THE STRATEGIC ACTION AGAINST THE PIRACY (STRAP) POLICY IN NIGERIA

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ABSTRACT

This paper is a study of Nigeria’s current anti-piracy copyright policy, the Strategic Action Against Piracy (STRAP) initiative. It examines the components of STRAP, the achievements recorded so far in its implementation, and the challenges mitigating against the full realization of the policy's laudable goals.

Introduction

The restoration of democratic governance in Nigeria in 1999 ushered in a civilian regime which had the reform of the national economy as one of its main priorities. Consequently, several bold steps were taken in the pursuit of this objective. Privatization and deregulation received a boost, while restrictive policies and laws on enterprises, which hitherto were the hallmarks of the Nigerian economy, were reviewed. This led to the opening up of the economy to greater foreign participation.¹

Empowerment programmes were also initiated to give the Nigerian business community a cutting edge on the international scene. One such programme was the National Economic Empowerment Development Strategy (NEEDS). The design of this programme was based on a vision of a Nigeria with a new set of values and principles that would facilitate the national goals of wealth creation, employment generation and poverty reduction.²

Realizing the need to key into the reform agenda and ensure that the copyright sector of the nation’s economy contributed to the ultimate goals of NEEDS, the Nigerian Copyright Commission³, (the Commission), carried out a careful study of the copyright environment in the country in 2004. Arising from the study was an alarming revelation that piracy⁴ has grown systematically into an

³ The Nigerian Copyright Commission was established in 1988 through Decree No. 47 that introduced a new legal regime of copyright in the country. The Commission is the sole government agency statutorily mandated with the responsibilities of promoting, administering and enforcing copyright in Nigeria. See Section 34 of the Copyright Act Cap. C28 Laws of the Federation of Nigeria, 2004.
⁴ Piracy is the illegal reproduction of copyright works, such as books, phonograms, paintings, architectural drawings, photographs, films, broadcasts, computer software etc. Note that the distribution, exhibition and/or circulation of illegal reproductions also constitute piracy. Piracy is a criminal act under Nigerian Copyright law. See J. O. Asein, 'Protection of computer software under Nigeria copyright law' in J. O.
organized industry in Nigeria. This organized piracy cuts across virtually all aspects of the copyright industry, claiming more than 90 per cent of the Nigerian market.\(^5\) Nine out of ten CDs, VCDs, DVDs, software, books and other copyrighted works were pirated products. This results in an annual loss of more than ₦100 billion (approximately US$650 million).\(^6\) This represents lost investment in the economy, forfeited remuneration to right owners, unrealized tax revenues that could have accrued to government for the development of the economy, and the frustration of incentives to professionals working in copyright-based industries.\(^7\) In essence, the report identified piracy as the greatest threat to the Nigerian copyright-based industries.

It was in response to this alarming information that the Strategic Action Against Piracy (STRAP) initiative was conceptualized by the Commission in August, 2004. It represents the Government’s efforts to bring about a significant reduction in the level of piracy, and to ensure that the copyright system makes a significant contribution to Nigeria’s economic development.\(^8\) This paper examines the STRAP initiative.

The Strategic Action Against the Piracy (STRAP) Initiative

STRAP was formally launched on 3 May 2005 by former President Olusegun Obasanjo who described the negative effects of piracy on Nigeria as follows:

… the damaging effects of piracy are visible all around us: the waning zeal for creativity; dearth of well-researched textbooks and reading materials in the education sector; the diminishing of artistic and literary quality of our stage performances; and the increasing colourless and, the uninspiring products in the visual arts. Expectedly, the investors are very wary, and the younger generation is not encouraged to pursue careers in the arts and the entertainment industry. We are all confronted by an attack on our culture and future as a people. We are faced with the reality of a declining economic resource and a source of pride as a nation.

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Asein and E. S. Nwauches (eds.), *A Decade of Copyright Law in Nigeria,* (Abuja: Nigerian Copyright Commission, 2002), page 198.


\(^6\) 'Confronting Piracy through STRAP Initiative’ in *1\(^{st}\) October 1960-2006: The Journey so Far,* (A special independence anniversary publication of Folio Communications Limited, 2006), page 58.

\(^7\) Causes and motivations for piracy are myriad. One such reason is the fact that despite the apparent long history of piracy in Nigeria, there has been no concerted effort until recent times to track and check it. Another factor is that the Nigerian Copyright Commission at inception was established essentially as an administrative agency and not an enforcement agency. By the time the mandate of the Commission was expanded to enforcement in the mid-1990s, no institutional structure was put in place for enforcement. Others are scarcity and the high cost of genuine products, abuse of digital technology, inadequate enforcement of intellectual property laws, poverty, laziness, inadequate awareness about copyright piracy and its ills, poor distribution networks of needed creative products, a slow judicial system, poor funding of regulatory agencies and the rancorous and uncooperative attitude of practitioners in the creative industries. See A. Adewopo, 'The Gain is More than the Pain: Cost Benefit Perspective of the Regulation and Control of Copyright-Based Industries in Nigeria’. Paper presented at the International Symposium on Economic Crimes 31 August-7 September 2008 at Jesus College, University of Cambridge, United Kingdom, page 6. See also B. Sodipo, 'Enabling an Effective Network for Combating the Menace of Piracy in Nigeria’. Paper presented at the National Copyright Summit, 24-25 October 2000 in Abuja, Nigeria.


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STRAP was designed as a multi-sectoral, public-private sector collaborative platform for strengthening copyright enforcement and action programmes tailored to address the needs of specific industries. It was therefore envisaged to be a proactive and dynamic agent of change that would positively impact the socio-economic and cultural heritage of the Nigerian people, while also securing the material interests of foreign investors. Under STRAP, the Commission plays the role of an enabler, facilitator and regulator through effective copyright administration, protection and enforcement. It does so in order to help the private sector grow, create jobs and generate wealth for the nation.\(^9\)

**Components of STRAP**

STRAP deploys three basic intervention components, namely: public 'enlightenment', proactive enforcement, and the administration of rights. Its core principles are to combat all forms of piracy and copyright abuses; to create a conducive environment for the management and exploitation of the gains of the copyright system; to facilitate the evolution of a suitable copyright environment, which will encourage foreign investors to explore the potential benefits of the country’s copyright-based industries; and to implement the 'restoration through awareness' campaign designed to bolster Nigeria’s image as a country that upholds the ideals of creativity and innovation.

**Public 'Enlightenment'**

It has been recognized that the lack of awareness of the legal and administrative dimensions of copyright created a major impediment to the development of a sound copyright system in Nigeria. It was on this basis that public enlightenment was incorporated as a core component of the STRAP initiative. This component is not only aimed at increasing the Nigerian’s awareness of copyright, the ills of piracy, and their obligations under the law. It also aims to re-orientate their mindset to playing an active role in the fight against piracy, and to encourage the integration of copyright and intellectual property perspectives into national development strategies. In this respect, the vehicle for the public enlightenment component of STRAP is an integrated media campaign tailored for different segments of Nigerians as a whole.\(^10\) This entails the strategic engagement of the public through the extensive use of endorsements by celebrities and influential people, such as traditional rulers, chiefs and religious leaders. Further, the initiative also provides for the creation of a platform that will secure public participation in deliberations on issues affecting the administration, enforcement and protection of copyright in Nigeria.

Other public engagement initiatives are building and managing networks of people that can be of great value in realizing the objectives of STRAP. These initiatives involve the mobilization of the media for effective coverage of the enforcement and administration of rights, setting up school and youth projects to engrain the basic tenets of copyright in Nigerian youth, and galvanizing consumer support and sympathy for the fight against piracy.

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\(^10\) The Commission has pursued this objective through publicity and advertising campaigns, jingles, announcements and interviews on television, radio, newspapers and magazines. Other means employed also include billboards erected in strategic locations across the country, posters and direct mails, STRAP campaign slogans, printing of T-Shirts, postcards, and stickers in the form of copyright warnings for use by right owners in their works, workshops, seminars, symposia, press releases, press briefings, road shows, special events and exhibitions. See STRAP Handbook, (Abuja: Nigerian Copyright Commission, 2005), page 28.
Proactive enforcement

In addition to being a central component of the Commission's statutory mandate, proactive enforcement is also a key aspect of STRAP because its operational mode easily elicits compliance in an environment plagued by piracy. The initiative's enforcement tools are meant to send a clear signal to pirates that the Government is determined to confront the scourge of piracy. These tools include anti-piracy raids, as well as the arrest and prosecution of pirates.

It is instructive to note that the enforcement component of STRAP is derived from the general enforcement powers that the Copyright Act confers on the Commission. The Act provides for the appointment of Copyright Inspectors who have powers similar to those of a police officer, but limited to handling copyright infringement cases. The Officers may investigate any complaint of piracy and arrest copyright offenders. They can also carry out inspections of any place allegedly used for piracy activities or the illegal production of copyrighted works. In addition, they have the authority to conduct raids, seize pirated materials, and prosecute suspected pirates in court.

To enhance the effectiveness of enforcement activities under STRAP, the Commission established inter-agency cooperation with other enforcement/regulatory agencies, such as the Nigerian Police and Custom Service. The underlying objective of enforcement activities is to escalate the anti-piracy raids to a level that those who deal in pirated works will voluntarily cease their activities in order to avoid the associated security and legal risks.

Administration of rights

Rights administration is one of the pillars of STRAP, and is crucial for the effective realization of the copyright system's underlying policy. Although the Commission is not empowered to manage any rights directly, it establishes the regulatory framework and guidelines that enable copyright owners to do so in a manner that would yield the required benefits. One such element of the framework is the Copyright Notification Scheme introduced in September 2005.

This scheme allows the author or rights holder of a copyrighted work to notify the Commission of this fact. This may be done by filling and returning the appropriate form. The essence of the scheme is to enable the Commission to create a database of authors and their works, and to provide prima facie evidence of the existence of the works submitted as well as the facts contained in the application.

It is instructive to note that Copyright Notification is a voluntary scheme, which is distinguished from a registration process in the sense that it confers no right beyond what the author enjoys under the Copyright Act. An important advantage of the scheme is that the database created will provide necessary rights management information, which, for example, could be used by the public in securing licences. In order to guard against fraudulent applications, it is a requirement of

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12 See Section 38(2) and (3) ibid.
13 Others include the Economic and Financial Crimes Commission, Nigerian Broadcasting Commission, the Standard Organization of Nigeria, and various right owners' associations.
15 Ibid.
16 Ibid., page 4.
the scheme for the applicant to declare the veracity of the facts stated in the application before a Commissioner of Oath. 

Other highly significant regulatory interventions of the Commission include the Copyright (Security Devices) Regulations 1999, the Copyright (Video Rental) Regulations 1999, and the Copyright (Optical Discs Plants) Regulations 2006.

Each of these regulations was designed to control certain practices in the copyright industry, and to curtail incidences of rights abuses. For instance, the Copyright (Security Devices) Regulations provide the framework for the enforcement of the compulsory use of holograms as anti-piracy devices. The hologram operates both as an enforcement device, as well as a rights administration mechanism. From the perspective of enforcement, the use of hologram facilitates easy identification of genuine copyright works. A sound recording or video film without the hologram stamp is prima facie presumed to be a pirated copy.

From the perspective of rights administration, the use of holograms offers a basis for accountability between producers of works and rights holders because production companies are obliged to maintain transparent records of their dealings. They must also submit periodic returns (records) to the Commission. Such records assist the right owners to ascertain the quantities of their works that have been put on sale, and also enable them to determine the royalties accruable to them. The use of holograms as a security label has been highly successful in other jurisdictions. As can be observed in Nigeria, this method is also popular with other industries such as the pharmaceutical sector.

Similarly, the Commission introduced the Video Rental Regulation in recognition of the fact that the most glaring form of exploitation of films in Nigeria was the unauthorized rental of movies by video rental outlets. The Regulation was intended to discourage the proliferation of illegal rental activities by establishing guidelines for the operation of rental outlets, which had to be accredited by the Commission. The essence of this requirement is to ensure that the Commission secures the undertaking of such outlets that they will operate within the confines of copyright laws.

This requirement also provides for the effective monitoring of the accredited outlets. Upon accreditation, the outlets are expected to rent out films that are produced in a format that is specifically designated for rentals. The release of films to rental outlets presupposes automatic consent granted by the producer for the production to be made available for rental. This obviates the need for producers of such films to grant specific licences to individuals who might want to use them for commercial purpose. The film made available for rental may however be released by the producer at a higher cost or under other terms as consideration for the rental.

Also, the regulation of the optical disc (CDs, DVDs, VCDs etc.) production plants became necessary to stem piracy from the point of production, and to increase the standard of record-keeping among persons engaged in the production of copyright works embedded in the discs. Till recently, piracy, both analogue and digital, has been fought through the traditional protections offered by

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17 Making false declaration on oath is a criminal offence in Nigeria.
18 See paragraph 1 of the Copyright (Security Devices) Regulations 1999.
copyright laws. These only protect content against unauthorized copying and distribution. Often, this creates difficulties as the manufacturing stage is left unregulated. This necessitated the introduction of the Copyright (Optical Discs Plants) Regulation, a new legal mechanism which was designed to stem piracy at the manufacturing stage.

The Regulation has facilitated the identification of these production plants for periodic inspection to ensure that the illegal reproduction of works is not occurring. It has also enabled the Commission to enforce its statutory duty\(^{21}\) by requiring these plants to maintain a register of all works they produce. These registers must show the name of the author, title of the work, year of production and quantity to be produced.

The Regulation empowers the Commission to monitor the operations of all local optical disc manufacturers and replicating plants, as well as the imports of such products with the aim of checking the rising tide of piracy in Nigeria. This enables the Commission to monitor and control the production, importation and export of optical discs, production parts, raw materials, and manufacturing equipment in Nigeria. Such monitoring is performed with the view of entrenching high standards of copyright practice in relevant industries.\(^{22}\)

Highlights of the Regulation include the mandatory Commission registration of persons and companies involved in manufacturing optical discs and production parts\(^{23}\), importers and exporters of optical disc duplicators\(^{24}\), as well as importers and exporters of optical discs and production parts.\(^{25}\) All registered persons are obliged to adapt and use the appropriate manufacturing code\(^{26}\) assigned by the Commission, and to keep samples and records relating to their machinery, raw materials\(^{27}\) and production. In addition, registered plants are obliged to file periodic returns as may be required. The plants must do so in the manner stipulated by the Commission, which must be notified of every instance of importation and exportation.

To enforce compliance with the guidelines, the Commission’s officials routinely make unscheduled inspections of the plants and business premises of the registrants. The registrants are obliged to cooperate with them and to provide unfettered access to their premises.\(^{28}\) Violation of the Regulation attracts penalties including the Commission's refusal to register an applicant, suspension of registration and prosecution for breach. Registration is for a period of a year, after which operators would apply for renewal.\(^{29}\) So far, 14 optical disc replicating plants and five mastering facilities have been registered.\(^{30}\) The hope is that the full implementation of the Regulation will minimize optical disc piracy in Nigeria.

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\(^{21}\) Section 14 of the Copyright Act.

\(^{22}\) See Guidelines for the Copyright (Optical Discs plants) Regulation 2006. (Abuja: Nigerian Copyright Commission, 2006), page 1. Note that the basis of the Regulation are the powers vested in the Commission under Section 45(4) of the Copyright Act ‘to make regulations specifying the conditions necessary for the operations of a business involving the production, public exhibition, hiring or rental of any work in which copyright subsists’.

\(^{23}\) Section 1(1) of the Copyright (Optical Discs Plants) Regulation 2006.

\(^{24}\) Section 3 ibid.

\(^{25}\) Section 2(1) ibid.

\(^{26}\) See Sections 4 and 5 ibid.

\(^{27}\) See Section 6 ibid.

\(^{28}\) See Section 9 ibid.

\(^{29}\) See Section 10 ibid.

\(^{30}\) This number is current as of October 2010. This fact was obtained from the Regulatory Department of the Nigerian Copyright Commission in Abuja.
An important achievement of the Optical Discs Plant’s Regulation is the introduction of mandatory inscription of a Source Identification (SID) Code on all optical discs produced in Nigeria. The SID code is a joint initiative between International Federation of Phonographic Industries (IFPI) and Phillips Consumers Electronics that holds the patents in the compact disc technology. The SID code is made up of characters, which may be numeric or alphabetical (or a combination of both). The code identifies the registered number of the Laser Beam Recorder used in making the stamper, or the registered number of the mould used to press the disc. Since its introduction in the mid-1990s, it has proven to be a useful tool in tracking and tracing the source of optical discs mastering and replications. It is expected that this new initiative will not only usher in a regime of transparency and best practices, but will also guarantee higher protection for all copyright works produced on optical discs in Nigeria.

Another important rights administration issue that has received tremendous attention under the STRAP initiative is the collective management organization. Collecting organizations are important vehicles for copyright administration. They facilitate the monitoring and collection of royalties on behalf of authors through the deployment of their wide networks. The regulation of collective administration has been one of the most challenging mandates of the Nigerian Copyright Commission. However the introduction of Copyright (Collective Management Organizations) Regulation 2007 and the decision of the Court of Appeal in Compact Disc Technologies Limited and Others v. Musical Copyright Society of Nigeria, has given the Commission the power to regulate effectively the collective management system in Nigeria for the benefit of Nigerian creators.

It is instructive to note that the Commission, in realization of the fact that the essence of the copyright law is to ensure that creators of creative works benefit from the fruit of their labour, has introduced the Copyright Litigation and Mediation Programme (CLAMP). Operating under the STRAP initiative, CLAMP serves as a dispute mediation mechanism for Nigeria’s copyright-based industries. The main objective of the programme is to encourage out-of-court settlements in copyright disputes, where it is considered that such action would leave the rights owner better off than they would be, if they pursued the long, expensive and often tortuous process of litigation. This, however,

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31 IFPI represents the interest of producers of phonograms in the music and film industries globally. It collaborates with national associations in the two industries to articulate practical measures for the control of piracy and other intellectual property abuses. The Nigerian Copyright Commission has a standing arrangement with IFPI on the implementation of the SID code.


33 The system of collective administration allows individual authors to come together and pool their rights, which are then collectively managed by an organization in a manner that the authors are able to maintain reasonable control over the use of their works and also derive economic benefits therefrom. Essentially, collective administration of rights involves the surrendering of authors’ rights to an organization with a mandate to act on their behalf. The mandate will often include the monitoring of the use of the works; granting licences; and the collection of accrued royalties, which are subsequently distributed to right owners on agreed principles or sharing formula. See Collective Administration of Copyright and Neighbouring Rights, (Geneva: WIPO, 1990) and U. Uchtenhagen, The Setting-Up of New Copyright Societies Some Experiences and Reflections. (Geneva: WIPO, 2005).

34 From the empowerment of the Commission in 1992 through the Copyright (Amendment) Decree No. 98 regulating the operation of collecting societies in Nigeria, it has been entangled in numerous lawsuits filed by stakeholders in the industry. The number of lawsuits has been particularly high in the music sector of the entertainment industry, which has challenged the Commission's regulatory powers regarding collective management organizations in Nigeria.

is being implemented without prejudice to efforts directed at ensuring that pirates face the full brunt of the law.\textsuperscript{36} This programme has been helpful to many right owners.

**Achievements and challenges under the STRAP**

Some of the programmes introduced by the Commission under the STRAP initiative are just being rolled out. As a result, a full and fair assessment of the initiative's impact on the Nigerian copyright-based industries may not be possible in the interim. To a large extent, however, the STRAP initiative has enabled the Commission to enlist public-private sector participation in the anti-piracy campaign through a critical buy-in by stakeholders. Anti-piracy enforcement activities, including intensified intelligence gathering and surveillance, raids and seizures, public destruction of pirated products and successful prosecutions of suspected pirates\textsuperscript{37} have increased significantly. Under the Copyright Litigation and Mediation Programme of the Commission, few cases have been settled out of court.

Further, the STRAP initiative has succeeded in redesigning and strengthening the Commission’s regulatory mandate. In this respect, it has provided a credible structure for rights owners and the creative industries to benefit from the copyright system. For instance, the Notification Scheme is gradually being embraced by authors and is facilitating the creation of a database of the authors and their works. Optical disc plants operations in Nigeria are now under regulation. About two of these plants were found to be engaging in acts of piracy and have been shut down.

Moreover, the resolution of the problem of collective rights administration in the country is being pursued with renewed vigour. The introduction of a new regulation in 2007, alongside the subsequent licensing of a collecting society for the Nigerian music industry, is a positive indication of this.

Furthermore, the institutional and workforce development drive, which the implementation of STRAP necessitated, has facilitated the repositioning of the Commission for greater efficiency and effectiveness. It is instructive to note that as a result of the aggressive pursuit of the Commission’s goal under the STRAP initiative, Nigeria was removed from the United States’ Special 301 List in 2007 and 2008.\textsuperscript{38} The Special 301 List is part of the yearly report prepared by the Office of the US Trade Representative. It identifies countries alleged to provide inadequate protection of US intellectual property rights. A listing can ultimately lead to trade sanctions against alleged offenders.

It is important to state that a number of challenges have constrained the Commission's efforts to fully implement the goals of STRAP, and ipso facto, the full realization of its objectives. Prominent


\textsuperscript{37} Until now, more than 60 anti-piracy raids and 316 inspections have been conducted in various parts of the country. Confiscated pirated materials with a market value of \(\text{₦}2,600,000,000.00\) (approximately US$15 million) have been destroyed by the Commission, more than 50 cases of copyright infringement have been prosecuted in the various Federal High Courts in the country, and four convictions have been secured. See STRAP 1 and 2 Reports prepared by the Nigerian Copyright Commission Abuja, which cover the first three years of implementation of the STRAP initiative.

\textsuperscript{38} The 301 List is prepared by US Trade Representatives under Section 182, as amended of the \textit{US Trade Act 1974}. See Wikipedia, Office of the US Trade Representative.

among these are, poor funding from government (which largely is due to the failure to realize the strategic importance of intellectual property to national economic growth and development\textsuperscript{39}), pervasive ignorance about intellectual property in Nigeria, and the often lackadaisical attitude right owners often have to the enforcement of their intellectual property rights.\textsuperscript{40}

Other challenges include the unstructured distribution chain of copyrighted works (which enhances piracy); the Commission's inadequate manpower and logistic infrastructure; and the lack of a proper organization of stakeholders in the copyright-based industries. Further, there is also the problem of an inadequate legal framework, particularly in the penalty provisions for copyright infringements and in provisions for addressing the emerging challenges of digital technology. One example is the illegal reproduction and distribution of work on the Internet. The general absence of judicial sympathy for cases involving intellectual property infringement has also been a significant problem.\textsuperscript{41}

**Conclusion**

Judging from the achievements recorded so far by the Nigerian Copyright Commission in its implementation of the STRAP, there is no doubt that the initiative offers a potential solution to the endemic problem of piracy that has plagued Nigerian copyright based-industries. However, it is important to note that the foregoing challenges need to be urgently addressed, otherwise the high expectations raised by STRAP may eventually turn into a mirage. For instance, the inadequacy of funds and manpower has stalled the full implementation of the Hologram and Video Rental Schemes. Further, prosecuting persons suspected of piracy has been a herculean task because of the lack of judicial sympathy for the anti-piracy campaign. This factor has largely been responsible for the poor rate of convictions secured by the Commission so far.

\textsuperscript{39} An indication of this could be seen in the fact that Nigeria does not have a national policy on intellectual property and the absence of intellectual property in all her national economic growth and development agenda prepared so far.


\textsuperscript{41} Ibid.
BIBLIOGRAPHY

Books


Chapters in edited books


Articles

A. Jain, 'Optical Disc Legislation: A New Tool to Combat Piracy'.
Available online at http://www.ebc-india.com/lawyer/articles/2002v5a5.htm
[Accessed on 13 August 2008]

Conference Papers


A. Adewopo, 'The Gain is More than the Pain: Cost Benefit Perspective of the Regulation and Control of Copyright-Based Industries in Nigeria'. Paper presented at the International Symposium on Economic Crimes 31 August–September 2008 at Jesus College, University of Cambridge, United Kingdom

K. Nyam, 'Copyright Notification Scheme'. Paper presented at Legal Officer’s seminar of the Nigerian Copyright Commission Abuja, Nigeria, 19 June 2008


Other Documents

*Publications by Nigerian Copyright Commission:*

Copyright (Optical Discs Plants) Regulation 2006
Copyright (Security Devices) Regulations 1999
Copyright (Video Rentals) Regulation 1999
Guidelines for the Copyright (Optical Discs plants) Regulation 2006
Strategic Action Against Piracy (STRAP) Reports 1 and 2, 2008
Survey of Copyright Piracy in Nigeria 2008

Others


Nigerian Copyright Act Cap. C28 Laws of the Federation of Nigeria 2004

SID CODE Implementation Guide, IFPI. Available at http://www.ifpi.org/content/library/sid-code-implementation-guide accessed on 17/09/2010