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Whither the future of internet streaming and time-shifting? Revisiting the rights of reproduction and communication to the public in copyright law after Aereo

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Abstract

New forms of communication technology often pose challenges to the copyright regime and have necessitated the rewriting of the scope of the exclusive rights and exceptions by the legislature, and, in some cases, by the courts in common law countries (as well as the Court of Justice of the European Union). These issues have arisen in different categories of digital technology, albeit with the same objective of streamlining and simplifying the delivery of copyright works to consumers. These categories include file storage and transfer operations offered by Peer-to-Peer technology, the space- and time-shifting functions of the early video and audio recording products, user-generated and industry content deliverable via new media streaming platforms, the ‘live’ streaming and time-shifting services offered by remote and wireless digital recording systems, file storage and sharing digital lockers and cloud technology. This article will examine the legality of Internet streaming and time-shifting technologies under copyright law, specifically in relation to the rights of ‘reproduction’ and ‘communication to the public’, through a comparative analysis of the jurisprudence in leading jurisdictions in recent times. Although the decisions are not always consistent, they do provide some helpful guidance in our assessment of the relative strengths and weaknesses of the various arguments made on both sides of the divide as well as of the prevailing judicial sentiment towards new technologies. In light of the continuing legal uncertainty faced by such technologies, the authors also offer suggestions as regards legislative amendments and alternative business models to ensure their continued existence in this harsh and highly competitive digital environment.

INTRODUCTION

New modes of online access and distribution continue to challenge the boundaries of copyright law and, more specifically, the ambit of the copyright owner’s bundle of exclusive rights. In particular, a string of recently-decided cases that have gone before some of the highest courts in the Commonwealth and the European Union have considered the legality of various online streaming and recording technologies that allow for the ‘live’ streaming and ‘time-shifting’ of copyrighted content, such as television (TV) programmes and audio files.

In the USA, the US Supreme Court (USSC) has also had several opportunities to determine the scope of the right to manage creative content by various parties—including copyright owners, providers of storage, access and distribution technology as well as consumers—in an increasingly complex technological landscape. *Sony Corp of America v Universal City Studios, Inc* (‘*Sony Betamax*’),¹ decided in 1984, seemed complicated enough when it dealt with a physical home video recording device, which

subsequently formed the prototype for modern wireless and digital recording technologies that developed. However, with the emergence and proliferation of electronic access and distribution technologies (with their accompanying slate of business methodologies) as well as the more extensive geographical reach of such technologies, the USSC and the apex courts in other leading jurisdictions like the EU, Canada, Australia and Singapore have had to grapple with the problem of reconciling the original policy objectives of the copyright regime and the burgeoning (but often divergent) public interest in accommodating the development of these new technologies.

Similarly, the Peer-to-Peer (P2P) line of cases—from the Ninth Circuit’s decision in *A&M Records, Inc v Napster, Inc*² to the USSC’s 2005 decision in *MGM Studios, Inc v Grokster, Ltd* (*‘Grokster’*),³ together with the most recent USSC decision in *American Broadcasting Cos, Inc v Aereo, Inc* (*‘Aereo’*)⁴ in 2014—illustrates how judges have to deal with the difficult task of balancing the competing interests of the various stakeholders within the copyright framework. It is noteworthy that both the *Grokster* and *Aereo* judgments were issued with inconsistent opinions, and in the latter case, by a Court fundamentally divided on the matter. *Grokster* and *Aereo* offered a ‘clawing back’ of rights to copyright owners as the panacea for the negative effects of new technologies that have flourished since *Sony Betamax*, technologies that were inconceivable in the 1980s when this case was decided. Furthermore, courts continue to grapple with this balancing of interests within the strictures of existing provisions in copyright legislation that generally were not drafted to deal with these sophisticated technologies.

From the global perspective, *Aereo* is the latest addition to the line of cases emanating from the top courts of Commonwealth jurisdictions, all of which have largely favoured protecting the rights of copyright owners (save for the anomalous decision of the Singapore Court of Appeal in *RecordTV Pte Ltd v MediaCorp TV Singapore Pte Ltd*).⁵ The Section ‘Internet streaming and time-shifting in the Courts’ of this article sets the stage for a detailed analysis of these decisions by categorizing them under the relevant exclusive right(s) which had been breached and according to their relevant laws. The authors will also study the functions and operation of the technology in question and critically examine the rationale behind the courts’ decisions.

In the Section ‘Possible legal exceptions or exemptions and alternative business models’ of this article, the authors offer an overview of the different technology providers and companies presently in existence as well as some alternative business models or strategies that technology companies offering online recording and streaming services could possibly adopt to avoid infringement liability. The authors will also briefly canvass the possibility of once again utilizing the open-ended fair use doctrine in the US (or its equivalent in other jurisdictions, where available) and the possibility of targeted legislative amendments (in the form of introducing specific exceptions or safe harbours) to exempt the use of such technologies, based on their function, from copyright liability.

INTERNET STREAMING AND TIME-SHIFTING IN THE COURTS

In the modern world, Internet functionality necessarily requires adjustments in copyright law in order to accommodate electronic communication and storage of information. With regard to the online time-shifting and streaming functions that we are concerned with here, the exclusive rights of ‘reproduction’ as well as ‘communication to the public’ (or the right of ‘public performance’ in the USA) have been rigorously asserted by copyright owners and fiercely challenged by technology providers before the courts in many jurisdictions.

Copyright owner's exclusive right of reproduction (right to stop copying)

The right to reproduce a work in a material form is, of course, one of the most fundamental exclusive rights belonging to the copyright owner.

Singapore

In Singapore, the copyright statute defines reproduction as including the making of a sound recording or cinematograph film of a literary, dramatic or musical work.⁶ Turning to neighbouring rights, copyright in relation to a TV broadcast—insofar as it consists of visual images—is the exclusive right to *make* a cinematograph film of the broadcast,⁷ whereas copyright in relation to a cinematograph film is the exclusive right, *inter alia*, to *make* a copy of the film.⁸ Quite clearly, some or all of these exclusive rights of the copyright owner will be implicated whenever a third party, without permission, decides to offer an online recording facility. To understand why this is so, we will start by briefly examining the facts in *RecordTV Pte Ltd v MediaCorp TV Singapore Pte Ltd* ('*RecordTV*'),⁹ a landmark decision of the Singapore Court of Appeal in December 2010.

The *RecordTV* decision was concerned with the legality of an online recording service. The plaintiff, RecordTV, ran an Internet business which provided complimentary recording services (essentially a time-shifting facility) to members of the public who had pre-registered with them on their website. Subscribers to this online service were able to request for free-to-air programmes from a number of TV channels (pre-determined by RecordTV) to be recorded for their later viewing. The defendant, MediaCorp, was the owner of copyright in the various broadcasts and films (collectively, the 'relevant MediaCorp shows') which had been recorded.

This was how the RecordTV system worked. Once a request was received from a registered subscriber, RecordTV's Internet-based digital video recorder (iDVR)—at its remote location—would identify the relevant programme and make a copy of it at the time of its broadcast. The recorded programme would then be stored on RecordTV's online servers for a period of 15 days, during which time the subscriber could log on to the website and gain access to and view the requested recording. After 15 days, the recorded programme would be deleted. It is pertinent to note that RecordTV's iDVR system (which was completely automated) actually underwent three different phases of operation, a point to which we will return later when we discuss the right of 'communication to the public'.

MediaCorp subsequently sent RecordTV cease-and-desist letters for copyright infringement, whereupon the latter initiated proceedings against the former—pursuant to section 200(1) of the Singapore Copyright Act 1987—for groundless threats of copyright infringement. In defence, MediaCorp pleaded that RecordTV had infringed their copyright in the relevant MediaCorp shows. Although MediaCorp initially prevailed before the trial judge, RecordTV's appeal eventually succeeded before the Court of Appeal (CA).

One of the main issues which arose for consideration was whether RecordTV had copied the relevant MediaCorp shows (ie whether RecordTV was the 'maker' of the online recordings in question). On this point, both the trial judge and the CA were in agreement. Relying on the authority of *Cartoon Network LP, LLLP v CSC Holdings Inc* ('*Cartoon Network*'),¹⁰ a decision of the US Court of Appeals for the Second Circuit, the CA held that it was the registered subscriber—and not RecordTV—who had copied the relevant MediaCorp shows (through his request for the recording of these shows via the iDVR system).

This conclusion was arrived at after the CA (as well as the earlier Second Circuit) took the following matters into consideration:

1. a purported analogy between the subscribers of the online recording facility (namely, Cablevision's remote-storage digital video recording (RS-DVR) system in *Cartoon Network* and the iDVR system in *RecordTV*) and users of the 'ancient' VCR (or self-service photocopier);¹¹ and
2. that, in both cases, the main volitional agent who engaged in copying (and who supplied the bulk of the relevant 'volitional conduct') was the user/subscriber himself, and not the provider/supplier of the recording facility.

The present authors have articulated their views elsewhere and put forward the contrary argument that the provider of the online recording facility—both in *Cartoon Network* and *RecordTV*—ought to have been held liable for making unauthorized copies of copyright-protected TV broadcasts and films.¹² Indeed, the very narrow interpretation of the word 'make' adopted by the courts in both decisions, if correct, would seriously throw into doubt the efficacy of the copyright owner's exclusive right of 'reproduction' in the digital environment.

To briefly reiterate our views, we had earlier submitted that:

1. the CA in *RecordTV* should not have relied on the *Cartoon Network* precedent because the analogy drawn above is inappropriate in many respects. The RS-DVR and iDVR systems are not simply 'digital versions' of the traditional VCR/photocopier, particularly as regards the extent of volition or the element of control over recordable content;¹³
2. there is no evidence of any 'continuing relationship' between the vendor/manufacturer of the VCR/photocopier and the consumer/user, quite unlike the ongoing relationships between Cablevision/RecordTV and their respective subscribers; and
3. Cablevision/RecordTV do not qualify as mere 'passive conduits' for the (so-called 'automatic') delivery of online content to their respective subscribers. Quite the contrary, they were *active participants* in the entire process of recording, hosting and delivery. Their conduct, as a whole, clearly assumes a nexus that is sufficiently *proximate and causal* to the prohibited acts in question.

Since the main volitional agent in the entire enterprise is the provider of the online recording facility, Cablevision and RecordTV—and not their respective subscribers—ought to assume primary copyright liability for having recorded/copied the TV programmes in question.

Before turning to some recent developments in the case law, we wish to raise, for the reader's contemplation, the following hypothetical.

Let us assume that Andy chances upon a self-service vending machine which offers an array of simple, made-to-order dishes. He places a specific order for pasta by putting money into the machine and pressing the order button. Let us also assume that the cooking process is entirely automated—there is no human chef involved at all. The meal is then prepared and served to Andy, all by way of automation. Who, in this scenario, has made/cooked the pasta? Would it be Andy, the customer?

Undoubtedly, Andy is the last 'human actor' or the person who committed the 'last volitional act' in the process just described. If the reasoning in *Cartoon Network* and *RecordTV* were correct, then Andy—as the main volitional agent and the party who supplied the 'last volitional act'—must be deemed the 'maker' of the dish in question. Is this, however, a sensible conclusion to reach on these facts?

Arguably, the whole idea of ordering food from an automated vending machine is to save the customer time and effort (because the customer does not wish to cook his own food and wants to rely completely on someone else to do the work for him). Just because Andy's pressing of the order button at the vending machine—the 'last volitional act'—actually triggers (in a 'but-for' sense) a whole sequence of actions which ultimately result in a cooked meal of pasta does not, *ipso facto*, mean that Andy was the 'maker' of that dish. To argue in line with the reasoning in *Cartoon Network* and *RecordTV* that it is the customer who has actually done the cooking in this instance flies in the face of logic.

In our attempt to identify who, exactly, has made/cooked the pasta, it is important also to reflect on the question as to whether mere *automation* of the cooking process should have any impact on the answer. The fear, of course, is that endorsing the 'volitional conduct' theory (as articulated in *Cartoon Network* and accepted by the CA in *RecordTV*) may well result in a proliferation of business models which are specifically designed to elude the reach of the copyright owner's bundle of exclusive rights, particularly so in the online environment where automation, de-centralization and consumer autonomy have now become the norm.

However, that fear may now be unfounded—at least in Australia—with the decision of the Full Court of the Federal Court of Australia (the 'Full Court') in *National Rugby League Investments Pty Ltd v Singtel Optus Pty Ltd* ('*Optus*').¹⁴

Australia

The Full Court in *Optus* had the opportunity to consider the scope of the copyright owner's exclusive right of 'reproduction' in relation to facts almost identical to those in *RecordTV*. The defendant (Optus) was a leading provider of communications services in Australia. Its TV Now time-shifting subscription service enabled a subscriber to have free-to-air TV programmes on football and rugby matches (the copyright in which belonged to the plaintiff) recorded as and when they were broadcast, and then played back at the time(s) of the subscriber's choosing. As is apparent, the TV Now system (which, like *RecordTV*'s iDVR system, was fully automated) entailed the copying and storing of TV broadcasts requested by and recorded for the individual subscriber concerned, hence the allegations by the plaintiff of copyright infringement.

For present purposes, the primary issue which the Full Court had to decide was who, whenever a TV broadcast was recorded for an individual subscriber, was the 'maker' of that copy pursuant to sections 86(a),¹⁵ 87(a) and 87(b)¹⁶ of the Australian Copyright Act 1968 (Cth)? Was it the defendant (Optus), the subscriber, or both of them jointly? The trial judge had decided that it was the subscriber—and not Optus—who was the maker of the recording in question, a conclusion compatible with the outcomes reached by the courts in *Cartoon Network* and *RecordTV*, which held that the subscriber alone was responsible for the creation of the copies, that no copies were made unless a subscriber required this to be done and that the fully-automated online service offered by each defendant was substantively no different from a VCR/DVR or a self-service photocopier.

On appeal, the Full Court held that the maker of the recordings in question was Optus or, in the alternative, Optus and the subscriber jointly.¹⁷ The appellate court also considered—but roundly rejected—two other possible outcomes: that the relevant copies were made by Optus as 'agent' for the subscriber, or that they were made by the subscriber as 'principal' himself.

The agency argument was instantly dismissed because there was no evidence whatsoever (contractual or otherwise) of any principal-agent relationship between Optus and its subscribers.¹⁸

In disagreeing with the trial judge that the subscriber ought to be treated as the ‘principal’ in the making of the relevant TV recordings, the Full Court was of the view that this particular conception of the word ‘make’ ‘... robs the entirely automated copying process [of the TV Now service] of any significance beyond that of being the vehicle which does the making of copies’.¹⁹ Instead, the word should convey the idea of ‘making (ie creating or producing) a physical thing (ie the embodiment of the copyright subject matter)’, which is in line with its dictionary definition.²⁰

The appellate court also rejected the ‘last volitional act’ argument, which asserts that because the subscriber, by performing the last volitional act in clicking the ‘record’ button, triggers a sequence of actions which ultimately lead to copies being made, the identity of the maker is the subscriber himself.²¹ The Court further disagreed with the trial judge’s observation that the TV Now system was substantially analogous to such copying devices as the photocopier and the VCR/DVR.²² Indeed, the Court opined that ‘analogies [were] not necessarily helpful’ and that the TV Now system had actually been ‘designed in a way that [made] Optus the “main performer of the act of [copying]”’.²³

To reinforce its view that Optus was indeed the ‘maker’ of the relevant copies of TV broadcasts and was not simply making available its technology to other third parties who use it to make copies for themselves, the Full Court reasoned that Optus’ role in the entire process of making copies was so ‘pervasive’ that, even though the TV Now system was completely automated, it could not be disregarded for the purposes of identifying who the maker was.²⁴ Further, the Court said that ‘[e]ven if one were to require volitional conduct proximate to the copying, Optus’ creating and keeping in constant readiness the TV Now system would satisfy that requirement’.²⁵

This conclusion aside (that Optus alone was the ‘maker’), the Court was also prepared to accept the possibility that both Optus and the subscriber could be held jointly and severally liable for the act of copying (ie as joint makers/copyists).²⁶

If one focused not only upon the automated service which is held out as able to produce, and which actually produces, the copies but also on the causative agency that is responsible for the copies being made at all, the need for a more complex characterisation is suggested. The subscriber, by selecting the programme to be copied and by confirming that it is to be copied, can properly be said to be the person who instigates the copying. Yet it is Optus which effects it. Without the concerted actions of both there would be no copy made of a football match for the subscriber. Without the subscriber’s involvement, nothing would be created; without Optus’ involvement nothing would be copied. They have needed to act in concert to produce – they each have contributed to – a commonly desired outcome. ...

Indeed, the Court’s ‘preferred view’ (without definitively deciding the point) was that both Optus and the subscriber—having acted together in concert pursuant to a common design—be found liable as joint makers of the relevant copies.²⁷ The end result, therefore, was that Optus, on either interpretation, was found to have infringed the copyright interests of the plaintiff (since its pleaded defence pursuant to section 111²⁸ of the Australian copyright statute had also failed before the Court).

Notably, Optus’ application for special leave to appeal this decision was rejected by the High Court of Australia on 7 September 2012. Counsel for Optus tried, in argument, to persuade the High Court that the Full Court had wrongly relied on the Japanese precedent²⁹ and ought to have placed greater weight on the *Cartoon Network* and *RecordTV* decisions. Justice Gummow, who did not even need to hear submissions from opposing counsel, simply dismissed Optus’ application thus:

There are insufficient prospects of success in displacing the result reached by the Full Court of the Federal Court to warrant a grant of special leave. Nor are we satisfied that consideration of the particular

facts of this case could yield any universal proposition respecting the application of section 111 of the *Copyright Act 1968* (Cth). Accordingly, special leave in each application is refused with costs.

For now, it appears that the final word on the subject in Australia rests with the decision of the Full Court. Although the Court did not reach a conclusive view as to who, precisely, was the ‘maker’ of the relevant TV recordings, it did accept that the provider of the online recording facility was a potentially suitable candidate. More importantly, though, the Court’s pronouncement that the individual subscriber clearly did not qualify as ‘maker’ (in his capacity as the ‘principal’) stands in stark contrast to the outcomes reached by the courts in *Cartoon Network* and *RecordTV*. Given our views expressed elsewhere,³⁰ the authors support the Australian position, although it remains to be seen whether it will ultimately gain traction in other jurisdictions.

Copyright owner’s exclusive right of ‘Communication to the Public’

Internet businesses which provide online recording as well as ‘live’ streaming services ought to be mindful also of the copyright owner’s exclusive right of ‘communication to the public’. The right of ‘communication to the public’ (including the more specific right of ‘making available to the public’) is provided for in the copyright statutes of jurisdictions which have implemented Article 8 of the World Intellectual Property Organisation (WIPO) Copyright Treaty 1996 (or Articles 10 and 14 of the WIPO Performances and Phonograms Treaty 1996).³¹ In the USA, the equivalent right, arguably, is the right of ‘public performance’.³²

The word ‘communicate’, in Singapore’s copyright statute,³³ means:

to transmit by electronic means (whether over a path, or a combination of paths, provided by a material substance or by wireless means or otherwise) a work or other subject-matter, whether or not it is sent in response to a request, and includes –

- the broadcasting of a work or other subject-matter;
- the inclusion of a work or other subject-matter in a cable programme; and
- the making available of a work or other subject-matter (on a network or otherwise) in such a way that the work or subject-matter may be accessed by any person from a place and at a time chosen by him

From this definition, the following *distinct* forms of communication are discernible:

1. A (general) *transmission* of a copyright work by *electronic means*—whether over a path, or a combination of paths, provided by a material substance or by wireless means or otherwise, and whether or not the said transmission is sent in response to a request;
2. A transmission of a copyright work by *broadcasting* the work;
3. A transmission of a copyright work by including the work in a *cable programme*; and
4. *Making available* a copyright work in such a way that the work may be accessed by any person from a place and at a time chosen by him.

In short, the copyright owner’s umbrella right of ‘communication’ encompasses, apart from a general right to transmit a work by electronic means, the more specific rights of ‘broadcasting’, ‘cable-casting’ and ‘making available’. The introduction of this exclusive right of ‘communication’ in the statute was intended to control the active *transmission and dissemination* of copyright works on the Internet (as is the case where ‘push’ technologies are concerned)³⁴ as well as to regulate indiscriminate *access* to such works in the online environment (as is the case where ‘pull’ technologies are concerned).³⁵

Providers of online recording (time-shifting) services—such as Cablevision and RecordTV—must therefore be cognisant that their business models may violate the copyright owner’s exclusive right of ‘communication to the public’ and hence attract copyright liability. This is because online recording services are typical examples of ‘pull’ technologies, involving a *passive communicator* (eg RecordTV) and multiple *active recipients* (namely, its registered subscribers). The individual subscriber concerned, in order to obtain *access* to the relevant TV programme(s) recorded by RecordTV, will have to *initiate the transmission process* by first logging-in to RecordTV’s website, entering the relevant password, accessing his personal playlist and then viewing the recorded show(s) on his personal computer at the time(s) of his choosing.

Likewise, providers of online ‘live’ streaming services may also be implicated under the same head of liability, but for a different reason. Whereas recording/time-shifting involves a passive communicator with multiple active recipients, ‘live’ streaming (which essentially entails re-broadcasting over the Internet) arguably involves an *active communicator* who transmits or disseminates copyright material to multiple *passive recipients*. Streaming technology is therefore one example of ‘push’ technology where service providers—like TV Catchup and Aereo (to be discussed below)—that stream ‘live’ free-to-air TV shows will have to re-transmit the original broadcast signals to their registered subscribers (who arguably constitute members of the public).

Singapore

Once again, we begin our analysis with the *RecordTV* decision, which presented the first opportunity for the apex court in Singapore to examine the scope of the copyright owner’s exclusive right to ‘communicate’ a work (or other subject-matter) to ‘the public’. The issue, essentially, was whether RecordTV—having recorded, stored and made available to its subscribers copies of MediaCorp shows on its online servers—did ‘communicate’ the relevant MediaCorp shows to ‘the public’ (within the meaning of sections 83(c) and 84(1)(d) of the Singapore Copyright Act 1987).³⁶

The CA (in disagreeing with the trial judge) decided that it did not because (1) RecordTV was not the party responsible for making the communication (ie RecordTV was not the ‘communicator’), and (2) there was no communication made to ‘the public’. We have similarly stated our views elsewhere³⁷ as regards this particular aspect of the CA’s judgment and will therefore only briefly reiterate our arguments relating to the latter.

On the facts, the CA came to the conclusion that there was no communication made to ‘the public’ principally because during the third phase of RecordTV’s operations,³⁸ each recorded MediaCorp show could only be accessed by a *single* subscriber who had earlier made a specific request for that particular show. As VK Rajah JA put it,

[s]ince Registered Users could only view those MediaCorp shows which they had requested to be recorded, those shows were communicated to the relevant Registered Users privately and individually. The aggregate of private communications to each Registered User is not, in this instance, a communication to the public.³⁹

However, as we have respectfully suggested elsewhere, adopting such a technical interpretation would, effectively, place ‘form’ over ‘substance’. Whilst it is true that each copy of a MediaCorp show made by RecordTV could only be retrieved by an individual subscriber (evidence which merely goes to *form*), we have argued that the iDVR system, in *substance*, still ‘makes available’ that TV show to any member of the public—so long as he is a registered subscriber and has specifically requested the same show—who can access it from any place and at any time of his choosing. In other words, although each respective

communication (between RecordTV and subscriber) appears to be private and individual in form, the reality, in substance, is that the aggregate of all these ‘private’ communications transforms the nature of such communications into ‘public’ communications.

To further buttress our argument, we have sought to explain that the right of ‘communication to the public’ should rightly be analysed from the perspective of the *potential audience of the ‘underlying copyright work’* (namely, the MediaCorp show in question), rather than from the perspective of the potential audience of a ‘particular communication/transmission’. Indeed, the key to answering this question as to whether RecordTV’s communications were made to ‘the public’ would be (1) to consider the *relationship of the ‘recipient’* of the copyright work (ie the registered subscribers of the iDVR service collectively) *vis-à-vis the ‘copyright owner’* (ie MediaCorp), and *not* that of the ‘recipient’ vis-à-vis the ‘communicator’ (ie RecordTV), and then (2) to ask whether the potential audience/recipient of the copyright work is part of the *‘copyright owner’s public’*.⁴⁰

Under this approach, it is submitted that because the registered subscribers of RecordTV—who requested the same MediaCorp show and who (from the evidence) formed a *not insignificant segment* of the public—*were not in any way bound by domestic or family ties* (ie a sizeable group of *unrelated* persons), they must, collectively, have constituted MediaCorp’s ‘public’.⁴¹ As such, we respectfully disagree with the CA’s conclusion on this issue and submit that RecordTV had indeed ‘communicated’ (or ‘made available’) the relevant MediaCorp shows to ‘the public’ through its iDVR service.

If, at this stage, the reader is still unconvinced by our arguments above, perhaps we should pause and consider why RecordTV’s iDVR system had undergone three different phases of operation since its inception. In its first phase, the system operated in the ‘Single Instance Storage (SIS)’ mode where only *one* recording was made by RecordTV despite multiple end-user requests for the same MediaCorp show (ie one copy/file for multiple subscribers). This process clearly eliminated the duplication of copies by allowing multiple subscribers to share one copy of a recording. Later, during its third phase of operations in ‘Multiple Copy’ mode, *multiple* copies of the same MediaCorp show would be recorded by RecordTV based on the number of subscribers requesting that particular show (ie one copy/file per subscriber).

Why then did RecordTV regress from the initial ‘SIS’ mode of operation to the (technologically inefficient) ‘Multiple Copy’ mode? Why the unnecessary duplication of copies which seemed to have served ‘no apparent engineering [or technical] objective’?⁴² In our view, the ‘one copy per subscriber’ model was deliberately adopted by RecordTV for the sole purpose of avoiding primary copyright liability, so that it could align its *modus operandi* with what, it thought, was legally permissible under copyright law.

We turn now to consider how other leading jurisdictions—namely, the UK, EU, Canada and the USA—have approached this issue.

UK

In the UK, the right of ‘communication to the public’ (including the right of ‘making available to the public’) is enshrined in section 20(2) of the UK Copyright, Designs and Patents Act 1988 (CDPA),⁴³ the scope of which was considered by Kitchin J in *ITV Broadcasting Ltd v TV Catch Up Ltd*.⁴⁴ The defendant (TV Catchup) provided an online ‘live’ streaming facility for the plaintiffs’ free-to-air TV broadcasts in the UK.⁴⁵ The TV programmes streamed via the defendant’s service—unlike a traditional broadcast where the relevant TV programme is beamed or transmitted for simultaneous reception by members of the public (ie ‘one to many’)—could only be accessed/viewed by its registered subscribers ‘privately and individually’ (ie ‘one to one’). When the plaintiffs (all broadcasters) instituted copyright infringement

proceedings against TV Catchup, it applied to the English High Court for summary judgment on the basis that the plaintiffs' claim had no real prospect of success.

In dismissing the application for summary judgment, Kitchin J took the view that the right of 'communication to the public' ought to be '*interpreted broadly* so as to cover *all* communication to the public *not present where the communication originates*'.⁴⁶

Counsel for the defendant had sought to argue that:

[O]ne cannot communicate a broadcast other than by means of a mode of delivery which has the characteristics of a broadcast. These characteristics include transmission for simultaneous reception by members of the public, that is to say 'one to many'. By contrast, ... the defendant's transmission is not 'one to many' but rather 'one to one'. So, whatever may be the scope of section 20 in relation to other categories of work, in the case of a broadcast it is limited to the single restricted act of broadcasting.⁴⁷

To this submission, Kitchin J reasoned thus:⁴⁸

I am unable to accept this argument which, in my judgment, confuses the protected work and the restricted act. They are different. The protected work, the broadcast, is the transmission of visual images, sounds and other information for reception by or presentation to members of the public. The restricted act is the communication to the public by electronic transmission of all of those images, sounds and other information.

Kitchin J emphasized that the definition in section 20(2) would encompass all acts (apart from the two specific examples provided therein, namely 'broadcasting' and 'making available') which constitute a 'communication to the public' of the work by electronic transmission. The fact that the defendant's transmissions were not 'broadcasts' as traditionally understood (ie 'one to many') was not at all fatal to the plaintiffs' claim, which Kitchin J considered had a real prospect of success.

The dispute between the commercial broadcasters and TV Catchup was eventually heard before Floyd J in the English High Court in *ITV Broadcasting Ltd v TV Catchup Ltd*.⁴⁹ Basically, the TV Catchup system operated as follows:

- users created an account with log-in details—they could only obtain access to content which they were already legally entitled to watch in the UK by virtue of their TV licence;
- the service was funded by advertising;
- the service captured the normal terrestrial and satellite broadcast signals transmitted by the plaintiffs via a single domestic TV aerial and a single satellite dish;
- these signals were then converted by software in the defendant's servers into a format that allowed video streams (containing a TV channel each) to be sent over the Internet;
- a TV channel was only streamed to a subscriber of the defendant's service when a request was received for that channel from the user in question—if there was no such request, there was no streaming involved. Also, a separate stream was created for each requesting user, ie an individual packet of data leaving the defendant's server was always addressed to an individual user (and not to a class of users); and
- at no stage during the process described above was the whole or any part of the video stream stored on any disk or other permanent storage medium—all processing took place in volatile memory.

One of the questions before the judge was whether the defendant's provision of an online 'live' streaming service amounted to an infringement of the plaintiffs' exclusive right of 'communication to the public' of their broadcasts and films pursuant to section 20(1)(c) of the UK CDPA 1988. The plaintiffs argued that whenever there was an intervention by a broadcasting organization other than the original one, there would be a 'communication to the public' because the re-transmitted signals targeted members of the public who were not the direct recipients of the original signals. In other words, the recipients of the re-transmitted signals got to enjoy the broadcast works only on account of the defendant's intervention as a re-broadcaster. In response, the defendant pleaded that they did not own or control the equipment on which the user chose to view the broadcast (ie the lack of control/volition argument) and that they were merely providing technical means which made it easier for users to receive what they could, in principle, receive by other means.

Although Floyd J ultimately referred several questions of law to the Court of Justice of the European Union (CJEU), his Lordship did arrive at a provisional view—that the defendant had indeed communicated the plaintiffs' broadcasts and films to the public. An important distinction had to be drawn between acts of third parties which were merely supportive of the copyright owner's exploitation of the underlying copyright works (eg providing technical means to ensure or improve reception in the catchment area of the TV broadcast) and those which were clearly independent exploitations of such works (especially for profit) and in competition with the copyright owner. In his Lordship's view, the latter conduct—as exemplified by the TV Catchup service—would fall foul of the copyright owner's exclusive right of 'communication to the public'.

Turning to the defendant's 'live' streaming of TV broadcasts to its subscribers on an individual, ad hoc basis, Floyd J was convinced that the *aggregate* of all these individual communications made by the defendant ought rightly to be regarded as communications to 'the public', rather than as a plurality of 'individual' and 'private' communications.⁵⁰ His Lordship opined that it was 'appropriate to look *cumulatively* at the communications in the present case, rather than regarding them as an aggregate of individual ones'.⁵¹ Further, in response to the defendant's reliance on the authority of the *RecordTV* decision of the Singapore CA (which held that the aggregate of private communications to each individual subscriber was not a communication to 'the public'), Floyd J was of the view thus:⁵²

To the extent that this conclusion [of mine] is inconsistent with one of the grounds for decision in *RecordTV*, I respectfully differ from it. Although the Singapore Court was applying a provision of Singapore law derived from the same international convention [i.e. Article 8 of the WIPO Copyright Treaty 1996], I find it difficult to reconcile the conclusion reached there with the reasoning in *Rafael Hoteles* ... and the obvious desire in the Directive to provide for a technologically neutral definition of communication to the public. It would be an unfortunate result if a point-to-multipoint communication were to be actionable but a number of point to point transmissions were not.

Be that as it may, his Lordship decided to seek guidance from the CJEU as to whether the online 'live' streaming service provided by the defendant in this case ('an organisation other than the original broadcaster') was in breach of the plaintiffs' right of 'communication to the public', notwithstanding that the defendant's 'server allows only a "one-to-one" connection for each subscriber whereby each individual subscriber establishes his or her own Internet connection to the server and every data packet sent by the server onto the Internet is addressed to only one individual subscriber'.⁵³ We shall discuss the CJEU's decision in the next section.

EU

The locus classicus in this regard under European law is the decision of the CJEU in *Sociedad General de Autores y Editores de España (SGAE) v Rafael Hoteles SL*,⁵⁴ where the Court famously enunciated that the right of ‘communication to the public’ in Article 3(1) of the EU Information Society Directive (2001/29) must be ‘interpreted broadly’ so as ‘to establish a high level of protection of ... authors’.⁵⁵ In *Rafael Hoteles*, the installation of TV sets in individual hotel rooms amounted to a ‘communication’ by the defendant (hotel proprietor) of copyright broadcast signals to ‘the public’, because such TV transmissions were ‘made by a broadcasting organisation other than the original one’ to ‘a public different from the public at which the original act of communication of the work [was] directed, that is, to a new public’.⁵⁶ In other words, it was decided that the transmission of TV signals to the occupants of individual hotel rooms was, in law, a communication to a ‘new public’, since the hotel had intervened—in full knowledge of the consequences of its action—to *give access* to the protected works to its customers (who were unrelated members of the public and not within the contemplation of the copyright owner at the time of the original broadcast).⁵⁷ The CJEU did, however, acknowledge that the mere provision of physical facilities (eg ‘companies specialising in the sale or hire of television sets’) does not ordinarily constitute a ‘communication to the public’ but it was clear that this exception did not apply on the facts of this case.⁵⁸ Crucially, the hotel’s distribution of broadcast signals by means of TV sets to its customers—albeit staying and receiving these signals in individual/separate hotel rooms—had the overall effect of granting them *access* to the copyright works in question,⁵⁹ thereby infringing the right of ‘communication to the public’.

We return to the *TV Catchup* case. In considering the various questions referred by Floyd J, the CJEU in *ITV Broadcasting Ltd v TVCatchup Ltd*⁶⁰ again reiterated that the ‘principal objective’ of the EU Information Society Directive (2001/29) was to ‘establish a high level of protection of authors’ and that the copyright owner’s exclusive right of ‘communication to the public’ must be ‘interpreted broadly’.⁶¹ As to whether there had been any ‘communication’ (within the meaning of Article 3(1) of Directive 2001/29) made by the defendant in the present case, the CJEU answered in the affirmative as the retransmission of the plaintiffs’ terrestrial TV broadcasts over the Internet via the defendant’s ‘live’ steaming service involved ‘a *specific technical means different* from that of the original communication’.⁶² The defendant, therefore, had to acquire *fresh or separate authorisation* for such retransmission from the copyright owners, notwithstanding that the defendant was merely providing its subscribers with an alternative mode of access to TV shows which they could, in any event, lawfully watch on their own TV sets at home.

Although the Court did acknowledge—based on its prior jurisprudence—that a mere technical means to ensure or improve reception of the original transmission in its catchment area does not constitute a ‘communication’,⁶³ this ‘mere technical means’ exception did not apply to the facts of this case because the defendant’s intervention involved ‘a transmission of the protected works at issue which [was] *different* from that of the broadcasting organisation concerned’ and was ‘*in no way* intended to maintain or improve the quality of the transmission by that other broadcasting organisation’.⁶⁴

Turning then to the next question as to whether the defendant’s ‘communication’ in the instant case was to ‘the public’, the CJEU made the following important observations:

- The term ‘public’ refers to an ‘indeterminate number of potential recipients’ and implies a ‘fairly large number of persons’;⁶⁵
- The *cumulative effect* of making the works available to potential recipients should be taken into account—in particular, it is relevant to ascertain *the number of persons who have access to the same work* at the same time and successively;⁶⁶ and

- It is *irrelevant* whether the potential recipients access the copyright works through a ‘one-to-one connection’ as this technique (or technical form) ‘does not prevent a large number of persons having access to the same work at the same time’.⁶⁷

In the context of the ‘live’ streaming of TV programmes on the Internet, the defendant’s retransmission of the plaintiffs’ copyright works was clearly aimed at an indeterminate (and a fairly large) number of subscribers—collectively unrelated—who could all access the same TV programmes at the same time.⁶⁸ As such, the Court held that the plaintiffs’ copyright works had indeed been communicated by the defendant to ‘the public’.

It is submitted that the interpretation adopted by the CJEU in relation to the right of ‘communication to the public’ is unassailable. Indeed, the Court was astute not to allow *form* (or technicalities) to trump the true *substance* of the communication (or retransmission in this case). Crucially, the Court emphasized that it is the *cumulative effect of making the (same) work available* to potential recipients that ultimately matters, and *not* how (or in what form) each individual recipient had obtained access to the copyright work in question. In this regard, the authors suggest that the *RecordTV* decision should be re-considered in light of the CJEU’s decision and reasoning in this case.

Canada

It comes as no surprise to the authors that the Canadian perspective on this issue is not at all dissimilar. Indeed, in the seminal, decade-old decision of the Canadian Supreme Court in *CCH Canadian Ltd v Law Society of Upper Canada*,⁶⁹ McLachlin CJ remarked, in *obiter dicta*, that:

[although] [t]he fax transmission of a single copy to a single individual is not a communication to the public ... , a series of **repeated** fax transmissions of the **same work** to numerous **different recipients** might constitute communication to the public in infringement of copyright.⁷⁰

More recently, the apex court in Canada again had the opportunity to consider the ambit of the copyright owner’s exclusive right of ‘communication to the public’ in *Rogers Communications Inc v Society of Composers, Authors and Music Publishers of Canada*.⁷¹ The defendant (Rogers Communications) offered an online music service which provided users with catalogues of digital audio files. A user could select a song or an album and then stream the digital audio file containing the musical work to his computer and/or mobile phone (ie on-demand streaming of copyright works). The plaintiff, the Society of Composers, Authors and Music Publishers of Canada (SOCAN), is a collective society which files proposed tariffs with the Canadian Copyright Board and collects royalties on behalf of its members. One question which the Canadian Supreme Court had to answer, which is relevant to our analysis, was whether the defendant’s online streaming of audio files—which had been initiated at the request of individual users, thereby constituting individual or point-to-point transmissions—amounted to a communication to ‘the public’ of the musical works contained therein in breach of section 3(1)(f) of the Canadian Copyright Act 1985 (c C-42).⁷² In other words, is a point-to-point transmission effected at the request of multiple individual users/recipients a ‘private’ communication or a communication to ‘the public’?

The nine-member Supreme Court unanimously found in favour of the plaintiff on the issue of ‘communication to the public by telecommunication’. In delivering the judgment of the Court, Rothstein J reasoned that the dispute/debate over the interpretation of the phrase ‘to the public’ is largely ‘based on perspective’—that is to say, whilst the defendant argues that it is the *recipient of each transmission* who matters in the final analysis, the plaintiff’s argument instead focuses on the *sender’s activities* in

communicating the copyright work(s) in question.⁷³ It was felt, however, that the defendant's perspective/proposition was 'untenable' for the following reasons:

Such a rule would produce arbitrary results. For example, where a copyright-protected work is sent to 100 randomly selected members of the general public by way of a single e-mail with multiple recipients, on the [defendant's] approach, this would constitute a communication 'to the public'. However, under the same approach, the sender could avoid infringing copyright simply by executing the same task through sending separate e-mails to each of the 100 recipients. If *the nature of the activity in both cases is the same*, albeit accomplished through *different technical means*, there is *no justification* for distinguishing between the two for copyright purposes.⁷⁴

Indeed, his Honour took pains to point out—just like the CJEU in the *TV Catchup* case—that form (or technicalities) should never be allowed to trump the true substance of the communication in question:

Focusing on each individual transmission loses sight of the *true character* of the communication activity in question and makes copyright protection dependent on *technicalities* of the alleged infringer's chosen method of operation. Such an approach does not allow for principled copyright protection. Instead, it is necessary to consider the *broader* context to determine whether a given point-to-point transmission engages the exclusive right to communicate to the public. This is the only way to ensure that *form does not prevail over substance*.⁷⁵

Rothstein J further clarified that the language of section 3(1)(f) of the Canadian Copyright Act 1985 did not limit a 'communication' to a purely non-interactive context and would certainly encompass interactive or on-demand point-to-point communications which have been initiated at the request of individual users/recipients. More importantly, his Honour emphasized that such a 'broad' interpretation of section 3(1)(f) was 'not out of step with Article 8 of the [WIPO Copyright Treaty 1996] and international thinking on the issue'.⁷⁶

Since the defendant's online music service entailed the indiscriminate streaming of musical works to any requesting member of the public with Internet access (and not just to 'members of a narrow group, such as a family or a circle of friends'),⁷⁷ it was apparent that the defendant had, without permission, communicated the relevant copyright works to 'the public' by telecommunication. His Honour once again reiterated that:

[Where] a *series* of point-to-point communications of the *same work* to an *aggregation of individuals* is found to exist, it *matters little* for the purposes of copyright protection whether the members of the public receive the communication in the same or in different places, at the same or at different times or at their own or the sender's initiative.⁷⁸

Interestingly, the defendant had also sought to rely on the authority of *Cartoon Network*,⁷⁹ a decision of the US Court of Appeals for the Second Circuit (discussed earlier). The court in *Cartoon Network* had taken the view that the potential audience of *each* point-to-point transmission must be considered in isolation to determine whether a given transmission was to 'the public'. Rothstein J was, however, quick to dismiss this US authority on the basis that the statutory wording in the USA (specifically, the 'Transmit Clause' in American copyright legislation) was vastly different from that in Canada.

Copyright Owner's Exclusive Right of 'Public Performance' by 'Transmission'

It was inevitable that the series of litigation in other parts of the world relating to online recording and distribution/re-transmission devices and services would eventually reach the USSC in the form of the

Aereo decision.⁸⁰ As we canvassed earlier, similar services offered by Wizzgo (in France),⁸¹ TV Catchup (in the UK),⁸² Singtel Optus' TV Now (in Australia)⁸³ and RecordTV (in Singapore)⁸⁴—as well as Save.tv⁸⁵ and Shift.tv⁸⁶—were all subject to legal challenges from the media/broadcast industry that, in some cases, went up to the highest courts. Even in the USA, cases involving similar types of technology, including Cablevision, ivi TV, FilmOn and Aereo,⁸⁷ had been decided earlier in the lower courts. One of the exclusive rights under US copyright law that is arguably the analogue to the 'communication to the public' right examined earlier in this article is the right of the copyright owner to 'perform the copyrighted work publicly'.⁸⁸ According to the definition in the statute (ie the 'Transmit Clause'), to perform a work 'publicly' includes:

to transmit or otherwise communicate a performance ... of the work ... to the public, by means of any device or process, whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times.⁸⁹

We shall now examine the latest line of cases in the USA to show how the trend continues to favour a reading of the exclusive right that is against the unauthorized use of such technology.

USA—the *Aereo* Decisions

Aereo charged US\$8 a month for its subscribers to pull broadcasting signals using its system of remotely-located small antennae and to stream real-time 'live' TV on their devices almost contemporaneously (the 'live' option). Aereo also allowed consumers to record the programmes for viewing at a later time (the 'time-shifting' option). Its system automatically assigns an individualized set of antenna and transcoder to each individual subscriber, thereby producing a personal and unique copy of the TV programme for the requesting consumer on a remote server that can be played back by that consumer only. In carrying out the operations of its service, Aereo neither paid statutory or negotiated licence fees nor compensated copyright owners in any way for the re-transmission of their content. The TV signals came from major broadcast networks (including Fox Broadcasting Company, CBS Broadcasting and National Broadcasting Company), which viewed Aereo's business model as infringing their exclusive rights as copyright owners to, *inter alia*, 'publicly perform' their works.⁹⁰ On the other hand, Aereo sought to argue that it was merely operating in accordance with the law: that its act of re-transmitting free-to-air content to consumers online did not constitute a 'public performance'.

The Second Circuit decision

Prior to the USSC decision, the US Court of Appeals for the Second Circuit (by a majority of 2:1) in *WNET, Thirteen v Aereo, Inc*⁹¹ had reached the opposite conclusion to find that the transmissions effected by Aereo's system to individual subscribers were not 'public performances'. The Second Circuit relied on its own prior decision in *Cartoon Network*⁹² to hold, *inter alia*, that because these on-demand transmissions were made from personalized copies that were delivered to subscribers on a one-to-one basis, these transmissions/communications were not to 'the public'.

The technology at issue in *Cartoon Network* related to Cablevision's Remote-Storage Digital Video Recorder ('RS-DVR'), which is somewhat similar to a traditional DVR. The RS-DVR system splits the data stream into two. One of these two streams is sent via coaxial cable to consumers in the style of a traditional 'live' broadcast. The other stream goes through a broadband media router to be buffered and reformatted and later sent to the 'Arroyo Server' to be stored for the one subscriber who had requested the programme. RS-DVR technology therefore allows consumers to use their cable set-top box to perform essentially the same functions as a stand-alone DVR, such that every copy made by the system existed only for one consumer.

The Second Circuit held, on these facts, that the creation and subsequent transmission of individualized/unique copies were relevant to the inquiry of whether a ‘public performance’ had taken place, and where limitations were placed on the potential audience of a *particular transmission* of a performance, the playbacks on the RS-DVR did *not* constitute ‘public’ performances.⁹³ In other words, if the potential audience of any particular transmission of a TV programme was only ‘one’, then the transmission in question would be considered ‘private’.

Aereo similarly argued that its technology merely enabled its subscribers to view individualized copies of TV programmes ‘privately’. The Second Circuit, following its own reasoning and interpretation of the ‘Transmit Clause’ in *Cartoon Network*, affirmed the lower court’s decision⁹⁴ and held (2:1) that the broadcasters’ exclusive right to ‘perform the copyrighted work(s) publicly’ had not been infringed by Aereo.⁹⁵ Because Aereo’s system was found to be materially indistinguishable from the RS-DVR system in *Cartoon Network*, the earlier decision was therefore binding on the Second Circuit in *Aereo*.

Dissenting judge Denny Chin, however, disagreed with the majority, arguing that Aereo’s individualized system—which he labelled ‘a sham’ and ‘a Rube Goldberg-like contrivance’⁹⁶—was devised ‘to avoid the reach of the Copyright Act’ and with the intention of taking ‘advantage of a perceived loophole in the law’.⁹⁷ His Honour opined that Aereo’s system fell squarely within the plain language of the ‘Transmit Clause’ and that ‘what Aereo [was] doing [was] not in any sense “private”’.⁹⁸ In other words, Aereo was clearly engaging in ‘public’ performances.⁹⁹

Judge Chin was, in our view, also correct in his analysis that the ‘Transmit Clause’ ought to be interpreted broadly, in line with legislative history and Congressional intent.¹⁰⁰ Above all, we respectfully agree with his Honour’s view that ‘form’ should never be allowed to prevail over ‘substance’¹⁰¹ and that the majority’s decision in this regard would provide ‘a blueprint for others to avoid the Copyright Act’s licensing regime altogether’.¹⁰²

The USSC decision

The appeal by the broadcasters was heard in the USSC in April 2014. Aereo had enjoyed several legal victories before various lower courts—including the Massachusetts District Court in *Hearst Stations Inc v Aereo, Inc* (*‘Hearst’*)¹⁰³—but later lost in Utah. There, Aereo had sought to rely on the Second Circuit’s decision in *Aereo* as well as the *Hearst* decision (which were not binding on the District Court in Utah), but Judge Kimball nevertheless granted an injunction in favour of the broadcasters.¹⁰⁴

Before the USSC, Aereo argued that it was merely providing a platform or facility that allowed its subscribers to access their own unique copies of free-to-air TV programmes, which were already available to them in any event. The broadcasters, on the other hand, argued that Aereo operated in a manner similar to cable-TV companies, which are statutorily required to pay fees for re-transmission. During oral argument, one of the primary concerns raised by the Supreme Court bench was how their decision in *Aereo* would impact other technologies that might be implicated under a broadened definition of ‘public performance’, such as cloud technology. The broadcasters had argued that the ‘Transmit Clause’ in the US Copyright Act 1976 ought to be interpreted expansively, whereas the narrower construction of re-transmission rights advanced by Aereo could well provide a precedent for other technology companies to work around having to pay re-transmission fees to TV companies, thereby undermining the statutory protection accorded to these copyright owners.

In a 6:3 decision in favour of the broadcasters, the USSC reversed the ruling of the Second Circuit. The majority took the view that Aereo was not simply an equipment provider, likened the activities of Aereo to those of cable-TV companies and concluded that Aereo (and not just its subscribers) had clearly

‘performed’. Despite the technological differences in the way content was delivered by Aereo and by traditional cable-TV companies to their respective viewers, the Court opined that these differences were not sufficient to change the outcome,¹⁰⁵ particularly given Aereo’s ‘overwhelming likeness’ to these cable-TV companies.¹⁰⁶

As Justice Breyer observed, in delivering the majority’s judgment, ‘Aereo’s activities are substantially similar to those of the CATV [i.e. community antenna TV] companies that Congress amended the [Copyright] Act to reach’.¹⁰⁷ His Honour further explained that:

Aereo’s equipment may serve a ‘viewer function’; it may enhance the viewer’s ability to receive a broadcaster’s programs. It may even emulate equipment a viewer could use at home. But the same was true of the equipment that was before the Court, and ultimately before Congress, in *Fortnightly* and *Teleprompter*.¹⁰⁸

Those were earlier USSC decisions involving CATV companies,¹⁰⁹ which were explicitly overturned by Congress through amendments to the US Copyright Act in 1976 so as to include cable-TV systems within the scope of the Act.¹¹⁰

As to the second issue of whether Aereo had performed the relevant copyright works ‘publicly’ within the meaning of the ‘Transmit Clause’, the majority rejected Aereo’s argument that because it used individual antennae to transmit programmes to individual subscribers upon their command and these transmissions were only capable of being received on a one-to-one basis, it had transmitted ‘privately’ and not ‘publicly’.

Again, the majority—in giving effect to Congressional intent—was of the view that such technological attributes (and differences) were immaterial as they do not, in *substance*, distinguish Aereo’s system from other cable-TV systems (which clearly perform ‘publicly’). A finding otherwise would indeed have encouraged other cable-TV companies to re-align their operations to fit Aereo’s model so as to avoid paying licensing and re-transmission fees. Furthermore, the text of the ‘Transmit Clause’¹¹¹ actually suggests that the Copyright Act was meant to target any entity that transmitted a performance through ‘multiple, discrete transmissions’, so long as the performance was of the same work.¹¹² It was also apparent that Aereo’s subscribers constitute ‘the public’ as Aereo’s re-transmissions were to a large number of unrelated people (outside of a family and its social circle), all unknown to one another.¹¹³ It therefore appears that the majority, in its analysis, was mindful not to allow *form* or *technicalities* to trump the true *substance* of each transmission made by Aereo to its subscribers on a purportedly ‘individual’ basis. We respectfully agree with the majority’s approach, which we submit is in line with the reasoning adopted by the CJEU and the English courts in the *TV Catchup* decisions (discussed above).

USA—Summary

In summary, the authors are of the opinion that despite the uncomfortable comparisons of Aereo to cable-TV systems (due to the technological differences mentioned above), the USSC was correct in reversing the Second Circuit and taking a broad reading of the ‘Transmit Clause’ as being necessary to meet Congressional intent. Further, by not allowing ‘form’ (the technological manner in which Aereo provides its service) to prevail over ‘substance’ (the true nature of Aereo’s activities), the Court’s approach would better enable the USA to discharge her international obligations to protect—more effectively—the exclusive rights of ‘communication’ (and, in particular, ‘making available’) to ‘the public’ as prescribed under the WIPO Internet treaties.¹¹⁴ As the authors have argued above and as recent case law in several leading jurisdictions suggest, the aggregation of ‘multiple, discrete transmissions’ occurring on a substantial scale can and should constitute ‘public performances’ in the USA.

It should be noted that Justice Breyer was cautious in confining the Court's decision to the facts of that particular case, stating that it does not prejudge the legality of digital lockers and other new technologies (such as cloud computing). In fact, his Honour stressed that the majority's ruling should not endanger or discourage the development of other forms of technology. Although this is only *opinio juris* (provided that the same Justices sit to hear the issue when it next comes before the USSC), the caution expressed will probably translate to judicial hesitancy to rule against these other forms of technology.

Also, the outcome of this case does not mean that the technology in question (ie Internet streaming) cannot be developed further or that Aereo cannot find a way to continue its business, although this may require them to re-negotiate their role with the broadcast industry, pay re-transmission fees or provide some other form of benefit to the industry players in return for the licence to re-distribute their content. Concomitantly, the experience could well be an impetus for the TV industry—in line with developments in the music industry—to redefine and update their business models to embrace new forms of distribution technology. In Singapore, for example, because of the incursion of RecordTV (the provider of new technology) into what it viewed as its 'turf', MediaCorp (the broadcaster) also created and 'upgraded' its online platform (Xin MSN) to stream and re-distribute its own content in a manner similar to RecordTV but on its own terms. The TV Everywhere initiative in the USA is another example, albeit with more expensive subscriptions by users to multichannel video programming distributors (MVPDs), consisting of the more traditional cable companies, satellite providers and telcos. Hulu (jointly owned by major broadcast networks), Netflix and Amazon (online services with content deals with networks) all operate likewise, although they are not 'live' TV. In short, it appears that the 'cord-cutting' trend is likely to continue. We shall examine, in greater detail, these alternative business models in the Section 'Possible legal exceptions or exemptions and alternative business models' of this article.

POSSIBLE LEGAL EXCEPTIONS OR EXEMPTIONS AND ALTERNATIVE BUSINESS MODELS

The preponderance of case authorities (emanating from the apex court of numerous leading jurisdictions) which have interpreted the right of 'communication to the public'—as well as the right of 'public performance' in the USA—suggest that the *Cartoon Network* and *RecordTV* decisions are no longer defensible and ought to be re-considered at the earliest opportunity.

However, there were good policy reasons behind those decisions; in particular, the importance of accommodating new technologies to avoid the chilling of future technological innovation and new business models for the wider reach and commercial exploitation of copyrighted materials. The courts in *Cartoon Network* and *RecordTV* must have taken cognisance of the path set by the *Sony Betamax* case¹¹⁵ that paved the way for the development of modern recording and distribution technologies and their associated benefits—not least of which is remote, quick, easy and convenient access, anytime and anywhere, to audiovisual works. The socio-cultural benefits of iDVR services and their time-shifting (and space-shifting) functions were also palpable from the courts' opinion. For example, the Singapore CA in *RecordTV* was particularly persuaded by the 'tangible benefits' of a 'more convenient and user-friendly' online time-shifting service (which was described as a 'significant technological improvement').¹¹⁶ However, despite the justifications for the outcome in those cases, the legal approach taken by the courts is, in our view, not defensible given the inescapable premise that direct or primary copyright infringement is a strict liability tort, where liability is made out once an alleged infringer is shown to have performed any act that falls within the scope of the copyright owner's exclusive rights.¹¹⁷

The authors posit that there are, possibly, two alternative (or perhaps complementary) approaches to this issue. First, an *open-ended* fair use/dealing provision can be interpreted to legitimize such technology, although this requires statutory amendments in jurisdictions that do not have such a provision and judicial

activism in the application of the doctrine.¹¹⁸ Alternatively, and perhaps also more realistically and providing greater certainty, a *specific* fair use/dealing exception or statutory safe harbour can be considered to more narrowly exempt such technology from primary copyright liability in a way that strikes a fair compromise for both copyright owners and technology providers. Second, rather than tweak the technological functions to exploit an apparent legal ‘loophole’ (which has since proven to be a risky and largely unsuccessful strategy), technology companies should themselves embrace *alternative business models* that would help keep them afloat or even allow them to thrive. There are some real examples of how this might work, which will be elucidated below.

Utilizing statutory exceptions and safe harbours—rather than for the courts to purposively re-interpret the meaning and scope of the exclusive rights provisions to determine liability—would have several benefits, and also obviate the problems that can potentially be caused by the latter approach. The former approach allows for open endorsement of public policy influences in a court’s decision, particularly as regards the fairness analysis in the context of the open-ended (and more flexible) fair use/dealing defence. For example, the CA decision in *RecordTV* was heavily influenced by policy considerations, which were to prevent the chilling of future technological innovation and the suppression of markets for copyright-exploiting devices/services.¹¹⁹ On the other hand, introducing specific function-based exemptions or purpose-based exceptions would allow for a more measured and gradual approach to carving out exclusions from the reach of copyright’s exclusive rights so as to accommodate other competing interests. Such an approach will also avoid the various uncertainties posed to other forms of new technology, which was a major concern raised in reactions to the *Aereo* decision.¹²⁰

Statutory exceptions or exemptions

General fair use/dealing exception

Even though, for the reasons given above, primary copyright liability does not provide sufficient leeway for public interest considerations to be taken into account, they may well be relevant in a court’s assessment of possible statutory *defences*. This, in our view, represents a more appropriate and defensible doctrinal route for the consideration of policy.

The option of interpreting the fair use/dealing exception to legitimize the technological functions of remote recording and distribution devices and/or services is only open to countries that have an open-ended fair use/dealing provision, such as the USA and Singapore. In most other jurisdictions (such as the UK, Canada and Australia), the copyright fair dealing exceptions must meet certain specified or listed purposes, thereby narrowing the scope and flexibility of these provisions considerably.¹²¹

Perhaps *Aereo*’s lawyers did not see the need to raise the defence of fair use as they were minded to structure their arguments on the basis of non-infringement (ie that *Aereo*’s activities did not constitute ‘public performances’ at all). But even if that were the case, they could still have advanced alternative arguments to the effect that *even if there were to be infringement*, the fair use defence could arguably have *absolved Aereo from liability*.¹²² Some scholars have observed that:

Courts have consistently followed *Sony*’s fair use holding, protecting consumers’ rights to store and review copyrighted works to which they have obtained lawful access ... To the extent that *Aereo*’s system provides the same functionality to consumers, they should enjoy the same fair use privilege to use it.¹²³

Unfortunately though, Justice Breyer in his majority opinion only briefly stated, without further elucidation, that ‘the doctrine of “fair use” can help to prevent inappropriate or inequitable applications of the [Transmit] Clause’.¹²⁴

Specific fair use/dealing exception or statutory safe harbour exemption

In his dissenting opinion in the *Aereo* case, Justice Scalia observed thus:¹²⁵

It is not the role of this Court to identify and plug loopholes. It is the role of good lawyers to identify and exploit them, and the role of Congress to eliminate them if it wishes. Congress can do that, I may add, in a much more targeted, better informed, and less disruptive fashion than the crude ‘looks-like-cable-TV’ solution the Court invents today.

Just as the legislature can be motivated by public policy reasons to sanction the technology in *Aereo*, it too can be motivated by equally, if not more, compelling reasons to provide for statutory fair use/dealing exceptions (both open-ended and purpose-specific) or safe harbour exemptions to condone the future development of new technologies.

Specific fair use/dealing exception

There is nothing to stop the legislature from creating a specific fair use/dealing exception for online recording (time-shifting) and distribution (streaming) services offered by third parties. The fair use doctrine has, as its primary focus, society as a whole and the individual user of copyrighted material in particular. Existing provisions currently provide for that benefit through, *inter alia*, permitting the facilitative functions of third party service providers and information products (such as libraries, educational institutions and in relation to the provision of reading aids for the physically and intellectually handicapped) as well as the backing up of computer programs. Attempts have also been made in some countries to modernize the exceptions/exemptions in their copyright legislation to accommodate access to and use of online time-shifting (albeit confined to individual users only).

Notably, the Canadian Copyright Modernization Act¹²⁶ introduced new exceptions for user-generated content (UGC) created using copyrighted works¹²⁷ as well as expanded the scope of the fair dealing exception to include education, satire and parody (which are common in UGC).¹²⁸ More noteworthy and of particular relevance to the thesis of this article are the exceptions for reproduction for private purposes (applicable to individuals),¹²⁹ time- and format-shifting by individuals¹³⁰ as well as the making of backup copies of copyrighted works without digital locks.¹³¹ It is interesting to note that there is an exception (amongst others) in the Singapore Copyright Act 1987 for an ‘exempt recording’ of a performance by a person for ‘private and domestic use’.¹³² Arguably, the sale of devices and the offer of services that facilitate such ‘private and domestic’ activities should similarly be protected from any possible liability arising. Further, if ‘private and domestic’ copying is to be treated as a ‘user’s right’, then in order to facilitate such rights (which would include a user’s time-shifting activities), the case can be made for enacting specific statutory exceptions for recording technologies to exempt them from copyright liability.¹³³ Just as anti-circumvention provisions in copyright law complement a copyright owner’s use of digital rights management to protect his IP rights in the online environment, the same argument can be made for the protection of new technologies that can further a ‘user’s right’ to private viewing, time-shifting and space-shifting.

It should be noted that the USSC in *Aereo* did not specifically address the time-shifting function offered by *Aereo*’s system, but only its ‘live’ (or close to ‘live’) function. It is possible that the majority’s interpretation of the ‘public performance’ right might not extend to time-shifting.¹³⁴ Nevertheless, for the sake of certainty, it is preferable for Congress to provide a clear and unambiguous exception to cover this particular function if it so chooses.

Statutory safe harbour exemption

In relation to safe harbours that are tailor made for third parties facilitating access to electronic copies of materials online, many countries have already updated their copyright laws to incorporate such provisions. For example, the US Digital Millennium Copyright Act 1998 (with similar amendments made to the Singapore Copyright Act 1987) provides safe harbour—under certain circumstances—to Internet intermediaries in respect of their functions (such as transmitting, routing and providing connections, allowing for system caching, as well as providing facilities for the storage of information and for hyperlinking).¹³⁵

Likewise, a statutory safe harbour can be enacted to provide some limited (but targeted) relief for certain categories of time-shifting and streaming technology and their functions, with built-in pre-requisites or eligibility requirements (such as no financial benefit accruing¹³⁶ and no control over users' activities) and/or conditions (eg instating a notice and take down procedure).

The potentially adverse effects of the *Aereo* decision on cloud computing technology and cloud storage facilities have been noted by many commentators and even by the USSC itself:¹³⁷

... Congress, while intending the Transmit Clause to apply broadly to cable companies and their equivalents, did not intend to discourage or to control the emergence or use of different kinds of technologies. ... [q]uestions involving cloud computing, [remote storage] DVRs, and other novel issues not before the Court, as to which 'Congress has not plainly marked [the] course,' should await a case in which they are squarely presented.¹³⁸

Given the general unease and uncertainty post *Aereo*, we would argue that a strong case can be made for a clearly worded statutory exception or exemption that would apply to these other forms of new technology as well.

Alternative business models

Despite these problems, the legal repercussions on new technologies may well be overstated, given the widespread availability of streaming technology that has supplemented the cable-TV business model well before the *Aereo* decision. For example, Hulu, Netflix and Slingbox are some alternative models available on the market (albeit more costly to consumers) that offer the delivery of broadcast programmes—through streaming technology and outside of the traditional TV sets and physical DVR set-top boxes—to consumers' devices for their convenience.

Some alternative business models that companies like Aereo can possibly adopt include:

Make a case for compulsory licensing

Aereo can perhaps build on the USSC's assessment that it bears an 'overwhelming likeness' to a cable company by arguing that it is indeed one and to compel broadcast companies to license their programmes and content under the retransmission consent rules of the US Copyright Act 1976.¹³⁹ This will provide consumers with a greater variety of channel packages and bundles at more competitive prices, ultimately benefiting them. However, the chances of such a possibility remain uncertain (and arguably unlikely) as it has been reported that Aereo's erstwhile attempts to be considered a cable company failed at the US Copyright Office and in the US Court of Appeals for the Second Circuit.¹⁴⁰ The only glimmer of hope is in amending the law and changing the Federal Communications Commission (FCC) rules to accommodate online TV services like Aereo.¹⁴¹

Voluntary licensing and other partnership arrangements with broadcast companies

In our view, voluntary licensing and entering into other partnership arrangements would still be the best option. Hulu and Netflix, despite inheriting some of the existing ‘problems’ of broadcast companies, are examples of licensing or joint venture arrangements that work within the copyright regime (rather than against it). Both provide on-demand video streaming services through their respective websites. Netflix is an independent company that streams TV content mostly originating from production companies it is not affiliated to (ie third parties). Audiences have to create an account and pay a subscription fee according to their subscription plan to be able to view Netflix’s content. In contrast, Hulu is a joint venture established by Comcast, Fox and Walt Disney. It is essentially an alternative distribution channel for the copyright works of these production companies and mainly offers content from its partners. Audiences can access Hulu’s content on its website without signing up for an account or paying subscription. Indeed, the Spotify model for free or paid music streaming may also be explored as an alternative business model to pursue, provided that the royalty distribution scheme is viable and can appeal to the broadcast companies. Unfortunately, Spotify—which distributes royalties according to the popularity of songs (as determined by the volume of streams per month)—has itself faced criticism over the fairness of its business model to artistes and their financial backers.¹⁴² As such, its viability as an alternative form of music distribution in the long run remains uncertain, even as the company faces more competition in the market for online music libraries.

An exception for the time- and space-shifting functions

As highlighted above, the *Aereo* decision was specifically confined to Aereo’s (almost) ‘live’ re-transmission function. As such, technologies that provide for a reasonable time lag between the original broadcast and the re-transmission at the user’s initiation are strictly not prohibited from doing so by that decision. Moreover, the open-ended fair use/dealing exception (if and where available) would, arguably, already provide a viable defence for such technology unless and until there is a specific statutory exception for time-shifting (as is the case in Canada).¹⁴³ Another technological function around which business models can be built and that can survive the series of decisions against Aereo (and similar systems) is space/place-shifting—presently offered by products such as Slingbox—which provides for the private re-transmittal of programmes across different devices. This service is now also offered by Dish’s ‘Hopper with Sling’, TiVo and others.

Broadcast industry diversification

On the flipside, many broadcast companies and networks have already moved towards offering content through their own websites to compete with these new technologies—for example, by developing, buying or licensing similar forms of technology.¹⁴⁴ The broadcast industry can adopt the same forms of technology to offer such services to their users so as to directly compete with other independent technology providers (like Aereo). Some TV companies and cable networks have already set up websites offering consumers some of their programmes for free streaming (but only after the original air dates for the programmes) and via video on-demand services (including ‘live’ events). As noted, Hulu and Xfinity are examples where the respective copyright owners are personally and actively involved in harnessing technology—rather than fighting against it—to compete for viewership.

CONCLUSION

We conclude with several observations. First, more than one exclusive right under the copyright regime can be implicated (depending on the jurisdiction involved) when the development and provision of modern communications technology (including streaming and time-shifting technology)—whether as products or services—is involved.

Second, although the *TV Catchup* and *Aereo* decisions only concerned liability issues arising from streaming technology (with the majority of the USSC in the latter case confining its decision to the specific facts before the tribunal), the authors respectfully submit, in line with our arguments above, that the Second Circuit’s decision in *Cartoon Network* and the Singapore CA’s decision in *RecordTV*—both of which involved time-shifting technology—must now be re-considered in light of the preponderance of recent case authorities (many emanating from the apex court of leading jurisdictions) and academic commentary. It appears that courts are less likely to accept the legality of new technologies that attempt to exploit loopholes in the law, particularly those that take the form of a ‘Rube Goldberg-like’ contraption. Instead, the judicial trend is to go down the ‘result-driven’ path and, in not allowing technological ‘form’ to trump the true ‘substance’ of the transmission/communication in question, interpret the relevant exclusive rights provision(s) expansively in favour of copyright owners. As some academics have advised, technological design should never determine legal outcome,¹⁴⁵ although it has also been urged that the law should provide for greater certainty and guidelines on what can and cannot be developed by technology companies so as to avoid unnecessary loss of investment, time and resources.

Third, the present judicial sentiment towards streaming (and to a lesser extent, time-shifting) technology has certainly not sounded the death knell for *Aereo* (and similar technology providers). It simply means that these technology companies should seek out alternative business models that are legally compliant and financially viable, many of which are actually available on the market.

Fourth, it may be timely for the legislature to embark on a careful study of the various issues at hand, considering, in particular, public policy interests as well as reassessing the objectives of the copyright system vis-à-vis new storage and distribution technologies in the digital environment. In delineating the rights of (and finding the right balance between) copyright owners and technology providers/users, it may be necessary to introduce legislative amendments to provide for open-ended or specific exceptions and/or safe harbours to condone the future development of such technologies.

Fifth, despite the outcomes reached in the cases discussed in this article (which should, in theory, be confined to the specific forms of technology implicated, save for the second observation we made above), the verdict is still out on the legality of other forms of online storage and distribution technology—not yet considered in case law—that provide a different type of service to consumers, such as cloud computing and cloud storage facilities.¹⁴⁶ Again, for the sake of certainty, the legislature should perhaps pre-empt what are foreseeable disputes, and a confused treatment by the courts, by amending the law to set out the rules to accommodate (or, in rare cases and with good reason, prohibit) such technology.

Aereo may be the latest in the line of cases dealing with streaming and/or time-shifting technology, but it will certainly not be the last word on the subject. It remains to be seen how other forms of new technology will fare when such cases come before the courts in future. In the meantime, *sans* statutory intervention, it appears that the future of Internet streaming (and arguably, to a lesser extent, time-shifting) of public broadcast material looks bleak if the prior consent of the relevant copyright owner(s) has not been sought. Technology providers are better off making alternative business plans to ensure their continued survival in an increasingly hostile global legal environment.¹⁴⁷

Notes

1 464 US 417 (1984).

2 239 F 3d 1004 (9th Cir 2001).

3 545 US 913 (2005).

4 134 S Ct 2498 (2014); 573 US ____ (2014).

5 [2011] 1 SLR 830.

6 See ss 26(1) and 15(1) of the Singapore Copyright Act 1987.

7 Section 84(1)(a) of the Singapore Copyright Act 1987.

8 Section 83(a) of the Singapore Copyright Act 1987.

9 [2011] 1 SLR 830.

10 536 F 3d 121 (2d Cir 2008).

11 The argument goes that because the user of the VCR—and not its manufacturer—supplies the necessary element of volition (ie the ‘last volitional act’) in the recording process (of making copies of TV programmes for later viewing), so it must be the case also for the user of the online recording service (a virtual VCR) which *automatically* makes copies on the request/command of the user.

12 Saw Cheng Lim and Warren B Chik, ‘Where Copyright Law and Technology Once Again Cross Paths – The Continuing Saga: *RecordTV Pte Ltd v MediaCorp TV Singapore Pte Ltd* [2011] 1 SLR 830’ (2011)

23 Singapore Academy of Law Journal 653.

13 As VK Rajah JA (on behalf of the Court) himself acknowledged: ‘[T]he vendor of the traditional DVR/VCR is unable to control the use of the DVR/VCR as a recording machine once it has been sold to the user, whereas the iDVR provider may stop the recording service as and when it wishes’ (*RecordTV Pte Ltd v MediaCorp TV Singapore Pte Ltd* (‘*RecordTV*’) [2011] 1 SLR 830 at [21]). The appropriateness of this analogy as well as the broader reasoning in *Cartoon Network LP, LLLP v CSC Holdings Inc* (‘*Cartoon Network*’) 536 F 3d 121 (2d Cir 2008) have also been questioned in US copyright scholarship: see Jane C Ginsburg, ‘Recent Developments in US Copyright Law – Part II, Caselaw: Exclusive Rights on the Ebb?’ (2008) Columbia Public Law & Legal Theory Working Papers, Paper 08158 (especially at pp 15–18).

14 [2012] FCAFC 59; (2012) 201 FCR 147.

15 Per s 86(a) of the Australian Copyright Act 1968 (Cth): ‘For the purposes of this Act, unless the contrary intention appears, copyright, in relation to a cinematograph film, is the exclusive right ... to make a copy of the film ...’.

16 Per s 87 of the Australian Copyright Act 1968 (Cth): ‘For the purposes of this Act, unless the contrary intention appears, copyright, in relation to a television broadcast or sound broadcast, is the exclusive right:

- in the case of a television broadcast in so far as it consists of visual images – to make a cinematograph film of the broadcast, or a copy of such a film;
- in the case of a sound broadcast, or of a television broadcast in so far as it consists of sounds – to make a sound recording of the broadcast, or a copy of such a sound recording ...’.

17 *National Rugby League Investments Pty Ltd v Singtel Optus Pty Ltd* (‘*Optus*’) [2012] FCAFC 59; (2012) 201 FCR 147 at [4].

18 *ibid* at [54]. Indeed, as the court said, ‘[e]ven if Optus could properly be characterised as making the copy as agent, it would, nonetheless, “make the copy” and be jointly and severally liable with the subscriber for that making ...’.

19 *ibid* at [56].

20 *ibid* at [58].

21 The ‘last volitional act’ argument was found to be more pertinent in the context of US jurisprudence for helping to distinguish between direct/primary copyright liability and indirect/secondary copyright liability, doctrines which are of no direct relevance under Australian (and, indeed, UK and Singaporean) copyright law.

22 *Optus* [2012] FCAFC 59; (2012) 201 FCR 147 at [57].

23 *ibid* at [60], citing *Rokuraku II* (a decision of the First Petty Bench of the Japanese Supreme Court dated 20 January 2011). And, at [64]: ‘It equally is not apparent to us why a person who designs and operates a wholly automated copying system ought as of course not be treated as a ‘maker’ of an infringing copy where the system itself is configured designedly so as to respond to a third party command to make that copy ...’ Again, at [75]: ‘For s 101 purposes, [Optus] manifestly is involved directly in doing the act of copying. It counts as a maker of copies for the subscriber.’

24 *ibid* at [67].

25 *ibid*.

26 *Optus* [2012] FCAFC 59; (2012) 201 FCR 147 at [76].

27 *ibid* at [78].

28 Per s 111 of the Australian Copyright Act 1968 (Cth):

‘(1) This section applies if a person makes a cinematograph film or sound recording of broadcast solely for private and domestic use by watching or listening to the material broadcast at a time more convenient than the time when the broadcast is made.(2) The making of the film or recording does not infringe copyright in the broadcast or in any work or other subject-matter included in the broadcast ...’.

29 See n 23 above.

30 See n 12 above. See also the decision of the Paris Court of Appeals in *Wizzgo v Metropole Television et autres* (14 December 2011) which concluded that the automated, remote video recorder service (similar to Cablevision and RecordTV)—and not the end-user—was the ‘maker’ of the end-user’s individual/personal copy.

31 See, eg ss 26(1), 83(c), 84(1)(d) and 85(1)(d) of the Singapore Copyright Act 1987. See also art 16.4.2(a)-(b) of the USA–Singapore Free Trade Agreement.

32 See s 106(4) (to be read with s 101) of the US Copyright Act 1976 (17 USC).

33 See s 7(1) of the Singapore Copyright Act 1987.

34 ‘Push’ technologies generally involve an *active communicator* (such as an unlicensed re-broadcaster) who *transmits, distributes or disseminates* the copyright work to multiple *passive recipients*—in other words, the transmission of the copyright work is generally taken to be *initiated by the communicator* himself. Another indication that ‘push’ technologies generally entail an active communicator and passive recipients can be gleaned from the s 7(1) definition of the word ‘communicate’, which, as mentioned above, includes a general right to ‘*transmit by electronic means ... a work ... , whether or not it is sent in response to a request*’.

35 ‘Pull’ technologies, on the other hand, generally involve a *passive communicator* (such as a website operator) who ‘*makes available*’ (or *provides access to*) the copyright work to multiple *active recipients*. In such cases, the actual transmission of the copyright work (from communicator to recipient) is generally regarded as *recipient-initiated* because it is the individual recipient, from any place and at any time chosen by him, who has to specifically ‘cause the system to make [the copyright work] actually available to [him]’ (per M Ficsor, *Guide to the Copyright and Related Rights Treaties Administered by WIPO* (WIPO Publication 2003) 208).

36 According to s 83(c), copyright in relation to a cinematograph film is the exclusive right, *inter alia*, to communicate the film to the public. Section 84(1)(d) stipulates that copyright in relation to a television broadcast or sound broadcast is the exclusive right to re-broadcast it or to otherwise communicate it to the public.

37 See n 12 above.

38 During this third phase of operations, multiple copies of the (same) recording of a MediaCorp show would be made by RecordTV based on the number of subscribers requesting that particular show (ie as many copies as there were requesting subscribers).

39 *RecordTV* [2011] 1 SLR 830 at [28]. Incidentally, the US Court of Appeals for the Second Circuit also came to the same conclusion (to which we will return below) as regards Cablevision’s RS-DVR system in the context of the ‘public performance’ right under US copyright law (17 USC § 106(4)): see *Cartoon Network* 536 F 3d 121 at 137–38 (2d Cir 2008). The *Cartoon Network* decision was, however, not considered by the Court in *RecordTV* in respect of the right of ‘communication to the public’.

40 See the highly instructive case decided by the High Court of Australia in *Telstra Corp Ltd v Australasian Performing Right Association Ltd* (1997) 191 CLR 140.

41 As the learned authors of *Copinger and Skone James on Copyright* have noted, ‘[w]here the work is only available to subscribers to an internet service, the subscribers will qualify as “the public” for this

purpose’ (see Kevin Garnett, Gillian Davies and Gwilym Harbottle, *Copinger and Skone James on Copyright* (15th edn, Sweet & Maxwell 2005) at para 7–118). In other words, a copyright work is arguably made available to ‘the public’ even if only subscribers to an Internet service (such as the iDVR service in *RecordTV*)—and not the public at large—can obtain access to that work.

42 Ginsburg (n 13) at p 8.

43 Section 20(2) of the UK CDPA 1988 reads thus:

‘References in this Part to communication to the public are to communication to the public by electronic transmission, and in relation to a work include—

- the broadcasting of the work;
- the making available to the public of the work by electronic transmission in such a way that members of the public may access it from a place and at a time individually chosen by them.’

Section 20 of the UK CDPA 1988 was amended in 2003 to specifically implement Article 3 of the EU Information Society Directive (2001/29/EC), which, in turn, was intended by the European Parliament to implement Article 8 of the WIPO Copyright Treaty 1996.

44 [2010] EWHC 3063 (Ch); [2011] FSR 16. See also Kitchin J’s earlier decision in *Twentieth Century Fox Film Corp v Newzbin Ltd* [2010] FSR 21.

45 In other words, despite its name, TV Catchup was in fact not a catch-up service. Rather, it operated an internet-based service for the ‘live’ streaming of (free-to-air) TV programmes and films which were broadcast by the plaintiffs and in which the plaintiffs own copyright.

46 *ITV Broadcasting Ltd v TV Catch Up Ltd* [2010] EWHC 3063 (Ch); [2011] FSR 16 at [15] (emphasis added), relying on Recitals 23 and 24 of the EU Information Society Directive as well as the CJEU’s decision in *Sociedad General de Autores y Editores de España (SGAE) v Rafael Hoteles SL* [2006] ECR I-11519; [2007] ECDR 2 at [36].

47 *ITV Broadcasting Ltd v TV Catch Up Ltd* [2010] EWHC 3063 (Ch); [2011] FSR 16 at [17].

48 *ibid* at [18].

49 [2011] EWHC 1874 (Pat); [2011] FSR 40.

50 *ITV Broadcasting Ltd v TV Catchup Ltd* [2011] EWHC 1874 (Pat); [2011] FSR 40 at [100].

51 *ibid.* (emphasis added).

52 *ITV Broadcasting Ltd v TV Catchup Ltd* [2011] EWHC 1874 (Pat); [2011] FSR 40 at [102].

53 For the entire list of questions referred by Floyd J to the CJEU, see *ITV Broadcasting Ltd v TV Catchup Ltd* [2011] EWHC 2977 (Pat); [2012] FSR 10 at [24].

54 (Case C-306/05) [2006] ECR I-11519; [2007] ECDR 2.

55 *Sociedad General de Autores y Editores de España (SGAE) v Rafael Hoteles SL* (‘*Rafael Hoteles*’) (Case C-306/05) [2006] ECR I-11519; [2007] ECDR 2 at [36], relying on Recital 23 in the preamble to the EU Information Society Directive (2001/29). This was endorsed by the CJEU in *Football Association Premier League Ltd v QC Leisure* (Case C-403/08) [2012] FSR 1 at [193], and yet again by the same court in *Nils Svensson et al v Retriever Sverige AB* (Case C-466/12) (13 February 2014) at [17].

56 *Rafael Hoteles* (Case C-306/05) [2006] ECR I-11519; [2007] ECDR 2 at [40]. As the CJEU further explained at [41], relying on WIPO’s Guide to the Berne Convention:

... when the author authorises the broadcast of his work, he considers only direct users, that is, the owners of reception equipment who, either personally or within their own private or family circles, receive the programme ... if reception is for a larger audience, possibly for profit, a new section of the receiving public hears or sees the work and the communication of the programme via a loudspeaker or analogous instrument no longer constitutes simple reception of the programme itself but is an independent act through which the broadcast work is communicated to a new public.

57 See *ibid* at [42]. Indeed, it does not matter whether these hotel customers have actually switched on the TV to access the broadcast works (*ibid* at [43]). See, further, *Football Association Premier League Ltd v QC Leisure* (Case C-403/08) [2012] FSR 1 at [199]; and *Nils Svensson et al v Retriever Sverige AB* (Case C-466/12) (13 February 2014) at [19] (‘[F]or there to be an ‘act of communication’, it is sufficient, in particular, that a work is made available to a public in such a way that the persons forming that public may access it, irrespective of whether they avail themselves of that opportunity ...’). We respectfully agree with the CJEU’s interpretation in this regard, as it accords perfectly with a plain reading of Article 8 of the WIPO Copyright Treaty 1996: ‘... authors of literary and artistic works shall enjoy the exclusive right of authorizing any communication to the public of their works, by wire or wireless means, including the making available to the public of their works in such a way that members of the public *may* access these works from a place and at a time individually chosen by them’ (emphasis added).

58 *Rafael Hoteles* (Case C-306/05) [2006] ECR I-11519; [2007] ECDR 2 at [46].

59 See, in particular, *Rafael Hoteles* (Case C-306/05) [2006] ECR I-11519; [2007] ECDR 2 at [54], where the CJEU concluded that ‘... the *private* nature of hotel rooms does *not* preclude the communication of a work by means of television sets from constituting communication to *the public* within the meaning of Article 3(1) of Directive 2001/29’ (emphasis added).

60 (Case C-607/11) [2013] WLR (D) 92; [2013] ECDR 9.

61 *ITV Broadcasting Ltd v TVCatchup Ltd* (*‘TVCatchup’*) (Case C-607/11) [2013] WLR (D) 92; [2013] ECDR 9 at [20].

62 *ibid* at [26] (emphasis added). The CJEU (at [39]) further clarified its earlier position in *Rafael Hoteles* by holding that the requirement of (a communication to) a ‘new public’ could be dispensed with whenever the retransmission in question was effected using a ‘different means of transmission’ from that used by the copyright owner. In the present case, where the defendant had deliberately intervened to make the plaintiffs’ terrestrial TV broadcasts available to the public by an *alternative* technical means (here, via the Internet), the ‘new public’ requirement was redundant. See, further, *Nils Svensson et al v Retriever Sverige AB* (Case C-466/12) (13 February 2014) at [24].

63 *TVCatchup* (Case C-607/11) [2013] WLR (D) 92; [2013] ECDR 9 at [28].

64 *ibid* at [30] (emphasis added).

65 *ibid* at [32]; endorsed by the same court in *Nils Svensson et al v Retriever Sverige AB* (Case C-466/12) (13 February 2014) at [21].

66 *TVCatchup* (Case C-607/11) [2013] WLR (D) 92; [2013] ECDR 9 at [33].

67 *ibid* at [34].

68 The CJEU’s reference to the public being able to access the same work ‘at the same time’ must be understood in context and confined to the facts of this case (which involved the retransmission of copyright material—a form of ‘push’ technology). Obviously, in the case of online ‘live’ streaming, the public—if connected to the Internet and to the defendant’s servers—will obtain access to the same work ‘at the same time’. But the crux of the test for what constitutes ‘the public’ cannot rest on the premise that the public obtains access to the same work ‘at the same time’, given that the right of *making available* to the public (which is generally applicable to ‘pull’ technologies) specifically allows any member of the public to access the copyright work *at any time* and from any place of his choice. Therefore, in cases involving ‘pull’ technologies (see, eg *RecordTV*), it is submitted that the general guidance from the CJEU should continue to apply *sans* the need for the public to obtain access to the same work ‘at the same time’. What matters, ultimately, is the ‘*cumulative effect of making the works available to potential recipients*’.

69 [2004] 1 SCR 339.

70 *CCH Canadian Ltd v Law Society of Upper Canada* [2004] 1 SCR 339 at [78]–[79] (emphasis and double emphasis added). *cf* in this regard, the observations made by the CJEU in *TVCatchup* (Case C-607/11) [2013] WLR (D) 92; [2013] ECDR 9 at [33] to the effect that the *cumulative effect* of making a copyright work available to potential recipients should be taken into account and that, in particular, it is relevant to ascertain *the number of persons who have access to the same work* (at the same time). See also Linden JA’s judgment in the Federal Court of Appeal in *CCH Canadian Ltd v Law Society of Upper Canada* [2002] 4 FC 213 at [100] where the learned judge opined that “to be “to the public” a

communication must be *targeted at an aggregation of individuals*, which is more than a single person but not necessarily the whole public at large’ (emphasis added).

71 [2012] 2 SCR 283.

72 Section 3(1)(f) states: ‘For the purposes of this Act, “copyright”, in relation to a work, means the sole right ... in the case of any literary, dramatic, musical or artistic work, to communicate the work to the public by telecommunication ...’. Section 2 broadly defines ‘telecommunication’ as ‘any transmission of signs, signals, writing, images or sounds or intelligence of any nature by wire, radio, visual, optical or other electromagnetic system’. There was no dispute before the court that the communications in issue were ‘telecommunications’ within the meaning of the Act.

73 *Rogers Communications Inc v Society of Composers, Authors and Music Publishers of Canada* [2012] 2 SCR 283 at [28].

74 *ibid* at [29] (emphasis added).

75 *ibid* at [30] (emphasis added). See also Sharlow JA’s explanation in *Canadian Wireless Telecommunications Association v Society of Composers, Authors and Music Publishers of Canada* [2008] 3 FCR 539 at [43].

76 *Rogers Communications Inc* (n 73) [49].

77 *ibid* at [56].

78 *ibid* at [52] (emphasis added). See also *Canadian Wireless Telecommunications* (n 75) [35].

79 *Cartoon Network* 536 F 3d 121 (2d Cir 2008).

80 *American Broadcasting Cos Inc v Aereo Inc* (‘Aereo’) 134 S Ct 2498 (2014); 573 US ___ (2014). Text available at: <http://www.supremecourt.gov/opinions/13pdf/13-461_1537.pdf (accessed 28 January 2015)>. All references made in this article will be to the pages of this Slip Opinion, pending proper citation.

81 *Wizzgo v Metropole Television et autres*, Paris Court of Appeals (14 December 2011).

82 *TVCatchup* (Case C-607/11) [2013] WLR (D) 92; [2013] ECDR 9 (CJEU).

83 *Optus* [2012] FCAFC 59; (2012) 201 FCR 147 (Full Court of the Federal Court of Australia).

84 *RecordTV* [2010] 2 SLR 152 (Singapore High Court); *RecordTV* [2011] 1 SLR 830 (Singapore Court of Appeal).

85 *RTL v Save.tv* (Case No I ZR 175/07, 22 April 2009).

86 *SATI v Shift.tv* (Case No I ZR 215/06); *RTL v Shift.tv* (Case No I ZR 216/06).

87 *Cartoon Network* 536 F 3d 121 (2d Cir 2008); *WPIX, Inc v ivi, Inc* 691 F 3d 275 (2d Cir 2012); *Fox Television Stations, Inc v BarryDriller Content Systems Plc* 915 F Supp 2d 1138 (CD California 2012); *Fox Television Stations, Inc v FilmOn X LLC* 966 F Supp 2d 30 (DD Columbia 2013); *WNET, Thirteen v Aereo Inc* 712 F 3d 676 (2d Cir 2013).

88 Section 106(4) of the US Copyright Act 1976 (17 USC).

89 See s 101 of the US Copyright Act 1976 (17 USC).

90 The broadcasters also alleged that Aereo’s system had infringed other exclusive rights under the copyright regime (such as the reproduction right), but because they did not assert these other claims in their application for a preliminary injunction, this question never arose for consideration before the Second Circuit.

91 712 F 3d 676 (2d Cir 2013).

92 *Cartoon Network* 536 F 3d 121 (2d Cir 2008).

93 *ibid* at 139.

94 *American Broadcasting Companies, Inc v Aereo, Inc* 874 F Supp 2d 373 (SDNY 2012).

95 See also 2 Melville B Nimmer and David Nimmer, *Nimmer on Copyright* (rev edn, Matthew Bender 2013) at § 8.14[C][2]–[3]: ‘... if a transmission is only available to one person, then it clearly fails to qualify as “public”. For it neither directly reaches “a substantial number of persons” nor is it transmitted to a place where such a grouping is congregated’.

96 Separate Opinion, *per* Chin J (dissenting), *WNET, Thirteen v Aereo, Inc* 712 F 3d 676 at 697 (2d Cir 2013).

97 *ibid*.

98 Separate Opinion (n 96) at 699.

99 See also *Community Television of Utah, LLC v Aereo, Inc* 997 F Supp 2d 1191 at 1198-1202 (D Utah 2014).

100 See H R Rep No 94-1476 (1976) at pp 63–65.

101 Separate Opinion (n 96) at 697: ‘By accepting Aereo’s argument that it may do so without authorization and without paying a fee, the majority elevates form over substance.’

102 Separate Opinion (n 96) at 705. Interestingly, Judge Chin had also perceptively pointed out that the majority’s decision appeared to be at odds with the Second Circuit’s own precedent in *WPIX*, (n 87): see Chin J’s dissenting opinion in *WNET*, (n 96) at 703–705.

103 *Hearst Stations Inc v Aereo, Inc* 977 F Supp 2d 32 (D MA 2013) (denying request for a preliminary injunction against Aereo and largely adopting the majority’s reasoning in the Second Circuit in *Aereo*).

104 *Community Television of Utah* (n 99).

105 Justice Breyer (in writing for the majority) observed thus: ‘In terms of the Act’s purposes, these differences do not distinguish Aereo’s system from cable systems, which do perform “publicly”. Viewed in terms of Congress’ regulatory objectives, why should any of these technological differences matter?’ (*Aereo* at p 12).

106 These technological differences were, however, deemed to be material by the Second Circuit in the *Cartoon Network* decision (as they were determinative of the extent of *volition* on the part of the technology/service provider vis-à-vis its subscribers/users), which decision was relied upon by the Second Circuit as well as in the analysis of Justice Scalia (who wrote the dissenting opinion in the Supreme Court) in the respective *Aereo* decisions. It is submitted that the notion of ‘volitional conduct’ advocated by these ‘dissenting voices’ ought to be re-considered in light of the decision of the Full Court of the Federal Court of Australia in *Optus* [2012] FCAFC 59; (2012) 201 FCR 147 (discussed above).

107 *Aereo* at p 8.

108 *Aereo* at p 9.

109 See *Fortnightly Corp v United Artists Television, Inc* 392 US 390 (1968) and *Teleprompter Corp v Columbia Broadcasting System, Inc* 415 US 394 (1974).

110 See H R Rep No 94-1476 (1976) at pp 86–87. Justice Breyer observed that ‘Congress made these three changes to achieve a similar end: to bring the activities of cable systems within the scope of the Copyright Act’ (*Aereo* at p 8). As Judge Wu also pointed out recently in *Fox Television Stations, Inc v BarryDriller Content Systems Plc* 915 F Supp 2d 1138 at 1146–47 (CD California 2012), Congress had found that ‘cable systems are commercial enterprises whose basic retransmissions operations are based on the carriage of copyrighted program material and ... copyright royalties should be paid by cable operators to the creators of such programs’.

111 In particular, the following phrase in s 101 of the US Copyright Act 1976 (17 USC): ‘... whether the members of the public capable of receiving the performance or display receive it in the same place or in separate places and at the same time or at different times’.

112 *Aereo* at p 13.

113 *Aereo* at pp 14–15.

114 See the critique in Ginsburg (n 13) at pp 18–25 and 37–38.

115 *Sony Corp of America v Universal City Studios, Inc* 464 US 417 (1984).

116 *RecordTV* [2011] 1 SLR 830 at [22].

117 See Warren B Chik and Saw Cheng Lim, ‘Opportunity Lost? Revisiting *RecordTV v MediaCorp TV*’ (2012) 24 Singapore Academy of Law Journal 16.

118 *ibid*.

119 As the authors have argued elsewhere (see n 117, above), the Singapore Court of Appeal should not have taken such policy considerations into account at the stage of determining primary copyright liability since copyright infringement is clearly a strict liability tort. Indeed, Justice Scalia in the *Aereo* dissent had specifically pointed to the legislature (Congress) as the proper forum to address such issues: see Separate Opinion, *per* Scalia J (dissenting), *Aereo* at pp 12–13.

120 Enacting statutory exceptions will help avoid the sort of ‘ambiguous’ decisions and ‘uncomfortable’ arguments made, such as those in *Aereo* where the majority in the Supreme Court sought to compare Aereo with traditional cable-TV companies to find liability but yet reassured other technology providers that the decision will not implicate them in the same way. Such uncertainty may well stifle future innovation.

121 Interestingly though, the Supreme Court of Canada in *CCH Canadian Ltd v Law Society of Upper Canada* [2004] 1 SCR 339, more than a decade ago, gave a rather liberal interpretation to the fair dealing provision, although it remains to be seen if future amendments to that part of Canada’s copyright legislation will introduce an open-ended provision instead.

122 Some academics have pointed out that ‘[t]his should have been a case about fair use’: see *Amici Curiae* Brief of 36 Intellectual Property and Copyright Law Professors (at p 10),

<http://www.americanbar.org/content/dam/aba/publications/supreme_court_preview/briefs-v3/13-461_resp_amcu_36ipclp.authcheckdam.pdf> (accessed 28 January 2015).

123 *ibid* at p 11.

124 *Aereo* at p 17.

125 See Separate Opinion, *per* Scalia J (dissenting), *Aereo* at p 12.

126 Copyright Modernization Act, SC 2012, c 20, Bill C-11.

127 *ibid* at s 29.21.

128 *ibid* at s 29: ‘Fair dealing for the purpose of research, private study, education, parody or satire does not infringe copyright.’

129 *ibid* at s 29.22.

130 *ibid* at s 29.23.

131 *ibid* at s 29.24.

132 See ss 246 and 249 (and also s 114) of the Singapore Copyright Act 1987. In the USA, the developers of Slingbox, Sling Media, could survive an action against illegal signal interception or reception of communication services offered over a cable system (under 47 USC 553) due to its ‘space shifting’ function by arguing that it falls under the private use exception (in 47 USC 605), especially since its design only allows one computer to access one Slingbox at a time.

133 The landmark decision of the Canadian Supreme Court in *CCH Canadian Ltd v Law Society of Upper Canada* [2004] 1 SCR 339, which preceded the Copyright Modernization Act, held that the fair dealing exception is a ‘user’s right’ which ‘must not be interpreted restrictively’ (at [48]).

134 See Rebecca Giblin and Jane C Ginsburg, ‘We (Still) Need to Talk about Aereo: New Controversies and Unresolved Questions after the Supreme Court’s Decision’ (‘Giblin and Ginsburg’) (24 October 2014), forthcoming, Vol 38, Columbia Journal of Law & the Arts, at pp 18–22,

<http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2514648> (accessed 28 January 2015).

135 See, eg Part IXA of the Singapore Copyright Act 1987. In Singapore, specific fair dealing exceptions also exist for incidental and temporal copying for broadcasting and simulcasting and copying made in the course of communication (see ss 107, 107A and 107E).

136 See, eg *Football Association Premier League Ltd v QC Leisure* (C-403/08) [2012] 1 CMLR 29; [2012] FSR 1 (ECJ) at [204]-[205], where the CJEU held that it was relevant whether the communication made to the public was one of a profit-making nature. The court was of the view that a hotel operator that had provided this service to its customers would be construed as having given additional services in exchange for a commercial benefit because the inclusion of the service would have had an effect on the standing (and hence the pricing) of the hotel.

137 The majority, led by Justice Breyer, took pains to deliberately and specifically confine its decision to the facts of the case and the technology at hand.

138 See *Aereo* at pp 16–17. This is an obvious acknowledgement of the dilemma facing the Court (in fact, any policy-maker) in its attempt to find the ‘right’ balance between the development of new technologies and the preservation and protection of copyright, both of which have strong societal underpinnings. In his dissenting opinion, Justice Scalia charged the majority with handing down a ‘result-driven’, ‘guilt-by-resemblance’ ruling that only perpetuates an environment of legal uncertainty for other forms of similar

technology: see Separate Opinion, *per* Scalia J (dissenting), *Aereo* at pp 10 and 11. His Honour stated that ‘[i]t will take years, perhaps decades, to determine which automated systems now in existence are governed by the traditional volitional-conduct test and which get the Aereo treatment’: see Separate Opinion, *per* Scalia J (dissenting), *Aereo* at p 11. He further observed that although ‘[t]he Court vows that its ruling will not affect cloud-storage providers and cable-television systems ... it cannot deliver on that promise given the imprecision of its result-driven rule’: see *ibid*.

139 See s 111 of the US Copyright Act 1976 (17 USC).

140 See Brian Fung, ‘No, Aereo Isn’t a Cable Company, Says the Copyright Office’ (17 July 2014, *The Washington Post*), <<http://www.washingtonpost.com/blogs/the-switch/wp/2014/07/17/no-aereo-isnt-a-cable-company-says-the-copyright-office/>> (accessed 28 January 2015); and Brian Fung, ‘A Federal Court Rejects Aereo’s Request to Argue It’s a Cable Company’ (21 August 2014, *The Washington Post*), <<http://www.washingtonpost.com/blogs/the-switch/wp/2014/08/21/a-federal-court-rejects-aereos-request-to-argue-its-a-cable-company/>> (accessed 28 January 2015).

141 See Joshua Brustein, ‘The FCC Wants to Let Aereo Become a Cable Service’ (28 October 2014, *Bloomberg Businessweek*), <<http://www.businessweek.com/articles/2014-10-28/the-fcc-wants-to-let-aereo-become-a-cable-network>> (accessed 28 January 2015).

142 The most recent and widely-reported debate in this regard is that between Taylor Swift and Spotify: see *The Straits Times* (Life!), 27 November 2014, at p C5; and

<<http://www.todayonline.com/entertainment/music/what-cost-free-music>> (accessed 28 January 2015).

143 See the text accompanying n 130, above.

144 For example, Xin MSN in Singapore was developed and ‘upgraded’ by MediaCorp in response to RecordTV’s iDVR technology.

145 See Giblin and Ginsburg (n 134).

146 It may, however, be postulated that the majority judges in *Aereo* had, in passing, already hinted (positively) at the legitimacy of cloud-based storage devices/services when they expressed the view that ‘... an entity that transmits a performance to individuals in their capacities as *owners or possessors* [of the underlying copyright works] does *not* perform to “the public”’ (*Aereo* at p 15; emphasis added). After all, Justice Breyer did clarify that the Court had not ‘... considered whether the public performance right is infringed when the user of a service pays primarily for something *other than* the transmission of copyrighted works, such as the *remote storage of content*’ (*Aereo* at p 16; emphasis added).

147 Rather ironically, apart from (or perhaps because of) the US Supreme Court decision which had ruled against it, Aereo has now been reported in the media to have filed for bankruptcy protection: see *The Straits Times* (Life!), 24 November 2014, at p C12; and <<http://www.businessweek.com/articles/2014-11-21/aereos-files-for-bankruptcy-and-almost-declares-defeat>> (accessed 28 January 2015).