COPYRIGHT PROTECTION OF COMPUTER PROGRAMMES IN TANZANIA: A PLEA FOR LEGISLATIVE INTERVENTION

By
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Abstract

The downing of computer age with its attendant technological and scientific consequences has brought in new problems in relation to traditional regime of international and domestic regime of intellectual properly law. For instance, if I may revisit the history, it cannot be disputed that the framers of Paris, Berne and Universal Copyright Conventions during the last century did not have in mind the issues and problems which have been encountered in relation to protection of computer programmes. Indeed, one is left but with the same conclusion with regard to the framers of the American Copyright Act of 1909; the English Copyright Acts of 1911 and 1955; and also the Tanzanian Copyright Act of 1966

This article attempts to revisit comparatively the protection of computer programmes with respect to copyright law. The survey will culminated in trying to resolve the issue as to whether computer programmes are afforded protection under the Tanzanian Copyright Act. It is suggested at the end that the Copyright Act of Tanzania should be amended to clearly provide for copyright protection of computer programmes.

Part one of the essay attempts to analyse from legal point of view the technical aspect of computers and computer programmes. In part two we intend to discuss the relevance of protection of computer programmes. In part three we make a comparative survey of copyright protection of computer programmes in selected jurisdictions.

We shall deal with the United States of America, Britain Chile and Brazil. This will assist us in discussing the legal position in Tanzania which will be the subject matter of Part Four of the essay. In discussing the position in Tanzania, an attempt will be made to trace briefly the development of computerisation in Tanzania and the significance of protection in the context of economic and technological dependency. I will conclude in part five

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Introduction

Technical aspects of computers

To understand precisely the subject matter of copyright protection of computer programmes, it is deemed important to elaborate two technical matters. These are, the distinction between soft and hardware in the computer on the one hand and the meaning of a computer programmes on the other.

In order to effect a given purpose in a computer system, computer soft and hardware must work together. Hardware comprises the physical components of the system which provides the framework for the input, storage, processing and output of data. Hardware can take many forms depending on the size of the computer system and the purpose for which it is designed.

For instance, the hardware in a micro computer system includes a keyboard, various electrical and electronic components and disc drive or other storage devices[1]. At the heart of every computers, there is special piece of hardware known as Central Processing Unit (CPU) which co-ordinates and controls the activities of all other units[2]

On the other hand, software consists of programmes designed for use with a particular computer system. Millard[3] defines a programme as any set of instructions to a computer to perform a specified activity. A functionalist definition of a computer programme has been given by the Australian Federal Court in the case of Apple Computer Inc. and Another v Computer Edge Pty Ltd[4] wherein a programme was defined as a *'concise set of instructions that direct the computer to do the tasks required of it step by step and to produce the desired result.'* A computer needs programmes for, among other things, controlling the operations of various pieces of the hardware which makes up the system. For legal purposes, it has been necessary to distinguish between an operating system and its associated application programmes. The former performs the task of organising various hardware components of the computer system and the latter performs specific tasks. It is the application programmes which are the subject matter of copyright protection.

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[1] See Millard page 12
[2] Ibid.
[3] At page 13.
[4] [1984] FSR 481.

Carr and Arnold[5] have classified applications programmes into three broader categories. The first consist of specialist application programmes. These are produced for the use of single or specified groups of customers for a specific purpose. They are usually not amenable to piracy because the same are usually tailored to meet specific customers' needs. The second category envisages commercial programmes. A good example of commercial programmes are word processor programmes such as windows (world perfect 6). They are usually produced for widespread sale throughout the world. This category is the most likely victim of unauthorised mass copying (pirating) because of their general usage. It has been estimated by a major international software company that for every authorised copy of a software available in the market there are between 3 and 8 unauthorised copies[6]. The third category covers mass marketing programmes. These include computer games programmes for home computers. They suffer the same problems like the commercial programmes.

Rationale for legal protection of computer application programmes

According to WIPO[7] the rationale for protecting computer programmes is based on five grounds. The first reason is that the production of computer programmes consumes a lot of time and resources. The existence of strong legal protection encourages the dissemination of programmes information by their creators, thus enabling other creators to avoid duplication thereof and, therefore, saving resources and time which would be otherwise used wasteful. Secondly, the widespread and common use of general computer programmes, coupled with the resources which are expended on them militates for the protection of those programmes to avoid massive privacy. Thirdly, like other forms of intellectual property, legal protection does operate as an incentive to disclose computer programmes though the programmes which involve some sort of secrecy are not likely to be disclosed despite the incentive. Fourth, legal protection increases the legal security of the relationship between buyer and seller of computer software. In this respect Third World countries which are yet to develop their own computer technology are likely to be major beneficiaries because the same encourages disclosure in those countries due to the fact that protection necessarily eliminates the uncertainty of enforcing licensing agreements against third parties who infringe copyright rights of the investors in those countries. And, lastly, protection is desirable because computer programmes are very vulnerable to piracy. While it is expensive to prepare a

[5] At page 7
[6] See Carr and Arnold at page 10
[7] World Intellectual Property Organisation

computer programme, it is cheap and easy to copy it once it has been made. Copyright protection debars the piracy perpetrator from pirating with impunity owing to the likelihood of facing legal action for infringement.[8]

Above all the reasons enumerated above, it is our contention that the major reason for protection is purely economic. Protection of computer programmes for a certain period enables the investors in the software industry to recuperate the costs incurred in the manufacturing of the programme while realising some profit for their investment[9] Against this background, we proceed to look at how four selected jurisdictions have approached the question of copyright protection of computer programmes.

Comparative approach in copyright protection of computer programmes

After considerable reluctance as to whether copyright protection is a proper method for protecting computer programmes, there seemed to be consensus among various states and WIPO that computer programmes are copyrightable under the category of literary works.[10] However, there are divergent approaches to achieving copyright protection in various jurisdictions. In this part we look at how the issue of protection has been approached in the United Kingdom, the United States of America, Chile and Brazil.

i) United Kingdom

The United Kingdom Copyright Act of 1956[11] did not recognise specifically copyright protection of computer programmes. However, in the few cases which went to courts to seek remedy for infringement of copyright in computer programmes, the courts, though doubtful, reached the conclusion that computer programmes amounted to literary work and that therefore they were protected under the Copyright Act.[12]

To cover the problem of copyright protection of computer programmes, a law to amend the Copyright Act of 1956 was enacted in 1985[13]. That Act provided expressly that the Copyright Act of 1956 applied also to computer

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[8] See **WIPO** page 1-4

[9] See **Carr and Arnold** page 6 - 7 and **Millard** 1- 8

[10] For general survey of international development in copyright protection of computer software see **Kindermann**

[11] 4 & 5 Eliz. 2, c. 62

[12] These cases are discussed in **Carr and Arnold** pages 60 - 62

[13] This law is Copyright (computer software) Amendment Act 1988.

programmes. It further provided that reduction of the work in material form includes reference to storage of that work in the computer [14]. The matter was finally settled by the consolidating Act of 1988[15] which expressly defined literary works to include computer programmes, thus putting them under the ambit of the provisions which protect literary works in the said Act.

ii) United State of America

In the United States computer programmes were officially recognised as registerable in 1964. In that year, the Copyright Office of the USA started to register computer programmes in the Copyright register under the 'rule of Doubt'[16]. In 1974 CONTU [17] was created in order to explore and formulate the policy regarding the interaction between the copyright law and the computer technology. In its findings it concluded and recommended that computer programmes should be treated as literary works, thus amenable to copyright protection. (Miller: 1993). Prior to the issuance of the CONTU report, Congress enacted the new Copyright Act in 1976[18]. The Act among other things, defined the situation under which copyright subsists in an open ended way so as to cover future and present development. The relevant section reads as follows:

> Copyright protection subsists in accordance with this title in original works of authorship fixed in any tangible medium of expression now known or later developed from which they can be perceived, reproduced or otherwise communicated, either directly or with the aid of a machine or device

In addition to that, it provided for a non exclusive list of categories of protected works, thus leaving a chance open for categorising any work as protected through copyright. Following the recommendation by CONTU, Congress enacted the Computer Software Copyright Act of 1980, which amended

[14] Ibid. section 1 (1)
[15] This Act is called Copyright, Designs and Patents Act
[16] **Millard** page 33
[17] National Commission on New Technological uses of Copyrighted Works
[18] 17 U.S.C.
[19] Ibid., Section 102 (a).

the Copyright Act of 1976 by including therein in the definition of a computer program. The same was defined as:

> a set of statement or instruction to be used directly or indirectly in a computer in order to bring about a certain result[20]

The Act also enacted a new section 117 (replacing the former section 117 which froze the registration of copyrights in computer programmes while waiting for COUNTU's recommendations). The new section provided for situations where the owner of a computer programme or a person authorised by the owner, could make copies thereof without infringing copyright provisions.

iii) Chile

Chile is an example of a developing country which has very clear provisions of Copyright protection.

In provisions protecting computer programmes, the Chilean Copyright Act of 1985 as amended in 1990, has recognised the fact that Chile is a dependent country technologically by providing for specific protection of computer programmes which are foreign produced but registered in Chile. To recapitulate the above point, under Chilean Law protection depends on whether the programme is national, that is produced by Chilean nationals or foreigners and by stateless persons who are domiciled in Chile; or foreign programmes, that is programmes produced by foreign authors. Local programmes are effectively protect on the date they are produced or created. Registration, though not mandatory, is required as a means of legal proof as to to the existence of the protected computer programme.

In addition to that, Chilean Copyright Law has defined the computer programmes as:

> a set of instruction for direct or indirect use in a computer for the carrying out of a particular process or the achievement of a particular result, which instruction are embodied in a cassette, diskette, magnetic tape or other material form

[20] Ibid.

This definition makes a departure from British and American position whereby in case of the former the computer programme is not defined and in case of the latter, the definition of a computer programme does not make reference to the medium which a programme is kept.[21]

As to foreign programmes, once they are created, they are protected in accordance with the international Conventions concerned with Copyright protection, that is, the Berne and the Universal Copyright Conventions.

iv) Brazil

Copyright protection of computer programmes in Brazil is a result of pressure by a major country producer of computer software (USA) to enable her multinationals to enjoy stable Copyright protection and free market in Brazil. So the Brazilian law tries to reconcile the interests of Brazilian investors with those of multinationals. Under Brazilian law, a computer programme is defined as *'an organised set of instruction in natural or codified language, contained in any type of physical media necessary for functioning of automatic data processing machines, devices instruments or related equipment based on digital techniques.'* Protection starts once a computer programme is introduced in the market in any country of the world. It will subsist for 25 years. For foreign programmes to receive protection there must be in existence an equivalent level of protection in the country of origin of such programme. The registration of the programme is not essential. However it is important for the purpose of ascertaining judicially and administratively as to whether there is an infringement of copyright. Furthermore, the Brazil law provides that there is no infringement of the copyright if a new programme which claims to infringe copyright is similar to previously copyrighted programmes.[22]

Other provisions of Brazilian law though indirectly relevant to copyright protection, are those which provide for restriction of marketing in Brazil of foreign produced programmes. With the above background of the various approaches invariably undertaken to provide copyright protection in computer programmes we now proceed to examine at the legal position in Tanzania by first briefly discussing the computerisation process in Tanzania.

[21] The discussion on the legal position in Chile is based on **Henera**

[22] The discussion on the legal position in Brazil is based on an article by **Basch and Schijndel**

Computerisation process in Tanzania

It is generally accepted that the computerisation process in Tanzania is still in its infancy stage. (Mselle and Hussein: 1994). The initials computerisation in Tanzania started in 1965 when the Treasury was computerised. Other government institutions followed suit. The Tanzania Electric Company computerised in 1968; the State Trading Company and the National Provident Fund in 1970; the Co-operative and Rural Development Bank in 1984; and the Bank of Tanzania in 1990. It seemed that computers were not popular and did not augur well for the policies of the Government of Tanzania. So in 1970 the Government banned the importation of computers. Some institutions which had earlier introduced computers phased them out in 1974 (Mselle and Hussein op. cit.).. It seemed that the bad reputation which accrued to computers was due to the fact that computers were introduced in Tanzania without the simultaneous development of computer culture (Woherem: 1993). However there is no doubt that the situation has changed because computers are now being introduced in Tanzania widely in both the private and the public sectors. This factor brings about the importance of clear legal protection of computer software both for those produced locally and those imported from other jurisdictions. But what is the significance of copyright protection of computer programme in Tanzania context? This is where we now turn.

Significance of copyright protection of Computer programmes in Tanzania

It is indisputable that Tanzania, like any other less developed country, is lagging behind in terms of scientific and technological development as compared with the industrialised nations already entering the post -industrial era dominated by highly sophisticated computer technology (Woherem, 1993). So it is not off the-point to contend that Tanzania should create a conducive environment for transfer and absorption of modern technology. And one of the means by which such transfer can be induced is by providing a clear legal framework of protection of the technology transaction concerned.[23]

Clear legal protection of computer programmes may encourage foreign investors to invest in computer software because the availability of protection makes their computer software less vulnerable to uncontrolled piracy. Further,

[23] This has been one of the reasons for enacting intellectual property Laws in the African Countries. For the discussion of this see generally **Lesotho Law Journal Vol.4 No.1** (Special Issue on The Role of Intellectual Property Legislation).

as Tanzania has opened her avenues to foreign investors (Peter, 1990), it can be argued that clear protection will encourage the incoming investors to bring in their capital together with computer technology used in their home countries.

Protection will also be an incentive to emerging Tanzanian programmers to invent and disclose their programmes. Finally, protection is necessary to encourage the development of local computer software industry. It is with those reasons we look at the provisions of Copyright Act with special reference to computer programmes protection.

The Tanzanian Copyright Act: Some salient features

The Tanzanian Copyright Law is embodied in the Copyright Act of 1966[24] It was enacted to repeal and replace the Copyright Ordinance[25] which made the United Kingdom Copyright Act of 1911 applicable in the then Tanganyika.

The objective for which the Act was enacted is to replace the law applicable by then was not suitable to the needs of Tanzania because it imposed very stringent obligations on the country, while her own output o literary and artistic works was far too small to justify the retention of sophisticated English legislation (Rwezaura: 1987)

The Act contains nineteen (19) sections. Matters canvassed include the definition of copyright, types of works covered as eligible for copyright protection, licensing, assignment and disposition of copyright and remedies in cases of piracy.

Under the Act, copyright is defined as a right to control the doing in Tanganyika of any reproduction in any material form, the communication to the public and the broadcasting of the whole work or substantial part thereof either in its original form or any form recognisably derived from the origin of the protected works.[26] Section 3(1) enumerates the protected works to include literary, musical, artistic works, cinematography films, sound recording and broadcasts.

[24] Act No. 61
[25] Cap 218 of Laws of Tanzania
[26] No 24 (supra), section 7(1)

For a work eligible for protection to qualify for protection, it must be created by a qualified person. A qualified person has been defined as a person who is a citizen or domiciled or ordinarily resident in the United Republic. In case of a corporation it must have been incorporated in accordance with the laws of Tanganyika.[27]

The implication of this provision is that works which are created by a person who is not a qualified person cannot enjoy protection in Tanganyika unless the maker of the work, though an unqualified person publishes for the first time his work in Tanganyika or, in case of other works makes them in Tanganyika or the Minister responsible for legal affairs, by order published in the Government Gazette, orders that a certain work is also a protected work.[28] Section 12 of the Act allows the owner of the copyright to assign or licence third parties to do certain Acts which are otherwise prohibited by virtue of copyright rights. By virtue of section 12(3) infringement of copyright, among other things, attract injunctions against the defendant. Damages may also be awarded for infringement. An infringement suit may be instituted in the High Court only. The next issue to discuss is whether computer programmes are protected under the Act.

Computer programmes: Are they protected under the Act?

The question as to whether computer programmes are protected under the Act is debatable. First and foremost, it cannot be said that the Parliament of Tanzania contemplated computer programmes as one of the works protected because when the Act was enacted computer technology was very negligible and the whole issue of protection was not as pressing at the international level as it is today.

All the same, in order to determine the above question we have to look again at the scope of copyrightable works in the Act. In particular, since the intentional trend has been to categorise computer programmes as literary works,[29] the question is whether computer programmes can be categorised as literary works under the Act. In my opinion it is not correct to conclude that under the Act computer programmes are automatically protected as literary works. Under section 2(1) of the Act literary works are defined as:

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[27] Ibid

[28] Section 2 (1)

[29] See Kinderman

> any of the following or works similar thereto (a) novels, stories and poetical works (b) plays, stage directions, film scenarios and broadcasting scripts (c) treatises, textbooks, histories, biographies, essays and articles (d) encyclopedias and dictionaries (e) letters reports and memoranda (f) lectures, addresses and sermons.

Perhaps for reasons which we have intimated above computer programmes are not mentioned as one of the literary works in the section. The question then is whether computer programmes can be categorised as works similar to those mentioned above

If we adopt the English position of the 1985 Act then we may say that once a computer programme has been stored in a disc it is reduced in material form.[30] Thus the computer programme satisfies one of the conditions under section 3(1) of the Act. There is no doubt that some labour and efforts are employed in production of a computer programmes. This meets another condition under the above mentioned section.

However it is submitted that a computer programme is not similar to the works which have been mentioned as a amounting to literary work, because it seems clear that the draftsman had in mind the woks which can be reduced into material form such as book or is at least on paper, thus visible to the naked eye.

Though the American and British Courts interpreted their copyright laws prior to their amendment (1976/80 and 1985 respectively) in such a way that computer programmes were included in the category of literary works, it is my proposition that compared to the British Copyright Act of 1956 and the American similar statute of 1909, the definition of literary works in the Tanzanian law has been narrowed by the nature of the works mentioned and the fact that other works which have not been mentioned should be similar to those which have been enlisted (*the ejusdem generis rule*)

So, in conclusion one may safely say that the court, if it is faced with the problem of determining as to whether computer programme are protected by copyright under the present law in Tanzania, cannot readily rule in the affir-

[30] See **Carr and Arnold** page 59

mative. Furthermore, it may not be wise to wait for judicial interpretation given the importance of copyright protection of computer programmes. This is aggravated by the fact that there has been hardly any litigation under the Tanzanian Copyright Act for eighteen years of its existence (Rwezaura, 1987)

Conclusion and Suggestions

The amendment of the Copyright Act to accommodate computer programmes as one of protected works under the category of literary works is long overdue. Since Tanzania will not be a pioneer in this aspect of law, it will benefit from approaches in other countries. I have indicated above how four selected jurisdictions have approached this problem. In effecting the amendment the legislature should balance the interests of local investors in computer software and those foreign investors, given the fact that Tanzania is still dependent in technology and the fact that the number of local investors in computer software is still negligible. The following matters should be taken into consideration:

- Computer programmes should be mentioned as one of literary works; or in the alternative a broader definition of literary works similar to the one given under United States' Copyright law should be given in order to cover present and future development in technology.

- The meaning of computer programmes should be provided for in Act.

- The Act should show clearly how foreign programmes will be treated under the Tanzanian Copyright Law. Here the Chilean flexible approach may be preferable whereby foreign programmes will be treated in accordance with the international Conventions on Copyrights.

- Some special period for which copyright will subsist in computer software should be specified.

Finally it is sad to note that Tanzania is yet to join the International Conventions on Copyright[31]. It is urged that Tanzania should join the Conventions in order to enjoy the benefits which are accorded to the members of the Conventions. Failure to amend the law, we are afraid, sooner or latter will make Tanzania a haven for piracy of computer programmes.

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