

Legal Aspects of Multimedia in Europe: Problems and Proposals

By Thomas Hoeren

Multimedia has entered the realm of computer law. Prior to 1993, computer lawyers tended to stew in their own juices when discussing the applicability of copyright law or traditional contract law to software and other computer-related products. But this situation has been changed by multimedia (the digital combination of text, music, and pictures), which forces the computer lawyer to deal with music law, film law, or even broadcasting law. Multimedia implies *multilegia*. Where text, music, and pictures can be combined technically, the copyright regimes for text, music, and pictures are combined legally. This complexity is intensified by the international nature of the industries concerned. Therefore, the harmonization of national copyright laws, including private international law, is required. Until now, only a few details have been considered by the EC authorities, such as term of protection, rental, and software protection. Other parts of the copyright system urgently need consideration.

Not all the necessary steps can be considered in this short article.¹ But ten aspects are so important that they must be discussed in the worldwide computer law community.

The Case for Voluntary Collective Administration of Licenses

Multimedia does not raise a great variety of legal problems. Instead, the central problem is one of license management, due to the large number of licenses required. From the perspective of multimedia producers, this problem may be solved by the introduction of statutory licensing. By national legislation, the producer would be entitled to use any work for digitization and incorporation in a digital product, without permission of the rightholders. Instead, the rightholders would be paid a remuneration collected and distributed by a collecting society. Because the

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producer gets a license by statute, issues regarding the bona fide transfer of rights could be omitted. In fact, this concept would guarantee that the multimedia industry could freely use pre-existing works without difficult enquiries about the identity of rightholders and without negotiations about license fees. The rightholders would get a standardized fee even where they have no bargaining power to market their rights individually.

However, concepts of statutory licensing or mandatory collective administration are not realistic. They would violate the Revised Berne Convention (RBC). The Convention allows statutory licensing only for sound recordings of music works and words pertaining thereto² or for the communication to the public.³ In addition, some further clearly defined regulations on free use are part of the RBC. These provisions mainly refer to quotations,⁴ illustrations for teaching,⁵ and the use of works in newspapers and periodicals.⁶ Art. 9 (2) RBC permits statutory licensing with regard to reproductions "in certain special cases" provided that such reproduction does not conflict with "a normal exploitation of the work" and does not unreasonably "prejudice the legitimate interests of the author." Apart from these restricted exceptions, statutory licensing violates the exclusive rights granted by the RBC.⁷

Multimedia does not justify statutory licensing within the RBC. In particular, Art. 9 (2) RBC cannot be applied as multimedia does not only concern the reproduction right. It includes the digitization of a work (reproduction), the implementation in a film-like work (adaptation) and the offering to the public for access (use on demand). In addition, Art. 9 (2) RBC refers to "certain special cases." The concept of multimedia is too vague to determine the extent of statutory licensing. Exemptions of the exclusive reproduction right had to be drafted to the effect that any digitization of the work or the integration in a "multimedia product" were allowed. Then everybody could use the work in digital form for every private or commercial purpose. There would be no chance for the rightholders and/or the collecting societies to monitor the use of the work and the payment of remuneration. This monitoring problem is of extreme importance in a digital era where copies could not be distinguished from the original work.

Finally, statutory licensing would conflict with the normal exploitation of the work. Up to now, "normal" exploitation refers to the use of works in analog form. Digitalization is a new technique which cannot be considered the usual, common way of exploiting literature, music, or films. However, this situation might change very quickly. With the immense growth of the multimedia industry, digital works might replace the analog alternatives. The possession of printed books might someday become the exception, when compared to the distribution of electronic books. Then, the author would be deprived of the digital exploitation where statutory licensing has been implemented in the copyright acts. He would be bound to distribute his works in analog form although this market has diminished. The "normal" exploitation would be made by multimedia producers and not by the rightholders themselves. This situation would unreasonably prejudice the legitimate interest of the authors. In the long run, statutory licensing is only favorable for the multimedia industry; the rights of authors would be prejudiced.

It would change the whole copyright world if mere storage in RAM is regarded as reproduction.

Nevertheless, multimedia and digital delivery of works requires a generalized and coordinated collective administration of rights. Otherwise, the user has to bear immense costs for finding the licensors. The rightholders, especially writers and artists, are themselves often in a weak position where they cannot exploit their rights without the aid of a collective society. Collective administration increases the payments to rightholders at least in those cases where they have no bargaining powers. At the present stage, many writers, artists, and filmmakers have no opportunity to discuss digitization on an individual contractual basis. They are under pressure to assign copyright to new media producers and publishers of all kinds. Therefore, collective administration is a most favorable way of solving the license management problems caused by multimedia. An author's participation in such a society would of course be voluntary; as mentioned above, mandatory collective licensing conflicts with the RBC and the concept of contractual freedom.

Loading Digitized Works

The collecting societies regard any digital storage

of the work as reproduction. They assert that permission is necessary for the mere storing of a digitized work in Random Access Memory. This view has yet to be refuted, although many authors support this concept based on the EC Software Directive. It would change the whole copyright world if mere storage in RAM is regarded as reproduction. Every storage would then require the permission of the rightholders or the collecting societies administering the reproduction rights. The rightholders could prevent any use of the digitized work on different hardware, even where the original computer cannot be used anymore. According to the EC Software Directive, the author might even sell the digitized work and forbid any use. Art 5 (1) of the Directive only guarantees the users' rights "in the absence of specific agreements."⁸

Storage in RAM cannot be regarded as equivalent to the storage on a CD-ROM or hard disk. The RAM is used as a mere temporary instrument to store the digitized data for a short period. This intermediate step is only made for technical reasons; the user is generally not able to take advantage of this additional "copy." From a functional point of view, the use of digitized works in RAM cannot be regarded as a reproduction similar to those on CD-ROMs or other hardcopy devices. In the author's view, loading does not constitute a reproduction under copyright law. Even where this view is not shared, the problem needs further clarification.

Use-on-Demand

In the author's view, multimedia involves only one problem which cannot be solved by traditional copyright law: the aspect of use-on-demand. Electronic delivery of documents lets the consumer select information from a database. The permanent storage of a



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copyrightable work, for instance on a hard disk or a CD-ROM, constitutes a reproduction which can only be made with the permission of the rightholders. The downloading of the work by the user can perhaps be classified as reproduction as well. Use-on-demand, however, includes an act of transmission as well. This act creates some legal uncertainty as to the rights involved.

This phenomenon can perhaps be regarded as broadcasting, or at least public communication. But a work is only communicated to the public where it is received by a large number of people at the same time.⁹ Use-on-demand enables the customer to access a multimedia system whenever he wants to. In such cases, there is no simultaneous reception.¹⁰ In literature, it has therefore been proposed to regard electronic delivery as similar to broadcasting and apply the regulations on public communication by analogy.¹¹

Alternatively, electronic delivery on demand can be classified as distribution. Distribution currently refers to the delivery of tangible good, but not to the transfer of electronic information. In addition, the problem arises that the distribution right is exhausted where a copy has been made public.

Electronic publishers' preparatory, logistic, and technical efforts need a protection similar to that of producers.

The problem cannot be solved by creating a new right of public access or use-on-demand.¹² Although the copyright acts of the EU member states are generally open to the establishment of new rights, the international copyright treaties refer to a traditional, restricted catalogue of rights. Thus, a new international treaty would be necessary for electronic rights such as use-on-demand. It would take a very long time to draft and settle such a new international treaty. The problem can only be solved by analogy; in the author's view, the regulations on communication to the public should be applied *mutatis mutandis*—with minor problems addressed as they arise. Communication to the public and use on demand only differ technically. In the first case, works are transmitted to an unlimited number of users; in the second, an unlimited number of users is allowed to access to a collection of works. In both cases, the public has access to copyrightable works. These similarities justify an analogy.

Neighboring Rights

Up to now, there has been no protection for a publisher *per se*. A publisher has had to rely on protection for the rights granted by the license of the underlying works. If a publisher is working as non-exclusive licensee, it has no direct rights of action against piracy. This is based on concepts laid down during the 19th century, when the compiling and marketing of written texts was not regarded as worth protecting in and of itself.¹³ However, the role of publishers has changed in the digital era. The electronic publisher has a creative role in compiling information and publishing it in forms suitable for network dissemination. These preparatory, logistic, and technical efforts need a protection similar to that of producers. "Authors are not the only people on earth worth protecting."¹⁴ As one scholar has noted, the electronic edition "will carry the fingerprint of the publisher in the same way as a work may bear the imprint of the personality of the author."¹⁵

Neighboring Rights for Sound Recordings

In every EU member state, producers of sound recordings are regularly granted a neighboring right that includes the reproduction and distribution of their recording media. This neighboring right does not extend to the broadcasting right. Currently, the phonogram producer only has a right to compensation exercised through collecting societies. This concept was developed at the beginning of this century in the face of wireless radio diffusion. In this technical context, broadcasting only constitutes a secondary use of music compared to the marketing of phonograms. This background is going to change fundamentally due to Digital Audio Broadcasting (DAB) and other related digital techniques. DAB will lead to a situation where the phonograms will be replaced by digital copies made via broadcasting. The user will be able to make digital copies of broadcasted music which cannot be distinguished from the original version. The phonogram producer must be able to control and monitor this method of broadcasting—otherwise he can no longer market his products. Therefore, the neighboring right of phonogram producers has to extend to the communication of a digitized work to the public.

Free Private Copying

There are bewildering differences in national copyright acts in the area of exemptions and limitations.¹⁶

According to Art. 9 (2) of the Berne Convention, it shall be a matter for legislation in the countries of the Union to permit the reproduction of such works in certain special cases, "provided that such reproduction does not conflict with a normal exploitation of the work and does not unreasonably prejudice the legitimate interests of the author."

The EU Member States have transformed this regulation into a number of divergent regulations. There are different media-specific (news), technology-specific (tape levies, equipment levies), and work-specific (*i.e.*, for writings, films, and computer programs) limitations on the exclusive rights embodied in the national copyright acts.

Almost everyone has access to technical devices for digitizing works and reproducing them in large quantities.

This situation must change due to multimedia. In the memorandum prepared for the discussions on a Possible Protocol to the Berne Convention, the World Intellectual Property Organization (WIPO) proposed in 1992 that no exemption for private use should exist for storage of works in computer systems. Otherwise, there would be a clear conflict with the normal exploitation of the works concerned. A similar approach may be found in the bill for a revised Copyright Act submitted by the Danish Minister of Culture on 9 February 1994. In the bill, no private use exemption exists for works in digitized form. Finally, the Business Software Alliance has asserted that exceptions to the exclusive rights of the author or other rightholder of digital works should be few and narrowly drawn. In its "White Paper on Copyright Protection for the Information Highway," dated 30 June 1994, the Alliance held that "there is . . . less scope for 'private copying' or other broad copyright exceptions for digital works."¹⁷

In fact, the private copying exemptions have been implemented in the copyright acts focusing on analog stored works. These works (books, records, and photographs) cannot be easily copied by a private user. The user typically has no facilities to reproduce his copy of the work and distribute them to the public. In addition, the copies made have usually less quality than the original copy; they could be easily distinguished from the original. This situation has changed due to the digitization. Almost everyone has access to technical devices such as multimedia PCs and scan-

ners for digitizing works and reproducing them in large quantities. Copies reproduced digitally often cannot be distinguished from the original master copy. Therefore, the line between commercial piracy and privately made/used copies is becoming blurred. As digitization reduces fixed copying costs, self-provision becomes inexpensive and geographically dispersed.¹⁸ Because of this decentralization in the dissemination of information goods, the enforcement of copyrights is going to be unreasonably expensive. This situation has led to the exclusion of software from private use exemptions.¹⁹ The same procedure should be considered for other digitized works, as well.

If the private use exemptions were abolished, there should yet remain digital privileges for the audio-visually handicapped. However, such an exemption could be narrowly drawn. It would not conflict with the legitimate interests of the rightholders, and is of general public interest throughout Europe. Otherwise, a single rightholder could prevent the distribution of, for instance, a digital newspaper being sent only to handicapped persons. The exemption can be drafted according to Scandinavian regulations. The Danish Copyright Act²⁰ provides that literary works may be reproduced in braille (§18 I); in addition, literary works may be recorded on sound carriers on the basis of a levy to be paid to the author (§18 II). Similar provisions may be found in the Swedish Copyright Act,²¹ which allows the distribution of braille texts on sound carriers to handicapped persons without the permission of the author (§18). It should be considered whether the statutory license shall be granted for free (as in Sweden) or for a license fee (as in Denmark).

Regulation of Collecting Societies

The European Commission has already initiated a research project on national regulations for collecting societies. The final study, written by Adolf Dietz of the Max Planck Institute in Munich, was published in 1978.²² The study contained distressing conclusions about European supervision of collecting societies. The regulations of the EC member states were totally unharmonized and dissimilar.²³ Belgium had no regulation at all. In France, Great Britain, and Ireland, there were no special provisions on the establishment and organizational structure of collecting societies or on their supervision. Danish acts provided for the admission of collecting societies, but did not regulate their activities. Germany, Luxembourg, and the Netherlands had fully established systems monitoring the admission, structure, and activities of collecting

societies. Italy has installed a public organization (the "*Società Italiana degli Autori et Editori/SIAE*") acting as monopoly.

The situation has not fundamentally changed since 1978. The British Copyright, Designs, and Patents Act 1988 (CDPA) still does not provide for any recognition and control of the licensing societies. Chapter VII of the CDPA only contains regulations regarding the licensing schemes; specifically, §129 declares the competence of the copyright tribunal to forbid an unreasonable discrimination of licensees.

Only in France and Belgium have legislatures amended the Copyright act to deal with collecting societies. In Articles 38 through 44 of the French act of 3 July 1985,²⁴ the legislature installed a supervision structure based upon the Minister of Culture and the *Tribunal de Grande Instance*. Collecting societies can work without permission, but are under permanent control of the Minister of Culture. The Minister may appeal to the *Tribunal de Grande Instance* in order to prevent the foundation of a collecting society.²⁵

In Belgium, the new copyright Act entered into force on 1 August 1994.²⁶ Unlike in France, a permit is required for the establishment of a collecting society.²⁷ The societies work under the supervision of a delegate nominated by the competent minister²⁸; the supervision relates to the fulfillment of statutory obligations and the implementation of tariffs.²⁹ This rigid system of supervision has been criticized as being excessive.³⁰

These recent developments demonstrate the unharmonized status of supervision in the various EU member states. Each member state has established a different system of control over collecting societies—irrespective of the internationalization of copyright licensing, especially the licensing of multimedia.

The Need for an International Collecting Society or Coordinating Bureau

Multimedia producers want global licensing through a one-stop shop, providing multiple licensing options at a reasonable rate without complicated administration. Digitization does not stop at a national border; it is a pan-European and even a worldwide phenomenon. The digital use of works can only be monitored by an international organization comparable WIPO. As the digitization requires cross-media licensing, this organization has to act as an umbrella body for the administration of all electronic rights.

In fact, WIPO has considered this task in its program for the 1994-95 biennium. According to its memorandum, "it could be useful to set up a centralized international data base of licensing sources."³¹ But the rightholders' organizations seem sceptical about this concept. Their fear was demonstrated at the meeting of working group on the establishment of a voluntary international numbering system for printed works, held on 9 June 1994 in Helsinki. Most participants stressed that:

no bureaucratic system (e.g. of deposit) should be established and that any solution should be industry-driven and implemented by organizations representing rights holders, in cooperation with users. WIPO . . . should not have a direct role to play in the day-to-day administration of the network.³²

Multimedia producers want global licensing though a one-stop shop.

The fear of a bureaucratic nightmare might be unrealistic. Yet this fear has to be taken into account. National collecting societies, in particular, will have problems in accepting a pan-European or even international rival. They will probably want to administer electronic rights themselves. If the following concept cannot be installed, at least alternatives should be considered by the parties concerned. For instance, an international bureau—comparable to the BIEM—could be installed which is responsible for the clearing of electronic rights, especially in international cases. This bureau would also assist in solving the difficult legal problems arising from multimedia and the collective administration of electronic rights. Finally, it might help the multimedia industry to find a competent collecting society.

Electronic Copyright Management Systems

Royalty distribution systems are based on the distribution of analog works. Melding of data is only possible with the digital encoding and processing of that data. Fair royalty distribution can only be achieved by the universal digital identification and tracking of works. In addition, electronic licensing is necessary to handle individual tariffs. As mentioned above, a collecting society could only use blanket licensing because otherwise it would not be possible to cope with the amount of relevant data. Electronic License Management would allow control of the nec-

essary information and individualization of licenses. With the aid of electronics, the society might implement an all-purpose universal pricing mechanism that deals with the wide range of electronic use options. Therefore, digitization of copyrightable works must be accompanied by the establishment of electronic tools for effective copyright management. Where thousands of rightholders are involved in the development of a multimedia product, electronic clearing of rights is essential. Therefore, technical devices have no disadvantages *per se*; they are instead inevitable in solving multimedia licensing problems.

There are a lot of technical devices available to improve the licensing of multimedia. Projects such as CITED should be intensified and extended. As the Committee on New Technologies reported at the 1993 IFRRO Annual General Meeting, the devices are "still in relatively rough form, and do not address the problems inherent in persuading the entire electronic universe to operate within the framework of a single particular product or technology."³³

A Standard for the Electronic Transfer of Rights and Works

In the digital era, licenses should be available online. However, this requires suitable technical devices and the standardization of electronic data interchange. Thus, the efforts in the EDI discussions should be noted. EDIFACT is focusing on commerce and trade of goods and services. The EDI standards have not been adapted to the licensing of immaterial information. For instance, the EDI standard "ORDERS" is defined as "United Nations Standard Purchase Order Message to be used in Electronic Data Interchange (EDI) between trading partners, involved in administration, commerce and transport." It claims to be "not dependent on the type of business or industry." A purchase order may refer to goods or services related to one or more delivery schedules, call-offs, etc. Therefore, the standard presupposes that the contract is entered into electronically while the good is transported afterwards. Consequently, the good is designated by its markings and labels used on individual physical units (*e.g.*, packages). The identification of rights is more complex than that of goods. Here, information about former rightholders is required. The content of the right has to be specified locally and

personally. The rights have to be linked with the digital copy to a kind of digital package. The link between copy and right has to be secured electronically to the extent that the customer may only use the copy in a legitimate way. The system has to be drafted to the effect that the licensee can report the purported use of the work in order to get rid of the moral rights problem. In conclusion, an EDI-like standard for the transfer of rights has to be created.

The value of electronic documents needs further attention. Electronic delivery is only possible where electronic documents are accepted as evidence in court. Otherwise, the user may claim that he has never received the electronic copy of the work. Or the network provider may claim that he has never agreed upon any license. The proposals mentioned above therefore tried to solve the problem by integrating digital signatures in their systems.³⁴ However, the problem will be that electronic signatures (however secure they may be) will not be accepted in court as valid. Unlike in the United States³⁵ or Great Britain,³⁶ the German legislature is unwilling to accept electronic documents as acts changing legal relationships. Some proposals for an amendment to the German Civil Procedure Act have been rejected or not been discussed by parliament.³⁷ Therefore, EDI documents will not be accepted as private deeds in the future (with the exception of documents fixed in a WORM storage³⁸). This is one of the main reasons why the German banks are unwilling to accept EDI.

Conclusion

Multimedia has brought large areas of intellectual property into the realm of computer law. Multimedia forces the computer lawyer to deal with music law, film law, and even broadcasting law. The harmonization of national laws is imperative. Multimedia needs multisolutions, including direct licensing, collective licensing, and technical devices. The answer to technology is not only in technology, but it can only be found by a multilateral approach combining all aspects of entertainment, copyright, and telecommunication law. This paper has addressed some of the problems and issues raised by this new technology. However, much more dialog is needed before the reforms demanded by this new technology can be implemented.

NOTES

1. The author has considered various aspects in detail within a research study performed under the auspices of the European

Commission/DG XIII. This study will probably be published in 1995 by the Commission.

2. Art. 13 (1) RBC/Paris Act.
3. Art. 11bis (2) RBC/Paris Act.
4. Art. 10 (1).
5. Art. 10 (2).
6. Art. 10 bis.
7. Cf. for films Art. 14 (3) RBC.
8. However, this possibility does not contradict the preamble, which states that "the acts of loading and running for the use of a copy of a program which has been lawfully obtained and the act of correction of its errors, may not be prohibited by contract." Consequently, contractual limitations are possible under Article 5 (1), although they are forbidden according to the preamble. It has been held that Article 5 (1) still prevails; see Verstryngne, Protecting Intellectual Property Rights within the New Pan-European Framework - Computer Software -, Paper presented at the World Computer Law Congress, April 18 - 20, 1991, Los Angeles, p. 9.
9. Paul-Gerhard Brutschke, *Urheberrecht und EDV*, Munich 1972, 82; Dieter Goose, *Die urheberrechtliche Beurteilung von elektronischen und Mikrofilm-Datenbanken*, Berlin 1975, 76; Schricker/von Ungern-Sternberg, *Urheberrecht*, Munich 1988, § 15 UrhG Note 30; Hans-Peter Hillig, *Zur urheberrechtlichen Einordnung von Videotext und Bildschirmtext*, in: *Festschrift für Georg Roeder zum 10. Dezember 1981*, edited by W. Herschel, Freiburg 1982, 165, 171; Bernd Sinogowitz, *Wiedergabe und Benützung audiovisueller Medien in Bibliotheken*, in: *Film und Recht* 1984, 563, 567.
10. See among others Werner Brinckmann, *Zivil- und presserechtliche Fragen bei der Nutzung von Bildschirmtext*, in: *Zeitschrift für Urheber- und Medienrecht* 1985, 337, 345. Another view has been taken by the County Court of Berlin, Judgment of 29 March 1967 - IZR 23167 = *Schulze LGZ* 98, 5 zu § 11 II LUG.
11. Katzenberger, *Urheberrechtsfragen der elektronischen Textkommunikation*, in: *Gewerblicher Rechtsschutz und Urheberrecht. Internationaler Teil* 1983, 895, 906; Herbert Landau, *Urheberrecht im Medienzeitalter - zum gegenwärtigen Stand der deutschen Urheberrechtsgesetzgebung*, in: *ibid.*, *Urheberrecht für das Medienzeitalter*, Schwerte 1986, 7, 27; Schricker, *Grundfragen der künftigen Medienordnung. Urheberrechtliche Aspekte*, in: *Film und Recht* 1984, 72. Cf. Hoeren, *Softwareüberlassung als Sachkauf*, Munich 1989, Notes 313 et seq.
12. This is however the idea of Charles Clark described in "Legal Implications of the Creative Role of the Publisher," paper presented at the Third International Copyright Symposium. Second Working Session on 23 May 1994. Similar proposals have been made by Jürgen Becker (GEMA), *Die digitale Verwertung von Musikwerken aus der Sicht der Musikurheber*, Manuscript Munich 1994 (to be published soon), p. 45, 64.
13. Cf. Jürgen Granlich, *Rechtsordnung des Buchgewerbes im Alten Reich. Genossenschaftliche Strukturen, Arbeits- und Wettbewerbsrecht im deutschen Druckerhandwerk*, Frankfurt 1994.
14. George Metaxas, cited in Charles Clark, *Legal Implications of the Creative Role of the publisher*, Third International Copyright Symposium. Second Working Session on 23 May 1994, p. 1.
15. Clark, *supra* n. 12, at p. 5.
16. Cf. Bernd Hugenholz, *Copyright and Electronic document delivery services*, Luxembourg November 1993, p. 7.
17. p. 10.
18. Cf. the results of Pethig, *Copyrights and Copying Costs: A New Price-Theoretic Approach*, in: *Journal of International Transactional Economics* 144 (1988), 462 et seq.
19. Cf. Article 4 I of the EC Software Directive.
20. *Lov om ophavsretten til litterære og kunstneriske værker*, 31 May 1961.
21. *Lag om upphovsrätt till litterära och konstnärliga verk given Stockholms stott den 30 December 1960*.
22. Adolf Dietz, *Das Urheberrecht in der Europäischen Gemeinschaft*, Baden-Baden 1978.
23. *Id.* at p. 277 et seq.
24. *Loi no. 85-660 du 3 juillet 1985 relative aux droits d'auteur et aux droits des artistes-interprètes, des producteurs de phonogrammes et de vidéogrammes, et des entreprises de ... audiovisuelle*, JO 4 juillet 1985, p. 7495.
25. Article 39 II of the *Loi du 3 Juillet 1985*.
26. *Moniteur Belge* of 27 July 1994, 19297-19314. For the long-lasting copyright discussion in Belgium cf. Doutréleont, *Nouvelles de Belgique: Une proposition de révision de la loi belge du 22 mars 1886*, in: *RIDA* 1987, No. 134, 70 - 195; Berenboom, *Une nouvelle loi sur le droit d'auteur?*, in: *Journal des Tribunaux*, 1989, 117 - 123.
27. Article 67 al. 1.
28. Article 76 al. 1.
29. Article 76 al. 3.
30. Berenboom, cited according to the report of de Clerck of 17 March 1994, *Documents de la Chambre des Représentants* 450 (S.E. 1991-1992), No. 33, p. 315.
31. *INS/CM/94/1*, p. 16.
32. *Note on the conference*, Internal paper, 1994, p. 3.
33. *Report of the Committee in New Technologies to the 1993 IFFRO Annual General Meeting*, Lugano, October 13, 1993, p. 3 f.
34. The discussion has been summarized in GMD (ed.), *Projekt: Bestandsaufnahme über die elektronischen Signaturverfahren*. Auftragsnr. 1219/91, St. Augustin 1992.
35. Cf. Rule 1001 (3) of the "Uniform Rules of Evidence": "If data are stored in a computer or similar device, any printout or other output readable by sight, shown to reflect the data accurately, is an original."
36. Cf. Sect. 5 of the Civil Evidence Act 1968. In September 1993, the English Law Commission published a report on the use of 'hearsay' evidence in civil proceedings which proposes the evidential treatment of computer records as the same as paper records.
37. Cf. GDD/AWV (Eds.), *Besteht Handlungsbedarf seitens der Bundesregierung und des Gesetzgebers im Hinblick auf elektronische Signaturverfahren?*, in: *AWV-Informationen* 39 (1993), Heft 5, 3 et seq.; Seidel, *Das elektronische Dokument als Regelungsobjekt gesetzgeberischen Handlungsbedarfs*, in: *Proceedings of the BIFOA-Congress. SECUNET 1992*, Wiesbaden 1992; *ibid.*, *Signaturverfahren und elektronische Dokumente. Rechtliche Bewertung und Regelungsvorschläge*, in: *GMD (ed.), Projekt "Bestandsaufnahme"* *supra* n. 34, at p. 76 et seq.
38. See Seidel, *supra*, in: *GMD (ed.), Projekt "Bestandsaufnahme"* *supra* n. 34, at p. 25; Sponeck, *Der Beweiswert von Computerausdrucken*, in: *Computer und Recht* 1991, 269, 273.

2. Art. 13 (1) RBC/Paris Act.
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10. See among others Werner Brinckmann, *Zivil- und presserechtliche Fragen bei der Nutzung von Bildschirmtext*, in: *Zeitschrift für Urheber- und Medienrecht* 1985, 337, 345. Another view has been taken by the County Court of Berlin, Judgment of 29 March 1967 - I ZR 231/67 = *Schulze LGZ* 98, 5 zu § 11 II LUG.
11. Katzenberger, *Urheberrechtsfragen der elektronischen Textkommunikation*, in: *Gewerblicher Rechtsschutz und Urheberrecht. Internationaler Teil* 1983, 895, 906; Herbert Landau, *Urheberrecht im Medienzeitalter - zum gegenwärtigen Stand der deutschen Urheberrechtsgesetzgebung*, in: *ibid.*, *Urheberrecht für das Medienzeitalter*, Schwerte 1986, 7, 27; Schriker, *Grundfragen der künftigen Medienordnung. Urheberrechtliche Aspekte*, in: *Film und Recht* 1984, 72. Cf. Hoeren, *Softwareüberlassung als Sachkauf*, Munich 1989, Notes 313 et seq.
12. This is however the idea of Charles Clark described in "Legal Implications of the Creative Role of the Publisher," paper presented at the Third International Copyright Symposium. Second Working Session on 23 May 1994. Similar proposals have been made by Jürgen Becker (GEMA), *Die digitale Verwertung von Musikwerken aus der Sicht der Musikurheber*, Manuscript Munich 1994 (to be published soon), p. 45, 64.
13. Cf. Jürgen Granlich, *Rechtsordnung des Buchgewerbes im Alten Reich. Genossenschaftliche Strukturen, Arbeits- und Wettbewerbsrecht im deutschen Druckerhandwerk*, Frankfurt 1994.
14. George Metaxas, cited in Charles Clark, *Legal Implications of the Creative Role of the publisher*, Third International Copyright Symposium. Second Working Session on 23 May 1994, p. 1.
15. Clark, *supra* n. 12, at p. 5.
16. Cf. Bernd Hugenholz, *Copyright and Electronic document delivery services*, Luxembourg November 1993, p. 7.
17. p. 10.
18. Cf. the results of Pethig, *Copyrights and Copying Costs: A New Price-Theoretic Approach*, in: *Journal of International Transactional Economics* 144 (1988), 462 et seq.
19. Cf. Article 4 I of the EC Software Directive.
20. *Lov om ophavsretten til litterære og kunstneriske væerker*, 31 May 1961.
21. *Lag om upphovsrätt till litterära och konstnärliga verk given Stockholms slott den 30 December 1960*.
22. Adolf Dietz, *Das Urheberrecht in der Europäischen Gemeinschaft*, Baden-Baden 1978.
23. *Id.* at p. 277 et seq.
24. *Loi no. 85-660 du 3 juillet 1985 relative aux droits d'auteur et aux droits des artistes-interprètes, des producteurs de phonogrammes et de vidéogrammes, et des entreprises de ...-audiovisuelle*, JO 4 juillet 1985, p. 7495.
25. Article 39 II of the *Loi du 3 Juillet 1985*.
26. *Moniteur Belge* of 27 July 1994, 19297-19314. For the long-lasting copyright discussion in Belgium cf. Doutrelepoint, *Nouvelles de Belgique: Une proposition de révision de la loi belge du 22 mars 1886*, in: *RIDA* 1987, No. 134, 70 - 195; Berenboom, *Une nouvelle loi sur le droit d'auteur?*, in: *Journal des Tribunaux*, 1989, 117 - 123.
27. Article 67 al. 1.
28. Article 76 al. 1.
29. Article 76 al. 3.
30. Berenboom, cited according to the report of de Clerck of 17 March 1994, *Documents de la Chambre des Représentants* 450 (S.E. 1991-1992), No. 33, p. 315.
31. *INS/CM/94/1*, p. 16.
32. Note on the conference, *Internal paper*, 1994, p. 3.
33. Report of the Committee in *New Technologies to the 1993 IFFRO Annual General Meeting*, Lugano, October 13, 1993, p. 3 f.
34. The discussion has been summarized in GMD (ed.), *Projekt: Bestandsaufnahme über die elektronischen Signaturverfahren*. Auftragsnr. 1219/91, St. Augustin 1992.
35. Cf. Rule 1001 (3) of the "Uniform Rules of Evidence": "If data are stored in a computer or similar device, any printout or other output readable by sight, shown to reflect the data accurately, is an original."
36. Cf. Sect. 5 of the Civil Evidence Act 1968. In September 1993, the English Law Commission published a report on the use of 'hearsay' evidence in civil proceedings which proposes the evidential treatment of computer records as the same as paper records.
37. Cf. GDD/AWV (Eds.), *Besteht Handlungsbedarf seitens der Bundesregierung und des Gesetzgebers im Hinblick auf elektronische Signaturverfahren?*, in: *AWV-Informationen* 39 (1993), Heft 5, 3 et seq.; Seidel, *Das elektronische Dokument als Regelungsobjekt gesetzgeberischen Handlungsbedarfs*, in: *Proceedings of the BIFOA-Congress. SECUNET 1992*, Wiesbaden 1992; *ibid.*, *Signaturverfahren und elektronische Dokumente. Rechtliche Bewertung und Regelungsvorschläge*, in: *GMD (ed.), Projekt "Bestandsaufnahme"* *supra* n. 34, at p. 76 et seq.
38. See Seidel, *supra*, in: *GMD (ed.), Projekt "Bestandsaufnahme"* *supra* n. 34, at p. 25; Sponeck, *Der Beweiswert von Computerausdrucken*, in: *Computer und Recht* 1991, 269, 273.