

# **The Amazing Diversity Framework of the Intellectual Property Rights Harmonisation**

*Pieter Kleve, Richard De Mulder and Kees van Noortwijk\**

## **1 Abstract**

The process of globalisation has been boosted considerably by the application of information technology. Global communication and exchange of data have become everyday, almost trivial, phenomena. As a consequence of the globalisation of the modern world, the European Union and other international organisations have paid a lot of attention to harmonisation of legislation. These attempts, however, often seem to be concentrated on information technology itself rather than on the social problems that may have arisen from it. In IT law causes and consequences often appear to be blurred. The result of the, often very extensive, legislative initiatives does not fulfil its expectations.

In this paper, a number of EU directives in the field of intellectual property will be discussed. It will be argued that, for example, the harmonisation of the intellectual property rights with respect to ‘chips’, software and databases, as well as the attempt to create a more general harmonisation of copyright, the ‘internet directive’, have led to more problems than were solved by them. Attempts to produce harmonisation in these fields have led to ‘disharmonisation’, while the new social problems arising from globalisation have hardly been dealt with. The standard legal interpretation of concepts in one country is often different from that in another country, leading to differences in judicial decisions and legislation between countries.

The conclusion is that although new technology may have caused social problems, international harmonisation of legislation should aim at the differences in national, social and legal approaches to these problems rather than at the technological changes that underlie them. If this would take place, such extensive attempts for harmonisation would most probably not be necessary.

## **2 Globalisation and harmonisation of legislation**

Globalisation is closely connected to technology in general. Technology has been the cause for increased mobility in the past. Development of motorised traffic (the third step in technology development, more or less coinciding with the ‘industrial revolution’)<sup>1</sup> has caused an enormous increase of mobility. Manifestations of this are for instance the huge migration waves at the beginning of the 20th century and after the Second World War, dormitory towns, going abroad for holidays and increasing international trade. Now, we see an increase in mobility again, caused by the development of automatic data processing (the fourth step in technology development, more or less coinciding with the ‘information revolution’). Information technology, including communication<sup>2</sup>, has made it possible that citizens all over the world can now become better informed, become more socially aware and migrate in a more determined way to countries with a higher level of prosperity, a higher standard of living and favourable conditions for settlement. Furthermore, information technology – and especially its interactive nature – has added a dimension to mobility, because cross-border contacts are now possible without the need of physical movement.

Especially with regard to the internet, questions about applicable legislation and problems with the enforcement of it play a role. This is particularly the case when network communication is used to exchange data files that are protected by intellectual property law. Two problems become apparent here. In the first place, the fact that data can be transported across national borders very easily leads to questions regarding harmonisation of legislation of the different countries. But the exchange of data files itself also touches the two essential aspects of the legal protection of these files, namely public performance and reproduction.

Because of globalisation, it has become necessary to gain a more concrete hold on knowledge about other legislative systems than it used to be in a discipline like ‘comparative law’. Harmonisation, decreasing differences, seems preferable at first sight. This is what the European Commission intended for copyright and neighbouring rights, when it issued the 2001 Copyright Harmonisation Directive<sup>3</sup>. The internet was mentioned as the immediate cause for this. This directive does not stand on its own, however, but relates to the WIPO Internet Treaties<sup>4</sup>, which in turn caused the introduction of the US Digital Millennium Copyright Act of 1998.<sup>5</sup> Furthermore, it is not the first initiative to induce harmonisation in the field of intellectual property rights connected to information technology.<sup>6</sup> In fact it is the most recent of a whole series of such initiatives that started with the US Semiconductor Chip Protection Act of 1984.<sup>7</sup> In the European Community this was followed by the 1987 Chips Directive<sup>8</sup>, the 1991 Software Directive<sup>9</sup> and the 1996 Database Directive.<sup>10</sup> Furthermore, harmonisation of software patents is now the subject of vivid discussions.<sup>11</sup> This large number of initiatives leads to the question what exactly was harmonised, however, and what the result of all this is.

### **3 Intellectual property rights**

Starting in the 1980’s, legislation regarding intellectual property rights has been altered considerably by the explicit inclusion of information society products, such as computer hardware (chips), computer software and computer data. This includes changes in copyright law (software) and new ‘sui generis’ legislation that resembles copyright law in many respects (chips, databases). Surprisingly, internet domain names is a field where this type of legislation is still missing.<sup>12</sup> In the following sections we will pay attention to the necessities and benefits of these results of European harmonisation urge.

#### *3.1 Chips protection law*

When we look at the general requirement for protection under copyright law, there was of course no real need for the US S CPA 1984. Chips and in particular the three-dimensional pattern (topography) of the semiconductor, consisting of a stack of (two-dimensional) masks that contain the circuit patterns could easily be classified as an ‘original intellectual creation’ and therefore be protected under copyright law.<sup>13</sup> To make this even clearer, the S CPA is in fact a lot more elaborate than necessary. Instead of just extending the definitions paragraph – as had been done for computer programs in 1980<sup>14</sup> – a whole new chapter 9 was added to the US Copyright law. Therefore, the most important reason for drafting this sui generis legislation does not seem to be the lack of protection in the US itself, but rather that in many other countries without sufficient copyright protection regimes or enforcement. Actually, large quantities of American chips were reproduced illegally in South East Asia in those days, whereas local authorities seemed reluctant to act against this practice. This frustrated the

Americans, even more so because they *would* have to protect chips from these countries against counterfeits themselves, under US copyright law.

The original copyright basis of the US SCPA can still be recognised. Chapter 9, however contains one remarkable novelty. The principle of ‘assimilation’ or ‘national treatment’, basic assumption of the Berne Convention and of the Universal Copyright Convention,<sup>15</sup> is dropped and is replaced by the principle of reciprocity. Under the new legislation, the US do not automatically grant foreign chips manufacturers the same rights as US manufacturers. This is now dependant on the level of protection that the particular country grants to US-made chips.

This makes the US SCPA primarily an instrument for economic politics, specifically to urge ‘clone countries’ to adopt an equivalent protection scheme for US chips, on penalty of losing protection in the US. ‘If you don’t protect us, we will not protect you.’ This is understandable; however, it is difficult to imagine that the US would benefit from regulations that would have the overall result that chips would no longer be protected. It seems desirable that everyone would eventually join the team. Given that objective, it can be easily understood why it was necessity – and not a favour – that led the US to include (the market of) the European Union in this protection scheme for the time of a six month (later even extended to a year) period of transition, during which European legislation could be modified to match American demands.

The ‘chips law’ – the 1984 US SCPA, the 1986 EC directive following it and (in The Netherlands) the ‘1987 Chips Protection Act’<sup>16</sup> – is therefore in a way ‘superfluous’, although it was necessary to circumvent the assimilation principle in existing international copyright treaties. Creating an exclusive position for chips was probably a more attractive alternative to the United States than to re-negotiate or to renounce existing treaties. The way in which this legislative solution was chosen unilaterally, given all its extraterritorial effects, is an example of the influence the US have in the field of IT regulation. The act also marks a change in the relationship between the US and the EU, which now seems to be increasingly based on trade protectionism. The principle of reciprocity has become the foundation of the EC 1996 Database Protection Directive (article 11), the exhaustion rule has been limited to specimen that are sold for the first time within the EU (article 4 under c 1991 Software Protection Directive, article 5 under c and article 7.2 under b 1996 Database Protection Directive and article 4.2 2001 Copyright Harmonisation Directive) and trademark law has become a means to act against so-called parallel import. This does not look like harmonisation driven by globalisation; it bears more resemblance to diversification.

### *3.2 Software law – copyright*

It is not hard to continue along these lines of critique: the special regime that was created to protect software was unnecessary too. The 1991 EC directive on software protection was the result of an intensive lobby by several interest groups from the computer industry. One of the most remarkable characteristics of the directive is the introduction of a legal status for ‘temporary reproductions’ of a computer program, as part of the loading, displaying, running, transmission or storage of the program. These, in fact, are no ‘reproductions’, or ‘copies’, in the sense of copyright at all. What the article refers to is the practice of data processing.<sup>17</sup> This has been the basis for widespread discussions about the silent extension of copyright law to cover not only ‘exploitation rights’, but also ‘usage rights’ and about the growing inequality between the rights of users and those of rightful claimants. But in the shadow of this discussion this incidental technical circumstance, that data must be *processed* in order for an

information system to work, has been used to include a legal limitation to competition that is without precedent in intellectual property law, namely a ban on *reverse engineering*. Article 6 of the 1991 EC directive prohibits the decompilation of computer programs, except where this is “indispensable to obtain the information necessary to achieve the interoperability of an independently created computer program with other programs”.

Decompilation (translating a program’s object code back to source code) is considered to be a ‘reproduction’ in the sense of copyright law under the EC directive. The exception that was made was a small concession to the lobby for the preservation of free research to the structure and working of computer software. And even this exception is limited explicitly by the condition that the obtained information may not “be used for the development, production or marketing of a computer program substantially similar in its expression” – a fully unnecessary condition, as prohibiting copyright infringement by products that have a strong resemblance to certain original work is the main objective of copyright law. Copyright law is not meant for the protection of underlying ideas and principles (article 1.2 EC directive), but that is exactly what is established by the restriction of decompilation. This is even more perplexing as patent law (and chips law) explicitly *include* the possibility of reverse engineering.

The concession with regard to compatibility is regarded as being a logical extension of the consideration of the directive with respect to the promotion of international standardization. If this should be the task of a government is questionable and depends, among other things, on the applicable political model and the assumption that steering society with such tools is feasible. This, however, does not fit very well in the rational model of man,<sup>18</sup> which favours the free-market system and a government that limits itself to its classical tasks. Economic theory indicates that protecting standards might encourage innovation, but public utility would benefit more from a government that avoids this. Furthermore, this type of legislation with regard to such a general purpose product as computer software lacks refinement.

With respect to the consideration in the directive referring to computer program technology being of “fundamental importance for the Community’s industrial development” the directive appears to be counter-productive, as most software standards stem *de facto* from the United States. The directive ‘condemns’ software developers from the EU to develop only software that is compatible with these standards, a sure way to increase the dominance of US manufacturers even more. With respect to this, it is ironic that Microsofts dominant position is questioned more in the EC than in the US, while Microsoft has succeeded all by itself in doing what the EC directive intends, namely to set international standards.<sup>19</sup>

A much more powerful alternative to Microsoft’s prominent position seems to come from the industry itself, however, in the form of the ever growing ‘open source movement’.<sup>20</sup> Under the title of ‘open source’, software is developed, the source code of which may be provided to other parties for further development. Certain provisions might be applied, such as the condition that the source code of a further developed version must in turn be made available to others.<sup>21</sup> For this new business model, the benefit of the EC directive is again questionable. Open source software is not the same as software without applicable copyrights, or software for which copyright is not claimed. As a matter of fact, copyright is used to secure the availability of the programs source code, as well as the possibility to copy the program freely. This means that copyright is just as much a necessity for the open source business model as it is for the traditional protection model. Open source software is not free, companies earn money with it. The market for this type of software is more competitive, however, because

there are more players and customers are not dependant on just one or a few software developers.

What can be learned from the rise of the open source movement is that society benefits from a manifold system with several options and standards that are left to the discretion of the market. Especially the latter seems to be something the EU is not yet quite accustomed to; its website now contains a guidance section on free and open source.<sup>22</sup>

### *3.3 Software law – patents*

An initiative that was also launched under the flag of harmonisation but is still unsuccessful is the directive on the patentability of computer programmes.<sup>23</sup> Under article 52 (c) of the European Patent Convention “programs for computers” are not regarded as inventions within the meaning of paragraph 1 of the convention. That does not mean that it is currently impossible to obtain patent protection for computer programs. They can be patented as a method of operation or as a product, however only in connection to hardware.<sup>24</sup>

The special position of software in European patent law is strongly related to the difficulties faced in qualifying software for legal purposes. The text of article 52 dates back to 1973, when computer programs were qualified in terms of ‘instructions’ and other abstract notions.<sup>25</sup> In his PhD thesis, Kleve discusses the legal qualification of computer data (including software) extensively. Based on a comprehensive analysis of legal and factual notions, he concludes that computer data, defined as concrete patterns that can contain information, should be qualified as ‘goods’ factually as well as legally. This means that data, just like other goods, can be someone’s property. The English summary of the applicable chapter 6 of this thesis, ‘The proprietary status of data’, states it as follows:<sup>26</sup>

“To determine if data are ‘goods’ depends upon whether data are tangible objects, whether they are capable of being controlled by people and whether they are objects with an economic value. Although it is conceivable that there are tangible objects that cannot be controlled by people, vice versa is not so likely: that there are things controllable by humans, which are not tangible. The fact that data can be controlled by humans, and they can be produced, processed, stored and transferred indicates in itself that data are tangible objects and of value to people.

Data are not rights but nonetheless they can be the object of rights. Data do not belong to the world of ideas. With respect to whether data are tangible objects, it appears that insights from physics play a role, although not always a decisive one. In general, there appears to be three schools of thought:

1. data are intangible and therefore not goods;
2. data may well be intangible but in practice they are always connected to a carrier which is tangible;
3. if physics does not consider data to be tangible, then tangible has to be interpreted in legal terms.

The question is very relevant, particularly because of electronic data processing. In the case of magnetised plastic disks, the magnetic fields are sometimes categorised as physical and sometimes not.

Otherwise than is suggested above, that the legal status of digital, electronic data determines the desirability of a ‘digital regime’, it seems that the desirability of a ‘digital regime’ is decisive for the legal status of digital, electronic data.

The idea that the tangibility criterion based on physics should stand in the way of categorising data as ‘goods’, cannot be supported by insights from physics. Experience points rather to the opposite conclusion: that as our knowledge of nature grows, more and more natural phenomena can be controlled by humans. Technology plays an important role in this respect. The tangibility of matter is not disputed. That gasses could be ‘goods’ was hardly conceivable in the time of the Romans, but when gasses could be stored in bottles ideas changed. Energy became a legal object when energy became transferable, it could be accumulated and made available. Just as the increased controllability of energy characterises the third stage of technological development, the fourth stage of development is characterised by the increasing controllability of data.

Opting for a ‘digital regime’ could be explained in that other legal consequences would be desirable. However, that does not appear to be the case. Within the realm of private law, data files are sold and delivered, whereas the criminal law takes action against the illegal copying of another’s data. The legal consequences connected to the status of ‘goods’ also appear to be equally desirable for data.”

When it is accepted that data are tangible object, just like other ‘goods’, and that abstract notions of computer programs (‘instructions’, ‘methods’) are represented physically in data, corresponding to the requirements for the patentability of other ‘inventions’, the special attention to computer programs in article 52 is plainly unnecessary. For it is the *implementation* of an ‘invention’ that can be the object of patent law protection, not the idea or the concept. This is of importance to the secondary discussion about the desirability of computer software patents. Why should an arbitrary product category that would otherwise qualify completely for patent law protection be excluded from it? This is a question that touches the very foundations of patent law.

### 3.4 Database law

The 1996 EC Database Protection Directive contains a complex regime of copyright protection for original databases as well as a *sui generis* protection for databases built with substantial investments. It is definitely not the case, however, that databases were completely without protection before the introduction of this directive. When personal choices of its maker had played a role while compiling or arranging the database, it was protected under the Berne Convention, specifically as a ‘collection’ or compilation. In many countries, however, even databases without such originality characteristics were granted legal protection, for instance by means of regulations against unfair competition or regulations based on printers law.<sup>27</sup>

More recent case law on the subject seems to indicate that new terms like ‘database’ and criteria like ‘substantial investment’ can still raise questions, however. Many of these would not have surfaced under the general copyright regime and with the broader term ‘works’. It is feasible, however, that for a database that does not conform to the criteria of the directive the general copyright regime or some other ‘old’ protection regulation would still apply.

Meanwhile, the directive continues with quite a number of systematic breaks with existing regulations. For instance, the unfortunate novelty that temporary, ‘technical’ reproductions fall under the reproduction right of the copyright holder, as introduced in the 1991 Software Protection Directive, is also adopted in the database directive. This means that also this directive not simply covers ‘exploitation’ of databases, but also their ‘use’. Furthermore, the directive was used by the EU to retaliate the US for the way in which chips protection had been enforced, now using the reciprocity principle itself and limiting exhaustion to the EU. Other new points are that protection is now granted to the *manufacturer* of the database (and not to the maker)<sup>28</sup> and that the duration of protection seems to be practically unlimited.

### 3.5 Internet law

The 2001 Copyright Harmonisation Directive is the third directive in a row in which a legal status is granted to ‘temporary reproductions’. The EC view on temporary reproductions (which are, in fact, not reproductions at all, but merely electronic data processing), as

established in the 1991 Software Protection Directive and the 1996 Database Protection Directive, has also been applied in the ‘internet directive’, be it in a different way. The temporary reproduction in this case is no longer allowed to the legitimate user, as in article 5.1 of the software directive and article 6.1 of the database directive, but has been excluded entirely from the applicability of the right to reproduce.<sup>29</sup> What has been added to it is a test for economic value and the so-called ‘three step test’ from article 13 of the TRIPS Treaty and article 10.2 of the WIPO Treaty, regarding the admissibility of exceptions.<sup>30</sup>

The purpose of the directive is to harmonise copyright law in the EU. The importance of this seems to be high, as it is even reflected in the title of the directive. Unlike prior directives, in which separate product categories were paramount (chips, software and databases, respectively), this directive was meant to establish an overall harmonisation of copyright law, necessitated by the growing importance of the internet (“the information society”). This expectation, however, has certainly not been fulfilled. It all starts promising, with the recodification of the “Reproduction right”, the “Right of communication to the public” and the “Distribution right” in articles 2-4. This, however, is mere window dressing – and even rather confusing, in this directive – as basic copyrights have already been anchored in the international copyright treaties. After this, the directive proves to be a patchwork of separate harmonisation subjects that can or can not be implemented in national legislation, all to the discretion of the individual member states.<sup>31</sup> Existing differences between member states are not eliminated at all. Even the hottest, most urgent subject, namely ‘home copying’,<sup>32</sup> is not regulated as “Member States *may* provide for exceptions or limitations”.<sup>33</sup>

Furthermore, the directive specifically pays attention to the use of technical protective measures and to information about rights management (Digital Rights Management Systems), with the obligation to implement adequate legal protection against the circumvention of technological measures, against devices that are primarily designed, produced, adapted or performed for the purpose of enabling or facilitating this circumvention and against the removal or alteration of any electronic rights-management information. It remains to be seen if this will end ‘the war on private copying’, or that on the contrary it will even intensify this war.

Under the existing copyright regimes, it is not always clear whether current exceptions to copyright, which allow reproduction for private, non-commercial use, are applicable on the internet. As far as home copying is allowed, it will also include copying of music and films from the internet. The question is, however, whether or not the making available of files by the one, for reproduction by the other, is to be considered as being ‘communication to the public’. As for the latter, an exception ‘for private use’ is of course difficult to imagine. A common opinion about this is that ‘putting something on the internet’ is equivalent to making it available to the public. This can already yield copyright infringement, even without someone actually viewing it. This opinion requires some refinement, however. It is not uncommon to speak about the internet in a metaphorical way, but it is not an entity one can ‘put something on’. The data resides on someone’s computer and therefore the question is how this person provides the data to others. When a user enables someone else, on this person’s request, to make a copy for personal use of a music file that resides on the user’s computer, this is probably not ‘communication to the public’. Based on the theory of exhaustion, the rightful claimant can not oppose the continued distribution of copies, after these have legitimately been brought into circulation. Publicly offering a musical work for download, for instance through a website, initiated by the ‘supplier’, possibly could be characterised as an infringement of the right of public communication. In the case of so-called

*peer-to-peer* copying of music or movies, however, a file is only copied *after* someone requests this. In this case, the initiative lies with the requester. In response to this request, the person is granted access to the respective musical work or the movie on the computer where it resides, after which he can make a ‘home copy’.<sup>34</sup> This situation seems different from the one in which musical works are ‘offered’. Furthermore, this particular way of transferring a file must be distinguished from situations in which the counterpart of downloading (the actual copying) is qualified as ‘uploading’. It is not uncommon to use the term ‘uploading’ in situations where someone actively copies a data file from his computer to another computer, with the intention that others can then copy this file for themselves, which activity is called downloading. In a peer-to-peer situation this is not applicable. The file continues to reside on the original computer, for use on that computer. An extra activity that could be characterised as ‘uploading’ does not take place nor is the file ‘uploaded’ by the original possessor to the computer of the other person.

But even if we accept that making home copies over the internet falls under the copyright exception, it is still a fact that the huge scale on which this home copying takes place – made possible by the scaling up that was caused by computer technology – was unforeseen. It is not a new problem, however; the ‘personal use’ exception is not so much a fundamental one but rather one that is unavoidable. Home copying is not *caused* by the copyright exception, nor is this exception the product of a fundamental notion about the ‘freedom of information’; it is the other way around. Because home copying became possible (starting in the 1960s and 1970s with ‘home taping’ on tape recorders and audio cassettes) the copyright exception was introduced, whereas now it is regularly justified in terms of ‘freedom to copy’.<sup>35</sup>

Another important point for criticism seems to be the ambiguity of the directive. It offers the possibility to set limitations to the reproduction right, with regard to private copies. This implies that a person is entitled to grant someone else access to the files on his computer in order to copy these files for personal use. It is also allowed to ask someone from a distance if he possesses a certain musical work. But the directive does not explicitly state if it is allowed for someone to grant a person access from a distance to that same music file, even though the *file sharing* programs that do exactly this in practice give rise to the largest number of legal questions.<sup>36</sup>

Therefore, the question is still open how file exchange through *file sharing* programs on internet should be characterised. Article 5.2(b) states that “Member States may provide for exceptions or limitations to the reproduction right provided for in Article 2 for non-commercial reproductions for private use”. Based on article 5.4 they may provide similarly for an exception or limitation to the right of distribution as referred to in Article 4 to the extent justified by the purpose of the authorised act of reproduction. The question, therefore, seems to be whether granting somebody access to a data file on a computer, for the purpose of making a non-commercial private copy by that person, falls under the right of distribution, or falls under the right of public communication. In the first case it may be allowed under the limitation of article 5.4, whereas in the second case it is not allowed.

At first sight, it seems that granting someone access to a certain file that person has asked for falls under the right of communication to the public. But this is not self-evident, as ‘making available to the public’ covers forms of the *material* ‘making available’ as well as forms of the *immaterial* ‘making available’. What we have here is the distinction between the separate right to distribution or making available of copies, and the separate right of public performances or public broadcasting. The latter includes the making available to the public of

works in such a way that members of the public may access these works from a place and at a time individually chosen by them. Such interactive on-demand transmissions should not be stretched beyond the domain of (commercial) interactive internet ‘radio’ or internet ‘television broadcasting’, beyond the domain of ‘view-on-demand’. If electronic data distribution (electronic data delivery) is brought under the regime of ‘public communication’, every sensible distinction from the distribution regime vanishes. In that case, the theory of exhaustion could also be dumped.

The considerations for the directive contain a further explanation of the right to make available to the public (consideration 23):

„(23) [...] This right should cover any such transmission or retransmission of a work to the public by wire or wireless means, including broadcasting. This right should not cover any other acts.”

This is the implementation of article 8 of the 1996 WIPO copyright treaties of Geneva, in which ‘immaterial publication’ over the internet – for instance the broadcasting of radio or television content – including ‘view-on-demand’ are also included under the right of publication. With regard to on-demand transmissions over networks consideration 25 states:

„(25) The legal uncertainty regarding the nature and the level of protection of acts of on-demand transmission of copyright works and subject-matter protected by related rights over networks should be overcome by providing for harmonised protection at Community level. It should be made clear that all right holders recognised by this Directive should have an exclusive right to make available to the public copyright works or any other subject matter by way of interactive on-demand transmissions. Such interactive on-demand transmissions are characterized by the fact that members of the public may access them from a place and at a time individually chosen by them.”

Regarding the right of distribution consideration 28 states:

„(28) Copyright protection under this Directive includes the exclusive right to control distribution of the work incorporated in a tangible article. The first sale in the Community of the original of a work or copies thereof by the right holder or with his consent exhausts the right to control resale of that object in the Community. This right should not be exhausted in respect of the original or of copies thereof sold by the right holder or with his consent outside the Community. [...].”

The explanatory text given with these considerations yields some remarkable findings. Firstly, even after reading consideration 23 it is still unclear if the ‘immaterial regime of publication’ that is contained in the right to make available to the public also includes *file sharing*. Secondly, it seems that *file sharing* does not conform to the characteristic of ‘on demand transmissions’ in consideration 25, because with this technique the availability of a file is not determined by ‘members of the public’, but depends on the fact of someone else who possesses this file is *on-line* at that moment or not. In the third place, *file sharing* seems to fit in the regime of the right to distribute, because a work is involved that is incorporated in a tangible object. That electronic data files are tangible has already been argued above. Furthermore, in this case there is no transmission of a work in the sense that the work is played or displayed ‘on demand’, for instance in the form of *streaming audio* or *streaming video*, which if necessary could be ranked under ‘immaterial publication’, but there is a material copy that is made available in order that a private copy can be made of it. The most remarkable point, in the fourth place, is, however, that it seems that the text is not meant this way. This could be concluded from consideration 29, in which cd-rom and cd-i disks are mentioned “where the intellectual property is incorporated in a material medium, namely an item of goods”, together with “on-line services” in which the Commission possibly also includes ‘on-line delivery’.

This is not only remarkable from the – incorrect – assumption that electronic files are not made available physically over the internet. It is especially remarkable because it would lead to an unworkable regime for home copying in peer-to-peer situations. It would have been far better to accept a general copyright exception for private copies. As it is now, the directive would make no difference to the situation prior to it. Furthermore, the ‘three step test’ in article 5.5 complicates matters. It states that exceptions are only allowed in certain specific cases, under the conditions that the normal exploitation of works is not affected and that legal interests of right holders are not deteriorated unreasonably.

Given the time that the WIPO internet treaties were drafted, in December 1996, *file sharing* was probably not an issue during the discussions. The internet, as a new medium, had to be given the same status, as far as copyright was concerned, as transmissions by air and by cable. Still, developments or rather experiments regarding interactive broadcasting such as *pay per view* and *view on demand* already took place at that time. This brings us to an important reason not to treat *file sharing* and *view on demand* in the same way. *View on demand* is possible because of the interactive character of the internet. Therefore, music and movies need not be broadcasted publicly at fixed moments anymore, like is the case with radio and television, but can be listened to or viewed at any moment, chosen by the listener or viewer. The specific attention that is paid to *view on demand* is based on the consideration that it could possibly not be regarded as *public display*, because every time the public only consists of one person. In that case individual on-demand transmissions would not be covered by copyright law, even if it would concern the commercial exploitation of copyrighted works. The situation is in fact comparable to the exhibition of movies in private video cabins. The Court of Appeal in The Hague, the Netherlands, considered this as ‘public display’, the making available of a work to multiple people, even if it is only observed by a single (or not even a single) person<sup>37</sup>. The important difference is here, however, that *view on demand* is a form of commercial exploitation whereas *file sharing* is a non-commercial form of home copying.

Should attacking home copiers be the objective, this could also be achieved by the protection regime that is suggested for the circumvention of technological measures.<sup>38</sup> Here again, the directive fails because no choice is made. If technical provisions would be adequate against copying, it would not be necessary to make an exception for private copying. Technical protection was developed because legal protection was inadequate. If, however, technical protection also proves to be inadequate, it is not very likely that legal protection of technical protection will help us out. Still, this is exactly what the directive does. It seems to take into account that technological measures will not work, as it includes regulations for the legal protection of these measures. Therefore, it only shifts the problem to a more complicated level.<sup>39</sup>

This approach bears a strong resemblance to the approach of the problem of home copying. Initially, home copying, for instance from radio broadcasts on a tape recorder, led to the exception for private use – although reluctantly – because nothing could be done against that. As technology made it easier to make home copies and the number of home copies grew, the resistance against the private use exception from the side of the information industry grew as well. As it seems, the amounts are now so high that industry longs back to the situation prior to 1960, even though at that time it was the inability to act against home copying that led to the introduction of the exception.

Instead of banning the circumvention of technological measures,<sup>40</sup> it would be a better idea to harmonise the grounds for home copy levys. Netanel<sup>41</sup> goes very far in this respect with the suggestion that a so-called '*null levy*' (or *non commercial use levy*) should be imposed on consumer products and services of which the value is substantially raised because of *peer-to-peer file sharing*. Examples of such products and services are internet access, P2P software and services, computer hardware, consumer electronics usable for the copying, storing, sending or playing of 'downloaded' files (like cd-burners, mp3 players and digital video recorders) and the recording media used in these devices. It is up to the information industry, however, to make the first move here, with the development of new business models.

Some authors<sup>42</sup> have stated that copyright is no longer necessary, because there are other, more effective ways to protect information products. We can not agree with this point of view, however. Copyright provides a foundation based on which authors and other right holders are entitled to a fee.<sup>43</sup> Commercial exploitation of works is not so difficult to assess, because some publicity is needed for it. But as a mechanism to allocate private consumption, copyright will not always be sufficient in a digital environment. In those cases, it seems obvious that statutory copyright levys will gain importance, as will collective licensing bodies that supervise these. From this perspective too, the legal protection of technological measures can be criticized, as the use of technical provisions is taken into account while establishing what is a 'fair compensation' for authors. The only party that seems to benefit from that are suppliers of technical protection and DRMS. It would be more sensible to pay attention to the rather monopolistic character of collective licensing bodies and to improve supervision on the functioning of these organisations.

#### **4 Harmonisation?**

The argument to improve harmonisation is an important one. Differences between legislation in the countries of the European Union that impede trans border trade are contradictory to the aims of the Union. Furthermore, it is understandable that legislative initiatives emerge at the level of the Union when new developments seem to be incompatible with existing legislation.

As regards copyright law, countries that have joined the international copyright treaties, such as the Berne Convention, the Universal Copyright Convention, TRIPS and the WIPO treaties, should have adjusted their national legislation in agreement with these. Harmonisation in the EU to a large extend has been provided by these treaties. Because the EU member states have ratified the Berne Convention, there does not seem to be a role for the EU for this.<sup>44</sup>

The German 'Inkasso-case',<sup>45</sup> has sometimes been cited to illustrate the fact that the level of copyright protection is not the same in all EU member states. This case, however, seems simply a mistake. It is hardly imaginable that accounting software and some other types of computer programs would stay without copyright protection just because they are judged not to be sufficiently original.<sup>46</sup> If harmonisation would be the main objective, it would be more appropriate to define certain criteria, such as the criterion of originality that in Germany is indeed interpreted more strictly than for instance in The Netherlands, at the Union level. Not just for software or databases, but on a general basis.<sup>47, 48</sup> That was not the point of departure, however, in the Green Paper on Copyright that preceded the software directive.<sup>49</sup> This paper states that the Commission would focus on aspects that might form obstacles for the free flow of goods and services and would abstain from so-called 'horizontal legislation'. The 2001 Copyright Harmonisation Directive, however, goes a lot further than would be necessary for

joining the WIPO treaties but does not lead to harmonisation in the Union because of the large number of optional regulations and conditions.

While the harmonisation that could be the result of the EC directives discussed here is therefore probably limited, disharmonisation effects could be considerable.

With regard to semiconductors, we have seen that an arbitrary ‘intellectual creation’ was taken from the domain of copyright because of legal, political and economic reasons. This product was then provided with a *sui generis* regime, giving up the principle of ‘national treatment’ from the Berne Convention.

With regard to computer programs, databases and ‘internet harmonisation’, copyright is stretched almost carelessly, by now also including the *use* – reading, listening, watching – as part of copyright. The way computers function – more specific the data processing functionality – has been used as a ground for this. To label the data processing functionality, as if this were self-evident, as ‘copying’ seems to indicate that not all legislators are completely familiar with the field of information technology; or with the field of copyright law. This whole approach already constitutes a systematic breach in copyright law. The implementation of the 2001 Copyright Harmonisation Directive, however, again constitutes a systematic breach with it.

To top it off, computer programs and databases are the only two products that have been excluded categorically from the private use exception. Furthermore, the ban on reverse engineering of computer programs – a form of legal protection that even forbids *studying* a product – constitutes a limitation in competition law that is without precedent in the whole field of intellectual property law. Another strange point and a source of disharmonisation is that computer programs are still not understood well enough to grant them the protection of patent law. The reason that is given for this is still the incomprehensible notion that computer programs would not be tangible.

Finally, harmonisation does not seem to contribute much to the solution of concrete societal questions. The specific attention that has been given to computer programs and databases has not been able to stop illegal copying, at least not in a way that could not have been achieved with general copyright law. With regard to the legal protection of databases it even seems that the new directive has made things worse, as the term ‘database’ gives rise to more discussions than the term ‘work’ in copyright. The harmonisation of copyright in the information society, that was initiated by the WIPO treaties of 1996, until now has not led to a uniform approach of *peer-to-peer* file sharing, and certainly not to a solution with respect to this.<sup>50</sup> The memorable sigh of judge Stearns in the LaMacchia case – “It is not clear that making criminals of a large number of consumers of computer software is a result that even the software industry would consider desirable” – seems to have only gained importance.<sup>51</sup>

## 5 Conclusions

Differences in legislation are a reality, just like the existence of differences in societal views and norms. Of course, it might be ideal if the world were one constitutional state. But since the setup of the European Coal and Steel Community (ECSC) in 1951 the achievements in this respect, even in Europe alone, have been limited. We can conclude that new problems in society can emerge because of applications of information technology, but multi-lateral

harmonisation of legislation should rather concentrate on differences in which these problems are treated than on differences in which information technology is treated. The question how to harmonise legal concepts is far less urgent than the question how legal notions should be interpreted in relation to technical notions. Differences in legal systems and differences in the legal interpretation of certain concepts, based on national legal dogmatism, can form huge obstacles for genuine harmonisation of legislation. Therefore, international consultation and cooperation in the field of law enforcement are a better approach. It could then be that extensive harmonisation is found to be less essential than the abundance of new regulations seems to suggest.

However, if harmonisation is chosen, it would be sensible to realise that if home copying was impossible to control in the time of cumbersome tape recorders, it will be even more difficult to do this in the time of the information super highway and moreover, that it is not even desirable to do this. In a community that evolves into an information society, nobody wants governors that take them back to 1950.

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\* Authors work at the Centre for Computer Science and Law, Faculty of law, Erasmus University Rotterdam.

<sup>1</sup> The first stage is characterised by the ability to influence spatial structures, for example building a hut or a house. The second stage consists of the possibilities for changing spatial structures, for example the wheel or hinged doors. The third stage gives the possibility to control the powers that are necessary to bring things into motion. The invention of the steam engine announces the age of the ‘Industrial Revolution’. The fourth stage offers the possibility of using the energy stored in an artefact to allow the artefact to start or stop itself etc. What characterises the ‘Information Society’ is that now machines can also interpret (process) data (R.V. De Mulder, *Een model voor juridische informatica* (A Model for Legal Computer Science, with summary in English) (diss.), Lelystad: Vermande 1984; P. Kleve, *Juridische iconen in het informatietijdperk* (Legal Icons in the Information Age, with summary in English) (diss.) Rotterdam/Deventer: Sanders/Kluwer 2004).

<sup>2</sup> Instead of IT, ICT (Information and Communication Technology) is often mentioned these days. Although the importance of the communication function has increased, it does not seem right to put it on the same level as information technology. Communication is a *function* of information technology, just like other functions such as input, output, processing and storage.

<sup>3</sup> Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society, OJEC L167/10, 22 June 2001.

<sup>4</sup> WIPO Copyright Treaty (WCT) en WIPO Performances and Phonograms Treaty (WPPT), Genève, 20 December 1996.

<sup>5</sup> Pub. L. nr. 105–304, 112 Stat. 2860, 28 October 1998.

<sup>6</sup> In time, copyright has been altered many times because of new technology (for instance printing press, photography, motion pictures). While all of these techniques can be characterised as ‘communication techniques’, this does not imply that they are also ‘information techniques’ in the sense of the fourth stage of technology development. The latter is only the case if the technique also includes the ‘interpretation’ of data.

<sup>7</sup> Semiconductor Chip Protection Act of 1984, title III of Pub. L. nr. 98–620, 98 Stat. 3335, 3347 (adding chapter 9, title 17, United States Code, to provide design protection for semiconductor chips), 8 November 1984.

<sup>8</sup> Council Directive of 16 December 1986 on the legal protection of topographies of semiconductor products (87/54/EEC), OJEC L024/36, 27 January 1987.

<sup>9</sup> Council Directive of 14 May 1991 on the legal protection of computer programs (91/250/EEC), OJEC L122/42, 17 May 1991.

<sup>10</sup> Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the legal protection of databases, OJEC L077/20, 27 March 1996.

<sup>11</sup> The urge to accomplish harmonisation in the field of IT is not only apparent in the field of copyright law. Initiatives are manifold and extended: privacy, international trade, broadcasting and telecommunication, to name just a few.

<sup>12</sup> Although the management of Top Level Domains (TLDs), now performed by ICANN, the Internet Corporation for Assigned Names and Numbers, requires attention continuously.

<sup>13</sup> Despite discussion with respect to the *useful article doctrine*, a.o. in the House Report on the Semiconductor Chip Protection Act of 1984, 15 May 1984.

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<sup>14</sup> Pub. L. nr. 96–517, 94 Stat. 3015, 3028 (amending §101 and §117, title 17, United States Code, regarding computer programs), 12 December 1980.

<sup>15</sup> WIPO handbook: There is the principle of “national treatment”, according to which works originating in one of the member States are to be given the same protection in each of the member States as these grant to works of their own nationals.

<sup>16</sup> Act of 28 October 1987, nr. 484.

<sup>17</sup> As the decisive factor for the fourth stage of technology is the possibility of machines to interpret data.

<sup>18</sup> Michael C. Jensen and William H. Meckling, ‘The Nature of Man’, *Journal of Applied Corporate Finance*, Summer 1994. V. 7, No. 2, pp. 4 – 19.

<sup>19</sup> Furthermore it must be stated that Microsoft’s success to a large extend was caused by the success of the IBM PC. Sales of this PC were booming at the time MS-DOS (Windows’ predecessor) was introduced. Because of the need for compatibility, the market standardised around Microsoft’s huge ‘installed base’, at the cost of others such as CP/M. This is sometimes called a ‘*network externality effect*’, W.J. Gordon & R.G. Bone, ‘Copyright’, in: B. Bouckaert & G. De Geest (red.), *Encyclopedia of law and economics. Volume 2. Civil law and economics*, Cheltenham: Edward Elger 2000, p. 197. See also: Niva Elkin-Koren & Eli M. Salzberger, *Law, Economics and Cyberspace*, Cheltenham, UK/Northampton, MA, USA: Edward Elger 2004.

<sup>20</sup> For example <http://www.gnu.org/>; <http://www.fsf.org/>; <http://www.opensource.org/>; [www.vosn.nl](http://www.vosn.nl).

<sup>21</sup> Several copyright licenses are available for this, under the name *General Public License* (GPL). See also D. McGowan, ‘Legal implications of open-source software’, *University of Illinois Law Review* 200, p. 241–304, 2001, [www.law.umn.edu/uploads/images/254/McGowanD-OpenSourceFinal.pdf](http://www.law.umn.edu/uploads/images/254/McGowanD-OpenSourceFinal.pdf).

<sup>22</sup> [http://europa.eu.int/information\\_society/activities/opensource/index\\_en.htm](http://europa.eu.int/information_society/activities/opensource/index_en.htm).

<sup>23</sup> Proposal for a Directive of the European Parliament and of the Council on the patentability of computer-implemented inventions, COM(2002) 92 final, 20 February 2002.

<sup>24</sup> The Dutch 1995 Patent Law Act contains the rather cryptic exclusion for “software as such”.

<sup>25</sup> See for example the WIPO definition of a computer program: „a set of instructions expressed in words, codes, schemes or in any other form, which is capable, when incorporated in a medium that the computer can read, of causing a computer to perform or achieve a particular task or result”.

<sup>26</sup> Kleve 2004, p. 364-365.

<sup>27</sup> For example the protection of ‘non-original writings’ in The Netherlands, the ‘kleine Münze’ in Germany or the protection of ‘the sweat of the brow’ in the US.

<sup>28</sup> Although not completely new, as motion picture producers had already been granted certain rights earlier, because of the investment risk they take.

<sup>29</sup> Article 5.1: Temporary acts of reproduction referred to in Article 2, which are transient or incidental [and] an integral and essential part of a technological process and whose sole purpose is to enable: (a) a transmission in a network between third parties by an intermediary, or (b) a lawful use of a work or other subject-matter to be made, and which have no independent economic significance, shall be exempted from the reproduction right provided for in Article 2.

<sup>30</sup> See also: J.C. Ginsburg, ‘Toward Supranational Copyright Law? The WTO Panel Decision and the “Three-Step Test” for Copyright Exceptions’, [http://papers.ssrn.com/paper.taf?abstract\\_id=253867](http://papers.ssrn.com/paper.taf?abstract_id=253867).

<sup>31</sup> Article 5 of the directive contains no less than twenty possible exceptions and limitations.

<sup>32</sup> Notwithstanding the existing regulations of the Union concerning the legal protection of computer software and databases.

<sup>33</sup> Article 5.2(b).

<sup>34</sup> If this would be done using a 50 cm. cable, it would undoubtedly fall under the personal use exception.

<sup>35</sup> Given this, it is remarkable that legal protection of technological measures, as proposed in the directive, is criticised using the argument that the equilibrium between the interests of right holders and of ‘users’ would be disturbed. Copyright is an absolute right, just like ownership, and therefore serves the interests of right holders. Exceptions to this should only be made if absolutely necessary, for instance because of educational needs or news provision.

<sup>36</sup> For example the law cases against Napster, KaZaa en Grokster.

<sup>37</sup> Hof Den Haag, 1 december 1994, Informatierecht/AMI 1995–3 p. 51 m.nt. Mom (*Videocabine*).

<sup>38</sup> In the United States, it even seems that the hunt is encouraged, in the proposal to modify the Copyright Act in order to limit the liability of right holders who impair the distribution of their copyrighted work over *peer-to-peer* networks: „a copyright owner shall not be liable in any criminal or civil action for disabling, interfering with, blocking, diverting, or otherwise impairing the unauthorized distribution, display, performance, or reproduction of his or her copyrighted work on a publicly accessible peer-to-peer file trading network, if such impairment does not, without authorization, alter, delete, or otherwise impair the integrity of any computer file or data residing on the computer of a file trader” (H.R. 5211 1H, 25 July 2002).

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<sup>39</sup> Although technical measures might skim the market, because ‘fans’ do not want to wait for the moment that the music or movie, with the technical protection stripped, is available on the internet. It would then be rational for the industry to install a technical protection if the cost of this would be lower than the extra revenues generated at and immediately after the release of an information product.

<sup>40</sup> K.W. Dam, ‘Self-help in the digital jungle’, *Journal of legal studies*, 1998, p. 393–412.

<sup>41</sup> N.W. Netanel, ‘Impose a noncommercial use levy to allow free peer-to-peer file sharing’, *Harvard Journal of Law & Technology* 2003–17, p.4.

<sup>42</sup> For instance Barlow 1994, „Everything you know about intellectual property is wrong.”, J.P. Barlow, ‘The economy of ideas – A framework for patents and copyrights in de digital age’, *Wired* 1994–2.03.

<sup>43</sup> Or they can get better conditions, like with *open source* software; see section 3.2 on Software law.

<sup>44</sup> Wiener points out, however, that the Berne Convention and the 1996 WIPO treaties indicate more in general the object and the period of protection, whereas the implementation of this is achieved in national legislation, including the different exceptions. J. Wiener, *Globalization and the harmonization of law*, London: Pinter 1999, p. 116.

<sup>45</sup> BGH 9 May 1985, GRUR 1985, 1041 (*Inkassoprogramm*); also: BGH 4 October 1990, CuR 1990–2, 80 (*Betriebssystem*).

<sup>46</sup> The German company SAP is one of the largest software companies in the world in the field of ERP software (applications for administrative business processes).

<sup>47</sup> As, for instance, is the case for the period of protection: Council Directive 93/98/EEC of 29 October 1993 harmonizing the term of protection of copyright and certain related rights, OJEC L290/9, 24 November 1993.

<sup>48</sup> The phenomenon that multilateral harmonisation of legislation sometimes leads to internal inconsistency at the national level is sometimes called a ‘harmonisation paradox’ (E.J. Dommering, ‘De software richtlijn uit Brussel en de Nederlandse auteurswet’, (The Software Directive from Brussels and the Dutch Copyright Law) *Informatierecht/AMI* 1992–5, p. 83–89.).

<sup>49</sup> Green Paper on Copyright and the Challenge of Technology - Copyright Issues Requiring Immediate Action, COM(88)172FINAL.

<sup>50</sup> See for instance the cases against Napster (114 F. Supp. 2d 896, 927 (N.D. Cal. 2000), 239 F.3d 1004 (9th Cir. 2001) and C MDL-00-1369 MHP, 2001 WL 227083 (N.D. Cal. Mar. 5, 2001)), KaZaa (HR (Dutch Supreme Court) 19 December 2003, LJN AN7253), Grokster (US Supreme Court June 27, 2005) and – in France – the Tribunal de Grand Instance de Paris (case nr. 0504090091 of 8 December 2005).

<sup>51</sup> United States v. LaMacchia, 871 F. Supp. 535, 536 (D. Mass. 1994).