

Intellectual Property and Copyright Laws and Their Impact on Digital Resources in Jordan

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Abstract

There are many obstacles and problems hindering digital resources in libraries according to librarians and administrators. These problems affect global economy, in general, and Jordanian economy, in particular. Piracy effectively destroys the creative initiative of Jordanian inventors and scientists. The international copyright laws, including Jordanian legislation provide Intellectual property rights holders with a great deal of protection. This research demonstrates at the importance of intellectual property and copyright laws in Jordan and deals with the international conventions on intellectual property and signed by Jordan. Finally, the research proposes a number of recommendations on how Jordan can combat problems and improves the enforcement of IPR legislations in the country.

Keywords: Intellectual Property, copyright, Jordan, Digital Resources, Library, piracy.

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1. Introduction

The widespread use of computer networks, and the open access to resource materials online and the global reach of the World Wide Web have added to the information sector's production of an abundance of information in digital form, as well as offering ease of access to it. Creating, publishing, distributing, using, and reusing information have become many times easier and faster in the past decade. But that can also bring to those who take advantage of the properties of digital information to copy, distribute, and use information illegally.

Migrating traditional print medium such as books, journals, magazines and other library resources into digital form for the purpose of easy access on the Internet opens them up to a lot of unauthorized access. The nature of digital resources makes them vulnerable to various types of attacks. Unauthorized duplication of digital resources undermines the value and integrity of digital resource, threatening to hinder technology innovation and reduce economic opportunities for authors and other copyright owners. Protecting resource materials on the internet not only open new market opportunities by allowing authors and developers distribute evaluation products freely, it also safeguard the efforts of the authors and encourage advancement in intellectual property development.¹

Intellectual property refers to rights in creations of the human mind which arise under the laws of patents, copyrights, trademarks, trade secrets, unfair competition and related laws. Copyright laws encourage the creation of literary works, computer programs, artistic works, and expressions of national culture.²

Intellectual property rights are the legal rights given to creators of intellectual property. Intellectual property rights usually give the creator of intellectual property the right to exclude others from exploiting the creation for a defined period of time. The protection of intellectual property rights contributes significantly to technological progress, competitiveness of businesses and our country's well-being.³

Intellectual property refers to creations of the mind: inventions, literary and artistic works, and symbols, names, and images used in commerce. Intellectual property is divided into two categories: first, Industrial Property

includes patents for inventions, trademarks, industrial designs and geographical indications. Second, Copyright includes literary works such as novels, poems and plays, films, musical works, artistic works such as drawings, paintings, photographs and sculptures, and architectural designs. Rights related to copyright include those of performing artists in their performances, producers of phonograms, and those of broadcasters in their radio and television programs. Intellectual property rights are like any other property rights – they allow the creator, or owner, of a patent, trademark, or copyright to benefit from his or her own work or investment.⁴

2. Research Questions and Study Objectives:

The purpose of this study is to investigate the degree of applying copyrights and intellectual property laws in libraries and their impact on digital resources in Jordan, and to discover obstacles and problems hindering this application and their solutions. This research is very important as well when taking into account that libraries in Jordan suffer from the rejection of the Jordanian authors to have their works available for public because of their fear from the waste of their rights, as they believe that they have no copyrights or intellectual property laws or not having these laws applied.

Research Questions:

What is the status quo of applying intellectual property and copyrights laws related to digital resources in libraries in Jordan according to librarians and administrators?

In which ways intellectual property and copyright laws related to digital resources affect libraries in Jordan according to librarians and administrators?

What are the problems and obstacles of applying properties and copyrights related to digital resources in libraries in Jordan according to librarians and administrators?

3. Background and Problem Statements:

3.1 Digital resources in libraries

Access to information is essential in a democratic society. Public health, economy and public policy all depend on access to and use of information; including copyrighted works.⁵ Digital resources are electronic equivalents to paper collections of records. It is an organized collection of electronic information disseminated to a designated community through network technologies providing easy access to data, (or collections stored in digital formats and accessible by computers⁵). Digital resources present an attractive alternative to the paper-based collections, it is a rich collection of archival quality information which may include video and audio tapes, disks, printed books, magazines, periodicals, reports and newspapers.⁶ Provided that a global secure network can be established, open access to digital resources hold the potential of vastly simplifying the process of providing access to timely and complete collections of records made available to the public.⁷

In the past few years, procedures for digitizing books at high speed and comparatively low cost have improved considerably with the result that it is now possible to plan the digitization of millions of books per year for creating digital resources.⁸ Essential goal of digital resources is convenient access to local and remote information, without regard for its location.⁹ Libraries aim at making digital information resources easier to use in an online environment. It builds on rich heritage combining multicultural and multilingual environments with technological advances and new business models. They can consist of material that has been digitized, such as digital copies of books and other physical material from libraries and archives. Alternatively, they can be based on information originally produced in digital format. This is increasingly the case in the area of scientific information, where digital publications and enormous quantities of information are stored in digital repositories.¹⁰

A significant portion of the digital repository literature demonstrates a justified concern with copyright laws and other aspects of intellectual property rights, such as moral rights and database rights.¹¹ The republication of material on the Web by libraries with the open access may require permission from rights holders, and there is a conflict of interest between them and publishers who may wish to create Web versions of their content

for commercial purposes.¹² Open access refers to works that are created with no expectation of direct monetary return and made available at no cost to the reader for purposes of education and research. Open access would permit users to read, download, copy, distribute, print, search, or link to the full texts of works, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers.¹³ But this ease of access also enables unauthorized usage of resource materials.¹⁴

Authors own the original copyright in their works. In the process of publishing, authors can transfer to publishers the right for publishers to post the work freely on the Web, or authors can retain the right to post their own work on institutional or disciplinary servers. Authors, however, retain control over the integrity of their work and have the right to be properly acknowledged and cited.¹⁵ At present, there is little experience with digital preservation, the legal framework is evolving, resources are scarce and the outcome of preservation efforts is uncertain. The problem deserves to be urgently addressed both by politicians and by the institutions most concerned. Its impact goes far beyond the realm of libraries and archives and concerns all organizations producing digital information and interested in maintaining its availability.¹⁶

Some people have criticized that libraries containing digital resources are hampered by works cannot be shared over different periods of time in the manner of a traditional library. The republication of material on the Web by libraries may require permission from rights holders.¹⁷ which increases outlays on limited budget libraries especially in Jordan. How to bring more in-copyright works online remains today a main challenge for libraries in Jordan, and how the legal framework for digitizing need to be to balance the principle of access to information with the rights of creators to be recognized and rewarded for their work and creativity.¹⁸

There is a dilution of responsibility that occurs as a result of the spread-out nature of digital resources. Complex intellectual property matters may become involved since digital libraries work to digitize out-of-copyright works and make them freely available to the public. Some libraries acquire a license to "lend out" its resources. This may involve the restriction of lending

out only one copy at a time for each license, and applying a system of digital rights management for this purpose.¹⁹

3.2 Intellectual property

Intellectual property is the lifeblood of progress in the sciences and arts. New knowledge is developed from existing information. Authors build on the intellectual products of others to create new works. Intellectual property rights promote the greater good. Property protections provide incentives for the creation of new ideas and inventions.¹⁹ In Jordan copyright is intended to serve the public interest by encouraging the advancement of knowledge while protecting the rights of authors and copyright owners. It is meant to balance the competing interests of creators, publishers, and users, not stifle the free flow of information. Copyright laws encourage the creation of literary works, computer programs, artistic works, and expressions of national culture.²⁰

In Jordan a possible threat to open access to information arises because of intellectual property concerns. Existing intellectual property and copyright law provides economic and legal protection to publishers of physical artifacts. "Fair use" (allowing libraries to make single copies of portions of books or journals) and "first-sale" rights (allowing individuals to lend or resell copies of books they have purchased) have promoted greater access to physical artifacts than might be possible otherwise, but these notions are only indirectly applicable to networked information. A recent National Research Council report states: ²¹ "The information infrastructure offers both promise and peril: promise in the form of extraordinary ease of access to a vast array of information, and peril from opportunities both for information to be reproduced inappropriately and for information access to be controlled in new and problematic ways". There are no straightforward answers to the enforcement of intellectual property rights for information available in digital form.

Copyright laws encourage the creation of literary works, computer programs, artistic works, and expressions of national culture which enhance development of Jordan, and promote economic growth. Property protections provide incentives for the creation of new ideas and inventions.²²

The importance of intellectual property was first recognized in the Paris Convention for the Protection of Industrial Property in 1883 and the Berne Convention for the Protection of Literary and Artistic Works in 1886. Both treaties are administered by the World Intellectual Property Organization (WIPO).²³

Taylor²⁴ states that Congress shall have the following power: "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries". This enumerated power provides authorization for copyright and patent laws in the United States.

There are four general types of intellectual property law: copyright, patent, trademark, and trade secrets. The various types of intellectual property law receive different legal treatment. They also face oversight from different government agencies. The following sections briefly address the various types of intellectual property law:²⁵

1- Patents: are property rights given to the developer of an invention. Patents are issued by the United States Patent and Trademark Office (USPTO).

2- Trademarks: are words, or symbols that indicate the provider of a good or service. It is used to distinguish between providers.

3- Trade secrets: are the last intellectual property categories. Trade secrets are information that gives its holder a competitive advantage in the marketplace. Examples of trade secrets include formulas, patterns, processes, techniques, or procedures

4- Copyright: refers to the legal protection of original works of authorship. Works covered by copyright include, but are not limited to: novels, poems, plays, reference works, newspapers, computer programs, databases, films, musical compositions, choreography, paintings, drawings, photographs, sculpture, architecture, advertisements, maps, and technical drawings. Copyright does not cover the ideas expressed in such works. But it covers the way ideas are expressed. Copyright protections are automatically provided to the author of both published and unpublished works at the moment they

are affixed in a tangible medium. The copyright holder has the exclusive right to the following with his/her work:

1. To reproduce the work
2. To prepare derivative works
3. To sell, lend, distribute copies or transfer ownership
4. To perform the work publicly
5. To display the copyrighted work publicly

This research concerns at this type of intellectual property. Copyright is the body of laws which grants authors, artists and other creators protection for their literary and artistic creations, which are generally referred to as "works". A closely associated field of rights related to copyright is "related rights", which provides rights similar or identical to those of copyright, although sometimes more limited and of shorter duration. The beneficiaries of related rights are: performers (such as actors and musicians) in their performances; producers of sound recordings (for example, cassette recordings and compact discs) in their recordings; and broadcasting organizations in their radio and television programs. 26

3.3 World Intellectual Property Organization (WIPO)

World Intellectual Property Organization (WIPO) established in 1970, it is an international organization dedicated to helping to ensure that the rights of creators and owners of intellectual property are protected worldwide and that inventors and authors are thus recognized and rewarded for their ingenuity. This international protection acts as a spur to human creativity, pushing forward the boundaries of science and technology and enriching the world of literature and the arts. By providing a stable environment for the marketing of intellectual property products, it also oils the wheels of international trade. WIPO works closely with its Member States and other constituents to ensure that the intellectual property system remains a supple and adaptable tool for prosperity and well-being, crafted to help realize the full potential of intellectual property for present and future generations. 27

3.4 Possible Threats to the Intellectual Properties Contained in digital Resources

There are three major types of attack and three corresponding technical defenses on the intellectual property contained in digital resources on the Internet. These attacks are software tampering, reverse engineering and unauthorized copying.²⁸

Software Tampering: Software tampering remains a threat induced by advancements in Information technology application and products. Many mobile agents and e-commerce application must contain encryption keys or other secret information. Hackers who are able to extract, modify or otherwise tamper with this information can incur significant financial losses to the intellectual property owner. The defense against software tampering is tamper proofing so that unauthorized modification to software (for example to remove a watermark) will result in nonfunctional codes.

Reverse Engineering of Software Products: The Second technique to be considered is reverse engineering. This is a scenario in which a very valuable piece of code is extracted from an application and incorporated into a competitor's code. Such threats have recently become more of a concern since, more and more programs are being distributed in easily decomposable formats rather than in the primitive or native binary codes. Obfuscation, a process that renders software unintelligible but still functional is a defense against reverse engineering.

Piracy: Among the various threats against which digital must be protected, piracy ranks highest in terms of its impact on developments in information technology and the global economic at large. The term "software piracy" covers such activities as the unauthorized copying of resource, counterfeiting and distributing resource illegally. It is important to understand the different resource piracy channels, not just to comply with the law but also to protect against bigger economic problems like lost revenue and lost jobs. The survival of the intellectual properties on the web is paramount to the survival of modern businesses, IT activities and the Internet as a whole. Many users have found themselves caught in the piracy trap, unaware they were doing anything illegal. It is worth explaining ways one can intentionally or unintentionally pirate²⁹:

Unrestricted client access: Unrestricted client access piracy occurs when a copy of a digital resource is copied onto an library's servers and the library's network "clients" are allowed to freely access the resource in violation of the terms of the license agreement. This is a violation when the library has a "single instance" license that permits installation of the digital resources onto a single computer, rather than a client-server license that allows concurrent server-based network access to the resource. A violation also occurs when the library has a client-server license; the library is not enforcing user restrictions outlined in the license.

Commercial use of noncommercial resource: Using educational or other commercial-use-restricted resource in violation of the resource license is a form of resource piracy. Companies often market special noncommercial resources aimed at a particular customer.

Counterfeiting: Counterfeiting is the duplication and sale of unauthorized copies of resource in such a manner as to try to pass off the illegal copy as if it were a legitimate copy produced or authorized by the legal publisher.

CD-R piracy: CD-R piracy is the illegal copying of resource using CD-R recording technology. This form of piracy occurs when a person obtains a copy of a resource and makes a copy or copies and redistributes them to friends or for re-sale.

Internet piracy: Internet piracy is the uploading of commercial resource (i.e., resource that is not freeware or public domain) on to the Internet for anyone to copy or copying commercial resource from any of these services. Internet piracy also includes making available or offering for sale pirated resource over the Internet.

There are a number of forces acting to increase piracy around the globe. The unauthorized distribution of pirated resources over the internet, and peer to peer networks present a new and much more complicated threat to resources producers. Online piracy is facilitated by continuous increases in

transmission speeds, since faster connections enable users to send and download larger files more quickly, along with the absence of strong online copyright laws and enforcement of laws. In addition, the economic slowdown in some regions, the increase in the number of new users, mostly consumers and small businesses, in emerging markets has contributed to increase piracy.

3.5 Jordanian intellectual property rights legislation:

Intellectual property in Jordan benefited reforms largely from the country's economy. Copyrights in Jordan are registered in the National Library and, also patents and trademarks are registered with the Registrar of Patents and Trademarks that are part of the Ministry of Industry and Trade in Jordan. Jordan has signed the Patent Cooperation Treaty and the Protocol relating to Madrid Agreement Concerning the Registration of Marks, but ratification was still imminent, until early in 2005. Jordan also joined the treaty to the World Organization for property rights and copyrights, achievements and photography. 30

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Unfair competition law, trade secrets, No. 15 of 2000

Patents Act No. 32 of 1999, as amended.

Law of Geographical Indications No. 8 for the year 2000

Trademark Law No. 33 of 1952, as amended

Copyright Act No. 22 of 1992, as amended,

Protection schemes designs of integrated circuits No. 10 of 2000

Law on the Protection of New Varieties of Plants No. 24 of 2000

Law of industrial designs and models No. 14 of 2000

Trade Names Act No. 22 of 2003

Marks Act No. 19 of goods for the year 1953

The government has taken substantive actions to alleviate resource piracy by addressing the problem directly through the National Library, which is entrusted by law with responsibility of IPR in the country, to combat piracy whether it is a movie, music, literature, CD-R recording or computer software. The National Library frequently conducts raids on computer show vendors and takes legal actions against violators. A number of legal cases were filed in the Jordanian courts and software retailers were fined. Yet there is still room for improvement which requires stronger enforcement of IPR legislation in the country.

The international copyright laws, including Jordanian legislation provide copyright holders with a great deal of protection, but these laws alone cannot protect intellectual property rights in goods once they have been exported to other markets. A significant body of domestic and international law as well as an active group of Jordanian non-governmental organizations and governmental agencies has been set in place to help protect the intellectual property rights in the country. It is essential for software developers and digital resources to become familiar with these laws and organizations.³¹

Intellectual property rights piracy effectively destroys the creative initiative of Jordanian inventors and scientists. It also hurts the bilateral relations with many countries, especially the United States. Therefore, and since the early 1970s, the government of Jordan has gradually made progress in IPR protection. In Jordan, digital resources is protected by the Copyright Law No (22) of 1992, which has been amended several times over the past decade to ensure that Jordan will comply with international requirements and meet national needs. The law was recently amended and published as the Copyright Law No (9) of 2005.³²

The copyright law provides the author with the following forms of protection; the law protects the Author's copyright, even if the computer software digital resource wasn't registered at the Jordan National Library. the author has the only right to:³³

Put his/her name on all copies of the product that are distributed to the public,

Release his/her product to the public and determine the time and means of distribution,

Make changes to the product,

Defend the product against any attack that might jeopardize the reputation of the Author, and

Withdraw the product from the market if good reasons require that. The Author must compensate financially any person who purchased the right of his/her product exploitation.

Copyright law follows IP products into the marketplace and promotes the continued dissemination of information. Licensing constitutes a limited transfer of rights to use an item on stated terms and conditions. Licenses are governed by contract law and, as such, are essentially a private agreement between two parties. That agreement can involve a wide range of terms and conditions and need not incorporate any public policy considerations, beyond some basic limits on what constitutes an enforceable contract. Contracting has benefits; for example, it may enable distribution of some information products that would otherwise not come to market. But there are also drawbacks, particularly the possibility that the terms of a license may be far more restrictive than the provisions for access normally granted under copyright's first-sale doctrine. As far as digitized contents are concerned, to the extent that highly restrictive licensing replaces the sale of copyrighted works, society may be the loser, especially if the public policy goals embodied in copyright law are omitted from contracts.

4. Conclusion And Recommendations

Combating piracy threat requires combined efforts of policy-makers, software developers and publishers, businesses, journalists, domestic and international bodies, an active group of nongovernmental organizations as

well as and concerned individuals. As long as digital resources piracy exists, there will be fewer jobs, less research and development and increased costs in all sectors.

Changing technology on libraries and other information resources on the internet and concludes that deliberate effort must be made to beef up intellectual property law in the light of current storage innovations in order to cater for the subtleties introduced by the impact of modern storage technology. Findings of the study are expected to help developing guidelines for intellectual property & copy rights laws and their impacts on libraries in Jordan

The following suggestions are recommended:

Review and amend existing IPR related legislation to ensure better enforcement in the country.

Provide Jordan's National Library with adequate financial and technical resources to ensure improved law enforcement.

Provide adequate human resources, specialized in IPR and copyright It related issues, such as e – security to ensure adequate enforcement.

Encourage universities and research centers to conduct research on digital resources piracy in Jordan to identify appropriate preventative actions and remedies.

Continue and enhance the support to the awareness campaigns about IPR and copyright conducted by JIPA and other organizations. Specific awareness seminars must target Software developers, and mainly exporters to educate them about these laws and resources and how to utilize them to protect their intellectual property interests domestically and abroad.

Build the capacity of Jordanian judges to become capable of handling digital resources piracy cases.

Coordinate with international organizations to learn from developing countries' experiences in combating digital resources piracy.

Develop an integrated strategy for intellectual property rights look to the future and deal with scientific and technological development

Develop criteria to assess the damage caused by the infringement of intellectual property rights

Initiate the development of a national strategy for intellectual property and digital to initiate studies of the economic dimension of the digital intellectual property and its impact on the national economy

To find ways to develop institutions of intellectual property rights and the national offices of intellectual property to keep up with the information revolution and the enormous development in the use of computing and digital world.

the establishment of arbitration centers specialized in settling intellectual property disputes

support for the institutions of national intellectual property protection to become efficient foreign rivals

5. References:

Longe, O.B. Digitized Storage of Library and other Information Resources on the Internet: Implications for Intellectual Property Protection. European Journal of Scientific Research. ISSN 1450-216X Vol.22 No.1 (2008), pp.58-65

<http://www.eurojournals.com/ejsr.htm>.

Ronald L. Schlicher, 2007. It's Everyone's Problem: Protecting Intellectual Property. Turkey: Kibris Newspaper, p

World Intellectual Property Organization, 2005. What is Intellectual Property? WIPO publication No .450(E) .New York :WIPO ,p23

<http://www.wipo.int>

L. Candela et al.: The DELOS Digital Library Reference Model – Foundations for Digital Libraries. Version 0.98, December 2007,p17

http://www.delos.info/files/pdf/ReferenceModel/DELOS_DLReferenceModel

S. B. Ghosh and Anup Kumar Das.Open access and institutional repositories – a developing country perspective: a case study of India : World Library And Information Congress: 72nd IFLA General Conference And Council 20-24 August 2006, Seoul, Korea. <http://www.ifla.org/IV/ifla72/index.htm>

Greenstein, Daniel I., Thorin, Suzanne E., (2002). The Digital Library: A Biography.Washington: Digital Library Federation, p.8<http://www.clir.org/PUBS/reports/pub109/pub109.pdf>. Accessed April, 25, 2010

Kahn, R. E., & Cerf, V. G. (1988). The Digital Library Project Volume I: The World of Knowbots, (DRAFT): An Open Architecture For a Digital Library System and a Plan For Its Development. Reston, VA: Corporation for National Research Initiatives.

World Intellectual Property Organization,

Committee on Institutional Cooperation: Partnership announced between CIC and Google, 6 June 2007, accessed 25 April 2010

Kahn, R. E., & Cerf, V. G. (1988). The Digital Library Project Volume I: The World of Knowbots, (DRAFT): An Open Architecture For a Digital Library System and a Plan For Its Development. Reston, VA: Corporation for National Research Initiatives. P3

Commission of the European Communities.2005.Digital libraries. Brussels: the community, p3.

Committee on Institutional Cooperation: Partnership announced between CIC and Google, 6 June 2007, accessed 25 April 2010

Gadd, E., Oppenheim, C. & Proberts, S. (2003a). RoMEO studies I: the impact of copyright ownership on academic author self-archiving. Journal of Documentation, 53(3), 243-277

Open Access. 2004. Association of research Libraries. Office of Scholarly Communication

Longe, O.B...etal,2008. Digitized Storage of Library and other Information Resources on the Internet: Implications for Intellectual Property Protection. European Journal of Scientific Research. ISSN 1450-216X Vol.22 No.1, pp.58-65

<http://www.eurojournals.com/ejsr.htm>

Open Access. 2004. Association of research Libraries. Office of Scholarly Communication

Commission of the European Communities.2005.Digital libraries. Brussels: the community

Digital library – Wikipedia, the free encyclopedia

Access date : 6/6/2010 . <http://www.wikipedia>

Wikipedia. Specific concerns may be found on the talk page. See Wikipedia's guide to writing better articles for suggestions. (May 2008)

Taylor, Jami Kathleen & Schaffer Henry E.,200.Intellectual Property: A Langure Mudule.

Digital library – Wikipedia, the free encyclopedia

Access date : 6/6/2010 . <http://www.wikipedia>.

Principles For Digital Library Development

World Intellectual Property Organization,2005 .What is Intellectual Property? WIPO publication No .450(E) .New York :WIPO ,p3

<http://www.wipo.int>

World Intellectual Property Organization, 2005. What is Intellectual Property? WIPO publication No. 450(E). New York: WIPO, p5

<http://www.wipo.int>ntoperty Organizatio

Taylor, Jami Kathleen, Schaffer, Henry E, 2007. Intellectual Property: A LANGURE Module

Taylor, Jami Kathleen, Schaffer, Henry E, 2007. Intellectual Property: A LANGURE Module

World Intellectual Property Organization, 200. What is Intellectual Property? WIPO publication No. 450(E). New York: WIPO, p19

<http://www.wipo.int>

Abbadi, Muhammad Yunus. Jordan's experience in the field of intellectual property: copyright protection. Jordan: The Ministry of Culture

Intellectual Property Laws. Low Researches, 2009

<http://www.tashreaat.com>

World Intellectual Property Organization, 2005. What is Intellectual Property? WIPO publication No. 450(E). New York: WIPO, p23

<http://www.wipo.int>

Saleh Al Sharari. Intellectual Property Rights Legislation and Computer Software Piracy in Jordan. Journal of Social Sciences 2 (1): 7-13, 2006. ISSN 1549-3652

Longe, O.B. Digitized Storage of Library and other Information Resources

on the Internet: Implications for Intellectual Property Protection. European Journal of Scientific Research. ISSN 1450-216X Vol.22 No.1 (2008), pp.58-65

<http://www.eurojournals.com/ejsr.htm>

Khudairi, Ghazi. Research & Development and intellectual property : Jordanian experience. Jordan : King Abdullah II Design and Development Center