

TELEVISION AS SOMETHING SPECIAL? CONTENT CONTROL TECHNOLOGIES AND FREE-TO-AIR TV

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[Many areas of digital communication, including digital television, raise concerns about unauthorised reuse of content. Proposals exist in the United States and Europe for applying content control technologies to free-to-air digital television to limit the reuse of broadcast content. These proposals have implications for regulatory options, and for the social and cultural position of television in countries such as Australia. Each proposal also demonstrates the importance of current issues in copyright reform for questions of media law and policy. By examining the history and current status of the broadcast flag in the United States and the Content Protection and Copy Management standard being developed in Europe, this article suggests that Australian regulators are likely to face similar calls for action on digital broadcast content and explains some of the possible regulatory choices regarding the transmission and the reception of digital free-to-air content. As with the United States' and European plans, the choices made in relation to television may have wider implications for digital networked communications and the evolution of a diverse media environment.]

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I INTRODUCTION: TELEVISION'S DIGITAL FUTURE

Australian free-to-air television is becoming digital,¹ even if the transition has been slower than expected when conversion plans were announced in 1998.² Free-to-air digital television ('DTV') commenced in 2001 and reached all metropolitan and rural areas over the following three years.³ However, digital uptake has been slight with only 15 per cent of households receiving free-to-air DTV at 31 December 2005 and 12 per cent subscribing to DTV.⁴ The transition to digital poses many challenges for Australian industry and policymakers, with numerous broadcasting and copyright reviews relevant to DTV conducted since the late 1990s.⁵ As well as the substantial work of the Productivity Commission in 2000,⁶ more recent reviews have examined aspects of the DTV regulatory framework related to simulcasting, licences and quotas,⁷ the treatment of technological protection measures ('TPMs') under copyright law,⁸ and copyright exceptions including fair dealing.⁹ Many of the reviews are ongoing.¹⁰ Television broadcasting is a complex policy area, with multiple changes in technologies, industries and audiences relevant to the Australian environment. One area which has not received a great deal of attention in the policy process surrounding DTV is the concern of copyright owners about protecting digital audiovisual content from unauthorised reuse.

¹ Different terms are used for television delivery formats in various countries, such as 'terrestrial', 'broadcast', 'cable', 'satellite', 'pay', 'subscription' and 'multichannel'. In this article, the terms 'free-to-air' and 'broadcast television' are generally used to describe the longstanding Australian form for broadcast television that is received by viewers without direct charge. Cable and satellite-delivered subscription multichannel services are generally described in this article as 'subscription television'.

² See, eg, the second reading speech for the Television Broadcasting Services (Digital Conversion) Bill 1998 (Cth): Commonwealth, *Parliamentary Debates*, House of Representatives, 8 April 1998, 2830 (Warwick Smith, Minister for Family Services). Smith stated that the transition would be complete by 1 January 2004: at 2831. This transition to digital is focused on television transmission and reception; television production has already moved to digital technology, see, eg, Jock Given, 'A Digital Agenda' (2002) 35 *Southern Review* 21, 22–3.

³ The reforms were contained in the *Television Broadcasting Services (Digital Conversion) Act 1998* (Cth) and the *Broadcasting Services Amendment (Digital Television and Datacasting) Act 2000* (Cth). See generally Lesley Hitchens, 'Digital Television Broadcasting — An Australian Approach' (2001) 12 *Entertainment Law Review* 112. For a brief overview, see Des Butler and Sharon Rodrick, *Australian Media Law* (2nd ed, 2004) 541–7.

⁴ See Department of Communications, Information Technology and the Arts, Australia ('DCITA'), 'Meeting the Digital Challenge: Reforming Australia's Media in the Digital Age' (Discussion Paper, 2006) 15; Tom Loncar, Peter Fairbrother and Julie Dalziel, *Digital Media in Australian Homes* (2005) 20. Note, however, that satellite subscription television in Australia is digital: see Given, 'A Digital Agenda', above n 2, 22.

⁵ Many of them are mandated in legislation governing DTV: see *Broadcasting Services Act 1992* (Cth) sch 4 cls 60–60B.

⁶ Productivity Commission, *Broadcasting: Inquiry Report*, Report No 11 (2000).

⁷ DCITA, *Reports on Reviews of the Digital Television Regulatory Framework* (2006).

⁸ House of Representatives Standing Committee on Legal and Constitutional Affairs, Parliament of Australia, *Review of Technological Protection Measures Exceptions* (2006).

⁹ Attorney-General's Department, Australia, *Fair Use and Other Copyright Exceptions: An Examination of Fair Use, Fair Dealing and Other Exceptions in the Digital Age — Issues Paper* (2005) ('*Fair Use Issues Paper*').

¹⁰ See, eg, DCITA, 'Meeting the Digital Challenge', above n 4.

The emergence of broadband internet and associated equipment such as digital video recorders ('DVRs')¹¹ means that television material broadcast digitally 'in the clear' — without any form of technological protection — has the potential to be copied and redistributed online without any loss of quality. Such redistribution may well breach the copyright held by creators, investors or broadcasters. However, the experience of content owners with peer-to-peer music distribution suggests that protection by copyright law alone is unlikely to prevent unauthorised reuse of digital broadcast material. In addition, the tradition of open and free reception of television content may leave viewers with few qualms about reusing content that has already been made available somewhere in the world on broadcast television. File sharing of DTV content is now far from novel.¹² Since the 1990s, content owners have investigated options for the technological protection of free-to-air DTV content. In recent years, processes based in the United States and Europe have sought to develop specific technological and regulatory protection mechanisms for such content. These initial steps in developing, deploying and regulating content control technologies raise significant issues for broadcasters, associated creative industries and viewing publics. US and European plans for the technological protection of DTV content identify issues for the Australian legislative and regulatory context, three of which appear particularly relevant. These are: the interaction between copyright law and broadcasting regulation; the appropriate levels and locations of control over the reuse of DTV content; and the impact of reuse restrictions on the place of free-to-air television in Australia.

A Interaction between Copyright Law and Broadcasting Regulation

The first of the three issues involves the relationship between two areas of law and policy. Under contemporary network conditions, broadcasting and copyright regulation are of growing *joint* importance for digital communications.¹³ As the proposals for content protection illustrate, choices that have been made in copyright policy may re-emerge in decisions about media regulation and vice versa. For example, the treatment of TPMs and their circumvention under copyright law — major issues in Australia and internationally¹⁴ — also become significant for DTV policy once control technologies are proposed for content. Closer relations between broadcasting regulation and copyright law raise issues about policy formation, such as the range of participants involved and the

¹¹ These devices are also commonly known as personal video recorders ('PVRs').

¹² See, eg, David Smith and Alice O'Keefe, 'TV: So How Will You Watch It?', *Focus, The Observer* (London), 12 March 2006, 24.

¹³ See, eg, Jonathan Weinberg, 'Digital TV, Copy Control, and Public Policy' (2002) 20 *Cardozo Arts and Entertainment Law Journal* 277. On the repositioning of television and film policy as part of a 'whole of government' approach to service industries (within which copyright has an important economy-wide role), see Tom O'Regan and Ben Goldsmith, 'Making Cultural Policy: Meeting Cultural Objectives in a Digital Environment' (2006) 7 *Television and New Media* 68.

¹⁴ See, eg, House of Representatives Standing Committee on Legal and Constitutional Affairs, above n 8; Kimberlee Weatherall, 'On Technology Locks and the Proper Scope of Digital Copyright Laws — *Sony* in the High Court' (2004) 26 *Sydney Law Review* 613.

opportunities for public involvement in the process.¹⁵ They also highlight issues about the extent of regulatory power within the sector: to date, limited regulatory power has determined the fate of the US proposal for broadcast content protection. And they reveal the breadth of regulatory impact when choices are made about DTV. In particular, decisions aimed at DTV can have implications for networked communications more generally and for the open architecture of the internet.¹⁶

B Levels and Locations of Control over Reusing DTV Content

The second issue concerns control. The content control technologies proposed for broadcast television in the US and Europe suggest that choices about reusing content may move away from viewers towards copyright owners. In terms of authorised content use at least, the ability to reuse content may be left to market mechanisms, with copyright owners able to offer content on more or less restrictive terms. (Of course, if those terms are too unacceptable to viewers, they may look to unauthorised file sharing networks.) Such a shift from users to copyright owners accords with literature on the interaction of digital rights management ('DRM') and copyright exceptions, which recognises that digital technologies can allow restrictions to be placed on uses that, in the analogue environment, were not practical to control.¹⁷ But the context of free-to-air television differs in an important way from many other instances of technological content control. It is not based on contracts where viewers purchase the ability to view particular content and, in doing so, limit their rights to reuse material. Rather, free-to-air television offers content widely in order to accumulate viewers and then sells their attention — or the model of it created through ratings measurements — to advertisers.¹⁸ Examining the US and European proposals for DTV content control suggests that media policy may offer its own reasons to limit changes in control from viewers towards content owners — reasons that are distinct from those raised within existing debates about the interaction of TPMs, copyright exceptions and contracts.¹⁹

C Impact of Reuse Restrictions on Free-To-Air Television in Australia

Shifts in control also relate to a third issue: digital broadcast content control illustrates how in the digital environment free-to-air television may change from

¹⁵ Such closer relations between broadcasting and copyright policy may also challenge the political weight of existing media entities, which is something that appears to have long been important in Australian media policy: see, eg, Mark Westfield, *The Gatekeepers: The Global Media Battle To Control Australia's Pay TV* (2000); Trevor Barr, *Newmedia.com: The Changing Face of Australia's Media and Communications* (2000) 206–7.

¹⁶ See, eg, Susan P Crawford, 'Shortness of Vision: Regulatory Ambition in the Digital Age' (2005) 74 *Fordham Law Review* 695.

¹⁷ See, eg, Dan L Burk, 'Legal and Technical Standards in Digital Rights Management Technology' (2005) 74 *Fordham Law Review* 537.

¹⁸ See, eg, John Sinclair, 'Into the Post-Broadcast Era' in John Sinclair (ed), *Contemporary World Television* (2004) 42.

¹⁹ On the latter, see, eg, Copyright Law Review Committee, Attorney-General's Department, Australia, *Copyright and Contract* (2002).

being ‘something special’ in terms of its cultural, economic and political position within other forms of media and within media policy. As Jock Given has suggested, broadcast media has a particular place in the history of countries like Australia:

the simplicity of music, speech and images supplied by radio and TV broadcasters, and the almost completely intuitive operation of the receiving devices, got them to nearly 100 per cent of households throughout the industrialised world. This outcome proved much more difficult for other media such as print, which required literacy, and the telephone, which required direct payment and a physical connection to the home. Broadcasting was something special.²⁰

Broadcasting was free — at least without direct charge to the viewer in Australia — and almost universal in its use. And free-to-air television remains the most widely used mass media form in Australia,²¹ certainly for news and information.²² While there is no ‘inherent social magic’ in the free availability of broadcast content,²³ free-to-air television has held a significant place in cultural, economic and political life in countries such as Australia for many years. From the mid-20th century, television was conceptualised as a nationally-based mass medium ascribed with important roles in identity formation, political life and public debate.²⁴ In recent decades, mass engagement with television has changed and it appears set to change much further in television’s digital future. In part, this is because the technologies underlying DTV also support alternative delivery formats for audiovisual content. This suggests how Australian viewers might bypass broadcasters and access their favourite programs directly — whether via authorised or unauthorised avenues. Technically such a shift is possible, but histories about the adoption of many technologies suggest that the cultural, political and institutional weight of free-to-air television will sustain it — in some form and for some time — although its content and financial models will be far from unchanged.²⁵

One important factor in these developments will be the scope and style of content protection measures. This article examines proposals for applying content control technologies to free-to-air DTV in the US and Europe, and examines implications for the Australian regulatory environment. Part II examines the progress and current status of the ‘broadcast flag’ proposal in the US, including the Federal Communications Commission (‘FCC’) rule-making process and the review by the US Court of Appeals for the District of Columbia of the FCC’s authority to make rules in this area. It also outlines the types of

²⁰ Jock Given, *Turning Off the Television: Broadcasting’s Uncertain Future* (2003) 40.

²¹ Productivity Commission, above n 6, 61–74.

²² David Denemark, ‘Mass Media and Media Power in Australia’ in Shaun Wilson et al (eds), *Australian Social Attitudes: The First Report* (2005) 220, 220–5.

²³ Given, *Turning Off the Television*, above n 20, 258.

²⁴ Sinclair, above n 18, 42–5.

²⁵ For a useful review of work on the reception of media technologies, see Leah A Lievrouw and Sonia Livingstone (eds), *Handbook of New Media: Social Shaping and Social Consequences of ICTs* (2006).

content control technologies which were approved before the FCC rules were struck down, and considers the concerns of public interest advocates about the impact of the broadcast flag rules on matters such as fair use under copyright law and the open architecture of the internet. Part III looks at a proposal for a Content Protection and Copy Management ('CPCM') standard, which is being developed in Europe by the Digital Video Broadcast ('DVB') consortium and incorporates more complex usage controls than the broadcast flag. The types of reuse of broadcast material which could potentially be controlled, and the differences between CPCM and the broadcast flag, are explored.²⁶ Part IV, while noting the limited effectiveness of content control technologies in general, focuses on the different regulatory choices that could be available under models provided by the US or European proposals. The possibilities for regulation are examined in relation to issues in both copyright and broadcasting law to illustrate a more general point: the examination of digital communications and content control can encompass multiple legal domains. This Part also analyses whether appropriate powers exist in Australia to implement options for regulating DTV reception equipment and transmission that are suggested by the international proposals. The analysis suggests how careful regulation of content control technologies might support the development of DTV in ways that maintain at least some of the cultural, economic and political roles of Australian television in the broader digital media environment.

II THE US AND THE BROADCAST FLAG

A Background

Unauthorised redistribution of digital broadcast content can be limited in various ways. For example, the signal can be encrypted at its source in an attempt to limit all unauthorised access to material, or watermarked by embedding data in signals to identify copyright owners and related information and to allow sophisticated tracing of copies. Subscription forms of DTV also offer the possibility of specific contractual terms under which subscribers consent to their reuse of content being limited and their activities being monitored — such as through networked set-top box reception equipment, which may be owned by subscription companies, and itself offers extensive possibilities to protect content technologically.²⁷ Free-to-air broadcast television lacks a

²⁶ Both the US and European developments could also be considered in light of the World Intellectual Property Organization's ('WIPO') proposed treaty on broadcasting: Standing Committee on Copyright and Related Rights, WIPO, *Revised Draft Basic Proposal for the WIPO Treaty on the Protection of Broadcasting Organizations*, 15th session, WIPO Doc SCCR/15/2 (2006), which is available at <http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=64712>. Some commentators suggest that the treaty will underlie the adoption of the content control technologies internationally: see, eg, Crawford, 'Shortness of Vision', above n 16, 714. On the proposed treaty, see generally Kate Gilchrist, 'Internet Transmissions and the WIPO Broadcasters' Treaty' (2004) 7(8) *Internet Law Bulletin* 108. However, for present purposes, examining the US and European proposals is enough to highlight the central regulatory issues likely to develop in Australia.

²⁷ See, eg, Matt Carlson, 'Tapping into TiVo: Digital Video Recorders and the Transition from Schedules to Surveillance in Television' (2006) 8 *New Media and Society* 97.

contractual relationship with its viewers, meaning attention has focused on technological possibilities for controlling the reuse of content. In the US, one such approach in particular — referred to as the ‘broadcast flag’ — developed alongside wider processes of converting television to digital.

The broadcast flag aims to control ‘indiscriminate redistribution’ of DTV content.²⁸ The flag is a series of bits which is embedded in an Advanced Television Systems Committee (‘ATSC’) digital broadcast signal.²⁹ Under the scheme, which combined technical standards and regulation, DTV signals containing the broadcast flag would be recognised by reception equipment and the redistribution of that content in digital form would be restricted by approved technologies within that equipment. Regulations would mandate that all reception equipment respond to the flag. It is worth noting that this model for controlling free-to-air DTV content requires public regulation to ensure that reception equipment complies with the particular control technology.³⁰

In 2002, content owners suggested they might withhold high value content, such as recent movies in high definition format, from US digital free-to-air television unless they were satisfied with the available content protection.³¹ Such concerns appeared likely to hamper US government plans for DTV and threaten the viability of free-to-air DTV.³² In this context, a report was issued in June 2002 by a US industry body known as the Broadcast Protection Discussion Subgroup (‘BPDG’).³³ The BPDG was formed to ‘evaluat[e] technical solutions for preventing unauthorized redistribution ... of unencrypted digital terrestrial broadcast television’.³⁴ It was established within the Copy Protection Technical Working Group, which itself is a voluntary body of representatives from consumer electronics, information technology, motion picture, and cable and broadcast industries.³⁵ The *BPDG Report* proposed implementing an ATSC flag scheme and regulating the manufacture of all devices that could receive digital

²⁸ *Report and Order and Further Notice of Proposed Rulemaking Re Digital Broadcast Content Protection*, 18 FCCR 23550, [6] (4 November 2003), codified at 47 CFR §§ 73, 76 (2005) (‘*Broadcast Flag Order*’).

²⁹ ATSC is an international, not-for-profit organisation which develops voluntary standards for advanced television systems. Its standard has been adopted for US DTV, unlike the DVB standard which is used in Europe, Australia and parts of Asia: see below Part III.

³⁰ Broadly similar proposals were adopted earlier for cable television in the so-called ‘plug and play’ Order: *Second Report and Order and Second Further Notice of the Proposed Rulemaking Re Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, Compatibility between Cable Systems and Consumer Electronics Equipment*, 18 FCCR 20885 (10 September 2003) (‘*Plug and Play Order*’). See further Susan P Crawford, ‘The Biology of the Broadcast Flag’ (2003) 25 *Hastings Communications and Entertainment Law Journal* 603, 616–18.

³¹ See, eg, Pamela McClintock, *Viacom’s Ultimatum — CBS Parent: No Piracy Protection, No Hi-Def* (16 December 2002) Variety.com <<http://www.variety.com/article/VR1117877531?categoryId=1237&cs=1>>.

³² *Broadcast Flag Order*, 18 FCCR 23550, [4] (4 November 2003).

³³ Robert Perry, Michael Ripley and Andrew Setos, *Final Report of the Co-Chairs of the Broadcast Protection Discussion Subgroup to the Copy Protection Technical Working Group* (2002) <<http://www.cptwg.org/Assets/TEXT FILES/BPDG/BPDG Report.DOC>> (‘*BPDG Report*’).

³⁴ *Ibid* 1.

³⁵ *Ibid*.

broadcast signals to ensure they would recognise the existence of the flag in a broadcast and act on it by preventing unauthorised redistribution of that content.

The *BPDG Report* contained two proposed components: the broadcast flag standard and rules for reception equipment.³⁶ The flag would be a small amount of digital data that could be added to an ATSC digital signal. In 2003, this component of the report was adopted by the ATSC and formed part of ATSC Standard A/65B.³⁷ The second component comprised rules for reception equipment, known as ‘compliance and robustness requirements’.³⁸ These would require digital broadcast reception equipment to recognise the broadcast flag and restrict redistribution of digital content in a manner that met the compliance and robustness requirements. Existing digital broadcast reception equipment — legacy devices — would be able to receive and handle DTV signals without limitation.

Despite the publication of the *BPDG Report*, there was considerable disagreement among participants about the process and the proposed solution. Some of their expressed concerns included issues of policy formation and copyright law. For example, the companies Philips, Thomson and Zenith objected ‘fundamentally’ to the BPDG process as ‘the only meaningful negotiations were occurring behind closed doors’ and were dominated by the studios and the 5C companies.³⁹ Other parties expressed concern that BPDG had entered too far into public policy, despite being a private technology discussion group with ‘no official or unofficial governmental standing’,⁴⁰ and in particular that the broadcast flag could be seen as restricting ‘the fair use rights of consumers’.⁴¹

In any event, the *BPDG Report* was put forward to the FCC as the appropriate solution for protecting DTV broadcast content. Proponents of the report drew on the same arguments used by content owners in the 1990s when lobbying for the *Digital Millennium Copyright Act of 1998*⁴² — that copyright owners would not make works available digitally without some ability to prevent widespread piracy — and the process appears to have been driven substantially by the major

³⁶ Ibid 2–10.

³⁷ See ATSC, *Program and System Information Protocol for Terrestrial Broadcast and Cable (Revision C) with Amendment No 1*, ATSC Standard A/65C (2006) <http://www.atsc.org/standards/a_65c_with_amend_1.pdf>.

³⁸ Perry, Ripley and Setos, *BPDG Report*, above n 33, 14.

³⁹ Philips, Thomson and Zenith, *Comments Submitted by Philips, Thomson and Zenith on the Report of the Broadcast Protection Discussion Subgroup to the Copy Protection Technical Working Group* (2002) [C] <http://www.cptwg.org/Assets/text_files/BPDG/Tab_P-04.doc>. These comments were supported by Vereniging Open Source Nederland, Sharp Laboratories of America, DigitalConsumer.org, Electronic Frontier Foundation and Microsoft: see Email from Vereniging Open Source Nederland to BPDG, 30 May 2002; Email from Sharp Laboratories of America to BPDG, 30 May 2002; Email from DigitalConsumer.org to BPDG, 30 May 2002; Email from Electronic Frontier Foundation to BPDG, 31 May 2002. These emails are available at <<http://www.cptwg.org/Assets/TEXT FILES/BPDG/Tab P-05.doc>>. The 5C companies comprised Hitachi, Intel, Matsushita Electric Industrial, Sony and Toshiba.

⁴⁰ Perry, Ripley and Setos, *BPDG Report*, above n 33, 4 fn 4.

⁴¹ Letter from Gary Shapiro (President and CEO, Consumer Electronics Association) to Michael Ripley, 16 May 2002 <<http://www.cptwg.org/Assets/TEXT FILES/BPDG/Tab P-06.doc>>.

⁴² Pub L No 105-304, 112 Stat 2860.

movie studios. In response to the *BPDG Report*, the FCC issued a Notice of Proposed Rulemaking⁴³ in August 2002 to explore ‘whether the FCC can and should mandate the use of a copy protection mechanism for digital broadcast television’ and the consumer impact of such regulation.⁴⁴

B *FCC Rulemaking and Technology Approval*

The FCC’s Notice of Proposed Rulemaking elicited thousands of responses,⁴⁵ and in November 2003 the FCC issued a Report and Order and Further Notice of Proposed Rulemaking.⁴⁶ The *Broadcast Flag Order* required all products capable of receiving DTV signals broadcast over the air to comply with the broadcast flag by 1 July 2005.⁴⁷ In its *Broadcast Flag Order*, the FCC examined various content protection alternatives. Encryption at the transmission source was considered more effective than flag-based systems, but rejected because of its potential expense, uncertain implementation time line, and rendering obsolete of legacy televisions.⁴⁸ The FCC also examined watermarking technologies, which were considered insufficiently mature for implementation.⁴⁹ This led the FCC to conclude that ‘an ATSC flag-based system is the best option for providing a reasonable level of redistribution protection at a minimal cost to consumers and industry’.⁵⁰ Under the system, DTV reception devices would need to recognise and give effect to the broadcast flag in a manner consistent with compliance and robustness rules which the FCC was still to formulate.⁵¹ From July 2005, consumer electronic manufacturers would need to make devices that ‘direct flag-marked content to digital outputs associated with approved content protection and recording technologies’.⁵² However, the FCC’s rule would not prevent flagged content being directed to analogue outputs on reception devices.

Two points are worth noting here. First, the *Broadcast Flag Order* did not determine the reuse standards that should be adopted within approved content protection technologies. However, the scope of allowable restrictions emerged subsequently in the FCC’s interim process for approving various technologies, discussed below. Second, although the Order was directed at free-to-air DTV, its scope was much wider. The broadcast flag model is addressed to ‘reception’ and ‘demodulator’ devices, but technological convergence means the flag regulation

⁴³ *Notice of Proposed Rulemaking Re Digital Broadcast Copy Protection*, FCC No 02-231 (9 August 2002).

⁴⁴ FCC, ‘FCC Explores Digital Broadcast Copy Protection: Goal Is To Facilitate Transition to Digital Television’ (Press Release, 8 August 2002).

⁴⁵ *American Library Association v Federal Communications Commission*, 406 F 3d 689, 691 (Edwards J) (DC Cir, 2005) (‘*American Library Association*’).

⁴⁶ *Broadcast Flag Order*, 18 FCCR 23550 (4 November 2003).

⁴⁷ FCC, ‘FCC Adopts Anti-Piracy Protection for Digital TV: Broadcast Flag Prevents Mass Internet Distribution; Consumer Copying Not Affected; No New Equipment Needed’ (Press Release, 4 November 2003).

⁴⁸ *Broadcast Flag Order*, 18 FCCR 23550, [22]–[23] (4 November 2003).

⁴⁹ *Broadcast Flag Order*, 18 FCCR 23550, [26] (4 November 2003).

⁵⁰ *Broadcast Flag Order*, 18 FCCR 23550, [11] (4 November 2003).

⁵¹ *Broadcast Flag Order*, 18 FCCR 23550, [40] (4 November 2003).

⁵² *Broadcast Flag Order*, 18 FCCR 23550, [50] (4 November 2003).

would affect a broad range of digital equipment, including digital televisions, DVRs, DVD recorders, digital VHS recorders, various mobile devices including video-capable mobile phones, and computers with tuner cards. The flag concerns digital content protection across all media, which in contemporary contexts means, especially, the internet.⁵³ This breadth of effect underlies the criticism that the *Broadcast Flag Order* received from copyright users groups.⁵⁴ The flag was seen as a substantial threat to the historically open architecture model of the internet.⁵⁵

The FCC established an interim procedure for approving content protection technologies under the *Broadcast Flag Order*.⁵⁶ The procedure clarified that technology complying with the broadcast flag could control content in a wide range of ways. The FCC considered 13 existing technologies that focused on output protection, recording methods and wider DRM techniques. Submissions were made by interested parties, generally commercial entities interested in licensing existing control technologies for use in DTV reception equipment and non-commercial entities with public interest concerns linked to the accessibility of copyright material. The FCC approved all of the 13 technologies considered, which varied greatly in the content control they allowed. For example, approved output protection technologies included: Digital Transmission Content Protection, which employs encryption to ensure content cannot be sent to noncompliant devices;⁵⁷ High Bandwidth Digital Content Protection, which does not permit any content to be copied;⁵⁸ and TiVoGuard Digital Output Protection Technology, which allows content to be transferred among a limited number of devices.⁵⁹ The approved recording methods also included technologies that encrypt content in a manner which is maintained when the content is copied, and those that use a proprietary recording and playback process which only allows copies to play on compliant devices.⁶⁰

The FCC emphasised that its goal was a system of control ‘that will prevent the mass indiscriminate redistribution of digital broadcast television content’.⁶¹ At the same time, the FCC said it sought to avoid limits on domestic redistribution that would be legal under the fair use doctrine in US copyright law, and did not intend to limit internet redistribution in contexts in which content

⁵³ Crawford, ‘Shortness of Vision’, above n 16, 709–15. The FCC was aware of the general point: *Broadcast Flag Order*, 18 FCCR 23550, [40] (4 November 2003).

⁵⁴ See, eg, Center for Democracy and Technology, *Implications of the Broadcast Flag: A Public Interest Primer (Version 2.0)* (2003) <<http://www.cdt.org/copyright/20031216broadcastflag.pdf>>.

⁵⁵ See, eg, Crawford, ‘Shortness of Vision’, above n 16.

⁵⁶ *Broadcast Flag Order*, 18 FCCR 23550, [50]–[57] (4 November 2003). While the procedure for approval was interim, the approval was intended to be ongoing; it would only be reviewed if other circumstances changed.

⁵⁷ *Order Re Digital Output Protection Technology and Recording Method Certifications*, FCC No 04-193, [5]–[13] (4 August 2004) (‘*Digital Output Protection Order*’).

⁵⁸ *Digital Output Protection Order*, FCC No 04-193, [14]–[18] (4 August 2004).

⁵⁹ *Digital Output Protection Order*, FCC No 04-193, [19]–[23] (4 August 2004).

⁶⁰ *Digital Output Protection Order*, FCC No 04-193, [24]–[46] (4 August 2004).

⁶¹ *Digital Output Protection Order*, FCC No 04-193, [61] (4 August 2004). See also above n 28 and accompanying text.

could be adequately protected. However, some commentators doubted these aims were achieved:

the *Broadcast Flag Order* said that the flag was to be used only to prevent redistribution of digital broadcasts, not mere copying. The Order explained the importance of this limitation in terms of preserving valuable uses of broadcast programming: ‘Consumers will continue to have the ability to make copies of broadcast content, including news and public interest programming.’ The Order did not make it entirely clear how this purported limitation on the degree of permissible TPM constraint would be enforced. And, as it turned out, the FCC later approved ... some technologies that limited copying, explaining that the technologies ‘were developed prior to adoption of the *Broadcast Flag Order*’ and therefore ‘carry with them certain legacy attributes that, while less than ideal from a broadcast flag perspective, may have been appropriate or necessary at the time and in the context that they were developed’.⁶²

One of the areas of particular debate in the approval process for broadcast flag compliant technologies was described by the FCC as ‘localization’.⁶³ It involved restricting content redistribution ‘to a tightly defined physical space in and around the home’.⁶⁴ Localization was sought by the Motion Picture Association of America (‘MPAA’), at least until further technical, legal and privacy-related matters could be addressed. This issue was discussed particularly in relation to one of the technologies, ‘TiVoGuard’. TiVoGuard allows content to move between a group of TiVo DVRs, all of which are registered to one TiVo customer account.⁶⁵ In combination with other TiVo services, it allows content to be transferred from a TiVo DVR via the internet to a personal computer which has TiVo media player software. TiVoGuard was the only approved technology that allowed some internet transmission of content marked with the broadcast flag.⁶⁶ However, as Susan P Crawford has explained, the ability to transmit was quite narrow:

TiVoGuard, the lone holdout against the MPAA’s forceful demands to the FCC ... itself permitted transmissions only to a single computer with a ‘dongle’ (a

⁶² Molly Shaffer Van Houweling, ‘Communications’ Copyright Policy’ (2005) 4 *Journal on Telecommunications and High Technology Law* 97, 106–7 (citations omitted).

⁶³ *Digital Output Protection Order*, FCC No 04-193, [70] (4 August 2004).

⁶⁴ *Digital Output Protection Order*, FCC No 04-193, [70] (4 August 2004).

⁶⁵ TiVo is a proprietary DVR and associated subscription service available in the US and the UK. The TiVo software and an associated electronic program guide and genre database provide a high level of user functionality which allows television viewers to search for programs that match their interests and record them to an internal hard drive for time-shifted viewing. Programs can also be transferred to other devices, such as personal computers, or burned onto digital video discs. For a useful overview of the development of the TiVo DVR, see generally Carlson, above n 27.

⁶⁶ Three other technologies abandoned plans to allow some online transmission of flagged content during the interim process of the FCC. See Crawford, ‘Shortness of Vision’, above n 16, 711 fn 69: ‘All save TiVo agreed to insert “time to live” (TTL) and “round trip time” (RTT) limitations in the packets generated by the protection technology. These limitations mean that packets can travel no more than three hops (in no more than seven milliseconds) before expiring’.

small device that plugs into a computer port that prevents illicit copies of software from being made) attached or within a constrained personal network.⁶⁷

TiVo did not want to adopt proximity controls within TiVoGuard for the purpose of localization — relying instead on its own software and hardware restrictions — and it was not required to adopt them by the FCC. In approving the TiVo model, the FCC emphasised that the aim of the broadcast flag regulations was to prevent the *indiscriminate* redistribution of DTV content:

Our goal was not to prevent ‘unauthorized’ redistribution as advanced by MPAA. Rather, we explicitly provided that the scope of the *Broadcast Flag Order* ‘does not reach existing copyright law.’ ... With respect to TiVoGuard, we note in particular that under the terms of TiVo’s subscriber agreement, copyrighted content may only be used for personal, non-commercial purposes. The limit of 10 devices uniquely associated with a single secure viewing group additionally prevents content from being indiscriminately redistributed in a ‘daisy chain’ fashion. ... It is our hope that ... TiVoGuard ... will not only provide a reasonable level of redistribution control for digital broadcast content, but will also facilitate new and innovative consumer uses, such as remote access to content.⁶⁸

The approval of TiVoGuard illustrates that, while approved broadcast flag technologies could be very restrictive of content reuse, the FCC did not limit all types of redistribution. However, neither did the FCC mandate viewer access to particular content by ruling that some content could not be ‘flagged’. Decisions about the possible reuse of content by viewers would be left to broadcasters and copyright owners (in terms of applying or not applying the flag and in supplying content) and to the influences of the market (both in terms of attracting viewers and selling reception devices that allow greater or lesser content reuse). The possibility that factual information, public domain material, news and commentary could be restricted by the broadcast flag was noted as potentially problematic by FCC Commissioners Michael Copps and Jonathan Adelstein,⁶⁹ and raised many concerns with critics.

C Review by the United States Court of Appeals

There was significant opposition to the broadcast flag from representatives of copyright users, consumer advocates and open source communities. As well as general concerns about free speech — which have particular prominence under the First Amendment — critics raised the treatment of factual information, which would not receive copyright protection under US law, unlike at least some factual compilations in Australia which could be protected by copyright.⁷⁰ Some commentators suggested that ‘the broadcast flag regulations could have a profound effect on the ability of consumers to watch, record, or use DTV and on

⁶⁷ Ibid 711 (citations omitted).

⁶⁸ *Digital Output Protection Order*, FCC No 04-193, [72] (citations omitted) (4 August 2004).

⁶⁹ *Broadcast Flag Order*, 18 FCCR 23550, [66]–[72] (4 November 2003).

⁷⁰ See, eg, *Desktop Marketing Systems Pty Ltd v Telstra Corporation Ltd* (2002) 119 FCR 491; cf *Feist Publications Inc v Rural Telephone Service Co Inc*, 499 US 340 (1991).

the design of devices that play, transmit, or store digital content, including computers'.⁷¹ And the Electronic Frontier Foundation argued that the broadcast flag 'would give Hollywood unwarranted control over the development of digital television ... and related technologies to the detriment of creators and consumers'.⁷²

In October 2004, nine non-profit organisations representing consumer, research, educational and library interests — including the American Library Association and the Consumer Federation of America — asked the US Court of Appeals for the District of Columbia to review the FCC's *Broadcast Flag Order*.⁷³ The petitioners argued the FCC had exceeded its statutory powers in requiring DTV receivers and other reception devices to include broadcast flag technology. They argued the FCC was seeking to protect copyright owners in a manner that had been rejected under earlier legislative enactments, which amounted to 'usurping the prerogative of Congress to create and define the scope of copyright'.⁷⁴ They also argued the FCC acted without evidence that the flag was needed or that it would solve the problem at which it was directed.⁷⁵

The decision in *American Library Association* in May 2005 focused on the regulator's powers, particularly the limits of its delegated authority. The FCC claimed authority for the Rulemaking from the *Communications Act of 1934*,⁷⁶ under which the FCC was created and empowered to make rules '[f]or the purpose of regulating interstate and foreign commerce in communication by wire and radio'.⁷⁷ This includes jurisdiction over 'all instrumentalities, facilities [and] apparatus' associated with the overall circuit of messages sent and received.⁷⁸ The FCC claimed the provisions provided it with 'ancillary authority' to make the broadcast flag regulations. The previous leading case on the ancillary authority of the FCC, *United States v Southwestern Cable Co*,⁷⁹ had upheld certain regulations for cable television made before the FCC had any express regulatory authority for cable.⁸⁰ Similarly, with respect to the broadcast flag the FCC claimed that it had ancillary authority to regulate consumer DTV reception equipment.

The Court of Appeals ruled against the FCC. It found the 'insurmountable hurdle' facing the regulator was that its general jurisdiction does not include power to regulate 'consumer electronics products ... when those devices are not engaged in the process of radio or wire transmission'.⁸¹ The Court of Appeals continued:

⁷¹ Center for Democracy and Technology, above n 54, 3.

⁷² Electronic Frontier Foundation, 'Electronic Frontier Foundation Rejects Broadcast Flag' (Press Release, 9 December 2002).

⁷³ *American Library Association*, 406 F 3d 689, 691 (Edwards J) (DC Cir, 2005).

⁷⁴ *Ibid* 698 (Edwards J).

⁷⁵ *Ibid*.

⁷⁶ 47 USC §§ 151, 154(i)–(j), 303, 403, 521 (1934) ('*Communications Act*').

⁷⁷ 47 USC § 151 (1934).

⁷⁸ 47 USC §§ 151, 153(50), 153(51) (1934).

⁷⁹ 392 US 157 (1968).

⁸⁰ See *Broadcast Flag Order*, 18 FCCR 23550, [29] fn 70 (4 November 2003).

⁸¹ *American Library Association*, 406 F 3d 689, 700 (Edwards J) (DC Cir, 2005).

Because the *Flag Order* does not require demodulator products to give effect to the broadcast flag until *after* the DTV broadcast has been completed, the regulations adopted in the *Flag Order* do not fall within the scope of the Commission's general jurisdictional grant.⁸²

Thus, manufacturers did not need to meet the July 2005 deadline for flag-compliant products. It is worth emphasising that the decision turned on the scope of FCC power; it did not address the interaction of the broadcast flag and copyright law, or the scope for other technological approaches to DTV content — issues which were raised before the Court of Appeals and in the earlier FCC rule-making process.

D Current Status of the Broadcast Flag

American Library Association removed the requirement for manufacturers to incorporate content control technologies in DTV products. Not surprisingly, copyright owners remained concerned that DTV broadcasts lacking appropriate protection would be redistributed without authorisation. If US legislators decided there was value in implementing the scheme, they could grant authority to the FCC to reinstate the broadcast flag regulations. Although legislative prediction is particularly difficult in the US context, a congressional response to the *American Library Association* decision appears plausible. As early as September 2005, a bipartisan group of 20 politicians wrote to the chair of the House of Representatives Subcommittee on Telecommunications and the Internet seeking federal law to support the broadcast flag model.⁸³ Interest has continued during 2006,⁸⁴ and legislation may be passed giving the FCC power to regulate DTV reception equipment. In any event, the growth in alternative distribution channels — authorised or not — suggests that demand for digital content controls will persist in the US. Such demand is present elsewhere, including in Europe.

III EUROPE AND CPCPM

In Europe, the DVB consortium that was instrumental in creating DTV standards is developing specifications for another content control technology. The consortium includes broadcasters, manufacturers, network operators, software developers, regulators and others responsible for setting technical standards.⁸⁵ Australia has adopted DVB standards for DTV transmission along

⁸² Ibid (emphasis in original). For further analysis of the ancillary jurisdiction of the FCC, see Crawford, 'Shortness of Vision', above n 16, 728–36.

⁸³ Declan McCullagh, *Politicians Want To Raise Broadcast Flag* (30 September 2005) CNET News.com <http://news.com.com/Politicians+want+to+raise+broadcast+flag/2100-1028_3-5886722.html>.

⁸⁴ See, eg, Brooks Boliek, *Stevens Wants 'Broadcast Flag' Vote by March* (25 January 2006) *The Hollywood Reporter* <http://www.hollywoodreporter.com/thr/television/brief_display.jsp?vnu_content_id=1001884261>; Paul Sweeting, 'Copy-Protection Bills Gain Senate Support: But Some Say It Will Limit Technology' (2006) 26(5) *Video Business* 8; Anne Broache, *Senators Endorse Broadcast Flag Plan* (2006) CNET News.com <http://news.com.com/Senators+endorse+broadcast+flag+plan/2100-1028_3-6088711.html>.

⁸⁵ See Digital Video Broadcasting Project <<http://www.dvb.org>>.

with the majority of European and Asian countries.⁸⁶ The planned DVB content protection standard is known as the CPCM system. As with the broadcast flag, the CPCM development process appears to have been strongly influenced by US film studios.⁸⁷ However, unlike the broadcast flag, CPCM has the potential to be applied across all forms of DTV content transmitted under DVB standards for terrestrial broadcast, cable and mobile television. The adoption of DVB in Australia makes CPCM particularly relevant. There may be pressure for its implementation in Australia if the CPCM standard is finalised and widely adopted in other countries using DVB transmission standards.⁸⁸

The broadcast flag functions as a simple marker. Detection of the flag brings certain usage controls into play, controls which are set within the reception technology and which have been approved by the FCC. In contrast, CPCM appears to go further towards defining allowable uses within metadata embedded in the broadcast transmission itself. And the DVB subgroup responsible for developing CPCM has identified the importance of restricting unauthorised redistribution while still allowing certain uses including moving content within a user's domestic network environment 'to conform with traditional user experience and expectations based on the portability of pre-recorded content'.⁸⁹

Planned specifications for the first three elements of the CPCM standard were released in November 2005 in the form of the document, *Digital Video Broadcast (DVB); Content Protection & Copy Management*, for information purposes.⁹⁰ This *Bluebook* contains proposed usage rules which define how certain operations on content would be controlled by the CPCM system. The usage rules are to be implemented through 'usage state information' ('USI') within the DTV signal. USI would cover five areas of control: copy and movement control; consumption control; propagation control; output control; and ancillary control.⁹¹ The proposed CPCM specifications would allow highly

⁸⁶ Australia has applied standards known as Digital Video Broadcast-Terrestrial ('DVB-T'). European countries have either launched a DVB-T service, adopted the standard, are undertaking trials of the standard, or have industry recommendations to adopt it. Japan is a major Asian jurisdiction that has adopted different technology, known as Integrated Services Digital Broadcasting-Terrestrial ('ISDB-T'). For the global adoption of DVB, see DVB, *DVB Worldwide: Where Have DVB Standards Been Adopted?* <http://www.dvb.org/about_dvb/dvb_worldwide>.

⁸⁷ The DVB content protection technical subgroup is led by Chris Hibbert from Walt Disney TV International.

⁸⁸ One of the concerns that is likely to arise more prominently as the CPCM proposal develops, which would also have relevance in Australia, is that the mandate of a *single* content control technology may have adverse implications for innovation in communications technologies or for competition more widely. For example, technology innovation arguments featured in US debates about the broadcast flag (even though the flag-based system controls technological standards less closely than a system like CPCM): see, eg, Matt Jackson, 'Protecting Digital Television: Controlling Copyright or Consumers?' (2006) 11 *Media & Arts Law Review* (forthcoming). It is also notable that recent innovations in digital communications and their use — such as peer-to-peer networks — appear to have arisen with little initial concern about whether the law allows or prohibits the 'disruptive' innovation.

⁸⁹ Chris Hibbert, 'Copy Protection: Work in the DVB' (2003) 5 *DVB-Scene* 14, 15 <<http://www.dvb.org/documents/newsletters/DVB-SCENE-05.pdf>>.

⁹⁰ DVB, *Digital Video Broadcast (DVB); Content Protection & Copy Management*, DVB Doc No A094 (2005) <<http://www.dvb.org/technology/dvb-cpcm/a094.DVB-CPCM.pdf>> ('*Bluebook*').

⁹¹ *Ibid* 31.

granulated control information to be embedded in digital broadcast streams by copyright owners, broadcasters or other distributors. This is a key difference to the broadcast flag, and it raises the possibility of similarly granular and flexible policy choices by regulators beyond pre-approved and fixed technologies embedded into receiving equipment as with the broadcast flag. However, like the broadcast flag, CPCM requires regulation of reception equipment to ensure that it recognises and implements the content control.

The *Bluebook* provides some detail about various types of content usage control that are envisaged. For instance, copy and movement control would include the ability to allow multiple copies, only a single copy, or no copies to be made.⁹² Under consumption control, the proposed restrictions include providing a ‘signalled time window’ in which the content could be consumed,⁹³ and placing a limit on the number of concurrent content uses.⁹⁴ In relation to propagation control, the CPCM system could establish a number of ‘propagation realms’ within which content could be exchanged, but from which it could not be removed. The propagation realms include an ‘authorised domain’ which is defined as a ‘set of DVB CPCM compliant devices, which are owned, rented or otherwise controlled by members of a single household’⁹⁵ as well as other local and geographically-constrained CPCM compliant devices. Another proposed realm is called a ‘local environment’, which would allow content to be restricted to exchange over a local area network within a domestic home-sized physical space, regardless of any device authorisation. Potentially, this could extend to a wider range of authorised proximate devices referred to as a ‘localised authorised domain’, which could include mobile devices.⁹⁶ Each of these propagation realms is intended to reduce the possibility of unauthorised redistribution of protected content beyond a particular group or territory of authorised receiving devices. In relation to output control, the USI could determine how and where digital and analogue outputs can be directed. It would include the ability to enable or disable export to ‘untrusted spaces’ or in specified analogue formats. In addition, ancillary control would provide the ability to assert the direction ‘do not CPCM scramble’, which allows owners delivering material to direct that broadcasters do not apply CPCM controls to specified content.⁹⁷

⁹² The ‘no copies’ option would still allow a secure temporary copy to be made ‘solely for the purpose of pausing of play-back, or trick-play’: *ibid*.

⁹³ This could be an absolute time window, a specified period after acquisition, or the first time the content is consumed: *ibid* 32.

⁹⁴ Time-based usage would operate in devices that play content as well as devices that store content, while the concurrent usage feature could also limit the number of devices to which an item could be supplied: *ibid*.

⁹⁵ *Ibid* 29.

⁹⁶ There could also be a ‘geographical area’ realm that would be ‘intended as a special case for allowing Remote Access to CPCM Content’ (which otherwise would be restricted to the Localised Authorised Domain) through authorising access by specific remote devices: *ibid* 36. Being able to authorise some form of geographical control would allow copyright owners or broadcasters to ‘ensure that original broadcast footprints are not violated’ and to ‘enforce regional black-outs of certain broadcast Content Items’: *ibid* 33.

⁹⁷ *Ibid* 37.

How the CPCM model might interact with existing copyright exceptions and statutory licences is yet to receive detailed discussion. However, as noted above, the model aims to conform to viewers' existing understandings about content use. In the European context, this raises issues about statutory schemes for private copying.⁹⁸ With digital communications, Europe appears to be moving, in general, from levy-based schemes toward using DRM to license specific uses.⁹⁹ However, the debate is not complete — either overall or with regard to DTV — and the questions can be expected to receive attention as CPCM or similar technologies move towards completion. The finely granulated control made possible by the CPCM system may provide additional regulatory possibilities for the protection of exceptions to copyright.

The FCC declined to prohibit the application of the broadcast flag to specific 'types' of content — for example, to allow wider access to news or public domain content, in order to avoid the 'practical and legal difficulties' in determining which content should be protected.¹⁰⁰ By comparison, a system like CPCM offers the possibility that regulators could protect specific 'uses' of all, or certain types of, content through limiting the settings which could be applied at the point of transmission. This may allow greater flexibility for regulators to fashion a regime which focuses on protecting both the public interest in information and the interests of copyright owners, which is explored below.¹⁰¹

There is another point to note about CPCM. As with the broadcast flag, it appears that CPCM will not affect legacy reception equipment. This could result in a substantial amount of non-controlled reception for some time after any introduction of CPCM.

⁹⁸ See, eg, Katerina Gaita and Andrew F Christie, 'Principle or Compromise? Understanding the Original Thinking behind Statutory Licence and Levy Schemes for Private Copying' (2004) 8 *Intellectual Property Quarterly* 422; Andrew F Christie, 'Private Copy Licence and Levy Schemes: Resolving the Paradox of Civilian and Common Law Approaches' in David Vaver and Lionel Bently (eds), *Intellectual Property in the New Millennium: Essays in Honour of William R Cornish* (2004) 248.

⁹⁹ See, eg, P Bernt Hugenholtz, Lucie Guibault and Sjoerd van Geffen, Institute for Information Law, University of Amsterdam, *The Future of Levies in a Digital Environment: Final Report* (2003) <<http://www.ivir.nl/publications/other/DRM&levies-report.pdf>>; High Level Group on Digital Rights Management, European Commission, *Final Report* (2004) <http://europa.eu.int/information_society/eeurope/2005/all_about/digital_rights_man/high_level_group/index_en.htm>.

¹⁰⁰ *Broadcast Flag Order*, 18 FCCR 23550, [38] (4 November 2003).

¹⁰¹ While the FCC did not act in relation to particular types of *content*, its interim approval process generally protected certain types of *reuse*, in particular, time-shifting. Only one of the control technologies it approved for use in broadcast flag-compliant reception equipment completely prohibited copying (beyond the reproduction involved in initially displaying the content). The FCC noted this was a pre-existing control technology, and emphasised its intention was that the broadcast flag should not prevent viewers from copying digital broadcast content: see generally *Digital Output Protection Order*, FCC No 04-193 (4 August 2004). Placing regulation at the reception end of the equation allows for competition between different control technologies and for users to chose the reception equipment (with a particular control technology) which provides them with their preferred level of reuse.

IV DTV AND CONTENT CONTROL

Notable concerns about the content protection proposals include the ineffectiveness of technological controls in networked environments and the potential for content protection schemes to restrict reuses that copyright law would allow.¹⁰² In addition, the application of content protection to television broadcasts raises questions about the power of authorities to regulate this area.

A *The Limits of Technological Control*

It is commonly understood that no TPM is completely effective.¹⁰³ The proposed reuse controls, aimed at domestic DTV viewers, may have little impact on those with the technological abilities to avoid them. More significantly, peer-to-peer distribution over the internet supports the wide availability of content once it has been 'released' from technological protection.¹⁰⁴ While any regulatory action is likely to have only partial success, the actual effectiveness of technological control systems in limiting redistribution deserves examination as the models evolve. Authorised and unauthorised markets for DTV content exist and the evolution of both markets may be hard fought. In that regard, it is notable that Australians reportedly have the highest per capita downloading rate for television programs,¹⁰⁵ an activity which, until recently, was in breach of copyright.¹⁰⁶ Case law about audio file sharing — such as recent litigation over Grokster and Kazaa in the US and Australia¹⁰⁷ — is likely to be influential for user-driven forms of unauthorised DTV content distribution.

Beyond this general point about technological control, concerns have been raised about particular limitations to the effectiveness of content control technologies in the DTV environment resulting from analogue reversion,

¹⁰² Concerns have also been expressed about the possible effects on innovation within the consumer electronics industry; the potential anti-competitive impacts on networked communications; and the potential impact on privacy. On this last point, see, eg, Debra Kaplan, 'Broadcast Flags and the War against Digital Television Piracy: A Solution or Dilemma for the Digital Era?' (2005) 57 *Federal Communications Law Journal* 325, 335–6.

¹⁰³ See *Broadcast Flag Order*, 18 FCCR 23550, [19] (4 November 2003): 'We are equally mindful of the fact that it is difficult if not impossible to construct a content protection scheme that is impervious to attack or circumvention'.

¹⁰⁴ See, eg, Paul Biddle et al, 'The Darknet and the Future of Content Distribution' (Paper presented at the 2002 ACM Workshop on Digital Rights Management, Washington, DC, 18 November 2002) <<http://crypto.stanford.edu/DRM2002/darknet5.doc>>.

¹⁰⁵ Mark Pesce, *Piracy is Good? New Models for the Distribution of Television Programming* (2005) 7 <<http://www.afrs.edu.au/download.cfm?DownloadFile=B0A6D409-2A54-23A3-69F5E21BEA2270EA>>.

¹⁰⁶ On early legal movie downloading services in Australia, see, eg, Andrew Colley, 'PCs To Become Online Picture Palaces', *The Australian* (Sydney), 23 February 2006, 27.

¹⁰⁷ *Metro-Goldwyn-Mayer Studios Inc v Grokster Ltd*, 545 US 125 (2005); *Universal Music Australia Pty Ltd v Sharnan License Holdings Ltd* (2005) 220 ALR 1. See also Jane C Ginsburg and Sam Ricketson, 'Inducers and Authorisers: A Comparison of the US Supreme Court's *Grokster* Decision and the Australian Federal Court's *KaZaa* Ruling' (2006) 11 *Media & Arts Law Review* 1; Graeme W Austin, 'Importing *Kazaa* — Exporting *Grokster*' (2006) 22 *Santa Clara Computer and High Technology Journal* 577. The *Kazaa* litigation was settled in July 2006: see, eg, APP with Louisa Hearn, *Kazaa Capitulates, Settles Piracy Case* (28 July 2006) *The Age* <<http://www.theage.com.au/news/digital-music/kazaa-capitulates-settles-piracy-case/2006/07/27/1153816326515.html>>.

international markets and legacy devices. The problem of analogue reconversion — sometimes called the analogue hole — arises when digital signals can be output in an analogue form and then reconverted to digital. The second digital version will have lost some quality in the process but it will no longer contain any of the reuse control information that was attached to the original digital signal. As the FCC noted, the broadcast flag ‘could be easily circumvented, potentially through the use of digital to analog converters’.¹⁰⁸ The reconversion problem has been an ongoing concern to the content industry and in December 2005 the proposed Digital Transition Content Security Act of 2005, HR 4569, 109th Cong was presented to the US Congress to prohibit the manufacturing or selling of electronic devices that convert analogue video signals to digital. The proposal was referred to the House Committee on the Judiciary.¹⁰⁹ Unlike the broadcast flag model, it appears that the CPCM system could allow analogue redistribution to be limited. The manner of that limitation — and its interaction with legacy devices — is not yet clear, and the extent of such control is an important issue in the continued development of CPCM. Limits to technological control are also posed by international communications — unless regulation with similar effects is in place in other jurisdictions — and by legacy devices.¹¹⁰ Notwithstanding these limitations, the FCC’s *Broadcast Flag Order* considered that the broadcast flag scheme would provide adequate protection for content in the digital environment by ‘creating a “speed bump” mechanism to prevent indiscriminate redistribution of broadcast content and ensure the continued availability of high value content to broadcast outlets’.¹¹¹

B Control and Copyright

One way of approaching the broadcast flag is to view it as simply another site of ongoing US battles over copyright and free speech — in particular, over reconciling the rights granted to copyright owners and the public policy benefits perceived to flow from wide access to information.¹¹² Proposals for DTV content controls have generated strong criticism about their possible effect on US copyright doctrines such as fair use and the public domain:

¹⁰⁸ *Broadcast Flag Order*, 18 FCCR 23550, [17] (4 November 2003).

¹⁰⁹ See Library of Congress, *Bill Summary and Status File: HR 4569* (2006) <<http://thomas.loc.gov/cgi-bin/bdquery/z?d109:h.r.04569:;>>; Jennifer LeClaire, *Congress May Require Embedded Copyright-Protection Tech in DVDs* (20 December 2005) E-Commerce Times <<http://www.ecommercetimes.com/story/D6gdfc3mXOVN60/Congress-May-Require-Embedded-Copyright-Protection-Tech-in-DVDs.xhtml>>.

¹¹⁰ Lisa M Ezra, ‘The Failure of the Broadcast Flag: Copyright Protection To Make Hollywood Happy’ (2005) 27 *Hastings Communications and Entertainment Law Journal* 383, 391–4; Garrett Levin, ‘Buggy Whips and Broadcast Flags: The Need for a New Politics of Expression’ [2005] *Duke Law and Technology Review* 24, [18] <<http://www.law.duke.edu/journals/dltr/articles/PDF/2005DLTR0024.pdf>>.

¹¹¹ *Broadcast Flag Order*, 18 FCCR 23550, [19] (4 November 2003).

¹¹² See, eg, Neil Weinstock Netanel, ‘Copyright and the First Amendment: What *Eldred* Misses — and Portends’ in Jonathan Griffiths and Uma Suthersanen (eds), *Copyright and Free Speech: Comparative and International Analyses* (2005) 127.

concern is expressed most prominently regarding news or public internet-based content, or works that have already entered the public domain. Despite suggestions raised by consumer rights groups, the FCC has so far declined to adopt language to prevent content providers from using the broadcast flag on such programs, largely because of the 'practical and legal difficulties of determining which types of broadcast content merit protection from indiscriminate redistribution and which do not'.¹¹³

Many commentators consider that the proposed broadcast flag scheme could undermine fair use and restrict legitimate access to broadcast television material. The determination of a fair use defence in the US is made by the courts on the basis of the four factors outlined in § 107 of the *Copyright Act of 1976*.¹¹⁴ This fact-sensitive approach makes technological determinations difficult. In the case of the broadcast flag, which would simply be set 'on' or 'off' when material is transmitted, there may be a danger that '[i]f there is not a secure technological way to prevent a possible fair use from turning into widespread online distribution, the use will be prevented by the approved technologies'.¹¹⁵

During the FCC broadcast flag rule-making process, Commissioner Copps submitted a partially dissenting statement due to concerns that the flag might restrict access to important content:

I dissent in part ... because the Commission does not preclude the use of the flag for news or for content that is already in the public domain. This means that even broadcasts of government meetings could be locked behind the flag. Broadcasters are given the right to use the public's airwaves in return for serving their communities. The widest possible dissemination of news and information serves the best interests of the community.¹¹⁶

These US debates have been echoed within Australia in contexts such as the planned revision of anti-circumvention provisions under the *Australia-United*

¹¹³ Angie A Welborn, Congressional Research Service, *Copyright Protection of Digital Television: The 'Broadcast Flag'*, CRS No RS22106 (11 May 2005) <http://www.cdt.org/righttoknow/crsreports/RS22106_20050511.pdf>.

¹¹⁴ 17 USC § 107 (2000). The four factors concern: the purpose and character of the use (including whether it is commercial or for non-profit educational purposes); the nature of the work; the amount and substantiality of what is taken; and the effect on the potential market for the work: see, eg, Robert Burrell and Allison Coleman, *Copyright Exceptions: The Digital Impact* (2005) ch 9; and for a comparative analysis of § 107, see Gerald Dworkin, 'Copyright, the Public Interest, and Freedom of Speech: A UK Copyright Lawyer's Perspective' in Jonathan Griffiths and Uma Suthersanen (eds), *Copyright and Free Speech: Comparative and International Analyses* (2005) 153.

¹¹⁵ Levin, above n 110, [22].

¹¹⁶ Michael Copps, 'Statement of Commissioner Michael J Copps Approving in Part, Dissenting in Part — Re: Digital Content Broadcast Protection' (Press Release, 4 November 2003) <http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-240759A4.pdf>. See also Robert T Numbers II, 'To Promote Profit in Science and the Useful Arts: The Broadcast Flag, FCC Jurisdiction, and Copyright Implications' (2004) 80 *Notre Dame Law Review* 439, 458, who comments that

everything from local government meetings to images of important national events will be restricted ... Images such as the fall of the Berlin Wall, the protests in Tiananmen Square, and the September 11 attacks might not be available for public use, except in those ways which the content provider and those designing flag-compliant technology allow them to be used ...

States Free Trade Agreement,¹¹⁷ and the ongoing consideration of reforming Australian copyright exceptions.¹¹⁸ Australian copyright law may soon be reformed to allow more domestic reuses, for example, allowing domestic time-shifting of broadcast content.¹¹⁹ While the final shape of any reforms will be relevant to how international plans for DTV content protection might best be adapted for Australia, the style of control offered by the European model offers interesting regulatory possibilities.

As noted above, CPCM aims to give broadcasters and copyright owners finely calibrated controls across five areas of reuse. As a result, CPCM may appear better suited than the broadcast flag to *allowing* content to be distributed in a form that enables reuses such as time-shifting, while still preventing unrestricted redistribution. This would require mandating the type of technological control to be used *and* regulating how the technology can be applied to transmission. The broadcaster, as well as the equipment manufacturer, would need to be subject to regulation. Although there is a separate question as to whether such an approach to reuse should be *required* for any or all content in light of public policy objectives, in adopting the CPCM model regulators would not necessarily face the decision of simply allowing or prohibiting all restrictions for certain categories of content. The decision would not just be whether some broadcast content should be prevented from having any technological protection, with protection left purely to copyright law. Rather, a more finely honed decision would be open about the types of uses which should not be restricted in certain instances. A simple 'on' or 'off' decision was what faced the FCC under the broadcast flag model with a range of pre-approved reuse controls then applying to any received content when the flag was set as 'on'. It seems that with CPCM, regulators could seek to prevent certain USI from being applied to particular areas of control — such as copy and movement control, consumption control or propagation control — and this could be done in relation to all or certain types of content. Regulators could decide, for example, that free-to-air broadcast content could be protected in any manner under CPCM so long as private time-shifting was allowed. Or allowing format-shifting within a viewer's authorised domain could be mandated. These options could be required only for particular types of free-to-air content such as news. The choices would be numerous. While they may not appear to be the usual types of choices for copyright policy, they are not

¹¹⁷ Opened for signature 18 May 2004, [2005] ATS 1 (entered into force 1 January 2005) ('*AUSFTA*'); see also *US Free Trade Agreement Implementation Act 2004* (Cth). See further House of Representatives Standing Committee on Legal and Constitutional Affairs, above n 8.

¹¹⁸ See, eg, Attorney-General's Department, *Fair Use Issues Paper*, above n 9.

¹¹⁹ The broad policy of allowing some time-shifting for audiovisual content (and allowing some format-shifting and time-shifting for audio content) was announced in May 2006: Philip Ruddock, Attorney-General, 'Major Copyright Reforms Strike Balance' (Press Release, 14 May 2006). No draft Bill is yet available and nor is one expected to be introduced before 2007. On the general issue of allowing these types of use through free exceptions or remunerated licences, each of which might be better suited to different acts of private copying, see, eg, David Lindsay, 'Fair Use and Other Copyright Exceptions: Overview of Issues' (2005) 23 *Copyright Reporter: Journal of the Copyright Society of Australia* 4; Kimberlee Weatherall, 'A Comment on the Copyright Exceptions Review and Private Copying' (Working Paper No 14, Intellectual Property Research Institute of Australia, The University of Melbourne, 2005).

unusual under traditions of broadcasting regulation in Australia (and many comparable countries) where it has been common to apply particular requirements for different types of content.¹²⁰

With regard to these possible regulatory choices it is worth noting that, while art 11 of the *WIPO Copyright Treaty*¹²¹ imposes an obligation to ensure ‘adequate legal protection and effective legal remedies’ against the *circumvention* of TPMs, its terms do not require that owners be able to *apply* any form of content control technology that they wish to any form of content.¹²² Debate may arise over whether this point should be inferred from these types of anti-circumvention provisions, debate which could develop the general issues canvassed in relation to contracting out of copyright exceptions.¹²³ However, it would seem difficult to mount such an argument in relation to *licensed* broadcast media, such as free-to-air television, where it is well-accepted that such services cannot be restricted by encryption or similar controls. Australian commercial broadcasting services, for instance, must be provided without encryption in a manner that can be received on commonly available equipment and without the need for special receivers.¹²⁴

There is also evidence that, in the US, the FCC will limit the application of at least some content control technologies in order to facilitate viewer access to content.¹²⁵ For example, in the *Plug and Play Order*¹²⁶ — which regulated the manufacture of cable set-top boxes — the FCC imposed ‘encoding rules’ to prevent cable companies placing copy restrictions on retransmissions of free-to-air broadcasts.¹²⁷ As Molly Shaffer Van Houweling notes, the FCC is regulating control technologies ‘in a way that limits their reach in order to preserve certain consumer uses that [they] might otherwise prohibit.’¹²⁸ This general policy approach was also taken in relation to the broadcast flag by

¹²⁰ For example, consider context codes and standards for television program content in Australia: see Butler and Rodrick, above n 3, 522–34.

¹²¹ Opened for signature 20 December 1996, 36 ILM 65 (entered into force 29 February 2002).

¹²² For a detailed background to art 11 of the *WIPO Copyright Treaty*, see especially Sam Ricketson and Jane C Ginsburg, *International Copyright and Neighbouring Rights: The Berne Convention and Beyond* (2nd ed, 2006) 966–82. See also Jörg Reinbothe and Silke von Lewinski, *The WIPO Treaties 1996: The WIPO Copyright Treaty and the WIPO Performances and Phonograms Treaty* (2002) 135–47; Mihály Ficsor, *The Law of Copyright and the Internet: The 1996 WIPO Treaties, Their Interpretation and Implementation* (2003).

¹²³ See, eg, Copyright Law Review Committee, above n 19.

¹²⁴ *Broadcasting Services Act 1992* (Cth) s 14. See also Butler and Rodrick, above n 3, 492, which draws on the Explanatory Memorandum, Broadcasting Services Bill 1992 (Cth).

¹²⁵ Shaffer Van Houweling, above n 62, 106–10.

¹²⁶ 18 FCCR 20885 (10 September 2003). In relation to this Order, it is worth noting that a large percentage of US viewers receive free-to-air television via cable delivery services. ‘[A]lmost 86 per cent of TV households subscribe to [cable or satellite television]’: *Re Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, FCC No 06-11, [8] (3 March 2006). The large US cable market underlies one way in which content control technologies for free-to-air DTV in Australia arise in a different context than in the US. In addition, before the broadcast flag debates, the FCC regulated to ensure the compatibility of cable television systems with varied DTV receivers, and it limited the application of content controls technologies to free-to-air content delivered via cable in order to preserve user expectations, such as time-shifting.

¹²⁷ *Plug and Play Order*, 18 FCCR 20885, [11] (10 September 2003).

¹²⁸ Shaffer Van Houweling, above n 62, 109.

including '[t]he extent to which the digital output protection technology or recording method accommodates consumers' use and enjoyment of unencrypted digital terrestrial broadcast content'¹²⁹ as one of the criteria used when evaluating TPMs for use in broadcast flag compliant reception devices.¹³⁰ Despite approving one existing technology which restricted all copying (beyond that involved in the initial real-time display of content) under its interim procedure,¹³¹ the FCC maintained the general ambition that 'technologies can protect content while facilitating consumer uses and practices'.¹³²

Demand for an approach which restricts how content control technologies are applied to free-to-air DTV might increase if Australian copyright law is reformed to allow domestic reuse of copyright material.¹³³ In this regard, it is interesting to note Australian television interests' views on legalising certain instances of private copying. They appear in submissions made during 2005 to the Australian Government's inquiry into whether the *Copyright Act 1968* (Cth) should include 'a general exception associated with principles of "fair use" or specific exceptions to facilitate the public's access to copyright material in the digital environment'.¹³⁴ The government's general response to that review — which was not to introduce a general fair use provision, but to allow some private time-shifting of audiovisual content — was announced in May 2006.¹³⁵ In their submissions, many television-related entities displayed concerns to limit unauthorised reuse of content and protect existing revenue streams. For example, the joint submission of the Nine and Seven Networks considered that exceptions allowing copying for private use would unacceptably harm their commercial activities. Similarly, the Screen Producers Association of Australia opposed allowing time-shifting, format-shifting or introducing a statutory licence for private copying.¹³⁶ However, some broadcasting organisations were prepared to countenance a limited free exception allowing time-shifting for personal use, although concerns remained about possible damage to secondary markets. For

¹²⁹ *Digital Output Protection Order*, FCC No 04-193, [3] (4 August 2004).

¹³⁰ *Digital Output Protection Order*, FCC No 04-193, [3] (4 August 2004).

¹³¹ See above nn 56–60 and accompanying text.

¹³² *Broadcast Flag Order*, 18 FCCR 23550, [55] (4 November 2003).

¹³³ See above n 119 and accompanying text.

¹³⁴ Attorney-General's Department, *Fair Use Issues Paper*, above n 9, 4. In total, 162 submissions were made responding to the issues paper. These submissions are available at Attorney-General's Department, Australia, *Fair Use and Other Copyright Exceptions: An Examination of Fair Use, Fair Dealing and Other Exceptions in the Digital Age* (2005) <http://www.ag.gov.au/agd/WWW/agdHome.nsf/Page/Publications_2005_Copyright_-_Review_of_Fair_Use_exception>.

¹³⁵ See above n 119. The announcement also included the introduction of 'flexible dealing' exceptions for parody and satire, and for non-commercial uses within the education and museum sectors, both of which would be subject to the 'three-step test' applicable under international treaties: see, eg, Sam Ricketson, *The Three-Step Test, Deemed Quantities, Libraries and Closed Exceptions* (2002).

¹³⁶ Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, 1 July 2005, Submission No 112 (Screen Producers Association of Australia). However, supporters for a statutory licensing scheme included the audiovisual collecting society, Screenrights, and the Australian Copyright Council. See Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, 8 July 2005, Submission No 142 (Screenrights); Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, June 2005, Submission No 61 (Australian Copyright Council).

example, Network Ten Pty Ltd suggested an exception allowing free-to-air broadcasts to be recorded only 'for the purpose of *private and domestic use of the maker of the copy* in order to allow a program to be viewed after the scheduled broadcast time *by the person who copied the broadcast.*'¹³⁷ The Australian Subscription Television Radio Association also supported reform to allow some time-shifting while suggesting the copyright owner should still retain the right to use TPMs to prevent such reuse.¹³⁸ The national broadcasters were more open to the introduction of provisions for time-shifting and format-shifting, noting in addition their dual role as both creators and users of copyright. For example, the Australian Broadcasting Corporation submitted:

Fair dealing plays a key role in the ABC meeting its Charter obligations. However, the pace of technological change has far exceeded the ability of copyright law to maintain a 'balance' between the interests of both users and creators of copyright. With the focus now more prominently directed towards copyright piracy than creativity, the ABC has been restricted in its ability to access and deliver information, content and innovation to meet both its Charter obligations and public expectations.¹³⁹

These examples illustrate how the possibilities for control (and regulation) offered by DTV content control technologies relate to issues within copyright law. In this article, the possible impact on copyright exceptions has been noted as a key issue. Consideration could equally be given to statutory licences or anti-circumvention provisions.¹⁴⁰ That is, an examination of DTV and content control needs to engage with questions from across at least three areas of copyright. The first involves copyright exceptions and statutory licences, both with regard to their legal scope and the degree to which copyright owners seek to police them. The second concerns technological controls: what style of control is applied to what content, and is that decision determined, at least in part, legally or economically? And the third raises exceptions to TPMs: in particular, who is able to circumvent a TPM and for what purposes? Depending on the type of copyright exceptions or licences within a jurisdiction, particular reuse might be better served by regulating the application of technological controls, the circumvention of controls, or both. For instance, given recent Australian litigation in *Network Ten Pty Ltd v TCN Channel Nine Pty Ltd* about reusing

¹³⁷ Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 161, 4 (emphasis in original) (Network Ten Pty Ltd).

¹³⁸ Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 107 (Australian Subscription Television and Radio Association).

¹³⁹ Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 152, 3 (Australian Broadcasting Corporation). See also Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 125 (Special Broadcasting Service Corporation).

¹⁴⁰ A technology like CPCM seems intended to come within the anti-circumvention provisions of Australian copyright law, although past Australian experience suggests such aims may not always be achieved: *Stevens v Kabushiki Kaisha Sony Computer Entertainment* (2005) 221 ALR 448.

television content under the copyright exception for fair dealing,¹⁴¹ it is not surprising that several submissions to the recent Australian review on exceptions to copyright infringement proposed revising fair dealing to allow for parody or similar commentary.¹⁴² These submissions appear to have been accepted, in general terms, by the Attorney-General and a new exception to parody and satire is planned for introduction.¹⁴³ Such an exception is a classic instance of reuse which cannot be accommodated by DRM technologies because all content is in principle open for parody. If such a reform were introduced, then allowing circumvention of TPMs may be more significant than limiting the application of technological controls for the practical availability of a parody exception — not that debates about how to provide for TPMs exceptions are likely to be any less fraught than on issues like the broadcast flag, especially with the reforms expected in 2006 to Australian law on TPMs exceptions under the *AUSFTA*.¹⁴⁴ But all three areas are important for analysis, with the variety of content, controls and reuses that can exist.

While general debates within digital copyright — drawn from across these three areas — are certainly significant for DTV content control, further arguments can be derived from traditions of *broadcast* policy and analysis. For example, we have outlined how the finely-tuned reuse controls available through content control technologies such as CPCM might allow the protection of certain content to be limited by regulators. Technically, it appears possible for regulators to require that such technologies do not prevent private time-shifting of free-to-air content. Even so, choices made in several other instances tell against regulators seeking to mandate how a technology like CPCM is applied: US experience to date with the broadcast flag,¹⁴⁵ emerging models of authorised broadband distribution,¹⁴⁶ and the use of DVRs by Australian subscription

¹⁴¹ (2004) 218 CLR 273 (*'The Panel Case'*). See also *TCN Channel Nine Pty Ltd v Network Ten Pty Ltd [No 2]* (2005) 145 FCR 35. For discussion of these cases, see, eg, Melissa de Zwart, 'Seriously Entertaining: *The Panel* and the Future of Fair Dealing' (2003) 8 *Media & Arts Law Review* 1; Michael Handler and David Rolph, "'A Real Pea Souper": *The Panel Case* and the Development of the Fair Dealing Defences to Copyright Infringement in Australia' (2003) 27 *Melbourne University Law Review* 381.

¹⁴² See Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 152, 14–17 (Australian Broadcasting Corporation); Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 107, 6–7 (Australian Subscription Television and Radio Association); Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 161, 3 (Network Ten Pty Ltd); Submission to the Attorney-General's Department, Australia, in response to the *Fair Use Issues Paper*, July 2005, Submission No 125, 5–6 (Special Broadcasting Service Corporation).

¹⁴³ See above n 119 and accompanying text.

¹⁴⁴ Opened for signature 18 May 2004, [2005] ATS 1 (entered into force 1 January 2005). See also House of Representatives Standing Committee on Legal and Constitutional Affairs, above n 8.

¹⁴⁵ Although the FCC has acted in relation to cable redistribution of free-to-air content: see above nn 125–8 and accompanying text.

¹⁴⁶ See, eg, Craig Birkmaier, 'The Real Digital TV Transition Begins' (2006) 48(1) *Broadcast Engineering* 14; Roulla Yiacoumi, 'Thinking Outside the Box', *The Sydney Morning Herald* (Sydney), 9 March 2006, 12; John Lehmann, 'Internet "Threat to Pay-TV"', *The Australian* (Sydney), 10 March 2006, 19.

television,¹⁴⁷ all suggest that regulators might not intervene. Instead, copyright owners might retain the ability to decide the terms on which their content is offered, subject to market pressures from content users to allow at least some form of reuse. It is important to appreciate that if a content protection system like CPCM was mandated for use *without* any regulation over how it could be applied to content, content owners would have greater technological abilities to limit reuse than under the broadcast flag scheme — that is, a CPCM-style scheme without some form of regulation over its application to content could be the most restrictive of content reuse. While the above instances might tell against regulatory action on this issue, an additional point which arises from broadcast policy tradition suggests that public interest claims might retain some purchase in supporting the regulation of how control technologies are applied to broadcast content. As noted at the outset of this article, free-to-air television has occupied a special place within the Australian media. To the degree to which that position continues, or the degree to which it is sought to be maintained, a different approach from that taken with the broadcast flag in the US may appeal to regulators, if content control technology is adopted for free-to-air DTV in Australia. Certain regulation of how control technologies are applied to free-to-air content — for instance, to mandate viewer ability to time-shift — need not prevent broadcasters limiting other valuable reuses. And allowing copyright owners to limit other reuses of content could support the development of alternative payment-based distribution platforms by existing media and communications players as well as other organisations.

C *Regulatory Powers*

Examining the US and European proposals illustrates how the appropriate site for regulation could vary depending on the technology's operation and the regulatory outcomes sought. In addition, these proposals illustrate how regulation at different sites would govern different actors. Regulation at the point of transmission would apply to the actions of those directly involved with content, such as broadcasters and content owners. Regulation applied at the reception end would govern the actions of reception equipment manufacturers. It is worth emphasising that both the US and European systems require the regulation of reception devices, but they differ on the regulatory options related to transmission. In the *Broadcast Flag Order*, the FCC decided not to regulate at the point of transmission because it believed that '[b]roadcasters and content owners have strong incentives to implement the ATSC flag'¹⁴⁸ and that they should have the latitude to decide if they did not wish to insert the flag into any broadcast. This was despite calls from consumer advocates to prohibit the application of the flag to news and public interest programming.¹⁴⁹ However, the

¹⁴⁷ The Australian subscription television provider, Foxtel, has a DVR called 'iQ' which allows some content to be recorded for later viewing with reuse restricted by contract and technology: Foxtel iQ <<http://www.foxtelq.com.au>>.

¹⁴⁸ *Broadcast Flag Order*, 18 FCCR 23550, [37] (4 November 2003).

¹⁴⁹ *Broadcast Flag Order*, 18 FCCR 23550, [38] (4 November 2003).

more finely granulated control offered by a technology such as CPCM offers additional possibilities for regulation at transmission to protect public use of certain types of material. While the FCC did not wish to involve itself in discussions about which types of broadcast content merited protection and which did not,¹⁵⁰ it was not presented with a technology which allowed more sophisticated levels of control at the point of transmission — for example, to allow universal time-shifting while still ensuring content owners could protect selected material from retransmission. Once the decisions made at transmission involve more than just ‘on’ or ‘off’, there is the potential for regulation to provide greater protection for public interest exceptions to copyright.

Regulatory options regarding the application of content control technologies to free-to-air television broadcasts depend on the scope of the regulator’s powers. Two issues that arose for the FCC in relation to its power to regulate are relevant here: regulating reception equipment and limiting the application of reuse controls at the point of transmission.

First, as US experience with the broadcast flag illustrates, regulators may lack powers to control reception equipment. In the Australian context, to adopt a system such as CPCM may well require legislative reform, either to directly set standards for reception equipment or to augment the powers of the Australian Communications and Media Authority (‘ACMA’) to enable the regulator to set relevant standards. While the questions are complex and may depend on the final form of any control technology adopted to work with DVB transmissions, the need for legislative reform seems likely if there is pressure for content control mechanisms to be applied to free-to-air DTV transmissions in Australia. Such an approach would go beyond the generally non-mandatory standards for DTV transmission and reception equipment established by Standards Australia.¹⁵¹

Sections 7–12 of the *Australian Communications and Media Authority Act 2005* (Cth) (‘ACMA Act’) give ACMA various functions and the powers required to exercise them.¹⁵² Section 10 of the Act sets out functions related to broadcasting, some internet content and datacasting. Along with the general function of regulating services in accordance with the *Broadcasting Services Act 1992* (Cth), ACMA Act s 10 lists functions such as administering the licensing process, researching community attitudes about content, developing program standards, and assisting providers to develop appropriate codes of practice. None of these powers directly relate to regulating reception equipment or content reuse. In addition, the *Broadcasting Services Act 1992* (Cth) itself sets out a number of roles for ACMA. Schedule 4 governs the introduction of DTV broadcasting in Australia and requires ACMA to formulate schemes for

¹⁵⁰ *Broadcast Flag Order*, 18 FCCR 23550, [38] (4 November 2003).

¹⁵¹ Standards Australia is the longstanding peak non-governmental standards body of Australia: see Standards Australia <<http://www.standards.org.au>>.

¹⁵² ACMA came into existence in 2005 through the merger of the Australian Broadcasting Authority and the Australian Communications Authority and carries on their regulatory functions under broadcasting, telecommunications and spectrum management legislation: see generally Australian Communications and Media Authority <<http://www.acma.gov.au>>.

converting commercial and national broadcasters to digital.¹⁵³ Under cl 36B, regulations may provide that domestic reception equipment must be accessible by each commercial and national broadcaster and datacaster.¹⁵⁴ This does not appear to extend to the power to require reception equipment to give effect to particular content control standards such as CPCM. Regulations can also determine format standards and technical standards for broadcasting DTV.¹⁵⁵ The technical standards are to focus on matters of transmission and ACMA's conversion plans: cl 39(1) provides that regulations can determine technical standards related to the transmission of DTV broadcasting to be followed by ACMA in creating or varying the conversion schemes for commercial and national television.¹⁵⁶

However, technical differences between the ATSC broadcasting flag in the US and DVB's proposed CPCM system may affect the interpretation of the relevant regulatory powers. While the FCC could not legislate to cover reception devices where the content control technology operated *after* a flagged broadcast signal was received, it may be possible to argue that CPCM controls operate *as* the broadcast stream arrives in reception devices and therefore that the recognition and implementation of CPCM by reception equipment is a technical standard applying to DTV transmission. But such an argument does not appear to accord with the general approach to DTV in the *Broadcasting Services Act 1992* (Cth).¹⁵⁷ In any event, the US experience illustrates how the required regulatory power, even if not currently available in Australia, could be sought through legislative reform.

With regard to the second issue faced by the FCC — namely, limiting the application of reuse controls at the point of transmission — it should be noted that the introduction of technological restrictions on the reuse of free-to-air broadcast content relates to questions about the status of television in Australian society. If television is to remain 'something special' — although in quite different ways than before the multiplication of channels, audience fragmentation and the development of alternative delivery mechanisms — there could be

¹⁵³ *Broadcasting Services Act 1992* (Cth) sch 4 cls 6, 19.

¹⁵⁴ *Broadcasting Services Act 1992* (Cth) sch 4 cl 36C requires national broadcasters to comply with any such regulations.

¹⁵⁵ *Broadcasting Services Act 1992* (Cth) sch 4 cls 37–37D, 39.

¹⁵⁶ Another provision worth noting is cl 39(2), a limiting provision which states that technical standards related to 'conditional access systems' *must* be directed towards achieving the policy objective that systems will be open to all providers of 'eligible datacasting services' so far as that is practical. A similar provision exists for 'application program interfaces' which are defined as having 'the meaning generally accepted within the broadcasting industry'. The aim is to make interfaces open to all providers of 'eligible datacasting services': see *Broadcasting Services Act 1992* (Cth) sch 4 cl 39(2AA), (5). The mandatory wording of cl 39(2) suggests that technical standards could not relate to other objectives about conditional access.

¹⁵⁷ As occurred in the US, such arguments may seek to rely on the incidental powers of ACMA. For example, under *ACMA Act* s 10(1)(s), ACMA has the function of doing 'anything incidental to or conducive to the performance of any of [the other functions set out in that section]'. ACMA also has delineated powers under *Telecommunications Act 1997* (Cth) s 376 to regulate technical standards relating to 'specified customer equipment' to protect the integrity and interoperability of the network. While these may have some relevance to regulating converged digital devices like video capable mobile telephones, the Act focuses on matters such as the allocation of carrier licences and interconnection across the telecommunications network.

reasons to regulate how control technologies are applied to various forms of DTV content.¹⁵⁸ Such an argument depends on deciding what type of digital access and reuse would serve similar social purposes to the near universal availability of analogue television. The significant social role of television in providing news and information remains one important factor in that assessment.¹⁵⁹ Given the general regulatory approach of the *Broadcasting Services Act 1992* (Cth), that type of argument for limiting the application of control technologies also depends on deciding that leaving their application to the market would not achieve desired results in relation to particular types of content or reuse. Existing subscription television practices in Australia suggest there is commercial value in allowing some reuse of content, for example, time-shifting.¹⁶⁰ Similar market pressures may influence how control technologies are applied to free-to-air DTV content. In addition, alternative distribution mechanisms can be expected to change the experience of television for audiences. While multi-channel subscription television has allowed niche programming, downloading content for viewing at a place and time of one's own choosing suggests a very different relationship with television. As Terry Flew has noted, being able to download content like popular movies and television programs from the internet is 'an instance of qualitatively "new" media, not so much because it changes the form, but because it changes the means of distribution and storage, and the associated business models, of those media.'¹⁶¹

If regulation of the way in which control technologies are applied to free-to-air content is pursued, it could apply to all free-to-air content or distinguish between different types of content.¹⁶² Thus, within the general question of the power of ACMA to regulate DTV transmission lies an issue about its power to regulate differentially particular types of content and forms of reuse. ACMA, however, has limited powers in relation to content under the *Broadcasting Services Act 1992* (Cth). The powers include, for example, setting program standards for children's television and Australian content on commercial television.¹⁶³ The regulator also has a supervisory role in registering industry developed codes of practice about matters such as program classification, accuracy and fairness in news, and permitted amounts of advertising on commercial services.¹⁶⁴ In

¹⁵⁸ However, a larger and significant question remains about whether it is possible to support the continued delivery of the social value that has been seen to inhere in mass audience free-to-air television in societies like Australia as audiovisual content spreads across more varied platforms.

¹⁵⁹ See, eg, Butler and Rodrick, above n 3, 487; *Australian Broadcasting Tribunal v Bond* (1990) 170 CLR 321. See also Denmark, above n 22.

¹⁶⁰ See, eg, above n 147.

¹⁶¹ Terry Flew, *New Media: An Introduction* (2nd ed, 2005) 2.

¹⁶² Differentiation could also be expected between broadcasting services given that the powers of ACMA vary for different types of service. The *Broadcasting Services Act 1992* (Cth) differentiates services by their perceived degrees of influence on community views and free-to-air commercial television is thus subject to greater regulation: *Broadcasting Services Act 1992* (Cth) s 4(1). See Butler and Rodrick, above n 3, 490–8 for an overview of the eight categories of broadcasting service under the legislation.

¹⁶³ *Broadcasting Services Act 1992* (Cth) s 122. In addition, broadcasting services are subject to requirements related to medical advertising, tobacco advertising, the broadcasting of material of national interest etc: *Broadcasting Services Act 1992* (Cth) sch 2.

¹⁶⁴ *Broadcasting Services Act 1992* (Cth) ss 123–4.

addition, ACMA can set program standards where industry-developed codes of practice are failing to provide appropriate safeguards.¹⁶⁵ None of these powers appear to relate to controlling the reuse of content. That control has been a matter for copyright law alone, at least since the advent of domestic video recording made reuse of content accessible to many viewers. Thus, if content control technology for free-to-air television broadcasts was to be introduced, the question of reforming the powers of ACMA in relation to content would be likely to arise. Any decision to exercise regulatory power at either the point of transmission or reception could have a major influence on the development of DTV and the wider media environment in Australia. And if, for example, powers to control reception equipment were provided but regulation governing the transmission of content was not addressed, equivalent issues about the accessibility of particular content for certain types of permitted reuse could be expected to arise in the other regulatory domains of copyright exceptions and licences, and the circumvention of TPMs.

V CONCLUSION

The broadcast flag in the US was an industry-generated proposal, aimed at controlling indiscriminate reuse of digital broadcast content. It involved both technological and regulatory elements — which is to be expected in the free-to-air digital environment. It went through a public FCC process which offered relatively wide opportunities for input from the content industries and from groups representing users. Although the FCC's *Broadcast Flag Order* was successfully challenged in court, the decision leaves open a future legislative endorsement of the flag by the US Congress and this is being pursued by its supporters. The general shape of the US debate about limiting indiscriminate redistribution of digital content while protecting some content reuse was mirrored in the earlier FCC *Plug and Play Order* regarding cable television, and appears likely to be repeated in consideration of a digital audio flag.¹⁶⁶ While the European CPCM proposal is less developed, in public documents at least, if it or a similar system is adopted as a DVB standard and mandated for use by other countries with DVB transmissions, it is likely to be influential in Australia.

The broadcast flag and CPCM proposals illustrate ways in which copyright and media policy increasingly interact, which underscores the value of inclusive methods of developing and implementing law and regulation in this area. The proposals also suggest how technological controls may increase the ability of copyright owners to decide what reuse is possible — perhaps by default if careful policy consideration is not given to the interaction of technological controls with copyright exceptions and licences, and with anti-circumvention legislation. And the ways in which these factors affect future media policy in

¹⁶⁵ *Broadcasting Services Act 1992* (Cth) s 125(1). ACMA must also act if an industry code was not developed for one of the specified areas: *Broadcasting Services Act 1992* (Cth) ss 123(2), 125(2).

¹⁶⁶ See *Plug and Play Order*, 18 FCCR 20885 (10 September 2003); Tony Sanders, *Audio Flag Waived, at Least until March* (4 February 2006) Billboard.biz <http://www.billboard.biz/bb/biz/magazine/upfront/article_display.jsp?vnu_content_id=1001919574>.

Australia may well be influenced by the extent to which television is seen to retain special cultural, economic and political roles that warrant legal or regulatory intervention. As John Sinclair has noted:

Instead of a medium for social communication, able to constitute its viewers as a national society, calling on them to participate, however vicariously, in the national culture and public sphere which broadcast television built, the new means of delivery and the variety of channels on offer mean that television viewers have less reason to think of themselves as an audience, let alone as citizens of a nation, but rather, as customers of a service.¹⁶⁷

Content protection schemes for DTV are another element in these long-term changes in the social position of free-to-air broadcast television. Television is changing from an almost universally available media, based on mass advertising-generated revenue, into a market-differentiated one, where content is available via a variety of delivery mechanisms. It is important to recognise that carefully framed content control regulation could support DTV evolution in ways that might retain some of the social roles long offered by free-to-air television in Australia. However, if content protection schemes are not applied, or not applied carefully, free-to-air broadcasting may soon play a negligible role for many viewers. At the very least, difficulties in developing and implementing content control technologies may reinforce the tendency for free-to-air broadcast television to move to particular types of content focused on specially-created and often live events.¹⁶⁸ As Given commented in 2004 on the contemporary success of reality television programming:

The explosion of Event Television over the last two years or so seems to me a potent counter-trend to the widely and accurately predicted fragmentation of a multi-channel and online universe. SMS, program websites, and other developments, strangely, seem to be boosting the social scale of those shared events, driving users back to the network screen when and where advertisers are waiting for them.¹⁶⁹

It is not surprising that the degrees of control offered by technologies like CPCM are seen as valuable to copyright and broadcasting interests. But it is important to recognise what might be less obvious: such possibilities for control could also be of great interest to regulators and DTV viewers. As Danny Butt and Axel Bruns argue with regard to DRM and music, content control technologies should not be seen only for how they can limit access and use of content; the technologies also provide innovative ways for allowing particular types of uses.¹⁷⁰ In the context

¹⁶⁷ See, eg, Sinclair, above n 18, 43.

¹⁶⁸ See, eg, Pesce, above n 105, 7.

¹⁶⁹ Gerard Goggin and Geert Lovink, 'Histories, Trends, Futures: A Round Table on the Australian Internet' in Gerard Goggin (ed), *Virtual Nation: The Internet in Australia* (2004) 274, 283, citing Jock Given.

¹⁷⁰ Danny Butt and Axel Bruns, 'Digital Rights Management and Music in Australia' (2005) 10 *Media & Arts Law Review* 265. As well as offering the possibilities for licensed broadcasting considered in this article, the ability to specify and track uses to generate payment could well support independent music and audiovisual distribution, as Butt and Bruns suggest, or new intermediaries: see Jane C Ginsburg, 'Copyright and Control over New Technologies of Dissemination' (2001) 101 *Columbia Law Review* 1613.

of DTV, a central point to take from the existing plans is that technologies like CPCM — perhaps more than simpler flag-based models — and the ways in which they suggest regulation of reception and transmission, might offer a path for free-to-air television to retain some of the policy benefits it has given Australian society and simultaneously to find a valuable place within an enlarged media environment.