer programs creates some international discrepancies. In the context of the 1997 study it has indeed been noted that the Japanese Copyright Act defines exclusions for "any programming language, rule or algorithm used for making such" computer programs.

The Commission shares the view that there is no reason for extending the exceptions to the scope of protection under the Directive to include programming languages. Under Article 1 (2) of the Directive it is however debatable as to whether rules and algorithms may be included within "principles", particularly if principles covers "procedures, methods of operation or mathematical concepts as such".

Finally, it would appear that there is no pertinent case law under Article 47 (2) of the Japanese Copyright Law which puts Japan in any different position to that of the European Union or the United States.

4. Consequences resulting from other discrepancies in Member States' implementation

Although interested parties were of the opinion that the majority of differences of implementation do not create significant problems for the Single Market, it can be noted that the Member States deviating most from the text of the Directive are those which have joined the European Union after the adoption of the Directive. It would appear that this is a consequence of the lack of involvement of such new Member States in the process that led to the adoption of the Directive.

VII. Possible need for further Community action

Since the completion of the study in August 1997 the Commission has received various communications from interested circles concerning issues arising both from the implementation of Directive 91/250/EEC and also from further developments since it came into force. Some of these submissions suggest that there is a need for clarifying certain aspects of the Directive. The issues concerned are set out hereafter.

1. The distribution right and communication to the public

The new WIPO Copyright Treaty (WCT) of December 1996 provides for authors of literary and artistic works including computer programs the exclusive right of authorising any communication to the public by wire or wireless means, including making available (Article 4 in conjunction with Article 8 WCT).

On the basis of such new international rules it has been suggested that an express communication to the public right (including a right of making available) be added to the bundle of restricted acts under Article

4 of the Directive. In this context it has also been proposed by parts of the computer programs industry to clarify the scope of the exhaustion principle.

As to the exhaustion of copyright it must be borne in mind that under the Directive Community exhaustion only applies to the sale of copies i.e. goods, whereas supply through on-line services does not entail exhaustion [17].

[17] Answer by Commissioner Monti to Oral Question H-0436/95 by Arthur Newens, MEP (11.7.1995), Debates of the EP (EN ed.) No. 466, p. 174

Furthermore, the Commission notes that by contrast with the other Community acquis concerning the distribution right Article 4 (c) of the Directive refers to "any form" of distribution "to the public" of a copyright computer program. This could be interpreted as meaning that the distribution right under Directive 91/250/EEC is not limited to the distribution of tangible copies of a computer program on floppy disks.

Whilst Article 4 (c) is capable of such a wide interpretation, the author's exclusive right of authorising any making available to the public of the work in such a way that members of the public may access it from a place and at a time individually chosen by them (cf. Article 8 WCT) is currently not provided for. Under these circumstances the need for the Community to ensure compliance with WCT requirements by providing for complementary rules on making available of computer programs is being taken into account in the proposal for a Directive on copyright and related rights in the Information Society.

2. Back-up copies

Industry has expressed concern that the back-up copy provisions (Article 5 (2) of the Directive) are being illegally exploited in that so-called "back-up" copies have been made and sold on the open market. Apparently even videograms, compilations on a CD-ROM and certain other "multimedia applications" integrating some features of "software" have been subject to unauthorised acts of reproduction by individuals claiming that they were entitled to do so.

In this context the use of the phrase "means the sole intended purpose of which is to facilitate unauthorised removal or circumvention of any technical device which may have been applied to protect a computer program" under Article 7 (1) (c) has created problems for computer games manufacturers in that action has not been taken against the providers of protection defeating devices and programs because the sole intended purpose of these devices / programs has been disguised in the advertising literature as for use for back-up purposes.

In the first place it should be noted, however, that under Directive 91/250/EEC the notion "back-up" is intended to mean "for security reasons". Furthermore, the Commission is of the opinion that it results from the wording and the objective of Article 5 (2) that only "a" (= one) copy is permitted and that the purpose may not be other than as a "back-up". The back-up copy exception shall merely ensure that normal use of the program can continue in the event of loss or defect of the original. It must indeed be "necessary" for the use of the computer program. Where there is no or no longer a right to use a computer program the exception does not apply. The making of private copies for unauthorised use is not permitted but constitutes an act of software piracy.

Despite a certain level of confusion in a number of Member States on the exact scope of the back-up copy exception, in general national jurisprudence has proved able to deal effectively with such illegal activity. In addition, rightholders may rely upon other pertinent provisions of Community law such as Directive 96/9/EC on the legal protection of databases [18] in order to combat acts of multimedia piracy. Finally, a further strengthening of the framework for the enforcement of intellectual property rights may be anticipated as a result of the consultation process launched with the Commission's Green Paper "Combating Counterfeiting and Piracy in the Single Market" [19].

[18] OJ L 77, 27.3.1996, p. 20

3. Remedies

On the issue of remedies, the Directive recognises the importance of copyright remedies but is only general in its requirements. Various interests that had been consulted believe that there is a need for a broad-based set of minimum standards and procedures for copyright remedies to be based on the TRIPs Agreement. They consider this to be particularly important in that such a set of standards and procedures would, they believe, be as influential as the Directive has been.

Issues of overall harmonisation of copyright remedies and combating copyright piracy are being addressed in the context of the pending proposal for a Directive on copyright and related rights in the Information Society and the follow-up to the Green Paper "Combating Counterfeiting and Piracy in the Internal Market".

4. Technical devices

It has been claimed by a number of interested circles that Article 7 of the Directive dealing with remedies must be brought in line with the new WIPO Copyright Treaty. According to this view there may also be some divergence between the coverage of Article 7(c) of Directive 91/250/EEC and Article 6 of the proposal for a Directive on certain aspects of copyright and related rights in the Information Society that suggests provisions on obligations as to technological measures that go into somewhat greater detail.

Under Article 11 WCT Contracting Parties of this instrument shall provide adequate legal protection and effective legal remedies against the circumvention of effective technological measures that are used by authors in connection with the exercise of their rights under the WCT or the Berne Convention and that restrict acts, in respect of their works, which are not authorised by the authors concerned or permitted by law.

Article 7 (1) (a), (b) and (c), (2) and (3) of the computer programs Directive provide for 'special measures of protection' that require Community Member States to prescribe appropriate remedies against certain types of acts.

It should be borne in mind that the WCT has not yet entered into force and will only bind its signatories from expiration of three months from the date on which 30 instruments of ratification or accession have been deposited. Finally, the legislative process concerning the proposal for a Directive on copyright and related rights in the Information Society is still ongoing. It is therefore premature to consider amending Directive 91/250/EEC until the final form of Article 6 of the Information Society Directive has been established. Whether there will be any need to adapt Article 7 of the computer programs Directive will have to be assessed at a later stage.

VIII. Related Community initiatives

1. Patent protection for software-related inventions

The Commission has noted that there is a misconception among certain circles that copyright is the only available regime for protecting computer programs. It would therefore recall Article 9 (1) (1) of the Directive according to which other legal provisions such as rules concerning patent rights and other intellectual property rights remain unaffected.

The necessity to create transparency and legal certainty with respect to patent protection of software-related inventions is being actively discussed in the follow-up to the Green Paper on Innovation and the Green Paper on the Community Patent [20]:

"The European Parliament supported the patentability of computer programs, on condition that the product in question meets the conditions of novelty and industrial application of a technical invention, as is the case with our economic partners at international level, in particular the United States and Japan. The Commission shares this analysis and suggests action on two fronts.

On the one hand, to fully ensure the achievement and operation of the internal market in this field, the Commission will present, as soon as possible, a draft Directive based on Article 95 (ex Article 100A) of the EC Treaty aimed at harmonising Member States' legislation on the patentability of computer programs. This Directive should ensure uniform application and interpretation of the new rules on the patentability of computer programs throughout the whole Community. In this context, the parallel application of copyright and patent rights in the area of computer programs does not pose any particular difficulties, owing to the specific material covered by the two types of rights. The draft Directive will have to closely examine the question of possible exceptions to the general system covering the patentability of computer programs.

In parallel with this legal action, the contracting states to the Munich Convention will need to take steps to modify Article 52(2) (c) of the European Patent Convention, in particular to withdraw computer programs from the list of non-patentable inventions. This is necessary to ensure harmony between the work carried out at Community level and that undertaken in the framework of the Munich Convention.

In addition, all patent offices should improve the dissemination of information aimed at enterprises engaged in the software sector, and in particular SMEs, in order to make them aware of the economic advantages which can be derived from appropriate use of the patent system."

One aim of patent protection would be to cover the underlying ideas and principles of a computer program, which according to recital 14 of Directive 91/250/EEC can never be covered by copyright. The means of ensuring that copyright in computer programs remains nevertheless unaffected will be a matter for any future patent legislation.

2. Government use of computer programs

While the implementation of the Directive has clearly entailed a decrease in software piracy rates, industry figures suggest that piracy is still significant and indeed may even take place in publicly funded organisations, which in some cases are among the largest users of commercial software. A number of possible actions to combat piracy within the EU have been proposed in the Commission's Green Paper "Combating Counterfeiting and Piracy in the Internal Market". Moreover it has already been agreed under the TEP Action Plan that the EU and U.S. will examine ways and possibly adopt measures to ensure that government agencies make use only of authorised software. In this connection it is noted that some Member States have issued policy statements on the use of authorised software in government establishments, as has the U.S. [21] Others may wish to consider publicising the measures they are taking in this regard, and the Commission services would be interested to hear of such activities, with a view to possible follow-up at Community level in the context of the Green Paper on Counterfeiting and Piracy.

[21] Executive order of 1.10.1998 "Computer Software Piracy"

IX. Final Conclusions

Member States' implementation is overall satisfactory but not always as good as expected. In a number of specific cases it may be necessary for the Commission to open ex officio infringement proceedings under Article 226 of the Treaty (ex Article 169 ECT).

However the effects of implementation actually achieved are beneficial.

Areas of non-harmonisation such as the absence of a binding definition of 'computer programs' present only minor difficulties and do not justify action at Community level.

In common with interested circles who in 1998 issued a joint statement in this regard, the Commission considers that experience to date does not lead to the view that the substantive copyright provisions of the Directive should be revisited at this time. The Directive and in particular the decompilation provisions were the result of intensive debate among all interested circles and the balance found then appears to be still valid today; indeed the Community institutions have been urged "not to re-open the floodgate of debate on this Directive".

Under these circumstances and in the light of the favourable results of the review, the Commission does not see fit to undertake any new initiatives with a view to proposing any amendments to Directive 91/250/EEC at this stage. However, this is not to rule out the possibility of re-examining certain questions at a later stage depending on the progress of other ongoing initiatives, in particular those concerning WIPO Copyright Treaty implementation.