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Abstract

The purpose of the study was to establish the perceptions of librarians on the usefulness of digital rights management systems in digital libraries as mechanisms of securing digital content from copyright violation in order to assess the general usefulness of the DRM technology. The study used Strathmore University library and Moi University Nairobi Campus library as the case studies. A Census was carried out because the population under study was small with a total of 34 respondents. Both descriptive and inferential statistics were employed in this study. Data analysis was done using statistical package for social sciences (SPSS) and the findings presented in form of tables and figures for easy interpretation and understanding.

The study established that there exists a positive correlation between the awareness of DRM systems and the use of digital content in Libraries. The study also established that DRM systems limit fair use of information. The respondents felt that DRM systems prevent fair use such as sharing articles and other information from e-resources with colleagues and that it also bars fair use of information since it forces users to access material in small chunks. Finally, the study established some e-books & e-journals are easily downloadable by unauthorized users' despite being locked with DRM technology.

The study will benefit the government agencies in charge of copyright and Digital media such as Copyright Society of Kenya in that it will be able to amend and/or create policies that will embrace DRM technologies and discourage copyright infringement in digital libraries. This is because the research outlines the benefits, challenges & loopholes of DRM technologies usage and further gives recommendations on the measures to counter the challenges.

Keywords: *Digital Rights Management; Fair use; copyright protection; eBooks*

Introduction

The study was guided by the following research objectives: to determine the general perceptions of respondents on the functionality of DRM systems in protecting against plagiarism and piracy of digital content, the perceptions of respondents on whether or not DRM systems limit fair use of information and finally the perceptions of respondents on the possible challenges of using DRM

systems in protecting digital content. DRM systems are technologies that disable the ability to copy or distribute digital content without the technical permission of the DRM technology itself.

The study was guided by the contingency model of perceived effectiveness by Andreas Nicolaou (2000). The model hypothesizes that perceptions of a system's effectiveness will depend on the fit between its Integration and the contingent factors of formalization and information interdependence among functional areas within a system, as well as interdependence with other systems. These contingencies are likely to create requirements for integrated information that are necessary for the satisfaction of coordination and control needs. The contingency formulation that was assumed in this study is that the design of the DRM technology will be adapted to respond to contingencies with the expectation that the system will meet the information requirements and protection expectations of its users and thus be perceived as effective. The theory relates to the study whereby DRM systems are in place to achieve specific objectives although different stakeholders have other perceptions about its usefulness.

In essence the DRM technology blocks use of information undesired by the provider, regardless of whether the information material is legally owned and whether the use in question is otherwise legally permissible (Puckett, 2010). Lafferty (2002), also defines DRM as a technology that enables persistent access control. Digital rights management is also described as a class of controversial technologies that are used by copyright holders, publishers, individuals with the intent to control the use of digital content and devices after sale; there are, however, many competing definitions. With first-generation DRM software, the intent is to control copying; with second-generation DRM systems, the intent is to control viewing, copying, printing and altering of works or devices. The term is also sometimes referred to as copy prevention, copy protection and copy control, although the suitability is often disputed (Tramboo, 2012).

Past studies on perceptions of different stakeholders have shown that digital rights management systems have greatly reduced the rates of copyright infringement; other studies have however criticized their usefulness. According to these authors, users still duplicate works without permission from intellectual owners and this is being suggested as a reason as to why to date, even with DRM systems authors of original content still fail to get their royalties. If this continues authors may be discouraged to publish because of fear of piracy and subsequent financial losses, resulting in lag in the process of author contribution to the body of knowledge.

Successful implementation of DRM systems is characterized by reduced complaints from Vendors and authors of original works protected by DRM systems and increased royalties. However, other stakeholders who include users and disseminators of electronic publications that are DRM protected have different perceptions regarding the current assessment of DRM technology's utility. It is not clear if the design and functionality of DRM systems is perceived as useful by all stakeholders and whether there are challenges experienced when accessing DRM protected content. This study therefore sought to close this gap by investigating the perceptions of librarians on the usefulness of DRM systems in protecting digital content against plagiarism and piracy.

Literature Review

Perceptions on functionality of DRM systems

DRM systems are especially problematic to users with disabilities. Publishers often apply DRM technologies that make content incompatible with compensatory technology like screen readers. Adobe and Microsoft built DRM technology into their e-book software that allows publishers to disable text-to-speech capability, making the content useless to visually disabled readers (Kramer, 2007). End users are ready for a DRM system that handles most fair use scenarios, protects their confidentiality, allows for the transfer of rights, and is flexible according to its media type.

The reason DRM technology has proven to be unpopular is simply expectation and cost: the consumer does not want DRM enabled content because nobody wants to pay for something that in the past was unrestricted. To many end users this basic conclusion appears to be ignored by the content providers and copyright owners, leading to a potential decline in online digital media sales if current DRM models remain in use (Arnab and Hutchison, 2004).

Analog content has high levels of integrity not only because of the difficulty of altering analog content but also because of its widespread distribution. Digital media lacks in this area. With the advent of digital media, distribution is now synonymous with copying, a nearly cost-free process that can now be completed almost instantaneously. With this in mind, creators could view DRM as not only trying to solve a piracy problem, but also creating a system of integrity for their digital content (Camp, 2002).

Success of DRM systems in protecting against plagiarism

Case studies across the globe have shown that most DRM products have achieved their intended purpose i.e. in response to the hasty increase in plagiarism and piracy of commercially available information material. This had thrived through the widespread use of file exchange platforms. Typically, DRM is implemented by embedding code that prevents copying, specifies a time period in which the content can be accessed or limits the number of devices the media can be installed on. The purpose of DRM is to prevent unauthorized redistribution of digital media and restrict the ways end users can copy content they have purchased. However, there is a research gap on the perceptions of librarians on the effectiveness and ultimately success of DRM systems.

According to Puckett (2010), with DRM, all content owners (from large media companies to individual talent) can quickly and easily offer their media online. At the same time, they can maintain the integrity of their copyrights, no matter how widely circulated their digital material is. Individual consumers can then enjoy digital music in a convenient and legal way.

DRM systems use in PDF and ePub

Studies have shown that incorporating Adobe DRM systems in e-books has benefits to vendors and doesn't limit authors in any way. Such platforms are lauded to integrate fully with most ecommerce platforms. According to Adobe (2013), the adobe digital rights management (DRM) solutions for eBooks offers a number of advantages for authors. In addition to allowing eBooks to be created in two of the most commonly read formats, PDF and ePUB, it also puts all of the power of distribution, sales and publishing control in the hands of authors.

A typical PDF publication may not have the security necessary to prevent issues with the duplication, unlicensed sale or sharing of content, but the Adobe eBook DRM – used by Google, Nook and other major publishers provides authors with protection for the copyright of their eBook. Adobe and e-pub give success proclamations of DRM systems although they do not give the success rates while other studies give criticism. There is therefore a research gap on the percentage levels of success of Adobe DRM and e-pub. This study sought to fill this gap by finding out the perceptions of librarians on the effectiveness of DRM systems with instances on e-book publications in their libraries using Adobe Digital Editions and e-pub.

According to Mahesh (2009), incorporating Adobe DRM systems does not limit authors in any way from using the ecommerce platform or business model of their choice. In fact, using Adobe DRM, integrates fully with most ecommerce platforms, allowing authors to sell eBooks directly from your own websites or sales pages along with any other items they might sell (consultations, counseling, companion products, merchandise, etc.).

Kramer (2007) argues that corporations do not need lightweight DRM systems but instead need proper encryption. He notes that 99.9% of encrypted documents published by corporations are PDFs with basic password protection, as per for example what is created via the system print dialog's security options on Mac OS/X. He believes these truly not secure. Kramer emphasizes that without an open password, choosing to disable printing and copying is really only obfuscation: the algorithm to decrypt is publicly available, and there is no legal requirement for PDF readers to honor these permissions.

According to him the point of the prevalent lightweight PDF encryption is not to protect truly confidential data or ward off determined thieves; but just to keep basically honest people honest. EPUB is starting to replace some uses of PDF in corporation, as EPUB improves N-screen support, accessibility, and integration with Web Standards. It doesn't seem unreasonable to enable the similar (weak) level of encryption to remove a barrier to switching. While there is literature showing studies that have reported the challenges of implementing DRM systems there is still a research gap on the challenges that are encountered while accessing DRM system enabled content and this study seeks to fill this gap.

Non-significant reduction of piracy and Plagiarism

Libraries and ultimately Librarians act as brokers between vendors and aggregators of digital content, who have every reason to want to place restrictions on their e-books so as to prevent plagiarism and piracy, and users, who want freely available content. Several researchers have given their opinions on the weaknesses of DRM systems and its concept. Some have actually given very good points in favor of not using DRM on eBooks.

Tramboo (2012), gave his opinion on the challenges of DRM and maintained that there are several issues with the concept of DRM, and there are some very good points in favor of not using it on eBooks. He points out Tim O'Reilly, the founder of technology publisher O'Reilly Media, who

wrote a great article about this topic in 2002, laying out the issues with DRM better. He argues that many of the discussions about DRM tend to be filled with fear and based on bad information. The effects that are commonly quoted as a reason to use DRM are just not provable. Tor Books UK, an imprint of Macmillan, went DRM-free for all of its titles in April 2012, and after a full year had seen no significant increase in piracy. This clearly shows that there are some loopholes in DRM which result to continued piracy, however these loopholes may not be known and therefore this study seeks to fill the gap by finding out the challenges as perceived by the respondents.

Methodology

The study adopted a descriptive case study design. A descriptive study attempts to describe a subject, often by creating a profile of a group of problem, people or events, through collections of data and the tabulation of frequencies on research valuables and the research reveals who, what, when, where or how much (Serakan, 2010). This design was suitable for this study because it helped to easily address the objectives and allowed for efficient collection of information which was analyzed to make useful recommendations. The dependent variables of the study are copyright violation of digital content, perception as barriers of Fair use and challenges. These variables are dependent in the sense that they attempt to indicate the total influence arising from the effects of the independent variable whereby the copyright violation takes place in the case where the DRM's are not perceived as successful. The independent variable of the study is the digital rights management systems which the study sought to determine its effect and influence on the dependent variables.

The study used Strathmore University library and Moi University Nairobi Campus library as the case studies. A census was carried out because the population under study was small with a total of 34 respondents. The study used a census approach hence no applications of sample size. The justification for the population size is that respondents are not so many hence can all be incorporated in a census. Questionnaires were administered to the respondents with the research objectives forming the basis of the research questions. Both descriptive and inferential statistics were employed in this study. The study made sure the questions seemed appropriate and were in context of the study. The questionnaire was formulated and given to respondents using the test-retest reliability tool to ensure that the research instrument produces stable and consistent results

once analyzed. Data analysis was done using statistical package for social sciences (SPSS) and the findings presented in form of tables and figures for easy interpretation and understanding.

Findings

Table 1.1 Population Distribution

	DISTRIBUTION	
Sample	**Frequency**	**Percentage**
Participated	32	94
Not participated	2	6
Total Sample	**34**	**100**

In terms of the level of competency in computer of the respondents, beginners accounted for 3.1%, those with computer competency of average accounted for 37.5%, above average accounted for 50% whereas 9.4% were experts. Table 1.2 shows the highly significant factors on perception on functionality of DRM system in protecting against plagiarism and piracy of digital content. From the table, it is well shown that function of DRM systems is that they prevent casual sharing, DRM ensures that Authors of original works get 100% of their royalties. Also established in the study is that the level of plagiarism of scholarly works into term papers has reduced with the use of DRM in publications, DRM's are most effective in preventing copyright violation and DRM has encouraged more authors to publish works because of lack of fear of plagiarism & piracy. The study also reveals that DRM has encouraged publishers to avail more e-resources without fear of plagiarism and piracy, many online academic resource databases have adopted DRM in their digital content and have successfully managed to curb piracy and plagiarism, DRM is an effective check against piracy, DRM enabled publications cannot be plagiarized and finally DRM is necessary to protect the sales of e-books for popular titles.

Table 1.2 Responses on DRM Effectiveness

	Mean	Standard Deviation	CV

main benefit of DRM systems is that they prevents casual sharing	3.32	1.137	.000
DRM ensures that Authors of original works get 100% of their royalties	3.03	1.110	.000
The level of plagiarism of scholarly works into term papers has reduced with the use of DRM in publications	3.45	1.150	.000
DRM's are most effective in preventing copyright violation	3.35	1.305	.000
DRM has encouraged more authors to publish works because of lack of fear of plagiarism & piracy	3.42	1.119	.000
DRM has encouraged publishers to avail more e-resources without fear of plagiarism and piracy	3.55	1.028	.000
Many online academic resource databases have adopted DRM in their digital content and have successfully managed to curb piracy and plagiarism.	3.35	1.199	.000
DRM is an effective check against piracy	3.52	1.288	.000
DRM enabled publications cannot be plagiarized	3.19	1.223	.000
DRM is necessary to protect the sales of e-books for popular titles	3.29	1.243	.001
The development of DRM has completely discouraged users of digital content from pirating unpermitted works	3.06	1.181	.002

Table 1.3 shows the cross tabulation between the respondent's computer literacy and whether DRM enabled publications can be plagiarized. This computer literacy was divided into beginners, average, above average and expert. From the table, 100% of the respondent with beginner computer literacy believed that DRM enabled publications cannot be plagiarized, 25% of the respondents with average computer literacy believed that DRM enabled publications cannot be

plagiarized, above average had 37.4% in agreement and finally experts had 66.3% of the respondents who agreed.

Table 1.3: Computer Literacy and DRM Enabled Publications Cannot be Plagiarized

		DRM enabled publications cannot be plagiarized					Total
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Computer Literacy	Beginner	0	1	0	0	0	1
		0%	100%	0%	0%	0%	100%
	Average	3	2	4	1	2	12
		25%	16.7%	33.3%	8.3%	16.7%	100%
	Above Average	1	1	8	5	1	16
		6.2%	6.2%	50%	31.2%	6.2%	100%
	Expert	0	0	1	1	1	3
		0%	0%	33.3%	33.3%	33.3%	100%
Total		4	4	13	7	4	32
		12.5%	12.5%	40.6%	21.9%	12.5%	100%

On awareness and the main benefit of DRM systems the findings showed that respondents agree that they prevent casual sharing at ($r=0.612^{**}$, $p<0.01$, $N=32$), awareness and main benefit of DRM systems is that they prevent casual sharing at ($r=0.558^{**}$, $p<0.01$, $N=32$), DRM as an effective check against piracy at ($r=0.715^{**}$, $p<0.01$, $N=32$) DRM is necessary to protect the sales of e-books for popular titles at ($r=0.284^{**}$, $p<0.01$, $N=32$) and the development of DRM has completely discouraged users of digital content from pirating unpermitted works at ($r=0.300^{**}$, $P<0.05$, $P=32$). Also the findings showed that DRM enabled publications cannot be plagiarized at ($r=148^{*}$, $p<0.05$, $N=32$).

Findings showed that e-books are easily downloadable by unauthorized users despite being locked with DRM software and despite the intended functionality of the DRM systems being protecting against plagiarism; According to the findings some DRM formats limit purchasers of digital content to a specific computer or device once purchased hence limited use, this is shown by

(r=0.457**, p<0.009, N=32); it is possible to take screenshots of a DRM-locked publication and convert the resulting image files to text at (r=0.482**, p<0.005, N=32) and finally it is possible to retype a DRM-enabled publication at (r=0.384*, p<0.03, N=32).

Table 1.4: Weaknesses of DRM

	Some commercial e-books & e-journals are easily downloadable by unauthorized users despite being locked with DRM software with intended functionality of protecting against plagiarism		
	Pearson Correlation	Sig. (2-tailed)	N
Some DRM formats limit purchasers of digital content to a specific computer or device once purchased hence limited use.	.457**	.009	32
It is possible to take screenshots of a DRM-locked publication and convert the resulting image files to text	.482**	.005	32
It is possible to retype a DRM-enabled publication	.384*	.030	32

Cross tabulation of Age Bracket and Main Benefit of DRM Systems

Table 1.5 illustrates the cross tabulation between age bracket of the respondents and main benefit of DRM systems is that they prevent casual sharing. From the table, the study reveals that the age group is divided into less than one year, 18-24 years, 25-30 years and 31-34 years and finally above 34 years. The table shows that over 50% of the respondents between the age bracket of 18 and 24 years agreed that the main benefit of DRM systems is that they prevent casual sharing, same to 36.4% of

the age between 25 and 30 years, over 70% of the age between 31 and 34 years and 42.9% of the age above 34years.

Table 1.5: Age Bracket and Main Benefit of DRM Systems

		main benefit of DRM systems is that they prevents casual sharing					Total
		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	
Age Bracket	18-24 Years	1	0	2	2	2	7
		14.3%	0.0%	28.6%	28.6%	28.6%	100.0%
	25-30 Years	0	2	5	4	0	11
		0.0%	18.2%	45.5%	36.4%	0.0%	100.0%
	31-34 Years	0	2	0	4	1	7
		0.0%	28.6%	0.0%	57.1%	14.3%	100.0%
	Above 34 Years	1	2	1	2	1	7
		14.3%	28.6%	14.3%	28.6%	14.3%	100.0%
Total		2	6	8	12	4	32
		6.2%	18.8%	25.0%	37.5%	12.5%	100.0%

Correlation of Awareness and Functionality of DRM system

Table 1.6 shows the relationship between awareness and functionality of the DRM systems in protecting against plagiarism and piracy of digital content. The table shows that awareness and main benefit of DRM systems is that they prevents casual sharing at ($r=0.612^{**}$, $p<0.01$, $N=32$), awareness and main benefit of DRM systems is that they prevents casual sharing at ($r=0.558^{**}$, $p<0.01$, $N=32$), DRM as an effective check against piracy at ($r=0.715^{**}$, $p<0.01$, $N=32$) DRM is necessary to protect the sales of e-books for popular titles at ($r=0.284^{**}$, $p<0.01$, $N=32$) and The development of DRM has completely discouraged users of digital content from pirating unpermitted works at ($r=0.300^{**}$, $P<0.05$, $P=32$). Also the table shows that awareness and DRM enabled publications cannot be plagiarized at ($r=148^{*}$, $p<0.05$, $N=32$).

Table 1.6: Awareness and Functionality of DRM system

	I am aware of DRM systems		
	Pearson Correlation	Sig. (2-tailed)	N
Main benefit of DRM systems is that they prevent casual sharing	. 612**	.000	32
DRM is necessary to protect the sales of e-books for popular titles	.558**	.001	32
DRM is an effective check against piracy	.715**	.006	32
DRM is necessary to protect the sales of e-books for popular titles?	.284**	.115	32
DRM enabled publications cannot be plagiarized	.148*	.418	32
The development of DRM has completely discouraged users of digital content from pirating unpermitted works	.300**	.095	32

DRM Systems and Fair Use of Information

The study was aimed at determining whether DRM systems limit fair use of information. Using coefficient of variation (C.V), the factors were categorized into three categories as the highly significant factors, moderately significant factors and the lowly significant factors. From the study, the lower the coefficient of variation value, the higher the level of significance.

Table 1.7 shows the highly significant factors that affect DRM system and the fair use of information. From the table, it is well shown that DRM prevents fair use such as sharing articles and other information from e-resources with colleagues, DRM bars fair use of information since it forces users to access material in small chunks, DRM does not incorporate assistive technology for users with disabilities and fair use and access to data encumbered with DRM is often limited by the lifespan or business decisions of vendors of the information material. The study also reveals that DRM does not take into account the legal concerns of the right holders, DRM functionalities that prevent users from printing legally acquired material, prevent fair use of information and finally DRM restrictions are enforced by computers that cannot serve up case-by-case judgments

thus may easily prevent fair use of information.

Table 1.7: Highly Significant

	Mean	Std. Deviation	C.V
DRM prevents fair use such as sharing articles and other information from e-resources with colleagues	3.28	1.276	.002
DRM bars fair use of information since it forces users to access material in small chunks, or disables standard context menus to prevent use of the clipboard copy feature	2.97	1.231	.004
DRM does not incorporate assistive technology for users with disabilities	3.25	1.107	.015
Fair use and access to data encumbered with DRM is often limited by the lifespan or business decisions of vendors of the information material	3.03	1.177	.061
DRM does not take into account the legal concerns of the right holders	3.12	1.185	.066
DRM functionalities that prevent users from printing legally acquired material, prevent fair use of information	2.87	1.231	.093
DRM restrictions are enforced by computers that cannot serve up case-by-case judgments thus may easily prevent fair use of information.	3.03	1.307	.093

Table 1.8 shows the moderately significant perception on whether DRM systems limit fair use of information. From the table, it is well elaborated that DRM systems do not embrace open access policy thus preventing knowledge enrichment, DRM systems should allow access to information in different formats, the degree of control that DRM enacts upon digital works is far greater than the equivalent restrictions that copyright law enacts over physical works, DRM lacks favorable

copyright laws that enhance access to information with intention of fair use and finally DRM treats users as attackers on their own computer, blocking uses of information undesired by the provider, regardless of whether the information object is legally owned and whether the use in question is otherwise legally permissible.

Table 1.8: Moderate Significant Factors

	Mean	Std. Deviation	C.V
DRM systems do not embrace open access policy thus preventing knowledge enrichment	2.72	1.250	.223
DRM systems should allow access to information in different formats	3.75	1.136	.221
The degree of control that DRM enacts upon digital works is far greater than the equivalent restrictions that copyright law enacts over physical works.	3.31	1.176	.237
DRM lacks favorable copyright laws that enhance access to information with intention of fair use	3.19	1.256	.275
DRM treats users as attackers on their own computer, blocking uses of information undesired by the provider, regardless of whether the information object is legally owned & whether the use is legally permissible.	3.41	1.132	.279

Table 1.9 depicts the lowly significant perception on whether DRM systems limit fair use of information. From the table, a library user with a physical book can use their own judgment to determine whether photocopying some or all of it is reasonable and defensible as fair use. If that same user has an electronic edition of that same title, the publisher may use DRM to remove the user's determination from the equation thus preventing fair use and all information resources that are provided directly or indirectly by the library, regardless of technology, format, or methods of delivery, should be readily, equally, and equitably accessible to all library users.

Table 1.9: Low Significant Factors

	Mean	Std. Deviation	C.V
A library user with a physical book can use their own judgment to determine whether photocopying some or all of it is reasonable and defensible as fair use. If that same user has an electronic edition of that same title, the publisher may use DRM to remove the user's determination from the equation thus preventing fair use	3.75	1.164	.651
All information resources that are provided directly or indirectly by the library, regardless of technology, format, or methods of delivery, should be readily, equally, and equitably accessible to all library users	3.97	1.092	.461

Conclusion

The study resulted in several conclusions. Based on the finding that DRM systems protect against plagiarism and piracy of digital content, the study concluded that Librarians generally perceive DRM systems as important in the protection of digital content against plagiarism. This established that DRM ensures that Authors of original works get 100% of their royalties and that the level of plagiarism of scholarly works into projects and term papers is reduced. It is for this finding that the study concludes that DRM technology is most effective in preventing copyright violation and that it has encouraged more authors to publish works because of lack of fear of plagiarism and piracy.

With the findings on whether DRM systems limit fair use of information, the study concludes that, indeed DRM systems limit fair use of information. The study points out that DRM systems are now well adopted globally. This is why it is vital for users to be informed of their rights, privileges and obligations concerning these technologies. The study's conclusions provide a broad overview on the importance of DRM systems in safeguarding against plagiarism and piracy of digital content. It has been established that Digital Rights Management technology is inevitable in the quest of preventing copyright infringement. Further, the technical side of the problem is compared to the legal aspects, underlining that copyright protection laws and DRM technologies are different

and that often, the DRM technologies exceed the legal rights and obligations they have been given by law.

With regard to perceptions of respondents on the possible challenges of using DRM systems in protecting digital content, the study concludes that authors have challenges with DRM. This study also concludes that according to Librarians, some DRM formats limit purchasers of digital content to a specific computer or device once purchased hence limited use and that there is room for some users who may want to use the material but do not want to purchase to hack yet there are no consistent and stiff penalties to hackers of DRM, therefore drawing the conclusion that DRM technology has its disadvantages, primarily for final users, but not only, and suggests that an alternative, user friendly solution to Plagiarism should be found.

Recommendations

From the Literature review, the findings and conclusions the study established that there are some countries that promote the use of DRM system such as the United States whereas countries like France believe that the use of DRM restricts users and it doesn't promote competitive practices. It is therefore this study's recommendation that globally acceptable policies that will cut across all countries be put in place to avoid the differences in the perception of the users on DRM systems. Although the publishing industry is considered to be the most established of all creative industries, where entry barriers are low, it still requires caution concerning its importance to the economic, social and cultural contributions to a country. Book publishing industries flourish best beyond borders of traditional centers of learning when they become a non-luxurious industry but a welfare-enhancing industry. Governments must come up with the policies and regulations that are to guide the DRM technology in ensuring that users get access to information and the authors in return get their dues. DRM technology is primarily organized around a core DRM model, in which the resource, the rights owner and the user are all entities of equal importance and in which all three entities engage with the usage rights in a use event. The aim is to manage appropriate use of a rights-protected resource within a DRM framework, against this background, this study recommends that policies be amended that once Libraries purchase the Digital content, they should be allowed to freely without barriers and restrictions use and store so that this will enhance the access and sharing of e-books within the Library.

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