SOFTWARE DEVELOPMENT AND INTELLECTUAL PROPERTY LAWS IN NIGERIA

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ABSTRACT

The Information Revolution of the 90's has made Software Development very attractive and one of the fastest growing industries in the world. However, inspite of the growing demands for quality software and the ever large software market, software development in Nigeria is at best in its infancy.

This paper, while reviewing software development in Nigeria, considers Intellectual Property Law as a major tool for propagating software development.

INTRODUCTION

Computer software is a term that denotes any program that is designed and distributed to facilitate computer use by practitioners and students in some particular discipline, profession or organisation. Section 39 of the Nigeria Copyright Act 1988 defines a Computer program as *"a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result"*. Accordingly, software development can be seen as the sum total of the activities involved in the process of producing successful software. A fundamental fact of life as we approach the 21st century is that software is pervasive. It influences our lives in ever more complex and significant ways (Tucker, A. B. et al, 1993). This is the more reason why the world's present and future needs for quality software far exceed the industry's capacity to produce it. Software business is the third largest industry in the world.

However, with Nigeria's huge investment in computing and other systems that use microchips, Nigeria does not seem to benefit from this large and ever growing software market. In order to be strategically positioned in the Global Information Village (GIV), Nigeria must not only be consumers of software but also developers of quality Software. It therefore becomes logical and expedient that those factors that inhibit software development must be removed for Nigeria to be a major player in this Information Technology (IT) revolution. This is occasioned by the fact that information has become a prime economic force.

Given this ugly scenario, it therefore becomes necessary that the law which is the last hope of the common man must be used as an effective means of propagating software development in Nigeria, since software is Intellectual Property. Agreeably too, there is a socio-economic principle that Intellectual Property protection encourages individual effort and invariably enriches society (Asein, J. O., 1994).

SOFTWARE DEVELOPMENT IN NIGERIA

Inspite of the growing demands for quality software and the ever large software market, software development in Nigeria is at best in its infancy. Nigeria with its huge investment in computing and its attendant software consumption,

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cannot boast of software houses that can produce quality software for the domestic and/or world market. It has been rightly reported that Nigeria has the fastest growing Computer software market in Africa. Unfortunately, we are consumers not producers of software. It is a truism that most of the software systems we use in this country today are imported. Our local software firms instead of producing software have become marketers of imported software. Virtually all the major software developers in the developed World are represented in Nigeria. This embarrassing situation precludes Nigeria' from benefiting maximally from the information revolution.

It must be mentioned however, that some software houses have actually been producing banking and financial applications. They have equally been of assistance in other areas of applications. What is more worrisome is the fact that the total input of the local software industry is infinitesimal vis-à-vis our software consumption. The Indian Software Industry in 1990 had an annual turnover of Rs 2700 million. Interestingly, 50% of this sum was earned from exporting low-level software. It therefore follows that India has been exporting software for more than a decade. In the US, the software industry occupies a pride of place. This is the more reason why the Vice President of Microsoft Corporation Bill Gates is about the richest man in the world today.

Nonetheless, all hopes are not lost. Nigeria still has a large software market and if properly harnessed can turn our economy around. Fortunately, Nigeria has a long tradition of university education and has produced quality graduates in Computer Science and related areas. I believe, and frankly too that we have enough human resources that can produce quality software if adequately encouraged. India had to improve upon ,her Copyright Protection Law and enforcement to make the domestic market more attractive. It is true that if there is no adequate protection for a software developer, there is a possibility that he may be compelled by the exigencies of life to look elsewhere and the society

will be the worse for it. This is the Nigerian situation.

SOFTWARE AS INTELLECTUAL PROPERTY

Intellectual property is property that is not physical but nevertheless has rights that can be assigned, licensed, or used as collateral between its owners (vendor) and its users (clients) (Tucker, A. B. et al 1993). When viewed as intellectual property, we can look at an item of software in either of two different ways. On the one hand, if we look at only the object program and the user interface, the software can be viewed as a process or machine. On the other hand if we consider the source program and the object program together, the same software takes on the appearance of an original work of authorship.

The notion of intellectual property also suggest four different ways in which property rights can be identified, and hence protected: *Copyright, Patent, Trademark* and *Trade secret*. These four means of protection for property rights are discussed, paying special attention to their application to Computer Software as intellectual property.

Software Copyright: Because the source program and the user interface in a software product are original works of authorship they are protected by copyright Law. Copyright Law protects all original works of authorship (historically, literary manuscript, paintings and musical compositions) against unauthorized copying. The Law was amended in the US in 1980 to explicitly cover Computer program or Software.

In Nigeria, the Law does not provide for separate Computer Software legislation. As such, the Nigerian Copyright Act 1988 provides the governing Law (Kola -Balogun, S. 1997). Section 39 of the Nigerian Copyright Act 1988 defines a Computer program as *"a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result".* This definition arguably covers preparatory design

aterial such as flowcharts, and drawings etc. used creating the computer program. Literary works e also defined in the Act to include, irrespective f literary quantity, Computer programs. As iterary works, Computer programs are clearly rithin the ambit of the Copyright Law.

It is important to note that in all these cases, 1e Law protects the expressions themselves (that , the verbatim text of the program) but not the leas that underline the expressions. The Nigerian opyright Law applies to an original work of uthorship, immediately, from the day it is created ntil 50 years after the owners death. It also applies uthomatically.

Software Patents: Because the object program in software product can also be interpreted as a *process or machine*, software can also fall into 1e realm of patent protection. Patent law xplicitly protects processes, machines, nanufactured items, or compositions-of-matter nventions from unauthorized reproduction, use, or ale by anyone besides the owner. In the US, the upreme Court has ruled that software related nventions can be judged for patentability in the ame way as non software-related inventions. "hus, patent law now can be fully applied to oftware in US.

Software Trade Secrets: A trade secret is enerally any item of knowledge or characteristic of product that makes it unique or valuable in omparison with the competition, but which is reatly kept secret from the competition. In the pecial case of a software product, any feature that nakes it especially efficient or unique in its apabilities, in comparison with its rivals in the narketplace, can be declared to be a trade secret. 'or example a very fast spelling checker built into a vord processor might be worth protecting as a rade secret if it makes that word processor unique n contrast with all others on the market.

A trade secret is easy to obtain, and no pplication procedure is required - infact, that vould be impossible, since the item is a secret. Trade secrets have unlimited life, but they are difficult to protect. Trade secrets often arise by contract as through an employer-employee relationship. Many software developers require their employees to sign a *"nondisclosure agreement"* at the time they are hired. Under such an agreement, employees are bound not to reveal the software designs or implementations with which they come into contact. A nondisclosure agreement thereby protects the secrecy of a software trade secret. Given the high degree of software portability and employee mobility in the industry, this type of agreement is very difficult, if not impossible, to enforce - especially when an employee terminates employment with a company and begins working for a major competitor.

Trademark: A trademark is a mark that is used or proposed to be used in relation to goods for the purpose of indicating a connection between the goods and the proprietor of the mark. The mark must be used in the course of trade and it may be a brand, heading, label, ticket, name, signature, word, letter, numeral, a device or any combination of these. Whereas a word or letter may qualify as a trademark it cannot be the subject of Copyright protection. Furthermore, trademark protection arises primarily from prior registration with the trade registry.

THE NEED FOR SOFTWARE PROTECTION

As a fundamental rule of natural justice, a man should be guaranteed the fruit of his labour; every labourer his wages (Asein, J. O., 1994). According to the United Nations declaration on human rights:

> *(27)(1) Everyone has the right freely to participate in cultural life of the community to enjoy the arts and to share in Scientific advancement and its benefits*
> *(2)   Everyone has the right to the protection of the moral and material interest resulting from any Scientific, literary or artistic production of which he is the author.*

A software developer deserves to have the result of his mental and physical exertion protected from unauthorised exploitation. The man that exerts his intellectual effort in the creation of ideas deserves greater protection for as aptly remarked by the legislature of the States of Massachusetts in 1789, there is *"no property more peculiarly a man's own than that which is produced by the labour of his mind"*. And if there is any good reason for the law to protect any property, it may very well start with intellectual property.

As anyone who is endowed with creative faculties will readily concede, intellectual works are an extension of the author's personality involving deep emotional and sometimes, spiritual values deserving our respect (Asein, J. O, 1994).

It is therefore, ethically unjustifiable that one man should be allowed to annex and parade another's work as if it were his. If intellectual fraud is to be discouraged, if everyone is to be encouraged to believe in himself and his modest abilities, if true creativity is to thrive, then intellectual property must be protected and defended by all.

Agreeably too, it is only very few software developers in Nigeria today that will feel undeterred by the fear that their software could be pirated immediately they hit the market. The assurance of some protection encourages more and more people to venture into software development, since they can be sure of the fruit of their labour. What is more, some software systems are unarguably the most complex artifacts ever created. It therefore follows that it takes a whole lot of money, time, creativity and patience to produce quality software. No one would want to invest all he has (time, money, creativity etc.) in an area where he is not sure of the return on investment. A measure of practicable protection will create a lot of confidence and motivate people to venture into software development.

Beyond this appeal to justice and fair-play there is more to it on the socio-economic front. With Nigeria's over dependence on oil as a major source of income, and the increasing down turn in the oil prices, it has therefore become necessary for us to look for other sources of revenue generation. The large software market in Nigeria and indeed the world, makes software development an attractive alternative to oil. Fortunately, there is a large pool of educated man-power, which can be trained as computer professionals with marginal efforts. This will create employment for thousands of educated youths in the emerging sector and hence reduce the level of unemployment. There is an untapped potential for software export which can be realized if Nigeria can build data communication gateways to the international market. This will in turn serve as a major source of foreign exchange. The software industry is yet to take the domestic market seriously, and an ability to control software piracy will determine to a large extent the growth of the software industry as we enter the next millennium.

THE NIGERIAN CASE

In a paper titled "Nigerian Copyright Law: A Judicial Overview", Honourable Justice Tajudeen Odunowo of the Federal High court traced the history of the Copyright legislation in Nigeria to the English Copyright Act of 1911 which was extended to Nigeria by an Order-In-Council dated 24 June, 1912 (Odunowo, T., 1998). The 1970 Copyright Act which was the first indigenous legislation and passed as Decree No 16 of 1970 contained a number of inadequacies, notable among which is the fact that it recognized the rights of Copyright owners but failed to provide adequate or commensurate remedies for those rights. The Copyright Act No. 47 of 1988 (cap. 68, Laws of the Federation of Nigeria 1988) was promulgated to replace the 1970 Law following persistent clamours by those intimately affected. This same 1988 Copyright was amended in 1992 therefore introducing many far reaching regulations. Regrettably however, these far reaching regulations have not been adequately implemented. The Nigerian Copyright Council which is the primary agency responsible for the implementation of Copyright matters have not fared well. Most people are not aware of the Council and its

functions. Another difficult area is the effective monitoring and policing of software piracy.

Again the Council has not fared well in this regard. This accounts for the reason why since its inception no case relating to software piracy has been reported in our Law reports.

On the contrary in US cases pertaining to software piracy have been widely reported. In 1998 alone there were a lot of litigations against Microsoft for the introduction of their Windows 98. This general awareness is a function of the development of the software industry in the US. It is evidently clear that the law has been a major tool towards the development of the software industry in the US. This does not seem to be the situation in Nigeria.

THE WAY FORWARD

Regarding the position of computer software developers, although computer software can, to some degree, be protected by the provision of the Copyright Act 1988, there is need for specific provision in the Copyright Act so as to consolidate the protection given to such software in Nigeria. For instance, there is need for a distinction between a Computer generated work as opposed to Computer aided work. There is also the need for guidance on the production of a back-up copy or copies by the legitimate user as provided for in the Laws of most Western countries. Are moral right provisions applicable to computer programs, or should they be excluded? Is user interfacing ("*look and feel*") permissible under Nigeria Law? All these issues can only be addressed specifically rather than by general legislation.

The Nigerian Copyright Council must pursue issues concerning software protection with renewed vigour. The Law should not only be made but must be implemented to practically protect software as intellectual property. To this end, there must be effective monitoring and policing of software piracy. Software developers must be prepared to assist in this regard. They are in the best position to monitor their software. Professional organizations like Computer Association of Nigeria (COAN), Computer Professionals Registration Council of Nigeria (CPN), and Computer Vendors Association of Nigeria (COVAN) must work together to effectively monitor software piracy. There should be an awareness campaign in the print and electronic media, this will sensitize the generality of the people about the existence of the law and what constitutes an infringement. More importantly, Government should not be indifferent to the development of the software industry. Ipso facto, Government must create enabling environment to allow software development flourish in Nigeria.

CONCLUSION

With the world becoming a Global Information Village and society highly dependent on IT, the software market will continue to flourish even as we enter the next millennium. There are enormous benefits derivable from the GIV, moreso when information has become a prime economic force (Adiele, C., 1998). For Nigeria to benefit maximally from the Information Revolution, we must not only be consumers of software but also, developers of quality software.

It is a truism therefore, that a measure of practicable protection will create a lot of confidence and motivate people to venture into software development. The Law, which is the last hope of the common man must be specifically made and meticulously implemented to protect software as intellectual property.

REFERENCES

Adiele, C., 1998. The Software Crisis and its Societal Impact, COAN Conference Series, 9: 94-101.

Adiele, C., 1999. Nigeria and The Millennium Time Bomb, Global Journal of Pure and Applied Sciences 5(4): 581-584.

Asein, J. O., 1990. Nigerian Copyright Law - An Appraisal of Recent Innovations and Implications, The Calabar Law Journal, 3(1): 124 -141.

Asein, J. O., 1994. The Nigerian Copyright Act with Introduction and Notes, Sam Bookman Educational and Communication services, Ibadan, Nigeria, 193pp.

Bhatnagar, S. C. and Ramani, K. V., 1991. Computers and Information Management. A Primer For Practising Managers, Prentice Hall Int., Inc., Englewood Cliffs, 184pp.

Forrester, T. and Morrison, P. 1990. Computer Ethics: Cautionary Tales and Ethical Dilemmas in Computing, MIT Press, Cambridge, MA.

Kola-Balogun, S., 1997. Computer Software Protection in Nigeria, Thisday, 3:793.

Nissenbaum, H., 1994. Computing and Accountability, Communications of the ACM, 37(1).

Odunowo, T. A., 1998. Judicial Overview of Nigerian Copyright Law, Copyright News, 6(26):21 – 26.

Samuelson, P. and Glushko, R. J., 1990. Survey on The Look and Feel Law Suits, Communications of the ACM, 33(5).

Samuelson, P., Denber, M., Glushko, R. J., 1992. Developments on The Intellectual Property Front, Communications of the ACM 35(6).

Tucker, A. B., Bradly, J. W., Cupper, R. D., Epstein, R. G., 1993. Fundamentals of Computing II, McGraw-Hill, 559pp.

Yoches, E. R., 1989. Legal Protection of Computer Software, Communications of the ACM , 32(2).