

Multimedia and Copyright

Pieter Kleve and Leo van der Wees

Center for Computers and Law
Erasmus University Rotterdam

0. Abstract

If there are no technical barriers, might there be legal barriers which could hinder the development, dissemination or use of multimedia applications? Would, for example, copyright regulations obstruct or promote the introduction of multimedia applications? In our view, copyright seems to offer adequate protection in the EU (and other countries that are member of the Berne Convention and the Universal Copyright Convention). This means multimedia applications, combining text, image and sound, will be legally protected as well.

Problems, however, seem to be the quantity and the logistics of the licenses required for multimedia applications. And, as more people are connected to world-wide computer networks, it will become increasingly difficult to actually protect such applications.

Is there a need for a different legal solution to deal with the problems arising from the need to issue increasingly vast numbers of licenses? Would copyright registration and the introduction of a copyright notice prevent wholesale copyright infringement? Might a rule be required which allows copyright owners to give licenses or to sell copyrights via computer networks? This paper will give an overview of some of the major problems arising from multimedia.

1. Introduction

The number of multimedia applications is increasing rapidly. In education, libraries, research and entertainment the use of CD-ROMs and CD-I's containing combinations of images, texts and sounds are more and more commonplace. Easy to use applications form interesting and attractive tools for all kinds of activities. At first sight, multimedia applications to law would seem 'easy to use' as well. It looks as if multimedia applications do not cause great legal difficulties. Intellectual property rules have been drafted almost universally to protect images, texts and sounds. They are also applicable to image, text and sound in multimedia applications. In addition, European countries have implemented the EC-directive for the legal protection of

computer software. As a result it seems that a multimedia application itself, a computer program, might also be protectable.

Nevertheless, legal barriers have been observed and noted in literature by various authors world-wide. This paper describes some of these obstacles. First of all, legal barriers in general are discussed. Attention will then be paid to copyright and multimedia. Copyright itself is discussed but also the 'logistics' of copyright, multimedia copyright in computer networks and, finally, moral rights.

2. Legal barriers in multimedia

Not only has it been noticed that legal barriers in the field of multimedia exist, it has even been stated that these legal barriers obstruct the growth of the multimedia industry. White writes that there are reports¹ of multimedia products being suspended, or even abandoned, simply because of the complexity of seeking rights and permissions from scattered groups of right owners. The inconvenience, delay and expense involved in gaining individual licenses from these right owners has an inhibiting effect. White says, therefore, that if solutions to these problems are not found soon, the multimedia industry in general, and the application of multimedia to information services, will be significantly restrained. [White 1993]

If one thinks of multimedia products and services hardware, software, data, databases and distribution channels come to the fore. These issues are related to a patchwork of legal codes and regulations: contracts, copyright law, patent law, trade marks, data protection legislation, database protection EC-directive, telecommunications law, international law, etc. However, in fact it is not multimedia which causes a wide range of general legal questions, it is the shift from ordinary paperwork, audio and video to digital formats which raises interesting legal issues. Multimedia rather compounds the problem than creates them.[White 1993]

The latter remark relating to the compounding character of multimedia gives rise to an even more interesting issue, namely, the fact that multimedia causes a shift from media with multiple formats (on paper, tape, vinyl, compact disc, etc.) to media with one format: zeros and ones. In the words of an American copyright expert quoted by White [White 1993]:

¹ White [1993] mentions Barbara Zimmerman (1992) New multimedia products spawn copyright worries, Wall Street Journal, 28 January and Tom Forenski (1993) Multimedia in handcuffs, Financial Times, 13 July.

'The categories of authorship have broken down, all information being reduced to zeros and ones and capable of transmission on various media regardless of their original or ultimate form of expression'².

Different types of media, floppy discs, CD-ROMs, computer tapes, WORMs, contain different types of information in one and the same format. It does not matter whether the medium carries text, sounds or images the format will always be the same. One medium contains zeros and ones representing a text, another one a sound, while a third could contain zeros and ones representing a mixture of sound, image and text. The fact that the format is the same could raise questions for the term 'multimedia'. Multimedia applications are 'multi' because they consist of a mixture of texts, sounds and images, but in the digital environment of multimedia applications it appears the media are not 'multi' because they have the same format. As a result, it might be better to speak of 'digital information' instead of 'multimedia'. In addition, 'digital information right' might also be a more preferable term than 'multimedia right'. This digital right should deal with the zeros and ones no matter what they represent: text, image or sound. This might be better than taking the traditional parts of the copyright legislation and apply them to digital information. Apart from the fact that different types of copyright (text, film, music) might be involved in a multimedia production which could make it a complex patchwork of rights, these regulations all have their own traditions and peculiarities which might cause difficulties as well.[NRC 1995] If digital information, no matter what it represents, has a universal, interchangeable format why should not we (legally) treat this type of information as being one and the same? We should start to think digitally, instead of grasping desperately at rules which might not be suitable for the digital world. As John Perry Barlow wrote in Wired, 'Intellectual property law cannot be patched, retrofitted, or expanded to contain digitized expression any more than real estate law might be revised to cover the allocation of broadcasting spectrum. We will need to develop an entirely new set of methods as befits this entirely new set of circumstances.'[Barlow 1993] However interesting, this issue is too complex and challenging to discuss in this paper as well. In forthcoming papers we will try to elaborate on this question.

In this paper, we will not discuss a new approach, but we will try to look at multimedia in relation to the traditional legal framework. Of the patchwork of legal aspects which might play a role in the multimedia society, we will only discuss copyright law.

² Morton Goldberg of the New York law firm Schwab Goldberg Dannay and Price, quoted in Copyright world, no.31, June 1993, p.22.

3. Copyright and multimedia

Above we spoke of legal rules and regulations which might play a role in the multimedia world as a patchwork. However, copyright itself is a patchwork as well. At least this is the case in the Netherlands. It contains special rules on books, radio and TV, music, software, newspapers, portraits, film, newspapers, etc. New developments seem to have had their influence on the contents of this act. The photocopier may have had an impact on the rules for books and publishers. The video recorder may have had an impact on the rights of film producers and TV broadcasters. The floppy disc and the networked PC may have had an impact on rules for software protection.

Whenever a new medium emerges for creative works, this will put pressure on copyright and often bring about amendments to the law. Multimedia will be no exception to this rule. Its emergence raises questions regarding copyright law. In certain respects, these questions are more profound than previous ones. Multimedia cannot be described as affecting one sector of the creative community. It is a 'new medium' which cuts across all traditional creative boundaries and is, therefore, not comparable to previous new media. Digital technology is rapidly offering the possibility to store, manipulate, intermingle and distribute all major existing types of works, rather than just one or another, both online and on material carriers.[White 1993] The technical structure of multimedia works will probably require new approaches and presents new problems for the intellectual property lawyer.[Davis 1994] However, as stated above, it is in fact not the development of multimedia applications which causes copyright difficulties, it is the shift from traditional to digital formats of copyrightable material. Without multimedia, which combines all kinds of material, these shifts would have been made as well, but then separately.

A distinctly new approach would be the one described in the previous paragraph; digital thinking instead of traditional text/audio/video thinking. So far, it seems that the existing approaches are not that new or at least not really challenging. Most of the authors try to solve the legal multimedia problem in a traditional way. They simply try to apply the existing copyright law to the new medium. It seems that the existing copyright law does often offer opportunities to solve new multimedial problems as well.

In a multimedia application one can find text, sound and images (film, photo). European copyright legislation has been dealing with these creative products for a long time, and we do not foresee new legal problems with the emergence of the new multimedia product.

Apart from the separate rights on text, sound and image, probably a right will also come into being on the product as a whole if the production of a multimedia product involves selection, arrangement, and a degree of judgement. This compilation copyright might not arise if *all* the required material is acquired and compiled and processed in a multimedia application without selection. In that case, however, the new EC-directive on the legal protection of databases might offer a solution. After all, the data compiled for the multimedia application could be considered to be a database according to this directive which, as a result, gives a certain level of protection when the database as a whole is not subject to copyright. This means multimedia will not cause new problems for compilation copyrights either.

Furthermore, the multimedia producer could obtain copyright for the computer program he has made which processes and combines the various sorts of texts, sounds and images. By the time this paper will be presented, all European countries will have implemented the EC directive on the legal protection of computer software in their copyright acts. This means that original multimedia computer programs can also be subject to copyright. The program itself can be protected as well as being a part of the whole multimedia compilation (text, sound, image and computer program). Of course, if an existing copyrighted program has been used to build a multimedia application permission will be required to use the computer program.

Davies points out that it has been stated that the digitized text, images and sounds in a multimedia work are merely data for the computer program which is also stored on that disc and the whole work, therefore, constitutes a computer program.[Davies 1994] We would like to remark that it is true that the zeros and ones representing the copyrightable parts (text, image, sound) are data for the program but this does not mean that they are part of the program. The files containing images, texts, and sounds are separate files and can easily be replaced by other files. If a programmer intends to use digitized copyrighted files, however, permission must of course be obtained. Having bought a multimedia application one does not only have permission to use the computer program, but to view the contents as well. A kind of implied license does exist. What would a program be without the multimedia files? It would be very impractical if the buyer of a multimedia application would require licenses to view the images and texts and to hear the sounds. This problem is not restricted to multimedia products and has not caused enormous difficulties in our opinion. If one buys an old fashioned encyclopedia - they might be cheap now - one also presumes permission was asked by the compiler to use photographs, pictures, drawings, etc.

In conclusion, one could say that neither the multimedia program nor the digitally formatted images, texts or sounds causes *new* challenging problems for copyright law.

Another not very new question concerns substantial copying. This question probably exists almost as long as copyright itself. The Dutch copyright act has several paragraphs dealing with this problem. Within certain limits substantial copying is sometimes allowed. We do not have fair use privileges, but we have copying privileges which shield many noncommercial uses of copyrighted works from infringement actions.[see also Samuelson 1994] In the Dutch act special attention has been paid to copying (parts of) newspaper items, scientific papers, radio items, etc. Text, images and sounds have been dealt with. Multimedia applications often contain snippets of music, pictures and texts. The law as it is in present is, to a certain extent, capable dealing with these substantial copying situations. If parties are not really sure of the situation, the right owner could be consulted thus avoiding law suits in the future.

The question of substantial copying, however, might be more complex in relation to multimedia applications. A comparison with sound samplers in the music industry is possible. This technique causes quite a few disputes because it is a brand new method of using other people's (copyrighted) material. The question is even more complex in multimedia where snippets can be taken not only from music but from a variety of media. To avoid possible copyright problems it seems some multimedia developers prefer to produce independent and original material for use in their products. [White 1993]

This sampling of multimedia may require a special approach, another special paragraph in the various copyright acts perhaps. To our knowledge, however, the music industry has not yet made clear the approach to be adapted to solve copyright problems as far as sampling is concerned. The new multimedia industry has not found a solution either and, therefore, has opted to use copyright free material or home made material for their applications as much as possible.[Davies 1994]

4. Logistics of rights in multimedia

Multimedia applications often consist of several pieces of text, lots of images and snippets of music. This means that for every piece of creative work research it is necessary to check the copyright situation. Breward pleads for a structured approach. A checklist of questions has to be processed: What inputs does the application have and which are potentially subject to copyright?, What copyright law applies to the material?, Is permission required or is there a fair use kind of exception?, etc. [Breward 1993] A structured approach is, of course,

always preferable. However, because of the enormous numbers of works subject to copyright which can be involved, a structured approach is strongly recommended for the multimedia environment. Nevertheless, it will be quite an onerous task to obtain all the licenses required and the consent of the copyright owners. The logistics of rights involved will be complex. This causes the effect discussed above, i.e. that multimedia developers will produce their own material as much as possible. On the other hand, a booming multimedia industry will undoubtedly also cause an increase in copyright infringements. We have seen such developments following the introduction of the photocopier, the tape recorder, the video recorder and the floppy disc. The Dutch professor Dommering wrote that the text, image and sound 'walk away' from the right owners as a result of the development of new techniques. In the digital context we would like to state that it even 'runs away'. Right owners loose control. Dommering spoke of an electronic strainer.[Dommering 1994]

How could these problems regarding the logistics of rights and the loss of copyright control be solved? Several options are possible. For example, a world-wide introduction of the American copyright notice could be combined with a world-wide copyright notice database. This would mean that there will be a certain pressure on creative workers to get their work registered in the database because an infringement suit would only be allowed after registration.[Brinson 1994] If no registration has been made the work is supposed to be not copyrighted. Registration as well as consultation, can, of course, be done via computer networks. New techniques offer possibilities for new creative works. In addition, a facility should be created to acquire a license or even a copyright via the computer network as well. Regarding the latter, however, a change in most copyright acts would be required as copyright can often only be transferred by a written document. Of course, a computer document could be interpreted as being a written document, but as long as digital thinking in the legal world is not commonplace, a change in copyright legislation be preferable. Such a method, registration combined with a database and more flexible rules for transferring rights, might solve the problem of the logistics of rights to a certain extent. On the other hand, however, it would require an enormous administration, a huge database and advanced computer network techniques which should be universally available. It will also affect the copyright world and causes an enormous administrative task for copyright-rich industries. This option will, therefore, probably never come into existence.

Another option, often mentioned, is the introduction of collective (licensing) bodies. Just as in the music industry (in the Netherlands) the music right owners are represented by such a body, so should a collective multimedia body represent right owners of material in digital formats. The bodies should have the authority to grant licenses for digital material. They should also develop

standard multimedia license agreements. Such bodies would make it easier for the multimedia industry to know whether or not a creative work is subject to copyright and it will be easier to obtain licenses. Illegal use might diminish as a result. Another task for these bodies could be to track down possible illegal copying, to arrange settlements with these illegal users and to hand over the revenues to the right owners. Until now, it seems no plans have been made to establish such bodies. White gives two possible reasons: one, there is hardly any idea of how much multimedia is worth, and thus, it is quite difficult to establish royalty rates, two, right owners are hesitant to surrender a degree of control over their products, particularly because it concerns creative works in a completely new format.[White 1993]

5. Networks and multimedia

So far, it seems that multimedia has not caused any problems cannot be overcome. The problems which have arisen often already existed. It is more the accumulation of existing problems which causes difficulties; not legal difficulties but logistics difficulties as right owners seem to lose control on the digital world. The latter is especially true if one examines the increase in multimedia products in combination with the increase in the use of computer networks. Although not a problem of multimedia applications as such, it certainly affects the multimedia industry. As Barlow wrote 'If our property can be infinitely reproduced and instantaneously distributed all over the planet without cost, without its leaving our possession, how can we protect it?'.[Barlow 1993] White also states that digital reproduction threatens the control of right owners and, in addition, that there is enormous uncertainty over how to regulate the position of digital materials made available in networks.[White 1993] Contracts and licenses are not the instruments to protect and control multimedia products in a digital networked environment. Therefore, much attention is paid to the possibility of using technical solutions to protect creative works in a digital format.

In the United States, for example, a system called Electronic Copyright Management System (ECMS) has been developed.[Computable 1994c] This means that in this system a key for decryption is required in order to be able to receive digitally formatted information. After having received the key and the information has been decoded it can, of course, be seen, read or heard, but, in addition, data are added to the file containing information about the buyer and the supplier. Suppose the buyer of the product disseminates it digitally, his or her identity is easy to track down. This tracking down and resulting actions could, for example, be done with the help of the 'cybercops' of a collective licensing body.[Wees 1995]

A slightly different but also technical approach to the copyright problems in digital networked environment is that of John Perry Barlow. Barlow wrote in *Wired*, somewhat exaggerated in our opinion, that if a solution could not be found for the intellectual property problems in the digital age we would sail into the future on a sinking ship. He even states that the present intellectual property law will be completely wrong within 50 years. Protection will be founded on technique (and ethics) rather than law. He writes that the technical basis for protecting most forms of intellectual property will be encryption. [Barlow 1993] Discussions on the Internet on this now famous article indicate Barlow has some supporters for his statement that encryption will play an important role for the protection of intellectual property in the future. In fact, the proposal discussed above tends to indicate that direction as well.

What will happen, however, if governments forbid encryption, or demand control over encryption? Will it still be an attractive tool for the protection of intellectual property? And, will there be an ever lasting battle between encryptors and illegal de-encryptors as we have seen happening in telecommunications [Wallich 1994] and with computer viruses (virus - anti-virus, etc.)? A battle which will probably cost the creative works industry a great deal of money. A sound solution has not yet been found, which means we will have to stay on John Perry Barlow's sinking ship for a while.

6. Moral rights and multimedia

In the Netherlands, the maker of a creative work, has even after transferring copyright the right, amongst others, to resist publication of the work without the name of the maker being mentioned, the right to resist against publication of the work quoting a name other than the maker's name, the right to resist against every mutilation, deformation or any other maltreatment of the work which could affect the honor or name of the maker. These rights are called moral rights. In the Netherlands, some of these rights can be waived, but, for example, the latter on mutilation and deformation cannot.

It is not hard to imagine that moral rights could cause some problems in the multimedia environment. Multimedia applications often not only allow users to browse through information in the works, but they also allow users to modify that information or combine it with other information. In addition, the multimedia producers themselves often want to enhance quality, attractiveness and the effect of the underlying work and, therefore, want to change the works stored in the multimedia application. Enhancements will not give much reason to protest, however, it is of course possible that people (painters, musicians,

etc.) are strongly attached to the original version of the work and they do not want someone to change it.

This means that if the moral right has not been waived or cannot be waived, a multimedia producer runs the risk of his product being outlawed because of an infringement of moral rights. It has been recommended that the multimedia world should obtain the necessary consent of the moral right owners with ??? from of exactly which changes, enhancements, etc. will be allowed. In the case of moral rights, however, again it can be quite an onerous task to find out who the moral right owner is. This is especially the case as the copyright owner is often not the same person as the moral right owner. In addition to the copyright logistics problems, a moral rights logistics problem comes to the fore. It means an increase in the number of people whose rights the multimedia producers have to safeguard. Another reason for the creative community to be careful on the multimedia route.[White 1993]

7. Conclusions

In conclusion one might state that copyright 'as such' does not cause difficulties in the multimedia environment. Text, sound, image and computer program are just as subject to copyright in the digital age as they were in the pre-digital world. It seems, however, it is the enormous numbers of copyrights which are involved in the information rich industry of multimedia which causes the problems. Who has which right on what part of a creative work? That is an important question but also difficult to answer.

Another important fact is the increase of the use of computer networks world-wide. If the introduction of the photocopier, the audio tape, and the video tape was a shock for the creative industry, the advent of the computer, the floppy disc and computer networks made copyrighted works 'run' away from the right owners. They have lost control. This is especially sad for these multimedia producers who have had to put so much effort into gathering and paying for all relevant copyright or licenses. It must be frustrating to know people are taking advantage of your work while you do not have sufficient control to enforce the copyright.

Logistics becomes an even bigger problem for multimedia producers who are confronted not only with copyright owners but with moral right owners as well. Have these rights been waived, can they be waived, if not, does the moral right owner have objections against his/her work being processed in a multimedia product? This question must be answered in addition to all the usual copyright questions.

Several solutions to these problems related to multimedia applications can be offered. The logistics problems could be diminished by introducing a universal copyright notice for creative works, establishing a database, and offering a digital opportunity for buying/selling copyrights or granting licenses. On the other hand collective licensing bodies might also be a solution. Copyright control could be regained by introducing encryption techniques for protecting creative works.

As long as no sound solution for these problems has been found, the industry might not boom as much as most people expected it to. Avoiding the use of copyrighted works seems the best advice for the multimedia industry at the moment.

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