

Hologram Technology and Copyright Between Evoking the Past and The Present Crisis in Lights of Copyrights Legislations and International Agreements

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Abstract

This paper analyses the multiplicity of the increasing use of holograms in live shows, which has created legal problems with regard to the protection of copyright and publicity rights. Holographic performances that use content without receiving the copyright holder's permission are considered copyright infringement. Infringement is the use of the image, voice, and likeness of celebrities, whether dead or alive, without the permission of the celebrities themselves or their rights. In addition, celebrities can regulate the commercial use of their photos and identities through copyrights protection, which prohibits their name or presence from being used. Therefore, holographic performance producers need to proceed with caution in using pre-existing celebrity material and images. On the other hand, investments and attempts have been made by producers to create holographic performances. Their time and money commitment should be compensated not only financially from income from success, but also from the security of intellectual property systems.

Keywords: Copyright, Holographic Performances, Hologram Technology, Reproduction Right, Pseudo-Holograms

Introduction

No doubt that the use of hologram technology in the embodiment of deceased singing and music stars and placing them as animated and three-dimensional images on theaters and platforms in front of the audience raises an ethical and legal controversy, although the technology has so far only provided modest possibilities in formation, clarity, and representation. The hologram is a holographic imaging technique that allows recreating the image of objects in its three dimensions in open space, not on a flat object, without the need for glasses or any special equipment to view them and rely on lasers. In some cases, the technology also enables interaction with virtual objects [1].

The first appearance of this technique in the field of singing and music was in 2012, when the American rapper Tupac appeared on stage at the Coachella Festival in California [2]. Two years later, those present at the Billboards Music Awards were imagined that Michael Jackson had risen from the dead and stood singing in front of them on stage [3]. Watching late stars such as Whitney Houston, Billie Holiday and Elvis Presley sing on stage became impossible.

In this regard, last year, this phenomenon has been recurring at

an accelerated pace. A propaganda video published in October revealed a concert by the late Egyptian Singer Umm Kulthum in Saudi Arabia, for the first time, using hologram technology [4]. Theaters of the world ignite criticism and questions about the technical limits of the new industry, as well as the legal controversy, financial rights and intellectual property.

Definition of Holograms

Hologram technology is a three-dimensional projection that can be seen without using any special equipment such as cameras or glasses. The image can be viewed from any angle, so as the user walks around the display the object will appear to move and shift realistically. Holographic images can be static, such as a picture of a product, or they may be animated sequences that can be watched by multiple people from any viewpoint [5].

The technology used to capture, and project Holograms has advanced rapidly in recent years. These latest techniques allow increasingly convincing and interactive models to be displayed and are expected to become even more widespread in the future. Now that we've got a better idea of how holograms technology work, let's take a look at the copyrights areas most impacted by holo-

gram.

Holograms and Copyright Law

As they can be used as an anti-counterfeiting technology and as a way to infringe copyright law, holograms tend to have a controversial relationship with copyright law [6]. Owing to the increased standard of lighting technology, the images are now much more lifelike and greatly enhanced.

Hologram” Smart Heritage Revival or Exploitation of Intellectual Property Rights

Hologram technology appeared for the first time in 1972 at the hands of Lloyd Cruz [7, 8]. The popularity of holographic forms that show images of deceased or living celebrity performers, or any other desired person or image on stage, has increased over the past few years. In 2012, the American rapper Tupac appeared on stage, as the singer Michael Jackson appeared with this technology, and the United States witnessed disputes over the intellectual property rights of this technology, the possibility of embodying the deceased, and benefiting from their work. Researchers said that this technology aims for profit and commercial motives, which requires preserving the intellectual property rights of its owners [2].

With the increased use of hologram technology, it becomes essential to save the rights of the authors. However, this technology faces the rights of the composer, the author, as well as the inheritors of the late artist; the owners have the right to reject or accept the idea. Therefore, today's holographic performances are thus merely using the "Pepper's Ghost" illusion technique, and a dedicated holographic film is used instead of transparent glass in addition to improved image quality. Holographic performances that use material without copyright holder's permission are called infringement of copyright [9]. The violation of the right of publicity is the use of the image, voice and likeness of celebrities, whether they are dead or alive, without the permission of the celebrities themselves or their property. Therefore, holographic performance producers need to proceed with caution in using pre-existing celebrity material and images. On the other hand, investments and attempts have been made by producers to create holographic performances. Their time and money commitment should not only be financially compensated from performance sales, but also from performance profits, but also protection from the intellectual property systems [10].

Therefore, this notice will concentrate on the issues of copyright resulting from the development of holographic performances by answering the following two questions: (1) In order to create holographic images and to avoid copyright from whom should a producer obtain a copyright license, and what kind of rights do they have? (2) Are the holographic performances created copyrightable so that unauthorized use can be forbidden by the producer? The limits of copyright infringement and copyright protection in the creation of holographic images will be delineated by a discussion of these two issues and will encourage the widespread use of holographic images in live performances.

Holographic Images: Reproduction Right

In general, copyright protection follows the general principles laid down by international treaties on intellectual property and copyright, such as the Berne Convention for the Protection of Literary and Artistic Works (Berne Convention), Convention on

Trade-related Aspects of Intellectual Property Rights (TRIPS), Rome Convention for the Protection of Artists, Manufacturers of Phonograms and Broadcasting Organizations (Rome Convention) Organization of World Intellectual Property (WIPO) Copyright Treaty and WIPO Performances and Phonograms Treaty [11-14]. Therefore, in literature, arts, and sciences, copyright protection requires original expressions that can be fixed in a tangible medium. There is no specific law governing the copyright of holograms, which are treated as copyrightable insofar as they are the result of one or more original creative works nor has there been any test in law of the copyright ownership of a hologram. However, certain jurisdictions have attempted to address the identification of a hologram and the copyright on it. For example, the United Kingdom Copyright Designs and Patents Act 1988 is drafted to include holograms under references to photographs and/or films as stipulated in article four under the artistic work "photograph" means a recording of light or other radiation on any medium on which an image is produced or from which an image may by any means be produced, and which is not part of a film" [15]. There are two general situations which revolve around holographic performance output. The first scenario requires actions by living celebrities, the second situation involves performances by deceased celebrities.

The above demonstration suggests that producers use photographs and videos to generate holographic performances. As far as photographs are concerned, whether creators are forced to apply for a license or are allowed to use existing elements freely depends on whether pre-existing copyright performances are reused for holographic performance output. In the case of holographic performances being those of a living celebrity, such as Stevland Morris, pre-existing performances are repeated and projected on stage. Since the performer has a collection of rights herself and will allow a third party to broadcast and publicly broadcast her live performance, make recordings of sound and video, replicate and distribute sound and publicly and video recordings, reproduce and distribute sound and video recordings, and make available her performance through the internet, the performance is under copyright protection.

Therefore, the producer would need to seek permission from Stevland Morris of his holographic performance for the right to record his sound and pictures, recreate the recordings, publicly distribute the performance and make the performance available on the internet.

Rather interestingly, if we think in terms of 'visual culture' instead of 'Art' up until now the widespread use of holograms has not threatened the protection of copyright, but has, on the contrary, acted as an important tool for improving and upholding the rules of copyright law [16].

The USA is more typical of the situation in most countries which have not attempted to classify the new technology. US Copyright Law defines 'pictorial, graphic and sculptural works' as 'two-dimensional and three-dimensional works of fine, graphic, and applied art, photographs, prints and art reproductions ...' [17].

Holograms would be considered as photographs, but in the absence of specific reference to holograms or legal precedent. The international hologram manufacturers association is unable to

give legally authoritative advice to members or their customers on copyright ownership. However, drawing on strong precedent and custom and practice in this and related industries, the international hologram manufacturers association has drawn up these guidelines for its members [18].

The use of holograms has already existed for decades as an anti-counterfeiting technology. It was in 1984, that a hologram was implemented by Johnnie Walker Scotch whiskey to fight counterfeiting. Glaxo became the first pharmaceutical company to use holograms to secure its goods in 1988, and Australia and Austria's first currency holograms appeared in banknotes. Since then, the use of holograms as proliferated in order to guarantee the product's authenticity. Compared to other anti-counterfeiting methods, holograms offer major benefits, since they are much more difficult to replicate than other recognition techniques [19].

Indeed, holograms do not operate on the instruments that have historically been used for counterfeiting (primarily the camera and the printing press). Holograms are created using lasers to create images that appear to have depth and movement in fantastic rainbow colors. Although the most sophisticated scanners and automated methods do not, thus, with 100% accuracy, replicate their visual appearance [20].

However, the development of technology has made it easier for counterfeiters to replicate such holographic designs. Thus, it is possible for a professional counterfeiter to make optical copies of holograms that are hard to differentiate from the originals [20]. It has a dual protective purpose to enforce a hologram on an IP protected good: it functions both as an "identification instrument" and as a deterrent. It conveys the message to the customer that the item she buys is genuine, while at the same time the expense and difficulty of replicating the hologram can also prevent non-sophisticated counterfeiters from counterfeiting the item.

This duplicity is not expressed in legal terms in the copyright regulation, since holograms belong only to the category of "right management information" which is narrowly defined as any information supplied by right holders identifying the work or other subject-matter" and cannot be regarded as technological security measures since they do not technically regulate access to or use of wood.

Finally, because holograms are pictures, the classic controversies about copyright law in the case of holograms that are created to be added to IP protected subject matter, the creation and reproduction of images is also present.

First a holographic image, if it is original, may be protected by copyright law. A flexible broad definition of "photographs," such as the one in the UK Copyright and Designs Act of 1988, could allow the classification of holograms as "photographs," because holograms are works created by a process akin to photography [21].

But to what degree will "photographs" be assimilated into holograms? Apart from the classification question, which is only useful in countries where there is a closed list of categories covered by copyright law, there is no need for equivalence between holograms and photographs. It could lead to undesirable analogies, apart from

fostering a technologically based vision of copyright law.

For example, it has been argued that the holographic image is somehow un-set, because the holographic image is not clearly visible and reproducible in all its dimensions, unlike photography, where a fixed image is directly visible in its entirety [22].

The claim could draw some support from the UK case in *Norwegian v Arks Ltd* where a choreographic work was denied copyright protection because the fixation of it which was created with a drastic technique of video editing ('jump-cutting'), was unable to recreate the form of the work, because the recording ended up displaying anything that nobody could perform or dance [23]. Nevertheless, this claim is not true because it stresses the visual inability to perceive the entire holographic image, while the fixation of the form itself and not the purpose served by the fixation is important for copyright security. In other words, because three-dimensional images are captured and projected on two-dimensional surfaces in holography, the whole message" still remains even though it cannot be interpreted and copied in a way similar to photography [24]. In addition, in case law, it is well known that even interactive for the purposes of copyright law, works, including video games, are considered to be fixed.

Secondly, copyright is infringed by a holographic image reproducing the original image (photograph, video, design, painting, etc.) without permission in whole or in portion. Here the classic principles of copyright law apply and copyright. It is infringed by significant taking of the original elements of the first image [25]. However, no case law has been published in this regard, as far as now.

Pseudo-Holograms and The Right to Public Communication

Extremely the dynamically rising domain of holographic performances is the most important bone of contention between copyright law and holography. Notably, Tupac was resurrected on stage at the 2012 Coachella Valley Music and Arts Festival through advanced digital technology. The result was a surge of rumors and wishes about the next hologram performance. Later, in 2014, Michael Jackson posthumously performed on stage at the Billboard Music Awards.²⁵ In 2016, Jackie Wilson, who inspired the likes of Elvis Presley and James Brown, was scheduled to be reincarnated in order to wow audiences on the strip in Las Vegas [26]. A package of contrasting IP circumstances may appear. Real actors were employed to appear as the deceased music stars in both performances. The digitally projected performers have been dubbed "holograms," which is not an exact term for the apparitions. Actual holograms would appear in the air by light only and not as a reflection [27].

Accordingly, image capture and computer-generated imagery were then used by producers (CGI) then the digitally enhanced images were projected in 3D using the derivation of the Pepper's Ghost illusion to re-create the images of the deceased stars. Although all of this could sound exciting from the audience's point of view, there are no "exciting" legal solutions from an IP viewpoint [28].

subsequently holographic process of "resurrection" aims to revive the deceased not as an individual, but as an actor. Thus, while physiognomy and other physical features of an individual, such

as his voice, are not copyrightable, the precise facial expression, headnotes and emotional reaction of the actor from different appearances, films and still images will need to be recreated. Holographic performances, therefore, will often be dynamic and composite works created by the combination and synthesis of images and sounds extracted from the artist's various current performances [16].

In order to reproduce, adapt and transmit to the public certain images and sounds, multiple right holders, such as writers or copyright holders of choreographic works and works of music performed in holographic plays, right holders of recordings of public performances or films, shall be granted authorization to the producer of a holographic performance [16].

Certainly, it is of considerable importance to determine the quantitative and qualitative part of the pre-existing works and performances that have been replicated. As was held in the landmark case of Infopaq, a copyright protected work would be reproduced in a part if the reproduced extract, albeit short, contains any original elements of the work, in the sense [29].

Assuredly, the use of certain exceptions to copyright, such as the use of a work for quotation purposes, may permit the use, without the permission of the right holders, of certain images in a holographic work, such as the display of a still image derived from the recording of a public performance or film. This discovery, however, cannot easily be extended to still photos, such as portraits depicting actors [30].

If it is agreed that even the reproduction of a picture as a whole constitutes a type of "quotation," the strictly conceived orthodox definition of "quotation" implies that only a part of a work is replicated and transmitted to the public [31]. In the case of images, as has often been considered in France, it will eventually mutilate the work by reproducing a part of an image and therefore, breach the moral right of dignity of the artist. Consequently, the application of the exemption remains ambiguous, as it will depend on the extent of defense of the author's non-harmonized moral rights in the EU. It can be quickly understood that this is generally not commercially appropriate for the commissioning customer who does not want to assume responsibility for ensuring that the paternity and reputation rights of the author are not infringed [32]. The use of pre-existing performances to construct a holographic performance could also breach the fundamental right of dignity of the performers.

Typical examples may be a holographic performance of poor quality or the use of images derived from a pre-existing performance for a new holographic performance conveying a style or message to which the performer has expressly opposed (such as "resurrecting" a music idol to perform a type of music or expressing a message that has been expressly opposed by the performer. For each performance, the performer thus has a collection of rights. In terms of copyright protection, the reproduction of a performer's featured movements and facial expressions means reproducing the featured movements and facial expressions that occur in a specific performance that has been registered. It is not possible to accept mere imitation of his/her gestures and facial expressions, regardless of how intricate or individualized they might appear, as reproduction in the copyright system. In this case, holographic output producers

do not need to seek authorization from either the artist or the phonogram recording company to prevent infringement of copyright [33].

Under the copyright protection of his or her performance, a performer enjoys the related rights. In other words, if at various venues the singer performs the same song twice, these are two rather than one performance. Thus, for each show, the artist has a collection of privileges. Ultimately, however, the issue of infringement will rely primarily on national laws on copyright. In addition, a license is most often required for the commercial use of the artist's name, provided that the latter has been registered as a trademark. Therefore, the real difficulty of collecting all these licenses is that the rights are always held by a number of holders of IP rights.

Holograms and The Personal Right to Image

Ultimately in a new public, "resurrecting" a deceased star Performance may violate the rights of personalities. When, yes, a holographic a deceased person's performance is an entirely original production, not dependent on any prior performances or works, so defense of personality rights may be the only legitimate legal bastion for alleging infringement [34]. As technology to create such holographic reproductions advances, more and more dead celebrities are likely to be brought back to the main stage to perform their classic hits as well as completely new musical compositions. Such holographic images raise various copyright and trademark issues, but the main property right at stake is the right of publicity [35].

However, acknowledging a power of influence over a deceased person's image presupposes that image rights are degradable. In both the US and Europe, but for different reasons, the issue is thorny. In the US where some states recognize post-mortem publicity rights under statutory or common law while others do not, the issue is also which state law is the relevant one. The diverging length of such privileges, which can typically be from ten to one hundred years after mortem, is another issue [34]. More recently, the articulated will of Robin Williams to forbid any use of his image for 25 years after his death brought the question of contractual limitations on the use of his image to light. Exercising the picture of an entity after his death [36].

In Europe, because the legal status of image rights is fragmented, the issue is more complicated. So, in a hypothetical case where Amy Wane house's holographic concert will be held simultaneously in Paris, London and Berlin, without her heirs' permission and divergent legal circumstances will arise, let alone the trademark protection issue [37]. Although the issue of the unlawful disclosure of the body of a dead person was at the root of the recognition of image rights in both France and Germany, the question of the preservation of the image and likeness of a person after his death receives, in those jurisdictions of civil law, a different legal response. Indeed, the decadence of the economic dimensions of personality rights has been well known in Germany since the seminal case of Marlene Dietrich [38].

On the contrary, in France, the courts still do not accept that it is possible to inherit personality rights, because they are considered to have been extinguished by the death of the individual. Nevertheless, the courts have consistently affirmed that the heirs of the deceased should, on the basis of their own privacy rights and

the supreme principle of human dignity that does not vanish after death, forbid the publication of the image of the dead person's corpse [16].

In the UK, no specific protection exists for the picture of a person. In the absence of a general right of identity or privacy or of a particular violation of privacy, in the sense of tort law, the legal defense of the personal dignitary and commercial aspects of the image of an individual is naturally pursued by infringement of confidence and dismissal. None of these treatments, however, can be genuinely successful in the case of deceased people. The guiding principle is that they die with the individual with respect to personal causes of action, such as slander and breach of trust [39].

Consequently, it may be claimed that the duty of trust is best focused on living persons who are closely related to the deceased's own interests in the field of privacy [40]. Laddie J narrowed the application to passing off only to live celebrities for false endorsement in *Irvine v Talk Sport Ltd* [41]. The court noted that "there could be no question of the performer endorsing anything since he had been dead for many years" by differentiating him from *Elvis Presley Trademarks* (1999). In addition, where trademark regulation was used to find a solution, Trademark registration was rejected against the unauthorized use of the image of *Elvis Presley* and *Princess Dianna* of deceased celebrities on grounds of lack of distinctive character [42].

Conclusion

I have tried to explain in this article the legal framework of holograms, as far as we can conclude that the legal issues are complex and fragmented. However modern technology also enables a deceased artist's likeness to be holographically reproduction with the potential to make them perform classic or new artistic works. Therefore, it is possible that there will be more holographic reproductions in the future as this technology progresses further. Although copyright laws cover some aspects of holographic performances by deceased performers, jurisdictions that recognize the right to publicity, and particularly those jurisdictions that recognize this postmortem right, have the most robust security. Currently, there are no copyright claims on holographic performance creation and misuse. Therefore, the examples in this notice of holographic performances are commercial rather than legal cases. The debate on holographic output development processes is focused on current cases and technologies.

Based on this idea, I invite all the competencies parts to adopt the following recommendations:

1. From a technological perspective, a stronger strategy of controlling holograms would reflect greater transparency.
2. From perspective commercial usage, with law as it is the dispersion of rights (moves, presence, songs, effects, voice) cannot be resolved. The development of international conventions relating to IP generis, the right to virtualization, will be one solution in this context.
3. Digital human holograms should be viewed as extensions of a person and not be used in any way against the person's consent. until the principle of holograms becomes necessarily ap-

parent, consent should be absolutely required before a digital human and reproducing the image using 3d techniques.

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