

Technological Advancement and the Copyright Law: Limitations and Challenges for Digital Bangladesh

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Abstract

Digital content is burgeoning on the Internet through the recent progression of various sites like Facebook and YouTube that allow a user to share content with other internet users. Though this technological advancement has proved to be a blessing for the authors by offering them the opportunity to disseminate their works, it is also posing a threat to the integrity of their work as anyone can easily tamper therewith. However, technology should not only be admonished for posing a threat to copyright as it simultaneously plays the role of a savior for them by providing solutions like encryption technology, watermarking and so on. Unfortunately, counter technology has also been developed to encounter these technological protection mechanisms. In order to combat these wicked technologies, the copyright law framework is also maturing accordingly-DMCA of the US is the glaring example of this. But not all countries are equally equipped to face the challenge, and in this regard, least developed countries (LDCs) like Bangladesh has the worst scenario. The innuendos faced by the LDCs in amending the copyright system are enunciated, and future implications are discoursed in this article.

Keywords: Information and communications technology, Copyright framework, Fair use, Digital Bangladesh

1. Introduction

We are living in the golden era of technology, which is making thousands of materials available at our fingertips with a handful of keystrokes. However, this technological blessing has posed an inevitable threat to the copyrighted works by allowing some websites to tamper with such works illegally. Apart from exerting its benefits, the digital generation is also attaining expertise in manipulating and retrieving information through the unwanted use of technology.

The unprecedented development in the technological field has made the rudimentary concepts of copyright laws, i.e., rights of reproduction and distribution, nugatory and immaterial. This is because technology is capable of making near-perfect reproduction of works with a single click, which highly reduces the cost of copying, disseminating, and modifying the work. Though this, on the one hand, has accelerated the accessibility and extensive utilization of copyrighted content, it has also availed the generation with accessibility to pirated copies of such works. Hence, an individual with home equipment and a handful of keystrokes can produce flawless replicas of copyrighted materials only by

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using the electronic mediums and can easily disseminate those digital works throughout the world (Patterson, 1993). This situation makes us face the reality that technology is creating various copyright issues which require immediate actions for the copyright owners' sake. In this article, therefore, the primary focus will be on the challenges that Bangladesh is facing as it is going through a transformation where almost everyone is using the digital platforms e.g. Facebook and YouTube, and copyrighted materials are being easily copied from home.

2. Rationale of the Research

Though technological advancement is posing some threats towards copyright protection, the protection mechanism it is providing for copyright owners cannot be ignored as well. In this way, technology itself is the solution to the problems generated by technology. Charles contemplated it in 1995 while saying "the answer to the machine is the machine itself". Technology offers a variety of protection mechanisms that restrict access to copyrighted works. 'Password protection' is one of the mentionable mechanisms.

Furthermore, several firewall software is commonly used to control unsanctioned access to copyrighted materials. Another useful technology is 'encryption' which encodes the copyrighted material to make it unreadable for the unauthorized readers, and only the person with the authorized key will be able to decode it and get access to it. In this regard, 'watermarking' offers another ray of hope by preventing illegal copying. Hence, technology offers divergent shields to protect the copyrighted contents, but unfortunately, the delinquents are no less advanced in taking advantage of technology in committing their mischievous activities and circumventing the protection mechanisms available in this regard. Hence, the copyright owners raised their voice against the inefficiency of existing technological protection measures and urged the necessity to frame appropriate legal mechanisms in this regard. In response to such demands, WIPO drafted the Copyright Treaty, 1996; wherein all member states are bound to ensure that sufficient safeguard is provided against the circumvention of technical protection mechanisms that are utilized by authors while exercising their exclusive rights (article 11). Moreover, the WIPO Performances and Phonograms Treaty 1996 (WPPT contains a similar obligation in article 18). Through these treaties, the international community is trying to respond to the need to ensure legal obligation in case of violation of copyright through technology.

Till 2.5.2020, eighty-four (84) states have acceded to WPPT and WCT, but Bangladesh is not a party to either of these treaties. This is because before being a party to the updated copyright laws, Bangladesh needs to bring a necessary amendment to its existing copyright law, i.e., the Copyright Act, 2000, in order to make it compatible with the recent international treaties. These legislative drawbacks create various challenges for Bangladesh, especially in mitigating the rate of copyright infringements through technological development.

3. Research Questions

The research questions that this paper aspires to answer are- 1. Whether the technological advances are creating new means of copying and disseminating the copyrighted works? 2.

How is it possible to provide effective copyright protection while with a few mouse clicks, perfect copies can be made? 3. How would the scope of copyright be tested on specific acts on the internet? 4. Is Bangladesh ready for the challenges posed by this technological paradigm?

4. Methodology

The research is qualitative in nature and adopts a multidisciplinary approach as its methodology. International conventions, treaties, decisions, some domestic laws, regulations and policies have been used as primary sources. However, the study is mostly dependent on secondary sources, which include textbooks, legal journals, legal encyclopedias, conference papers, reports of international organizations, newspaper articles, theses and online resources, as they provide an overview of legal provisions through their explanations, commentaries and comparisons.

5. Limitations of the Study

The study mainly concentrates on the copyright laws in the technological paradigm. Hence, it limits its focus on particular activities in the digital environment. Because of the time constraints and word limits, many issues have been left unaddressed, like the copyright exhaustion in promoting access to education, cross-border exploitation of digital materials by arranging bilateral agreements, and the three test principles of fair dealing provided by Berne and TRIPS.

6. Literature Review

Over the years, the legal framework of copyright law tried to cope up with the technological expansions and gradually took its present shape. Initially, copyright law covered printed materials and later on expanded its scope to bring noble of advanced expressions, i.e., paintings, drawings, inscriptions, compositional and architectural works within its ambit (Cornish, Llewelyn, and Aplin; 2007). Within a very short time, cinematographic and photographic works and phonograms entered in its paradigm (Sherman and Bentley, 1999). According to Geiger (2009), with the introduction of every new emerging technology to utilize cultural goods, the copyright regime reshapes itself accordingly in order to patronize creativity and innovation. The Berne Convention of 1886 is an excellent example of such legal development, which has been updated at regular intervals in order to strengthen the copyright legal regime. The convention was first revised in 1896 to deal with issues of mechanical reproduction, then in 1928 for issues in radio broadcasting, in 1948 for the issues in cinematography and photography, and subsequently in 1968 for issues in television (Masouyé and Wallace, 1978). However, despite regular revisions, the legal framework is faced with various challenges due to the rapid technological expansions.

Alford (1997) simplifies the age-old economic rationale of copyright by stating that in order to avail economic incentives, the authors of newly produced works should be provided with adequate effective protection against direct copying; otherwise, they will not be encouraged to produce new innovative works. From the traditional viewpoint, it may seem that unauthorized copying and distributing copyrighted works may have some

positive welfare effects, but in the long run, it will extinguish the innovation and creativity of the society (Landes and Posner, 1989). Copyright thus seeks to overcome this status quo by merely conferring upon the author of the original work an exclusive right to control over the use and access of the work. However, in today's digital arena, this control is very much limited and cost-effective for the author.

Islam (2009), while discussing the copyright laws of Bangladesh, emphasized that copyright law strikes a balance between the competing interests of the copyright holders and the public interest. In this regard, it must be remembered that copyright owners are entitled to reward, but they cannot claim right over the raw materials used in their work that has been collected from someone else. In a famous case of *Harper Row v. Nation Enterprises* [1985] US 471 (Harper & Row), the court referred to copyright as "the engine of free expression". Therefore, in this rapidly growing internet age, legal protection tools should offer effective protection to encourage original innovations and returns in this field. While designing an optimal copyright law, it is to be kept in mind that this should in no way debar the public from the enjoyment of those digitized works.

7. Findings and Analysis

Intending to examine the scope of copyright concerning internet materials, this study considers the following imaginary circumstances having a resemblance of the real-life scenario:

- I. Arab Chowdhury browses the internet through his laptop and mobile phone multiple times in his daily work. In doing so, these devices automatically make temporary copies while browsing and viewing the contents. Is such a temporary copy enough to be regarded as a violation of copyright law under the existing copyright laws of Bangladesh?
- II. Ibrahim Khan makes a software called 'Moogle' which is basically a searching website to help its users by crawling various internet sites and showing results from those sites. While doing so, it makes temporary copies of the contents of the webpages known as 'cache'. Such cache files are flawless copies of the original contents and retained by Moogle's server for subsequent use. Can this act be regarded as copyright infringement?
- III. Mim Islam operates an internet site, education4all.com, that assembles links to other illegal sites which provide unauthorized copies of copyrighted books. By clicking the links given on Mim's website, the users move to the illegal websites and can download the copyrighted books for free. Does this act amount to contributory copyright violation?
- IV. Abdus Salam runs a website, watchlive.com, that broadcasts (streams) different international sports matches. Is this streaming legal?

I. Browsing: Case of Arab Chowdhury

Browsing is an indispensable part of internet activity. While browsing any webpage, the computer makes a copy thereof in order to show the same on the screen (Chen et al., 1998). Berners-Lee et al. (1992) discuss that the primary purpose of a browser is to send data

assets to the user ('fetching' or 'retrieval'), allowing them to lookover the data ('display', 'viewing'), and subsequently access other data ('following links', 'navigation'). Hence, it fetches the information from the web and views them on the device of the user.

For browsing a webpage, the software primarily needs to create a portrayal of that page in the computer's random access memory (RAM) in order to direct the indispensable subtraction (Hogan et al., 2011). To put simply, browsing activity (opening, viewing, displaying, or utilizing) has, as a prerequisite, generated a supplementary copy of the content in PC's RAM or device's memory. Now the question that floats in mind- whether this incidental and transient automatic copy will be considered as an infringement of the copyright owner's exclusive reproduction rights? Moreover, whether it is required for the user to obtain a license from the copyright owner to view and read a webpage since a copy will be automatically produced on the RAM (or memory) of the user's device?

The act of browsing, similar to reading in conventional media, i.e., paper, theoretically constitutes an infringement of the copyright: In the case of *Intellectual Reserve, Inc. v. Utah Lighthouse Ministry Inc.*, (D. Utah, 1999), the court held that browsing of copyrighted content without a license is considered as an infringement of the rights of the copyright owner since the act of browsing made a temporary copy of the copyrighted materials in the computer's RAM. The court, quoting the case of *MAI Systems Corp. v. Peak Computer, Inc.*, (9th Cir., 1993), stated:

When a person browses a website, and by doing so displays the [copyrighted material], a copy of the [copyrighted material] is made in the computer's random access memory (RAM), to permit viewing of the material. And in making a copy, even a temporary one, the person who browsed infringes the copyright. (*Intellectual Reserve v. Utah*, P. 1428)

Some scholars, however, criticized the case and described the case as contentious since copies in RAM are fleeting in nature, and sooner or later get erased whenever the computer is switched off, shut down, or gets restarted (Jones, 1998). They also backed up their arguments by referring section 101 of the US Copyright Act under which copies must exist for "more than a fleeting moment" (Johnson, 1994). In the case of *Public Relations Consultants Association v The Newspaper Licensing Agency Ltd* ([2013] UKSC 18 (*PRCA v NLA & others*)), the Court of Justice of the European Union (CJEU) commented that the copying is necessary for browsing to function effectively and was temporary, incidental, transient or impermanent and sine qua non of a technological process. "If it is an infringement merely to view copyright material, without downloading or printing out, then those who browse the internet are likely unintentionally to incur civil liability, at least in principle, by merely coming upon a webpage containing copyright material in the course of browsing," Lord Sumption explained on behalf of the other judges (*PRCA v NLA & others*, p. 22). "This seems an unacceptable result, which would make infringers of many millions of ordinary users of the internet across the EU who use browsers and search engines for private as well as commercial purposes,"- he added.

On several occasions, it is found that a copyright holder uploads his or her works in the digital environment intending it to be browsed. Hence, the browsing of such works falls either within the periphery of an implied license from the copyright owner or under the fair use doctrine (Sieman, 2006). For instance, the court in *Religious Technology Center v. Netcom On-Line Communication Services* (N.D. Cal. 1995) explained in the decision that internet browsing might be viewed as fair use:

Absent a commercial or profit-depriving use, digital browsing is probably a fair use; there could hardly be a market for licensing the temporary copying of digital works onto computer screens to allow browsing. Unless such a use is commercial, such as where someone reads a copyrighted work online and therefore decides not to purchase a copy from the copyright owner, fair use is likely. Until reading a work online becomes as easy and convenient as reading a paperback, copyright owners do not have much to fear from digital browsing and there will not likely be much market effect (*Religious Technology Center v. Netcom On-Line Communication Services* 1998, p. 1378).

Given that US Copyright laws allow temporary copies exception, the problems surrounding the ‘acts which enable browsing’ appear to be removed or solved. However, the developing and least developed countries (LDCs), including Bangladesh, are yet to find an effective tool to face this copyright problem. In Nepal, an LDC and neighbor country of Bangladesh, section 16 of the Nepal Copyright Act (2002) mentions that reproduction of a significant percentage of digital data is not allowed without the author’s permission. Turning to the Bhutan’s Copyright Act (2001), section 4(xviii) defines reproduction as any temporary storage of electronic work. Hence, it seems that both the LDCs consider temporary copies as reproduction, and do not allow it without the copyright owner’s permission.

Admittedly, the copyright regimes of Bangladesh do not have any provision either about any impermanent or temporary copies, or the implied license doctrine. Looking at our above-mentioned case of Arab Chowdhury, as per EC’s copyright directive or Copyright law of the USA, Arab Chowdhury as a typical user, browsed the website page consisting of copyrighted contents, and for that, he is not liable for the violation of copyright since the electronic copies automatically created by the browser are too evanescent or temporary to be considered as copies. Furthermore, these electronic copies (temporary saving of browsed content) fall within the doctrine of fair dealing or implied license. Looking into the Bangladeshi copyright laws, temporary copies stored in digital form are reproductions and will be considered as copies as per section 2(1) of the Copyright Act 2000. Section 17 of the Act confers the exclusive rights of reproduction to the copyright owner only. Additionally, the Copyright Act does not allow the ‘temporary copying exception’, and there is no provision on the implied license doctrine. Although the doctrine of fair use is there in section 72 of the Act, the provision is narrower than the EC or US’s copyright law. So, it seems that Arab Chowdhury is liable for copyright infringement under the copyright laws of Bangladesh.

II. Catching: Scenario of Ibrahim Khan

Caching has turned into another pervasive internet activity in the present day's context. Every web user must have observed that while browsing any popular and widely used website, the computer retrieves information faster than it retrieves while browsing any unknown website. One of the reasons behind it is caching, which speeds up the loading time or downloading speed in some popular sites. Caching improves the performance of the internet as it reduces bandwidth usage, network congestion, and server load. This is because caching generates incidental copies of the webpages in its first access to boost up the subsequent connection time of that particular page. While a web surfer views or reads any web page, this identical process is repeated, and the surfer may not know about it (Hugenholtz, 2000). The copying of copyrighted contents for the purpose of caching may infringe copyright since caching 'reproduce' a copy of contents and display those contents to the public. Hence, under the new emerging copyright law regime caching is emerging as a thorny issue as it causes violations of the reproduction right, the public distribution right, the public performance right, and the new evolving rights of access and transmission (under the WIPO treaties).

A landmark case on caching is *Field vs. Google* (D. Nev. 2006), where the plaintiff, i.e., Field brought an allegation of infringing the reproduction and distribution rights of his copyright-protected works against Google. Field alleged that Google was doing so by stocking his poems, posted on his website, with its system caching and by permitting internet users to access those works. However, the court decided in favor of Google and held that there was no violation of copyright laws since the entire process- initiating with search results' display and concluding with a review of the cached page- was automated to locate and analyze available webpages. As the court noted, Field knew that Google was to use his website to its indexing and caching, and as such there was silent acquiescence regarding this. Following this finding, the court held that an implied license gave Google permission to store and view the cached copies of Field's works.

Interestingly, this was not the only time Google was alleged for copyright violation. In *Perfect 10 vs Google* (C. D. Cal., 2006), Perfect 10 Inc. (plaintiff) alleged that Google (defendant) by its search engine was accessing its sites and storing copies of its copyright protected images and hence infringing the concerned copyright laws. However, like the previous case, the judgment came in favor of Google. The court considered caching a technical process which stores the latest data requested by the internet users. Though appeal was filed against this decision, the Appellate Court affirmed the ruling of the ninth circuit court and observed that "even assuming such automatic copying could constitute direct infringement, it is a fair use in this context... It is designed to enhance an individual's computer use, not to supersede the copyright holders' exploitation of their works. Such automatic background copying has no more than a minimal effect on Perfect 10's rights, but a considerable public benefit." (*Perfect 10 vs. Google*, P. 852).

However, any website can avoid cached copies by explicitly telling not to visit it. The case of *Facebook v. Power Ventures* (N. D. Cal., 2009) illustrates this proposition further. The defendant, i.e., Power Ventures Inc., was an internet service operator that allowed users to

manage all of their social networking accounts and users gave the authorization to collect information about them to use them in Power's website. It also accessed and collected Facebook data from the users for its site. Moreover, Power users also could send messages to other users of Facebook. Subsequently, Facebook asked the defendant (Power.com) to halt this unauthorized practice by serving a 'cease and desist' letter. However, the defendant continued the malpractice even after the notice. Accordingly, Facebook sued Power Ventures alleging that it infringed the copyright by collecting its user data. The court, while pronouncing judgment, commented that even the assumption that this is a temporary and transient copying could not escape the defendant from liability. Since Facebook's service of terms explicitly prohibits "scraping" of content and the defendant copied the same without Facebook's permission, it is a case of copyright infringement.

Now, if we come back to our hypothetical fact, it is clear that Moogole's caching does not amount to infringement of copyright since the caching activity is a technical process and could not be considered as a volitional act on Moogole's part. Moreover, the USA's DMCA gave Moogole an implied license, which allowed it to make cached copies of the copyright-protected contents. Surprisingly, LDCs like Bangladesh, Nepal and Bhutan's copyright laws do not mention anything about implied license and transient copying through cache files. Even the word "cache" is not mentioned, though the word has explicitly been used by most international treaties. The copyright laws of New Zealand (The Copyright Act 1994, s 92E), UK Electronic Commerce Regulations 2002, reg 18), and Canada (Copyright Modernization Act, C-11 2012) are also well equipped to face these challenges. In this regard, the only convenient solution for Bangladesh is to amend the Copyright Act of 2000 and the Copyright Rules 2006.

III. Linking or Hyperlinking: Case of Mim Islam

Linking (also referred to as hyperlinking) is a ubiquitous activity on the World Wide Web (or simply 'the web'). The practice of linking is widespread on the internet and a very successful information access tool among users (Stuckey 1998). Linking is equivalent, although not exclusively, to placing a reference to other works in an electronic document. Carothers (1999) thereby confirmed that a link acts as a pointer to another site, and as such by viewing one website gain access to another website. Most of the time, Links are highlighted in colored text or denoted in clickable icons. For example, a link is placed on A's website and by clicking the link, it takes the web surfer to B's website and displays B's works. So, linking makes works of another person publicly available without the copyright owner's consent or knowledge (Wassom 1998). Regarding linking, therefore, a question arises- whether unauthorized linking invokes legal liability? As per the law of copyright, A cannot share the copyright-protected works of B without taking authorization of B. if A does so, he may not be liable for direct infringement of copyright, but he may be liable for contributory infringement for generating "means to infringe".

Myriad legal issues arose while challenging the use of linking under the realm of copyright. Several cases concerning the issue of linking show that a link creator may not be a direct infringer, but he may be a contributory infringer as linking generates routes to distribute copyrighted works to users (Raysman and Brown, 1997). In a Scottish case of *Shetland*

Times v. Jonathan Wills and Zetnews, Court of Session Edinburgh 1996, the plaintiff, Shetland Times (Times) sued the Shetland News (News), the defendant for creating links to its Webpage. The News allegedly copied headlines of the Times and made those available to the public using the links embedded with the headlines. The plaintiff argued that the use of its website's news headlines was an act of copyright infringement and asked an interim injunction to stop this practice. The presiding judge, after meticulously observing the case, found a prima facie case of copyright infringement as the headlines are literary works. The Scottish court agreed that linking helped the users to bypass the front page of Time's website which led to decline the site's value to the advertisers as the paid advertisements were on the front page. The parties of the case later on decided to settle the case outside of the court, where the News agreed not to deep-link the Time's site. New Zealand has a similar case of *TVNZ v. 7am Weekly News* where 7am news embedded links in its site and with a click, it took the user to the website of the TVNZ Sports news. These cases clearly illustrate the legal implications of linking or hyperlinking by interpreting copyright law.

In our hypothetical scenario, Mim Islam may be liable for contributory copyright infringement as Mim's customers, following the links of the site- education4all.com, obtain their chosen books. The website made the copyrighted books available to the public only by using the links embedded in the site of Mim. Accordingly, links assembled by education4all.com make the copyright-based books publicly available, which is considered as copyright infringement. In the USA, the linking issues are dealt with by the "the anti-circumvention provisions of the DMCA" (The Digital Millennium Copyright Act (DMCA) 1998 § 1201(a)(1)). Under the Bangladeshi Copyright Act 2000, the legality of linking can be tested by applying section 71 in which contributory infringement has been explained. According to section 71 (a) (ii), an individual who allows a third person to use a place for communicating copyrighted works to the public is responsible for the infringement of copyright. The term "communication to the public" is defined in section 2 (15) of the Copyright Act, 2000; and communication through cables or satellites also falls in the means of communication. Thereby the copyright act covers the sharing or communicating the web contents as well. So, it means that linking, with an intention to share copyrighted works, is a violation of copyright law of Bangladesh. Additionally, Information and Communication Technology Act (ICT Act) 2006 also addresses the act of linking in section 54(10A) by mentioning that unauthorized sharing, copying, modifying, or downloading of files is a punishable offence for which the minimum punishment is seven years simple imprisonment.

IV. Streaming: Case of Abdus Salam

"Streaming", completely opposite from downloading, is a new distribution technology which causes online transmission of digital contents, e.g., audio or video files. With streaming, video, or audio files being played on the user's device is stored remotely without permanent copying or storing at the recipient's end (Hayes, 1998). Streaming technologies are real time, while downloading requires copying and saving the media files on the user's device before it can be played (Pallante, 2012). Modern internet technology

nowadays allows us to watch films, sports or episodes of tv shows like Friends or Game of Thrones. For that, we just need to type in Google “Game of Thrones streaming” or “Friends streaming”, and by clicking one of the links suggested by Google, we become able to watch those episodes online. A question arises concerning this streaming- do the streaming technologies, without obtaining required licenses from the copyright holder, constitute an infringement of copyright? In several case laws, it has been found that streaming technologies in some cases constitute copyright infringement.

Streaming copyrighted materials at least implicate two rights of the copyright owner such as public performance right and reproduction right. Public performance right is possibly implicated because streaming facilitates transmission of public performance of the work. The reproduction right is implicated because streaming activity makes buffer copies of the works in PC’s RAM. In the Spanish case of *Sociedad General de Autores Y Editores de España (SGAE) v Rafael Hoteles SA*, 2006 ECR I. 11519 (2006), the European Court of Justice (ECJ) in dictastated that facilitating public access to inaccessible copyright protected contents is viewed as encroachment of copyright owner’s exclusive right of public performance. In another case of *Live Nation Motor Sports, Inc. V. Davis*, Civil Action No. 3: 06-CV-276-L (ND Tex. Dec. 12, 2006), the US court held that the defendant Robert Davis infringed the copyright of the plaintiff by live webcasting the motor racing events and thereby, infringed the plaintiff’s right of public performance or distribution right. Therefore, in all scenarios, streaming content on the web without a license from the copyright owner has legal implications, even if for non-commercial purposes on Facebook or YouTube.

In our hypothetical scenario, Mr. Salam’s site ‘watchlive.com’ constitutes copyright infringement by facilitating copyrighted media files publicly available without obtaining consent from the copyright holder. Thus, streaming technologies radically altered the protection realm of copyright. In India, section 31D of the Indian Copyright Act 1957 was restricted only to television and radio broadcasting organizations. Then, their Industrial Policy Department (DIPP) liberally interpreted section 31D and included internet broadcasting organizations in it. In Bangladesh, online broadcasting or webcasting is not covered within the ambit of broadcasting organizations under the Copyright Act, 2000. So, in order to bring online streaming within the periphery of Bangladeshi copyright law, provisions on ‘online broadcasting or streaming’ need to be inserted in the Copyright Act, 2000. Such provisions will allow the copyright holders to demand royalties from popular streaming platforms of Bangladesh such as Bioscope, Iflix, Hoichoi, BongoBD, Banglafix, Robi TV, Gaantori, etc. Consequently, new provisions requiring payment of royalties to copyright holders for streaming their works through the different online medium like- YouTube live, periscope, Instagram live, and Facebook live - is essential, whereby online broadcasters will remain responsible for sharing their profits with copyright acknowledgment. Therefore, the enigma posed by streaming technologies in ensuring credentials and royalties of the copyright owners calls for immediate amendments in the present copyright landscape of Bangladesh.

8. Conclusion

The above discussion makes it clear that the Bangladeshi Copyright Act, 2000 lacks adequate protection mechanisms to safeguard the interest of the copyright holders, especially against the infringements caused in different online platforms. In order to realize the dream of digital Bangladesh, the anomalies existing in the present law requires imperative attention. Accordingly, the law needs to be amended to incorporate WCT provisions.

In this regard, a collective effort among different countries is an absolute necessity considering the fact that the internet has made the cross-border violation of copyright- a frequent mischief of our lives. Copyright Directive of the EU or the DMCA of the US may play the role of torch-bearer in this regard. However, the digital protection regime should not be so tightened to impede 'Access to Knowledge'. Rather, a fine-tune between the two should be materialized. It seems that the realization of Vision 2021, for a least developing country like Bangladesh, requires digitalization of its legal regime of copyright protection, while imparting similar importance to access to knowledge. Now, the challenge for the government is to establish an upgraded copyright regime that will balance the interest of the copyright owners and public interest, with an ultimate goal to cope with a new copyright setting as influenced by the internet.

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