

Copyright law challenges of preservation of "born-digital" digital content as cultural heritage^[1]

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The paper deals with the issues of preserving the copyrighted content that are born-digital by cultural heritage institutions within the EU. Firstly, the paper analyses relevant UNESCO documents that define cultural heritage, digital cultural heritage and intangible cultural heritage and discusses whether “born-digital” content could be included in one of these categories. Next, the copyright-relevant issues of digital cultural heritage preservation are analysed. Within the EU copyright law framework, the paper analyses the currently applicable copyright exceptions and demonstrates their limits on practical examples. Further, the paper discusses whether the “born-digital” content which is not currently preserved by institutionalised “brick-and-mortar” cultural heritage institutions can be legally preserved by private collectors and virtual heritage institutions. Lastly, the proposed Directive on Copyright in the Digital Single Market is analysed.

Keywords: copyright; exceptions and limitations copyright; three-step test; digital cultural heritage; cultural heritage; cultural heritage institutions; digital single market; out-of-commerce work; orphan work; computer programs; video games

1 Introduction

Copyrighted content is increasingly created, consumed and accessed in digital form. Some of this content might become cultural heritage that current generations leave as their legacy for future generations. The preservation of content that was created, exists and is communicated and consumed in digital form especially via the Internet (hereinafter “born-digital”), can be realised in unlimited copies without reducing the quality of the content – each digital copy usually has the same quality as the original. The downside of the digital nature thereof is its relative low resistance to the passing of time and technological development – storage media are usually not designed to last decades and also the technological means how to access it may become gradually obsolete (Niggemann, De Decker, and Lévy 2011, 26). In order to follow this development, the cultural heritage institutions (further referred to as “CHIs” or “CHI” in singular) have to act much faster in recognising and preserving items of potential cultural heritage that are born-digital. As a result, this means preserving content that is presumably still under copyright protection and often also available in general distribution channels under various licensing terms. Consequently, the preservation of digital cultural heritage and ensuring access to it is thus a complex organisational, technical, legal and financial challenge (Niggemann, De Decker, and Lévy 2011, 32–34).

In this paper, we focus on the legal issues and specifically on the ones related to copyright law. ^[4] As a rule, copyrighted content might be used (and consequently preserved) only if it is authorised

either by the rightholder or by law. Obtaining a license for each item can be beyond the technical and financial resources of CHIs. Therefore, CHIs often rely on statutory copyright exceptions that can reduce transaction costs (Rogers, Mark, Joshua Tomalin, and Ray Corrigan 2010, 7). The European Union (hereinafter “EU”) tried to harmonise the framework for copyright exceptions in the Art. 5 of the Directive on the harmonisation of certain aspects of copyright and related rights in the information society (hereinafter “InfoD”).[\[5\]](#)

The first research objective, and at the same time the content of the third part of the paper, is to analyse whether the current copyright exceptions provide for clear and certain framework for CHIs to sufficiently preserve content that is born-digital.

In the fourth part of the paper, the current limits of the current exceptions are discussed in the context of Digital cultural heritage (hereinafter “DCH”) and demonstrated on particular use cases, namely website preservation, on-demand services preservation and preservation of video games.

The development of information and communication technology also challenges the traditional notion and concept of CHI as a “brick-and-mortar” institution. Various tools enabled individuals to pursue activities that were previously reserved only to larger institutions and corporations. It is reasonable to expect that enthusiastic individuals are now able to take over certain roles of CHIs regarding preservation of DCH, e.g. preserving content that is out of the scope of traditional CHIs such as vintage video games. The second research objective is to explore legal tools and restrictions for preserving certain forms of cultural heritage via more autonomous and deinstitutionalised repositories such as fan sites, tribute sites or social network profiles. In the fifth part the paper thus discusses whether an individual collector or group of users can reach the status of CHI.

Currently, the EU copyright framework is about to undergo the most fundamental change since the inception of the InfoD. The proposed Directive on Copyright in the Digital Single Market,[\[6\]](#) introduces a specific exception for the preservation of cultural heritage for CHI and regulates the treatment of out-of-commerce works. The last – sixth – part of this paper provides a critical analysis thereof and discussion whether it actually addresses the identified lacunae in the current EU copyright framework.

2 “Born-digital” content as cultural heritage

2.1 Importance and definition of the digital cultural heritage

Born-digital content can be potentially considered as a part of cultural heritage and be the legitimate focus of CHIs’ attention to preserve it. The understanding of the term cultural heritage gradually developed from tangible objects, such as archaeological heritage to broader concepts, such as folklore and historical landscapes, and later transformed into the wide-ranging definition that also contains intangible heritage (Vecco 2010, 321). In 2003 the UNESCO recognised and defined the term “Digital Heritage”. The General conference of UNESCO adopted the Charter on the Preservation of Digital Heritage (hereinafter “CPDH”) and declared that born-digital content is a new form of cultural legacy. CPDH understands the term “digital heritage” as unique resources of human knowledge and expression, that embrace cultural, educational, scientific and administrative resources, as well as technical, legal, medical and other kinds of information created digitally, or converted into digital form from existing analogue resources. (UNESCO 2003, 74). It also defined the term of “born-digital”, which refers to resources, where there is no other format but the digital object (UNESCO 2003, 75). The article 1 of CPDH gives a broad definition of

digital heritage which covers both content that is “born-digital” as well as the non-digital (analogue) content that is digitalised. The focus of this paper is, however, narrower as it only discusses issues relevant to the preservation of content that is born-digital and might be potentially regarded as “digital cultural heritage” (further referred to as “DCH”) and not digital copies or reproductions of analogue objects.[\[7\]](#)

2.2 User-generated content as digital and intangible cultural heritage

It is, however, legitimate to ask whether all the born-digital content created today can be considered as potential DCH. For example, Instagram users post millions of photos every day, but not every one of these posts have the individual quality to be considered cultural heritage. User generated content, however, might be worth preserving in aggregation with other user generated content, for example, as a group of posts with a certain hashtag or from a certain place or event. User-generated content can also act as a documentation of existence of so called “intangible heritage”. The UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage” (further referred to as “CSICH”) was adopted at the same session as CPDH (UNESCO 2003, 53).

This convention defined intangible cultural heritage as “*practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated in addition to that – that communities, groups and, in some cases, individuals recognise as part of their cultural heritage*” (UNESCO 2003, 54). The message of the CSICH is clear: a) there are no limits on what can potentially be qualified as a cultural heritage, and b) the cultural heritage shall be defined by perception of an individual or group of individuals, and objective criteria such as antiqueness, uniqueness, artistic value or monetary value are secondary.

The definition of intangible cultural heritage is supported by a non-exhaustive list of domains, in which the intangible heritage may be manifested. These domains are (a) oral traditions and expressions, including language as a vehicle of the intangible cultural heritage; (b) performing arts; (c) social practices, rituals and festive events; (d) knowledge and practices concerning nature and the universe; (e) traditional craftsmanship. (UNESCO 2003, 55). Kurin (2003, 63) described intangible cultural heritage as an awkward and technical term, which however had to be used because the other words, such as “folklore”, “oral heritage”, “customs”, “community-based culture” or “popular culture” caused difficulties in an international comparative context. Kurin (2003, 63) further explains intangible cultural heritage as “*a culture that people practice as a part of their daily lives*”. So far, UNESCO used the concept of intangible cultural heritage to identify and protect 470 social phenomena and activities such as “Beer culture in Belgium”[\[8\]](#), “Idea and practice of organising shared interests in cooperatives”[\[9\]](#) or “Puppetry”[\[10\]](#). Vecco (2010, 322) observed that since 1954 UNESCO understands the cultural heritage as a heritage of “humanity” and not the heritage of one individual nation or state.

2.3 Content born-digital as focus of CHI

This part could be concluded with the rather general remark that any born-digital content has the potential to become a subject of interest of certain CHIs. There is a strong possibility that future generations will see some of the born-digital content consumed today as cultural heritage. It is likely that some of current activities that revolve around the born-digital content will be perceived also as intangible cultural heritage in the future in the sense as discussed earlier. UNESCO recognised that the data, which contain the culture of today are at risk of being lost to posterity, due to the rapid obsolescence of the hardware and software, which brings it to life, and the lack of

supportive legislation (UNESCO 2003, 75). It is up to individual states to decide what content should be preserved and to introduce a legal framework that can provide adequate tools for preserving the DCH. As was mentioned earlier, in the case of copyrighted DCH, the preservation is a legal challenge. The next part thus analyses the current copyright framework in the EU dealing with this topic.

3 Copyright-relevant issues of DCH preservation

The discussed DCH preservation basically involves the making of a digital copy of the to-be-preserved object, including it into some sort of archiving system and optionally (but ideally) bringing it online for access to the general public.

From the copyright law perspective, it is firstly important to decide, whether the DCH constitutes a copyrighted subject matter. According to the case law of the CJEU, [\[11\]](#) in order to obtain copyright protection, the subject-matter must be “*original in the sense that it is its author’s own intellectual creation*”.[\[12\]](#) The intellectual creation must reflect the author’s own personality, which is demonstrated if the author is able to make free and creative choices.[\[13\]](#) Furthermore, the DCH might also include subject-matter protected by rights related to copyright. If the DCH does not fulfil the criteria mentioned above, it is not protected by copyright and generally available for any form of reproduction or communication to the public, i.e. also for preservation. However, as suggested by the CJEU in the *Ryanair Ltd v. PR Aviation BV* case,[\[14\]](#) the disposition with unprotected subject-matter might be regulated, i.e. also forbidden, contractually.

3.1 Relevant economic and moral rights

The preservation might encroach both on economic as well as on moral rights of the respective rights holder. For general works, the **economic rights** of reproduction (Art. 2 InfoD) and right of communication to the public (Art. 3 InfoD) are the most pertinent. The former right must be interpreted broadly,[\[15\]](#) including copies in any format, i.e. also the creation of digital “surrogates” (analogue-to-digital reproduction). If the subject matter constitutes a computer programme, the Art. 4 SoftD[\[16\]](#) restricts any unauthorised copy thereof as well as “*any form of distribution to the public*”.[\[17\]](#) The latter right of communication to the public also covers the right of making available to the public, which restricts the on-demand access to the work. Consequently, the acts of providing access to the protected subject matter on websites or social media networks also fall within the scope of this right.[\[18\]](#) The recent rulings of the CJEU also elucidated the term “public”.[\[19\]](#) What matters is the new public, which is to be understood as any public, that the rights holder did not consider in the initial authorised communication to the public.[\[20\]](#) The scope of the right was extensively debated as regards to hyperlink[\[21\]](#) – its setting is an act of communication to the public, if the hyperlink leads to a work that has not been made available legally online and the person setting a link is either acting for profit or, if not acting for profit, had or should have had knowledge of the circumstances of the illegal nature of the making available.[\[22\]](#) On the other hand, a hyperlink leading to authorised content is not considered as “communication to the public” and therefore is not a copyright infringement.[\[23\]](#) Interestingly, the technical method of the hyperlink is not decisive – also embedding of the content with the help of “framing” that in end effect makes the protected subject-matter look as if it is available on the linking site, is not copyright-relevant.[\[24\]](#) Consequently, a CHI might theoretically “preserve” the content completely legally only by linking to it. However, such a method would render the basic function of the preservation useless. As soon as the content would be deleted from the source site, it would automatically also disappear from the CHI archive site.

The **moral rights** are not harmonised on the European level (recital 19 InfoD) and are left for the national legislator to deal with (Minero 2014, 324). As noted by Klass and Rupp (2014, 969) the DCH preservation activities might, based on the effective national legislation, encroach the moral rights protecting against distortion of the work (e.g. by using a low-resolution version of the subject-matter) or its alteration or misappropriation (e.g. by stamping the CHI logo on the subject matter). The infringement of moral rights by unlawful publication is a non-issue in the case of DCH already made publicly available online (e.g. on social media networks, websites).

3.2 Current exceptions in the InfoD

3.2.1 General remarks

Due to the nature of the above-discussed protection regimes, i.e. exclusive control over the copyrighted content, any restricted act must be authorised either by the respective rights holder or law (i.e. statutory exception).

The first alternative, i.e. standard licensing, is connected with significant transaction costs.^[25] This process should usually include the determination of the status of the subject-matter, identifying and contacting of the rights holders and finally negotiating the license.^[26] These costs might hamper the successful preservation of the DCH. In order to alleviate these costs and mediate the conflicting interests, fair balance is sought with the help of the exceptions to the exclusive rights.

Currently, there are several optional exceptions in the current copyright framework that may apply to the copyright-relevant acts involved in DCH preservation. Before we discuss the specific exceptions in detail, it must be noted, that they are regarded as an exception from the general rule (i.e. the exclusive right).^[27] This interpretative approach is also strengthened by the principle of “high level of protection”,^[28] that should ensure the needed investment in the creative process. Dreier (2010, 51) aptly remarks, that “*exceptions are seen as an unavoidable evil, i.e. the necessary concession to be made to public interest which does little more than cutting away some of the exclusivity granted by the exclusive rights and which, therefore, should be kept at a minimum.*” This strict approach was, however, later mitigated by the further case law of the CJEU that acknowledged that these limits of protection might also have an important social role.^[29] They should be interpreted in such a way that their purpose is not hampered (Geiger and Schön herr 2014, 450–51). Nevertheless, in the case of a dispute, it has to be expected, that the further discussed exceptions would probably be interpreted rather narrowly. Yet another problem of the European system of exceptions is the three-step test that introduces a significant level of legal uncertainty. According to the Art. 5(5) InfoD^[30] not only the fulfilment of the formal conditions laid out in the respective exceptions is sufficient. These exceptions might only apply in certain special cases, shall not conflict with the normal exploitation of the subject-matter and shall not prejudice the legitimate interests of the rights holder. The test must be applied even by the national judges when assessing the application of the respective national exception/limitation (Arnold and Rosati 2015, 747). Consequently, even in the states that have not implemented the text of the three-step test in their national copyright acts, the CHI’s use on the relevant must still be compliant with the three-step test, especially the second step (no conflict with normal exploitation) and the third step (no prejudice of the interest of the author).^[31]

3.2.2 The notion of CHI in the current EU copyright framework

Some of the further discussed exceptions have a specific beneficiary – the cultural heritage

institutions – an entity that should be functioning as the custodian of the cultural heritage (Hilty, Moscon, and Li 2017, 48). However, the EU copyright framework does not contain a detailed definition thereof. The InfoD does not even use this term. However, it contains a specific set of exceptions^[32] for non-profit “*publicly accessible libraries, educational establishments or museums, or [...] archives*”.^[33] Apart from the archives (Lewinski and Walter 2010, 1035), the institutions must be “publicly accessible,” i.e. the access is granted on a non-discriminatory basis (Bechtold 2016, 463). An operation-costs-covering fee might, however, apply, as long as it does not create a profit (Bechtold 2016, 463). Also, these institutions do not have to be publicly funded or run in order to be able to rely on the provided exceptions (Lewinski and Walter 2010, 1037).

The Directive 2012/28/EU on certain permitted uses of orphan works (further referred to as “OrphanD”) uses a broader list of cultural heritage institutions than the InfoD which includes moreover non-profit film or audio heritage institutions and public service broadcasting organisations (Guibault 2016, 521). Furthermore, all of these institutions must be seated in a Member state, and the use of orphan works must pursue a public interest mission (Art. 6(2) OrphanD). The commentators of OrphanD, however, express doubts on the clarity of the “public interest mission” criterion – there are no clear guidelines on this issue (Suthersanen and Frabboni 2014, 658) and it is also not clear, whether this public interest mission should be set by law (Guibault 2016, 521). What is however, implicitly clear according to Suthersanen and Frabboni (2014, 657) is the rule that an individual may not benefit from the orphan work regime. Also, contrary to the InfoD, the institutions listed in the OrphanD might generate revenue when using orphan works in order to cover the costs when fulfilling their public interest mission.^[34] This goal might also be achieved within a public-private partnership as this is sanctioned in the Art. 6(4) OrphanD.

3.2.3 The respective applicable exceptions and limitations

Firstly, a natural person may make a reproduction of the protected subject-matter for **private purposes** provided that these copies do not follow neither directly nor indirectly a commercial end (Art. 5(2)(a)). The author/rights holder must receive fair compensation for such a reproduction, and the source of the copy must not be, according to the CJEU, illegal.^[35]

Specific acts of reproductions, such as copies for preservation and archiving, made by the CHI that are not “*for direct or indirect economic or commercial advantage*” are exempted under the Art. 5(2)(c) InfoD. Von Lewinski and Walter argue (2010, 1037) that the Art. 14 ReLeD shall be applied analogically, and as a result, the operating costs (or costs of reproduction for that matter) of the CHI might be still covered by the fees paid by the users. As noted by Torremans (2010, 117) the InfoD is however silent on the topic, whether format-shifting is allowed or not and also on the amount of copies allowed.

The “**on-site terminal**” communication of the protected subject-matter by CHI to the public for private study and research purposes is made possible by Article 5(3)(n) InfoD. In the Eugen Ulmer case,^[36] the CJEU held that this exception implicitly also allows the CHI to digitise the subject-matter in order to make the “on-site terminal” exception usable.

Specific works with unknown or unlocated author might be reproduced and made available to the public provided they fulfil the conditions set in the OrphanD, such as the diligent search for the rights holder. This specific framework for the use of **orphan works**, however, has a very limited scope of application. Only the CHI as discussed above might benefit from the therein stipulated exception. Furthermore, only certain works in the collections of these CHIs fall under the definition of orphan work namely works “*published in the form of books, journals, newspapers, magazines*

or other writings” and “cinematographic or audiovisual works and phonograms”. The former group includes primarily printed resources, including their electronic versions (Guibault 2016, 522). Artworks and photographs are not mentioned and are covered only to the extent that they are “embedded” in the covered subject-matter (Art. 1(4) OrphanD), not if they are a standalone object. The regulated exception in Art. 6 OrphanD allows the CHI to make the subject-matter available online and reproduce it for such purposes.

Moreover, the orphan works might be reproduced for purposes of “*digitisation, [...] making indexing, cataloguing, preservation or restoration*” (Art. 6(1) OrphanD). All of these copyright-relevant acts might be undertaken only in the CHI’s public-interest mission. The OrphanD does not constitute this exception as a remunerated one. However, the rights holder is entitled to fair compensation if she ends the status of orphan work (Art. 6(4) OrphanD). Despite its conciseness, it is not apparent, whether the OrphanD provided incentives for using orphan works (Callaghan 2017, 254).

If the perceived DCH constitutes a **computer program**, the SoftD[37] does not contain any directly applicable exception usable for DCH preservation.[38]

3.2.4 The treatment of “out-of-commerce” works

Closely related to the issue of orphan works and copyright exceptions are the issue of out-of-commerce works. The European Commission started a discussion with relevant rights holders on this topic in November 2010 which resulted in the 2011 Memorandum of Understanding on Key Principles on the Digitisation and Making Available of Out-of-Commerce Works (‘Memorandum of Understanding on Key Principles on the Digitisation and Making Available of Out-of-Commerce Works’ 2011). This document, focusing only on books and articles stipulates that the work is out of commerce “*when the whole work, in all its versions and manifestations is no longer commercially available in customary channels of commerce, regardless of the existence of tangible copies of the work in libraries and among the public (including through second hand bookshops or antiquarian bookshops)*” (‘Memorandum of Understanding on Key Principles on the Digitisation and Making Available of Out-of-Commerce Works’ 2011, 2). Contrary to the orphan works, the authors are known, but the work itself is not available. The Memorandum lays down guiding principles on how to regulate out-of-commerce works, suggesting the model of extended collective licensing as a passable solution (Guibault and Schroff 2018, 5). The issue of out-of-commerce works is also mentioned in the recital 4 OrphanD, however, it is left to member states to deal with (Hilty, Li, and Moscon 2017, 62). Consequently, various national models of regulation were implemented, relying mostly on the system of extended collective licensing or presumption of representation (‘Impact Assessment on the Modernisation of EU Copyright Rules - PART 3/3’ 2016, 130).[39]

4 Application of exceptions and limitations to the born-digital content

In this part, the application of the currently available exceptions is discussed, including the limits thereof that lie in the nature of DCH and the specific forms of its availability.

4.1 Acquiring DCH in “collection” as a technological and legal problem

A collection or permanent collection of the content is what defines the societal function and importance of every CHI institution. The concept of the permanent collection, inventory or

catalogue presumes that certain objects are attributed to certain CHI which is responsible for preserving them. Traditionally, the CHI would obtain the ownership (absolute right) of the tangible object, e.g. archive materials, print, book or record, typically by donation, purchase or performance of legal deposit duty. As regards born-digital content, CHI might apply the concept of the permanent collection analogically by listing intangible copies as items in their collection. However, the problem with this analogy arises when the CHI tries to add digital-born content to their permanent collection. The rights to intangibles cannot be transferred similarly as to tangibles. The license agreement to digital content is characteristically a relative and temporary legal tool.[\[40\]](#) Moreover, the grant of rights is often limited to certain forms thereof. The moral rights of the author might also act as an effective barrier, e.g. when the technology advances and CHI might want to adapt the DCH to a new platform.

The question of how to add born-digital content to the permanent collection is vital for every CHI. The CHI might want to make a copy of artistic photography shared via Instagram or make a point-in-time snapshot of social networks contributions of participants of particular cultural events or contributions with a specific hashtag. Such an act of extensive collection is rather easy to perform technically but raises the question whether CHI is even entitled to do so. InfoD (Art. 5(2)(c)) gives member states leeway to enact exception “*in respect of specific acts of reproduction made by publicly accessible libraries, educational establishments or museums, or by archives, which are not for direct or indirect economic or commercial advantage*”.[\[41\]](#)

Member states usually complement these exceptions with legal deposit obligation for publishers of books and periodicals. The examples are deposit regulations for non-print materials in the UK [\[42\]](#) or German act on the national library[\[43\]](#), where national libraries gain license to deposit electronic content, and also impose obligations of certain publishers of electronic content to hand over copies for depositing. The archived content is usually not available for remote access and can be accessed only locally. The regulation standardly relies on formalised criteria. The law explicitly states which entity is entitled to collect what content and who can access it. For example, the German National Library is entitled to store only content published in Germany or German publications published outside Germany and foreign works about Germany[\[44\]](#) and does not include movies[\[45\]](#). UK regulation, for example, does not include sound recordings[\[46\]](#). Relying on formal criteria provides legal certainty but makes the preservation of DCH less flexible towards new forms of digital-born content. This may lead to loss of potential DCH, because Member States do not adapt rules on preservation quickly enough to keep pace with the advances in technology.

4.2 Preserving DCH in web archives

Various national CHIs have already started to preserve content that is born-digital. The most typical example is a “national Internet archive”, where the central CHI archives the content from a specific Internet domain or content published by specific institutions.[\[47\]](#) Aggregating all of the content from the whole Internet domain needs to rely on the copyright exceptions, since transaction costs for negotiating with every operator of a website within the domain would be high, especially in country code top-level domains. The EU law does not contain a harmonized specific exception for preserving websites – the Member States might, however, introduce exceptions for reproducing the websites by CHIs under Art. 5(2)(c) InfoD and for communicating such reproductions to the public on dedicated on-site terminals pursuant Art. 5(3)(n) InfoD.

The statutory licenses for preserving websites in individual Member States can usually be enjoyed only by a limited number of subjects or even by a single entity. A good example of this approach is the Austrian Media Act that provides for statutory license only to the Austrian National Library,

which is consequently entitled to aggregate (i.e. reproduce) the content of the national domain “.at” and content from other domains that relates to Austria up to four times per calendar year and archive it.[\[48\]](#) The library cannot make the whole aggregated content available on-line. Similar exceptions are introduced in Germany[\[49\]](#), United Kingdom[\[50\]](#) and France[\[51\]](#).[\[52\]](#) All mentioned Member States give statutory exception only to a designated public library and do not allow access to the archive outside the physical premises of the library. However, not every state has introduced a statutory license specifically for websites, such as Czechia and Slovakia.

This situation, together with the fact that the content cannot be communicated to the public leads some archives to combine statutory exceptions with license agreements. The operators of Internet archives in countries without specific statutory exceptions rely solely on licensing and ask website operators to register for automatic scanning of their websites.[\[53\]](#) The cooperation with owners of selected websites is essential also for technical reasons.[\[54\]](#)

The public licenses, such as Creative Commons, have the potential to be an efficient tool for mass archiving of born-digital content.[\[55\]](#) Licensing the website under one of the available public licenses serves as a signal towards CHI institution, that the content of the website is available for crawling, archiving and making available for the institutional archive. However, considering the complexity of current websites, there are few cases, where the whole website[\[56\]](#) is created merely from the content that can be licensed in such a way. Even if the owner of the website opts to license the whole content of the website under conditions of a public license, the CHI has to critically assess, whether the licensor truly understands how this licensing works and whether the licensor did not unintentionally also license third-party content. Our previous research performed in four top-level domains revealed that in 2013 only 118 from total 200 websites licensed under Creative Commons licenses applied the license correctly (See Koščik and Šavelka 2013, 211).

It can be summarised, that the potential to introduce statutory exceptions formulated in the Art. 5(2)(c) of the InfoD does not lead to sufficient preservation of DCH. Some Member States did not introduce the copyright exceptions for preserving websites at all. Even the most progressive member states introduced specific statutory exceptions for preserving DCH from the websites in the second decade of the twenty-first century, which is two decades after the release of the first web browser. These exceptions are based on narrow definitions of what can be collected, which means that the activities of CHIs are focused on the time captures of static websites, the technology of the 90’s, whereas more and more content is distributed through new platforms, such as on-demand platforms, mobile applications and social networks. The wording of the Art. 5 of the InfoD, leads to the very limited use of archived websites, which can be accessed only by terminals within the premises of CHI. Even in member states where the copyright exemptions for archiving websites are in place, the CHI would have to contact website owners and conclude license agreements if it intended to create “open” version of the archive accessible on-line.

4.3 Preserving DCH distributed via on-demand services

Significant part of the contemporary digital content is distributed by on-demand platforms. As discussed earlier, the content which is distributed by digital retailers cannot be considered as an out-of-commerce work as long as it is available through their distribution channels. As long as the content is within the digital distribution, it is difficult to make it a part of permanent collection of a CHI for various legal reasons. Firstly, it seems to be unclear whether reproduction of such distributed content is actually covered by the Art. 5(2)(c) InfoD, i.e. whether such preservation could be treated as “specific act of reproduction” and whether it would not contravene the recital 40 of the InfoD.[\[57\]](#) Furthermore, such content is standardly distributed under specific licensing

terms and it is also debatable, whether the exceptions provided in the InfoD are immune to contractual override (Bechtold 2016, 455). Lastly, such content is often protected by technological protection measures preventing unauthorised access and copying. These measures are also protected against circumvention as such (Art. 6 InfoD). Even though the exception belongs to the privileged ones, i.e. one where the right holder should make such use possible (Art. 6(4) InfoD), the practical implementation of this obligation is rather non-functional (Favale 2007). As a result, after the content disappears from the on-demand distribution, there is no physical medium left, which can become a part of the CHI's collection. The major part of the potential DCH is thus in the hands of commercial entities, and there is no general legal framework on their obligation to offer it for potential preservation. Unlike publishers of books and periodic print, the retailers of digital content and providers of an on-demand platform usually do not have the general obligation to submit the distributed content under a legal deposit scheme. It is also questionable, whether the introduction of such legal deposit schemes for digital content would be enforceable on the national level, as digital retailers may not have their branch in the respective Member State. It might be more practical to introduce cross-border statutory exception that would enable the CHI to transfer the content from digital content providers to its permanent collections and preserve it for future access once the work goes out of commerce provided that it has acquired legal access to it, and also make it immune both to contractual, as well as technological override.

4.4 Preserving video games as DCH

The current legal framework for CHI, outlined especially by the Art. 6 of OrphanD and Art. 5 of InfoD is based on the presumption that digital archives may contain digital copies of analogue works. In order to efficiently preserve content that is born-digital, CHIs need clear legal tools that would enable transfer from “digital-to-digital”, i.e. adapting the digital heritage to another digital form, which can be consumed on a digital device or platform of a newer generation if the older technology becomes obsolete. The problem can be illustrated by computer video games, where the technological platform on which the game can be experienced changes constantly. [\[58\]](#)

Maier (2015) extensively discusses the issue of video games as cultural heritage and application of the OrphanD thereon. In reliance on the Nintendo case, [\[59\]](#) she suggests (Maier 2015, 124) that video games might be regarded as audiovisual works fulfilling the conditions of the OrphanD. [\[60\]](#) However, the specificities of this type of content and the relatively narrow exception provided in the OrphanD, render the application of the exception practically useless (Maier 2015, 127). The main problem is that a simple 1:1 copy of the video game does not make it actually usable – it needs to be emulated, i.e. modified to some extent, which is not allowed by the exception. Maier further analysed the provision of the SoftD and concluded, that CHI is entitled to reverse engineer and decompile the game itself (2015, 126). However, there are even more legal obstacles to preserve video games using emulation. In order to understand and emulate an old code, the decompilation of an operating system or reverse engineering of the hardware on which the game is played may be necessary as well. The CHI might not have the right to use the needed operating system or it may not meet other requirements of the SoftD to modify the code thereof. The problem is even more complex considering the moral rights of the authors. The emulation of old computer programs to a new platform might impact the moral rights of the creators of the game, and we see a strong analogy to colouring monochromatic films [\[61\]](#) because in both cases the content is adapted to the next-generation technological platform to display and consume the content. [\[62\]](#)

Furthermore, video games are often protected by technical protection measures – however, none

of the potentially applicable directives grant the CHI any “right to hack” these protection measures, which renders the actual “preservation” of old games futile (Maier 2015, 125–26).

Consequently, the preservation of video games constitutes an especially complex challenge from the copyright point of view. As of now, the possible solution lies, apart from rather idealistic introduction of a specific EU-wide exception respecting all the above identified peculiarities, in meticulous national implementations^[63] potentially paired with the public law obligation to legal deposit.

5 Privately operated digital CHIs and virtual CHIs

The decreasing costs of storing data online makes it increasingly easy to run an archive of any digital content. It is technically possible to open and operate a purely virtual digital CHI from the comfort of one’s living room. Many unofficial websites used by fans of pop stars, profiles on social networks like Pinterest or, in the past, Myspace might be considered as *de facto sui generis* archive of digital cultural heritage.^[64]

The importance of private collectors for the preservation of cultural heritage cannot be underestimated, as large parts of the current collections of cultural heritage would have been lost without the activities of private collectors.^[65] Private archives can be much more flexible in preserving niche forms of digital cultural heritage that CHIs are possibly even unaware of. As was described above, it took two decades for some states to create the institutional framework for protecting DCH contained on the Internet, and some states still have not recognised the importance of preserving content of national websites. Private archives may also be efficient in preserving user-generated content and content that was never intended for commercial utilisation^[66] and perform the societal function that is complementary to “brick and mortar” CHIs.

The current copyright framework in the EU, however, does not create favourable conditions for operating such archives by individuals as the copyright exceptions intended for CHIs in the InfoD and OrphanD can be enjoyed only by institutions and not by natural persons. Nevertheless, the member states are allowed to introduce copyright exceptions which can be enjoyed by a legal entity established by individuals under the provisions of private law^[67]. Consequently, an individual who wishes to run an archive of DCH has the possibility to set up her own CHI by establishing a non-profit legal entity or foundation. As a privately-owned CHIs, such an archive can enjoy the copyright exceptions under InfoD and OrphanD, as long as the archive remains non-commercial in nature.

The exception for private use of a copyrighted content under the InfoD is granted only for making reproductions and not for communication of the archived DCH to the public. The criterion of the accessibility by the public, not applicable for archives, however, does not necessarily require physical premises. It is however possible, that an archive that focuses on born-digital DCH, is accessible to the public purely in the on-line form. Unfortunately, a purely virtual archive would not be able to benefit from the exceptions created under the Art. 5(3)(n) of the InfoD, as this requires physical premises with terminals, not only making available online of the DCH.

It can be concluded, that even if the current state of technology enables every user of the Internet to operate an archive and establish purely virtual CHI with minimal costs, the copyright rules narrow the possible content only to the content to which an individual is an author or has an explicit license to do so as the InfoD leaves no room for copyright exceptions that would enable

on-line access to a virtual archive for the general public. The lack of such exceptions is a missed opportunity. Broader copyright exceptions, that would enable operating a purely virtual archive for DCH, that would not conflict with a normal exploitation of the work or other subject-matter and would not unreasonably prejudice the legitimate interests of the rights holder would arguably encourage civic engagement in preserving of DCH. Broader exceptions do not necessarily have to mean broader definition of CHI. Viable alternative is to extend the copyright exception for private use, so that it would include also the right of communication to the public by individuals in cases where such communication would not conflict with a normal exploitation of the work and would not unreasonably prejudice the legitimate interests of the right holders.

6 De lege ferenda considerations: The Directive on Copyright in the Digital Single Market

Currently, the EU copyright framework is about to undergo the most fundamental change since the inception of the InfoD. The proposed legislation also addresses issues relevant to DCH, albeit not optimally, as is shown in this part.

6.1 The notion of CHI

The proposed COM-D includes a different definition of CHI than the current directives^[68] that has been criticised as not precise enough as it differs from the definitions above (Hilty, Moscon, and Li 2017, 48). The main difference was that the educational establishments were not included. The exclusion of the educational establishments from the circle of beneficiaries was also criticised by the jurisprudence as unjustified (Geiger, Frosio, and Bulayenko 2017, 25). This situation was however changed in the CON-D, albeit only in the recital 11a thereof, that also includes educational establishments and public sector broadcasting organisations. However, these changes do not address the issues discussed and conclusions reached in part 5 of this paper.

6.2 Exception for preservation of cultural heritage

All of the currently applicable copyright exceptions in the InfoD discussed earlier are optional for the Member States which leads to an undesirable effect of actual disharmonisation (Guibault 2010, 55). Consequently, there is no coherent EU-wide legal framework for cultural heritage (or DCH for that matter) preservation, only national legal solutions.^[69] In order to mitigate this undesirable situation, the Commission proposed a mandatory exception aimed specifically at the preservation of cultural heritage (Article 5 COM-D).^[70] The recital 20 stipulates that Member States should be required to provide for an exception “*to permit cultural heritage institutions to reproduce works and another subject-matter permanently in their collections for preservation purpose*”. Moreover, the exception targets also the exclusive rights pertaining to a computer program, i.e. Art. 4 SoftD. Interestingly, it must be noted, that this provision also entails “*any form of distribution to the public*” of the computer program.^[71]

However, the fundamentals of this exception remains restricted to traditional concepts of analogue objects and their digitisation. Firstly, the recital 5 COM-D recognises that there are new types of uses but does not recognise that there are completely new forms of works, and potential DCH, that may not easily fall in to the current categories of literal works, audiovisual works and computer

programs.^[72] Next, the exception namely only concerns artefacts that are permanently in the collection of the CHI and does not address the obtaining of the relevant content into the collection in the first place. Merely, the recital 21 of the directive^[73] stipulates that the item may become part of the collection by transfer of ownership to the medium containing the protected subject matter, a permanent custody arrangement and also by a licence agreement. Interestingly, this may open the door to wider preservation of DCH licensed under irrevocable public licences, such as Creative Commons, because the CHIs will be able to consider such copies of works under public licenses as part of their permanent collection. However, the application of the exception in this will nevertheless make no sense – the copyright-relevant acts pertinent to DCH preservation will be already granted to the CHI contractually (on the basis of the public licence), therefore relying on the statutory exception might be superfluous.^[74]

6.3 Out-of-commerce works

In order to overcome the various national regulations, the Commission proposed a unified scheme for concluding licences (i.e. not an exception) for specific non-commercial uses of out-of-commerce works (Art. 7(1) COM-D). From the functional point of view, the system is based on the already existing national solutions, i.e. extended collective licensing/presumption of representation.^[75] The non-exclusive license granted from the collective management organisation shall allow the CHI to use the work by the digitisation, distribution, communication to the public or making available (Art.7 COM-D) in all member states (Art. 8 COM-D). The licence could be only granted if the collective management organisation is “broadly representative” (Art. 7(1)(a) COM-D), which is a very opaque term to operate with (Hilty, Li, and Moscon 2017, 65). Furthermore, all rights holders should be treated equally as regards to the terms of the license, and finally, they should always have the right to exclude the effects of this licence. As aptly criticised by Keller (2016), the general problem with the proposed system, however, lies in its’ core – namely the preference of a licensing scheme instead of an exception. Based on the type of work it can easily happen that “*there is simply no-one who can grant a license for out-of-commerce works in the collections of cultural heritage institutions*” (Keller 2016). Commercially unavailable works are namely also these, that “*have never been or were never intended for commerce*” (Keller 2016).

The current trend of ever-increasing volumes of content available from on-demand services also puts a new practical challenge to the notion of “out-of-commerce works”. Any content that is nowadays considered to be out of commerce can return to distribution if the costs of distribution fall below its potential revenue. For example, the audiovisual content that was not lucrative enough for distribution via DVD’s might attract enough users to be able to generate revenue via on-demand stream. The old books that are no longer popular enough to occupy shelf space in bookstores may still be lucrative for distribution in e-book format. Increasing efficiency of commercial entities enables them to put more and more works of low commercial value to on-demand platforms. This might undermine the legitimacy of digitalisation of any content by CHI because principally every content that has its recipient can be provided by commercial on-demand service.

The proposed COM-D makes it, however, easier for CHI to make certain forms of DCH accessible to the public, by using the less formalised definition of out-of-commerce work. As opposed to OrphD, it does not cover only certain explicit categories of works, but generally all out-of-commerce works in “permanent collection” of CHI.

In conclusion, the COM-D reflects the problems of the past and does not anticipate the challenges

of the future, mainly, it does not reflect the increasing importance of content that was never intended for commercialisation.

7 Conclusions

In 2002, the General Conference of UNESCO recognised that preservation of the DCH heritage is an urgent issue of worldwide concern and adopted the Charter on the Preservation of Digital Heritage. The Article 10 of the CPDH encouraged all member states to adopt measures that would urge hardware and software developers, creators, publishers, producers and distributors of digital materials as well as other private sector partners to cooperate with public heritage organisations in preserving the DCH. Sixteen years after the call for policy changes, the preservation of DCH remains one of the blind spots of the European copyright framework. The primary responsibility of preservation of cultural heritage policy lies on the individual states and not on the EU or UNESCO. It is up to the member states individually to decide, which DCH should be preserved and adapt their legislation accordingly. In practice, the actual preservation of DCH is then undertaken by CHI. As this paper tried to demonstrate, the current European copyright exceptions are ill-suited to provide CHIs with enough legal certainty and clarity to preserve DCH. The current regulatory approach of fragmented and narrowly defined copyright exceptions for CHIs leaves many gaps and DCH is being lost. The possible exceptions under EU legislation are still oriented to provide rules on creating digital copies of tangible objects but do not offer any solutions designed for preserving born-digital content.

These deficiencies were firstly demonstrated on the fundamental activity of the CHI, namely acquiring the DCH. This function and, consequently the importance of the CHI, is defined by its collection. The EU copyright legislation, especially the InfoD, however, is based on the presumption that the CHIs collect physical objects, which may be digitised. Further, it forces member states to adopt very narrow exceptions only to “specific” acts of reproduction in the case of the Art. 5(2)(c) exception. Also, there is no specific legislative framework tailored for adding purely digital items into the collections. The lack thereof causes problems in the preservation of specific forms of DCH such as the content of WWW, works available via on-demand services and video games. It can be burdensome for CHI to collect works that are distributed via digital on-demand services and protected by technological protection measures. The presented national solution of DCH preservation (specifically in the case of website archiving) also proved to be very narrow in scope of the DCH archived and limited as to the entitled subject. Also, once the provider of the on-demand service removes the work from its digital distribution, the DCH might be either lost completely or there might not be a legal obligation of the provider to supply CHIs with the copy of protected work.

Another issue is that the volume of born-digital content is too big to be preserved in its entirety and the CHIs must be selective on what content can be preserved within their capacities. The private collectors can help preserving DCH that is not preserved by any public CHI. The copyright exceptions for private use may relate only to the acts of reproduction and not to rights of communicating to the public – thus the preservation of DCH by a private person is not sufficiently covered by the copyright exceptions. However, the concept of CHI is rather broad and can be enjoyed also by an entity established by an act of private law, such as foundation or non-governmental organisation. These privately-operated CHIs might fill the gaps in the activities of traditional CHIs.

The proposed directive on copyright in the Digital Single Market is based on the premise that the copyright framework has to be adapted to new types of uses but does not bring any fundamental change to the current status quo. The proposed exceptions for preserving cultural heritage are focused only on the legal regime of digitising heritage objects instead of creating flexible instruments that could be used for the works that are born-digital.

To conclude, a more flexible and tailored approach taking into account the specificities of DCH in the EU copyright framework is needed. The problem of volume of the DCH might also be addressed by employing the privately-operated CHI. The problem of DCH preservation might also be complemented by reconsidering the member states' legal deposit policies so that distributors of digital content have the responsibility for preserving and depositing DCH similarly to publishers of books and periodicals.

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[1] Czech Scientific Foundation supported the publication of this paper within the project ID no. GA17-22474S – “Adapting Exceptions and Limitations to Copyright, Neighbouring Rights and Sui Generis Database Rights to Digital Network Environment”

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[4] Consequently, we do not discuss further legal issues that might also be relevant for digital cultural heritage, such as privacy and personal data protection. These issues pose yet another challenge to the preservation of DCH (See e.g. (Baets 2016; Rosnay and Guadamuz 2016; Vavra 2018).

[5] Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

[6] The initial proposal of the Directive by the Commission is further referred to as “COM-D” (Interinstitutional File: 2016/0280 (COD)), the Agreed negotiating mandate as “CON-D” (Interinstitutional File: 2016/0280 (COD)).

[7] Digital copies of the tangible objects of cultural heritage presented by multimedia or virtual/augmented reality are often referred to as “virtual heritage” (see generally e.g. Thompson, 2017; Sullivan, 2015).

[8] “Beer Culture in Belgium - Intangible Heritage - Culture Sector - UNESCO,” accessed September 11, 2018, <https://ich.unesco.org/en/RL/beer-culture-in-belgium-01062>.

[9] “Idea and Practice of Organizing Shared Interests in Cooperatives - Intangible Heritage - Culture Sector - UNESCO,” accessed September 11, 2018, <https://ich.unesco.org/en/RL/idea-and-practice-of-organizing-shared-interests-in-cooperatives-01200>.

[10] “Puppetry in Slovakia and Czechia - Intangible Heritage - Culture Sector - UNESCO,” accessed September 11, 2018, <https://ich.unesco.org/en/RL/puppetry-in-slovakia-and-czechia-01202>.

[11] See the case law cited below. The CJEU gradually extended the criterion of originality to all types of works, not only photographs, databases and computer programs (Griffiths 2014, 1104).

[12] Judgment of the Court (Fourth Chamber) of 16 July 2009. Infopaq International A/S v Danske Dagblades Forening, C-5/08, para. 37. For an extensive discussion of the originality criterion see (Rosati 2013).

[13] Order of the Court (Third Chamber) of 7 March 2013. Eva-Maria Painer v Standard VerlagsGmbH and Others, C-145/10, para 89.

[14] Judgment of the Court (Second Chamber) of 15 January 2015 Ryanair Ltd v PR Aviation BV, C-30/14.

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[16] Directive 2009/24/EC on the legal protection of computer programs, further referred to as “SoftD”.

[17] The right of communication to the public for the computer programs is stipulated however in the Art. 3 InfoD (Bechtold 2016, 444).

[18] See to that matter Judgment of the Court (Second Chamber) of 7 August 2018, Land Nordrhein-Westfalen v Dirk Renckhoff, C-161/17, para. 47.

[19] Most notably Judgment of the Court (Fourth Chamber), 13 February 2014, Nils Svensson and Others v Retriever Sverige AB, C-466/12; Order of the Court (Ninth Chamber), 21 October 2014, BestWater International GmbH v Michael Mebes and Stefan Potsch, C-348/13; Judgment of the Court (Second Chamber) of 8 September 2016, GS

Media BV v Sanoma Media Netherlands BV and Others, Judgment of the Court (Second Chamber) of 26 April 2017, Stichting Brein v Jack Frederik Wullems , C-160/15.

[20] Judgment of the Court (Fourth Chamber), 13 February 2014, Nils Svensson and Others v Retriever Sverige AB, C-466/12, para. 24 Order of the Court (Ninth Chamber), 21 October 2014, BestWater International GmbH v Michael Mebes and Stefan Potsch, C-348/13, para. 14; Judgment of the Court (Second Chamber) of 8 September 2016, GS Media BV v Sanoma Media Netherlands BV and Others, C-160/15, para. 37.

[21] For an extensive discussion of the CJEU case law on this issue see e.g. (Hugenholtz and Velze 2016; Angelopoulos 2017; Císařová 2017; Ginsburg and Budiardjo 2017; Stevens 2014; Rendas 2017; Rosati 2017; Savola 2017)

[22] C-160/15 - GS Media, paras. 47–49.

[23] C-160/15 - GS Media, para. 41.

[24] C-348/13 BestWater International, para. 19.

[25] COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT on the modernisation of EU copyright rules, PART 3/3, Annex 9D, p. 124.

[26] COMMISSION STAFF WORKING DOCUMENT IMPACT ASSESSMENT on the modernisation of EU copyright rules, PART 3/3, Annex 9D, p. 124. Specific examples are presented e.g. by Peters and Kalshoven (2016).

[27] Judgment of the Court (Fourth Chamber) of 16 July 2009. Infopaq International A/S v Danske Dagblades Forening, C-5/08, paras. 56–57; Judgment of the Court (Grand Chamber) of 4 October 2011. Football Association Premier League Ltd and Others v QC Leisure and Others and Karen Murphy v Media Protection Services Ltd, joined cases, C-403/08 and C-429/08, para. 162; C-145/10, Order of the Court (Third Chamber) of 7 March 2013. Eva-Maria Painer v Standard VerlagsGmbH and Others, C-145/10, para. 109.

[28] This principle is re-iterated both in the InfoD (recital 4 and 9) as well as in the recital 2 COM-D/CON-D.

[29] Judgment of the Court (Grand Chamber) of 4 October 2011. Football Association Premier League Ltd and Others v QC Leisure and Others and Karen Murphy v Media Protection Services Ltd, joined cases, C-403/08 and C-429/08, para. 163; Order of the Court (Third Chamber) of 7 March 2013. Eva-Maria Painer v Standard VerlagsGmbH and Others, C-145/10, paras. 132-133; Judgment of the Court (Grand Chamber), 3 September 2014, Johan Deckmyn and Vrijheidsfonds VZW v Helena Vandersteen and Others, C-201/13, para. 23.

[30] The three-step test is present also in the Art. 6(3) SoftD. Art. 11(1) InfoD extends the application of the test also in the directive 2006/115/EC on rental right and lending right and on certain rights related to copyright in the field of intellectual property (further referred to as “ReLeD”).

[31] It is far beyond scope of this paper to address the problems and also solutions of the three-step at the European level. However, there are already excellent sources discussing the three-step test (Senftleben 2004), as well as providing solutions (Koelman 2006; Lucas 2010; Griffiths 2009; Hugenholtz and Senftleben 2012; Geiger, Gervais, and Senftleben 2014).

[32] Art. 5(2)(c) and 5(3)(n) InfoD.

[33] Art. 5(2)(c) InfoD.

[34] Recital 21 OrphanD.

[35] Judgment of the Court (Fourth Chamber), 10 April 2014, ACI Adam BV and Others v Stichting de ThuisKopie and Stichting Onderhandeligen ThuisKopie vergoeding, C-435/12; Judgment of the Court (Fourth Chamber) of 5 March 2015; Copydan Båndkopi v Nokia Danmark A/S, C-463/12, para. 79; Judgment of the Court (Fourth Chamber) of 12 November 2015, Hewlett-Packard Belgium SPRL v Reprobel SCRL, C-572/13, para 57.

[36] Judgment of the Court (Fourth Chamber), 11 September 2014, Technische Universität Darmstadt v Eugen Ulmer KG, C-117/13, para. 49.

[37] Art. 1(2) OrphanD.

[38] For the discussion of problems related to video games preservation see part 4.4.

- [39] For overview of the implemented national solutions see e.g.: ('Impact Assessment on the Modernisation of EU Copyright Rules - PART 3/3' 2016, 131–32).
- [40] The acquisition-by-licence issue is also to be addressed by the proposed Directive on Copyright in the Digital Single Market as discussed later in part 6.
- [41] See also the earlier discussion of this exception in part 3.2.3.
- [42] Legal Deposit Libraries Act 2003. The regulations on deposit of non-print materials are contained in the sections 6, 7, and 8. The Legal Deposit Libraries (Non-Print Works) Regulations 2013, (2013 No. 777) section 13.
- [43] Gesetz über die Deutsche Nationalbibliothek vom 22. Juni 2006 (BGBl. I S. 1338), das zuletzt durch Artikel 2 des Gesetzes vom 1. September 2017 (BGBl. I S. 3346) geändert worden ist.
- [44] Section 2 of the Gesetz über die Deutsche Nationalbibliothek vom 22. Juni 2006 (BGBl. I S. 1338).
- [45] Section 3(2) of the Gesetz über die Deutsche Nationalbibliothek vom 22. Juni 2006 (BGBl. I S. 1338).
- [46] Legal Deposit Libraries Act 2003. Section 1(5)(a); The Legal Deposit Libraries (Non-Print Works) Regulations 2013 Section 13(2)(a)(i).
- [47] Good examples are e.g. Open UK web archive (webarchive.org.uk), Webarchiv of Czech National Library (webarchiv.cz) or Webarchiv Oesterreich (webarchiv.onb.ac.at).
- [48] See Sec. 43b of Bundesgesetz vom 12. Juni 1981 über die Presse und andere publizistische Medien (Mediengesetz – MedienG).
- [49] Gesetz über die Deutsche Nationalbibliothek vom 22. Juni 2006 (BGBl. I S. 1338).
- [50] Section 18 of The Legal Deposit Libraries (Non-Print Works) Regulations 2013,
- [51] Code du patrimoine, articles L131-1 à L133-1 et R131-1 à R133-1, see also http://www.bnf.fr/en/collections_and_services/book_press_media/a.Internet_archives.html,
- [52] The website of the Research Infrastructure for the Study of Archived Web Materials <http://resaw.eu/web-archives/> lists only five Member States who support national Internet archives. This list has not been updated since 2016 and does not include Germany, Austria and Hungary (<http://mekosztaly.oszk.hu/mia/>) where the Internet archives are currently present.
- [53] An example is Czech Webarchiv <https://webarchiv.cz/cs/>.
- [54] The archiving process is usually performed by crawler, and the cooperation of the website operator is usually necessary to make website crawler-friendly.
- [55] The use Creative Commons public licenses is currently encouraged by Internet archive operated by Slovak university library (<https://www.webdepozit.sk/www-pramene/odporucania-pre-poskytovatelov/>).
- [56] Including, texts, images, scripts, audiovisual elements and database structure.
- [57] *“Such an exception or limitation should not cover uses made in the context of on-line delivery of protected works or other subject-matter. ... Therefore, specific contracts or licences should be promoted which, without creating imbalances, favour such establishments and the disseminative purposes they serve.”*
- [58] As an example, the lifespan of a console such as PlayStation or XBOX is six to eight years, before the new model is introduced. PC games may have compatibility problems with every new generation of PC hardware. Modern games may depend entirely on the support of their developers, especially video games that have multiplayer/online components (such as the MMORPGs).
- [59] Judgment of the Court (Fourth Chamber), 23 January 2014, Nintendo Co. Ltd and Others v PC Box Srl and 9Net Srl– Nintendo and Others, C-355/12.
- [60] Similar opinion on the nature of video games is presented by Suthersanen and Frabboni (Suthersanen and Frabboni 2014, 659). However, the problematic issues will not be mitigated if the video game would be treated differently, e.g. as content partly regulated by SoftD and partly by InfoD – the video game is a complex content and in

order to be preserve it, the CHI would have to fulfil the most stringent provision of all of the applicable directives.

[61] For the analysis of colorization of black and white movies see Sessa (1988) or Schei (2018, p. 781) the latter referring also to the famous case of *Huston v. La Cinq*, Cour de cassation, première chambre civile [Cass. [supreme court for judicial matters], 1e civ., May 28, 1991, Bull. civ. I, No.172 (Fr.).

[62] The of a heritage 16-bit game arguably looks different on the Atari VGA and on the 27 inch high definition monitor and the change of platform on which the game is presented may change the artistic experience of the user.

[63] These implementations should also actually solve the issues related to use of technological protection measures, e.g. by a key escrow system.

[64] The content of Myspace profiles seems to be a good example of potential DCH that has been lost.

[65] A good example are the large collections of European paintings collected by US private collectors and therefore saved from the impact of two World Wars. As one of the many examples, we can mention e.g. the Chester Dale Collection.

[66] Such as photographs, memes, animations, or virtual objects contained in on-line words.

[67] Such as foundation or non-profit organisation.

[68] See part 3.2.2 for discussion of the current regulation.

[69] Some of these practices are discussed earlier in part 4.

[70] The wording of the Art. 5 does not restrict the exceptions in the InfoD. In fact, the proposed COM-D amends the wording of the Art. 5(2)(c) InfoD in a way, that makes it explicit, that the exception under the Art. 5 COM-D exists next to the current Art. 5(2)(c) InfoD.

[71] As was however noted earlier, the right of communication to the public for the computer programs is stipulated however in the Art. 3 InfoD (Bechtold 2016, 444).

[72] A good example of such work may be a virtual object offered as an additional content to an on-line videogame.

[73] Both COM-D as well as CON-D.

[74] On the other hand, it is still debatable, whether the exceptions might be overridden by contract. The Creative Commons licensing suite expressly contains provision, that the licences do not apply in case where statutory exceptions and limitations apply (see e.g. the Art. (2)(a)(1) Creative Commons Attribution 4.0 International License (CC BY 4.0) (Available from: <https://creativecommons.org/licenses/by/4.0/legalcode>).

[75] For details about this systems see e.g. (Guibault and Schroff 2018; Janssens and Tryggvadóttir 2016).