

Technological Developments in the Print Media

Introduction

8.01 As, required by its terms of reference, the Committee has considered several technological developments which may affect the manner in which newspapers, magazines, and periodicals are published, distributed, and used. The Reference specifically requires the Committee to have regard to developments since the enactment of s. 35(4) in 1968, and those likely to occur in the foreseeable future. This chapter summarises the Committee's consideration of these issues. The significance of these developments to the recommendations of the majority and minority is considered in chapters 10 and 11 respectively.

8.02 Many of the submissions provided useful accounts of the changing circumstances of the publication and use of newspaper and similar material. The Combined Newspaper and Magazine Copyright Committee of Australia's (CNMCCA) submission included a substantial report on what it said were the likely effects of new **technologies**.¹ The Media Entertainment and Arts Alliance (MEAA) suggested that technological developments, especially advances in monitoring technology, facilitated the administration of copyright **payments**.² In the early stages of its deliberations and during its inspections, the Committee received valuable assistance from Dr Ian Reinecke, the Director of the Centre for Information Technology Research, at the University of Wollongong.

8.03 There are two main technological developments which the Committee must consider in this **Reference**.³ The first is the recent viability of electronic alternatives to print, the means of distribution associated with them, and the information marketplace in which newspapers, magazines, and similar periodicals now compete. The second is the viability of the archival storage of material published in publications with which s. 35(4) is concerned, whether by the

¹ Submission of the Combined Newspaper and Magazine Copyright Committee of Australia (CNMCCA), Report 4, "Technology and the Print Media" (Prepared by Fred Kenyon & Des Morton) (being a revised version of the paper presented by News Ltd to the House of Representatives Select Committee on the Print Media (October 1991).

² This was to counter CNMCCA's arguments which appear in report 3 of its submission, authored by Dr Philip Williams subsequently reprinted Jeff Borland & Philip Williams, "An Economic Analysis of Copyright Between Newspaper Publishers and Journalists", (1993) *UNSW L J* 351.

³ Dr Thomas K Dreier notes: "To a large extent, the history of copyright amounts to a progression of legal reactions to the challenge presented by technology."; in Dreier, "Copyright in the Age of Digital Technology", (1993) 24 *IIC* 481 at 481.

proprietors or others, and the new opportunities for the commercial and private use of such material provided by developments in database and reproduction technology. This last issue includes the increased ability to collect payments for use. In Chapter 9, the possibility of a compulsory licence scheme is considered.

8.04 The extent to which the Committee need consider these developments is necessarily limited by its terms of reference to the question of the appropriateness of the present scheme of split ownership provided for by s. 35(4). Although the question of the extent of investment required by the new technologies is of some relevance, the Committee received little detail of this. The MEAA has questioned whether an argument for a change in the allocation of the ownership of copyright in the sub-section can be premised upon technological developments. It asserted that

[t]he alteration, reinterpretation and removal of rights can not be justified as a consequence of technological change. . . . Rights, such as the right of journalists to hold the copyright when their works are exploited beyond the purposes of their employment, do not belong to a previous age. . . .

Changes in technology have not rendered Section 35(4) anachronistic. On the contrary, the concern for those who would have it repealed is that the subsection has never been more relevant than it is today.⁴

8.05 Whether technological change is a matter of relevance to any change in the current position is extensively considered in chapters 10 and 11 of this Report. The remainder of this chapter will consider the practical effect of technological development upon the production of newspapers, magazines, and similar periodicals.

The Digital Age, Convergence of Technologies and Markets

8.06 The technological developments noted in paragraph 8.03 are part of what has become known colloquially as the “digital age”. That age is associated with the advent of digital technology which allows the “digitisation” of works, whether by creating them in binary machine-readable code, or their subsequent reduction into machine readable code, by scanning or some other means. This technology allows the conversion of all works into the one format. Thus, as Dr Dreier notes:

[t]exts, pictures, image sequences, and sound can be digitized, in addition to general data and information. They can all be stored on one and the same data carrier, be disseminated via the same communications networks and - assuming a compatible retrieval format - can all be converted back to their original form, perceptible for humans, by one and the same device. . . .⁵

⁴ Submission of the Media Entertainment and Arts Alliance (MEAA), p. 41, paras 6.1.1 and 6.1.3.

⁵ Dreier, Note 3, at pp. 481f.

8.07 This passage encapsulates the three essential features of the digital age relevant to this Reference. Firstly, that technologies which were traditionally separate have converged, so that the manner in which works are used has changed and a distinction between primary and secondary uses is often difficult to discern. Secondly, that the digitalisation of works facilitates their transmission and thereby provides opportunities for additional payments. Lastly, that once a work has been digitised, the additional cost of placing it in an electronic database is minimal.

8.08 In its submission, the CNMCCA argued that newspapers now operate in a market comprising the “information industry”, which includes not just the traditional print media, but also electronic alternatives such as television, radio, telecommunications, and **databases**.⁶ It asserts that “[newspapers and magazines] and electronic media now compete head-to-head in the mass media market to provide similar products and services, viz. news, commentary, education, entertainment and **advertising**.”⁷ The CNMCCA further suggested that, by the year 2000, the majority of Australian homes will be equipped with a range of digitally-based technologies allowing a “wider range of information to be delivered more economically via an expanded number of **pathways**”.⁸ It appended to its submission extracts from a number of electronic database services already offering real-time news.

8.09 Whether these developments occur or not, it is clear that newspapers operate in a much more complex environment than before the advent of digital technology. Proprietors have responded to this complexity. The manner in which newspapers are prepared has changed. The *Sydney Morning Herald*, for example, has a substantial investment in graphics technology. At the inspection, the Committee was told of management’s desire to be able to paste-up a newspaper electronically. The Committee understands that several other newspapers already do this. Insofar as it is relevant to this Reference, electronic paste-up allows the simultaneous distribution of a newspaper in a number of forms without the need for re-keying or **re-scanning**. Thus, the same newspaper (or magazine, etc) can be provided, for example, by facsimile, by electronic file transfer, and in its traditional paper form.

Changes in Delivery Practices and the Information Highway

8.10 The Internet is a world-wide network of computer systems which are able to communicate because they share a common language, called **protocol**.⁹ It has been estimated that there are in excess of 30 million users of this network, in over 150 countries. US Vice-President Gore last year announced the US Government’s blueprint for the “information superhighway”, in a discussion paper entitled “National Information Infrastructure” which noted the commercial opportunities provided by high-speed networks. However, it is only

⁶ Submission of the CNMCCA, Report 4, at pp. 7-8.

⁷ Submission of the CNMCCA, Report 4, at p. 9.

⁸ Submission of the CNMCCA, Report 4, at p. 21.

⁹ Called the internet protocol or IP.

relatively recently that commercial organisations have arranged connections to the Internet, seeing the potential of world-wide marketing and support and information supply.

8.11 Already several organisations publish electronic newspapers on the Internet. Some of these are only available to fee-paying subscribers, others are free-of-charge. There are specialist and general interest electronic magazines and other periodicals with various conditions attaching to subscription. There are digital sound recordings of various current affairs radio programs, music, and interviews with world leaders. These can be heard by the network user through his or her own computer's speakers. There are extensive collections of images, both static and moving. Some of these have been created for specific scientific purposes, others are recreational. Colour magazines have been made available electronically in a form which can be printed by the reader on-demand.

8.12 This brief statement of the state-of-the-art indicates the advantages of electronically publishing material now found in the Print Media. The "reader" of a newspaper, whether delivered by facsimile or network, bears the printing costs. The delivery cost becomes negligible, and subsequent reproductions can be controlled. Moreover, material can be supplied with different levels of currency to electronic subscribers. For example, one subscriber may require financial information as it becomes available to the newspaper, whereas another may only request daily updates.

8.13 There are, of course, advantages to the user as well. Rather than reading an entire newspaper to find an article, users can have their computers search the text. Alternatively, users can ask the electronic newspaper publisher to provide them with only certain kinds of article. The information is available to a user anywhere in the world and as soon as it is published.

8.14 It is not necessary for the Committee to describe how these technologies work presently or how they are likely to evolve in the near future; such a description is beyond its terms of reference, moreover the rate of change is too great for such an account to be **useful**.¹⁰ In its submission, the CNMCCA referred extensively to satellite transmission, digital compression, expansion of broadcast channels, and optical fibre. Although prepared in 1991, its discussion is already out-of-date.

Electronic Databases

8.15 Electronic databases are already used in a large number of organisations in diverse fields to store material which may have first been published in the Print Media. Several commercial services already offer the text of Australian newspapers in electronic **form**.¹¹ The NEXIS

¹⁰ The interested reader should see, for example, Ed Krol, *The Whole Internet Guide*, O'Reilly & Associates 1992.

¹¹ Such services are described in the Submission of the CNMCCA, Report 4.

service provided by Mead Data Services, of Dayton, Ohio, contains the text (but not the images) of numerous newspapers in electronic form often available as the paper version hits the street. One of the press-clipping services visited by the Committee had plans to provide a database of newspaper material, including the images.

8.16 The manner in which a newspaper is used is of some relevance to the likely success of the electronic versions of newspapers and databases. At present, the physical page of a newspaper is not available electronically. It **is** not possible for the user to **determine** the position of an item on the page. This, the proprietor of one press-clipping agency noted, is of crucial interest to its clients. They want to **see** the item in context. Unless newspapers can be made available electronically in the form in which they **are** now available physically, there will always be the need to clip from the paper version. It therefore remains for the Committee to consider the **more** traditional form of reproduction by the use of photocopying equipment.

Reproduction from Paper

8.17 Since 1968 there has been an enormous expansion in the use and extent of photocopying. The history of photocopying is extensively described in the **CNMCCA's** submission and need not be repeated here, other than to note that the speed of photocopying equipment has substantially increased to the point where it is now possible to produce books by using photocopying rather than printing technology. Moreover, the technology used to produce an image on paper **has** 'changed so that an everyday photocopier will soon be able to function as a scanner, printer, facsimile transmission unit, and be driven from a personal desktop **computer**.¹² This increased functionality results from the use of digital technology, rather than the traditional analog technology.

8.18 Whatever the technology used, the amount of copying in private and public organisations, government departments, educational institutions and by individuals has dramatically increased. The CNMCCA estimated that, in 1992, world-wide 5,000,000,000 photocopies were made. Quite obviously, the proprietors are concerned about the effect of photocopying upon their sales of **newspapers**.¹³ They have suggested that the growth of and demand for photocopied articles from newspapers, magazines and periodicals and the resulting expansion of the activities of press clipping services has resulted in a decline in the sales of the original publications and shows an emerging trend which is unlikely to abate.

¹² See *Australian Financial Review*, 29 November 1993, "Digital revolution to make office copier **multi-functional**", referred to the expected **release** by Canon of a digital black-and-white photocopier in 1995.

¹³ See Submission of the **CNMCCA**, Report 5, "The Photocopying Phenomenon".

8.19 Another possibility created by digital technology is frequently called “**electrocopying**”. This, as **Dr Dreier** explains is “the reproduction of printed material in electronic form”¹⁴. In its 1989 report, the **IFRRO** Working Group on **Electrocopying** stated that,

- . . . the term as currently used can include any one or more of the following acts:
- of storage both of **pre-existing** print based works and of works made available only or alternatively in machine readable form;
 - of display of such works;
 - of manipulation (including searching) of such works;
 - of dissemination for example by downloading or networking of such works;
 - of reproduction of such **works**¹⁵.

Obviously, **electrocopying** has the potential to affect publishing activities in the same way as photocopying, but because of the increased potential for digital works to be stored, manipulated, reused and delivered any number of times and to any number of recipients, the potential problems for publishing industries are exaggerated. The Committee offers no comment on the appropriate copyright responses, apart from noting its existence and the possible effect which it might have upon the revenues derived from primary and subsequent uses.

¹⁴ Thomas K **Dreier**, “Copyright in the Age of **Electrocopying**”, *Journal of the Copyright Society of Australia*, Volume 11, No. 1, August 1993, p. 1.

¹⁵ **Dreier**, Note 14, pp. 2-3,