IRIS plus
LEGAL OBSERVATIONS
OF THE EUROPEAN AUDIOVISUAL OBSERVATORY

Online Games from the Standpoint of Media and Copyright Law

by Paul Göttlich

EDITORIAL

Remarkable for their increasingly sophisticated underlying technology, online games are achieving ever-closer representations of reality. The more realistic the design of game worlds, the more comparable they become to other forms of realistic audiovisual representation, such as film and television.

The growing resemblance between different categories of audiovisual services is reflected in new questions about the legal standards to be applied to them. The greater the similarity between a game and a film involving interactivity, the greater the possibility that the game could be protected as a film work. But what exactly would such a work consist of, and who would hold the copyright to it?

If comparable services are meant to be subject to comparable legislation, we need to ask whether this is in fact the case. The new Audiovisual Media Services Directive, for example, contains standard provisions for all such services. Yet Recital 18 of the Directive stipulates that online games are excluded from its scope. Are we to conclude from this that online games lack the core characteristics that distinguish audiovisual media services from other types of service? What is the main purpose of online games, who is editorially responsible for them, and for whom are they intended?

In this issue of IRIS *plus*, Paul Göttlich explores these and other questions and concludes that there are certainly arguments for protecting online games not only as software but also as audiovisual works. He shows, too, that many types of game may qualify as audiovisual media services on grounds not just of presentation but also of their inherent characteristics.

It is clear from this edition of IRIS *plus* that an unambiguous legal framework for online games has yet to be established, so these issues will remain topical. Paul Göttlich's article also usefully documents the rules that definitely can be applied to online games already.

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Online Games from the Standpoint of Media and Copyright Law

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A. Introduction: from a Dot on a Screen to MMORPGs[1]

The earliest computer games were created as long ago as the 1950s for the purposes of playing on industrial mainframe computers. The very first of these, *Tennis for Two* – which had mass entertainment potential – was invented in 1958 by American physicist William Higinbotham. It allowed players to move a dot on an oscilloscope screen backwards and forwards. Higinbotham developed the game for open-day visitors to the US nuclear research laboratory at Upton, New York, with the idea of amusing as well as informing them.[2] The game that signalled the beginning of the industry's revolutionary growth was *Spacewar*, developed at the Massachusetts Institute of Technology (MIT) and the forerunner of a whole generation of computer games.

The 1970s was the era of video game machines but it was the advent of home computers and consoles in the 1980s that opened living and bedroom doors to the mass invasion of computer games. The key development was the launch of Atari's *Videogame Computer System* which hit the market in October 1977 and went on to sell more than 25 million copies until production of its last version ceased in 1990. There was still a long way to go, however, to the modern multimedia PC. Prominent among the first computers to appear in people's homes was the C 64, a lower-performance version of the personal computer, which began to take over in the early 1980s.[3] As microchips became cheaper to produce and computer manufacturers were able to source expansion cards from outside suppliers, the PC gradually developed into the multimedia vehicle that we know today, at the same time becoming affordable for ordinary consumers.

It was the development of modern telecommunications technology that made possible what is currently one of the most popular forms of video game, namely the *Massively Multiplayer Online Role-Playing Game* (MMORPG).[4] Although it was possible in the 1980s for some games to be played by multiple computer users connected by a data line, the high cost of the technology required kept these games beyond the reach of the mass market. Then, as network technology developed and modems and network cards became standard features of PCs, the computer game began to evolve from a solitary pursuit to a social event. The main attraction of networked gaming is that players are not simply competing with the computer, but are challenging other gamers. So it is no surprise that "LAN parties"[5] rapidly grew in popularity and paved the way for worldwide networked gaming with MMORPGs. Increasingly high-performance non-portable games consoles are being marketed – the latest examples being the Xbox 360,[6] Wii,[7] and PlayStation 3 (PS3),[8] which, since their launch, have realised a combined sales volume of 24.5 million units.[9] In their modern multimedia form, computer games are achieving an ever-increasing level of realism. They depict reality in scrupulous detail and are notable for their complex action sequences and filmic feel.

As a result of all this technical progress, the economic importance of the computer games market is steadily growing. In the core business of computer game sales, for example, the expansion pack of *World of Warcraft*, one of the most popular MMORPGS, sold 8.5 million copies within two months of its launch: in cash terms this represents some EUR 382.5 million.[10] Alongside game sales, ancillary markets have also become established, dealing in virtual equipment and "virtual currencies". IGE, the world leader in virtual-commodity trading estimates that this market will be worth USD 7 billion by 2009.[11] The potential of computer games has already been recognised by the advertising industry. A study by the Yankee Group put the value of in-game advertising at USD 77.7 million in 2006 and predicted that this would grow to USD 971.3 million by 2011.[12]

There are three main types of online game: **browser games**, **MMORPGs** and **cyber communities**.

Browser games are those for which the only requirement apart from an Internet connection is a Web browser.[13] Gamers do not normally need to install software on their own computers. They simply log on to a personal access account and the game is then entirely server based. **Browser simulations** are the most common type of game in this category. These are the so-called construction games, involving economic and strategy simulation.[14] Typically, an economic empire, dynasty, colony or similar entity is developed from elements available in the game.[15] Browser simulations, unlike non-browser-based variants of such games, are relatively straightforward in audiovisual terms.[16] Most games simply assign basic graphic elements to individual actions within the game – adding a defensive wall to a castle, for example – thus documenting its progression. The additional element appears on the screen after a certain building time. Interaction with other players takes one of two forms: in games based on rounds, individual rounds are credited to the players on the server, and the results are then displayed; in non-time-limited games, the interaction is in real time. Another form of game in this category is the *browser adware game* or *branded game*. Most games of this kind are not on a large scale and their level of animation is similarly limited;[17] there is none of the interaction among players typically found in the large online games (hence the label "small flash games").

MMORPGs also exist in the form of browser games, although the only games in this category are those known as persistent worlds – for example the role-playing game *World of Warcraft*. The distinguishing feature of MMORPGs is that each player can create within the game his or her own individual play character, the "avatar". Large numbers of players of differing abilities meet in the many settings of the online game world. The game environment is lavishly animated. Players guide their characters through the world, performing tasks by availing themselves of the many options that the game affords. When a number of players come together in a given setting of the game world – which is normally what happens – they will all have simultaneous audiovisual representation of the action. Interaction between them takes place directly, either in the form of fighting or via communication ("chat") which is an integral part of the game, hence the designation of these online game worlds as MMORPGs.

The third type of online game is the **cyber community** – *Second Life* being an example. These games are also lavishly animated; however, the form they take is determined not only by the manufacturer, for users of the games also make a significant contribution. Players have complete freedom in the creation of their own avatar, for example, and the design of their buildings or objects: the only limits are those of their own creativity. Using a special "script language",[18] the avatar can also be moved at the user's will. Although most interaction takes place through chat and via control of the avatar character, it would also be technically possible for players to communicate with one another using microphones. In cyber communities, as in MMORPGs, events at a given location in the virtual world are conveyed simultaneously to all the users who are present there (hence the designation "cyber communities").

The variety and the potential for growth in this new market are considerable, but what laws and regulations will the new business models have to observe? What rights are created when a computer game is produced? How is the placing of advertising in games to be evaluated? Will online games be regulated by the Audiovisual Media Services Directive? What provisions are applicable with regard to protection of human dignity and protection of children and young people? In the following we will explore whether European law offers answers to these questions.

B. The Classification of Games in Terms of Copyright

The extent to which the new business models will be practicable will be influenced by how we classify computer games with regard to copyright. The computer program could be protected either as software or as a film. It would also be conceivable to protect only the individual elements of a computer program. The arrangements chosen will determine

whether programmers or games manufacturers are in the stronger position and will simplify, strengthen or lessen the potential for exploitation and copying and the degree of legal protection in individual cases.

I. Protection of Games as Computer Software

A computer game consists of a computer program, the game concept, the design of the game, the characters in it and its multimedia representation in the form of graphics and sound. A computer program is an item of software – in other words, an instruction to the computer to make particular computations in order to resolve a problem. There are many stages in the development of a computer program. Firstly, an approach to the solution must be devised. This can be done in many different ways, through the application of logic, a range of ideas and algorithms. Differently structured programs will emerge, depending on the chosen approach and on the programmer. All these elements of a computer program could potentially enjoy copyright protection.

At international level, the concept of protection for software is reflected in the World Intellectual Property Organization Copyright Treaty[19] (WIPO Copyright Treaty – WCT) in association with the Berne Convention for the Protection of Literary and Artistic Works as revised on 14 July 1967[20] ("the Berne Convention") and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).[21] The Berne Convention (Article 2) does not explicitly identify computer programs as works but they are nonetheless protected as works of language by the non-exclusive nature of the list in Article 2(1).[22] Computer programs enjoy protection under Article 5(1) of the Berne Convention[23] with its so-called "national treatment" provision.[24] The Berne Convention does not, however, impose an obligation to observe minimum standards.[25]

Article 10 TRIPS and Article 4 WCT constitute the first explicit provisions on protection for computer programs and both these instruments expand on the basic stipulation, spelling out (in Article 10(1) TRIPS and Article 4 WCT) that computer programs shall be protected as literary works under the Berne Convention. The so-called "Berne-plus" provisions of the TRIPS agreement go beyond the Berne Convention by affording computer programs minimum standards of protection.

Thus, Article 10(2) TRIPS confers protection on databases, and Article 11 requires Member States to make provision for rental rights. Article 9(2) TRIPS, like Article 2 WCT, guarantees that copyright protection will not extend to ideas, procedures or mathematical concepts. In addition to the rights already set forth in the TRIPS agreement, the WCT (Article 8) further provides for a right of communication to the public, including the "right of making available" – which in this context means affording access and making retrievable online. Article 4 WCT guarantees protection for the inherent nature of a computer program by stating explicitly that computer programs shall be protected whatever the mode or form of their expression.[26]

Directives 91/250/EEC on the legal protection of computer programs (the "Software Directive")[27] and 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society (the "Copyright Directive")[28] give the Member States a legally binding duty to afford protection to computer programs – the Software Directive setting the standard in this regard and the Copyright Directive (see Article 1(2)(a)) complementing it. The sense of the term "computer program" as used in the Software Directive implies protection for computer programs in every form – i.e. including programs integrated into computer hardware – and for the separate stages in the development of a program, including design materials (Article 1). The Directive affords program authors the right of permanent or temporary reproduction and the rights of translation, adaptation and reproduction of the program's results, as well as the right of distribution (including rental) to the public of the original computer program or copies thereof. Nor is the rental right under Article 4(c) of the Software Directive affected by the revised Directive 2006/115/EC on rental right and lending right.[29] Author's rights are considerably restricted in the areas of interoperability with other computer programs, creation of security copies insofar as these are necessary for the use of the program, and observation of the program in order to convey the ideas behind it.

By contrast with corresponding legislation in the USA,[30] the Software Directive includes no definition of the term "computer program". In the framing of the Directive, it was deliberately decided to omit a definition in order not to restrict new developments.[31] The term is therefore used in a way that leaves scope for embracing developments and is intended to afford protection to everything which, in the technical practice of software manufacture, is known as a computer program.[32] Given this conception of the term "computer program", there can be no doubt that the programs underlying computer games fall within the scope of the Software Directive. Programs in the form of data, printed matter or preparatory design materials, or in the form of source codes thus enjoy, at least, protection from identical copying.

A further question, however, concerns the extent to which the Software Directive also protects a program's internal structural characteristics from imitation. Such protection cannot be deduced from the wording of the Directive; in fact Article 1(2) suggests a distinction between content and form by stipulating that protection shall not extend to the ideas and principles underlying a program.[33] For computer games, this means that specific elements of content, such as the game's concept, its layout and the methods it uses – which influence the program code – are not protected.[34] It could also mean that the "game engine",[35] which is developed from the game concept and substantially determines the program structure, lies beyond the scope of copyright protection. However, by applying to the Software Directive the concept known as the "*Gewebeformel*" ("fabric formula"), developed in German copyright law, the case can be made that protection extends to program structure, including the game engine, which in many cases is re-usable. The fabric formula eschews strict differentiation between content and form, and balances, instead, public and individual property interests: in other words, it seeks a balance between, on the one hand, leaving individual components out of the protection afforded to a computer program and, on the other, protecting them individually.[36] From this standpoint, protection will extend to a particular formal program structure – based on the overall conception of the program, which is likewise protected.[37]

Through its open interpretation of the term "program", the Software Directive could also afford protection to the audiovisual form in which a computer game is produced, inasmuch as it regards the audiovisual elements and the program code collectively as a work. Article 1(2) of the Directive affords protection to the expression of a computer program in any form. This could mean that the audiovisual representation of the program – as it appears on the computer screen and is heard through the speakers – is included as a form of expression of the program. It would thus seem possible to interpret the Directive's use of the term "program" in this broad sense.[38]

The first point to note here is that, under Article 1(2), interfaces – the components of a computer program that enable interaction between the software and the hardware and between the software and the user – lie outside the scope of protection.[39] In the case of computer games, the command menu, for controlling sound, music and graphics, is such a component.[40] Under the terms of the Software Directive, it is the menu which constitutes the interface and it thus does not enjoy protection.

That consideration aside, we cannot conclude that the audiovisual representation of a game enjoys protection on the basis of a broad interpretation of the term "expression in any form" in Article 1(2) of the Software Directive. Such a reading is not possible because the Directive (in Article 1(1)) requires computer programs to be classed as literary works within the meaning of the Berne Convention. This means that the computer program enjoys protection as a work of language, i.e. in the form of source code, language being the means of expression.[41] Extending protection to the program's audiovisual representation would run counter to the logic of the copyright laws.[42]

From the programmers' and game manufacturers' point of view, it has yet to be established that classification of a computer game as a computer program within the meaning of the Software Directive leaves it only partially, rather than fully, protected. The Software Directive protects only the actual program code, giving its author exclusive rights of distribution, reproduction and adaptation.[43] Further to this, it is our contention that the individual, formal program structure also enjoys protection under the Directive.

The author of a computer program is the physical person who created it, i.e. the programmer (Article 2(1) Software Directive). Where a computer program is created by an employee under the terms of his or her employment and in the absence of any agreement to the contrary, all rights in the program automatically transfer to the employer under the principle of *cessio legis* (Article 2(3)). Under a contractual relationship,

however, the author's rights do not transfer automatically. This difference is not another example of an unintentional gap in legislation: the fact is that the Commission, in its first draft of the Directive, initially sought to extend the *cessio legis* principle to contractual as well as employer-employee relationships.[44]

Apart from the copyright enjoyed by the programmers, it is possible in cyber communities like *Second Life* that users could acquire joint copyright in the actual computer program. Using special tools made available in the course of the game, the user has the capacity to create entirely individual game environments, objects and characters. While the "cost of program development" borne by the individual user here is effectively nil, it cannot be denied that actual program code is generated through his or her creative input in the course of the game. The creative process in which the user engages is directly comparable to normal programming in the development of a game, using a flexible game engine, and here too the actual cost of program development is not high. The game engine simply provides a framework for the game and a set of design tools: it is the way in which the tools are applied that effects the transition into a game.[45] The person using the tools establishes the audiovisual sequences of events and the ultimate program code. The question that then arises is whether players using the tools available to them in *Second Life* become co-authors of the game program. Two scenarios could potentially apply here and would have to be considered in individual cases. In the first of these, the user has made his or her own creative contribution but the contribution of the game-engine program, in the shape of the tools used, is still clearly recognisable, and the user might acquire copyright in the adaptation of the program.[46] In the second scenario, the user has drawn on the multiple potential of the tools to create something that the programmer could not have anticipated, and would therefore acquire his or her own copyright. The comparison with actual game-development work is problematic, however, inasmuch as the users of *Second Life* are creating only small sections of a game – not the game itself. Nonetheless, the possibility of co-authorship could come into consideration in individual cases.[47]

II. Protection of Games as Films

If computer games can be classed as film or audiovisual works, they become eligible for wider-ranging protection, extending in particular to their audiovisual representation. There is a long tradition of copyright protection for films and cinematographic works, including works expressed by a process analogous to cinematography. The Berne Convention, for example, explicitly lists such works in its catalogue of types of protected work (Article 2(1)) and the WCT includes a similar provision (Article 3 WCT in association with Articles 2-6 of the Berne Convention). At European level, reference to protection of films is to be found in the Copyright Directive, in Directive 93/98/EEC[48] harmonising the term of protection of copyright and certain related rights (the "Term of Protection Directive") and in the Directive on rental right and lending right.

Whether a computer game can be protected as a film depends firstly on how we define the concept of a "film". There is no definition in either the international agreements or the Copyright Directive; only the Directive on rental right and lending right (Article 2(1)(c)) sets forth a meaning for the term. It stipulates that a "film" is a cinematographic or audiovisual work or moving images, whether or not accompanied by sound,[49] but it does not claim any validity for that definition beyond its own field of application. That much is clear from Article 2(1) of the Directive on rental right and lending right. The concept of the "audiovisual work" originated in French copyright law, where it was introduced in 1985 to ensure that TV films were covered by copyright, because prior to that date the French legislation had recognised only "works of cinematography" – a formula contingent on specific production technology.[50] Introduction of the term "audiovisual work" signalled, most importantly, acceptance of a wider conception, embracing films in all guises.[51]

The definition of "film" was similarly broadened in EC subsidiary legislation in 1989 by Directive 89/552/EEC[52] on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities (the "Television without Frontiers" Directive). The change was timely because the term "film" tended to be understood in a traditional sense associated with existing circuits of exploitation. Almost all films were shown initially in cinemas and only subsequently could television rights be exercised. It was in order to extend this narrow conception and embrace other types of work that the term "audiovisual work" was used. The "Television without Frontiers" Directive thus recognised – for example in Article 11(3) – a non-exclusive definition of audiovisual work including everything from feature films and films made for television to series and documentaries.

Before looking more closely at the definition of an "audiovisual work", however, it should be established whether computer games can enjoy protection as cinematographic works or as moving pictures. A cinematographic work is not simply a compilation of the works necessary for its production – i.e. a screenplay, storyboard, music and original work of literature. It is a type of work in its own right, for which individual creativity is required.[53] Protection of a cinematographic work means protection of an actual film, not protection of the separate components, such as the music and individual images, contained within it. These components can be protected individually if they are deemed to be personal intellectual creations in their own right. In the case of a computer game the creative input lies in the translation of the game idea into a playable audiovisual form. Cinematographic works, like moving pictures, consist of sequences of images, which give the viewer the impression of a moving image.[54] Depending on whether they are made for television or for the cinema, the sequences contain 24 or 25 images per second. The manner in which the work came into being is not relevant to its protection as a film; specifically, it does not have to involve photographic or similar techniques.[55] The defining factor is the impression created of a moving image, and the protection therefore extends to films created on computer. The overwhelming majority of today's computer games, including action games and sport simulations, create the impression of a moving image throughout. Only a few strategy games continue in some respects to resemble a slide show. A major feature of these games is the use of a button to issue complex instructions to the game system.[56] At best, there will then follow a short visual animation of the results of the instructions before the game continues with its static mask. The browser simulations referred to earlier also fall into this category. They are static inasmuch as their appearance does not create the impression of a moving image; the smaller examples of Flash or Java animated games are similarly incapable of creating such an impression.[57] Most larger-scale computer games could, however, meet the moving-image criterion.

As a rule, the traditional film constitutes a closed system.[58] Scenes, action and dramatic development can be altered either not at all or only within narrow limits. By contrast, an interactive computer game offers multiple possibilities in terms of action. Individual decisions by the players directly influence the order of image and sound sequences produced by the computer program. The question is whether protection of cinematographic works extends only to unalterable sequences of images. The Frankfurt High Court of Appeal (*Oberlandesgericht Frankfurt*), in the *Donkey Kong Junior I* and *Parodius* cases, ruled that computer games were not films, precisely because they offered the potential to generate various different sequences of images.[59]

There are, however, substantial grounds for contesting that view. Other court rulings have rightly recognised that graphic presentation cannot be the key factor determining copyright protection and that it is immaterial whether the images that appear on the screen are predetermined or whether they are generated by a computer program.[60] The Cologne High Court of Appeal, in the *Amiga Club* case,[61] was therefore right to contest the Frankfurt Court's interpretation, ruling that whether or not a work had to reproduce a recorded sequence of action in order to be defined as a film, the running of individual program loops called up by a player was comparable to the playing back of individual parts of a film. All that could appear on the screen were predetermined variants of the game. The postulate that the player determined the order of the action and thus at least produced his or her own film was also dismissed. Players were unable to select individual sound and image sequences and combine them at will; all they could do, through their decisions in the course of the game, was to influence the output of individual variants already determined by the game's creator. The only artistic creativity was that of the computer game's creator; there was no such creativity on the part of players.[62] The fact that the content of the game varied from player to player and from game to game was immaterial.[63] In precisely the same way, the new interactive options in traditional television or DVDs – for changing camera angles, for example, or influencing the course of a programme – do not affect the copyright protection of a cinematographic work: users do not become authors of the individually created film or programme. The framework has been predetermined by the film or programme maker or the producer of the DVD, and the artis-

tic creativity involved is theirs. The same case can be made at least in relation to MMORPGs and all traditional computer games.

By contrast, it is not clear if it applies with regard to cyber communities, to which the user has made a distinct contribution. The possibility of users having creative input does not, however, help in determining whether a game like *Second Life* falls within the definition of a cinematographic work – which could have implications for the potential protection of the game's setting as a film without any specific level of creativity. This line of argument, too, must necessarily be rejected. Elements of the setting such as landscape and standard avatars cannot be considered in isolation: the game must be seen as a complete entity. Nonetheless, guiding an avatar through the game world of *Second Life* creates the impression of a film. When an avatar is directed within the game setting of this cyber community – even without additional enhancement – the appearance is that of a moving image. Depending on the arrangement of the setting, it can certainly be argued that a sufficient level of creativity is entailed. Whether the fact of contributing to the game environment and directing an avatar makes individual users co-authors of cinematographic work is another question. The user may acquire other rights to what he or she creates within the game, but the audiovisual manifestation of the game – here as in other computer games – is based on predetermined possible sequences of images, which are called up in the process of directing the avatar through the virtual world. The image sequences are not, therefore, creatively determined by the user. Whether an individual user (like a set designer) acquires a right of co-authorship, based on creation of a backdrop, is a question to be explored in individual cases. The prerequisite in any case would be an individual creative contribution by the user to the "cinematographic work".

If a computer game is rendered in a sufficiently creative and individual way, it can be protected as a film. In the case of films, the individual creative input – i.e. determining the sequences of images and sound – comes from the director, the film crew, the editors and the actors on the basis of a storyboard. In the case of computer games an equally extensive process is involved in translating the game concept into a computer program. First the story is developed from the concept, then the environment, characters and various elements of the game are created graphically and the play and control options for each individual element have to be programmed. Entire teams of designers, writers, game developers and software specialists are involved in this process.[64] The "director" is the game designer and the "cast" comprises the virtual characters within the game, which are designed by the programmers. Computer games of this type could therefore be classed as films. In the absence of this individual creation process, computer programs can be protected as moving pictures.[65]

The term film as used in the Directive on rental right and lending right also covers audiovisual works,[66] which are afforded the same protection as traditional films. If the fixed variants available as visual and audio output via a loop in the computer program cannot be classified as works of film in the traditional sense,[67] they could at least be covered by the term "audiovisual works" within the meaning of the Directive. The WIPO Handbook on Intellectual Property defines the term "audiovisual" as involving "moving images, with or without sound".[68] This means that what is output in a computer game on the screen and via the speakers is "audiovisual". In another document[69] the WIPO goes further, requiring that the Member States protect audiovisual works in all forms.[70] If the term "audiovisual work" is to continue to have the function of embracing modern, technical developments in film, then, as we have established, that must entail broadening the traditional understanding of what constitutes a film.

For now, it may be deemed self-evident that a film enjoys protection irrespective of the underlying mechanisms whereby it was produced. Modern animated films are created entirely on computer: examples include *Toy Story*, *Shrek*, *Finding Nemo* and many others. If the system of protection was predicated on particular means of production, depending for example on the use of photographic technology, none of these would be protected as films. If, however, animated films are recognised as films, then the term "audiovisual work" must be ascribed a broader meaning. The formula of representation on a screen against a background of sound effects delivered via speakers falls within this internationally accepted conception of audiovisual work. Following this logic, computer games too are covered by the notion of film within the meaning of the Directive. The criteria to be met in terms of a level of creativity are left to the discretion of individual Member States. If the audiovisual work meets the requirements in terms of independent creative input, it is justifiable to afford it the same protection as a film.

Classification as a film or an audiovisual work implies that authorship rests with the overall director. In addition, Member States may recognise other authors (Directive on rental right and lending right, Article 2(2)). In the case of a computer game, where there was no overall director, authorship would rest at least with the main team leader or game designer who developed the game and was creatively responsible for its overall context. Being protected as a film implies that, in addition to its protection as software, the computer game in its entirety, including its audiovisual delivery, also enjoys protection. This does not necessarily mean that individual elements, such as the game's music, are protected independently. Such protection applies only if these elements are also regarded as intellectual creations. They enjoy protection, with the film, only as part of the overall conception of the "computer game". It would be feasible to afford independent protection to, for example, the instructions for the game, its concept, the game music or the characters. Closer consideration of the protection of individual elements is beyond the scope of this paper. It should simply be noted that, in a system of protection for such elements, the development of a computer game could potentially entail the creation of rights for multiple rightsholders.

If we accept the above arguments, we must recognise that the dual nature of the computer game, as a computer program and as a film, can potentially give rise to legal problems, depending on the specific provisions in individual Member States. For one thing, a distinction needs to be drawn between authorship of the computer program and authorship of the audiovisual output. For another, co-authorship situations could arise if a number of people work together on a game and their individual contributions are all separately reflected in the individuality of the game – the respective extent of their contributions being immaterial.[71] In consequence, exploitation and publication rights could rest jointly with the co-authors.[72] There is also the question of protecting the moral rights of the individual authors: although all economic rights in a computer program developed under the terms of a contract of employment transfer to the employer, an author's moral rights must, under Article 6*bis*(1) of the Berne Convention, rest with the author.[73] The rights acquired by the employer will, however, include all rights to forms of use of the computer program as yet unknown. Differences also arise in relation to technological protection measures: the program of a computer game will continue to be covered by the Software Directive in association with Article 1(2)(a) and Recitals 20 and 50 of the Copyright Directive, whereas technological protection of the film or audiovisual work is governed by Article 6 of the Copyright Directive.[74]

Most computer games enjoy dual protection, on the one hand as software and on the other as "cinematographic works", "works comparable to cinematographic works", or "audiovisual works".[75]

C. Issues of Media Law, Data Protection Law and Child Protection Law in Relation to Online Games

I. Games and the Application of the Audiovisual Media Services Directive

Questions are increasingly being asked about how we classify games under media law, and specifically about the extent to which they will be governed by the Audiovisual Media Services Directive. The questions concern not only the games themselves, but also the integration of audiovisual content into game worlds – a phenomenon known as "in-game broadcasting". This integrated audiovisual content is found, for example, where it is possible in a game for one of the virtual characters to watch a TV programme. In-game broadcasting is increasingly popular in large cyber communities like *Second Life* and also in MMORPGs.

A separate phenomenon, distinct from in-game broadcasting and unaffected by the problem of classification, is broadcasting via game consoles. Because this type of broadcasting involves, as a rule, linear (or non-linear) audiovisual media services, it will be covered by the Audiovisual Media Services Directive. The services in question are delivered via new-generation game consoles which – as well as displaying games – also relay audiovisual content. Video-on-demand or Internet Protocol Television (IPTV) technology is being incorporated into more and more game consoles. The possibility of connection to the Internet via WLAN or a

stationary network is facilitating the evolution of the game console into an entertainment platform for the multi-media digital living room. Modern consoles like the Xbox 360[76] allow users not only to play DVDs but also to manage a range of media in a "media library", to watch TV programmes, either as they are broadcast or time-shifted, and to view on-demand services in HD quality. Wii[77] offers not only its own online channels with information such as news displayed graphically, but also user-created "channels" for example in the form of private photo shows. PlayStation 3[78] can also play Blu-ray discs and manage digital film material; and films in HD quality can be downloaded from the "PlayStation Store". Insofar as we are talking here about use of game consoles as "receivers" for television programmes or on-demand audiovisual content, the normal system of classification under media law applies, and there is no need to consider this aspect in greater detail.

1. Audiovisual Services and Games

Recital 18[79] of the new Directive seeks a blanket exclusion of online services from the Directive's scope. Recitals are not, however, part of the enforceable text of EC legislation: at most they serve as aids to its interpretation. The recital's aim could be achieved only by inclusion in the enforceable section of the Directive of a sufficiently clear provision excluding online games from its field of application. As outlined below, however, this would be a questionable step.

It could be possible, in principle, to extend the provisions of EC media law both to audiovisual content offered within games and to the games themselves.

2. Applicability of the Audiovisual Media Services Directive to Audiovisual Content within Online Games

We need to begin here by establishing which different forms of in-game broadcasting are in evidence. They include films shown in virtual cinemas and television programmes "broadcast" on virtual TV sets in virtual living rooms.[80] Programmes may be produced specifically for in-game broadcasting or in-game broadcasting may be used as an additional means of transmission for a programme screened at the same time in the "real world". These types of content may be offered in the form of "streaming" (a data-processing-based means of transmitting images and sound to a terminal in real time) or as a podcast (reports, radio pieces etc. which can be downloaded as audio data from the Internet). Thus far, the various forms of broadcasting in a virtual game world do not differ from broadcasting that uses the platform of the Internet. Other manifestations of broadcasting in a wider sense are the insertion of advertising spots into computer games and the provision of on-demand services which can be called up individually on a virtual television.

The question thus arises as to how far such content is covered by the provisions of Community law.

In-game broadcasting could be amenable to regulation by the Audiovisual Media Services Directive (AVMSD). The Directive draws a distinction in Article 1(e)[81] and Article 1(g)[82] between television broadcasting as a linear audiovisual media service and on-demand services as non-linear services. Recital 20[83] of the proposal for a common position of the Council on the new Directive classes not only analogue and digital television but also live streaming, webcasting and time-shifted video services as linear services (i.e. television broadcasting). Actual video on demand, however, is classed as an on-demand service. As mentioned above, Recital 18 seeks to place online games outside the Directive's scope – but what rules will apply when content disseminated via the albeit unconventional vehicle of an online game meets the criteria included in Article 1 subparagraphs (a) to (d) AVMSD?

Considered in their own right, such services, being audiovisual media services, are clearly covered by the Directive as they meet all its requirements.

The condition, under Article 1(a) AVMSD, that the principle purpose of the service should be the provision of programmes has the effect (as do other criteria) of restricting the Directive's scope. It excludes from its field of application services that offer audiovisual content merely as an adjunct to other types of provision. Recital 18 cites the example of websites that contain audiovisual elements only in an ancillary manner, such as animated graphical elements. As a rule, however, the purpose of transmitting an entire television programme, or a particular television channel, in a virtual world is not as an adjunct to another service; the main purpose is the provision of programmes with a view, for example, to reaching a new audience or to retaining existing viewers who are increasingly switching from traditional television to new media. This would not apply only if the audiovisual content offered was intended merely to promote other services. To that extent, there is no difference between the presence of a programme on the Internet and its presence in a virtual world. Moreover, the main purpose of the service is to provide programmes to inform, entertain and educate.

In an online game like *Second Life* the types of service potentially addressed by the Directive include television programmes provided in the game by means of streaming, virtual cinema and other media services provided both by the game provider, as operator of the platform, and by direct providers of audiovisual content. Article 1(d) AVMSD defines a media service provider as the natural or legal person who has editorial responsibility for the choice of the audiovisual content of the audiovisual media service and determines the manner in which it is organised.[84] A platform operator, by contrast, has no editorial responsibility within the meaning of Article 1(c) AVMSD, which defines such responsibility as entailing the exercise of effective control both over the selection of the programmes and over their organisation in either a chronological schedule or a catalogue. A platform operator cannot select or organise programmes and the reality is that editorial responsibility lies with the format provider, who might, for example, be a television broadcaster. The platform operator merely offers third parties a potential means of disseminating their product.[85] It is those third parties, as providers of audiovisual content (e.g. in the form of a virtual cinema), who hold the editorial responsibility, as it is they who select the programmes and compile a chronological schedule or a catalogue.

The Directive also requires that an audiovisual media service should be accessible by the general public. The fact is that access to online games is normally restricted, for example by the requirements of registration and/or conclusion of a user agreement entailing remuneration. This situation could prevent the general public from being aware of the audiovisual content in question. However, restricting access to the platform (*Second Life*, for example), on which a programme is offered does not necessarily mean that the programme is not intended for the general public. Ruling in the *Mediakabel* case,[86] the European Court of Justice found – in relation to the "Television without Frontiers" Directive – that the existence of an access restriction did not exclude the service in question from classification as a television programme. This definition was applicable, in the Court's view, provided that the service was intended for reception by the public.[87] Only straightforward delivery services, such as that considered in the *Lagardère* case, are deemed not to be intended for reception by the public. Drawing on the rulings in the two cases mentioned, the Court found in the *Rafael Hoteles*[88] case that, for purposes of EC copyright law, the definition of a communication to the public required merely that there should be a relatively large number of viewers. In this case the requirement was met by the existence of a large number of successive viewers in a hotel. If we compare, for example, the number of people visiting a hotel or using its encoded cable network with the number of users of a virtual world, we come up with figures of approximately 400 000 for successive viewers in the hotel context, as against a subscriber total of 7.1 million for *Second Life*, and must therefore conclude that the definition of a communication to the public certainly applies in the latter case. The services are indeed directed at the required "indeterminate number of potential viewers". This understanding of a communication to the public can be transferred to the Audiovisual Media Services Directive. The EC copyright directives, like the "Television without Frontiers" Directive and the Audiovisual Media Services Directive, seek to achieve a high level of protection – the copyright directives with a view to the interests of authors or holders of related rights, and the other two directives with the interests of end-users to the fore. Both sets of considerations justify keeping the threshold low in the definition of "public". In light of the foregoing, access restrictions are thus immaterial: the media services provider offers audiovisual content and anyone may receive it, provided certain technical and, where necessary, contractual conditions are met.

Nor is the newly introduced definition of a "programme" – as understood in Article 1(a) and defined in Article 1(b)[89] – an impediment to application of the Directive. One of the terms of the definition is that a programme should be comparable to the form and content of television broadcasting. Article 1(b) of the Directive lists as examples feature-length films, sports events, situation comedy, documentary, children's programmes and original drama. These types of content, or at least comparable types, are frequently found in online games; and even audio-

visual content disseminated in part via online games and bearing less resemblance to the examples cited is capable of inclusion under the Directive's definition of a "programme". Examples of newer formats include interactive programmes or programmes with short – e.g. two-minute – episodes. Modern broadcasting already comes in so many different formats that it is not, in general, very useful to use the criterion of resemblance to television as a basis for limiting the scope of the Directive. Moreover, it is intended that the term "programme" should be understood in a broad sense. In relation to new forms of content, the stipulation in Recital 17[90] is significant that the notion of programme "should be interpreted in a dynamic way taking into account developments in television broadcasting". It should also be remembered here that programmes consisting of the transmission of SMS or voice-controlled computer games have existed for some considerable time. If content of this type is included in a specific schedule or catalogue, it falls within the application of the Directive. We can thus conclude that the types of content in question here, such as virtual cinema or an on-demand service that shows films via the platform of a game, are covered by the term "programme".

On the basis of the foregoing, it can be established that game worlds as platforms do not fall within the scope of the Audiovisual Media Services Directive on account of third-party providers' content that is offered in, or via, them. The provisions of the Directive are, however, binding on the actual content providers.

3. Applicability of the Audiovisual Media Services Directive to Online Games

It has not yet been established whether online games as such (virtual worlds in the form of MMORPGs for example) are covered by the Directive in their own right, irrespective of the content of media services that may be offered within them by third parties, on the grounds that – depending of course on the individual form of each game – they may meet many or all of the criteria for definition as audiovisual media services within the meaning of Article 1(a) AVMSD.

It is clear, for example, that many online games are indeed intended for the general public. Cyber communities like *Second Life,* MMORPGs like *World of Warcraft*, with sales topping 8.5 million, and the large-scale browser simulations – like the game *Trevian*, for example, with a membership of 112 000 and some 90 000 active players[91] – set out to reach the public generally. Not all players are aware of the same content at the same time but it is accessible to all of them and it is experienced simultaneously by numerous players in interaction. By contrast, adgames and Flash games are not directed simultaneously at the general public, because players do not, as a rule, interact; such games are designed simply for individual players' personal online use. The criterion of simultaneous viewing by an indeterminate number of users is not met.

The game manufacturer's editorial responsibility is reflected in the continuing development of the online world or worlds. The game manufacturer is responsible for the editorial form and composition of the game. He or she determines what options are available to individual players in the game and how these combine in an action sequence. Updates are prepared, extending the game's action sequence and introducing completely new play options. In the case of MMORPGs, it is also possible to identify a form of schedule. Modern online game worlds have one feature in common: the action continues to unfold without assistance from the individual player. The game manufacturer takes on what might be termed "overall direction" of the game world and, by means of updates and developments, sets out a schedule, as required under Article 1(b) AVMSD.

The same applies in large browser simulations. Here too the game is carried on by means of scenario updates, developments or the addition of a world in order to draw in new players.

In the case of cyber communities like *Second Life*, ascribing editorial responsibility to the game manufacturer is not entirely self-evident. In this context, players have virtually unlimited scope for creativity. They are free to shape their own avatars, for example, and to create almost any conceivable object. Nor does the game set its players any standard goal or entail any clear rules. Each player decides independently how he or she will use the game world. The manufacturer provides merely a rudimentary framework – e.g. a landscape – in which the players can move, and the tools they need to exercise their own creativity. A plan for the unfolding of the game exists only to the extent that the framework is subject to updates by the manufacturer. This in itself is not a sufficient basis on which to conclude, in the case of a cyber community, that the operator bears editorial responsibility.

Most computer games, and particularly MMORPGs, also meet the criterion of constituting "moving images" (with or without sound), which is part of the definition of a programme. As outlined above, in the discussion of computer games' potential classification as film, the key consideration here is simply that the impression of a moving image should be given. Even *Second Life* creates such an impression once an avatar is moved through the game world: the images that appear on the screen have the effect of a film. As we have already mentioned, however, browser simulations do not give an impression of moving images.[92]

The provision of audiovisual content, in the form of the online game, rather than enhancement of any other service, is moreover the main function of the service offered in this case – and its principal purpose is certainly to entertain and, to some extent, to educate and inform.

To meet the definition of a programme under the Directive, a set of moving images must constitute an individual item within a schedule or a catalogue. Small browser simulations, adgames and Flash games cannot meet this condition: unlike larger browser simulations, the action they contain is complete in itself and they are not designed to be extended. In fact, such games have been developed either as vehicles for simple advertising messages or as a cheap means of deriving maximum entertainment from a game idea.

In MMORPGs the overall action of the game results from the multiple actions of individual players, which in turn are based on the possibilities offered and the goals set in the game by the manufacturer. Often, for example, individual tasks within a game can be completed only through joint action with other players and, for that reason, the design is such that individual elements of multiple actions in the game are combined in a schedule. Depending on where he or she is located, the individual player in a big game world will be aware of only a portion of the overall world. Nonetheless, all action within the world takes place simultaneously and this means that one player's actions influence the options available to others. In a persistent world, the action in its entirety – including the predetermined principal aim of the game – may thus be considered collectively as an overall programme. Cyber communities could be similarly classified if they were not already excluded from the scope of the Directive through failure to meet the condition of editorial responsibility.

Comparing games with the examples of "programmes" set out in Article 1(b) of the Directive initially seems problematic.[93] As explained above, the requirement is that the form and content of audiovisual services should be comparable with those of television broadcasting. The definition of television broadcasting gets us no further in our interpretation in this respect, Article 1(e) AVMSD defining it as an audiovisual media service provided by a media service provider for simultaneous viewing of programmes on the basis of a programme schedule. The stipulation concerning "simultaneous viewing of programmes" serves to distinguish broadcasting from on-demand services. That stipulation would, however, be met by online games inasmuch as the "action" is transmitted simultaneously to numerous players. The fact that a player can log in to an online game world when he or she pleases does not mean that the game world stands still. There is no need to consider here whether an online game constitutes a linear service (within the meaning of Article 1(e) AVMSD) or a non-linear service (Article 1(g)). For one thing, the distinction yields nothing new with regard to the comparability of an online game with television broadcasting in terms of form and content. For another, the logic of Article 1 and the wording of clauses (a) and (b) therein imply that comparability with television broadcasting is a condition for both types of service. Article 1(b) AVMSD refers to both types inasmuch as it stipulates that individual broadcasts should be included in a schedule or a catalogue.[94] In both cases, the Directive and its minimum requirements would be applicable. Whether to class an online game comparable to broadcasting in one or the other category is a question to be determined in the context of individual cases.

As discussed already, television programmes nowadays are so varied in their form and content that excluding online computer games from the scope of the Directive solely on grounds of form and content is problematic. It is true that browser simulations and small adgames and Flash games do not bear comparison with television programmes. In these games there is no superordinate plan and no extended development of

the action, and, as a rule, numbers of players do not even interact. In the case of MMORPGs and cyber communities, the similarity with (animated and action) films and with programme formats involving a high level of viewer interaction is a distinguishing characteristic. An online computer game does not consist simply of an extract depicted on the screen and concerned with the situation in the game of a particular character or thing. Rather, the game users have an impression of the existence of individual sequences of images. These interactive and (supposedly) individualised elements of a computer game cannot, however, be a determining factor. Interactive elements that give the viewer the impression of an individual sequence of images are also to be found on television. In sports broadcasting on pay TV, for example, viewers can choose between quite individual viewpoints and aspects of the coverage. Viewers watching a broadcast of a Formula One race, for example, can choose which driver they want to "sit beside" or whether to watch the race from outside, from overhead or from the pit stop. The individual televisual experience, with its almost unlimited options, is no more amenable to reproduction than the action of an individual player in a computer game – unless the sequences of images are recorded. In that event, there is no difference in the nature of the recordings: in both cases they are merely depictions of the options selected by the user. An online game is more comprehensive than the extract from it that a user, or users, can access in a given game situation. Not even the multiplicity of display options available to individual players or groups of players can alter the fact that online game worlds are used by a large, indeterminate number of participants, all pursuing the superordinate aim of the game, and the game situations, collectively considered as a masterplan, feed into a schedule.[95]

On the basis of this initial evaluation, at least interactive online games in the form of multimedia MMORPGs – in which the actions of different players are combined – could fall within the field of application of the AVMSD. That conclusion is reinforced by the stipulation in Recital 17[96] that the notion of programme should be interpreted in a dynamic way. The Directive is not applicable, however, to smaller adgames and Flash games.

II. Regulation of In-game Advertising

The integration of advertising into games throws up some interesting issues. Ford is believed to have been the first company to advertise through games, as long ago as 1964. The image of a ford Mustang was incorporated into the playing surface of a pinball machine and the series of machines was sold under the name "Mustang". The marketing campaign was explicitly linked to motor racing and the motor industry[97] It is impossible to imagine computer games today without advertising, and that situation has come about largely through the desire to develop ever more realistic games. Programmers were quick to realise that the simulation of reality underpinning many games could not be achieved – or at least could be achieved only partially – without advertising. For example, gamers would find a virtual football match disconcerting and less than realistic if there were no pitch-perimeter advertising.[98] For that reason, the integration of a whole range of commercial messages into games has now become commonplace. A surprising development has occurred in this regard: whereas game manufacturers initially had to pay considerable sums of money for the right to use known brand names and products, the tables turned quite some time ago. Many companies are now prepared to invest substantial sums in order to place their advertising or their products in computer games, and they hope by so doing to reach consumption-orientated target groups with money to spend.

1. Types of In-game Advertising

A distinction has to be drawn between static and dynamic in-game advertising. Static advertising is firmly incorporated into the game's source code and cannot be changed. Current forms of static in-game advertising are the display of product information on pitch-perimeter hoardings in[99] sports matches, on surfaces such as house walls within a game or on cars and gamers' t-shirts. Many of what are known as adgames or branded games can also be classified as in-game advertising. Companies commission such games as a means of bringing their advertising to target groups. Most of the games in question are small "fun games", produced at relatively little cost. Often, the commissioning company is not featured directly in the game, but appears in the intro, the extro or the name of the game, and strip advertising is also common.[100] A further form of advertising occurs in what are known as "banner games", where it can conceivably be either static or dynamic. An example of static banner advertising is to be found in the game entitled *Be the Monkey*.[101] The game appears within a frame which accommodates advertising banners.

Dynamic in-game advertising has the advantage that advertisements can be switched in the course of the game. This is achieved technically through the incorporation into the game program of surfaces that are either empty or designed to be switched, and can later be covered dynamically with advertising. This type of advertising makes sense primarily in online games, where there is an ongoing connection to the game's server. The incorporation of new advertising via game updates is another possibility.[102]

A further type of commercial message within games is in the form of product placement. Unlike obvious advertising on hoardings or house walls, this involves the placement in the game of copies of actual objects, such as drinks cans of a particular brand.

2. Problems with In-game Advertising under Community Law

a) Consumer Protection and the Protection of Children and Young People

If online computer games are covered by the Audiovisual Media Services Directive, then, in relation to the inclusion of advertising, attention must be paid at least to Article 3e(1)(a) and, with regard to product placement, to Article 3(g). The first of these provisions requires that advertising should be recognisable as such. This is a particularly relevant stipulation where advertising is incorporated in such a way as to reflect reality – for example in a motor-racing game set in a city and depicting hoardings on which advertisements appear. The ban on surreptitious advertising, contained in Article 3(e)(1)(a), second sentence AVMSD, would also have to be observed, and the content of the advertising would also be subject to the further provisions of Article 3(e).

Determining what constitutes product placement is particularly difficult in the case of games. Insofar as a definition exists, it would have to be assumed that product placement is prohibited under Article 3(g)(1). Games could potentially be included in the derogation under Article 3(g)(2) for light entertainment programmes, and consequently product placement would be permitted. Such an exemption from the rules is problematic particularly in the case of children's programmes, and there is disagreement as to what constitutes a children's programme. One view is that only programmes made for children exclusively can be classed as children's programmes, and this would mean that computer games intended for a family audience are not covered. Product placement would therefore be permitted in these games. A key criterion used in some cases to distinguish between children's and family programmes depends on the point at which children become capable of understanding the distinction between advertisements and programmes, and of recognising the intentions behind commercial communications.[103] In the case of online computer games, all games with an age rating of 12 years or above ought, under this criterion, to lie outside the definition of games for children.[104] Increased use of media means that today's older children and young people ought, by the age of 12 at the latest, to be capable of distinguishing between programmes and advertising.[105]

In addition to the Audiovisual Media Services Directive, provisions of Directive 2005/29/EC on unfair commercial practices could also be applicable.[106] Neither Article 8 nor Article 5(1) in association with Article 5(4)(b) of this Directive, concerning aggressive commercial practices, applies to in-game advertising in its current forms.[107] In-game advertising does not pressurise players to take transactional decisions, nor is their freedom of choice significantly impaired.

More interesting is the prohibition of misleading advertising as expressed in Articles 5(1), 5(4)(a) and 5(5) in association with Annex 1, point 11. This provision may be applied to games where it is not possible to apply the Audiovisual Media Services Directive. Under Point 11 of the Annex, editorial content intended to promote a product where a trader has paid for the promotion without making that clear in the content, or by images or sound clearly identifiable, is classed as a misleading commercial practice. Product placement in particular is likely to be classed as advertising in the guise of information. In games, however, advertising is not generally disguised as information: rather it serves to "decorate" a form of visual depiction and it would not, therefore, fall within the Directive's scope.

Whether the term "media" is to be understood in the traditional sense in this context, as excluding online games, thus remains an open question. One possible criterion for distinguishing between games and media within the meaning of the Directive could be the means used to present the game on the player's computer: is specific dedicated software required or is the game accessed via an Internet browser?[108] Modern online games are, in any case, provided centrally on a server and "communication" with the players is via two-way transmission. This is also the case with a range of traditional electronic media. On the other hand, the means whereby the game is ultimately presented on the computer screen can scarcely be a defining criterion inasmuch as it is not explicitly linked to the term "media".

Irrespective of these considerations, restrictions could be placed on advertising in online games for children and young people on the basis of Article 5(2)(b) of the Directive. In-game advertising may be intended, to a greater or lesser extent, to exert significant influence on children.

Under Article 3(5), Member States have a derogation to continue to apply national rules for a further six years, so both stricter and less strict requirements with regard to in-game advertising will remain possible.

b) In-game Advertising and Data Protection

By means of tools specially developed for the integration of dynamic advertising into games, it is also possible to gather data about gamers' behaviour patterns. It can be determined, for example, how long a player spends looking at particular advertising. Such data can then be assigned to an individual player via an Internet Protocol (IP) address or the player's account data.[109] This means that advertising can be tailored to individuals.

From the standpoint of data protection, Directive 95/46/EC has relevance for dynamic in-game advertising. According to the industry, the type of data mentioned above is required in order to measure the effectiveness of advertising, to improve it and to optimise it for the individual user. Article 3(1) of the Data Protection Directive covers automatic data gathering but it applies only where the data gathered is also personal. Data is deemed to be personal if it can be assigned to a particular individual. If the data can be linked to an individual via an IP address or otherwise assigned to the individual, for example through a link to the player's account data, the Directive will apply.[110] Only data that has been rendered anonymous may be gathered without regard to the Directive. Even the gathering of IP addresses itself falls within its scope.

The permissibility of data processing for dynamic in-game advertising needs to be examined in light of Article 6(1)(b) and (c) and Article 7 (a) and (b). These provisions require the controller of the data to determine the specific purpose for which data is gathered in a lawful and proportionate manner, and to process this in accordance with the stipulations of Article 6(1)(b) and (c). In-game advertising is normally permissible only if a player has consented (Article 7(a)). Under Article 2(h), the player's consent must be freely given, specific and informed. Compliance with the resultant obligation to supply information could prove difficult in the case of games the programmes of which do not run exclusively online. Leaving aside the question of the effectiveness of so-called "shrink-wrap" licences[111], there is usually a technical printing problem involved in displaying adequately on the game packaging the requisite information about the purpose and extent of any intended data processing. Supplying the information required under Articles 10 and 11 of the Directive is also problematic.[112]

Considered generally, in-game advertising can certainly be an important marketing tool. It is subject to restrictions with regard to the information requirements under Community law and, in relation to data protection, the need to obtain the player's freely given consent.

III. Protection of Children and Young People and Protection of Human Dignity

In the following we will draw a distinction between those types of content generally not permissible – most of which also represent criminal offences – and those which may be subject to dissemination restrictions on the grounds that they could harm children's or young people's development. We do not intend to consider the debate about potential dangers of addiction, to which young people and adults might be exposed in relation to numerous games.

1. General Protection of Children and Young People and of Human Dignity

If the Audiovisual Media Services Directive is applicable, then with regard to the protection of children and young people at least, the provisions of Articles 3(a) to 3(g) AVMSD must be observed.

Article 3(b) AVMSD – echoing the European Commission's 1996 Green Paper on the Protection of Minors and Human Dignity in Audiovisual and Information Services[113] – provides that audiovisual media services must not incite to hatred on grounds of race, sex, religion or nationality. Article 3(e)(1)(c) subparagraphs (i) and (ii) AVMSD provide that audiovisual commercial communications must not prejudice respect for human dignity and must not include or promote any discrimination based on sex, racial or ethnic origin, nationality, religion or belief, disability, age or sexual orientation.[114] Articles 3(e)(1)(d), (e) and (g) stipulate further standards for audiovisual commercial communication.

In relation to on-demand audiovisual services, Article 3(h) AVMSD provides that any such services which might seriously impair the development of minors should be made available only in such a way as to ensure that minors will not normally hear or see them. Insofar as we accept the possible classification of many online games as linear audiovisual media services, Article 22(1) AVMSD is also relevant, with its provision for a complete ban on the dissemination of such services, particularly if they involve pornography or gratuitous violence.

The 1996 Green Paper, which also used the basic distinction referred to at the start of this section, urged restrictions on access to services that might be intended solely for adults but were liable to harm the physical and mental development of children.[115] In the case of television programmes (linear services) this concern had already been addressed through Article 22(2) of the "Television without Frontiers" Directive. It requires Member States to ensure, by selecting the time of broadcasts or by technical measures, that minors do not normally hear or see potentially harmful content. With regard to non-linear services, the provisions of Directive 2000/31/EG (the E-Commerce Directive)[116] – in Article 3(4)(a) (i)-(iii), Article 3(5) and Article 3(6) – could, in principle, be applied for the purpose of protecting children and young people. However, if we assume that online games fall within the scope of the Audiovisual Media Services Directive, then the provision in these articles for a receiving state to take its own action against services posing a threat to the protection of minors is superseded by Article 2(a), subparagraphs (4) to (6) AVMSD – specifically drafted for this purpose. This is also clear from the stipulation in Article 3(8) AVMSD that, in the event of conflict between the AVMSD and the E-Commerce Directive, the former shall take precedence. This would mean, as we have seen, that Articles 3(h) and 22 AVMSD would be the determining provisions for protection against content liable to be (seriously) harmful to children's development. In this regard, Recital 45 AVMSD proposes the use of systems such as PIN codes, filters or labelling. It should also be noted that both the AVMSD and the E-Commerce Directive[117] advocate the encouragement of co- and/or self-regulatory regimes (see Article 3(7) AVMSD).

2. Prohibited Content

a) Games Involving Extreme Violence

Games involving extreme violence have, for some time, been part of the headline-making debate about "killer games". "Killer games" are those in which the aim of the game is to kill other human beings. A distinction must be drawn, however, between games in which violence is "just" one element of the action and games where the direct (or sole) aim of play is to exercise virtual violence. One of the factors that instigated the debate in Germany was a murderous rampage by a former grammar school student in Erfurt in 2001. The game *Counterstrike* – a type of game known as an "ego shooter" – was repeatedly mentioned in media coverage of these killings, although it was clear that the former student responsible had scarcely used the game.[118] The aim in ego-shooter games is the deliberate and systematically repeated killing of virtual living creatures, generally people. The player operates from the perspective of the marksman, and the weapon and the target are always in view. The true-to-life depiction of the action includes, for example, the visual impression and sound of the shots. Spent cartridge cases are thrown down and, to a greater or lesser extent in different games, there is simulation of the physical impact on the victim including, in some cases, the sound of groaning. It is a common feature of many ego-shooter games that they include detailed visual and functional representation of real, existing weapons.[119]

Classification of a computer game as a prohibited media product is problematic. One argument heard is that we do not yet have reliable criteria for determining how such games influence development and what harm they may cause. In assessing a game's potential violence, the context is crucial. An experienced gamer, who plays for fun or regards the game as a sport, would interpret its violent content (even within the overall scenario) in a different way from an outsider, who classes any game with violent content as a "killer game" or regards games as depictions of reality.[120]

At European level, EU Justice Commissioner Franco Frattini took an initiative in November 2006 to improve protection of children and young people.[121] Frattini did not envisage a ban on violent games; instead he sought a serious exchange of views. Specifically he wanted to consider more closely the questions of selling to minors, awareness-raising about age ratings and possible improvement of the system for indicating age ratings. The subject was discussed in Dresden at a meeting of EU Home Affairs and Justice Ministers on 16 January 2007.[122] It was decided that, as a first step, the German Council Presidency would conduct an empirical assessment of the rules currently in force in the Member States.[123]

The self-regulatory PEGI[124] system of age rating for games has been in operation since 2003, and a new offshoot project entitled PEGI Online[125] is already addressing the classification of both online games and mobile-phone games. At the Dresden meeting, the German Justice Minister showed scenes from the game *Manhunt*, in which people are smothered with plastic bags, beaten with roof battens or massacred with chainsaws.[126] The demonstration was intended as an illustration for EU Justice Ministers of the type of game in breach of Section 131 of the German Criminal Code, outlawing the glorification of violence. At around the same time, draft legislation was introduced in Germany to strengthen the prohibition of violent games. A bill tabled by one Federal State Government supports a ban on such games and also seeks new criminal penalties in the interests of protecting "human dignity". The explanatory memorandum accompanying the bill describes the games in question as containing scenes of "virtual slaughter", in which the aim is to kill people in the cruellest possible ways. It asserts that such content is covered neither by the fundamental right of freedom of opinion nor by the right of freedom to exercise a profession.[127] In the absence of consensus on this set of proposals, the Federal Ministry of Family Affairs has tabled an alternative bill to tackle the problem of "killer games". The intention is to amend Section 15 of the German Youth Protection Act to introduce a ban on computer games, containing "particularly realistic, cruel and sensational depictions of gratuitous violence that dominate the action" [editorial translation]. The aim is to prevent realistically detailed depictions of murder and brutality. The bill also provides that the age rating – which is determined in Germany by the *Unterhaltungssoftware Selbstkontrolle* (USK)[128] – should be displayed in considerably larger type and more visibly on computer game packaging and on discs.

Some critics believe that the new bill also poses problems. They claim that by introducing new concepts the bill could create legal uncertainty for the sectors of industry affected by it and also question whether regulation ought not to be confined to inhuman and degrading games, which are already banned.

It will certainly take some time to achieve European-level harmonisation beyond the scope of the PEGI initiatives – an important step particularly in respect of online games – and to find the best formula for protection of children and young people. Technical measures, such as age controls integrated into game consoles, could – provided parents are made aware of them – produce significant results in terms of youth protection. This type of system is already integrated into the Xbox 360 – although the product is not supplied with the control system activated!

b) Virtual child pornography

As computer games have grown in popularity, they have also increased in number, variety and quality, but not all the developments have been positive. Regrettably there has also been an increase in problems within certain games as some players take advantage of the game content to tap into "new" markets for crime.

Many traditional offences can be committed equally effectively in the virtual world: there is scope for fraud, for example, in trading virtual objects, and computer fraud (e.g. hacking and data theft) as well as slander, coercion and blackmail.[129] The behaviour of gamers must always be considered, however, in the context of the game. Thus, a game designed on the basis of a rough form of interaction may have the effect, in the game context, of significantly raising the bar with regard to criminal slander. Certain forms of offence, on the other hand, cannot be committed in online games: for example, virtual property, due to its immaterial nature, cannot be the subject of theft as defined in criminal law.

The only area that we intend to consider more closely here is that of criminal liability in relation to child pornography and how it is addressed by European-level law. Virtual child pornography is an unpleasant "product" of the high level of graphic realism in computer games and of the facility to direct avatars using a script language. In games like *Second Life* it is possible to depict human beings in an extremely realistic and detailed way. The main issue in relation to virtual child pornography is whether it can be tackled within the relevant system of protection under criminal law. There is disagreement on this point because the virtual actors in pornographic scenes are not normally created or controlled by children. Where no real child is involved, it can be argued that there is no victim.[130] Under German law, for example, the aim of Section 184b of the Criminal Code is to protect "real" children from degradation as sexual objects. This provision would not therefore be applicable in "virtual" cases. It is argued, however, that virtual child pornography should be treated in the same way that the law treats child pornography in film photographic form – the point being that it tends to trivialise the real abuse of children.[131]

As a standard-setting international agreement, the Convention on Cybercrime, which came into force on 1 July 2004, could potentially oblige all Member States to make virtual but realistically depicted child pornography a criminal offence.[132] The purpose of this Convention is to promote a common criminal policy on offences committed with and by means of computers. The introduction of basic standards for the criminal prosecution of such offences is seen as a means of protecting society against "cybercrime". Article 9 of the Convention concerns offences related to child pornography. It provides that child pornography shall include not only the visual depiction of minors engaged in sexually explicit conduct, but also realistic images representing a minor engaged in sexually explicit conduct (see Article 9(2)(c)). Paragraph 101 of the Explanatory Report accompanying the Convention stipulates that realistic images are deemed to include pictures which are altered, or even generated entirely, by computer.[133] They are punishable under criminal law, according to paragraph 102 of the report, on the basis that they might be used to encourage or seduce children into participating in pornographic acts, and hence could form part of a subculture favouring child abuse. If we accept these arguments it would seem inconsistent that Article 9(4) of the Convention gives Member States discretion on the criminalisation of virtual child pornography.[134] Where Article 9(2)(c) of the Convention has been transposed into national law, virtual child pornography of the type found in *Second Life* is punishable on the same basis as other forms of pornography. Differences may arise, however, with regard to the meaning of "pornography", as the Convention does not refer to a standard definition of the concept.[135]

Within the European Union, child pornography has been addressed by Council Framework Decision 2004/68/JI on combating the sexual exploitation of children and child pornography.[136] Article 1(b)(iii) of the Framework Decision stipulates that its provisions extend to virtual child pornography which is therefore punishable under criminal law. Article 5(4), however, contains a provision paralleling that in the Cybercrime Convention permitting Member States to exercise discretion in this regard.

D. Conclusion/prospects

The ongoing technical advances in online games, communications technology and personal computers demand flexibility on the part of those whose task it is to apply the law and also on the part of legislators. The need for such flexibility will only increase. In relation to the law as it affects online games – an area of growing practical and economic relevance – many issues have yet to be resolved. The extent to which European law can influence future developments in this area remains to be seen, however, as many such products originate outside Europe.

1) Massively Multiplayer Online Role-Playing Game
2) Slabihoud, Stephan http://www.8bit-museum.de/
3) For technical information on the C 64 see: Jakubaschk, Boris at http://www.homecomputermuseum.de/comp/22_de.htm and Slabihoud, Stephan at http://www.8bit-museum.de/docs/comm.htm
4) For a history of MMORPGs see http://en.wikipedia.org/wiki/Massive_Multiplayer_Online_Roleplaying_Game
5) A LAN party involves the linkage of private computers via a Local Area Network (LAN) provided by the host; see also: http://en.wikipedia.org/wiki/LAN_Party
6) The Xbox 360 is a video-game console developed by Microsoft and a successor to the Xbox. See also: http://en.wikipedia.org/wiki/Xbox_360
7) Wii is a TV-linked game console developed by the Nintendo company, which has been on the market since late 2006. See also: http://en.wikipedia.org/wiki/Wii
8) PlayStation 3 is a video-game console produced by Sony Computer Entertainment. See also: http://en.wikipedia.org/wiki/Playstation_3
9) The breakdown, as at 5 August 2007 was 10.32 million for Xbox 360, 10.1 million for Wii and 4.11 million for Playstation 3; see also http://www.medienhandbuch.de/prchannel/details-12085.html ; http://www.vgchartz.com/
10) Press release from Blizzard Entertainment: http://www.blizzard.com/press/070307.shtml
11) Further information available at: http://www.ige.com/corporate.aspx?lang=en
12) Information available at: http://www.gamesindustry.biz/content_page.php?aid=28284
13) On the development and variety of browser games, see: http://browserspiele.meinweblog.com/
14) For examples of strategy simulation and construction games see: http://www.my-dynastie.de/index.php. A contribution to the game featured here was shown on Giga-TV, see http://www.mydynastie.de/uploads/my_dynastie_de_giga.mpg
15) Audiovisual depiction in most browser games is confined to the display of individual graphic elements comprising – for example and depending on how the game unfolds – houses, streets and churches. For screenshots of a typical game landscape see: http://www.gladiatus.de/game/index.php?mod=stuff&submod=screenshots and http://www.die-zunftmeister.de/
16) For an example of simulations with lavish audiovisual depiction, currently on the market, see *The Sims 2 Pets*, in which it is actually possible to groom pets in a whole range of ways; screenshots are available at: http://www.pc-spieleforum.de/index.php?a=420
17) As a rule, Flash or Java games.
18) Script (or "scripting") languages are computer programming languages intended chiefly for short manageable programming tasks. See also: http://en.wikipedia.org/wiki/Scripting_language
19) The World Intellectual Property Organization (WIPO) Copyright Treaty is a "special agreement" within the meaning of Article 20 RBC. It is available at: http://www.wipo.int/treaties/en/ip/wct/trtdocs_wo033.html#P62_6959
20) Available at: http://www.wipo.int/treaties/en/ip/berne/trtdocs_wo001.html#P85_10661 ; *BGBl.* [*Bundesgesetzblatt* (German Federal Gazette)], 1973, II, p. 1071, and 1985, II, p. 81.
21) Agreement on Trade-Related Aspects of Intellectual Property Rights, available at: http://www.wto.org/english/docs_e/legal_e/27-trips.pdf
22) Grützmacher, Malte, in Wandtke/Bullinger, *Praxiskommentar zum Urheberrecht*, 2nd edition, 2006, commentary on §§ 69(a) *et seq.*, paragraphs 8 and 10. Computer programs can also be protected as works of literature under Article I of the Universal Copyright Convention. This multilateral agreement was concluded in order to extend access to a worldwide system of copyright protection to states whose national legislation did not afford such protection as of right. In contrast to the thinking behind the Berne Convention, the UCC contains no binding stipulation with regard to the provision of copyright protection as of right. The UCC is without prejudice to the provisions of the Berne Convention. In states that are signatories to both agreements, the more restrictive terms of the Berne Convention apply in this regard. The text of the UCC is available at: http://portal.unesco.org/en/ev.php-URL_ID=15241&URL_DO=DO_TOPIC&URL_SECTION=201.html
See also Oberlandesgericht Karlsruhe, *GRUR [Gewerblicher Rechtsschutz und Urheberrecht]* 1984, 521, 522.
23) Welser, Marcus, in Wandtke/Bullinger, *op. cit.*, commentary on §§ 69(a) *et seq.*, paragraph 8, with further references.
24) There is parallel protection of national treatment in Article II(1) and (2), UCC.
25) Grützmacher, Malte, in Wandtke/Bullinger, *op. cit.*, § 121, paragraphs 13 and 27.
26) Lewinski, Silke, "Die WIPO-Verträge zum Urheberrecht und zu den verwandten Schutzrechten aus Dezember 1996", *CR*, 1997, 432, 438.
27) Directive 91/250/EEC of 14 May 1991 is available at: http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31991L0250:EN:HTML; *OJ* 1991, L 122/42
28) Directive 2001/29/EC of 22 Mai 2001 is available at: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2001/l_167/l_1670010622en00100019.pdf; *OJ* 2001, L 167/10
29) Directive 2006/115/EC of 12 December 2006 on rental right and lending right and on certain rights related to copyright in the field of intellectual property, *OJ* 2006 L 376/28 – available at http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_376/l_37620061227en00280035.pdf – replaces Directive 92/100/EEC of 19 November 1992.
30) Defined in the United States Copyright Act, Section 101, as "a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result".
31) Koch, Frank A., "Begründung und Grenzen des urheberrechtlichen Schutzes objektorientierter Software", *GRUR* 2000, 191, 195. German copyright law takes the same approach, see *Amtliche Begründung* [Official Explanatory Statement], *Bundestagsdrucksache* [Bundestag Printed Paper] 12/4022, p 9.
32) In Koch's opinion, therefore, the term "computer program" is not amenable to precise legal definition: it belongs to the realm of IT theory and software technology, and the meanings ascribed to it are determined in that context. See Koch, Frank A., *op. cit.*, p 195.
33) Unlike Article 4 WCT, see above.
34) Lambrecht, Arne, *Der urheberrechtliche Schutz von Bildschirmspielen*, 2006, p. 94.
35) "Game engine" is the name given to the underlying core component of a computer game. It is the foundation on which the action of the game is built. A game engine can often be re-used to create other, different games.
36) Lambrecht, Arne, *op. cit.*, p. 95, see footnote 422, with further references.
37) German Federal Supreme Court, *GRUR* 1994, 39, 40 f. – Buchhaltungsprogramm.
38) The US Copyright Office effectively uses an equally broad conception in its registration practice, despite court decisions to the contrary. On the position in Russian law, see *GRUR Int* 1993, 756 and Lambrecht, Arne, *op. cit.*, p. 81; on the US Copyright Office's registration practice, see US Copyright Office, Circular 61, June 2002, at http://www.copyright.gov/ and Lambrecht, Arne, *op. cit.*, p. 81, with further references.
39) On interfaces, see Recitals 10 and 11 of the Software Directive: "the function of a computer program is to communicate and work together with other components of a computer system and with users and, for this purpose, a logical and, where appropriate, physical interconnection and interaction is required to permit all elements of software and hardware to work with other software and hardware and with users in all the ways in which they are intended to function" and "[...] the parts of the program which provide for such interconnection and interaction between elements of software and hardware are generally known as 'interfaces'".
40) Lambrecht, Arne, *op. cit.*, p. 82.
41) The Software Directive does not protect every function – e.g. graphics and sound – as a form of expression of the computer program; protection is afforded explicitly and solely to the program in the forms of data, source codes, printed matter or preparatory design materials.
42) Lambrecht, Arne, *op. cit.*, p. 90. Under the continental European *droit d'auteur* system of copyright law, not even the consideration of protecting investment offers a basis for advancing interpretation along these lines, although the second recital of the Software Directive does represent a certain easing of the provisions on computer programs in the interests of investment protection. The fact remains that the Directive does not guarantee any protection of investment, even though high investment costs were a reason for adopting legislation to harmonise copyright law in relation to computer programs. On this point, see Kotthoff, Gunda, in Dreyer/Kotthoff/Merkel *et al.*, *Urheberrecht, Kommentar*, Heidelberg 2004, § 69a paragraph 23, and Recital 2 of the Software Directive: "the development of computer programs requires the investment of considerable human, technical and financial resources while computer programs can be copied at a fraction of the cost needed to develop them independently".
43) See Article 4 Software Directive.
44) Article 2(III) of the draft of 5 January 1989, *OJ* 1989 C 91/4.
45) On the use of game engines in programming, see Lambrecht, Arne, *op. cit.*, p. 103.
46) Lambrecht, Arne, *op. cit.*, p. 205, on the question of authorship in the context of programming with a game engine or with tools created by the programme author. The provision in German law governing copyright in adaptations is to be found in the Copyright Act (*Urhebergesetz*), Sections 3, 23 (first sentence) and 69(c)(2).
47) Thum, Dorothee, in Wandtke/Bullinger, *op. cit.*, § 8, paragraph 10.
48) Directive 93/98/EEC, *OJ* 1993 L 290/9.
49) Article 2(1)(c): "'Film' means a cinematographic or audiovisual work or moving images, whether or not accompanied by sound".
50) Karl, Harald, *Filmurheberschaft: Das Filmschaffen im österreichischen Urheberrecht*, Vienna, 2005, p. 78.
51) Karl, Harald, *op. cit.*, p. 78.
52) Directive 89/552/EEC of 3 October 1989, *OJ* 1989 L 298/23.
53) Bullinger, Winfried, in Wandtke/Bullinger, *op. cit.*, § 2, paragraph 121.
54) Reute, Alexander, "Digitale Bild- und Filmbearbeitung im Licht des Urheberrechts", *GRUR* 1997, 23, 24, with further references.
55) Loewenheim, Ulrich, *Handbuch des Urheberrechts*, 2003, § 9, paragraph 161.
56) Loewenheim, Ulrich, in Schricker, *Urheberrecht, Kommentar*, second edition, Munich 1999, § 2, paragraph 181.
57) As an example of smaller browser games, see *Moorhenne II*, which can be played at http://www.tnt-factory.de/spiele/moorhenne2.php . Other games of this kind can be found at http://www.mygame.com/ and http://www.seafight.de/ . The game *Seafight* is better animated and could be classed as borderline with regard to creating the impression of a moving image.
58) Lambrecht, Arne, *op. cit.*, p. 119.
59) Oberlandesgericht Frankfurt am Main, *GRUR* 1983, 757, 758 – *Donkey Kong Junior I*; Oberlandesgericht Frankfurt am Main, *GRUR Int* 1993, 171, 172 – *Parodius*.
60) Oberlandesgericht Hamburg, *GRUR* 1983, 436, 437 – *Puckman*; Oberlandesgericht Hamburg, *GRUR* 1990, 127, 128 – *Super Mario III*; Oberlandesgericht Bayern, *GRUR* 1992, 508, 509.
61) Oberlandesgericht Köln, *GRUR* 1992, 312, 313 – *Amiga-Club*.
62) Bullinger, Winfried, in Wandtke/Bullinger, *op. cit.*, § 2, paragraph 129, with further references.
63) Loewenheim, Ulrich, in Schricker, *Urheberrecht, Kommentar*, 2nd edition, Munich 1999, § 2, paragraph 181.
64) Poll, Günter and Brauneck, Anja, "Rechtliche Aspekte des Gaming-Marktes", *GRUR* 2001, 398, 390.
65) As, for example, in the German Copyright Act [*Gesetz über Urheberrecht und verwandte Schutzrechte* (*UrhG*)], Section 95.
66) On the origin of the term "audiovisual work" see above.
67) On definition of the term "film" to include computer games, see Lambrecht, Arne, *op. cit.*, p. 121, and Nordemann, Wilhelm, *GRUR* 1981, 891, 893.
68) WIPO *Handbook on Intellectual Property, Chapter 5, International Treaties and Conventions on Intellectual Property*, p. 95, available at: http://www.wipo.int/about-ip/en/iprm/pdf/ch5.pdf#wct
69) This document is available at: http://gatt.stanford.edu/bin/object.pdf?92040090
70) GATT document MTN.GNG/NG11/W/24, p. 15.
71) German Federal Supreme Court, *GRUR* 1994, 39, 40 – Buchhaltungsprogramm.
72) In relation to Germany, see by analogy Section 8(II)(1) *UrhG* in association with Sections 705 *et seq. BGB*, for example, and Lambrecht, Arne, *op. cit.*, p. 202 with further references.
73) German law also takes this line: see *Bundestagsdrucksache* 12/4022, 10.
74) The interplay of the various provision in Directives 91/250/EEC and 2001/29/EC can lead to considerable difficulties of interpretation. See, for example, Thierry Maillard, "Mesures techniques de protection, logiciels et acquis communautaire: Interfaces et interférences des directives 91/250/CEE et 2001/29/CE", *RLDI* 2005/5, n°154, available at: http://mtpo.free.fr/read.php?file=0505011&typ=1
75) Apart from the issue of how online games are classified under one or more of the explicit headings for types of work relevant in terms of copyright, questions are raised by other rules affecting these types of work in international, European and national law. As well as the issue discussed above, of who may hold rights to games, such questions concern exploitation rights and other exclusive rights. Potential difficulties arise, in particular, where there is a need to reconcile different systems of regulation – designed on the one hand for films and, on the other, for computer programs. In French law, for example, there are specific requirements for contractual agreements concerning audiovisual productions – see Articles L132-23 to L132-30 of the Intellectual Property Act, No 92-597, of 1 July 1992 (*Loi no 92-597 du 1er juillet 1992 relative au code de la propriété intellectuelle (partie législative)*).

76) See http://www.xbox.com/en-GB/hardware/xbox360/benefits/media.htm ; http://www.xbox.com/en-GB/hardware/xbox360/benefits/mediacentre.htm
77) See, on this console's media functions, http://wiiportal.nintendo-europe.com/1350.html
78) See, concerning video on Playstation 3, http://de.playstation.com/help-support/ps3/movies/detail/item49525/
79) Recital 18 of the proposed Directive of the European Parliament and of the Council amending Council Directive 89/552/EEC, available at: http://register.consilium.europa.eu/pdf/en/07/st10/st10076.en07.pdf reads: "For the purpose of this Directive, the definition of an audiovisual media service should cover mass media in their function to inform, entertain and educate the general public, and should include audiovisual commercial communication but should exclude any form of private correspondence, such as e-mails sent to a limited number of recipients. That definition should exclude all services whose principal purpose is not the provision of programmes, i.e. where any audiovisual content is merely incidental to the service and not its principal purpose. Examples include websites that contain audiovisual elements only in an ancillary manner, such as animated graphical elements, short advertising spots or information related to a product or non-audiovisual service. For these reasons, games of chance involving a stake representing a sum of money, including lotteries, betting and other forms of gambling services, as well as on-line games and search engines, but not broadcasts devoted to gambling or games of chance, should also be excluded from the scope of this Directive."
80) For example, the German WDR programme „echt Böhmermann", available at: http://www.wdr.de/radio/wdr2/westzeit/373268.phtml or Bunch TV, available at http://www.bunch.tv/
81) "'[…] television broadcasting' or 'television broadcast' (i.e. a linear audiovisual media service) means an audiovisual media service provided by a media service provider for simultaneous viewing of programmes on the basis of a programme schedule".
82) "[…] 'on-demand service' (i.e. a non-linear audiovisual media service) means an audiovisual media service provided by a media service provider for the viewing of programmes at the moment chosen by the user and at his/her individual request on the basis of a catalogue of programmes selected by the media service provider".
83) Recital 20 AVMSD: "Television broadcasting, currently includes, in particular, analogue and digital television, live streaming, webcasting and near-video-on-demand, whereas video-on-demand, for example, is an on-demand audiovisual media service […]".
84) This provision is reflected in Recital 19 AVMSD: "[For the purpose of this Directive] the definition of media service provider does not include natural or legal persons who merely transmit programmes for which the editorial responsibility lies with third parties".
85) See also Recital 19 AVMSD.
86) ECJ Case C-89/04, *Mediakabel BV v. Commissariaat voor de Media*, [2005], ECR I-4891, paragraphs 30-32
87) See ECJ Case C-192/04, *Lagardère Active Broadcast v. Société pour la perception de la rémunération équitable (SPRE) and Gesellschaft zur Verwertung von Leistungsschutzrechten mbH (GVL)*, [2004], ECR I-7199, paragraph 31, and ECJ Case C-89/04, *Mediakabel*, *op. cit.*, p. 30.
88) ECJ Case C-306/05, *Sociedad General de Autores y Editores de España (SGAE) v. Rafael Hoteles SA*, [2006], ECR I-11519.
89) "For the purpose of this Directive […] 'programme' means a set of moving images with or without sound constituting an individual item within a schedule or a catalogue established by a media service provider and whose form and content is comparable to the form and content of television broadcasting. Examples of programmes include feature-length films, sports events, situation comedy, documentary, children's programmes and original drama".
90) Recital 17 AVMSD: "It is characteristic of on-demand services that they are 'television-like', i.e. that they compete for the same audience as television broadcasts and the nature and the means of access to the service would lead the user reasonably to expect regulatory protection within the scope of this Directive. On this basis in order to prevent disparities as regards free movement and competition, the notion of programme should be interpreted in a dynamic way taking into account developments in television broadcasting".
91) The game can be found at http://www.travian.com/
92) See B II above.
93) For the examples, see C I.2 above.
94) See Article 1(e) AVMSD on the requirement of a schedule for linear services and Article 1(g) on the criterion of a catalogue for non-linear services.
95) On the concept of the "general public" see also C I. 2 above.
96) See footnote 90.
97) http://www.ipdb.org/machine.cgi?id=1644 ; Salomakhin, Sergey and Zislis, Mikhail, *The History of In-game Ads So Far*, p. 1, available at: https://www.v-lodge.com/public/The%20History%20Of%20In-Game%20Ads%20So%20Far.pdf
98) Two examples of early advertising in games are worth mentioning: advertising for MasterCard, Coca-Cola and Easton was included in the game *NHL series*, and the game *World Cup 98* included pitch-perimeter advertising for Opel, MasterCard, Snickers, McDonald's, Philips and JVC. See also Salomakhin, Sergey and Zislis, Mikhail, *op. cit.*, p. 6.
99) With regard to the intention of creating true-to-life computer games, the ruling by the European Court of Justice in ECJ Case C-429/02, *Bacardi France SAS v. Télévision française 1 SA (TF1), Groupe Jean-Claude Darmon SA and Girosport SARL*, [2004] ECR I-6613, is relevant. The Court found here, in relation to interpretation of the "Television without Frontiers" Directive, that "indirect advertising", which could not be avoided editorially or over which the broadcaster had no influence, was not television advertising within the meaning of the Directive. Conversely, it should be noted that in the case of in-game advertising the manufacturer does insert the advertising deliberately. The conclusions in the *Bacardi* judgement cannot, therefore, be used to justify advertising in games. If the ruling were applied to online games, then in future – presuming that the AVMSD will be applicable – games manufacturers would have to be reminded of their obligations in the interests of consumer protection (see Article 3(e)(1)(a) and Article 3(g) AVMSD).
100) Examples can be found at http://www.miniclip.com. Miniclip, with 34 million different players, is currently the fun games platform with the widest reach. See also: http://mediaserver.prweb.com/pdfdownload/513050/pr.pdf . Burger King adgames can be found at http://www.bkgamer.com
101) See http://www.bannergame.com/ A more detailed description of this form of advertising is available at: http://mediaserver.prweb.com/pdfdownload/527251/pr.pdf
102) Examples of companies that market dynamic advertising and so-called "Flash adware games" are IGA Worldwide (http://www.igaworldwide.com/) and Atomentertainment (http://www.atomentertainment.com). Google too is now involved in the games advertising market, having acquired Adscape Medi Incorporated (http://www.adscapemedia.com/).
103) Ladeur, Karl-Heinz, in *Beckscher Kommentar zum Rundfunkrecht*, 2003, § 14, paragraph 7.
104) A different age scale would, in practice, lead to problems. Age rating for computer games in most countries is based on the PEGI system, with age bands from 3, 7, 12, 16 and 18 years. In Germany the applicable age limits are those set forth in Section 14 of the Youth Protection Act (*Gesetz zum Schutz der Jugend in der Öffentlichkeit*), which differ from the PEGI age bands. See, on the classification of games, http://www.pegi.info . Specifically in relation to online games see http://www.pegionline.eu/ and, concerning the position in Germany, http://www.usk.de/90_Die_Alterskennzeichen.htm
105) With regard to television, Gerhild Nieding (quoted in Gangloff, Tillmann P. "Gebote statt Verbote", *tv diskurs* No 41, (Vol. 3) 2007, pp 94 and 96) takes the view that children develop the capacity to distinguish between programmes and advertising and to recognise advertisers' intentions between the ages of seven and eight years. Younger children do not have this capacity.
106) Directive 2005/29/EG is available at: http://europa.eu.int/eur-lex/lex/LexUriServ/site/de/oj/2005/l_149/l_14920050611de00220039.pdf
107) A view supported by Schaar, Oliver, "In-Game Advertising", *CR*, 2006, 619, 621
108) See, for another viewpoint, Schaar, Oliver, *op. cit.*, p. 621.
109) The Electronic Arts game *Battlefield 2142* offers an illustration of what is known as "data mining": it gathers intensive data and forwards them to an ad server. For players' reactions, see: http://www.kotaku.com/kotaku.com/gaming/centipedes/battlefield-2142-with-a-dash-of-spyware-207955.php
110) Recital 26 of Directive 95/46/EC, and Opinion 2/2002 of the Article 29 Data Protection Working Party on the use of unique identifiers in telecommunication terminal equipment: the example of IPv6, p. 3, available at: http://ec.europa.eu/justice_home/fsj/privacy/docs/wpdocs/2002/wp58_en.pdf
111) On shrink-wrap licences see Marly, Jochen, *Softwareüberlassungsverträge*, 2004, paragraphs 455 *et seq.*
112) If an online game does not qualify as an audiovisual media service, for example because it is not a "programme" within the meaning of the AVMSD, then application of Directive 2000/31/EC must be considered. The so-called "E-Commerce Directive" includes provisions for further duties to provide information in information-society services. The provisions affect both service providers (Article 5) and those who commission commercial communications (Article 6). With regard to commercial communications in the broader sense, Article 6(a) stipulates that these must be clearly recognisable as such.
113) Green Paper COM(96) 483 final, of 16 October 1996, p. 6.
114) Point 3(a) of Recommendation of the European Parliament and of the Council of 2006/952/EC, of 20 December 2006, *OJ* L 378/72, provides that the new communications sector should be encouraged to combat the types of discrimination listed above. To that end, Point 3(b) advocates encouraging vigilance and the reporting of pages considered illegal and 3(c) recommends that a code of conduct be drawn up.
115) Green Paper, *ibid.*
116) *Op. cit.*, (Footnote 112).
117) *Op. cit.*, Article 16.
118) The report of the Gutenberg Gymnasium Commission is available at: http://www.thueringen.de/imperia/md/content/text/justiz/bericht_der_kommission_gutenberg_gymnasium.pdf
119) See also the report of the Gutenberg Gymnasium Commission, *op. cit.*, p. 336 *et seq*.
120) See the Hans Bredow Institute study, *Das deutsche Jugendschutzsystem im Bereich der Video- und Computerspiele*, p. 60 *et seq.*, available at: http://www.hans-bredow-institut.de/presse/070628Endbericht.pdf
121) Published online at: http://ec.europa.eu/commission_barroso/frattini/doc/2006/pr_14_11_06_en.pdf . See also Thomas Kleist/Carmen Palzer, "Co-Regulierung als Instrument der modernen Regulierung", Background Paper for Working Group 4 at the expert seminar on the subject of "Mehr Vertrauen in Inhalte – Das Potential von Co- und Selbstregulierung in den digitalen Medien", Leipzig, 9-11 May 2007, available at: http://www.leipzig-eu2007.de/de/scripte/pull_download.asp?ID=13
122) Available at: http://www.eu2007.de/de/News/download_docs/Januar/informalJI0114/070_Tagesordnung.pdf
123) The survey results do not yet appear to be publicly accessible.
124) The PEGI system is managed by NICAM. Further information about how the system functions is available at: http://www.pegi.info/pegi/index.do?method=rating . See also the description in Carmen Palzer, "Horizontal Rating of Audiovisual Content in Europe. An Alternative to Multi-level Classification?" *IRIS plus* 10/2003, available at: http://www.obs.coe.int/oea_publ/iris/iris_plus/iplus10_2003.pdf.en
125) See http://www.pegionline.eu/de/index/id/34
126) Stöcker Christian, "Zwischen Wirtschaftsfaktor und gesellschaftlicher Tabuisierung", *BLM tendenz* 2/2007, p. 4.
127) Opinion of Georg Schmid, Permanent Secretary at the Bavarian Interior Ministry, quoted in *BLM tendenz* 2/2007, p. 10; the bill is available at: http://www.bundesrat.de/cln_050/nn_8694/SharedDocs/Drucksachen/2007/0001-0100/76-07,templateId=raw,property=publicationFile.pdf/76-07.pdf
128) On the age rating system in Germany, see http://www.usk.de/
129) For an introduction to the problems posed by online games under German criminal law, see Krasemann, Henry, "Onlinespielrecht – Spielwiese für Juristen", *MMR* 2006, 351, 354 *et seq*.
130) Sakowski, *Pornografie im Internet (II)*, available at: http://wwww.sakowski.de/onl-r/onl-r31.html
131) Hopf, Kristina and Bramel, Birgit, "Virtuelle Kinderpornografie vor dem Hintergrund des Online-Spiels *Second Life*", *ZUM, 2007*, 354, 355.
132) The Convention on Cybercrime has been ratified by 20 member states of the Council of Europe as well as the USA, Canada and Japan. It is available at: http://conventions.coe.int/Treaty/en/Treaties/Html/185.htm On its ratification, see: http://conventions.coe.int/Treaty/Commun/ChercheSig.asp?NT=185&CM=8&DF=9/19/2007&CL=ENG
133) The Explanatory Report is available at: http://conventions.coe.int/Treaty/en/Reports/Html/185.htm
134) Hopf, Kristina and Bramel, Birgit, *op. cit.*, p. 357 also take the view that there should be no derogation here. Baier, Helmut, in "Die Bekämpfung der Kinderpornografie auf der Ebene von Europäischer Union und Europarat", *ZUM*, 2004, 39, 46, argues generally against an ad hoc approach to criminalisation, citing the danger that the acts depicted may be copied.
135) Baier, Helmut, *op. cit.*, p. 43. For an overview of national provisions banning pornography in different European countries, see Liesching, Marc, *MMR*, 2003, 156.
136) The Framework Decision is available at: http://eur-lex.europa.eu/LexUriServ/site/en/oj/2004/l_013/l_01320040120en00440048.pdf