THE IMPACT OF TECHNOLOGY

Copyright about communicating

64. Communication between people - between author and reader, composer and listener, film or TV producer and viewer, artist and beholder - is what copyright is principally about. If the twentieth century is the age of technology, it is probably in the field of communications that the wizardry of applied technology is most spectacular. At the turn of the century if a Canadian wished to hear Nellie Melba sing, he had to go to Australia or she had to go to Canada. Today, he can sit at home and listen to a high-fidelity recording or, by means of satellite television, he can even watch a live concert taking place in the Sydney Opera House. Similarly, in 1910 the cricket fan in Antigua could only read about the exploits of the West Indian team in India weeks after the matches had been played. Today he can watch at home the dazzling talents of the West Indian team while they are actually playing anywhere in the world. At the turn of the century a school teacher who wished her pupils to study passages from a particular book had to undertake the laborious task of making hand-written copies or duplicating them on hand-cranked apparatus. Today photocopying equipment (which eliminates all transcription error) enables instant facsimile copies to be produced in any number desired. In short, by the combined technologies of computer storage and retrieval facilities, cable networks, television and video recording equipment, vast amounts of information and countless works of literature, drama, music and

art can be summoned up in one's home from data-banks and libraries at the flick of a finger - the genii of Aladdin's lamp come true!

Communications technology produces benefits for society, problems for authors

65. Life has been, and is being, transformed by these twentieth century marvels. They bring enormous benefits to society, not least to the peoples of developing countries; for example, the special educational programmes brought to various regions in India by direct satellite transmission. But the impact of technology on the copyright system has given rise to problems of some complexity. Authors and other copyright owners have no wish whatever to restrict in any way the enjoyment by the public of these new technological facilities. All they seek is that they, too, should derive some benefit from them by receiving reasonable remuneration for the use of their works which these new techniques make possible. The following examples illustrate the practical aspects of some of these problems and indicate some possible solutions.

Cable TV - origins and development

66. *Cable Television.* This began as a community antenna service in America - where most technology begins. In areas where reception of television signals via standard domestic aerials was of poor quality, possibly because of mountains or remoteness, groups of householders clubbed together and erected large central aerials which more effectively collected the signals which were then led by wire to the individual television sets. In origin it was simply a local co-operative operation, entirely non-profit and non-commercial in character. Today in North America and in Europe cable television has become a growth industry serving millions of subscribers. The latest dimension of this development is that it straddles national boundaries. For example, in Belgium there are some 42 different cable companies relaying by wire to their subscribers the programmes broadcast by the television broadcasters of France, Germany, Holland and the United Kingdom as well as by the Belgian

Broadcasting Service itself. In the Bahamas there are services relaying various television channels broadcast from the Miami area.

Problems

67. The problem which this development poses for the copyright system is as follows. When a script-writer, a composer, an illustrator or an animator grants permission to a broadcasting service to broadcast his works, the royalty paid is directly or indirectly related to the audience which the broadcaster is addressing by its transmissions. Normally this consists of the national audience (or part of it) within the country from which the broadcaster transmits. But if a cable company in a neighbouring country receives those broadcast programmes and transmits them via cable to its own subscribers, the audience for those programmes and the works in them is an entirely new one, not taken into account when the original royalty terms were settled.

Liability of cable operators

68. Under the international conventions and virtually all national copyright laws, the transmission of copyright works via a cable system (whether the works are in broadcast programmes which the system picks up off air or whether they are in programmes originated by the cable operator) requires the permission of the copyright owner. In the case of works contained in broadcast programmes, the original contract between the copyright owner and the original broadcaster does not as yet cover possible subsequent cable TV use. Consequently, the copyright owners expect to receive some payment in respect of this additional use, and the cable operators need to obtain permission for the right to transmit via cable all the copyright material in the broadcast programmes which they pick up off air and transmit in this way. It is clearly impracticable for a cable operator to negotiate separately with each copyright owner with an interest in each work transmitted by the operator. The problem has been much discussed both nationally and internationally. The only feasible solution lies in some system of blanket licensing under

which a cable operator can obtain from one central source, or a limited number of such central sources, permission covering all the copyright intereste in the broadcast programme he transmits. In Europe copyright owners have already established arrangements for issuing such blanket licences or are in the process of attempting to do so. In those developing countries where cable television is or may soon become a reality, there may not be an existing infrastructure of boides which administer rights on a collective basis. Hence it may be necessary for the copyright law itself to provide a legal authority for the operations of cable companies with appropriate provisions for ensuring payment at a reasonable level and providing a system for its distribution to the individual right owners.

Satellite broadcasting

69. *Satellite Broadcasting.* This differs from the standard method of broadcasting in which signals are transmitted through the ether directly to receiving equipment. With satellite broadcasting the signals are sent first to a special satellite equipped with receiving and transmitting apparatus, which beams them back to earth. These signals are able to reach not only the national territory of the original broadcaster, but the national territories of other countries as well. Even when the signals are intended for reception only in the country of the original broadcast, in the present state of the technology it is not yet possible to regulate the shape of the downward beam so as to eliminate "overspill", that is the possibility of the signals being received in adjoining countries. In practice, satellite broadcasting operates in two different ways, at least at present. One is direct satellite broadcasting where the programme-carrying signals from the satellite are received directly by any member of the public within the reception area possessing the necessary receiving apparatus. The other is point-to-point satellite broadcasting where the signals from the satellite are not receivable generally by the public in reception areas but only by a

direct satellite broadcasting

point-to-point satellite broadcasting

ground station whence they are re-transmitted either through cable systems (i.e. cable television) or over the air (i.e. re-broadcast) to the receiving equipment of the general public.

National considerations posed by satellite broadcasting

70. Satellite broadcasting clearly poses a host of national considerations of a political, social and cultural nature which must concern governments. Up to now foreign radio broadcasts have been largely tolerated by the governments of most countries. However, it is doubtful whether governments, particularly governments of developing countries, will allow their citizens to have unrestricted access to foreign television transmissions made available via satellite broadcasting. For this reason it is likely that satellite broadcasting will be subjected to a regime of control organized both internationally and nationally. Also because such control can be more easily exercised over point-to-point satellite broadcasting than over direct satellite broadcasting, it is probable that this will be the form normally authorised.

Direct satellite broadcasting

71. The copyright problem is essentially that of ensuring that the original contributor to the programme originally broadcast receives reasonable remuneration for the additional audiences reached by his work as a result of the extended coverage created by the satellite transmissions. In the case of direct satellite broadcasting, the problem will normally be confined to cases of "overspill". As we have seen, the programme-carrying signals go from the original broadcaster's transmitters via the satellite direct to the audience in whatever reception area is covered by the transmission. So it clearly must be the responsibility of the original broadcaster to obtain from the contributors the right to address these extended audiences. This needs to be done when the original contracts for the right to broadcast are negotiated.

Point-to-point satellite broadcasting

72. The same problem arises in the case of point-to-point satellite broadcasts, but its dimensions and permutations are greater. In the normal case the original broadcaster will negotiate agreements with ground stations in the territories receiving its transmissions via satellite. Such agreements should make provision to take care of the interests of the original contributors to the programmes. However, a problem arises when a ground station with which the original broadcaster has made no agreement picks up signals arriving by satellite and transmits them either by cable or by re-broadcasting. These "pirate" ground stations may be either in the country of intended reception or in an adjoining country. Already some countries in Africa have paid considerable sums for the right to receive via satellite programmes of certain events at the Olympic Games or matches in the World Football Cup only to find that ground stations in neighbouring countries which have made no payment have picked up the signals and re-transmitted them freely to the public in those countries.

Problems

73. If there is a copyright law in force in the country where this re-transmission takes place, it is probable that such re-transmissions will require the permission of all the copyright interests. So the operator of the ground station will be committing an infringement if he does not himself obtain consent from the copyright owners of the material in the programmes. But such copyright laws do not exist everywhere. Thus, to take a hypothetical example, the Trinidad Broadcasting Service might transmit its programmes via satellite to Jamaica where, under negotiated agreements, ground stations pick them up and re-transmit them (either by wire or by re-broadcasting) throughout the island. But because of the Dominican Republic's proximity to Jamaica, a ground station in the Dominican Republic might well be able to pick up the signals. It might then transmit the programmes throughout the Dominican Republic without any payment. As the

Dominican Republic does not belong to either of the copyright conventions, it is doubtful whether foreign works enjoy any protection there. So the interests of the Trinidad Broadcasting Service and the contributors to its programmes would be without any protection.

Brussels Convention 1974

74. Any solution to this problem must obviously be an international one. To this end a convention was established at Brussels in 1974. Its purpose was to require each country joining it to adopt legislative or administrative measures to prevent programme-carrying signals from being distributed in the country by persons or organisations for whom they were not intended. So far only six countries have joined.

Private recording - normally an infringement

75. *Audio- and video-recording.* Under normal copyright legislation, the private recording of a copyright work, unless done for private research or study, is an infringement if the permission of the copyright owner has not been obtained in advance. Tape recorders and cassette radios have been available to the general public for many years, and it is common knowledge that considerable home taping of records takes place. Until recently, however, copyright owners paid little attention. One reason was that the record industry was booming and the composers, publishers and record companies were content with producing and selling more and more records. But with the coming of the economic recession the record industry, though still basically sound, cannot afford to overlook any significant area of potential but unrealized income. Nor can it ignore the fact that the use of the recording facility is no longer confined to producing copies at home for home listening. Today record piracy in all its variations is world-wide in extent and enormous in dimension. It is estimated that probably half the records currently being sold around the world are either "pirated", "counterfeit" or "bootlegged". These three expressions have come to denote different versions of unauthorised recording.

A "pirated" recording is one made by transferring without permission a legitimate recording intended for retail sale on to a blank tape carrying no label. A "counterfeit" recording is made in the same way save that it carries a label imitating the original label - i.e. purporting to be an authorised recording. A "bootlegged" recording is a recording made of the music played at a live convert without the authority of either the performer(s) or the copyright owner(s).

Measures needed to combat piracy

76. There is no single, simple remedy for dealing with piracy. It can probably never be entirely eliminated, but by a combination of measures it can be reduced to an acceptable level. The following measures are needed:

(a) Governments should ensure that the penalties in their copyright laws are adequate to provide effective deterrents, taking into account the high profits which can be made in a very short space of time by large-scale piracy.

(b) Copyright owners should concert their efforts and resources into planned enforcement campaigns. For such campaigns to achieve maximum effectiveness, government support is needed in various ways -

(i) The Government should ensure that the public is aware that the Government regards piracy as a serious offence, not simply against the rights and interests of individual copyright owners but against the public interest generally.

(ii) The Government should, wherever appropriate, act in support of such infringement campaigns. For example, in Hong Kong the Government established a

special copyright squad within the Customs and Excise Department which acted in co-operation with the record industry in a planned and successful campaign against record piracy.

(iii) Effective procedures designed to ensure that pirates cannot evade their liabilities should be made available to copyright owners, either through the development by the courts of new forms of process or by legislation (see the discussion in paras. 41 and 42 about "Anton Piller Orders").

(c) A sustained programme of public information and education should be mounted to illustrate the overall value to society of the copyright system and the injury suffered by society when widespread piracy flourishes.

Computers

77. *Computers*. The use of computers poses two quite different questions:

(a) Is storage in, and retrieval from, a computer system of a work protected by copyright an act requiring the permission of the copyright owner?

(b) Is computer "software" - i.e. the programme written so as to produce the desired result from a computer - a work entitled to copyright protection?

Storage of copyright works in computers

The first question is immensely important. The use of computers for storing and reproducing copyright works in one form or another is becoming increasingly common. Storing the contents of standard textbooks in a computer database to which schools and other educational institutions may have access so as to reproduce passages on classroom television screens is

by no means a Jules Verne vision. There is virtually no case law on this aspect of computer use so far, but there has been considerable study of the question, both nationally and internationally. Informed opinion is unanimous that under the Berne Convention - and hence under most national copyright laws - such use of copyright material requires the permission of the copyright owner.

Computer programmes

78. The second question is equally important. There is no doubt that the writing of programmes requires considerable skill and, many argue, as much imagination and creativity as composing a symphony. This question, too, has been much discussed, and there is general agreement that computer software should enjoy protection against unauthorised use. So far, however, there has been no final decision at international level as to whether this protection should be provided under the copyright system, under the patent law, or by some new international convention and new national legislation. In the United States computer programmes have already been registered at the Copyright Office as works entitled to copyright protection. Legal and official opinion in the United Kingdom is that computer programmes are entitled to protection under the Copyright Act, 1956, as a form of "literary work".