The WIPO Broadcast Rights Treaty:
Saving Value in Broadcasting Markets?

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The World Intellectual Property Organization’s (WIPO) Standing Committee on Copyright and Related Rights (SCCR) has been working since 2001 on a new treaty to grant broadcasters a series of monopoly rights over the use of their signals.¹ The aptly named Treaty on the Protection of Broadcast Organizations (hereafter Treaty) would grant broadcast organizations several exclusive rights over the use of their signals: the right to control retransmission of the signal by any means; the right to control fixation (making copies) and the later use of such fixed signals; and the right to reproduce and distribute fixed signals (WIPO, 2006).² This more or less covers all “uses” of broadcast signals other than direct reception and immediate consumption of intact signals. The Treaty would also mandate that signatories institute and support “adequate” and “effective” legal remedies against circumvention of technological protection measures (TPMs) designed to enforce those rights. The proposed Treaty creates and extends rights and terms (the proposed rights would be granted for a period of 50 years) well beyond what currently exists in the U.S. and elsewhere.

The stated purpose of the Treaty is to “protect” broadcasting organizations from revenue losses due to piracy. In fact, comments included with the September draft

² The initial analysis was based primarily on the May 2006 draft proposal. A revision was released on July 31, 2006 (available at http://www.wipo.int/edocs/mdocs/sccr/en/sccr_15/sccr_15_2.pdf). The analysis has been updated to reflect that version.
(WIPO, 2006) mention adding language about a “right to remuneration.” The Treaty follows the templates of, and uses language from, two key intellectual property rights treaties also concerned with piracy and unauthorized uses, the WPPT (WIPO Performances and Phonograms Treaty) and the WCT (WIPO Copyright Treaty). As such, it would seem clear that what the Broadcast Treaty seeks is to provide broadcasters a set of monopoly “intellectual property” rights to their broadcasts, in the hope that they will allow broadcasters to extract greater value from their operations. But will these rights actually benefit broadcasters?

In normal economic markets, granting monopoly power enables sellers to extract consumer surplus, generating higher than normal profits; however, broadcasters do not operate in “normal” markets (Albarran, 2002; Bates, 1987; Collins, Garnham & Locksley, 1988; Owen & Wildman, 1992; Picard, 2002). While the Treaty may provide broadcasters with the potential to generate new revenue streams, it is unclear how significant these are likely to be, or what the costs of enforcing the granted rights will be or their likely impact on the core values of broadcasting. This paper will examine the sources of value for broadcasters, and consider whether the Treaty and its proposed rights are the solution to broadcaster concerns.

**Background**

The broadcasting industry has changed worldwide over the last few decades. Competition has generally increased within traditional broadcast markets, and broadcasting has also faced competition from new delivery mechanisms such as cable, satellite, and the Internet. Both private and public broadcasters face dwindling shares of audience and revenues. Meanwhile, the rise of digital technology has increased the
ability to capture and use electronic signals, facilitating both authorized and unauthorized uses (piracy). The rise of alternative ways of using broadcasts, perhaps buoyed by the inflated claims of piracy losses from other media, brought the issue of who controls the use of broadcasts forward. The WIPO Treaty on the Protection of Broadcast Organizations would provide broadcasters exclusive rights to identified derivative uses, granting legal protection against piracy and potential new revenue streams from enforcement of those rights.

While broadcast organizations have been generally supportive of the Treaty, other groups have not. A wide range of telecommunication reform activists and public interest, consumer, and industry groups have expressed concerns about the various draft proposals of the Treaty (Anderson, 2006). There are concerns that the Treaty may conflict with existing intellectual property rights, that it may endanger existing audience rights, hinder technological innovation, restrict access to public information, and pose an undue burden on consumers and related industries.3 A number of participating countries have also raised concerns about the proposed Treaty’s provisions, particularly the initially proposed extension of these rights to the Internet and webcasting. 4 A variety of consumer, industry, and public interest groups and NGOs have expressed considerable reservations.

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3 These critics include Computer Professionals for Social Responsibility (http://www.cpsr.org/issues/ip/wipobroadcastletter), Consumer Project on Technology (http://cptech.org/ip/wipo/bt/), the Electronic Frontier Foundation (http://eff.org/ip/wipo/broadcasting_treaty/), IP Justice (http://www.ipjustice.org/WIPO/broadcasters.shtml), Public Knowledge (http://www.publicknowledge.org/issues/wipobroadcasters), and the Union for the Public Domain (http://www.public-domain.org/?q=node/47) among others. The WIPO Casting Treaty blog (http://www.cptech.org/blogs/wipocastingtreaty) also addresses issues raised by the proposed Treaty. These sites link to a wide range of analyses and comments.

4 Concerns about extension to the Internet were strong enough that those sections were removed to an affiliated Appendix Treaty in the May 2006 draft, and were fully deleted from the August 2006 draft.
about the treaty’s impact on innovation, while broadcasting organizations generally support it, under the impression that the Treaty will be economically beneficial.\textsuperscript{5} There have already been several examinations of earlier drafts of the Treaty (Akester, 2006; Asbell, 2006; Balganesh et al., 2004; Public Knowledge, 2004) from legal and policy perspectives, focusing on impacts on freedom of expression and existing fair use rights, and the implications on innovation and development of Internet resources.\textsuperscript{6} To date, there does not seem to have been any thorough consideration of the Treaty from an economic perspective.

**The WIPO Treaty on the Protection of Broadcast Organizations**

The Treaty assigns to broadcasting organizations the legal right to control copying and distributing of their broadcasts, rights that mirror those of copyright and performance rights.\textsuperscript{7} To the extent that there is value in those uses of broadcasts, granting those rights exclusively to broadcasters allows them to seek to extract that value from the market.

There is one major problem, however. Broadcasts embody both the transmission signal and the programming content that is transmitted; content that already has its own set of existing exclusive intellectual property rights (copyright and/or performance rights). Recognizing the potential for conflicting “exclusive rights”, the proposed Treaty includes language to the effect that the new rights are secondary to existing intellectual property

\textsuperscript{5} The National Association of Broadcasters’s President, David K. Rehr, sent a letter to US officials urging adoption of the Treaty, to modernize rights and combat piracy (Rehr, 2006).

\textsuperscript{6} A much more extensive literature exists examining intellectual property rights and policy in general. While some of it will be introduced as we examine particular aspects of the Treaty’s proposed rights, we will not undertake a thorough review for this paper.

\textsuperscript{7} In fact, the explanatory comments included in the working draft indicate that most wording is based on the WPPT (WIPO Performances and Phonograms Treaty), and the Berne Convention and Rome Convention (both covering copyright).
rights, and “shall in no way affect copyright or related rights in program material” (WIPO, 2006, Article 1(2)).

Since all program material (content) transmitted by broadcasters is covered under existing copyright and/or performance rights, it is unclear whether the Treaty seeks to create a new level of rights, superimposed on existing copyright and performance rights, or whether the new rights would apply only to the signal (noncontent) aspect of the broadcast. The Treaty’s (WIPO, 2006) Preamble provides no clue, as it sets forth the vague motives of protecting broadcaster rights “in an effective and uniform manner,” and providing solutions to “questions raised by economic, social, cultural and technological developments.” Regrettably, only a few such “questions” are identified, and those can be loosely described as broadcasters fearing the loss of revenue and/or power as a result of signal theft.⁸

The lack of serious discussion of “questions,” and whether the proposed policy is actually likely to satisfactorily address them, is, regrettably, all too typical in information, media, and technological policy. The distinctive nature of information goods and services and markets (Arrow, 1984; Babe, 1995; Bates, 1990; Laffont, 1989; Lamberton, 1971; Rescher, 1989; Wolpert & Wolpert, 1986) compounds the problem,⁹ as traditional and “normal” economic arguments and assumptions may not be appropriate for

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⁸ Signal theft is defined as the unauthorized use of a broadcast signal, once it is transmitted.
⁹ One distinctive aspect of information goods and services is that their consumption tends to create value outside of the market exchange (Bates, 1988), both for individuals as well as for society more broadly. In addition, people often create and use information for reasons other than money (Benkler, 2006).
information markets and can lead to perceived market "failures." Thus, information and media policies based on limited economic considerations often fail to achieve their putative goals, while engendering unanticipated consequences that create new problems to be resolved.

For example, while the draft Treaty contains language recognizing the need to balance broadcaster rights with the public interest, any new rights will necessarily impact on covered markets and existing uses. Critics are already identifying some of the potential consequences; in the U.S., the proposed new rights could invalidate existing fair use rights such as time-shifting, the use of broadcasts in classrooms, and the emerging ability to place-shift through digital networks. New technologies such as Tivos and DVRs, Slingbox and home entertainment networks, and Video-on-Demand would be under challenge. It would seem to challenge existing laws and policy covering cable and satellite retransmission, could mandate the use of broadcast flags, and could prevent "unauthorized" retransmission over the Internet and any other new media such as cell phones or WiFi. It would seem to make any technological protection measures (TPMs) used in broadcasting compulsory (as long as any single broadcaster sought to utilize it), burdening a wide range of consumer technologies, networks, information markets, and new media services with the costs of integrating TPMs in any device which might “use” a broadcast signal. The Treaty’s potential for economic disruption is significant.

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10 Market “failure” does not mean that markets do not work, merely that left to itself, market behaviors may result in non-optimal or inefficient markets, often because the market fails to consider some costs and/or benefits (termed externalities).

11 Digital Video Recorders (DVR) such as Tivo record (“fix”) broadcast programs, and then retransmit them to display devices. Slingbox and home networks retransmit broadcasts over computer networks. Video on Demand services fix broadcasts and make them available for later use.
As the WIPO appears destined to fast track this Treaty for rapid approval, there would seem to be a need for a thorough examination of the proposed rights and their potential consequences. Will the Treaty save broadcasting, or will the backlash from an attempt at protectionism further damage broadcasting? The key to the answer lies in considering where value lies in broadcasting, and how the Treaty’s provisions impact on that value. The simple view is to argue that granting monopoly rights allows a greater ability to extract value from consumers. But, as noted above, broadcasting is not a typical economic good – it operates in multiple markets with a range of complementary and supplementary goods and services – and the impacts may be more convoluted.

The analysis will begin with a short discussion of the distinctive nature of the economics of information, exclusive rights, and TPMs, with an eye towards providing a background for considering the impact of the Treaty. We will then address the economics of broadcasting; in particular, how broadcasting creates and extracts value. At that point, we will apply that approach to analyzing the implications of granting “broadcasting rights” in general, and the implications for each specifically identified right enumerated in the Treaty. Then, the various impacts will be integrated in order to consider the overall impact of the Treaty and whether any potential benefits to be gained by broadcasting organizations offset the costs for broadcasters, copyright holders, audiences, and society more broadly.

**Economic Implications of Information and Intellectual Property Policy**

Economists recognize that information goods and services are not your typical private good (Arrow, 1984; Babe, 1995; Lamberton, 1971; Melody, 1993; Noll, 1991, Wolpert & Wolpert, 1986). Many note that information goods and services tend to have
certain characteristics of public goods, principally non-rivalrous consumption and non-excludability.\textsuperscript{12} Often, they must be consumed in conjunction with other goods (including time); that is, many information products are what economists call joint products or complements with other goods and markets.\textsuperscript{13} In addition, information goods and markets tend to be non-transparent, with high degrees of uncertainty (imperfect information) about both the good and the market (Laffront, 1989). Information goods may also be seen as operating in multiple markets, or having different values to different sets of users.\textsuperscript{14} Thus, information markets tend to be complex, interdependent, and imperfect. They also seem to be rapidly shifting and developing in response to technological and marketing developments, resulting in what has been called “fuzzy” markets (Lacy, 2004),\textsuperscript{15} which contribute to the difficulty in making precise evaluations.

Another distinctive and problematic aspect of information goods and services such as broadcasting is that they are multiple goods in the sense that what we generally think of as the product is actually comprised of the “information” (content) and its distribution medium (conduit).\textsuperscript{16} The two aspects have different sets of economic properties and must

\textsuperscript{12} These properties are at the heart of the “free rider” problem tied to the signal theft concern. Non-rivalrous consumption refers to the property that information can be used by one without affecting the abilities of others to consume the same information. Non-excludability refers to the difficulty in restricting consumption to only those who directly pay for the goods or services. Both aspects are inherent in broadcast products.

\textsuperscript{13} For example, consumption of information goods and services takes time, and consumption of broadcasting requires investment in receivers and includes the costs of operating those receivers.

\textsuperscript{14} Broadcasters, for instance, operate jointly in sponsor markets (selling access to audiences for sponsor content) as well as audience markets (trading desired content for audience attention).

\textsuperscript{15} “Fuzzy” markets are those where values and boundaries may be indistinct, creating difficulties in reaching precise market solutions, or assuring that solutions are optimal.

\textsuperscript{16} This aspect is critical to the examination of “Broadcaster” rights and values. There is a tendency to conflate the content with the distribution system, but here the distinction is
be considered separately. If you do that, then it is easy to see (particularly in a digital universe), that the information component is non-physical, and while expensive to produce initially, is easily and cheaply copied (Kahin & Varian, 2000; Lessig, 2004; Negroponte, 1995). Information goods and services generally exhibit (at least for the information/content component) a high fixed cost, and very low marginal cost, often approaching zero. In fact, marginal cost for information may always fall below average cost, leading to the situation where “normal” market optimization would mean that such information goods would never be produced (as revenues from sales would never match total costs of production) (DeLong & Froomkin, 2000), at least if the direct revenues were the only source of value for the producer. This argument is the primary basis provided for granting exclusive intellectual property rights; granting monopoly rights allows rights holders to charge higher prices and obtain higher revenues, which in turn motivates creation of intellectual goods.

Technological advances have dramatically reduced production and distribution costs, particularly in digital media and networks. This changing cost structure, combined with a shift in regulatory policy, has had a significant impact on traditional information markets (Anderson, 2006; Bates & Albright, 2006; Benkler, 2006; DeLong & Froomkin, 2000; Lessig, 2004; Shapiro & Varian, 1998; Shy, 2001). Markets have expanded, new competition has arisen, and demand characteristics have changed, as audiences have embraced the choice and control provided by new media and markets (Bates, 2005).

critical – most of the “value” and desire to “use” broadcasts is based on the desire for the content, not for any separate value of the conduit.

17 Such markets and behaviors, however, may in fact be rational and efficient, if one considers other sources of value (Bates, 1988, 1990; Benkler, 2006).
While disrupting traditional markets, including broadcasting, these developments have not invalidated economic approaches.

**The Economics of Exclusive Intellectual Property Rights**

The proposed Treaty (WIPO, 2006) will grant a number of rights to broadcasting organizations that mirror intellectual property rights. The explicit rights include the exclusive right to authorize a number of uses of their broadcasts: retransmission; communication to the public; fixation; reproduction; transmission following fixation; making available after fixation; and interception and use of component signals prior to broadcasting. In essence, these give broadcasters the exclusive legal right to control use of their signal; from an economic perspective, this grants broadcasters monopoly power over the use of their signal. This arguably allows the rights holders to overcome the public goods nature of their products, allowing them to combat “piracy” and the resulting revenue losses.

While possessing an exclusive legal right may help reduce piracy losses, the granting of monopoly power (through exclusivity) gives firms the ability to control prices to some degree, to set them higher than what would occur in free markets. This generally allows them to extract supranormal profits by appropriating the consumer surplus in markets. Higher prices, however, also means that fewer goods are sold and used, and also makes derivative goods more expensive.¹⁸ Thus, monopoly pricing is generally considered to be harmful to efficiency and general social welfare. It does not create new sources of value for the rights holders to exploit, but rather transfers value from other market participants.

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¹⁸ Derivative goods are those that include the original good as an input. Increasing the costs of inputs will make production more costly and thus discourage production.
and society in general. Adding new exclusive rights, or extending existing rights, necessarily distorts the existing equilibrium in markets.

In the case of intellectual property, it has been argued that exclusive rights are necessary to encourage production of information goods and services, and that the social value of the added production offsets the social costs of exclusivity. While exclusive rights do seem to motivate production in commercial information markets (Benkler, 2006), at least to a point (Bates & Miller, 2001), it also has little direct impact in cases where the predominant motivation and value for a creator lies in getting the work distributed and used. They also clearly increase the costs of covered intellectual property as inputs in all markets. Research is beginning to demonstrate that extending exclusive rights have negative impacts on the creation and utilization of information goods over the long term, even in commercial markets (Benkler, 2006; Doctorow, 2005; Lee, 2006).

There is also the question, in this case, of whether or not the WIPO rights are truly exclusive. The content of broadcasts (the programs) are already covered by copyright and/or performance rights. The Treaty acknowledges the primacy of those rights; it is not clear whether this means that broadcaster rights thus apply only to the signal (independent of content), or that broadcaster rights are commingled with those of the owners of the content’s intellectual property rights.

While there are arguable benefits to intellectual property rights, there are also clear market and social costs. From both a broadcaster and a social perspective the key question is do the benefits outweigh the costs? Will the short term gain from piracy losses for broadcasters be offset by long term declines in audiences and increased costs of content? Is there likely to be a net gain, or a net loss, in social welfare? The matter is
complicated by the fact that the mere granting of exclusive rights is not sufficient to fully capture their benefits, particular for information goods. While law and policy may grant exclusive rights, recall that information goods and services often exhibit the property of non-exclusivity.

The Economic Impacts of Technological Protection Measures

For most typical goods, exclusivity is inherent in its nature. Possession of the candy bar grants exclusive rights to the holder. The nature of intellectual property is different; having the idea does not prevent others from having the same idea. Any exclusivity must be imposed from outside the good and market. While policy can grant exclusive rights, for them to be effective, the policy must also provide an enforcement mechanism. The proposed Treaty explicitly requires parties to provide “adequate legal protection and remedies against the circumvention of effective technological measures” (WIPO, 2006, Article 16). These requirements are not without cost; economists refer to such as enforcement and compliance costs. For purely legal enforcement, the costs come in the form of policing and legal expenses as well as the disincentive to “pirate” based on the perceived risks of being both caught and subject to legal penalties.

Technical protection measures (TPMs) arguably provide a mechanism for actually preventing unauthorized uses rather than punishing violators after the fact. They are particularly appropriate to broadcasting, as broadcasting requires technology for its use, and TPMs can be embedded in that technology. TPMs work by incorporating into relevant devices additional mechanisms that prevent uses that are not authorized by the rights holder. TPMs can be fairly simple, such as the use of scrambled signals and decoders in cable and satellite broadcasting. Or it can be more sophisticated, such as the
proposed broadcast flag system that would give broadcasters the flexibility to dictate specific types of uses (Crawford, 2003).

The effectiveness of TPMs, however, depends on the nature of the technology used and the degree to which they are ubiquitous. One inherent problem with using technology to limit use is that technology can also be used to defeat TPMs. Thus, effective control may require increasingly sophisticated systems over time. TPMs can also be bypassed through the use of devices that do not incorporate the TPMs. As media and information technology becomes more powerful and flexible, and markets expand and converge, the ways and means in which broadcasts can be used will increase. For broadcast TPMs to be effective, they must be in all devices that might be used to access, record, distribute, process, and display broadcast signals and be sophisticated enough to prevent bypassing while distinguishing between authorized and unauthorized uses.19 Effective broadcast TPMs are likely to be costly and will need to be mandated for a wide range of information technology and supported by legal enforcement.

Thus, TPMs impose an additional layer of compliance and enforcement costs. There is the cost of the development of the measures in addition to the cost of the devices themselves, both of which not only increase the costs of covered technology and devices but can also delay their development and diffusion. Further, the TPMs must be included in any and all devices that could be used in a way that might violate the exclusive rights of the rights holder. Unlike legal enforcement costs, which are largely born by violators, TPM compliance costs are born by all users of the covered intellectual property, as well as all users of compliant equipment, even if those devices are not used in broadcasting

19 If TPMs fail to distinguish between legal but unauthorized uses (like fair use) and illegal uses, the TPMs impose the additional social cost of preventing legitimate uses.
markets. The fact that TPMs’ compliance costs are widely and indiscriminately manifested makes them particularly costly in terms of social welfare.

The added costs and delays, by reducing use of intellectual property, actually reduce the ability of rights holders to materially benefit from protected content or services, as well as imposing additional indirect social enforcement and compliance costs. The added costs also must be born by someone, and thus impact on the ability of creators to extract ancillary value that depends on distribution and use of their work. To the extent that such enforcement costs are less than the likely losses due to inappropriate uses, it may be seen as a net gain for rights holders. However, in terms of ancillary values, nonmarket uses, and both social production and welfare, enforcement costs extract a clear loss.

In other words, there are extensive negative social welfare consequences resulting from the granting of exclusive intellectual property rights like the Treaty’s proposed broadcasting rights. While the positive benefits of granting such rights may offset them, any attempt to truly “balance broadcaster rights with the larger public interest” (WIPO, 2006, Preamble) must identify likely costs as well as benefits and consider how much the

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20 For example, since computers and networks may be used for viewing, fixing, and retransmitting broadcasts, the Treaty could require the inclusion of TPMs in computer and networking devices. Those costs are born by all equipment users. And in extreme, since the Internet is global, one could argue that any TPMs must be globally imposed, on all digital technology. This could slow technological diffusion, and the added costs could hamper development of the Internet and the network information economy. This was a concern expressed by some member states at the WPPC meetings, which resulted in the separation of webcasting from the main treaty. Even so, broadcasting TPMs can have the same impact if broadly applied.

21 While reducing piracy losses, added costs increase prices and shrink overall demand. Depending on the price elasticity for the good, net revenues could increase or decrease.

22 Since much ancillary value, as well as nonmarket and social production motivations, comes from the distribution and use of content, rather than its sale, the added cost of TPMs is not offset by any additional market revenues. Thus, the impact of TPMs in these sectors is purely negative.
proposed rights will disturb the existing balance. The nature of broadcasting makes this even more critical, as there is a tendency to conflate the value of the broadcast signal with the value of the content of that signal and thus inflate the perceived value to be gained.

**Value and the economics of broadcasting**

The explicit motivation for the proposed Treaty is to correct for the “opportunities for unauthorized use of broadcasts” resulting from technological innovations (WIPO, 2006, Preamble, paragraph 4). The affiliated explanatory comments note that this covers the “anti-piracy function” of the Treaty (WIPO, 2006, p. 10).²³ While concern about unauthorized use might also be raised over political or secrecy issues, we will focus on analyzing economic impacts. From an economic perspective, “unauthorized uses” are a problem only to the extent that they impact upon the ability of the broadcaster or cablecaster to appropriate the full value of the broadcast signal. In this sense, it is critical to identify what values might exist in the broadcasting signal and whether the proposed Treaty will help broadcasters better appropriate that value.

The Treaty defines broadcasting as “the transmission by wireless means for the reception by the public” of audio and/or video content (WIPO, 2006, Article 5(a)); similarly, it defines cablecasting as “transmission by wire” (WIPO, 2006, Article 5(b)).²⁴ The current draft of the Treaty explicitly excludes original transmissions over computer networks, although it does cover retransmissions of broadcast signals over other

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²³ Piracy tends to refer to cases where the “unauthorized use” is for the commercial gain of the “pirate.” However, if the “authorization” is by the broadcaster, this could be construed as covering existing fair use rights or those granted by other policies or regulations.

²⁴ Satellite transmissions are explicitly included in the definition of broadcasting. Encrypted transmissions where decryption devices are authorized by the broadcaster are incorporated into each definition.
networks. These definitions mirror conventional usage of those terms and thus would seem to limit coverage to traditional broadcast and cable systems. Since these terms have been defined, the Treaty tends to use “broadcasting” as including cablecasting, and this study will do the same.

The basic economics of broadcasting and cablecasting have been well studied and evidence a number of the distinctive characteristics of information goods and services (Albarran, 2002; Alexander et al., 2003; Bates, 1987; Doyle, 2002; Owen & Wildman, 1992; Picard, 2002). Both broadcasters and cablecasters operate in multiple markets, offering a mix of joint and interrelated products and services dealing with the distribution of audio and/or video content to audiences. One key aspect is that broadcasters operate in two linked markets (Bates, 1987): the sponsor market, where broadcasters offer access both to an audience to those who wish to distribute content to that audience,\(^{25}\) and the audience market, where the broadcaster offers valued content access to audiences.\(^{26}\)

The distinctive nature of broadcasting as a good also raises some issues about value. Depending on how you define the product and market, value can exist in several sources, and can vary depending on the market and on whether you’re a supplier or consumer in that market. For the broadcaster, the most obvious source of value is their source of revenues, but that can be convoluted in broadcasting markets. Broadcasters and cablecasters have two primary potential sources for revenue. First, they can sell access to

\(^{25}\) This included both those who merely wish to make content generally available, regardless of whether it is actually consumed, and those who are particularly interested in having their content consumed by a specific audience (i.e., advertisers).

\(^{26}\) Audiences compensate broadcasters through some combination of paying attention to the desired content and the affiliated sponsored content (which is then made available in the affiliated sponsor market), and payments to the broadcaster through subscriptions or donations.
their signal directly to consumers. Second, they can sell access to their audiences to those who wish to have certain content reach audiences (advertisers, governments, etc.). One can also argue that there is social value for broadcasting in their role as a distributor of socially valuable information, but social and ancillary values do not always enter into market decisions. Value in broadcasting can also be confounded by the fact that broadcasters can also create content, and thus the value of the content could also be considered. Finally, broadcasters may find also derive revenues from nonbroadcast activities, such as offering production facilities, or offering to transmit private signals on sidebands (Bates, 1998). However, as nonbroadcast activities, the Treaty should have no significant impact on those sources of value.

Selling access directly is not always feasible. For traditional over-the-air broadcasters, the public good aspects of inappropriability, non-rivalry, and non-depletability make it difficult to charge audiences directly for access to content. The lack of exclusion mechanisms at the advent of broadcasting, the size of the audiences, and the nature and intent of public broadcasting meant that charging directly for access was impractical. But if broadcasters could not charge for access, they could exchange for it. Consumption of broadcasts requires the time and attention of audiences; if audiences weren’t directly paying for access, they were paying for it in terms of attention. Broadcasters could act as aggregators of that attention, and enter a second market, where it was that audience, that attention, which was the product.

Using public good arguments, some countries used government-collected license fees as an indirect way of charging for access. In a way, this anticipates and demonstrates the second source of value: the interest by non-broadcasters to use
broadcasters to distribute information. Governments could see the value in providing news, information, and cultural and educational programming. In other systems, broadcasters developed a second market, finding that not only the government was interested in reaching their audiences. Broadcasters were once again the supplier, but in this case offering access to their audiences as the product, incorporating advertising as a mechanism for exchanging their audiences for revenues. Each of these indirect mechanisms, however, based value on the size of the attracted audience. The greater the audience, the more license fees were collected, and the greater the value of that audience to advertisers. In both systems, there was little incentive for broadcasters to institute direct charges later, when they became technologically practicable. Such action might not only violate broadcast regulations, but would also have the impact of reducing their audiences and thus the revenues from these indirect sources.

Satellite and cable broadcasters have been able to restrict access, due to their particular technologies, latter adoption, and different regulatory standards. This has allowed them to charge for access, and those fees have become their dominant revenue source in the U.S. (Bates & Chambers, 2004; Parsons & Freiden, 1998). In many cases, cable and satellite broadcasters have also been able to tap into the second market, selling access to advertisers and others. Cablecasters, in particular, have also been able to generate additional products and services suitable for their distribution networks, and those markets provide a growing source of revenues (Bates & Chambers, 2004).

Both cable and satellite broadcasting developed when better encryption and exclusion technology was available, and their operation outside of traditional over-the-air broadcast channels allowed them to work to mandate inclusion of TPMs in equipment and receivers. Cable also benefited from requiring a physical connection, which gave it an additional exclusion point.
A third market has opened up with the rise of multichannel systems. Multichannel systems create value by packaging a range of signals and channels for consumers. They have a nearly insatiable appetite for channels and content. As cable networks established value, they were able to charge cable systems for access to their programming, based on the value of the channel and its content to the multichannel distributor’s customers. This is the primary area where broadcasters see the potential to extract additional revenues.

Historically, broadcasters have not been very successful in getting paid for carriage of their signals and content by multichannel systems. In cable’s early years, demand for cable was fairly low in most areas where over-the-air broadcasters had strong signals, and the broadcaster benefited directly from carriage on cable systems, as cable expanded their coverage and markets (Bates & Chambers, 2004; Parsons & Freiden, 1998). As multichannel systems developed in the U.S., the government instituted a compulsory copyright policy to deal with copyright issues arising from carriage. While the compulsory license generated revenues from fees, broadcasters found that the monies went to copyright owners, and that they held relatively few copyrights in the content that they transmitted, and thus broadcasters received relatively little value from the license fees. Later, in the 1992 Cable Act, the FCC gave broadcast stations the authority to either require local multichannel systems to carry their signal, or to negotiate retransmission consent. At the time, some broadcasters thought that this would generate significant additional revenue. However, cable systems generally refused to pay straight fees for carriage, as the actual value added by local stations in most markets was
minimal, despite their relative popularity. Rather, stations and systems tended to make deals for carriage of additional affiliated channels, or other joint activities. One problem from the broadcaster perspective is that there is a limited window to negotiate the agreement, and cable systems have generally been more willing to go without the channel than broadcasters have been willing to withhold their signals from the increasing market share held by multichannel systems.

The new rights to control retransmission may shift the power balance by superseding current retransmission consent and other carriage rules. Providing an exclusive right is likely to give broadcasters a stronger position for negotiation. However, by itself, it will not increase the value of the broadcast signal to multichannel systems, and that has been the real problem; in a world where most people get their television programming through multichannel systems, broadcast stations need carriage on those systems to remain competitive more than the multichannel system needs that particular channel to maintain its customer base. Further, the multichannel operator is interested in the content of the broadcast rather than any inherent value of the signal itself.

The point is that while this can be a source of value to the broadcaster, it may not generate the large returns expected, particularly considering that copyright holders will also want to benefit from any added revenue sources. In addition, the basic law of demand indicates that the more broadcasters extract that value by increasing the price of

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28 The problem for broadcasters were that they were already providing a free signal, and what cable subscribers were generally willing to pay for was access to content and signals not available from local broadcasters. While broadcast signals on cable were highly watched, consumers were generally not willing to pay extra for “free” signals.

29 Various estimates indicate that 80-90% of US television households receive signals from a multichannel programmer. If one broadcaster drops carriage while others in the market do not, that will put that station at a significant competitive disadvantage.
retransmission, the lower the demand for their broadcasts. While broadcasters may gain in one market, they will also lose value in terms of the size and value of their audience.

The joint product distinction of both broadcasting as content and the signal that distributes the content to audiences is critical to this examination for two reasons: first, the value of a broadcast to the audience lies primarily, if not exclusively, in the content; second, the content is already covered by exclusive rights, in terms of copyright and/or performance rights. To the extent that this proposed Treaty is not supposed to usurp or affect those rights (and thus that value), it would seem that the value of any new exclusive rights proposed by the Treaty must be limited to that of the distribution system.

If the rights do extend over the content component of broadcasts, they must necessarily conflict with the similarly “exclusive” rights associated with the content. The broadcaster’s attempt to control the use of content conflicts with the ability to control use granted in copyright and performance rights holder. Any assertion of broadcaster rights in an attempt to increase broadcaster revenues, since no new values are created, must therefore come at the expense of the content rights holders. This would not only negatively impact on content value, but would likely be an untenable gain in the long term. There would likely be immediate and costly litigation to resolve the conflicting “exclusive” rights. And even if broadcasters won in the short term, they are still likely to lose in the long term. Broadcasters require valued content in order to attract audiences, while content creators have alternative distribution mechanisms. In the long term, content owners are likely to adjust their input prices to broadcasters in order to recoup any losses arising from the new broadcaster rights. In fact, content owners would seem to have the upper hand; not only are their rights given primacy by the Treaty, but they
have an increasing range of options for distributing their content. On the other hand, broadcasters need content, since it is what attracts audiences. In open markets, any excess value derived from control over content would seem to eventually flow through to the copyright and performance rights owners. Thus, there is likely to be no long-term added benefit to broadcasters from asserting any rights over content.

Absent of content, the basic market value of a network lies in its ability to distribute content to potential consumers, and in general the value of a network is tied to the value of the product or service being delivered as well as the size of the distribution system.\(^\text{30}\) The economics of networks have also been well researched, including the implications of digital technology and new distribution systems (Bates & Albright, 2006; Benkler, 2006; Shy, 2001). For broadcasters, the direct source of value is based on the size of the audience reached by the transmitted signals (system reach). They benefit in a secondary market by selling access to that audience, and in some cases can benefit from the collection of fees paid for the right to access the signal. The ability of a broadcaster to actually get members of the potential audience to consume the broadcast depends largely on the value of the content, as well as the nature of competition in the market. There might be some ability for broadcasters to provide added value, in terms of convenience of use, enhanced quality, supplemental content, etc., but what the audience principally values is content.

If the primary value of broadcasting is tied to audience size, it is difficult to see how a set of rights that are based on restricting distribution and use of broadcast signals would

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\(^{30}\) This is illustrated by the economic concept of network externalities; the idea that the value of a network is tied to the number of people connected to it. The regulatory structure for both also did not mandate open access, largely due to the fact that both systems were seen as supplementing traditional broadcasters, rather than replacing them.
generate significant additional value or protect the basic signal distribution system. Any additional use, authorized or not, can only increase the reach of the signal, the potential audience that might be exposed to the signal, and thus enhance the basic value of the system, as well as its social value.\textsuperscript{31} There is possible benefit from reducing “piracy” losses for broadcasters that directly charge for access, but it is unclear how significant those are, or that the new rights are needed to combat piracy.\textsuperscript{32} On the other hand, enforcement gains are likely to be at least partially offset by the loss of value resulting from the limiting of audience reach. The net effect will depend on the relative mix of fees and sponsorship as revenue sources for the broadcaster.

Things become a bit more complicated if those seeking access to audiences are concerned with the actual audience reached and not network reach. As broadcasting is largely a synchronous network, it must compete for the attention of potential audiences\textsuperscript{33} Any alternative delivery system for the content (by retransmission, time-shifting, or place-shifting) that provides an alternative for audiences introduces competition for attention and could impact on the actual audience for the primary broadcast or cablecast at a given time. On the other hand, it also opens up new areas of demand for the broadcaster through retransmission to new markets, or through the ability to eventually reach consumers through time-shifting.

\textsuperscript{31} For example, early cable systems often extended existing TV broadcast signals into areas where the broadcast did not reach, increasing the audience for those stations. \textsuperscript{32} Existing copyright and performance rights provide one layer of protection against piracy, and “signal theft” legislation exists in many jurisdictions. \textsuperscript{33} A broadcast is a form of time-constrained mass communication. Content is distributed widely, but the initial broadcast can only be accessed and consumed by those within signal reach at the time of transmission.
The decline in actual audiences currently experienced by many broadcasters is primarily due to competition. The proposed Treaty can be seen as an effort to reduce competition by enhancing broadcasters’ ability to prevent audiences from being able to access their signals via alternative means. There is a question as to how much of this competition and decline can be attributed to unauthorized uses. Most of the losses in audience have been a result of new channels and distribution systems offering greater choice and convenience to consumers. The proposed Treaty provisions would not directly impact on those sources of competition. A small, but increasing, source of competition is emerging in the form of the alternative uses addressed by the Treaty. However, while these uses may compete with the use of the primary broadcast, they are themselves uses and also contribute to broadcast reach and use. Prohibiting these uses might reduce competition slightly for the primary broadcast, but would also have the effect of eliminating additional uses. At this point, audience measurements measure primary users, and thus discount the value of those added uses. Rather than banning them, a more effective strategy would be to find ways to measure that portion of the audience utilizing the alternative channels. Broadcasters are likely to find that claiming and measuring those uses would generate more value than prohibiting them.

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34 Broadcasters face added competition not only from other broadcast and cablecast services, but from new media and entertainment options.
35 An exception might be when unauthorized distant signals are used. However, the Treaty does not directly address this issue, as it only gives broadcasters rights over their signals, not others’. It is possible that broadcasters could conspire to support each other by forbidding import of their signals, but that raises other legal and equity issues.
36 Traditionally, audiences have been measured in terms of those who consume the main broadcast signal at the time of the broadcast. While audience measurement systems do generally include retransmissions in the count, they have yet to develop reliable means of measuring uses after fixation. As these uses increase, audiences may be under-reported, and broadcasters may not be able to fully appropriate the true value of their signal.
It is not clear, then, that exercising the new exclusive rights to prohibit unauthorized uses would resolve the competitive difficulties of broadcasters or return them to old levels of revenues and profits. Short of forcing a return to the old limited-choice monopolistic markets, broadcasters need to identify new sources of value and revenues if they are to maintain their old profit margins. And there is a widely perceived social value in encouraging choice and wider signal distribution. A central tenet of FCC policy is to provide greater access and choice in broadcast signals (Krasnouw, Longley, and Terry, 1982).

From a social perspective, additional uses, whether authorized or not, will generally have positive effects. They provide alternatives for prospective consumers, extending accessibility and choice, both of which generate additional value for consumers. For those seeking to reach those audiences, there would also seem to be a generally positive value, as these additional options are likely to increase total exposure and market efficiency. Only those seeking exposure to a specific signal at a specific time and place might be negatively impacted, if the presence of alternatives reduces actual use at that time and place. In addition, general social welfare is enhanced by a more efficient market and expanded access that the added uses enable.

From this perspective, it would seem that there would be little to be gained by broadcasters from asserting the proposed new broadcasting rights. In contrast, any limitation of broadcast uses would likely disrupt markets, reduce choice and use of broadcasts, and have potentially serious negative social welfare consequences. Thus,

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37 Arguments can be made for potential impacts due to some specific alternative uses, such as time or place shifting. Those will be discussed in terms of the specific proposed solutions. This section will deal only with general signal piracy.
limiting broadcast uses would seem to have a net negative impact on social value and welfare.

**The Value of a Right of Retransmission**

The proposed Treaty gives broadcasting organizations the exclusive right of authorizing retransmission of their broadcasts (WIPO, 2006, Article 9). As discussed above, there is questionable economic value in such a right. The value in broadcasting lies in the willingness of people to pay (in time, access fees, etc.) in order to receive the broadcast. However, it is the content of the broadcast that audiences demand, not the actual transmission. Absent the content of broadcasts (which is covered by copyright and performance rights), what is left that is unique to a broadcaster is the distribution system.

Direct retransmission of a broadcast does not reduce the potential audience for the signal. Rather, it increases it to the degree that the retransmission reaches beyond the original signal. If the retransmission reaches some of the same audience as covered by the original broadcast, some of that audience may access the signal via alternative delivery systems and thus reduce the separate audience for the direct broadcaster. However, they are still consumers of the broadcast and will not reduce the value for the broadcast itself. In addition, any new audiences for the retransmitted broadcast would only increase the total broadcast audience and thus the value of the broadcast.

The impact may be different if part of the value lies in reaching a narrowly targeted audience. As a general rule, targeted audiences can demand a premium value over general audiences, at least to those who seek to reach that audience. Unauthorized retransmissions would expand that audience, potentially diluting it. However, the broadcaster has the option of marketing both the direct audience and the extended
audience (through retransmission); thus, retransmission should not reduce demand for the broadcast among those seeking access to audiences through broadcast signals.\textsuperscript{38}

Thus, it would seem that retransmission is most likely to enhance the basic source of value for broadcasters, by enhancing the potential audience for broadcasts. Recalling the non-rivalrous nature of information goods, retransmission should have a negative impact for consumers only if part of the value is its restricted availability, which should not occur under the Treaty’s definition of broadcasting as public. Rather than harming broadcasters, retransmission is likely to add value in terms of providing consumers with alternative delivery systems and by adding choice in markets not reached by the original broadcast. And under retransmission, the increased reach comes at no cost to the broadcaster. Finally, if we assume that the social value of a broadcast is positive then retransmission can only increase its general social value.

While retransmission is generally indirectly beneficial, the motivation for a retransmission right might be the desire of broadcasters to try to extract that added value. The retransmission of a signal by others suggests that the retransmitter sees a value deriving from that action. An exclusive right can provide a mechanism for allowing the broadcasting organization to try to appropriate some of that value by licensing its authorization. However, one needs to recognize that granting the right does not create new value; it merely allows existing value to be redistributed. In this case, the obvious case is that the broadcaster seeks to gain some of the value gained by the retransmission. In doing so, however, it increases the cost of the signal to the retransmitter; a cost which

\textsuperscript{38} It is possible that demand could be reduced if the content has a negative impact if it reaches non-targetted audiences. Examples might be advertisers wanting to limit ads to test markets, or states engaging in propaganda, where they may face a backlash if the content is distributed to the wrong audience.
is passed along to consumers or may result in the retransmission being dropped. Any
charges for retransmission will reduce uses, and any benefit will be at least partially
offset by losses in “reach” value due to reduced demand.

In addition, remember that audience demand is for content, not the broadcast signal.
Appropriating any value that derives from the value of content reduces the content
owners’ ability to benefit. Content owners and producers will seek to recoup any loss
through increased prices to broadcasters. Today, content providers have alternative
channels for their product and can shift to lower cost distributors or increase their price.
On the other hand, broadcasters must have content in order to attract audiences. 39 Even if
broadcasters argue that they only seek to appropriate value from consumers, this will
result in a lower demand for the broadcasts from consumers, which will in turn lower the
value of the broadcast signal to advertisers and other programming sponsors. In the long
term, content owners will seek to regain those losses, and they are in the better
competitive position to do so. Considering the fact that any enforcement will carry costs,
it is unlikely that broadcasters will be able to extract greater value from authorizing
retransmissions than they will suffer in the consequent reduction in the value of the
broadcast or from the increased costs of content.

If broadcasters seek an additional source of revenue from retransmission, there is one
alternative way for broadcasters to achieve revenues for retransmission without broad
negative effects. That is not through restricting retransmission, but by offering to those
seeking retransmission an improved signal. Adding such value would not only provide a

39 This shift in market power can be seen in the current transition in relationships between
networks and affiliates. The major TV networks used to pay their affiliates for carrying
their signal, but as those contracts expire, networks are requiring stations to pay for
programming.
basis for seeking value from retransmitters, but would also create added value for consumers. This approach would actually increase social value for both broadcasters and audiences.

In summation, if broadcasters limit retransmission, either by fiat or by charging for authorization, they reduce the reach of the broadcast. Since most funding of broadcasters is from those who seek access to audiences or from audience payments, the smaller reach means less market and social value of the broadcast. While exercising those rights may allow broadcasters to better extract value, it is simultaneously reducing that value. Further, it is also unlikely that basing retransmission licensing solely on a legal “right” will generate significant net gain in revenues in the long term; between enforcement costs and the ability of content owners to extract their share of the added revenues, the long term gain is likely to be much less than expected. Broadcasters are likely to find that limiting retransmission is a not likely to generate significant value in most situations, and may actually reduce net profits.

**The Value of a Right to Communicate to the Public**

The most recent draft of the Treaty added a new proposed broadcaster right: “the exclusive right of communication to the public of their broadcasts, if such communication occurs in places accessible to the public against payment of an entrance fee” (WIPO, 2006, Article 10). This right is narrowly crafted to commercial situations and purposes, but will run into the same basic problem as the retransmission right. That is, the “broadcast” component of audience value is based in the content, not in the broadcast signal. To the extent that broadcasters seek to appropriate that value, they will reduce the ability of the content owners to do so, as well as reduce demand for covered
uses and incur added enforcement costs. Further, it seems unlikely that this will be a significant source of revenue for most broadcasters.

As discussed above, while this might seem as a good alternative revenue stream, it is unlikely to be successful for broadcasters in the long run.

**The Value of a Right of Fixation**

From an economic perspective, it is difficult to conceive of any distinct direct value of a right to authorize fixation. The value of broadcasting derives from its ability to distribute content and aggregate audiences and attention. Fixing (recording) a broadcast, in itself, has no direct effect on that ability, and thus no separate value. Indirectly, fixation is a component in a number of alternative uses that might impact on broadcast value. The explanatory comments in the proposed Treaty provide no real motivation for this right; it notes merely that this follows provisions in the WPPT (WIPO, 2006, p.44). As such, this right of fixation would appear to be in direct conflict with the exclusive WPPT rights to control fixation and copyright holder’s rights to control the making of copies.\(^{40}\) As such, it would seem that any value extracted from such a right would necessarily come at the expense of content creators. There is likely to be no immediate impact on consumers, as fixation per se has little value to audiences.

The real value in a right to control fixation comes from the fact that it is a mandatory step in many potential uses that do have value to audiences. Fixation is the precursor of time-shifting, reproduction, and place-shifting. The economic impacts of these uses will be discussed later. Granting broadcasting organizations “rights of fixation” may also be

\(^{40}\) As broadcasts are transient signals embodying content, any fixation of a broadcast, by definition, embodies a fixation of a performance and/or a copy of the content being broadcast.
used to exert some influence over the adoption of technological protection measures (TPMs) in both recording and display devices. This right could, and likely would, be extended to not only recording devices, but any device that can digitally process broadcasts.\footnote{The WIPO Internet Treaty includes an understanding that even transient copies inherent in digital information processing count as copies under copyright law. Digital information processing involves making numerous transient or fixed copies of the information. If the potential for “fixation” is applied broadly, it could affect virtually any digital media device.}

As discussed earlier, the use of TPMs impose considerable market and social costs. TPMs can delay the diffusion of technologies and necessarily adds to their costs. Affiliated legal enforcement costs appropriate social value, extracting it from producers and distributors of intellectual property as well as from consumers. This is one of the sources of serious criticism within the WIPO SCCR members. Many members, as well as consumer and industry groups, are concerned that such rights might limit development and diffusion of digital technologies and new distribution systems and hampering access to information products, particularly in poorer countries (TACD, 2005). Any assertion of these proposed rights would impose significant costs, impact a wide range of markets and information goods and services, and could seriously impair the public’s ability to access and use information. Asserting an exclusive right to control “fixation” would thus be controversial and would likely have significant and widespread negative impacts on social welfare.

**The Value of a Right of Reproduction and Distribution**

The proposed Treaty grants broadcasters the exclusive right of authorizing reproduction of fixations of broadcasts (WIPO, 2006, Article 12), and of authorizing
distribution of original or fixed broadcasts (WIPO, 2006, Article 13). The proposed Treaty does provide for an alternative, granting parties an opportunity to allow specific limited exceptions to that right. These reproduction and distribution rights would seem to be in direct conflict with existing copyright and performance rights. If not, it would have to apply only to that portion of the signal beyond the intellectual property or performance – in other words the carrier wave. Yet the carrier wave has no inherent value to the public or any consumer.

If this right is interpreted as giving broadcasters rights over both the signal and the contents as broadcast, this would usurp the exclusive reproduction and distribution rights of copyright or performance rights holders, and any broadcaster appropriated value would have a direct impact on the ability of content owners’ ability to appropriate value. This may happen directly, with broadcasters competing with content owners in markets for content, or indirectly, by adding a new layer of costs for the content, resulting in higher prices and thus lower sales. In either case, content sales would be negatively impacted, as would any social value arising from the distribution and use of the content.

And as with retransmission and fixation, reproduction and distribution of broadcasts would seem to only increase their ability to be used by audiences, while any prohibition

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42 An interesting legal question is whether such “exclusive” rights would allow them to reproduce and distribute broadcasts without the permission of the creators of the content of the broadcasts.
43 The language appears in Article 17 of the proposed Treaty (WIPO, 2006). It allows parties to extend such limitations or exceptions that are provided for in national intellectual property rights legislation (which would seem to not include traditional, or judicially derived fair use rights). However, Article 17(2) limits these to “special cases” which do not conflict with broadcast organizations’ “legitimate interests” or “normal exploitation” of the broadcast.
44 Interestingly, this interpretation essentially grants broadcasters a legal right to content “piracy,” letting them commercially benefit from selling others’ intellectual property.
would seem to have a negative impact on value to both consumers and broadcasters. As with retransmission and fixation, assertion of any broadcaster rights of reproduction and distribution would thus seem to have only a limited ability to benefit broadcasters, while creating the potential for significant social costs. Thus, there would seem to be little independent economic value to broadcaster “reproduction rights.”

**The Value of Rights following fixation**

The draft Treaty proposes granting to broadcasters two rights concerning uses after fixation: the exclusive right to authorize transmission following fixation (WIPO, 2006, Article 14) and the exclusive right to authorize making fixed broadcasts available (WIPO, 2006, Article 15). The first is essentially the right to control delayed retransmission, or time-shifting, while the second would seem to address “on-demand” type uses. As noted in the two sections above, these would also seem to be in conflict with existing copyright and performance rights. Furthermore, these rights also would seem to conflict with existing public rights to those uses, such as the fair use rights to time-shift granted in the U.S. by the Betamax case.45

Thus, it would seem that broadcasters could only exert this right in terms of not authorizing such uses, and even then this could conflict with the content owners’ rights to allow such uses. Seeking value by prohibiting use is perverse, from an economic perspective. Broadcasters may think that forbidding such uses may reduce direct competition and increase the value of their signal, but as noted in the retransmission analysis, the value is in the consumption of the signal regardless of the channel. Denying alternative means of consuming broadcasts only reduces the value of the broadcast (by

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eliminating the added value of choice and accessibility) and reduces its consumption (reducing the overall value of the broadcast signal). In the presence of widely available substitutes for the audience’s time and attention, seeking to increase prices through artificial scarcity is likely to be ineffective.

And, following the retransmission and fixation analyses, any assertion of these rights will likely result in a series of negative impacts on social economics: enforcement and compliance costs will reduce demand in broadcast markets, affect innovation and diffusion of related technologies and information goods and services, and reduce general social welfare. Conflicts with other IP rights will disrupt and further distort broadcast markets, reducing efficiency and general social welfare. Use of TPMs or prohibitions against these uses will also harm and further disadvantage nonmarket and social production uses that might take advantage of these means of access. Any assertion of these rights will inevitably disrupt the existing balance of broadcaster, IP rights-holders, and public rights and interests, and will likely have negative social and economic impacts. And any initial gains that broadcasters might gain from licensing are likely to be offset by IP rights-holders seeking compensation for the inherent conflict with their existing rights as well as by the long term decline in broadcasting signal value due to increased enforcement and consumption costs. As with several other proposed rights, it is likely that broadcasters can gain long term benefit from the Treaty rights only by never exercising them.

**The Value of Protecting Signals Prior to Broadcasting**

While not expressed as a specific exclusive right, the Treaty provides that broadcasters “shall enjoy adequate and effective legal protection” against unauthorized
use of source or component signals prior to the actual broadcast (Treaty, Article 11).
This protection addresses the problems arising from the interception and use of source materials not intended to be broadcast or, for commercial broadcasters, the source content before the insertion of commercials or sponsor information, and any other information added by the broadcaster to the finished signal.

This is one area where the covered uses are clearly harmful to the broadcaster and content rights holders. Such uses are likely to substitute for using the direct broadcast and, therefore, will detract from demand for the finished broadcasts. Consider the use of broadcasts before the insertion of sponsor content; in this case, the value of the broadcast to the sponsor is reduced as those messages do not reach the intended audience. While users might see some value of having access to such prebroadcast signals, the difference between the value of the prebroadcast signal and the broadcast itself would seem to be fairly small. From a social economic perspective, any such benefit to consumers is likely to be at least partially offset by the loss in user and social value resulting from not consuming the material inserted into the final broadcast. Only in the case where the added material is socially harmful would there seem to be a strong argument for there being a social value to using the prebroadcast signal.

Explanatory comments in the Treaty also identify the consumption of content not intended for broadcast as a motivation for this provision (WIPO, 2006, p.60). From an economic perspective, uses of the pre-broadcast component signals would clearly dilute the value of the finished product and diminish the ability of broadcasters to benefit from their signals. Should the decision to not include raw footage be a result of the perception that the content may be generally harmful, or poorly reflect on the broadcaster, the result
would be a negative value. There might be some social benefit from the availability and use of raw footage, but that would depend on whether the information is itself beneficial.

The covered examples do appear to address situations where the unauthorized uses would clearly be economically harmful to broadcasters and content IP rights holders. There would also seem to be only limited potential for the unauthorized uses to create added social value. There would also be the potential to have serious negative impacts on social welfare should content providers limit their use of broadcasting in order to protect their IP rights and value. On aggregate, there would seem to be at least a reasonable argument in favor of these protections.

Still, it should be recognized that such uses can be controlled by enforcement of existing copyright and performance rights provisions. They can also be largely controlled by minimally intrusive use of TPMs via the use of encryption of prebroadcast signals by the broadcasting organizations themselves. As such, it would seem that the Treaty’s proposed provisions are unnecessary.

Discussion

Broadcasters face a changed marketplace. Technological developments have created new competition, drastically shifted cost structures, and redefined markets. Broadcasting provides a relatively efficient system for distributing audio and visual content to audiences, allowing broadcasters to aggregate audiences and offer sponsor access to audiences. The high cost of market entry and the relative scarcity of viable alternative delivery systems provided broadcasters a degree of market power, which had allowed them to be able to appropriate some of the surplus value generated by the distribution and utilization of audio and video information goods and services.
The rise of alternative distribution systems and technological advances have challenged broadcasters’ market power by providing competition in the delivery of information goods and by providing consumers with greater flexibility in accessing and using content. Not unreasonably, such increased competition has reduced audiences and profits for broadcasting organizations, reductions that are likely to continue into the future. Broadcasting organizations interpret this as a failure of their old markets, a challenge to their monopoly power and status, and a threat to the nature of broadcasting.

One of the principle motivations for policy is to correct market imperfections or failures. Broadcasters may thus see the proposed Treaty as a solution to their problems; gaining additional specific rights provides a legal basis for trying to limit competition and/or to try to appropriate any surplus value in the new uses. From that perspective, broadcasters may see the potential to gain monopoly power and new revenue streams. The gains, however, do come at a cost, as the granting of rights does not create new value, just shifts who can claim rights to existing value. If policy is not based on a full understanding of the full range of potential benefits and costs, it is not likely to achieve the expected results. Further, social policy should consider the full impact of proposed rights and policies, and weigh the relative costs and benefits to industry, consumers, and society at large.

The problems broadcasting organizations face are not primarily due to piracy (unauthorized uses) or market failures per se, but the ongoing transformation and evolution of markets. Granting rights that have limited added value to broadcasters while

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46 Reduced audiences mean reduced value for broadcasting. However, the nature of broadcasting is such that the cost of reaching and attracting that audience is not commensurately reduced. Therefore, reductions in value and revenues will disproportionately affect profits.
creating significant market and social costs creates new and significant distortions in the new marketplace rather than solving old market failures. The apparent failure of the proposed Treaty to understand even the basic economic nature of broadcasting (evidenced by its conflation of content with signal as the source of value, and its inability to recognize inherent conflicts between the proposed broadcaster rights and existing copyright and performance rights) suggests that the proposed solutions are not likely to achieve the desired ends.

This is strongly supported by this paper’s economic analysis, which suggests that any attempt to enforce almost all of the proposed Treaty’s new set of broadcaster rights will likely reduce the core value of broadcasts and, in the long term, will likely offset any initial revenue gains. Not only will the new rights not resolve the revenue problems of broadcasters, their assertion will significantly reduce consumer and social welfare generally.

Attempts to appropriate value through authorizing uses under these rights will negatively impact content producers and owners as well, triggering legal disputes over whose set of “exclusive” rights has priority. Since the Treaty specifically acknowledges priority of copyrights and performance rights (WIPO, 2006, p. 13, 15, 17), broadcasters are likely to lose that battle. Finally, the negative effects of the use of TPMs to assert and enforce the proposed rights are likely to create negative impacts for a wide range of industries and markets beyond broadcasting. The use of TPMs is also likely to slow, if

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47 The right to limit use of prebroadcast signals is valuable to broadcasters. However, this is more a restatement of existing legal rights than a new right. As such, its value is irrelevant to an examination of the overall value of the proposed Treaty.
not completely block, the developing information network economy, particularly in the poorer regions that would benefit most from greater access to information markets.

From a social perspective, the proposed Treaty is likely to prove disastrous. The new rights create no new, added value to broadcasts; at most they redistribute the existing value. Whatever new sources of value broadcasters can appropriate in the short term will come from content providers, from its audience, and/or from general consumer surplus and social welfare. Any restrictions of use reduce the inherent value of broadcasting as a distribution system and will likely reduce the use of broadcasts, and thus any value deriving from that use. As enforcement of these new rights will also be costly, additional value will be lost from the market as well. In the long term, it is likely that the broadcasters will experience a net loss from any assertion of these rights.

It’s likely that someone will argue that the provision of these, or similar, rights to broadcasting organizations are necessary to protect their economic viability (if not vitality), and thus their ability to provide and efficient and relatively inexpensive (to audiences at least) access to a range of socially valuable information. The loss of broadcasting organizations, the argument goes, would result in a significant loss of social value. It is an argument that was used, somewhat successfully at first, to attempt to restrict the development of cable television (Besen & Crandall, 1981; LeDuc, 1973; Parsons & Frieden, 1998). And yet the rise of cable in the U.S. has been reflected in a significant increase in the number television stations, not a decline.

It is far from clear that the proposed rights will contribute to the viability of broadcasting; in fact the analysis suggests that in the long term, these rights will diminish, rather than enhance, the value of broadcasting by making the use of broadcasts more
costly. The assertion and utilization of the proposed rights would also have a negative effect on a wide range of other information markets and services, delay diffusion of innovative technology and services, disadvantage social production sectors, and have strong negative impact on social welfare. In other words, the proposed Treaty is an ineffective solution to the potential loss of social welfare attributable to the demise of broadcasting. If saving broadcasting is the primary motivation for the proposed Treaty, there are far more efficient and effective means for achieving that result than the assertion of a set of problematic rights.
References


