IS IPTV AN INTERNET SERVICE UNDER AUSTRALIAN BROADCASTING AND COPYRIGHT LAW?

***David Brennan**, University of Melbourne*

This paper questions the common legal assumption that Internet protocol television (IPTV) in its typical form is necessarily a service delivered using or over the Internet. It uses two aspects of Australian law – one in broadcasting and the other in copyright – to examine whether the Internet exclusions enacted truly apply to such IPTV. The conclusion reached is that neither applies for the same reason; IPTV in the form outlined does not implicate the Internet.

INTRODUCTION

This paper is directed to two questions that can be simply-stated: under Australian broadcasting law: is Internet protocol television (IPTV) a service made available using the Internet; and under Australian copyright law does IPTV retransmission take place over the Internet? While the questions appear on their face to answer themselves itself in the affirmative – and indeed that is a common assumption – here a different answer is provided.

The first question asks whether the provision of IPTV is a 'broadcasting service' amenable to the licensing regime of the Broadcasting Services Act 1992 (BSA). That regime includes licence fee requirements, local content requirements, programming standards, advertising restrictions and restrictions upon the acquisition of exclusive rights to designated sporting events. The BSA permits exclusion from this regime by ministerial determination (BSA, s 6(1) 'broadcasting service' definition). In September 2000 one class of services was ministerially determined not to be a 'broadcasting service', and thereby not subject to the licensing regime. That was 'a service that makes available television and radio programs using the Internet' (Alston 2000). Thus, if an IPTV service is made available 'using the Internet', it is outside of the BSA's primary regulatory regime.[1]

The second question is whether an IPTV provider which wishes to retransmit free-to-air broadcasts as part of its suite of content may avail itself of the Part VC statutory licence to do so under the Copyright Act 1968 (CA). Since 2001 the CA has created an exception to copyright for subject matter included within a free-to-air broadcast when that broadcast is retransmitted to the public by a third party to the broadcaster. That third party, as long as it complies with several conditions (including the payment of equitable remuneration) can lawfully retransmit the subject matter included in the broadcast. The only type of retransmission excluded from the benefit of the Part VC statutory licence is retransmission which 'takes place over the Internet'. Thus, if IPTV retransmission occurs 'over the Internet' it does not attract the benefit of the copyright exception.

In order to consider the question of whether IPTV is a service made available using the Internet, or whether IPTV retransmission takes place over the Internet, there are two preliminary questions that need to be considered:

i. What is meant by 'the Internet' in each legislative regime?

ii. What are the functional characteristics of an IPTV service?

It is only once that those two questions are answered that it is possible to begin to ask: is an IPTV service (as understood at (ii)) 'using' or 'over' the Internet (as understood at (i))? Once having set out an understanding of 'the Internet' and the character of IPTV delivery, more particular issues may arise as a matter of legal interpretation of whether an IPTV service that 'makes available ... programs using the Internet' in the BSA exclusion and whether IPTV retransmission 'takes place over the Internet' in the CA exclusion. These too will be considered by examining the underlying purposes which support each exclusion.

THE INTERNET

To this writer's knowledge there is yet to be an English-language legislative definition of the Internet. With its provenance in the US military's ARPANET project of the late 1960s, a judicial attempt was made in 1996 to describe, rather than define, the administration and working of the Internet:

> No single entity – academic, corporate, governmental, or non-profit – administers the Internet. It exists and functions as a result of the fact that hundreds of thousands of separate operators of computers and computer networks independently decided to use common data transfer protocols to exchange communications and information with other computers (which in turn exchange communications and information with still other computers).[2]

Similar to the judge in the above passage, both the BSA and the CA regimes use the definite article and a capital 'I'. This implies that in each setting the Internet is being used as a proper noun intended to refer to one specific thing. In the case of the Internet that thing is a system. That system is global, and relies upon an overlay of shared applications and protocols to meaningfully transmit data between connected computers. The most well-known application is the World Wide Web (the web) which operates as a popular overlay upon the Internet (Lindsay 2007, 1–3 and 11–12). The most well-known protocol is the transmission control protocol/Internet protocol (TCP/IP) to manage the disassembly, routed transmission and reassembly of file data in discrete packets. Connections between computers can be made with or without wire, and presently those connections are made using an assortment of cable first laid for telephony or television, cable specifically laid for Internet purposes, telecommunications spectrum, and satellite transmission. The Internet, however, as system is not any one of those features, or even a selection of those features. Rather, it is the network of networks formed globally by the interoperability of those features.

THE IPTV SERVICE PARADIGM

The paradigm IPTV service here considered is both a hypothetical one, and also one which reflects the present technological reality of the delivery of typical services in Australia (ACMA 2008, 14–18). The paradigm involves provision by an Internet service provider (ISP) which provides asymmetric digital subscriber line (ADSL) Internet access to a customer through the customer's connection to its local telephone exchange by twisted copper pair telephony infrastructure. In

the paradigm the ISP supplies Internet access services to customers distinct from telephony services. The supply and its distinct nature are here explained by reference to the following diagram.

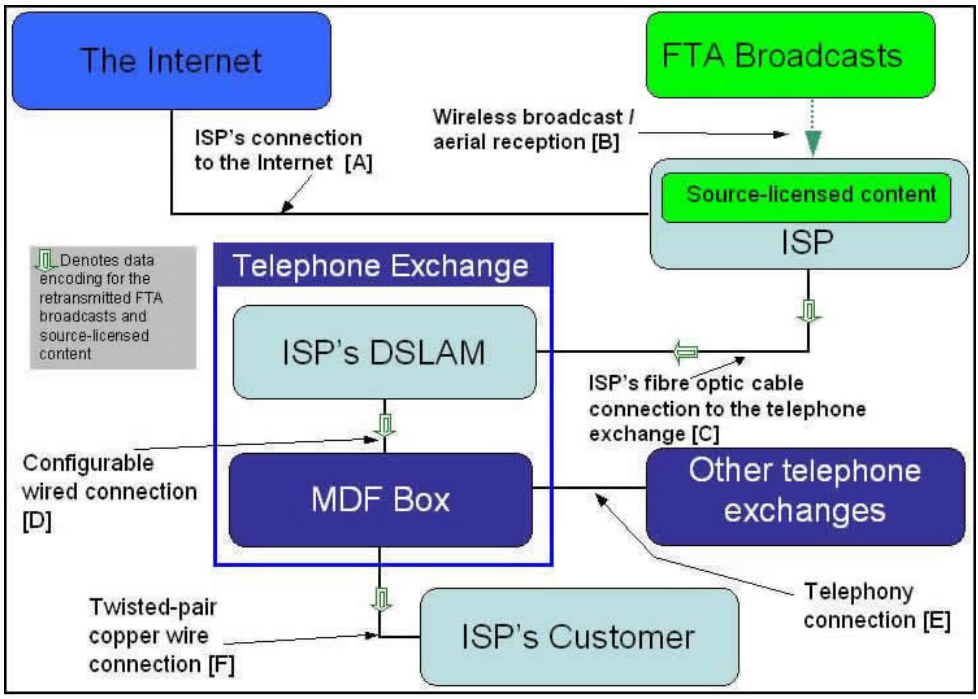

Figure 1 The IPTV service paradigm

(I) THE ADSL INTERNET CONNECTION

The ISP computer servers are connected to the Internet [**A**] through any of the means discussed in the above section. Through a dedicated connection to a digital subscriber line access multiplexer (DSLAM) installed within the customer's local telephony exchange [**C**], and the DSLAM's wiring with the exchange's main distribution frame box (MDF Box) configured to connect to the customer's telephone line [**D**], the ISP is able to deliver Internet data carriage services to the customer through the twisted-pair copper wire telephony infrastructure connecting the customer to its local exchange [**F**]. Through the use of filters installed at the customer's point of connection, data traffic and voice telephony traffic are segregated. The voice traffic to and from the customer's telephone is handled by the MDF Box and its connection to other exchanges [**F**]-[**E**]; the Internet data traffic to and from the customer's modem is passed through the MDF Box on to the DSLAM to be handled by the ISP's Internet connection [**F**]-[**D**]-[**C**]-[**A**].

(II) THE IPTV SERVICE

As an additional service to the customer the ISP provides the service of IPTV. In the paradigm the IPTV content is both source licensed (programming owned by or voluntarily licensed to the ISP by rights owners) and content sourced by retransmitting free-to-air broadcasts. Data encoding for both types of content is designated by the green arrows in the diagram (IPTV content data).

Along the [C]-[D]-[F] ISP-to-customer connection the IPTV service shares the same physical transmission route as the Internet data. The IPTV service also employs essentially the same data transmission protocol (TCP/IP) which is applied to Internet data, and it is this which gives the service half its name. However notwithstanding those features, the IPTV service is distinct from Internet access services in that it could be supplied standalone without the ISP being connected to the Internet and without the provision to the customer of Internet access services – a point expanded upon below. (However, typically IPTV services might only be offered commercially by an ISP when bundled with Internet access services.) The IPTV content data is received at the customer's connection by passing through the filter to the customer's modem and rendered by appropriate software (such as Windows Media Player) on the customer's personal computer.

(III) IPTV RETRANSMISSION

IPTV retransmission is effected by the ISP receiving, by ordinary aerial reception, free-to-air broadcasts [B]. Those broadcasts are encoded by the ISP into a form suitable for transmission as data along its cable connections. That retransmission data (together with data encoding source-licensed programming) is transmitted as IPTV content data to the DSLAM, through to the MDF Box and on to the twisted copper pair connecting the customer as described above.

Three salient features of the paradigm can be described:

- At no point is the ISP's connection to the Internet implicated for the transmission of the IPTV content data. The connection is not relied upon by the ISP as the source of the content encoded to comprise the IPTV content data. The connection is not relied upon for the customer to obtain access to the IPTV content data. The transmission of the IPTV content data merely implicates infrastructure shared by both Internet traffic and voice traffic and employs some of the data transmission Internet protocols.
- The flow of IPTV content data is one-way, point-to-multipoint. Its reception does not entail input on the part of the customer once the customer has obtained access to it.
- Similar to a subscription broadcast, access to the IPTV content data is closed, being transmitted to the customer subject to an access control technological protection measure. This applies in so far as the ability of the customer to avail itself of the IPTV content data is dependent upon ISP satisfaction that the point of access is a telephone number which is that of a current subscriber to the ISP.

THE 2008 ACMA REPORT

In 2008 an Australian Communications and Media Authority (ACMA) report observed – consistent with the above analysis – that a mode of IPTV delivery the same as the paradigm described above (termed in the ACMA report a 'Telco TV model') was 'multicast via a managed IP connection technically separate/distinct from the broadband Internet connection although carried on the same physical copper lines' (ACMA 2008, 17). When making this observation, the ACMA report described IPTV as the 'replication of a subscription television service over a managed IP network' and offered as an example a US service branded U-verse and provided by AT&T (ACMA 2008, 17). Although AT&T's U-verse is delivered over infrastructure comprising fibre-optic cable to the home rather than twisted copper pair wire, to all intents and purposes, the IPTV service

of AT&T shares the salient attributes of the Australian paradigm described above: non-implication of connection to the Internet; a flow of content data that is one-way, point-to-multipoint; access controlled by a technological measure to subscriber households. While the ACMA report was not a legal analysis of IPTV its authors formed the view that from a technical perspective, such IPTV was not a means of transmission implicating the Internet.

THE 2008 US COPYRIGHT OFFICE REPORT

In the same year as the ACMA report, the US Copyright Office considered the AT&T U-verse service in the context of retransmission. There are presently two retransmission statutory copyright licences in the US: one for retransmission by cable systems and the other for retransmission by satellite systems (Brennan 2003, chapters 5-6). In the US Copyright Office Report, one of the matters considered was the suitability of US statutory licensing for retransmission by Internet-based services. A pair of conclusions arrived at by the US Copyright Office taken together are striking.

The first conclusion was strong opposition to the expansion of an existing statutory licence or the creation of a new statutory licence 'that would permit any website on the Internet to re-transmit television programming without the consent of the copyright owner' (US Copyright Office 2008, 188). In supporting that opposition the US Copyright Office referenced both the dispute involving the web-retransmissions of iCraveTV and an obligation precluding a copyright exception for retransmission 'on the Internet' in article 17.4.10(b) of the Australia-US Free Trade Agreement 2004 (AUSFTA). Both the iCraveTV dispute and the AUSFTA obligation are described in more detail below. Implicit in the US Copyright Office discussion however was an assumption that a statutory licence exception for the retransmission of television broadcasts via a website would comprise retransmission that was 'on the Internet' and be plainly offensive to the AUSFTA obligation.

The second conclusion was in support of the view that the existing cable retransmission statutory licence already operated so as to include within it IPTV along the lines of the paradigm described above, therefore including the AT&T U-verse service and another like service offered by Verizon. The report noted that the Copyright Office had already been accepting Statement of Account forms from AT&T and Verizon for the purpose of their payment of royalties under the cable statutory licence for their IPTV retransmissions. It went on to state:

> After consideration of the statutory language and the facts at hand, the Office finds that there is nothing in the Act that would clearly foreclose the application of the [cable] statutory license for the retransmission of distant broadcast signals by either company. By its terms, the statutory license applies only to cable systems and [the relevant provision] defines "cable system" quite broadly. Consequently, both AT&T, as well as Verizon, meet each of the elements of the cable system definition. (US Copyright Office 2008, 199)

This statement occurs shortly after the possibility of web-based retransmission falling within the statutory licences was forcefully rejected by the US Copyright Office for reasons that included such retransmission was 'on the Internet' and thereby precluded by the AUSFTA obligation. The key definition in section 111 of the US Copyright Act relevantly provides that:

> A "cable system" is a facility, located in [the USA] that in whole or in part receives signals transmitted or programs broadcast by one or more television broadcast stations licensed by the Federal Communications Commission, and makes secondary transmissions of such signals or programs by wires, cables, microwave, or other communications channels to subscribing members of the public who pay for such service.

When concluding that IPTV retransmissions fall within the scope of that definition there was no suggestion by the US Copyright Office that the US was not meeting its AUSFTA obligation by reason of that conclusion. The clear implication of the report is that the view of the US Copyright Office is that the 'cable system' definition can accommodate IPTV services without the US contravening the AUSFTA, because IPTV services are not regarded by the Office as being on the Internet. That is an outcome consistent with the technical view of the authors of the ACMA report.

THE AUSTRALIAN LEGISLATIVE LANGUAGE AND CONTEXT

THE *BROADCASTING SERVICES ACT* LICENSING REGIME EXCLUSION

Notwithstanding the views expressed in the ACMA report and by the US Copyright Office in 2008, IPTV delivered under the described paradigm seems to be assumed generally in the Australian broadcasting industry as falling within the 'using the Internet' BSA exclusion. In its June 2009 submission to the Commonwealth Government's Discussion Paper *National Broadband Network: Regulatory reform for 21st Century Broadband* FreeTV Australia (the Australian peak body for commercial free-to-air television broadcasters) set out a detailed table to provide evidence of the 'existing and emerging regulatory imbalance' between free-to-air commercial broadcasting (Free services), subscription broadcasting (Pay services) and IPTV. The table indicated that IPTV was, unlike Free services and Pay services, outside the licensing regime of the BSA (FreeTV Australia 2009, 6-7). The only explanation for that treatment in the table is the existence of an assumption in FreeTV Australia that IPTV falls within the 'using the Internet' BSA exclusion. The correctness of that assumption is here being questioned.

Shortly after the ministerial determination of September 2000 (which as noted above excluded services 'using the Internet' from the concept of a 'broadcasting service' amenable to the licensing regime of the BSA), the then Department of Communications, Information Technology and the Arts (DOCITA) gave a Report to Parliament which explained the background to and the intention of the ministerial determination. Four policy justifications were accepted by DOCITA to support such exclusion (DOCITA 2000):

- The likely business models for Internet content providers might be significantly different from that of traditional broadcasters;
- The BSA licensing of Internet services as if they were broadcasting services would lead to a competitive disadvantage in the international economy when the Australian regulatory framework might be more restrictive than that of overseas competitors;

- The commercial success of communications and IT companies was subject to high risks and BSA licensing of Internet services, such as audio and video streaming, would create additional impediments for these businesses;
- Streamed audio and video programming delivered over the Internet had the potential to provide consumers with greater access to information and entertainment services, so that the BSA licensing of Internet streaming services as if they were broadcasting services might impede the growth of these alternatives to traditional broadcasting.

It might be observed that, by and large, the IPTV service paradigm is a very close substitute (both commercially and technically) for traditional Pay services. Many of the policy reasons for the exclusion of BSA regulation appeared tied to the needs of those in Australia utilising web-based delivery and seemed inapposite to the IPTV service paradigm.

In explaining the operation of the determination, the DOCITA Report stated:

> The determination is intended to include a service that uses the Internet, even if part of the means of delivery of the service is technology which may not clearly be part of the Internet, so long as the service does not deliver programs using the broadcasting services bands. For example, the determination will cover services that enable users to access material from the Internet using a wireless application protocol device such as a mobile phone, whether or not the wireless application protocol is itself part of the Internet.

This passage, when applied to the IPTV service paradigm, lends itself to two possible readings. Its first sentence could, if read in isolation, support an interpretation of the 'using the Internet' exclusion as encompassing any service which uses any infrastructure or technology shared by computers connected to the Internet. This would seemingly include the IPTV paradigm described above. But, such a wide interpretation of 'using the Internet' could not be correct for its breadth would include too much. For example, such an interpretation would include most Pay services in Australia. This is because cable broadband Internet access has since the late 1990s been provided to households by connecting those households to the Internet using the same cable used for the transmission of most Australian Pay services. However the illustrative second sentence in the above passage clarifies and confines the meaning of the first. It explains that services 'use' the Internet in the sense of the determination if the services 'enable users to access material from the Internet'. As the programming content transmitted by Pay services (sharing its transmission infrastructure with cable broadband) and under the IPTV service paradigm (sharing its transmission infrastructure with telephony and ADSL) does not originate 'from the Internet', but rather from the Pay services or the IPTV service, each seems to fall outside of the intended operation of the exclusion, and for the same reason.

THE *COPYRIGHT ACT* RETRANSMISSION STATUTORY LICENCE EXCLUSION

The CA exclusion of retransmission which 'takes place over the Internet' is not easy to locate in the legislative history. As originally conceived in an early 1999 Exposure Draft the licence was to be modelled on the CA section 109 statutory licence for the broadcast of sound recordings. That was however replaced in the 1999 Bill introduced into Parliament with terms modelled upon the CA Part VA educational statutory licence for the recording of broadcasts. In both forms,

however, a government objective of the reform was technological neutrality insofar as retransmission was not confined to any particular means. A report on the Bill in 1999 by the House of Representatives Standing Committee on Legal and Constitutional Affairs (LCAC Report) observed the following concern that arose from the breadth of technologically neutral drafting:

> [The Motion Picture Association] argued that the potential harm caused to copyright owners by Internet retransmissions being subject to proposed Part VC is enormous. For this reason they suggested that the definition of 'retransmitter' should be confined to retransmission by means of a cable. (LCAC Report 1999, para 5.21)

This concern led to the recommendation that the scope of the statutory licence should be limited to retransmission by a Pay service. This recommendation seemed to be resisted at first by a government wedded to drafting that was broad-based and technologically neutral. However after the LCAC Report, but before the finalisation of a government response to it, a retransmission controversy erupted in North America. A Canadian company, iCraveTV, had commenced web-based Internet retransmission of US television signals which in early 2000 sparked ten US film studios and three US broadcasters to initiate litigation to successfully obtain injunctive relief (Standeford 2000, 9). Sparked by that controversy, in February 2000 the government asked Screenrights – the copyright collecting society then considered most likely to administer the retransmission statutory licence – how it envisaged the terms of the licence proposed in the 1999 Bill would apply to 'web retransmissions'. Screenrights response included this passage referencing the iCraveTV dispute:

> [T]he … possibility of extra-territorial web retransmissions occurring under the retransmission regime should be carefully considered. Acute international embarrassment may arise if web retransmissions emanating from Australia under a statutory licence represent copyright infringements in other countries. (Screenrights 2000, 7)

Faced with the iCraveTV dispute and the LCAC recommendation, the government persevered with its technologically neutral language but introduced in June 2000 (as one of its amendments to the Bill) the 'takes place over the Internet' exclusion. The accompanying explanatory memorandum stated that the amendment clarified that Part VC of the Act 'does not apply to the retransmission of free-to-air broadcasts via the Internet' (Sup ExM 2000, para 209). The exclusion represents a major carve-out from the retransmission copyright regime. Insofar as it is possible to say, the two factors that led to this belated exclusion were the LCAC recommendation and, perhaps more importantly, the iCraveTV controversy. In respect of the latter, it is clear that the iCrave business model was open-access and web-based. That is to say that iCrave's retransmissions were digitised third party broadcast signals, web-streamed from iCrave computer servers so as to enable any user, anywhere in the world, who visited the iCraveTV website to access that content. Quite clearly if iCraveTV-type retransmissions were to occur in Australia, the intent was for the 'taking place over the Internet' provision to put those retransmissions outside the operation of the statutory licence. But equally clearly IPTV retransmission under the paradigm is a far cry from the iCraveTV mischief, being retransmission that is closed and not web-based.

The nature of transmissions made by an IPTV service under the paradigm described here does not fall within the intended operation of the exclusion.

The concerns created by the short-lived iCraveTV can be seen in the 2004 AUSFTA provision, mentioned earlier in the context of the US Copyright Office Report. In part its text provided that 'neither Party may permit the retransmission of television signals (whether terrestrial, cable, or satellite) on the Internet without the authorisation of the right holder or right holders, if any, of the content of the signal and of the signal'.[3] The Guide to the AUSFTA prepared by the Australian Department of Foreign Affairs and Trade (DFAT) stated that the requirements of this obligation 'reflects current Australian law' (DFAT 2004, 98). An exchange of side letters to the AUSFTA opened the door to the renegotiation of this obligation if 'it is considered in the opinion of either Party that there has been a significant change in the reliability, robustness, implementability and practical availability of technology to effectively limit the reception of Internet retransmissions to users located in a specified geographic market area' (Vaile and Zoellick 2004). Such geographic limitation, with a technological access control tied to a specific telephone number, is intrinsic to retransmission under the IPTV service paradigm. Implicit in the side letters' proviso is an understanding that what is intended by the primary obligation is not IPTV retransmission under the paradigm, but rather open, web-based retransmission of the iCraveTV variety.

CONCLUSION

'Is IPTV a service made available using the Internet?' and 'Does IPTV retransmission take place over the Internet?' Based upon the understanding of the Internet and IPTV paradigm here deployed, the counter-intuitive answer to both these questions in broadcasting and copyright law is: no.

For broadcasting law purposes IPTV is not a service made available using the Internet because, while the service uses the TCP/IP transmission protocols and avails itself of infrastructure shared by an Internet connection, the IPTV transmission is a direct feed from ISP to customer without requiring either to be connected to the Internet. Moreover, to the extent it is possible to discern an intended meaning of 'made available using the Internet', the DOCITA Report to Parliament explains that this was to apply in cases where a service enabled end users to access material from the Internet. In the case of the IPTV paradigm the material is merely from the ISP. This conclusion suggests that Australian IPTV services, similar to that described as the paradigm, should be licensed as broadcasting services under the BSA.

For copyright law purposes IPTV retransmission under the paradigm does not take place over the Internet for similar reasons. Again, while the retransmission occurs over infrastructure shared by an Internet connection, as a direct feed from ISP to customer at no point is connection to the Internet by either ISP or customer necessitated. Moreover, the context of the copyright exclusion and the related provision in the AUSFTA is the mischief of open, web-based retransmission. IPTV retransmission is far outside the intended operation of the exclusion, a conclusion implicitly arrived at in 2008 by the US Copyright Office. This conclusion leads to the possibility of IPTV retransmission, similar to that described within the paradigm, falling within the operation of the Part VC statutory licence.

ACKNOWLEDGEMENTS

Two acknowledgements are in order. First, James Dickinson, licensing executive at Screenrights – The Audio-Visual Copyright Society, was instrumental in me questioning the assumption that IPTV used or was over the Internet. Second, a *Telecommunications Journal of Australia* referee provided several valuable suggestions that have all contributed materially to the final publication. Naturally, I take responsibility for the analysis.

ENDNOTES

1 It might be noted that this declaration does not exclude content services from a BSA censorship regime (in Schedule 7) which is directed in part to services which are not broadcasting services.

2 *ACLU v Reno*, 929 F Supp 824 (1996), 832.

3 The Copyright (International Protection) Regulations treatment of foreign broadcasters provides: 'subject to these Regulations, a provision of the Act that applies in relation to a sound broadcast, or a television broadcast, referred to in section 91 of the Act (an Australian broadcast) applies in relation to a sound broadcast, or a television broadcast, made at a material time by a relevant broadcaster from a place in a Rome Convention country (a foreign broadcast): (a) in the same way as the provision applies, under the Act, in relation to an Australian broadcast; and (b) as if the foreign broadcast were an Australian broadcast': regulation 4(6). However the USA is not a member of the Rome Convention and thus US broadcasts are not afforded the protection of the Australian copyright under regulation 4(6). Regulation 4(7A) states that a 'provision of the Act that applies to an Australian retransmission of an Australian television broadcast applies in relation to an Australian retransmission of a US television broadcast: (a) in the same way as the provision applies, under the Act, in relation to an Australian retransmission of an Australian television broadcast; and (b) as if the US television broadcast were an Australian television broadcast'. This regulation was added almost certainly to ensure compliance with article 17.4.10(b) because the term 'Australian retransmission' is defined in regulation 3(1) to mean 'a retransmission of a television broadcast: (a) over the Internet and (b) made from a place in Australia'. It might also be noted that the immunity from suit found in BSA section 212(2) would not apply in relation to a free-to-air signal originating from a US-based broadcasting organisation.

REFERENCES

Alston, Richard. 2000. Determination under paragraph (c) of the definition of 'broadcasting service' (No 1 of 2000), Commonwealth of Australia Gazette No GN 38, 27 September 2000.

Australian Communication and Media Authority (ACMA), 2008. *IPTV and Internet video services – The IPTV and Internet Video Market in Australia*, April 2008 available at: http://www.acma.gov.au/webwr/_assets/main/lib310210/iptv_and_internet_video_in_aust.pdf.

Brennan, David. 2003. *Retransmission and US Compliance with TRIPS*. The Hague, The Netherlands: Kluwer Law International.

Department of Communications, Information Technology and the Arts (DOCITA), 2000. *Report to Parliament: Review of audio and video streaming over the internet*, October 2000 available at: http://www.dbcde.gov.au/television/digital_televison_switchover/digital_broadcasting_policy_reviews/report_to_parliament_review_of_audio_and_video_streaming_over_the_internet.

Department of Foreign Affairs and Trade, 2004. *Australia – United States Free Trade Agreement Guide to the Agreement*, March 2004 available at: http://www.sice.org/TPD/USA_AUS/Studies/AUSFTAguide_e.pdf.

Free TV Australia, 2009. *Submission to the Department of Broadband, Communications and the Digital Economy on National Broadband Network: Regulatory Reform for 21st Century Broadband Discussion Paper*, 3 June 2009 available at: http://www.dbcde.gov.au/__data/assets/pdf_file/0013/115321/Free_TV_Australia.pdf.

House of Representatives Standing Committee on Legal and Constitutional Affairs (LCAC), 1999. *Report on the Copyright Amendment (Digital Agenda) Bill 1999*, December 1999 available at: http://www.aph.gov.au/house/committee/laca/digitalagenda/contents.htm.

Lindsay, David. 2007. *International Domain Name Law – ICANN and the UDRP*. Oxford, UK: Hart Publishing.

Supplementary Explanatory Memorandum Copyright Amendment (Digital Agenda) Bill 1999 (Sup ExM), 2000. *Amendments and New Clauses to be Moved on Behalf of the Government*, June 2000.

Register of Copyrights (US Copyright Office). 2008. *Satellite Home Viewer Extension and Reauthorization Act Section 109 Report*, June 2008 available at: http://www.copyright.gov/reports/section109-final-report.pdf.

Screenrights – The Audio-Visual Copyright Society, 2000. Submission to Attorney-General's Department on Web Retransmission under the Proposed Reform, March 2000 available at: http://www.screenrights.org/pdfs/about/submissions/Retr2000.pdf.

Standeford, Dugie and Aquino, John. 2000. 'U.S. Film Studios, TV Stations Win Preliminary Injunction Against iCraveTV', 6(5) The Intellectual Property Strategist, February 2000.

Vaile, Mark and Zoellick, Robert. 2004. Australia-United States Free Trade Agreement Side Letters on Understanding: Articles 17.9.6, 17.4.10(B), 17.11.6(A)(I) and 17.9.5, May 2004.

Cite this article as: Brennan, David. 2010. 'Is IPTV an Internet service under Australian broadcasting and copyright law?'. *Telecommunications Journal of Australia*. 60 (2): pp. 26.1 to 26.11. DOI: 10.2104/tja100026.