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PIRACY OF LIVE SPORTS BROADCASTING OVER THE INTERNET

HEARING

BEFORE THE

COMMITTEE ON THE JUDICIARY
HOUSE OF REPRESENTATIVES

ONE HUNDRED ELEVENTH CONGRESS

FIRST SESSION

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PIRACY OF LIVE SPORTS BROADCASTING OVER THE INTERNET

WEDNESDAY, DECEMBER 16, 2009

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE JUDICIARY,
Washington, DC.

The Committee met, pursuant to notice, at 11:13 a.m., in room 2141, Rayburn House Office Building, the Honorable John Conyers, Jr. (Chairman of the Committee) presiding.

Present: Representatives Conyers, Jackson Lee, Waters, Delahunt, Johnson, Quigley, Smith, Coble, Goodlatte, Issa, and Rooney.

Staff Present: (Majority) Jason Everett, Counsel; Kirsten Zewers, Counsel; Brandon Johns, Clerk; and (Minority) David Whitney, Counsel.

Mr. CONYERS. The Committee will come to order.

Good morning everyone, particularly our witnesses. This is a hearing on Piracy of Live Sports Broadcasting Over the Internet. The purpose of the hearing is to examine how the piracy of live sporting events over the Internet impacts sports leagues, consumers, broadcasters, and the unique challenges copyright owners face in attempting to enforce their rights on the Web page. More and more of other media, the music, the TV shows, and the sports, is moving to the Internet. Piracy has increasingly injured artists and intellectual property owners as individual consumers have access to faster, more powerful Internet connections.

The Judiciary Committee has convened today's hearings to discuss an emerging form of piracy, that of live broadcast in real-time, especially with regard to sporting events. This is supposed to allow us to examine how new technologies that allow for the streaming in real-time of sporting events also may allow individuals to evade intellectual property laws. And so I look forward to learning from our witnesses about the frequency of Internet piracy of live sporting events, how this type of piracy could negatively affect consumers and what we may want to do about it.

I am pleased now to recognize my friend from Texas, Lamar Smith, the Ranking Member.

Mr. SMITH. Thank you, Mr. Chairman. This oversight hearing focuses on an emerging and disturbing new aspect of Internet piracy, the unauthorized streaming of live television programming. Today the Committee will consider the impact of this piracy on sports leagues. The programming produced by professional and college sports associations, such as the Major League Baseball, the Na-

tional Basketball Association, the Ultimate Fighting Championship, and the National Collegiate Athletic Association, is among the most popular and unfortunately the most pirated programming in the world.

Sports leagues are investing significant amounts to monitor the piracy of their property and provide notices to Internet service providers and web site operators to take down illegally posted content. The cost of these efforts are then passed on to sports fans and consumers when they purchase tickets or subscribe to sports networks. Leagues spend billions of dollars annually to build and market their brands. Half or more of their revenue is generally derived from exclusive television deals, Pay Per View sales, and licensed Internet distribution.

The unauthorized distribution of all forms, live and preproduced video programming, is widely and readily available via the Web. An example of this is when pirated movies become available on the Internet before they are released in movie theaters. There is an old expression that applies here, why buy the cow if you can get the milk for free? Why pay the sporting event when you can watch it on line for free?

The wider adoption of broadband technologies, the widespread availability of inexpensive devices to upload television signals to the Web and the global nature of the Internet together pose enormous challenges to rights holdings.

The Organization for Economic Cooperation and Development has declared the use of P-to-P networks for live piracy has become "a significant threat for the sportscasting industry." The United States Trade Representative has noticed that China, which today has more Internet users than any other nation, is a nation of particular concern when it comes to Internet piracy.

Internet piracy, particularly the theft of live programming, has increased dramatically in recent years. It is clear we need to assess the state of the law and technology and to begin consideration of the steps that ought to be taken domestically and internationally to respond to this new and damaging form of piracy.

Mr. Chairman, thank you for holding the hearing, and I yield back my time.

Mr. CONYERS. Thank you very much. Did any other Member want to bring greetings? I notice Magistrate Hank Johnson, Chairman of a Subcommittee himself has, indicated in the affirmative and the gentleman is recognized.

Mr. JOHNSON. Thank you, Mr. Chairman, for holding this very important—thank you for holding this important hearing on a very important development in the annals of history of communication.

Piracy comes in many forms and no content provider is immune. Today we will examine the impact that streaming piracy has on live sporting events and the unique challenges copyright owners face in enforcing their rights. Specifically, we will hear about how streams are distributed over the Internet and the confines of the Digital Millennium Copyright Act, which is intended to protect copyrighted works in the digital environment.

The effects of piracy are widespread and felt across the Nation. Unfortunately, illegal streaming of sports events is on the rise and negatively impacts our economy. It also hurts consumers. When in-

dividuals illegally stream sports events, companies lose revenue. Consequently companies pass down the cost to consumers who seek to lawfully view live sporting broadcasts on line.

Furthermore, pirating sports events has a negative impact on the sport. If fewer funds are received by rights holders from the sale of the broadcasting rights, then fewer funds will be available to invest back into the sport. It is imperative that Congress act to send the message loud and clear that illegal streaming copyrighted content is unacceptable and will not be tolerated.

I thank the Chairman for holding this hearing, and I look forward to hearing from our witnesses today, all of whom I thank for being here. And I yield back.

Mr. CONYERS. Thank you, Chairman Johnson. We welcome our panelists, a very distinguished group of men and women, Professor Christopher Yoo, not to be confused with John Yoo, no relation.

Mr. YOO. No relation, Mr. Chairman.

Mr. CONYERS. Mr. Ed Durso. Mr. Michael Seibel, Mr. Lorenzo Fertitta, and of course Michael Mellis, who will start us off.

I just want to say this about him, I rarely stay up later than my bedtime to read law review articles, but yours, which exceeded 100 pages, was very fascinating, and I want to compliment you for it.

As Senior Vice President, General Counsel of Major League Baseball Advanced Media, an interactive company of Major League Baseball founded in 2006, the Coalition Against on Line Video Piracy. Prior to that he was Deputy General Counsel for News Media at Mayor League Baseball. He clerked for a Federal court judge and, without diminishing any of his reputation, he graduated with honors from Harvard Law School.

And so we include all of your statements in the record, and we welcome you, Mr. Mellis, to these proceedings.

TESTIMONY OF MICHAEL J. MELLIS, SENIOR VICE PRESIDENT AND GENERAL COUNSEL, MLB ADVANCED MEDIA, L.P.

Mr. MELLIS. Thank you very much, Mr. Chairman. I very much appreciate the kind words.

Chairman Conyers——

Mr. CONYERS. You have to turn the mike on.

Mr. MELLIS. Chairman Conyers—oh, first, thank you very much, Mr. Chairman. I appreciate the kind words that you just said.

Good morning, everyone, Chairman Conyers, Ranking Member Smith and distinguished Members of the Committee. On behalf of Major League Baseball I would like to thank you for the privilege of addressing you this morning. My name is Mike Mellis and I am Senior Vice President and General Counsel of MLB Advanced Media, which is MLB's Internet and interactive media company.

Under the leadership of Commissioner Allan H. Selig, MLB has developed highly successful, diverse and innovative sports media businesses. On television our game telecasts are distributed nationally through DirecTV, ESPN, FOX, inDemand, the MLB network, TBS, and Verizon; locally through broadcast television stations and regional sports networks; and internationally, to over 200 countries and territories and the U.S. Armed Forces overseas.

On the Internet MLB has been a pioneer in distributing live sports. MLB's first live game webcast occurred in 2002, an innova-

tion to better serve our fans in the pioneering tradition of the first radio broadcast of one of our games in 1921 and the first television broadcast of one in 1939.

Today MLB.TV is the world's most successful and comprehensive and live video service on the Internet, distributing thousands of games live each season to a global audience of baseball fans using personal computers and iPhones.

Clearly then rights owners like MLB can be adversely impacted by telecast piracy. And right now there is an emerging type: Unauthorised streaming over the Internet of live television programming of all types, including live sports telecasts and related programming.

The number of sites and services involved in this phenomenon is significant and has grown rapidly. They are believed to be located in many nations, including the People's Republic of China and the United States. Many are open doors, permitting any type of television programming to be streamed live, persistently and globally without authorization from copyright owners.

This poses a threat to the global televised media sector. Although there is much that remains unknown about this problem, particularly with respect to its offshore aspects, it is clear that on an annual basis tens of thousands of hours of live television programming from networks around the world are being pirated. Included is significant piracy of live sports.

In our rights enforcement efforts throughout the past several years, during which we have catalogued thousands of piracy incidents, the dominant pattern we have seen is piracy occurring through streaming over peer-to-peer services based China. Late last year we observed a newer pattern involving livestreaming user generated content sites, sometimes called lifecasting sites, most of which are located in the United States.

We have also seen that when operators of sites and services decide to take affirmative steps to prevent or block unauthorized streaming the piracy can be substantially mitigated.

Our copyright law is clear, this piracy is copyright infringement. However, domestic copyright infringement—excuse me, domestic copyright litigation is a remedial tool available only in limited circumstances. This is because the piracy is global, often involving sites and services that operate entirely offshore, outside the effective reach of our courts. Approximately 75 percent of the pirated retransmissions of our game telecasts have occurred through offshore sites and services, and approximately 50 percent of the total through Chinese sites and services. Under these circumstances the remedial steps available to the private sector are limited.

We therefore believe that international cooperation about this problem must be improved. Most nations are both exporters and importers of television programming. So we see common ground, both in terms of shared economic interest and legal obligations for the U.S. and its trading partners to work cooperatively to curtail this problem.

We therefore recommend that Congress and the Administration give this matter priority in our Nation's ongoing efforts to improve intellectual property rights protection and enforcement on a worldwide basis.

In conclusion, this emerging breed of piracy is international in scope and has demonstrated growth characteristics. The threat it poses to the U.S. televised media sector must be taken seriously. We believe it is prudent to move proactively against this threat now, and we commend this Committee for shining a spotlight on it today through this hearing.

As we develop more experience in this area, we look forward to the opportunity to make additional recommendations to you.

Once again, thank you very much for your interest in the matter and for the privilege of addressing you this morning.

[The prepared statement of Mr. Mellis follows:]

PREPARED STATEMENT OF MICHAEL J. MELLIS

STATEMENT OF MICHAEL J. MELLIS,
SENIOR VICE PRESIDENT AND GENERAL COUNSEL, MLB ADVANCED MEDIA
BEFORE THE COMMITTEE ON THE JUDICIARY,
UNITED STATES HOUSE OF REPRESENTATIVES, 111TH CONGRESS, 1ST SESSION
DECEMBER 16, 2009

Hearing on Piracy of Live Sports Broadcasting Over the Internet

Chairman Conyers, Ranking Member Smith and distinguished members of the Committee, on behalf of Major League Baseball, I would like to thank you for the privilege of addressing you this morning. My name is Mike Mellis and I am Senior Vice President and General Counsel of MLB Advanced Media, which is MLB's Internet and interactive media company.

Under the leadership of Commissioner Allan H. Selig, MLB has developed highly successful, diverse and innovative sports media businesses. On television, game telecasts are distributed nationally through DirecTV, ESPN, Fox, inDemand, the MLB Network, TBS and Verizon; locally through broadcast television stations and regional sports networks; and internationally, to over 200 countries and territories and the U.S. Armed Forces overseas. On the Internet, MLB has also been a pioneer in distributing live sports. MLB.com's first live game webcast occurred in 2002, an innovation to better serve our fans in the pioneering tradition of the first radio broadcast of a game in 1921 and the first television broadcast in 1939. Today, MLB.TV is the world's most successful and comprehensive live video service on the Internet, distributing thousands of games each season to a global audience of baseball fans on personal computers and iPhones.

Clearly, rights owners like MLB can be adversely impacted by telecast piracy. And right now there is an emerging type: unauthorized streaming over the Internet of live television programming of all types, including live sports telecasts and related programming.[1]

The process starts by plugging a cable or satellite television line into a personal computer connected to the Internet. A TV tuner card or stick with accompanying software allows the computer to capture the television signals and function like a TV. These cards and sticks cost less than $100 each and are widely available. Next, with the help of a free streaming over peer-to-peer service[2] ("p2p") software download or other enabling technology, the signals are uploaded onto the public Internet for worldwide viewing.

The number of sites and services involved in this phenomenon is significant and has grown rapidly.[3] They are believed to be located in many nations including the People's Republic of China, the Republic of Korea, Sweden and the United States.[4] Many are open doors,

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[1] *See e.g.*, Organisation for Economic Co-operation and Development, *Case Study: The Sports Rights Owners Sector, in* Piracy of Digital Content at 87-115 (2009) [hereinafter OECD]; Michael J. Mellis, *Internet Piracy of Live Sports Telecasts*, 18 Marq. Sports L. Rev. 259-284 (2008) [hereinafter Mellis].

[2] Streaming over peer-to-peer networks involves media streams being passed (in real-time) through the Internet among network participants, rather than from a central server to an end user. *See* OECD, *supra* note 1 at 29 ("...recent technological developments also permit P2P networks to also be used for the unauthorised distribution of live broadcasts of sports events, which has become a significant threat for the sports broadcasting industry....").

[3] *See* OECD, *supra* note 1, at 106-112 for specific industry examples about the number of sites and services involved in the piracy.

[4] MLB Advanced Media Comments, Special 301 Review: Identification of Countries Under Section 182 of the Trade Act of 1974, USTR-2009-0001-0037, at 2 (Feb. 19, 2009) *available at* http://www.regulations.gov/search/Regs/home.html#documentDetail?R=09000064808bc81b [hereinafter MLB Advanced Media Comments]. These comments were submitted on behalf of the Sports Coalition, which consists of the following amateur and professional sports leagues, associations and related entities: MLB; MLB Advanced Media; National Basketball Association; National Collegiate Athletic Association; National Football League; and NHL Enterprises, L.P. (the licensing arm of the National Hockey League).

permitting any type of television programming to be streamed live, persistently and globally, without authorization from copyright owners. Some stream dozens of television networks at a time. For example, one industry association recently described pirate services based in China as responsible for streaming "entire bouquets of pay-TV channels" including the Cartoon Network, CNN, Discovery Channel, Disney Channel, ESPN and HBO.[5] Many parse out programming into genre or game-specific "channels."

This poses a threat to the global televised media sector. Although there is much that remains unknown about this problem, particularly with respect to its offshore aspects, it is clear that on an annual basis, tens of thousands of hours of live television programming from networks around the world are being pirated. Included is significant piracy of live sports telecasts and related programming of the world's premier sports organizations. For example, earlier this year, MLB, NBA, NCAA, NFL and NHL informed the Office of the U.S. Trade Representative ("USTR") that a hub of online television piracy called "TVAnts," based in China, was pirating nearly every one of their live event telecasts and profiting from it by selling advertising on the TVAnts media player.[6]

In our rights enforcement efforts throughout the past several years, during which we have identified and logged thousands of piracy incidents, the dominant pattern we have seen is piracy occurring through p2p services based in China, a nation on the USTR's "Priority Watch List" because of its intellectual property rights protection and enforcement problems.[7] Late last year,

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[5] Cable & Satellite Broadcasting Association of Asia Comments, Special 301 Review: Identification of Countries Under Section 182 of the Trade Act of 1974, USTR-2009-0001-0013.1 (Feb. 17, 2009) *available at* http://www.regulations.gov/search/Regs/home.html#documentDetail?R=090000648085bcea.

[6] MLB Advanced Media Comments, *supra* note 4, at 3-4.

[7] Office of U.S. Trade Rep., 2009 Special 301 Report at 13-15 (Apr. 30, 2009) *available at* http://www.ustr.gov/about-us/press-office/reports-and-publications/2009/2009-special-301-report [hereinafter USTR] ("[o]f particular concern is the rise of Internet piracy in China, especially given its emergence as a leading nation in terms of the number of Internet, broadband

we observed a newer pattern of piracy involving live streaming user-generated content sites, sometimes called "lifecasting" sites, most of which are located in the U.S.

We have also seen that when operators of sites and services decide to take affirmative steps to prevent or block unauthorized streaming, the piracy can be substantially mitigated. These steps can include: clear warnings against service misuse; account termination for violators; prevention through screening (including the possibility of real-time content filtering); and cooperation with copyright owners, including immediate take-down of unauthorized streams upon notice.

Our copyright law is clear: the piracy is copyright infringement.[8] However, domestic copyright litigation is a remedial tool available only in limited circumstances. This is because the piracy is a global phenomenon, often involving sites and services that operate entirely offshore, outside the effective reach of our courts. Pirates take advantage of the borderless Internet and readily available technologies to distribute streams worldwide. To illustrate this point: approximately 75% of the pirated retransmissions of our game telecasts have occurred through sites and services located offshore, and approximately 50% through sites and services located in China.

Under these circumstances, the remedial steps available to the U.S. private sector are limited. We therefore believe that coordinated initiatives are needed to arrive at enduring solutions, and are encouraged by several already underway. One private sector initiative is the Coalition Against Online Video Piracy, a forum through which more than fifty worldwide sports

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and mobile device users. Strong action to curb trademark counterfeiting and copyright piracy on the Internet is critical to the future of IPR [intellectual property rights] protection in China.").

[8] *See Twentieth Century Fox Film Corp. v. iCraveTV*, 2000 U.S. Dist. LEXIS 11670 (W.D. Pa. Feb. 8, 2000); *cf.* Register of Copyrights, Satellite Home Viewer Extension and Reauthorization Act Section 109 Report at p. xii, 181-189 (June 2008), *available at* http://www.copyright.gov/reports/section109-final-report.pdf (retransmissions of television programming over the Internet require licenses from copyright owners).

organizations (including MLB), entertainment companies, telecasters and trade associations share information, resources, experiences and strategies.[9] One private-public sector initiative is the ongoing dialogue that MLB, NBA, NCAA, NFL and NHL have with USTR. USTR should be commended for its early identification of this matter as an international intellectual property rights protection and enforcement issue in its 2008 and 2009 Special 301 Reports to Congress.[10]

We also believe that international cooperation about this problem must be improved. Most nations are both exporters and importers of television programming. So we see common ground – both in terms of shared economic interests and legal obligations – for the U.S. and the nations with which it engages in international trade to work cooperatively to stop Internet-based television piracy. We therefore recommend that Congress and the Administration give this matter priority in our nation's ongoing efforts to improve intellectual property rights protection and enforcement on a worldwide basis.

In conclusion, this emerging breed of piracy is international in scope and has demonstrated growth characteristics. The threat it poses to the U.S. televised media sector must be taken seriously. We believe it is prudent to move proactively against this threat now, and commend this Committee for shining a spotlight on it today through this hearing.

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[9] *See* http://web.caovp.com.

[10] Office of U.S. Trade Rep., 2008 Special 301 Report at 10 *available at* http://www.ustr.gov/about-us/press-office/reports-and-publications/archives/2008/2008-special-301-report ("[u]nauthorized retransmission of live sports telecasts over the Internet is reportedly becoming an increasing problem internationally, particularly in China"); USTR, *supra* note 8, at 5 ("[u]nauthorized retransmission of live sports telecasts over the Internet continues to be a problem in many countries, particularly in China"). Another initiative involved the U.S. Copyright Office and Patent and Trademark Office in connection with their representation of the U.S. at the World Intellectual Property Organization's ("WIPO") discussions about a proposed Treaty for the Protection of Broadcasting Organizations. The U.S. delegation should be commended for specifically identifying the matter of Internet piracy of television programming (in its June, 19 2007 statement during a WIPO Standing Committee for Copyright and Related Rights session) as one that could be addressed in an appropriately crafted treaty. *See* Mellis, *supra* note 1, at 276.

As we develop more experience in this area, we look forward to the opportunity to make additional recommendations to you. Once again, thank you very much for your interest in this matter and the privilege of addressing you this morning.

Mr. CONYERS. Thanks, Mr. Mellis.

Ultimate Fighting Championship has been the main activity of Mr. Lorenzo Fertitta, our next witness. He has also been a casino executive, a sports promoter, and he has got degrees from San Diego University and the Stern School of Business at NYU.

Welcome to our hearing, sir.

TESTIMONY OF LORENZO J. FERTITTA, CHIEF EXECUTIVE OFFICER, ULTIMATE FIGHTING CHAMPIONSHIP

Mr. FERTITTA. Thank you, Mr. Chairman. Thank you, Chairman Conyers. Thank you, Ranking Member Smith, and distinguished Members of the Committee. I would like to thank you for inviting me to appear today to discuss the on-line streaming of stolen copyrighted works, including pirated live sporting events. It is a true honor for me to be here, and I am pleased to explain how unlawful live streaming of our Pay Per View events adversely impacts our business.

The piracy of live sporting events is illegal, it kills jobs and threatens the expansion of U.S.-based companies.

In 2001, my brother and I along with our friend Dana White, purchased the nearly bankrupt UFC. We saw great potential in the UFC when many thought we were crazy. We took a great risk, but today the UFC is a phenomenal success, creating and impacting thousands of jobs for our athletes, licensees, partners, and affiliates. That success is threatened by the theft in retransmission of our live Pay Per View events, which account for nearly half of our revenues.

Our copyright protected works are critical to our survival, yet they are infringing—yet there are infringing web sites where you will find almost any type of content which is all likely pirated. These include live UFC events, NFL, NBA and MLB games, they Olympics and virtually every TV show and movie.

If copyrighted works are allowed to be pirated with impunity, the potential effects on U.S. producers of entertainment programming, including the thousands of jobs that they create, will be disastrous.

The UFC is potentially losing tens of millions of dollars a year from piracy. Here is how the theft occurs. With a simple adapter purchased from any retail electronic store like the one I hold in my hand, someone with access to one of our live events reproduces the program and retransmits it over the Internet with the aid of these new web sites. The site then allows any user to view the programming without authorization or payment. These unauthorized viewers watch the live event just like those who lawfully purchased the content through Pay Per View.

Just last month the broadcast of UFC 106 had over 271 unauthorized streams with over 140,000 views, and those were just the streams that our piracy team was able to locate.

We do our best at considerable expense to have our copyrighted content removed from these web sites. We have a team of in-house technicians scanning the web sites and chatrooms to find our pirated content. We also have hired several private vendors to assist us in this effort.

However, even if our—even after our request the streaming web site takes down our pirated content, it is often too late because the value of our content is extremely perishable. A match can be over in seconds. So even if the web site takes the infringed content down within 15 minutes, the damage is done.

I would like to emphasize that as a business entrepreneur I applaud the development of technologies that help consumers access entertainment in more robust and creative ways. Indeed, the UFC constantly employs new technologies to provide our fans with the

content they love and the format they desire, and we in no way want to discourage the development and use of legitimate methods of distribution. However, the use of technology to circumvent intellectual property laws and aid the piracy of content is something that we cannot and should not tolerate.

Based on our observation, many of these new websites are making fortunes by aiding in the theft of our content and making it available through their web sites. While these sites purport to be a from for users who share their own original user generated video content, they cannot deny that watching a live Pee Wee football game will not generate much, if any, viewer interest. Certainly it would not drive enough traffic to rate a viable business based on an advertising revenue model. The truth is that most of the content that is generating any real traffic consists of infringing streams of copyrighted works.

To make matters, worse the web sites often actively promote or induce infringement by instructing users on how to upload live content from their television computer or other device. I submit that they have deliberately chosen not to take reasonable precautions to deter rampant infringement on their sites because they profit from the availability of infringing streams on those sites.

As the Committee examines this important issue we believe that there are steps that could be taken to help alleviate these problems. web site operators are in the best position to stop the retransmission of stolen live streaming content. For example, they should not permit streaming content unless they receive confirmation that the person uploading the stream is authorized to do so. They should take steps to disable instantly the ability from pirates from uploading content, including blocking any uploads from their IP addresses. They should also institute strict limits on the number of viewers that can see a particular stream.

These sites should preserve identifying information about their users, and they should require such information as a condition of providing users access to their streaming technology web sites.

Finally, they should incorporate the latest technologies, perhaps electronic fingerprinting, to prevent the piracy that they are currently aiding.

Mr. Chairman, we are at a critical moment in the evolution of digital content delivery. It is critical that our courts and our policymakers send an unambiguous signal that users and companies who engage in these activities should not be allowed to operate beyond the reach of the law and to examine our laws to see if any updates may be needed. If the rampant piracy via these new sites is allowed to continue, it threatens the financial viability of the UFC and many other businesses that rely upon these live broadcasts.

I want to thank the Committee again for giving me the opportunity to testify today. We at the UFC would be pleased to assist the Committee in any way and answer any questions. Thank you.

[The prepared statement of Mr. Fertitta follows:]

PREPARED STATEMENT OF LORENZO J. FERTITTA

Hearing on "Piracy of Live Sports Broadcasting Over the Internet"

Before the United States House of Representatives Committee on the Judiciary

Statement of Lorenzo J. Fertitta
Chairman and Chief Executive Officer
Zuffa, LLC / Ultimate Fighting Championship®

December 16, 2009

Chairman Conyers, Ranking Member Smith, and distinguished Members of the Committee, thank you for inviting me to appear today to discuss issues raised by certain new websites that stream stolen copyrighted works, including pirated live sporting events. The piracy of live sporting events is illegal; it kills jobs, and threatens the expansion of U.S.-based companies. My name is Lorenzo Fertitta and I am the CEO of Zuffa, LLC, owner of the Ultimate Fighting Championship® (UFC®). It is a true honor for me to be here, and I am pleased to explain how live streaming of our pay-per-view events adversely impacts our business.

My testimony is divided into four parts. Part one provides the background on UFC®'s business model and the sport of Mixed Martial Arts (MMA), and the importance of the delivery of our copyrighted content via pay-per-view, to the success of the UFC®. Part two explains how stealing our copyrighted content and streaming our live events hurts our business. Part three gives an overview of the methods used to distribute our copyrighted content and, finally part four provides some sensible steps that can be taken to address this emerging problem.

Part One -- The UFC®, the Sport of MMA and our Copyrighted Content

The Ultimate Fighting Championship organization is a major creator of copyrighted entertainment content, both live events as well as taped content. Our sport is Mixed Martial Arts or MMA.

MMA has a rich history and tradition dating back to the original Olympic Games in Athens. About 80 years ago, a Brazilian form of MMA known as Vale Tudo sparked interest in the sport that we know today, a sport which is essentially a combination of all martial arts.

In 2001, my brother Frank and I, along with another fan of the sport and a boxing trainer, our friend Dana White, were presented with the opportunity to purchase the UFC® organization which was nearly bankrupt. We saw the great potential that the UFC® had as a real sports league when many thought we were crazy.

Many professional sports leagues have been created and just about as many have failed. We took a great risk, but today the UFC® is a phenomenal success, creating and impacting thousands of jobs for our athletes, licensees, partners and affiliates.

Additionally, the influence of UFC®'s popularity has extended far beyond just the sport of MMA to include UFC® branded gymnasiums, the "UFC® Undisputed" videogame, and other lifestyle products.

Having served as a member of the Nevada State Athletic Commission for four years, I was determined, along with my brother and Dana, to turn MMA into a sanctioned sport,

with proper oversight from the state athletic commissions that would protect the health and safety of the fighters, and preserve the integrity and legitimacy of this exciting sport. The sport is now sanctioned in 42 of the 48 states that have an athletic commission, and the UFC® only holds events in those states that have formally sanctioned the sport.

Mixed martial arts athletes are experts in virtually every discipline – from Tae Kwon Do, Judo, karate, Brazilian Jiu Jitsu, Kung Fu and Sambo. For an athlete to be truly successful he needs to have training in each of the martial arts, wrestling, boxing and kick-boxing. Most of our athletes are college graduates, many even with advanced degrees, and many are former collegiate or Olympic wrestling competitors. While they are fierce competitors inside the Octagon, they are some of the finest people with whom I have had the pleasure to be associated.

We distribute our sporting events to our fans through multiple platforms. We offer twelve to fourteen live pay-per-view events annually through cable and satellite providers to both residential and commercial customers. In fact, we have been the largest pay-per-view provider in the world since 2006, with over 22 million residential transactions during that timeframe. The UFC® is also the largest distributor of content to commercial locations via our network of over 5,000 restaurants and bars in North America. We also distribute content, including the highly rated "The Ultimate Fighter®" reality program on Viacom's SPIKE TV network. We are growing internationally and currently distribute UFC® programming in over 125 countries and territories. We also provide a wide variety of online and mobile products including our live pay-per-view events.

UFC® content is distributed worldwide to over 400 million households across over 125 countries and territories. Due to its surging popularity, MMA has attracted sell-out crowds at arenas across America, which is good news for arena owners, their employees, and the cities and states that reap increased jobs, tourist expenditures and tax revenues. UFC® sells out nearly every venue where it holds events and frequently breaks attendance and gate records. As an example, over 19,000 people attended a March 2007 event at Nationwide Arena in Columbus, with approximately 40 percent of attendees (8,000) visiting from outside Ohio, a boon for transportation, hotels, restaurants and retail in Columbus. The overall economic impact of our August 8, 2009 event at the Wachovia Center in Philadelphia was $11.9 million in salaries and wages for 106 jobs. Taxes paid to local governments were $325,372.

We are constantly looking for innovative ways to bring our loyal and valued fans content in the format they desire. We distribute our archived products, and provide a transactional model for our content online, and on gaming devices. We are also exploring the possibility of distributing our events via digital technology to movie theatres.

Part Two -- The Problem of Copyright Piracy and Unauthorized Streaming Sites

Protecting our copyrights, like any other content company, is critical to our survival. The challenges we face are not unique to our sport or our company – all the major sports leagues have their content stolen. Furthermore, these challenges are not limited to live entertainment. If you visit some of these websites, you will find almost any type of content, which is likely all pirated, ranging from live NFL games, NCAA basketball

March Madness games, the Olympics, as well as any episode of Entourage, or even the latest theatrical releases of a feature film.

At the outset, let me state that I am not here with any specific legislative solutions. We believe it is important for the Congress, and specifically this Committee, which has played a pivotal leadership role in the protection of intellectual property, to be aware of some of the new technological challenges that are aiding the massive piracy of copyrighted works. If copyrighted works are allowed to be pirated with impunity, the potential effects on US producers of entertainment programming, including the thousands of jobs that they create, will be disastrous.

The challenge that I am speaking about is that these new websites are allowing and encouraging rampant piracy of live events through streaming technologies.

The UFC® is potentially losing tens of millions of dollars in revenues because our content is streamed through these websites. Here is how it works: with a simple adapter that can be purchased at any Radio Shack or Best Buy (that I am holding here), someone with access to one of our live events reproduces the program and retransmits it on the Internet with the aid of these new websites, such as the one represented on this panel today. The website that allows this retransmission then allows any user that can access the site to view the programming without authorization or payment. These unauthorized viewers watch the event live, in the same quality and with the same ease as those who lawfully purchased the content through pay-per-view. An unlimited number of viewers can watch the pirated program from just a single feed uploaded to the website. Just last month, the broadcast of UFC® 106 from the Mandalay Bay in Las Vegas, Nevada, had

over 271 unauthorized streams with over 140,000 views, and those are only the ones that our anti-piracy team and consultants identified. There were likely more streams that we simply couldn't find.

We do our best, at considerable expense, to have our copyrighted content removed from these websites. We have a team of in-house technicians scanning known websites and chat rooms to help find our pirated content. We also have engaged several private vendors to assist us in this effort. Even if one of the streaming websites takes down our pirated content, it is often too late and an insufficient remedy to limit our losses. The value of our content is extremely perishable. A bout can be over in seconds. Even if the website takes the infringed content down within 15 minutes, the damage is done because the pirate viewer has already seen and extracted all of the value of our live content. As you can imagine, once the event is over, there can be a quick dissipation of the economic value of our content, which is perhaps different from other types of non-live programming. Moreover, even if the content is removed, pirate viewers are often directed by other users to continue to watch the event on another stream which has been embedded in other feeds -- and that could happen on the SAME website. It is just another feed of the same program or live event uploaded by another, or the same, pirate.

Streaming live content is unfortunately simple. Coupled with much greater access to broadband and faster processing speeds for personal computers, cell phones and other devices that allow access to the Internet, there is real concern that pirated live streaming content will become the norm. These new websites make it simple to upload live streaming content and actually encourage it. Their entire business model is predicated on

drawing the maximum number of visitors to the site so that they can reap higher and higher advertising revenues. Certainly, few people are signing on to watch live pee wee soccer games. Let's be honest, viewers are signing on to watch pirated copyrighted content.

These websites present the creative community with new challenges similar to those challenges that music publishers and recording artists faced with Napster, Grokster and similar technology just a decade ago. I do not have sufficient mastery of the technical details to venture an opinion on how these streaming technologies will develop, but it is clear that these sites are making their money on the backs of stolen copyrighted works.

I want to emphasize that as a business entrepreneur, I applaud the development of technologies that help consumers access entertainment in more robust and creative ways that take advantage of the efficiencies that new developments can provide. I believe that we must preserve an environment that encourages the creation and advancement of new technologies that provide enhanced quality of content and allow for expanded opportunities for delivering such content to meet the needs of consumers. Indeed, the UFC® constantly employs new technologies to provide our fans with the content they love in the format they desire, and we would in no way want to discourage the development and use of legitimate methods of distribution.

However, the use of technology to circumvent our intellectual property laws and aid in the piracy of our content is something that we can not and should not tolerate.

Part Three -- Websites Facilitating Piracy of UFC® Content

Based on our observation, many of these new websites are making fortunes by aiding in the theft of our content and making it available through their website. Rather than building businesses that respect intellectual property rights, many of these streaming sites, some of which reside outside the United States, are building their business models by exploiting the infringing potential of the streaming technology.

Justin.tv, which is represented on this panel, is only but one such website. It just happens to be the most user-friendly at the moment. To their credit, they have reached out to us recently to explore ways to stem the streaming of our pirated content. Reserving all of our rights to seek redress to the fullest extent of the law, we are hopeful that these new efforts may present a part of the solution to this dilemma. We wish other websites would also recognize their role in the piracy of our content and work to find technological and other solutions to prevent it.

While these sites purport to be a forum for users to share their own original "user generated" video content, they cannot deny that watching a live pee wee football game will not generate much, if any, viewer interest. Certainly it would not drive enough traffic to create a viable and thriving business based on an advertising revenue model. The truth is that most of the content that is generating any real traffic consists of infringing streams of copyrighted works. To make matters worse, the websites often actively promote or induce infringement by instructing users how to upload live content from their television, computer or other device.

Some of these websites perfunctorily offer tools to copyright owners to engage in self-help take-downs. However, they have deliberately attracted users by allowing and inducing users to upload infringing works, thereby drawing traffic to their website. This has enabled some to gain a commanding market share, earn significant advertising revenues, and presumably increase their enterprise value.

I submit that they have deliberately chosen not to take reasonable precautions to deter the rampant infringement on their sites because they directly profit from the availability of popular infringing streams on those sites.

I think it is wrong and seems unfair for these sites to shift the burden entirely onto copyright owners to monitor the streaming sites on a minute-by-minute basis during our live events to detect infringing video streams and send notices to the sites demanding that it "take down" the infringing material while they profit from the traffic and ensuing advertising revenues.

Moreover, some of these websites have deliberately withheld the application of certain available copyright piracy take-down tools in order to coerce content owners to grant them certain assurances limiting our rights to bring lawsuits.

Mr. Chairman, I am not a lawyer, but my lawyers tell me that it is well established in our laws that those who aid and abet copyright infringement are no less culpable than the direct infringers themselves. Whether it is through "contributory infringement," which occurs when "[o]ne who, with knowledge of the infringing activity, induces, causes, or materially contributes to the infringing conduct of another," or through "vicarious

liability," which occurs when one "has the right and ability to supervise the infringing activity and also has a direct financial interest in such activities," it is clearly illegal.

We at the UFC® are examining all of our options. Unless these websites voluntarily take the proper measures to prevent pirates from streaming our copyrighted content, we are faced with the unenviable choice of either turning a blind eye to rampant, pervasive and potentially massive theft, or filing infringement actions against the websites and/or the individual users. Neither is a preferred solution, but legal redress may become necessary.

Part Four – Some Sensible Next Steps

As the Committee examines this important issue, we believe there are some steps that could be taken to help alleviate these problems. It is unfair for content owners to bear the brunt of the costs of this theft. Website operators must be active participants in thwarting the retransmission of stolen live streaming content. For example, they should not permit streaming content through their site unless they receive a positive expression that the person uploading the stream is authorized to do so. They should take whatever steps necessary to disable the ability of pirates from uploading content, including blocking any uploads from their IP address. They should also institute strict limits on the number of viewers that can see a particular stream. We also hope that these sites are keeping and preserving identifying information about their users, and if they currently are not, that they take the responsible step and require such information as a condition of providing users access to their streaming technology hub on their websites.

Finally, increased vigilance by the government, including in the executive branch, at the United States Trade Representatives office, the Department of Justice, the Department of Commerce and others, is needed to help limit and deter this burgeoning criminal activity, which is increasingly international.

Conclusion

Mr. Chairman, we are at a critical moment in the evolution of digital content delivery. We need everyone to be educated that unauthorized redistribution or display through streaming of copyrighted materials is wrong. It is critical that our courts and policymakers send an unambiguous signal that users and companies who engage in these activities should not be allowed to operate beyond the reach of the law, and to examine our laws to see if any updates may be needed, as Congress has done from time to time. If the rampant piracy via these new sites is allowed to continue, it threatens the financial viability of the UFC® and many other businesses that rely upon live broadcasts.

I want to thank the Committee again for giving me the opportunity to testify today. We at the UFC® would be pleased to assist the Committee in its examination of these important issues and I am happy to answer any questions

Mr. CONYERS. Thanks, Mr. Fertitta.

Our next witness is Michael Seibel, an amazing young man, cofounder and CEO of the web site Justin.tv, which has been the largest live video site on the Web with more than 30 million visitors each month. And before that he was campaign director for our former colleague Kweisi Mfume, and we recognize his talent because he is a political science graduate of Yale University.

Welcome to the hearing.

TESTIMONY OF MICHAEL SEIBEL,
CHIEF EXECUTIVE OFFICER, JUSTIN.TV INC.

Mr. SEIBEL. Chairman Conyers and Ranking Member Smith and Members of the Committee——

Mr. CONYERS. Push the button.

Mr. SEIBEL. Thank you for allowing me to testify today.

Justin.tv is a privately owned technology start-up, formed in 2006, and based in San Francisco, with 32 employees. We have raised capital from some of the investors and engineers behind TiVO, Google, Twitter, Skype, Hotmail, and many other well-known technology companies. We provide a platform that empowers people to create and share live video online. Our site is the modern equivalent of the town square, but instead of standing on a soap box to be heard a user can broadcast his or her message to the world.

Our vision is to make live video part of the every day Internet experience in the same way that other companies have brought online images, news and video clips into the mainstream. In a time of traditional media consolidation, Justin.tv is providing an important alternative platform for the distribution of live video content.

In addition to providing everyday people with access to large audience, we have worked with a wide variety of content owners, advertisers, and entertainers to help them increase awareness of their content and services. In 2009 alone Comcast and G4tv utilized Justin.tv for live coverage of E3, the largest video game conference in America. MicroSoft produced a 10 episode live show on the site, attracting over 2 million potential new customers. And the Jonas Brothers broadcast live on Justin.tv promoting their Disney movie, which went on to gross almost $40 million worldwide.

We aim to meet the needs of everyone, from individuals to large corporations. Because we provide thousands of channels of content 24 hours a day, 7 days a week, it is impossible for Justin.tv to manually monitor its user broadcasts. The DMCA recognizes this impossibility, providing online service providers like Justin.tv with a safe harbor from copyright infringement liability. We comply with the DMCA by, among other things, responding to take down notices and terminating the accounts of repeat infringers expeditiously.

Like Justin.tv, all four major sports leagues host user generated content on their web sites and rely upon the DMCA to protect themselves from liability for the content uploaded by their users. We work with copyright holders to go above and beyond the DMCA in our effort to ensure that unauthorized content does not appear on the site.

One example of this effort is our copyright protection system, an online tool that enables copyright owners to instantly remove their content from the site. Another is our recent partnership with Vobile to implement live filtering through which a copyright owner's content is compared to content streaming on Justin.tv in real time and when there is a match the infringing content is removed. This system was deployed on November 15th and immediately began removing FOX's static content from the site.

On Sunday we tested the system with NBC and the NFL for their Sunday night football game. The live filter was successful in removing the majority of infringing channels automatically. At this point the path to full full deployment is clear.

Among the hundreds of organization that take advantage of one or more of the solutions referenced above are the NFL, the NBA, the MLB, UFC, ESPN, NBC, FOX, CBS, ABC and Comcast. Our providing solutions that go above and beyond the requirements of the DMCA has not yet become standard in the live video industry. We believe strongly in the value of providing copyright owners with the resources to protect their rights, having invested time and money into developing such resources. We are sensitive to the concerns of the professional sports industry and have entered memoranda of understanding with FOX and a major American sports league that clearly lays out how we can work together to combat these issues. We are actively negotiating similar agreements with NFL, MLB, NBC and Sony, with the goal of finalizing those agreements before the new year.

Our goal is to democratize the power of live video, and the misuse of our technologies slows our progress toward that goal. We trust that this Committee and Congress will recognize and protect the legitimate interest of technology companies that provide citizens with the tools to share their voices with the world while also considering the concerns of copyright owners.

We are available to assist the Committee as it explores these issues and are happy to answer your questions.

[The prepared statement of Mr. Seibel follows:]

PREPARED STATEMENT OF MICHAEL SEIBEL

TESTIMONY OF

MICHAEL SEIBEL

CHIEF EXECUTIVE OFFICER

Justin.tv

HEARING ON

"PIRACY OF LIVE SPORTS BROADCASTING OVER THE INTERNET"

BEFORE THE

COMMITTEE ON THE JUDICIARY

U.S. HOUSE OF REPRESENTATIVES

DECEMBER 16, 2009

Introduction

Chairman Conyers, Ranking Member Smith, and members of the House Judiciary Committee, thank you for allowing me to testify before you today to provide information about Justin.tv.

Justin.tv is a privately owned start-up technology company headquartered in San Francisco, California. The company was founded in October 2006 by four co-founders: Justin Kan (Seattle, WA), Emmett Shear (Seattle, WA), Michael Seibel (East Brunswick, NJ), and Kyle Vogt (Shawnee, KS). We have raised capital from a combination of private and institutional investors, and we currently employ thirty-two people who all live in the San Francisco Bay Area.

Company Purpose

Justin.tv is, first and foremost, a technology company. We provide a platform that empowers people to create and share live video online. Our platform is the modern equivalent of the town square, but instead of standing on a soapbox to be heard by a few passers-by, a Justin.tv user can broadcast his or her message to the world. Our vision is to make live video part of the everyday Internet experience in the same way that Flickr, The Huffington Post, and YouTube have brought online images, news and video clips into the mainstream. In the near future, your cell phone, your gaming console, and your video camera will all be able to broadcast to the Internet using Justin.tv. Furthermore, users will be able to build businesses on Justin.tv by creating pay-per-view and subscription live videos. In a time of traditional media consolidation, Justin.tv is providing an important alternative platform for the distribution and monetization of live video content.

General Use Cases

Our technology supports a wide variety of uses. It enables individuals to meet new people and keep in touch with their friends, event organizers to reach an online audience, advertisers to create entertaining content for their target customers, and content owners to expand their distribution across the Internet. Our goal is to provide a live video platform that meets the needs of everyone, from individuals, to small organizations, to large corporations.

Specific Use Cases

In addition to content created by everyday users to share with their friends, there are also many examples of premium content being distributed on Justin.tv. G4tv, a Comcast-owned cable network, syndicated their coverage of E3, the largest gaming conference in the world, on Justin.tv. Justin.tv allowed G4tv to increase its online audience by 400% at a drastically reduced cost. Microsoft produced a 10-episode live show on Justin.tv named "The PC Hookup Show." This project was part of a Microsoft advertising campaign and drew over two million viewers in just five weeks. The Jonas Brothers, a wildly popular band, drew over one million views in one hour to an online chat that gave fans a unique opportunity to interact with the band directly from any location in the world. The live viewers of all of these broadcasts had a unique opportunity to be entertained by premium live content on Justin.tv.

These are just some of the examples of premium content on Justin.tv that drew successful reactions from our users, others include: a weekly broadcast from Alex Bogusky, Principal of the famous advertising firm Crispin, Porter + Bogusky, dubbed "Fearless Q&A;" a promotional broadcast with Adidas and Derrick Rose of the Chicago Bulls that led to a significant increase in e-commerce sales for Eastbay, their distribution partner; and Michael Jackson's funeral, an event

that touched nearly everyone in America and abroad, for which Justin.tv provided a central meeting place to share the experience. Every type of content is represented on Justin.tv, from technology conferences such as StartupSchool and Demo, to web-based shows from companies like Mevio, including "Press Pause" and "Rad on the Web," to still-undiscovered content from creative people who could easily be your neighbors or mine.

Technology

As a platform provider, Justin.tv is content agnostic. We provide the technology that enables any user to create and share live video with any other person online. In October 2009, our network delivered over forty-seven million hours of live video to over thirty million viewers around the world. We have the capacity to simultaneously serve over one million viewers watching over ten thousand live videos. To accomplish this feat, we have invested significant time and money in building proprietary software to manage the distribution of live streams and serve large volumes of page views.

Our Anti-Piracy Efforts

As with many technologies created to advance the public good, Justin.tv's technology can also sometimes be used by individuals to violate the rights of third parties. Such abusive actions do not mean that the underlying technology is responsible for the bad actor. This is not uniquely an issue for Justin.tv; every computer that allows a user to access the Internet can be used reproduce or distribute unauthorized impressions of copyrighted materials. We are mindful both of the ways in which Justin.tv's live streaming video platform can be used for legitimate purposes and the ways consumers can misuse the technology. To minimize the appearance of

unauthorized content on Justin.tv, we work diligently and in conjunction with rights owners to limit those abuses.

The Digital Millennium Copyright Act

At peak usage, Justin.tv's users can view the equivalent of 16,946 standard DVDs per hour. Further, Justin.tv is online twenty-four hours a day, seven days a week. Needless to say, this makes it impossible for Justin.tv to monitor its users' broadcasts. The law recognizes this impossibility. The Digital Millennium Copyright Act ("DMCA"), codified at 17 U.S.C. § 512, provides online service providers such as Justin.tv with a safe harbor from copyright infringement liability in the event that users of the site stream unauthorized content. Justin.tv complies with the DMCA and therefore qualifies for the safe harbor from infringement liability that it provides. Among other things, this means that when a copyright owner requests that Justin.tv remove allegedly infringing content, Justin.tv does so expeditiously, with no questions asked.

To be clear, any site that hosts user-generated content relies upon the DMCA for protection. For example, every major professional American sports league has a website that features message boards on which fans can discuss and share information about their favorite teams. However, there is always the possibility that a fan could upload an image, or the entire text of a newspaper article, without authorization. My own review of the sites of the four major American sports leagues revealed that every one of their websites includes a reference to the DMCA in their Terms of Use, indicating that they all appreciate the necessity of relying upon the DMCA for protection against users who might misuse their sites.

While the DMCA effectively protects Justin.tv from liability, Justin.tv wants to ensure that unauthorized content does not appear on Justin.tv. Therefore, Justin.tv takes a number of steps beyond those required by the DMCA to facilitate the detection and removal of any unauthorized content:

- Including in our Terms of Service, to which anyone accessing our site is bound, an explicit prohibition on broadcasting unauthorized content that infringes the rights of others. Users of the Justin.tv service also agree, through their acceptance of our Terms of Service, that they will not, among other things, "use the Justin.tv Service for any purposes other than to disseminate or receive original or appropriately licensed content and/or to access the Justin.tv Service as such services are offered by Justin.tv."[1]

- Including in the broadcasting interface a clear statement that broadcasting unauthorized or infringing content is prohibited, and referring again to our Terms of Service.

- Expeditiously removing from the site content identified as unauthorized in a notice that complies with the requirements of the DMCA;

- Enforcing a repeat infringer policy and terminating the accounts of users who are found to have repeatedly uploaded unauthorized content. While our standard is a "Three Strikes and You're Out" policy, we have enforced stricter policies upon request;

- Providing copyright owners with access to our Copyright Protection System, an online tool that permits them to monitor our site and directly initiate the takedown of content they claim is being transmitted without authorization. This tool permits copyright owners to automatically and almost immediately remove their content from Justin.tv without having to notify Justin.tv. Because this system is automated, we also allow content owners to request that takedowns accomplished via their tool give users fewer than three strikes before their accounts are terminated;

- "Fingerprinting" our content in real time and working with Vobile, one of the world's leading content monitoring companies, to identify content that is infringing. We have developed, with Vobile, a commercially-viable system that

[1] Justin.tv Terms of Service, Section 8.1, available at http://www.justin.tv/user/terms_of_service (emphasis added).

permits even unauthorized content on Justin.tv that is not immediately detected by a copyright owner to be identified and removed automatically from Justin.tv; and

- Working with representatives of the major sports leagues, other live-sports programmers and other content owners to develop both a working relationship and additional means of identifying and stopping piracy, including blocking IP addresses of infringers upon request and blocking certain websites from embedding Justin.tv content.

The removal of content at an owner's written request and the implementation of a repeat infringer policy are required by the DMCA. Everything else we have done, including providing copyright owners with our self-service Copyright Protection System and developing, at our own expense, content filtering technology, has been in an effort to protect the rights of content owners to ensure that our technology and third-party content is not misused.

Empowering copyright owners to remove content from our platform, without review, facilitates the rapid removal of unauthorized content from Justin.tv, which is critical for owners of the rights to live sports programming. The following organizations are some of the active users of our Copyright Protection System: NFL, NBA, MLB, NHL, MLS, ATP, USGA, UFC, WWE, NBC, Fox, CBS, ABC, Comcast, DirectTV and Disney.

Our decision to go above and beyond the requirements of the DMCA and provide copyright owners with the ability to directly remove unauthorized material from Justin.tv has not yet become standard in the live video industry. Others may not be interested in giving content owners this level of control, but Justin.tv believes strongly in the importance of allowing copyright owners the ability to protect their rights.

Professional Sports Industry

We are sensitive to the concerns expressed by our colleagues at the sports leagues. We have amicably worked with representatives from many sports leagues, as well as other major entertainment and broadcasting entities, to address their concerns about piracy. While some of our agreements are protected by confidentiality provisions, we have entered memoranda of understanding with a major American sports league, as well as Fox, regarding Justin.tv's anti-piracy measures. We have also had constructive discussions about similar agreements with the NFL, UFC, MLB, MLS and NHL and hope to enter agreements with them soon. Just as importantly, we continue to evaluate our platform to find other ways to prevent misuse.

Conclusion

We support efforts to address the unauthorized online display of live sports programming as well as any other copyrighted content. Justin.tv's goal is to democratize the power of live video – the misuse of Justin.tv's technology only slows our progress toward that goal. We trust that this Committee and Congress will recognize and protect the legitimate interests of technology companies that provide citizens with tools to share their voices with the world while addressing the valid concerns of copyright owners.

We are available to assist the Judiciary Committee as it explores the issue of live sports programming retransmitted over the Internet, and are happy to answer any questions you may have.

Mr. CONYERS. Thank you, Mr Seibel.

Ed Durso heads ESPN and developed the magazine as well. Previously he served in a number of leadership roles in the office of the Commissioner of Major League Baseball, and he is a graduate

with honors of Harvard University, I note duly. Glad to have you here.

TESTIMONY OF ED DURSO, EXECUTIVE VICE PRESIDENT, ADMINISTRATION, ESPN, INC.

Mr. DURSO. Thank you, Mr. Chairman. Mr. Chairman, Ranking Member Smith, other Members of Committee, I would like to begin by commending you for holding this hearing and in particular for your focus on emerging forms of Internet piracy.

In today's economy we cannot afford to let the threat of U.S. intellectual property undermine the vitality of what should be among our most promising, creative and economic assets. Each year ESPN invests billions of dollars to produce tens and thousands of hours of high quality sports programming for distribution by television and a growing array of new media platforms.

We are here today because sports is not immune from piracy. We see this on an increasing number of Internet sites that are the focus of today's hearing. These sites enable the real-time theft of live sports programming uploaded either directly by the site operators or by the users of these sites.

In the interest of time, let me highlight just a few points from my written testimony. First, it is important to recognize that this is not a problem limited to live sports or even sports in general. These same sites also make available real-time streaming of many other types of television and new media programs. This is an issue that effects the entire global media sector.

Second, this problem even though it is fairly nascent and heavily international in scope and impact, in many cases these streaming sites set up overseas, particularly in Asia, where these sites can take advantage of massive broadband capacity, legal uncertainty, and in many instances lax enforcement.

Third to give you a sense of ESPN's experience with this, we regularly see ESPN's linear cable networks, including ESPN, ESPN2, and ESPN Deportes made available for streaming in real-time without authorization.

In addition, the programming we make available through our new media offerings is also regularly retransmitted on these sites.

ESPN has been a pioneer in expanding legitimate access to live sporting events through broadband services. ESPN360.com is ours signature broadband sports network, providing access to more than 3,500 live domestic and international sporting events each year.

Through our investment in technology and this programming these events are now available via ESPN360.com to over 50 million households and through 110 affiliated and Internet service providers. We also provide this programming to U.S. college students and all U.S. based military personnel via campus and military broadband networks.

These efforts have yielded tremendous benefits for consumers. Many of the households served by ESPN360.com would not have legitimate access to these events but for our investment. Yet many of these same events appear routinely without authorization on Internet streaming sites. It is not hard to see how the widespread unauthorized and uncompensated availability of the content that we pay to produce and distribute would undermine our incentive

to invest in and provide this high quality content, whether through innovative broadband offerings or through more traditional linear networks.

Fourth and finally, while the challenges we see here are new and the process of devising solutions is still ongoing, we can learn something from what we experienced when user-generated content sites first came online. There, like here, we saw new media online distribution platforms with interesting possibilities to promote legitimate user generated activities, but we also saw those possibilities come completely overrun by piracy.

As described in my written testimony, ESPN's parent, the Walt Disney Company, was one of several that led the way to develop a set of principles for user-generated content services. Under these principles participating services and content providers agreed on a set of objectives that included the elimination of infringement on UGC services and the encouragement of uploads of wholly original and authorized user-generated content.

While we consider whether the measures embodied in these principles would be effective or sufficient to address piracy on live streaming sites, as a starting point those sites that claim their commitment to promoting legitimate user driven environment should embrace the objective of eliminating infringement on their sites. As has been done by the leading UGC sites, that objective should proceed by implementing those mechanisms that are reasonable and effective to that end.

That commitment is important not only to protect the rights of creators and legitimate distributors of creative content, but is also key to driving the development of a robust, trusted, and content rich legitimate streaming environment.

Mr. Chairman, I want to thank you again for your attention to this important issues and for the opportunity to appear before you. I look forward to your questions.

[The prepared statement of Mr. Durso follows:]

PREPARED STATEMENT OF ED DURSO

Testimony of Ed Durso
Executive Vice President, Administration
ESPN, Inc.

Hearing on Piracy of Live Sports Broadcasting over the Internet
Before the Committee on the Judiciary
United States House of Representatives

December 16, 2009

Mr. Chairman, Ranking Member Smith, thank you for the invitation to appear before you today. My name is Ed Durso and I am Executive Vice President, Administration at ESPN. ESPN is proud to be a leading provider of sports programming. Each year, we invest billions of dollars to produce and distribute tens of thousands of hours of high-quality sports programming, covering more than 65 sports, for distribution around the world via television and a growing array of new media platforms.

I want to begin by thanking this committee for the time and effort it has invested in addressing this important issue and issues related to intellectual property theft generally. As you know, theft of intellectual property is a serious challenge that impacts the livelihoods of millions of Americans, as well as the strength and vitality of some of this nation's most important industries. According to the most recent estimates, nearly 5.6 million workers were employed in 2007 by the core copyright industries, in good jobs that pay workers on average 30 percent more than the national average.[1] In 2006-2007, the same core copyright industries were responsible for nearly one quarter (22.74%) of the total real growth in the U.S. economy, and between 2004 and 2007 they grew at real annual growth rates that were more than double the real growth rate of the U.S. economy as a whole.[2] But the continued success of these industries, and the ability of creative people to find work in them, is challenged by piracy in many forms. By some estimates, piracy results in more than $58 billion in lost output and $16 billion in lost wages each year, and more than 373,000 lost jobs.[3]

This is serious business. In an economy facing many unprecedented challenges, we cannot afford to let the theft of U.S. intellectual property undermine the vitality of what should be among our most promising creative and economic assets. So I commend you for holding this hearing today to continue examining these challenges, and in particular for your focus on new and emerging forms of copyright infringement on the Internet.

The subject of this hearing is important and we are here because live sports is not immune from the scourge of piracy. Whatever features may have in the past distinguished live sports from other forms of content in terms of its susceptibility to online infringement are being

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[1] STEPHEN E. SIWEK, COPYRIGHT INDUSTRIES IN THE U.S. ECONOMY: THE 2003-2007 REPORT 13 (2009) (available at http://www. iipa.com).
[2] *Id.* at 12.
[3] STEPHEN E. SIWEK, THE TRUE COST OF COPYRIGHT INDUSTRY PIRACY TO THE U.S. ECONOMY 11-13 (2007) (available at http://www.ipi.org).

rendered increasingly irrelevant by new technological means for misappropriating linear programming.

As you will see today, there exist an increasing number of Internet sites that enable the theft of live sports programming. Sites like JustinTV, UstreamTV, LiveStream, TVU, channelsurfing.net, adthe.net, Sopcast, TVAnts, and myp2p.eu, for example, regularly make available real time streaming of live sports programming, uploaded we believe either directly or by the users of these sites. And the quality of these sites is improving to the point that programming can be streamed in a form that is almost on par with that accessed through legitimate distribution channels. It is important to note that this is not a problem limited to live sports, or even sports programming generally. These same sites also make available real-time streaming of every other form of television and new media programming. Thus it is an issue that affects the global media sector and its related industries.

To give you a sense of some of the challenges from ESPN's perspective, several of ESPN's cable networks, including ESPN, ESPN2, and ESPN Deportes are regularly available for streaming, around the clock and in real-time, on many of these sites. It is not uncommon to find other ESPN channels, like ESPNEWS or ESPNU, available on these same sites as well. ESPN invests substantial resources to purchase, create and distribute this programming, all of which appears routinely on these streaming sites without authorization and without compensation.

In addition, programming we now make available through our new media offerings is also misappropriated and retransmitted on these sites. ESPN has been a pioneer in expanding legitimate access to live sporting events through broadband-enabled services. ESPN360.com is our signature 24/7 broadband sports network, providing streaming access to more than 3,500 live domestic and international sports events each year. Online coverage is provided from a broad range of sports, including the NBA, college football and basketball, NASCAR, international cricket, the Canadian Football League, major golf and tennis events, including the Masters and the US Open, Wimbledon, the French Open, the Australian Open and the WTA Tour, as well as international soccer and basketball. Through the investments we have made in both technology and programming, these sporting events are now available via ESPN360.com to nearly 50 million households through 110 ESPN-affiliated Internet service providers. The same sporting events are also available to U.S. college students and U.S.-based military personnel via campus and military broadband networks.

These efforts have yielded tremendous benefits for consumers. Many of the households served by ESPN360.com would not have legitimate access to these events but for our programming investment. Yet at the same time that ESPN360.com is providing legitimate online access to these sporting events, we face the challenge of many of the same events appearing without authorization on these streaming sties. For example, approximately one-third of ESPN360.com content is made up of international sporting events. In some cases, ESPN has negotiated for and obtained the exclusive right to distribute these events on ESPN360.com in the U.S. in the same way we do for much of our programming on our linear networks. But these same events are generally telecast live outside the U.S. by another entity that has negotiated for those rights. It is not uncommon to see these telecasts misappropriated and simultaneously retransmitted to viewers worldwide on these streaming sites. Similarly, ESPN360.com offers

more than 50 exclusive college football and basketball games for online streaming, many of which also end up being retransmitted simultaneously and without authorization on rogue Internet streaming sites.

It is important to understand that this is a problem that is both relatively nascent and one that is international in scope and impact. In fact, the United States Trade Representative identified the unauthorized retransmission of live sports programming as an increasing international problem in its 2008 and 2009 Special 301 Reports.[4] It is also an issue that affects a range of entities inside and outside the sports industry. ESPN, like all of these entities, is very focused on how it can be combated most effectively.

It is not entirely clear how real-time streaming piracy via these sites occurs in every case. We believe it happens, in part, by streaming pirates capturing the output of a television or set-top box to a computer, which can be easily done with consumer-grade equipment, and simultaneously encoding and uploading the programming stream to Internet streaming sites using peer-to-peer streaming application technology or otherwise. We believe in other cases, these infringing streams originate with streaming pirates who hack the authorized Internet streams of international rightsholders. And in some cases it may be as simple as pointing a camcorder at a television or computer screen to capture the programming, encode it, and upload it to these sites.

Part of the challenge is also the international dimension of the problem. We know that in many cases, these streaming sites set up overseas, particularly in Asia, where these sites can take advantage of massive broadband capacity, legal uncertainty, and lax enforcement. In some cases we believe these sites themselves upload and stream misappropriated programming directly. In others, they rely on users of their platforms to supply the content they stream, including through peer-to-peer streaming upload applications.

In terms of the overall scope of the problem, it is not hard to see how the widespread, unauthorized, and uncompensated availability on rogue streaming sites of the content that ESPN and others pay to produce and distribute would undermine the ability to invest in and provide this

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> "The increased availability of broadband Internet connections around the world has made the Internet an extremely efficient vehicle for disseminating pirated products. Internet piracy is a significant concern in a number of countries, including Canada, China, Sweden, Spain, and Russia, among others. In addition, unauthorized retransmission of live sports telecasts over the Internet is reportedly becoming an increasing problem internationally, particularly in China."

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE, 2008 SPECIAL 301 REPORT 10 (2008) (available at http://www.ustr.gov/sites/default/files/asset_upload_file553_14869.pdf).

> "Unauthorized retransmission of live sports telecasts over the Internet continues to be a problem in many countries, particularly in China."

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE, 2008 SPECIAL 301 REPORT 10 (2008) (available at http://www.ustr.gov/sites/default/files/Full%20Version%20of%20the%202009%20SPECIAL%20301%20REPORT.pdf).

high quality content. This is why ESPN has joined with sports organizations, entertainment companies, broadcasters and telecasters, and related trade associations in the Coalition Against Online Video Piracy.[5] Through the Coalition we are able to share information and resources to understand the scope of the problem and its effects, as well as to develop strategies to deal with it.

I would also note that in some respects what we are experiencing with respect to these Internet streaming sites is not unlike what we experienced when user generated content ("UGC") sites first came online several years ago. In that case, we saw a new, user-driven media platform emerge with interesting possibilities for promoting the creation and distribution of wholly-legitimate, user-generated original content. But we also saw that legitimate potential completely overtaken by massive piracy in the form of wholly-illegitimate distribution of non-user generated content belonging to others. At the same time, many of these UGC sites maintained that they were not interested in being a platform for infringing distribution, and that their interest was solely in providing a platform for legitimate distribution of user-generated original content.

ESPN's parent company, The Walt Disney Company, was one of several leading content providers and UGC services that undertook an effort to forge a set of principles to foster an online environment that both promotes the potential and benefits of UGC services and protects the rights of copyright owners in the UGC environment. The result was an agreement on a set of Principles for User Generated Content Services (see http://www.ugcprinciples.com), under which these UGC services and content owners agreed to cooperate to implement a range of measures that were both commercially reasonable and effective, with the goal of eliminating infringement from these UGC services, and to do so in a way that accommodates the legitimate interests of the users of these services. Among other things, these measures include pre-upload filtering, notice-and-takedown, enhanced search and identification tools for rightsholders, and removal of links to sites the services determine are clearly dedicated to and predominantly used for the dissemination of infringing content or its facilitation. The result has been highly favorable, as we have seen infringement on these sites drop dramatically upon implementation of these principles with the corresponding emergence of these sites as a source of legitimate content to meet consumer demand. What the UGC Principles demonstrated is that significant progress can be made in reducing piracy through voluntary action by platforms and sites that are truly committed to that end.

Today we find ourselves in a similar position with respect to real-time streaming sites. We see new user-driven media distribution platforms with interesting possibilities for promoting legitimate, user-generated activity, but we also find those possibilities to be overrun by widespread piracy. It is too early to tell whether the measures embodied in the UGC Principles, alone or in combination, would be effective or sufficient in addressing piracy on the live streaming sites we are examining today. But it is intuitive that where we started with the UGC Principles is where we ought to look to start here.

At the heart of the UGC Principles is a set of shared objectives that include "the elimination of infringing content on UGC services" and "the encouragement of uploads of wholly original and authorized user-generated audio and video content." What followed is a set

[5] See http://web.caovp.com.

of principles designed specifically to achieve those objectives, including through the implementation of those technical and other mechanisms that are both commercially reasonable and effective in achieving the objective of eliminating infringement on these sites. Those principles further recognize that what is effective in achieving this objective may change over time, in light of advances in technology, changes in patterns of infringement, changes in users' online activities, and other circumstances.

Experience over time will shed light on what solutions are available and effective to combat piracy in this new real-time streaming environment. As a starting point, however, those sites that state their commitment to promoting a legitimate, user- and creator-friendly environment for the streaming of original content should begin by embracing the objective of eliminating infringement on their sites. Those same sites should then undertake to implement those mechanisms – including, but not limited to, technological mechanisms – that are both commercially reasonable and effective in achieving the goal of eliminating infringement on their sites. That commitment is important not only to protect the rights of creators and legitimate distributors of creative content, but it is also key to driving the development of a robust, trusted and content rich streaming environment to which mainstream consumers will flock.

Mr. Chairman, in closing I want to thank you again for your attention to this issue. While it is still a nascent problem, it is one that has potentially significant consequences in terms of its impact on long-term investment in high-quality programming and legitimate distribution media. We look forward to working with you and your staff as you continue your examination into real-time streaming piracy and other new and emerging issues involving the theft of intellectual property.

Thank you again for inviting me to appear before you.

Mr. CONYERS. Thank you, sir. We now conclude with Christopher Yoo, University of Pennsylvania Professor of Law. Numbers of books and articles have flowed from his pen. He has clerked for Justice Anthony Kennedy and Appellate Judge Arthur Raymond Randolph and started Vanderbilt University Law School, and as usual he is a Harvard University law graduate.

We welcome you today, sir.

TESTIMONY OF CHRISTOPHER S. YOO, PROFESSOR OF LAW AND COMMUNICATION, UNIVERSITY OF PENNSYLVANIA LAW SCHOOL

Mr. YOO. Thank you, Chairman Conyers, Ranking Member Smith, Members of the Committee. I am grateful for the opportunity to testify today on the subject of piracy of live sports broadcasting. To date, most of the attention has been focused on unauthorized copying of prerecorded television. Today's hearing provides welcome attention on the unique problems and challenges posed by piracy of live television.

A wide range of companies offer devices that take advantage of what is known as the analog hole to enable end users to copy high definition television programming directly to personal computers. These devices typically connect to the component video ports on cable and television set top boxes, which are the trio of red, green and blue jacks that appear on the back of a wide range of devices. Because these ports convey data in an analog format, they lack the more sophisticated copy protection built into ports employing digital formats.

Once live television programming has been captured and stored on a computer, the person wishing to share the unauthorized copy must find a way to distribute it. One means of doing so is streaming video, in which the copier establishes an Internet connection with interested viewers and delivers the programming through a continuous flow of data.

Those making unauthorized copies of live television programming have increasingly used peer-to-peer systems to distribute them. In a peer-to-peer system, the content is saved in a file that is sent to and stored by multiple end users throughout the network. Those wishing to view the program then can connect to any of the locations where the file has been saved.

Because peer-to-peer systems require that programs be recorded, then stored, then accessed, they have historically imposed delays that would render them unsuitable for distributing live television programming. More recently, peer-to-peer systems have begun saving live programming in short segments of approximately 10 seconds. This has enabled those making unauthorized copies to distribute the content without having to wait until the end of the program. It has also enabled viewers to view these programs on a near live basis, simply by accessing a series of small files instead of one large one.

Preventing the dissemination of unauthorized copies of video content poses more difficult challenges for live television than for prerecorded television. One of the most effective means of deterring piracy is fingerprinting, which takes advantage of the fact that every segment of a television program exhibits a characteristic pattern. If these patterns are stored in a database, web site owners and network providers can analyze the programs they carry to determine whether they consist of copyrighted content. The problem is that ascertaining and disseminating these fingerprints require a certain amount of time. The delay inherent in fingerprint-based so-

lutions limits their effectiveness when live video programming is involved.

Moreover, those seeking to distribute pirated video content are employing a variety of strategies to evade detection, which has in turn prompted content owners to respond with a number of counter strategies. The result is an endless cat and mouse game in which both sides spend significant resources in an attempt to stay one jump ahead of the other.

Technical measures to prevent piracy can be supplemented and reinforced with legal measures. The distributed nature of the Internet makes it difficult and costly to target private individuals, the ones who are actually making the copies. Consequently, legal responses generally focus on commercial actors that facilitate illegal piracy, such as those firms that manufacture the devices that make the actual copies and the web sites that host unauthorized copies or provide information about where to find such content.

For example, manufacturers of devices that evade copy protection may be subject to liability under the Digital Millennium Copyright Act. In addition, web sites that serve as focal points for information about where to find unauthorized copies may be subject to vicarious liability or copyright infringement for their role in facilitating piracy.

Recently, France and the U.K. have adopted three strikes policies that mandate that network providers cut off subscribers who repeatedly violate the copyright laws.

Lastly, declines in the costs of filtering technologies have led some jurisdictions to consider requiring web sites and network providers to filter the content they carry to determine whether it infringes the copyright law.

The problem of piracy of live sports programming is complicated by the fact that any solution will inevitably involve a wide variety of stakeholders, including content owners, device manufacturers, network providers, web sites, and software firms. The problem is that those who would benefit from implementing solutions to curb piracy are often different from those who would bear the cost.

The multi-faceted nature of the problem makes it hard for the industry to find common ground. If so, Congress may be able to play a constructive role in helping to craft a solution. This hearing represents an important first step in addressing the significant problems posed by the piracy of live sports broadcasting.

I appreciate the opportunity to assist the Committee in its exploration of these issues and will be happy to answer any questions you may have.

[The prepared statement of Mr. Yoo follows:]

PREPARED STATEMENT OF CHRISTOPHER S. YOO

WRITTEN TESTIMONY OF CHRISTOPHER S. YOO

Professor of Law and Communication
Founding Director, Center for Technology, Innovation, and Competition
University of Pennsylvania

Hearing on "Piracy of Live Sports Broadcasting Over the Internet"

Before the Committee on the Judiciary of the United States House of Representatives

December 16, 2009

Mr. Chairman and Members of the Committee, I am grateful for the opportunity to testify on the subject of the piracy of live sports broadcasting. The migration of television broadcasting from analog to digital formats has made it much easier for those interested in pirating content to make nearly perfect copies of video content. To date, most of the attention has been focused on prerecorded television programming, such as movies and most television shows. Today's hearing focuses welcome attention on the unique problems and challenges posed by the piracy live television.

I will begin my remarks by briefly describing how unauthorized copies of video content are made and distributed. I will then outline the various technical and legal measures available to curb the unauthorized dissemination of live television content.

Copying Live Television Content

A wide range of companies offer devices that that can hook up to cable and satellite television set-top boxes and copy high definition television programming directly to any personal computer. For example, Hauppauge offers an HD PVR for $249. These devices typically function by connecting to the component video ports on the set-top box. Component video is an analog format. Although these analog signals cannot take advantage of digital compression

techniques, the signals can be recompressed with only a relatively small loss of fidelity. Copy protection systems exist for analog formats. They are generally relatively easy to evade and designed to prevent copying of DVDs and other forms of prerecorded content.

Devices sold today also typically have HDMI and DVI ports that employ exclusively digital formats. Because they employ digital formats, they can incorporate more sophisticated copy protection known as High-bandwidth Digital Content Protection (HDCP), which requires certain technology to be built into the television sets themselves. Although HDMI capture cards and other devices exist that are capable of evading HDCP and can copy protected programming from HDMI ports, they remain relatively rare.

Distributing Live Television Content

Once television programming has been captured and stored on a computer, the person wishing to share the unauthorized copy must find a way to distribute it. The traditional means for doing so is streaming video, in which the copier establishes an Internet connection with interested viewers and delivers the programming through a continuous flow of data.

Those making unauthorized copies of television programming have increasingly used peer-to-peer systems to distribute them. In a peer-to-peer system, the content is saved in a file that is stored by multiple end users throughout the network. Because peer-to-peer systems require that programs be recorded, then stored, and then accessed, they have generally functioned better for distributing prerecorded content, such as movies, than for programming being broadcast in real time. More recently, peer-to-peer systems have begun saving live programming in short segments of approximately ten seconds. This has enabled those making unauthorized copies to distribute the content without having to wait until the end of the program and has enabled viewers to view these programs on an almost-live time frame simply by accessing a

series of small files rather than one large one. Websites exist that allow end users to view a wide range of live sports programming, much of which is being offered on a pay-per-view basis. (For one example, see www.atdhe.net.) Observers report that peer-to-peer distribution of live television has become a particularly serious problem in China.

Possible Technical Measures to Curb Piracy of Live Television

A number of technical measures exist for curbing the piracy of television programming. For example, it is possible to use the characteristics of particular video content to generate a "fingerprint" of the content. Video fingerprints remain effective even if the content has been abridged or has undergone significant editing. Network providers can use deep packet inspection to examine traffic and see if it carries the fingerprint to identify content that is likely to be pirated. Content providers can also embed a "watermark" within the content that can identify the particular source of any particular copy. A number of firms exist that scour the Internet and inform content owners whenever they locate unauthorized copies

Unfortunately, all of these solutions are less effective for live television than for prerecorded television. For example, any Internet service provider (ISP) using video fingerprints to filter traffic passing through its network must receive a constant stream of updates of the fingerprints. The problem is that fingerprints are based on the characteristics of the actual program. As a result, they cannot be determined until the program has actually been produced. When a program has been prerecorded, it is a simple matter to disseminate the fingerprint to the relevant databases prior to the public release of the content. For live programming, however, this is impossible. Currently, the services that host video fingerprints typically update their databases only once a day or perhaps once an hour. Even if a service wished to send more frequent updates, propagating information about the fingerprints takes time and would almost certainly

not be disseminated until after the live television program has already been made available to the public and thus available for unauthorized copying.

Although watermarks can be determined in advance, watermarking is also harder to verify in real time. As a result, it is relatively ineffective as tool for identifying piracy of live television programming. Instead, watermarking is best used as an after-the-fact, forensic tool to determine which actor was responsible for allowing the unauthorized copy to be made. Although useful for curbing unauthorized copying and distribution of prerecorded content, watermarking is less helpful in curbing piracy of live television programming, where most of the value lies in being able to view the event as it occurs.

Perhaps most importantly, those seeking to distribute unauthorized copying can defeat both fingerprinting and watermarking by encrypting their data streams. Networks have responded by interjecting themselves as a "man in the middle" in order to receive the encryption keys as the session is being established. Peer-to-peer systems are also trying to employ "darknets," in which people must be invited by someone else willing to vouch that the person being added to the network is not going to sue them for copyright infringement before they are allowed to participate in the network. Content owners in turn attempt to infiltrate these darknets by posing as someone the others sharing illegally pirated content through peer-to-peer networks can trust. The result is an endless cat-and-mouse game in which both sides spend significant resources in a series of moves and countermoves in an attempt to stay one jump ahead of the other side.

Possible Legal Measures to Curb Piracy of Live Television

These technical measures can be complemented and reinforced through a series of legal measures to curb piracy of live television content. The distributed nature of the Internet makes it

difficult, if not impossible, to target the private individuals who are actually making the copies. Consequently, legal responses generally focus on commercial actors that facilitate illegal piracy, such as those firms that manufacture the devices that make the actual copies and the websites that inform viewers where they can find the copies.

For example, manufacturers of HDMI capture cards equipped to evade the copy protection provided by HDCP may be subject to liability under the Digital Millennium Copyright Act (DMCA).[1] In addition, firms such as Grokster and Pirate Bay that serve as focal points for information about where unauthorized copies are available for download have been increasingly subject to vicarious liability for their role in facilitating piracy. The fact that viewers of unauthorized copies of live television programs similarly depend on websites and other key intermediaries to identify and provide access to these video streams suggests the possibility of pursuing similar strategies to curb piracy in this context as well.

Finally, there is the extent to which network providers should bear legal responsibility for curbing unauthorized copies. Under the DMCA, network providers are largely immune from liability for copyright infringement so long as they maintain policies to terminate repeat infringers and accommodate standard technical measures that protect against copyright infringement.[2] In order to receive DMCA immunity, the network provider must also expeditiously remove material claimed to be infringing.[3] To date, the law has been reluctant to impose substantial liability on network providers or to require them to filter for content that infringes copyright, largely out of concern that the cost of doing so would deter the deployment of network services. There are some indications, however, of a change in heart. For example, in

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[1] 17 U.S.C. § 1201.
[2] 17 U.S.C. § 512(i)(1).
[3] 17 U.S.C. § 512(c)(1)(C).

the *Grokster* case, the Supreme Court pointed to the fact that neither Grokster nor Streamcast "attempted to develop filtering tools or other mechanisms to diminish the infringing activity using their software" as evidence that they were inducing their customers to use their technology to violate the copyright laws.[4] As the cost of video fingerprinting has fallen, some courts have begun to explore the possibility of requiring ISPs to filter for piracy. For example, one Belgian court concluded that the cost of filtering had dropped to the point where it was appropriate to issue an injunction ordering an ISP to deploy software to filter for copyright infringing content.[5] The court later lifted the injunction on October 24, 2008, on the grounds that the filtering software was not yet ready to perform these functions.[6] The possibility remains that courts may begin to mandate filtering for piracy once such software is ready for deployment.

Finally, the European Parliament has authorized EU member states to enact laws disconnecting individuals from the Internet. In response, the French National Assembly has enacted a "three strikes" law requiring ISPs to give two warnings and then cutoff subscribers who repeatedly violate the copyright laws. The UK is reportedly testing a similar program that will be fully deployed in 2011.

The Future

Speculating about the future is particularly difficult in an industry as technologically dynamic and diverse as the Internet. The evidence suggests that the solutions to the problems of piracy of live sports programming are likely to be complex and likely to involve a wide variety of stakeholders, including content owners, device manufacturers, network providers, websites,

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[4] *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.*, 545 U.S. 913, 939 (2005).

[5] *SABAM v. S.A. Tiscali (Scarlet)*, No. 04/8975/A (Dist. Ct. Brussels June 29, 2007), *reprinted in* 25 CARDOZO ARTS & ENT. L.J. 1279 (Fran Mady et al. trans., 2008).

[6] T.J. McIntyre, *SABAM v. Scarlet: Belgian ISP Released from Obligation to Filter Network for Illegal Downloads*, *at* http://www.tjmcintyre.com/2008/10/sabam-v-scarlet-belgian-isp-released.html (Oct. 26, 2008).

and software firms. The problem is that those who will benefit from implementing solutions to the piracy of live television are often different from those who will bear the costs. It is thus quite possible that Congress may need to step in to create a solution to a complicated and multifaceted policy problem.

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Mr. CONYERS. Thank you, Professor. We welcome Adam Schiff, Howard Coble, Maxine Waters, and Bill Delahunt, who came through but he didn't stay. He will come back out.

Now, I thank all of you. The two questions that occur, what are some possible legal remedies and how good are these techniques

that we've heard from both Seibel and you about fingerprinting and cutting off offending repeat subscribers as they do in Britain and France? But nobody suggested any legal remedies and that is why we may have to hold other hearings. And so I am just jumping to—I am fast forwarding to what we are going to do after this great hearing today. Everybody is alerted, and they know a little something about it. But where do we go from here? Mr. Mellis?

Mr. MELLIS. Well, Chairman Conyers, you have asked the most important question right off the bat. We don't believe there is a silver bullet to stop this problem. We would agree with professor Yoo that it is a very complicated one. We do believe that international cooperation needs to be improved, that practices and standards in other countries where we have seen the weight of the gravity of the problem occurring needs to be brought up to ours.

We know this piracy in the United States is copyright infringement, but in other countries, particularly in China, where for reasons Mr. Durso explained, the situation is unclear and enforcement is lax. So one essential part of an enduring solution is we think going to need to include improved cooperation with our trading partners and otherwise.

And of course the government and the agencies in the United States Government are involved in intellectual property rights protection and enforcement internationally in many ways. I think it would be important to prioritize this issue among all of the important and hard work that they are doing.

And then second I would say, if we can bring the U.S. sites and services up to best practices, then we have a model that we can show, let's say, the Chinese Government or other governments and say, this is how it can work, this is how on the one hand these sites and services can do the legitimate things that they offer and at the same time protect copyrighted works.

Mr. CONYERS. Well, thank you very much. After watching our President, global solutions seem pretty hard to come by these days. But does the U.N. have a role in this? I mean we have very creative lawyers in back of me here that have all these kinds of ideas.

Mr. MELLIS. Well, I think there is a role in the realm of international copyright and related treaties in general, and there are a number of them that establish minimum standards in foreign countries and national treatment, and the World Intellectual Property Organization of the United Nations is an important player in all of that. And so that is an area that I agree should be pursued, but it will need also the follow-through of having our signatories to those treaties, and the treaties are already clear in our view that this type of piracy is—it violates them, that they need to enforce their legal obligations.

Mr. CONYERS. Wait until Ambassador Susan Rice hears about this at the U.N.

Mr. Fertitta.

Mr. FERTITTA. Yes, Mr. Chairman.

Mr. CONYERS. What do you think?

Mr. FERTITTA. I think that—you know, I look at this, I am not an expert in technology, I am not an expert in law, I am an entrepreneur that started a business that—that bought a business that was nearly bankrupt, invested a tremendous amount of money and

have grown—has grown it into what is now an international media company where we distribute our product to over 170 countries around the globe and to over 4 to 500 million homes worldwide.

Mr. CONYERS. Well, I am part of you, but that is not why we brought you here today.

Mr. FERTITTA. I understand. What I am looking at from our perspective is that the current—I know that the DMCA was put in place, but I am not sure that that contemplated live streaming events. Certainly with somebody puts up a song that is created and there is this issue of notice and take down and what is the amount of time that it should take to take that down, the amount of damage if it is within 24 or 48 hours is significantly different than it is to one of our events which is a live Pay Per View, and the value of our product goes down significantly. It is very perishable every minute that goes by.

Mr. CONYERS. Okay. What did you want to add to your contribution, Mr Seibel? You first brought up fingerprinting.

Mr. SEIBEL. Yes, I don't think I am qualified to discuss the international remedies for these solutions.

Mr. JOHNSON. Is your mike on?

Mr. CONYERS. Turn your mike on.

Mr. SEIBEL. There we go. We are all good. I don't believe I am qualified to discuss the international solutions or the legal solution. I do agree with Mr. Mellis that we are very interested in creating a standard in the United States for how sites that allow individuals to create and share live video can also work with copyright holders to protect their rights. And so we believe that through our copyright protection system and also through the new filtering, live filtering system that we have been able to build with Vobile, those are two affirmative steps that we believe can certainly address this concern in the United States.

In terms of internationally or legal based solutions, unfortunately I don't have much to contribute on that front.

Mr. CONYERS. Have you ever considered law school? No, you have been very helpful. You have introduced the whole topic of fingerprinting.

Mr. Durso.

Mr. DURSO. Yes, Mr. Chairman, thank you. I do want to echo a bit of what has been said before and point out we are entrepreneurs also and we really need perhaps the power of persuasion and pressure of this Committee and like Committees to keep the pressure on individuals like Mr Seibel, to my right, to kind of do the right thing here. If you just look on what is happening there, you can't traverse down their index page and see stream after stream after stream of professionally produced, high quality ESPN and other products and not say there is something wrong here and it ought to be addressed.

We are doing what we can, but Professor Yoo aptly described how difficult a process that is. And a real world example, you know we made a decision 8 years ago to launch I said our broadband service, ESPN360.com. It is a tremendous service, a great application to support the growth and development of broadband. Today it has 3,500 events on it a year, it is a terrific product. We had a business model in which the ISP paid us a fee, they distributed it

and today it is, as I said more, in more than 50 million homes and providing a lot more product to a lot more people.

Now if it were today and I were contemplating launching that service, I might look around and say this is crazy, this is not in environment in which this can take hold. We started 7 years ago and invested tens of millions of dollars to try and produce something at a time when the service like Justin.tv wasn't even thought about by anybody. But today it exists, and it is neatly packaged, well produced, and it provides certainly a significant part of the now landscape of what people like us want to do in terms of deciding to invest.

Mr. CONYERS. Tell me how ESPN that you mentioned operates and is unique from other web sites and why you chose not to offer it as a subscription product to broadband connected consumers.

Mr. DURSO. Certainly. We have addressed any new platform distribution opportunity that has come along in our 30 years of existence. We are platform agnostic and we look to try and figure out ways to put the ESPN brand and ESPN product in any stream of commerce where we think there can be a return. Broadband is no different. So we have looked at that in a number of different ways. ESPN360.com is one such application, as I said.

We think it works very well in the broadband environment. We decided that among a number of approaches we would approach Internet service providers directly and say if we can produce a product with the ESPN brand on it, would that be helpful to you in terms of your selling your product out to the consumers. The answer we got was yes. So we were happy to participate in both the development of new businesses on their part and at the same time the enhanced distribution of broadband throughout our country.

Now an analogy might be back in the early 90's, ESPN was among the very first to embrace and distribute a significant quantity of HD programming at a time when HD programming was very nascent. We think we did a lot to support the growth of HD and to support ultimately the whole digital transition as HD led up to that.

So that is a similar circumstance here. We look to build successful products that can work in an environment. We are making investments and we are working with our distributors to provide something to them that we think benefits consumers. The fact it is available to 50 million homes today, 70 percent of the broadband universe, we think is a significant indicator that that has been a successful effort.

Mr. CONYERS. So you didn't think it was an economically wise investment?

Mr. DURSO. No, we looked at the development——

Mr. CONYERS. Why you didn't offer it as a subscription product, you didn't think it was viable?

Mr. DURSO. We saw an opportunity, Mr. Chairman, to get on board a train we thought was leaving and would do very well, which was called broadband. That was not the business we are in, we are not a broadband—we are not a platform, we are a content company. We said how can we participate in this in a meaningful way to offer something to broadband distributors that would help their business.

We have other products available in our areas, so we are not just putting all of our eggs in this one basket. ESPN.com is available on the open Internet, it has a tremendous amount of free product on it in terms of video and clips. We offer a product there, for example, called the ESPN Insider, which is a subscription-based adjunct to ESPN.com and, along with the Walt Disney Company, are participating in a number of different approaches here, Mr. Chairman. We thought this was a good opportunity and sort of the proof is in the pudding; it seems to work well.

Mr. CONYERS. Okay. Professor, you have already made a couple of good suggestions. What about the legal basis? These are technical. How do we sue these guys?

Mr. YOO. I have a number of——

Mr. CONYERS. How do we prosecute these guys? Everybody agrees what we are complaining about is illegal, right? So there ought to be a law. What is it you think we do here?

Mr. YOO. I have some concrete suggestions of ways the laws might be changed and what that—changes in the law that might contribute to curbing illegal piracy.

The Digital Millennium Copyright Act was really envisioned—envisioned content owners sending a web site address to a web site and forcing them to take it down and that has created part of the cat and mouse game. What they do is take it down and it will immediately get re-posted. Fingerprinting we can change the notion of what notice and takedown means. One example might be you give the web site a fingerprint instead of a specific web site address and ask them to screen for everything that contains a fingerprint, and that represents a notice.

A more basic problem is the DMCA operates after the fact, after the content has been posted and the request to be taken down. The DMCA notice requirement could be changed particularly for live programming where you know at what time it would be broadcast. Give them advance notice of when this programming will be provided, and ask them to take appropriate measures in the absence of a specific Web address by broadening our notion of what notice means. Not just a Web address, but a general notice about when live content is likely to come out, and make that a basis for potential liability for anyone facilitating that content under the DMCA.

Another ambiguity is contributory infringement, which is addressed by the Supreme Court in the Grokster case really instead of addressing substantial questions about how substantial does the infringement have to be before it triggers contributory infringement, the Supreme Court left that issue unresolved. And the Grokster case decided it on different grounds. Interestingly the two concurrences split right down the middle about how substantial the noninfringing uses has to be before it constitutes contributory infringement. The perfect area where there is an ambiguity in the law where Congress can step in and provide much needed clarity about ways—in ways that would make it easier to curb the kind of piracy we are talking about here today.

Lastly, as Mr. Durso pointed out, industry got together for use generated content and found solutions for prerecorded content in ways that didn't involve so much direct legal enforcement and suggested a different role that Congress might play, which is holding

hearings like the one we are having today to encourage players to come to the table to find common ground. Because everyone has to recognize nobody wins unless the content is provided in ways that are protected in ways that people can generate revenue. Everyone has to—that has to be aligned. No one can make money unless the programs are provided and provided in a way that generate revenue for people who are willing to pay for it, and I think hearings like the one we are having today can be an important part of that process.

Mr. CONYERS. I thank all of you. You have been very helpful in getting us started. Remember, this is only the first hearing. So we have got a ways to go.

I am pleased to recognize Bob Goodlatte, a senior Member of this Committee, from Virginia.

Mr. GOODLATTE. Mr. Chairman, thank you very much, and thank you for holding this hearing. This is the first hearing that has been held on the DMCA I think in quite some time. I can remember very well, going back I think more than 10 years ago when we wrote that legislation, I was asked by Chairman Hyde to sit in rooms with representatives of the content industry, the Internet service provider industry, the universities, and other users of Internet content and try to manage a negotiation of this notice and takedown issue, and we came up with something that we thought was very good at the time. In fact, it was well received by folks on every side of this issue, but it requires that ISPs expeditiously remove materials. And I suppose the meaning of the word "expeditiously" has got to change or the DMCA has got to change. And I don't know how many people here agree with Professor Yoo that we may have to reopen the DMCA to enact some of the suggestions that he has made, which are certainly worthy suggestions.

But I would like to ask Mr. Seibel, since his product is the focus. And, as I understand it, you are sort of like the YouTube of live streaming online, and I know that you have a lot of experience with this notice and takedown issue. What is the typical amount of time that an Internet service provider takes to remove infringing content once a notice of infringement is received? How fast is it possible to take down infringing materials once the notice is received?

Mr. SEIBEL. Sir, Justin.tv's system for implementing DMCA takedown, we refer to that as the copyright protection system, and essentially it transfers the typical takedown e-mail notice, which is usually in the form of a letter, into an online form. As a result our ability to remove content once we have been notified is extremely fast. Because we have been able to push this from the kind of letter and e-mail world into an online form, as soon as we are notified through the copyright protection system our system can then go about removing that content.

Mr. Goodlatte. I would guess that Mr. Mellis and Mr. Fertitta and Mr. Durso would say that in the environment of live streaming, particularly where it is broken down into 10-second increments, if they are going to protect their copyrighted material, they have got to get a notice to somebody really fast and they have got to respond virtually immediately, which is very different than what I think we sat around and talked about 10 years ago.

Is that a feasible environment to operate in? I mean, can they—I guess they can see coming the fact that they are going to have these programs on the air and they can then be on the lookout, but I don't know if they can be on the lookout for thousands of different people who might take the opportunity to stream and to use your service to stream. You may have the capability of very quickly taking them all down, but what has been your experience with this thus far?

Mr. SEIBEL. So the reason why we have developed both the copyright protection system and the live filtering system is to address the specific issue that you bring up. Essentially, what we want to provide is both a system whereby people can look at the site, identify their content, and have it removed immediately, but also a system by which people can provide us with a fingerprint. And we will use our live fingerprinting partner to automatically search out and remove this content from the site.

So in our efforts to work with copyright holders, we are really trying to encompass both issues, both how can we make sure that once contentis identified it is removed extremely quickly, and also how can we confront the issue of identifying the content in a more automated fashion.

Mr. GOODLATTE. Now, there is another side of this issue, and that is the user of your service or other Internet sites or the people who may have a web site on which they are placing some material that may or may not be copyrighted, and I have received complaints from individuals who have complained that their content has been taken down inappropriately.

Are you able to judge quickly enough and accurately enough that the content you are taking down is indeed copyright material that is entitled to the protection under the DMCA?

Mr. SEIBEL. Well, our understanding is that once we receive a takedown notice, regardless of its validity, we are required to act upon that takedown notice. And, in addition, we are required to offer to the user whose contents have been taken down the ability to counter that takedown. In our experience, however, copyright owners have been extremely good on Justin.tv in identifying their content as opposed to——

Mr. GOODLATTE. Not a lot of mistakes, in other words?

Mr. SEIBEL. Exactly.

Mr. GOODLATTE. Well, in a recent submission to the New Zealand Government regarding a new copyright there, Google alleged that 57 percent of the takedown notices it has received under the DMCA in the United States were sent by businesses targeting competitors, which certainly is a legitimate thing to do, but they also allege that 37 percent of the notices were not valid copyright claims.

You have indicated that you have not experienced those kind of abuses, but I want to direct to some of the content owners, Mr. Durso, Mr. Fertitta, Mr. Mellis, if you want to join in, if these numbers are true, does the fact that 37 percent of the notices are in error alarm you, considering the fact that the content must be expeditiously removed and will not be available online for at least 10 to 15 days after it is taken down? That is the complaint that we are getting from some consumers and some users of various Inter-

net web sites that have been subject to a notice and takedown and then have a hard time getting back up.

Any of you. Mr. Durso, do you want to respond to that?

Mr. DURSO. I am not personally aware of a way I could validate any of those statistics relative to percentage of inappropriate or appropriate takedown notices. I can share with you that—and I think others in the panel have seen the frustration and difficulty of operating within the current system, especially in a live sports environment.

Mr. GOODLATTE. It is very fast, isn't it?

Mr. DURSO. It is very quick.

Mr. GOODLATTE. The decisions have to be made extraordinarily quick?

Mr. DURSO. But it is also frustrating in this regard. I don't think anybody who goes on Justin.tv or a similar service and looks through their index page where they can go click on whatever it is they wish to see will be at all confused about whether or not Sports Center, which I was watching this morning, is the Sports Center from ESPN. It is. And it is frustrating for us to have to sort of play the cat and mouse game of trying to take that down. And despite whatever technological advances may be on the horizon here, it has been a difficult—it is a difficult time for us in this respect. And what we are really looking for are companies like Justin.tv and others to really make a firm commitment to say this is wrong and we will work tirelessly to fix this for you. Because someoneis indexing those pages. Somebody is looking. And the notion that there is so much out there that we can't figure out what is on, you know, sort of belies the notion that it is nicely arranged and available and subject mattered and indexed and available. Here is how we will help you find what you are looking for. Someonehas got to be doing that.

Mr. GOODLATTE. Absolutely. And I agree. And that is certainly a major onus that Mr. Seibel and others in the same business face or there is going to be some kind of a major change in the law that will make this wonderful availability more difficult.

Mr. Fertitta, Mr. Mellis, any comments?

Mr. FERTITTA. Yes, I do. Thank you. Relative to what you were talking about with New Zealand, I don't know if that was——

Mr. GOODLATTE. This was something they presented to New Zealand, but they were talking about the United States.

Mr. FERTITTA. Right. And I guess the question would be was that archived or live content?

Mr. GOODLATTE. I don't know the answer to that. That is a very good question.

Mr. FERTITTA. It is very difficult, as we mentioned before, because it is live streaming. And while a lot of these web sites say that they are doing things to try to prevent this, one of the things that bothers us is that right on their own web sites they provide exact detail on how to upload content from your television. And content coming from the television, my guess would be that 99 percent of it would be copyrighted material. So not only are they facilitating this; they are in some ways encouraging it. And that is part of the problem that we have, and that is why when our Pay Per View starts, you have 271 streams.

Mr. GOODLATTE. Mr. Fertitta, would you put that document in the record, make it available to the Committee for that purpose? And I would ask unanimous consent that it be made part of the record.*

Mr. CONYERS. Without objection.

Mr. GOODLATTE. Mr. Chairman, if I might have forbearance to ask—I know my time has expired, but to ask Professor Yoo one more question. And that is, you have heard this question about notice and takedown. What can be done to make sure that content owners are doing their due diligence to make sure the claims they allege are valid?

We have heard from you some other ideas which I think have merit in terms of making their ability to protect their content stronger and more immediate, which is effectively the environment they are operating in with this type. What can we do to make sure that people don't use this in an abusive way?

I can understand why a competitor would have many reasons to ask another competitor to take something down that may be copyrighted material, but they also might have an incentive to try to disrupt the availability of something on the Internet that they shouldn't be asking to be taken down. They don't seem to face any consequence for that right now. What can we do to change that?

Mr. YOO. Clearly, the Congress could impose some consequences. They, unlike producers of—people who are pirating live content, large content providers are easy to identify, easy to find, they are easy to bring to this Committee and testify. So I would not want to put on content owners the burden of being perfectly correct all the time.

On the other hand, what you are talking about is repeat offender status, abuse of processes on a repetitive basis. And I could see Congress enacting a law that if any content owner on a persistent basis pursued a course of action really designed to pull down content that they didn't own, or try to use that in an anti-competitive manner, you could make that a basis for liability for the content owner under the DMCA. You could make them swear under penalty of perjury that in fact they hold a valid copyright in the content they are asking to be taken down.

There are a number of steps this Congress could do to make that—to give that some more teeth, because any system is subject to abuse on any side. And what we are likely to see is this is a new area. It is unsurprising that after 10 years and something is changing as fast technologically as the Internet, that the Congress is having to consider revising the laws, and it should come as no surprise this will not be the last time this Committee will have to consider issues like this.

Mr. GOODLATTE. Thank you. Thank you, Mr. Chairman.

Mr. CONYERS. Maxine Waters, Chair of the Subcommittee on Financial Services, senior Member of the Judiciary Committee.

Ms. WATERS. Thank you very much, Mr. Chairman. I have been listening with great interest since I entered the room. But I must share with you that my initial motivation for coming here was not

*The information referred to was not available at the time of the printing of this hearing record.

so much to learn about the piracy, but to find out whether or not I could have another way of looking at the NFL and its antitrust exemption. As you know, I am focused on some efforts that we all have been putting forth to deal with some of the problems of some of the older players of the NFL. But I must admit, since I have been here I have listened and I am curious now about some of what I am hearing.

Let me address a question to Mr. Mellis. Could you show us exactly how people are stealing these live major league baseball broadcasts, Mr. Mellis?

Mr. MELLIS. Congresswoman, I would be glad to try to explain that. This is one way that we think it is happening. There are probably other ways. The way that I am going to describe involves coaxial cable in your house, this would be incoming in from outside the house and this would be—excuse me. This would be from your set top box to your television set. What you would do is you would unscrew the end from your television set, and then you would screw this TV stick into that end here. And on the other end of this stick is a USB connector, universal serial bus, which can be inserted into the front part of your computer where there is a receiving connector for that, the same place that you would stick in a flash memory stick. And then with drivers that would come with this device—the one we bought cost $70—you can more or less manipulate your personal computer as if it were your television, and you could watch your TV programming, change channels on your computer.

The next step is using a peer-to-peer service download, let's say from one of the services in China that has plagued us, or through the instructions that a service like Justin provides, you can then take those signals which have already been converted and are being read by the TV—by the computer, through this device, and wrap them, upload them to the public Internet for worldwide viewing.

Ms. WATERS. Mr. Mellis, the device that you just showed us that you could put on the cable and connect to your computer is a device that is legally sold in some retail outlet somewhere?

Mr. MELLIS. Yes. I believe these devices are widely available. And it is not the only device that could be used to do this. There is a card that you could stick into the back of your personal computer which would receive the coaxial cable into the back and have this nub on it, and the technology of the card achieves the same function and the same purposes of it.

Ms. WATERS. What other use would these devices have other than the piracy actions that you just described?

Mr. MELLIS. I don't know much about these devices except about how they are used with respect to the piracy of our game telecasts, unfortunately.

Ms. WATERS. Where are they sold?

Mr. MELLIS. They are widely available. This can be bought online at Amazon. We bought this one at a Staples store.

Ms. WATERS. So you don't know whether or not these devices could be used for a legitimate use?

Mr. MELLIS. I think that they could be. What I mean to say is I am not familiar with how they are in fact used by people, but

they could be used to watch television programming on your personal computer. Then there is the next step where, by downloading the peer-to-peer service client from a Chinese service, let's say, or following the instructions from a service like Justin, that you would then take that converted signal and—someone could—upload it to the public Internet for worldwide viewing.

Ms. WATERS. I see. Well, Mr. Chairman, if I may, it sounds as if we have a complicated issue before us that must be given an awful lot of thought, and I know that you will lead this Committee in trying to make sure that we correct the problems with piracy. But as we do that, I am also wanting to keep you focused on the NFL and the fact that it has the power to negotiate with all of these entities and avoid the antitrust laws of this country and see if when we solve the piracy problem we can also take away that exemption.

Mr. CONYERS. I want you to rest assured that Hank Johnson's Committee is going to hold hearings, I think in January, on this antitrust exemption and the problem. Will that make you more comfortable?

Ms. WATERS. As long as we stay focused on that antitrust exemption, I am happy.

Mr. CONYERS. Okay. That is an easy assignment. Thank you very much, Maxine Waters.

We turn now to Howard Coble, a distinguished senior Member of the Judiciary Committee from North Carolina, and invite him to question our witnesses.

Mr. COBLE. Thank you, Mr. Chairman. And welcome to the panelists who appeared before us today. Gentlemen, I believe that streaming broadcasts is a global problem, and I think that robust and effective American copyright laws are essential to content owners who work to protect their works from being infringed by individuals and other countries, and I think probably we all concur with that. Do we not? I am glad to hear that.

Mr. Durso, I was going to ask you about the decision not to offer as a subscription product to broadband connecting consumers, but I think you and the Chairman pretty well covered that. Let me ask you this, Mr. Durso. Some have criticized the ESPN360.com mode as having the potential to drive up broadband subscription prices. Is this criticism fairly leveled?

Mr. DURSO. Well, thank you. I don't believe that it is, Congressman. We have heard that complaint before. Two things to point out on that, if I may.

One, we watch the marketplace pretty carefully to see the impact of our business in it and the retail world. We have not seen any instance that we can identify where there was any kind of direct correlation between our sale of this product and the wholesale marketplace and an impact on the retail pricing of the ISPs. That is their decision to make. We don't have anything to say about that. Our only requirement is that if you do the deal with us, you must provide the service to everybody on your system. So we think that we are helping consumers in that regard.

Secondly, we looked at it from an economic standpoint. We have got noted Washington, D.C. economist Jeb Heisenak to take a look at this issue to see how one would analyze it from an economic

standpoint. He put together a very short paper, which I am happy to introduce in the record. His conclusion was this:

It is very expensive to build a broadband platform, and the cost of getting that first subscriber is very high. But if you can make your service popular, as you add more and more people to the service the average cost of providing the service to each subscriber comes down.

Mr. COBLE. I got you.

Mr. DURSO. And in that circumstance, you are actually putting downward pressure on retail pricing. So I would be happy to submit that for your review.*

Mr. COBLE. Thank you, sir.

Professor Yoo, in your testimony you referred to several technologies that may be employed to prevent infringement through rebroadcasting. Which of these technologies, in your opinion, is the most realistic option for entities such as UFC or professional sports leagues?

Mr. YOO. When you see how piracy and other security problems have been addressed on the Internet in other contexts, it is very rare to see there be one single strategy that is the solution to everything. You generally see a layer of strategies. In this case, you can see the use of fingerprinting to screen out content in advance. Perhaps asking the content provider, instead of sending it out on a live basis, do it on a near live basis delayed by a few seconds to allow that technology to work. You may see some form of, in addition to automated screening, some sort of manual screening obligation on the part of the web sites. And you may see after the fact, old-fashioned lawsuits, which cannot prevent it up front but it will have a role in deterring repeat offenses and identifying those people and giving them some deterrence.

But my guess is most security people say if you rely on one solution, the minute that one is cracked you have nothing, and that you are in fact much better instead of having an eggshell—you are much better having a series of layers of protection which are more robust and can respond to different numbers and types of threat.

Mr. COBLE. Thank you all for being with us. I yield back, Mr. Chairman.

Mr. CONYERS. Thank you. Hank Johnson, Subcommittee Chair, former magistrate, is recognized.

Mr. JOHNSON. Thank you, Mr. Chairman. And for some reason this microphone goes limp all the time. Maybe we can get it to—maybe with some Viagra or something, we can get it to stay up.

Mr. CONYERS. I hope nobody chooses to take your words down, Mr. Johnson.

Mr. JOHNSON. Yes. What I would like to ask Mr. Seibel—and, by the way, I am happy to know that your firm supports getting a handle on this kind of copyright infringement. But I have got to ask you, do you think it is morally right for your firm to continue to engage in the use of copyrighted material without the owner's consent from a moral standpoint? I would like for you to answer that. Is it right? Is it fair?

*The information referred to was not available at the time of the printing of this hearing record.

Mr. SEIBEL. I think when we look at this issue, our understanding and kind of as we look at our entire business, it is not the point nor is it the goal of Justin.tv to distribute content. When you look at where Justin.tv began, we started with the idea of broadcasting one person's life on line. That was our cofounder Justin Kan. And the viewers of that original broadcast were so excited by the potential of live video online that they too wanted to create their own live content. They didn't want to broadcast their entire lives, but they wanted to share live video of interesting events.

Mr. JOHNSON. Well, now that is different from—there is no need for consent and payment for the use of that material that is voluntarily put on the Web. But I am speaking of this precise issue. And if you could speak to that, because I don't have a lot of time.

Mr. SEIBEL. Certainly. So when designing a site for anyone to create and share live video, unfortunately, as in any user generated sites, some group of people are going to do that in a way that distributes unauthorized content. And so I want to be clear that the goal of Justin.tv is not to support that. I also want to be clear that the business model of Justin.tv is not based around supporting that. Continued broadcast of unauthorized content is not a good base in which to start a business or to run a business in the long term. And so when you look at where we have invested our time and energy on this front, it took a significant amount of time and energy to build out the copyright protection system and the live fingerprinting system. And the goals of those systems are to completely remove copywritten content from the site.

Mr. JOHNSON. You are kind of going far afield of my question. But I will ask also, how does Justin-dash-tv or Justin.tv make its money?

Mr. SEIBEL. So Justin.tv, when we look at our business model, it is really threefold. The first aspect is an advertising supported model. The second aspect is going to partners who want to distribute live content on our platform and charging in a metered format. And the third aspect is going to partners who have premium content that they believe they can charge a pay per viewer subscription fee for and to support that transaction and generate revenue from that transaction.

When you look at our business model, Justin.tv is a significantly more robust and viable company as it is able to work with copyright holders as opposed to the opposite. That is why we have invested all of this time and energy in these potential solutions, because in the long run——

Mr. JOHNSON. Okay. You could keep going for—you could filibuster for the remaining 1 minute or so of my time. And I am just having fun with you. No disrespect.

What is the difference between this case and, say, Napster, which was kind of forced to change its—it was forced to change its methods of distribution of copyrighted music without—that they were doing it without the consent or payment of royalties or anything like that. How does—can somebody shed light on the Napster case and how it would apply to this case?

Mr. SEIBEL. So I am not a legal expert in terms of the legal part of the Napster case. But from a product perspective, Napster was designed and built to distribute music content on the Web. Essen-

tially, part and parcel of their product was the distribution of copywritten unauthorized content. In addition, Napster avoided working with content owners to help reduce or eliminate the copywritten content that was distributed by that company.

Justin.tv is different in two ways. First, the system was never designed or conceived of to be distributing unauthorized content. And, second, we actively work with over 150 copyright owners in the world and give them tools to remove their content in real-time from our site.

Mr. JOHNSON. Anyone else?

Mr. YOO. Napster intentionally pursued copyright infringement as its business strategy, and the Supreme Court in the Grokster case made very clear that is a sole sufficient basis for liability by itself. What the Supreme Court left open is if you have an innocent web site that did not intentionally seek out copyright infringement as its business model but is nonetheless used for substantial infringement, at some point it can become liable as a contributory infringer. The Supreme Court did not clarify exactly where that line is. It is ambiguous. And the Sony case from 1984, the Grokster case, had a chance to address it. The Supreme Court chose not to. And in fact, of the five Justices who opined on the proper standard, they split more or less right down the middle. So we are—the business community is left with a great deal of legal ambiguity about the precise extent to which providers like Justin.tv, who are not actively fomenting infringement, may nonetheless be subject to liability.

Mr. JOHNSON. Anyone else?

Mr. FERTITTA. Yes. I have a comment. Certainly I am not an expert on the Napster or Grokster case, but I think one of the differences may be that in those early days the music industry wasn't necessarily embracing technology to what the consumer wanted to do. At the time, the consumer wanted to be able to download music on the Internet. There wasn't a system really put in place.

I think the difference here is we all sit up here on this panel, we are embracing technology. We want to be able to give consumers our product on any format that they want, whether they want to watch it on satellite, cable, broadband, on their telephone. We offer those products all the way down the line. And I think that may be part of the difference as far as how that evolved. And we are in a situation now where we offer it on all these various ways to watch it, yet it can be uploaded on to the Internet and watched by literally hundreds of thousands of people for free without having to pay for the copyrighted content.

Mr. JOHNSON. Anyone else?

Thank you, Mr. Chairman, for allowing me some additional time for the answers to the questions. Thank you.

Mr. CONYERS. You are more than welcome. The Ranking Member from Florida, Tom Rooney.

Mr. ROONEY. Thank you, Mr. Chairman. As a freshman, that sounds pretty good. Mr. Johnson asked most of the questions I wanted to ask, and that is usually what happens when you are low man on the totem pole.

Mr. CONYERS. Was that including the Viagra issue also?

Mr. ROONEY. Yes, sir.

Mr. CONYERS. I warned you about that, Johnson.

Mr. ROONEY. That is my sign to talk quickly here. Mr. Yoo, I really appreciate your testimony. I think that it is incumbent upon us, especially my predisposition is to protect the U.S. tradition of the value of property rights. And certainly I understand what you are saying about the courts leaving it open to Congress to fill in the gaps here. And obviously, Mr. Chairman, I think that that is our duty moving forward, is to make sure that it is our obligations to finish the work that has been started years ago as technology and things evolve, that we—the court has punted it to us, and now it is our opportunity to address that situation as outlined in the Grokster case.

My questions—I apologize for sounding elementary in what I ask. Specifically, Mr. Seibel, I am trying to get my arms around exactly what Justin.tv is. And from the testimony here today, it sounds like you have taken steps to try to work with the other entities, but at the same time I can't get out of the back of my head this sort of notion that we have opportunities and obligations in the law to act. You know, if you act or you fail to act, sometimes you can be just as culpable or liable. It sounds to me like Justin.tv has content on their web site that is not permissible. And failing to act before that until one of the content-based companies comes and says please take it down, it is kind of like going into a jewelry store and robbing it but not making a mess when you are in there. I mean, I don't know if that is a fair assessment. But just because you aren't actively seeking out content-based material, but not doing anything about it until one of these guys comes and says, hey, you need to take it down, in matters of law and fairness it just doesn't to me seem right.

What would you say in response to that?

Mr. SEIBEL. So I think the new technology of the fingerprinting solution is a comprehensive solution to this issue. I think really what you are addressing here is, isn't there a manual solution that we can be implementing. And I think what is most important to understand is that on Justin.tv there are 1.9 million broadcasts a month. And we believe that any attempt to manually monitor the site would create an unfair expectation among copyright holders that we were going to be 100 percent or 90 percent or some reasonable percent effective.

When we think about the solutions that we want to provide, we have been focusing on systematic and automated solutions, and that is why the live filter is so valuable, because we can ensure to a copyright holder that that solution is going to work.

Mr. ROONEY. Okay. On that point, you said earlier in your testimony that as soon as one of these guys calls you and says take down whatever, and that that can happen quickly, what if you don't take it down? What happens to you? Or what could happen to you? Do you know, legally?

Mr. SEIBEL. Unfortunately, I am not an expert.

Mr. ROONEY. Does anybody?

Mr. YOO. Justin.tv would lose its immunity under the Digital Millennium Copyright Act. To the extent to which they have made a copy, they would be subject to copyright liability, subject to statutory damages, and any damages that could be proven. There is an

open question about whether a soft copy—that is, one that is only in the computer—is a copyright violation. There are cases on both sides of the question, and it is another area that this Congress is——

Mr. ROONEY. Mr. Seibel, I am running out of time already. When you say that you are entering into agreements with some of these guys in the future, you mentioned the NFL. Do you have the NFL games on your web site now every week?

Mr. SEIBEL. So in the context of the NFL, the NFL and NBC were looking for an automated solution to remove NBC's NFL game from the site, and then eventually any NFL game that might appear on Justin.tv. So when we ran a test just this past Sunday, we were actually able to automatically identify and remove the majority of NFL games that had appeared on the site during that time period.

Mr. ROONEY. But you don't have an agreement with the NFL to put these games on your web site. They are just on there, and then if they say take them down, they take them down?

Mr. SEIBEL. As in all user content sites, it is really the same issue. When a user is putting someone else's content on your site and using your site to distribute someone else's content, how do you work with copyright holders to address that and to remove that content and to remove that user from the site? And so we approach it like every other UGC site.

Mr. ROONEY. Madam Chair, I know my time—could I ask one more question, please? Very quickly. Thank you, Madam Chair.

Mr. Yoo, you mentioned with regard to maybe precluding these things even getting on a site before, and you talked about what we can do as a Congress to actively do that rather than just reacting, how can we be proactive. And I think that you mentioned that we need to make consequences for repeat offenders. I believe that you said that one of the ways to do that is to swear under penalty that these rights aren't theirs and that they can get in trouble for doing that.

Is that specifically what you are talking about with regard to us making a law that would provide consequences for repeat offenders, or is there some more specific solution you have with that?

Mr. YOO. I think a repeat offender law, as they are doing in France and the U.K. for end users who are pirating illegal content and posting it, is a potential solution. The other—the question that was asked specifically is what about erroneous takedown notices, that people are using it anti-competitively to say take down this content even though it doesn't belong to them. Any aspect of the system could be abused, and it is relatively easy with corporations who are repeat offenders to identify them and remediate them. The real problem is in the end users, who are extremely hard to find, extremely hard to track down, and extremely hard to enforce rights against. And I think what they are doing in France and the U.K. is a very interesting solution, assuming that it is done appropriately. It is three strikes. You get two warnings to make sure you know it is illegal, and then if the end users persists it is a remedy that they say the ISP has some obligation to either limit their service or to disconnect them altogether. And that is an option that the Congress could consider.

Mr. ROONEY. Thank you, Madam Chair.

Ms. JACKSON LEE. [Presiding.] Thank you. I am going to yield myself 5 minutes, my 5 minutes, and then we will make further determinations about the questioning. Let me welcome the witnesses and thank you very much for your presence here today. I am sorry that we are interrupted by votes. I just have a nonlegal question.

Mr. Fertitta, do you have any relatives in Texas?

Mr. FERTITTA. I certainly do.

Ms. JACKSON LEE. Oh, my goodness.

Mr. FERTITTA. Galveston.

Ms. JACKSON LEE. All right. Well, I have obviously run into them on several occasions. It won't bias my questions, and I will recuse myself. But in any event, I hope you have the opportunity to visit. It is a great State.

I first of all want to thank Mr. Seibel for his genius and creativity. And I hope that our questions don't disregard the uniqueness of your efforts, but I am going to try to be pointed in my questions and particularly cite language that deals with the Grokster case.

As I understand it, that case establishes liability for peer-to-peer copyright infringement that pertains to the unauthorized distribution and availability of music files on the Web. So it is a narrow decision. And if I can profess, I will just—yes or no, is it a narrowly drawn decision?

Mr. YOO. Yes. But it has implications beyond music.

Ms. JACKSON LEE. But it is a narrowly drawn decision. I mean, if we look at it, it pertains to music. Of course, it can be used and cited in someone's brief, but it will be up to the courts to interpret it more broadly. Is that my understanding?

Mr. YOO. The copyright law does not distinguish between music and other forms of protected acts. So the implication is there, but no, it does not decide anything.

Ms. JACKSON LEE. And so there is the possibility that we would legislatively act, or this would have to be an ongoing court proceedings or actions that individuals who felt that they were aggrieved would take in to court. Is that correct?

Mr. YOO. Yes.

Ms. JACKSON LEE. Then let me indicate that though we don't often cite our work, I think the Judiciary Committee has been a champion on job creation, and it has done so because we have taken to task this whole question of copyright infringement. As I understand it, when you have a product content you also have jobs. You have the institution that depends on content. And I just want to cite for the record some deals that have been put forward.

ESPN has in recent years signed several high-priced deals with sports leagues for broadcasting rights, including an $8.8 billion deal with the NFL, a $2.4 billion with Major League Baseball, and a $2.1 billion deal with NASCAR. That is a lot of money. And I assume the intent behind that is that those games generate dollars, and that means that people are employed in that particular industry, not necessarily—and it may mean that football teams can stay open as well, because I understand part of their revenue stream is the dollars that they get.

So when we talk about copyright protection, I would like it to be beyond the nuances of those of us who enjoy that kind of debate, intellectual property. It really has to be a mainstay of the survival of the genius of America, and this Committee has been in the forefront of trying to protect the genius of America. We have done so on a number of occasions. And to our chagrin, we have not been the most popular Committee here. We have talked about performers, we talked about others. We just have not been popular.

So my quick question is—and I think I am under 5 minutes. Is there where I am right now—5 minutes on the floor? Just to ask each of you very quickly how this present structure of the potential piracy would impact your bottom line and jobs. Mr. Mellis, am I asking the right—you are in Major League Baseball?

Mr. MELLIS. Yes.

Ms. JACKSON LEE. Very quickly.

Mr. MELLIS. Right now, with respect to the piracy, as we have been experiencing and observing it for several years, it is very difficult to quantify the impact because most of it is occurring offshore through rogue sites and services where we don't know much. We don't know how many piracy incidents there are.

Ms. JACKSON LEE. But you do know that if piracy continues and your product depletes in value, the potential that you may lose jobs. Is that? Can you answer yes or no?

Mr. MELLIS. Yes.

Ms. JACKSON LEE. Thank you.

Mr. Fertitta.

Mr. FERTITTA. Yes. I can tell you that I am sure this is an important issue for the other members of the panel; I can you that this is the most important issue for our company. We have created thousands of jobs, we have built a company with our content, and Pay Per View represents over half of our revenues. It is over half of our total revenue. So when people can choose just to log on to the Internet on to Justin.tv and get it for free, it certainly impacts our ability to run our——

Ms. JACKSON LEE. Thank you.

Mr. Durso.

Mr. DURSO. We have 6,000 people worldwide supporting the work of ESPN, and obviously our incentive to keep growing that asset would be significantly impacted.

Ms. JACKSON LEE. How many employees worldwide?

Mr. DURSO. 6,000.

Ms. JACKSON LEE. And does that impact on your bottom line and the potential of losing jobs?

Mr. DURSO. Unquestionably.

Ms. JACKSON LEE. Professor Yoo, do you see this as an economic issue?

Mr. YOO. I see it as an economic issue. Jobs are at stake. I used to teach in Nashville. The music industry was behind the curve on this, and they have been losing jobs like crazy. The industry is struggling. The television industry wants to get out in front of it, and this Committee has been a tremendous help in that regard.

Ms. JACKSON LEE. Mr. Seibel, do you want to work with us? Your business obviously provides income. Do you see the value of trying

to get a good roadmap so that you can exist but that we can prevent piracy on the Internet?

Mr. SEIBEL. Definitely.

Ms. JACKSON LEE. Let me thank you. We are going to adjourn this hearing and—all right. We are going to adjourn this hearing. So this hearing now stands in adjournment. Recess, excuse me. Let me pull that back. We are going to recess this hearing, and we ask that the witnesses remain available. It should be about 10 minutes, maybe a little longer. But we need you to stand by.

Thank you very much. This hearing is in recess. Thank you.

[Recess.]

Mr. DELAHUNT. [Presiding.] Okay. The hearing will come to order. And let me recognize my colleague from California, Mr. Issa, for as much time as he may consume.

Mr. ISSA. Thank you, Mr. Chairman. This has been a very interesting hearing because I think it has gone beyond perhaps the issue just that your organizations are dealing with. And let me go to a couple of questions.

First of all, Mr. Mellis, would you concur that over-the-air broadcast becomes the right of anyone who can receive it, to have it, to time shift it, and to watch it wherever they want to watch it?

Mr. MELLIS. Beyond the television set in the home?

Mr. ISSA. Beyond the Supreme Court decision. In other words, the Supreme Court has held that we have in the Sony Betamax, we have an absolutely right on a broadcast to store, and because it was a removable device in the case to store it forward. I mean, I can take my VHS tape out and I can take it to grandma's house and watch it there. That was all codified in Sony Betamax. Would you agree?

Mr. MELLIS. I do.

Mr. ISSA. So the question for you is, recognizing that that is not a commercial use, that is not a dissemination or a performance or a broadcast to others—and you say it very well—at the start and end of baseball, football, all the major leagues, that rebroadcast is prohibited. So we are not having that discussion here, and that may be today's subject. But let me just go through a scenario.

I am in San Diego. The San Diego Chargers are playing there. Let's just say that it is not being—I don't have it available where I am. Would you say that, as an owner of seven TVs in Oceanside, in San Diego, California, Vista, California, that I could watch it there and I could record it on an equivalent today of the Betamax?

Mr. MELLIS. Yes.

Mr. ISSA. And if I have the ability to do that and have the ability to forward it to myself, I am well within my rights?

Mr. MELLIS. Well, I think, from a strictly legal context, that question hasn't been decided by a court, although there is a technology available to do that.

Mr. ISSA. The Slingbox and other similar devices?

Mr. MELLIS. Correct. But what we are talking about here is the uploading of that game telecast for worldwide viewing.

Mr. ISSA. And one of the reasons I am pursuing this line of questioning is I don't get you all in front of me very often. I happen to believe strongly that your right to go to the audience that you originally broadcasted to, wherever they might be, including the store

and forward I mentioned, is really what we should be talking about today. But I ask this to lead you down a road of a question that is today.

If in fact I were to pay a service to capture in my home, whether it is a Slingbox I own or a commercial equivalent, I pay so that I may watch that on my BlackBerry because in fact I am away from my house right now; I am downtown, I want to watch it. As long as I am a broadcast recipient, would you say that I have the reasonable right to have that delivered to me?

Mr. MELLIS. On your BlackBerry?

Mr. ISSA. Let's just say on my BlackBerry.

Mr. MELLIS. And it is a service that you subscribe from your BlackBerry, or are you saying from your television to your BlackBerry?

Mr. ISSA. Well, let's go back to the Slingbox because that may be a better one. My ability to have delivered to my Washington home from my San Diego home a San Diego Charger game or a Padre game, would you say that that was reasonably consistent with existing law and your interpretation of it?

Mr. MELLIS. My view under the Copyright Act is that there are two copyright rights that are implicated. There is the platform shifting—using not copyright terms, but platform shifting and the place shifting. And those——

Mr. ISSA. Time and space.

Mr. MELLIS. Right. Those are the issues. So the question is whether or not doing that in the context you described for your own personal use, having paid for it already, whether that is a fair use. And that hasn't been decided by any court that I know of.

Mr. ISSA. And I am going to go down the aisle quickly because I happen to be of an opinion—thank goodness, I am not a judge. But I am of the opinion that simply broadly saying I am going to capture everybody's football games, baseball games, boxing matches, and then make it available on a service is way outside of the intent of existing law or copyright interpretations. But as to the description I made that whether it is through a service that is literally in my home or a service I contract, how many would you believe that with existing law we should feel comfortable that the owner of a San Diego home who wants to receive something from San Diego in their home in Washington, D.C. or on their BlackBerry should be able to? Let's just assume it is a Slingbox for now so that the technology is pretty understood.

Mr. FERTITTA. Once again, I don't have a legal background, I am not a legal expert relative to that issue. But my opinion is if you pay for my product and you are paying for your own personal use, as long as you paid for it, then that is fine.

Mr. ISSA. Mr. Seibel.

Mr. SEIBEL. Well, I think this calls for a legal interpretation I am not qualified to provide. I mean, as a consumer, that sounds reasonable.

Mr. ISSA. Mr. Durso.

Mr. DURSO. Yeah. Once upon a time I used to be a practicing lawyer but not anymore.

Mr. ISSA. You were probably practicing when Sony Beta was designed.

Mr. DURSO. Yeah. A long time ago. But as someone who produces and distributes content, I think it is a—as Mike said, I think it is an unanswered question. I don't think that—the courts haven't really addressed it, and how that plays out I don't know. There are legitimate concerns about the scope of geography and rights that we buy, for example, in baseball in terms of protecting markets and the like. So it is a complicated issue.

Mr. ISSA. Sure. But back to the original premise. If I can record on a Sony Betamax set, assuming I find one, and I can remove that cartridge and move it here to California and play it at my home here, and that is codified in law, then wouldn't you agree that the equivalent would reasonably be anticipated by the Supreme Court decision?

Mr. DURSO. I don't know that it would be, honestly.

Mr. ISSA. Okay. So this is something where you don't consider it settled law when we go digital, we go over the Internet, we go to something other than a Sony version?

Mr. DURSO. I think additional questions come into play.

Mr. ISSA. Professor, you get to end on this. Because for us on the dais, at least for many of us, that is the question. I happen to come from a consumer electronics manufacturer background. I come from that industry that thought it was settled law that the noncommercial rebroadcast by the owner of something for purposes of time shifting or place shifting or even product shifting, in other words, recorded on this machine, played on another one with a different TV, were all pretty much settled law. How would you view that, Professor?

Mr. YOO. I don't believe it is settled law. I think that, for example, we have—for broadcast, retransmission of broadcast signals over cable had to—required a separate statute for retransmission consent. Rebroadcast of radio signals over the Internet required a separate statute. If it were simply true that if you could receive a radio signal——

Mr. ISSA. But that is rebroadcast, but not the owner recipient who has stored pursuant to a very hard-fought battle in the Sony Betamax case or the *Motion Picture Association v. Sony Betamax.*

Mr. YOO. But what is interesting is the Sony Betamax case left a lot of questions unanswered. For example, time shifting is clearly within the pale. What is clearly suggested by other decisions building on Sony Betamax, building a library is probably outside the pale if you are going to build it on a durable basis. Space and device shifting is much harder to do. A couple of examples. People buy territorial exclusivity for programming internationally and in States, and in fact there are State blackout laws. If for some reason your beloved Chargers did not sell out their stadium, you would be banned from—you would be blacked out in San Diego. Theoretically, a person could be in Washington, D.C., where they are getting the feed and retransmit it back in ways that would potentially violate the law.

Mr. ISSA. I am going to close with a small statement which I am taking from the Chairman partially. Our problem on the dais is we pass laws or observe interpretations by the courts as part of promoting commerce, protecting intellectual property, and recognizing

that laws are only effective if they are, one, supported by the masses and, two, enforceable.

What I am hearing here today is that potentially we would reinterpret a law. My question to all of you in the abstract here, hypothetical, is how would we enforce: You can do this, but you can't library it? Well, the Sony product was a durable product and it was portable and it met a whole bunch of requirements. So from this side, or from the men and women in robes across the street, how in the world would we, one, enforce it and, two, why would it be the burden of the Federal Government to bring about that very expensive enforcement of finding out whether someone is storing something in their home, whether they are forwarding it, whether it is durable? Because we have been asked over the years to buy into—you might remember the Digital Millennium Copyright Act—buy into schemes that were going to empower others to primarily do it. And each time when it failed, you have come back to us.

So I am going to leave that as a rhetorical question, because it is beyond the scope just of this hearing. But I think, with the Chairman, we are very interested in figuring out whether or not what is being brought to us is in fact something that if we dealt with it we could be effective.

I thank the Chairman, and I yield back.

Mr. DELAHUNT. Thank you, Mr. Issa. You know, obviously I think the sentiment here on this side is to ensure that the creative community is protected and continues to operate and function in a way that produces the kind of products that the United States has a lead, has an advantage on, if you will. So I believe that to be unanimous.

I think the enforcement and the compliance issues are the real ones here, as suggested by my friend from California. And I am always struck, being a former State's attorney, by the imposition of very long prison sentences, and often cases mandatory ones, on some juvenile or, maybe for legal purposes, an adult, but maybe 19 years old that goes in and robs a convenience store and comes out with around $30 in cash and ends up doing 8 to 10 in a maximum security prison, and yet here we are today listening to the concerns that are obviously legitimate where I am confident that in the aggregate the losses are substantial.

If there is anyone on the panel who can describe or estimate what the losses are, I would be interested in hearing from any panelist. Mr. Fertitta.

Mr. FERTITTA. Certainly, Mr. Congressman. I can give you an idea just based on our experience. We operate the Ultimate Fighting Championship, which is the largest Pay Per View provider of sports in the world. And one of our recent events, which was just held back in November, just our team of people that were trying to find pirated streams found over 271 broadcasts in over 160,000 views in just that one night. And as I had mentioned in previous testimony, it is important for us, because it is a live sporting event, that we charge money for. It is extremely perishable. Once it is over, it is not worth what it was once it started, once somebody knows the outcome of what happened in that.

Revenues that are generated through there represent over half of our revenues of our overall company, and just that number of

streams represents probably in the neighborhood of 40 percent of the total amount of business that we——

Mr. DELAHUNT. Give me a number.

Mr. FERTITTA. Well, Pay Per View we charge $44.99. And if there was 160,000 people watching that night, that is potentially 160,000 people that weren't paying $44.99.

Mr. DELAHUNT. What is that?

Mr. YOO. $8 million.

Mr. FERTITTA. That is just what we found.

Mr. DELAHUNT. Less delivery costs. I mean, compare that. What is it in terms of the order of magnitude as far as the balance of payments issues is concerned? What is it in terms of the loss to the economy? And what is—does anyone know here, what is the longest prison term that has been served by a pirate? Professor?

Mr. YOO. I don't know.

Mr. DELAHUNT. Mr. Seibel?

Mr. SEIBEL. I don't know, sir.

Mr. DELAHUNT. So no one knows.

Mr. YOO. There is a famous case of someone violating the DMCA, a person by the name of Sklyarov, who recently went to jail. He was one of the first people to go to jail for creating a technology that allows this form of piracy. I don't know that—it is in the number of well over—it is in the years, I think—I am trying to remember, in the 10-year range, but sentences are along that order. But it is rare.

Mr. DELAHUNT. Well, I guess what I am saying, until there are severe sanctions—because we can have these very erudite and arcane discussions about dealing with the concerns that you are expressing. But until we have enforcement and appropriate sanctions by courts, many of my friends on the other side support the concept of mandatory sentences. I happen to disagree. But once that happens—this is theft. This is grand larceny. And until we get serious about enforcement and prosecution, we are going to continue to have—we are going to continue to have interesting hearings such as this, and I dare say we are not going to make a lot of progress.

Now, Professor, I am sure that you could provide us guidance and counsel in terms of how the law needs to be changed. I am sure our own staffs can do that. I am sure there are technologies that are out there and we should have, as Bob Goodlatte indicated earlier, continue to have meetings, et cetera.

But somebody has got to get serious about enforcement. And at one point in time, I know that we implored the Department of Justice to create a task force to do this. I don't know whether it still exists. Maybe we need some sort of an oversight hearing. But if someone is going to steal $8 million from one particular outlet and there is no consequence—there is a difference between a young male 18 or 19 years old who robs a convenience store and does 8 to 10. Deterrence really doesn't exist in the majority of those cases because that young male doesn't have in his back pocket the United States Criminal Code, and he hasn't done an analysis of what the potential sanction may be. Believe me, that is the case, based on my own experience. So the concept of deterrences really doesn't play. But whoever is doing the $8 million hit to the company and to our overall economy, I am sure he has a battery of

lawyers that are either going to raise all of the issues that I heard being discussed here today, contributory infringement and all these concepts that are freedom of free speech and in the marketplace and et cetera. But until there is a serious consequence—and I think it is incumbent upon people who are in the industry working with the Congress, working with the executive branch to say if you are a thief you go to jail. If you are stealing and you can establish it beyond a reasonable doubt, then let's impose harsh, severe sanctions, because it is not just the individual sport, it is not just the individual company that is being victimized here, but it is all of us. I mean, this is an important aspect of the American economy and a global economy today.

Any comments?

Mr. DURSO. I couldn't agree with you more.

Mr. DELAHUNT. Well, I have been given some questions to ask you. All right. Mr. Seibel, could you comment and respond to the document that Mr. Fertitta introduced into the record?

Mr. SEIBEL. Yes. Thank you for the opportunity to do that. For a second, I want you to excuse the title of this document and consider the text. What is clear is that this is a guide for broadcasting video from a video game console to Justin.tv, which is an extremely popular practice. If you consider the second sentence. This is a popular request among broadcasters who see channels like four-player podcasts where they broadcast or stream capture the video game. You can look at the second instruction. A way to send a video from your console to your television. The third instruction, most plug their console into their TV using composite cables and use another set of cables to send audio.

If you were to follow this guide on Justin.tv, you would not see television showing up on your channel, you would see a video game from Xbox or a PlayStation 3. I just wanted to make that clear.

And I do apologize for the header and the title text, because I do believe that that is slightly misleading. That is something that we will certainly correct.

Mr. CONYERS. Thank you. I want to thank all of the witnesses for their testimony, and without objection, Members will have 5 legislative days to submit any written questions to you, which we will forward and ask that you answer as promptly as you can to be made part of the record. The record will remain open for 5 legislative days for the submission of any additional materials.

Thank you again, and the hearing is adjourned.

[Whereupon, at 1:45 p.m., the Committee was adjourned.]

APPENDIX

Material Submitted for the Hearing Record

TESTIMONY OF

THE NATIONAL FOOTBALL LEAGUE

BEFORE THE

COMMITTEE ON THE JUDICIARY

UNITED STATES HOUSE OF REPRESENTATIVES

"PIRACY OF LIVE SPORTS BROADCASTING OVER THE INTERNET"

DECEMBER 16, 2009

Chairman Conyers, Ranking Member Smith, Members of the Committee:

The National Football League appreciates the Committee's interest in the piracy of live sports broadcasting. We are pleased to have received an invitation to submit testimony and share our experience with online piracy of our games. We look forward to working with you in the future to address this issue.

The National Football League

> "This telecast is copyrighted by the NFL for the private use of our audience. Any other use of this telecast or of any pictures, descriptions, or accounts of the game without the NFL's consent, is prohibited." -NFL Broadcast Copyright Notice

For decades, the NFL has advised viewers, fans and would-be copyright infringers that the NFL game telecasts are copyrighted, protected content. Nonetheless, internet pirates, with full knowledge of their infringing behavior, are streaming live NFL games without the NFL's consent.

NFL football is the most watched professional sport in America. According to consumer survey data, the NFL is the most popular spectator sport, with nearly 180 million fans and more avid fans than any other sport.[1] Over 245 million Americans watched the NFL's 2008 season and over 151 million Americans watched Super XLII, making it the most-viewed television program in U.S. history.[2] The NFL's popularity is reflected in the reach of its viewership and is a direct result of the NFL's media strategy. Unlike other sports properties, NFL programming is limited to 16 regular season games per team and a series of 10 playoff games culminating in the Super Bowl championship

[1] ESPN Sports Poll 2006-08
[2] Nielsen Media Research 2009

game. Because every game impacts a team's ability to progress to the playoffs, each game is significant.

Each of the NFL's 256 regular season games and every post-season game is televised on free over-the-air television. Every fan can watch all of the local team's away games on broadcast television. If sold out at least 72 hours in advance (as is almost always the case), each home game is televised locally over-the-air as well. In addition to making available home team games, the NFL offers fans with viewing options that include a slate of regional and nationally televised games. This includes multiple offerings on Sunday afternoon (CBS and FOX), one nationally televised game on Sunday night (NBC), one nationally televised game on Monday night (ESPN), and beginning in November, a series of nationally telecast games on the NFL Network. All NFL playoff games, including the Super Bowl championship, are televised by one of the free over-the-air broadcast networks on a national basis. These viewing options are supplemented by NFL Sunday Ticket on DirecTV – a satellite package for Sunday afternoon games that allows fans to view games from throughout the country – and through services that offer online and mobile streaming of game content.

Last season, NFL games on broadcast television (CBS, FOX and NBC) averaged 16.6 million viewers, 89 percent higher than the average primetime viewership among the four major over-the-air networks. On cable, ESPN's *Monday Night Football* was the most-watched series during the 2008 season, with an average of 12.0 million viewers. [3] Because of the popularity of NFL football and the significant viewership that it garners, broadcasters pay significant fees for the right to broadcast NFL football games. If not for

[3] Nielsen Media Research 2009

the ability to sell advertising at premium rates during NFL game telecasts, broadcasters may not be willing to pay these significant rights fees.

To satisfy evolving consumer demand and add value to NFL broadcast partners' investments, the NFL has undertaken new media initiatives offering fans live online streaming of NFL games. For example, the NFL has authorized free live streaming of nationally telecast NFL Sunday night games on NBC as a complement to its broadcast rights. In addition, the NFL offers NFL Sunday Ticket Super Fan, a subscription service that permits upgraded NFL Sunday Ticket subscribers to access online streams of live NFL games, and NFL Game Pass, another subscription service that provides fans outside North America access to authorized streams of live NFL games. These digital media initiatives expand the audience for NFL football, but do not siphon off the existing audience from broadcast television.

Both broadcast and new media distribution platforms are threatened by the unauthorized distribution of live NFL game content. In order to ensure that the value of the NFL's live game asset is protected, it is critical that the NFL maintain exclusive control over the availability and distribution of live NFL games. Online piracy threatens the investment broadcasters and digital media companies are willing to make to distribute NFL live content, the ability of our member clubs to sell game tickets and secure local television and radio carriage, and the value of advertising revenue generated by broadcast, radio and new media partners.

Online Piracy of Live Games

Live sports content is pirated on a real time basis through the internet either by streams that are retransmitted through peer-to-peer network services ("P2P"), directly from a web server to the end-user ("unicast"), or through live streaming user-generated content sites sometimes called "lifecasting" sites. The content is intercepted, typically, by using a component that allows television signals to be received by a computer and streamed in real time over the internet. Internet users can access these streams with relative ease. Internet web logs, chat boards and social media sites are replete with guides on how users can view unauthorized streams of intercepted video content. In addition, index sites sweep the web and gather information on live streams, then provide links back to the channel on stream aggregator sites where the intercepted streams are broadcast.

Online piracy of live NFL telecasts is a growing problem. During the 2008 season, the NFL identified over 1,045 unauthorized streams, including during Super Bowl XLIII. Approximately three-quarters of the way through the 2009 season, the NFL has already identified over 1,600 streams and as many as 200 streams in a given week. Almost all televised games from the NFL can be located on live streaming services.

Online piracy is also a global problem. Pirate services, including hosting services, indexing sites and stream originators, are believed to operate out of Canada, the Netherlands, People's Republic of China, Republic of Korea, Sweden, Israel, and the United Kingdom. The laws in many of these countries do not afford live sports programming adequate intellectual property protections.

NFL Enforcement Efforts

As a response to the growing threat of online piracy, the NFL has committed significant resources to combat the proliferation and impact of unauthorized live streams of NFL games. The NFL has increased its staff to protect NFL content from unauthorized streaming on, for example, peer-to-peer services and web sites hosting user generated content. In addition, the NFL engages outside attorneys and vendors to identify, investigate and take-down unauthorized streams.

In addition to these global take-down efforts, the NFL has initiated a dialog with site aggregators to try to establish efficient takedown notification programs. While this is currently the principal means by which sports content owners address unauthorized streams, often, the tools are inadequate to address the scope of the problem. First, the onus rests with the content owner to locate the unauthorized streams, record evidence of the infringement and send notification to the site, service or host to remove the content. Second, once the take-down notices are sent there is often lag time for compliance, ranging from several minutes to several hours. Because the average NFL football game lasts only 182 minutes, every minute of lag time matters and the speed with which response is received is critical. Finally, it is often the case that site originators re-issue unauthorized streams once they have been removed as a result of a take-down notice. Therefore, protecting live sports content becomes a virtual game of wack-a-mole, with content owners trying to remove streams that pop up minutes after they are taken down. To date, there is no technology solution offered that effectively identifies and filters unauthorized live streams from the internet on a real time basis.

The NFL has also joined in strategic partnerships, working alongside other content owners to identify online piracy patterns, raise awareness of online piracy on a global level and explore enforcement mechanisms to address the issue.

* * * *

Despite significant resources dedicated to addressing pirated streams, content owners continue to face challenges due to the inadequacy of current enforcement technology available to content owners, and piracy's international scope. Every year the NFL invests substantially more time and resources dedicated to combating online piracy. We believe this is a timely investigation and look forward to cooperating with the Committee as it considers these issues.

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INTERNET PIRACY OF LIVE SPORTS TELECASTS

Michael J. Mellis

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INTERNET PIRACY OF LIVE SPORTS TELECASTS

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I. INTRODUCTION

Live sports telecast rights are a core asset of the world's premier amateur and professional sports leagues and organizations, often commanding significant rights fees from television network rights holders.[1] Sports organizations also utilize their live sports telecasts in team and league-owned pay television networks and interactive media businesses. These organizations and related stakeholders are therefore vulnerable to piracy of their live telecasts. Unfortunately, at a point in time when many Internet users are increasingly comfortable consuming video online,[2] a new global paradigm of online piracy of live sports telecasts is emerging with worrisome growth characteristics. This is irrespective of the fact that it is a particularly egregious

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1. The *Sports Business Journal* reported that as of their respective 2007 fiscal years, News Corporation's sports programming obligations over the life of its contracts were approximately $17.1 billion and Walt Disney Corporation's was $19.2 billion. Daniel Kaplan, *Nets' Bill for Sports on the Rise*, SPORTS BUS. J., Dec. 10, 2007, at 1.

2. The amount of web-based video provided over the Internet continues to increase significantly each year. In July 2006, 107 million Americans, three out of every five Internet users, viewed video online. In July 2006, about 60 percent of U.S. Internet users downloaded videos. More than 7 billion videos were downloaded that month.

Press Release, Fed. Commc'n Comm'n, FCC Adopts 13th Annual Report to Congress on Video Competition and Notice of Inquiry for the 14th Annual Report (Nov. 27, 2007), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-278454A1.doc; *see also* Brian Stelter, *Serving Up Television Without the TV Set*, N.Y. TIMES, Mar. 10, 2008, at C1 ("[W]atching television episodes on a computer screen is now a common activity for millions of consumers.").

form of rights infringement. The purpose of this article is to examine the matter, which to date has received limited attention.

Part II of this article analyzes the Internet live sports telecast piracy problem. Two technologies enable it: unicast and streaming over peer-to-peer networks (SOP). SOP is showing signs of dominating digital piracy of live television programming of all types, including live sports telecasts. Parts III–V consider certain private and public sector responses to the problem. Part III analyzes anti-piracy litigation in this area and identifies likely aspects of foreseeable litigation. Because the Internet live sports telecast piracy problem largely occurs off-shore, with pirates engaging in "intellectual property arbitrage"[3] among variances in laws and enforcement mechanisms of nations, Part IV discusses initiatives to promote international cooperation. Part V examines the emerging trend toward the development and adoption of counter-technologies to curb online content piracy generally and how it relates to online live telecast piracy.

II. THE INTERNET LIVE SPORTS TELECAST PIRACY PROBLEM

There are two technologies enabling online live sports telecast piracy: (1) unicast streaming and (2) streaming over peer-to-peer networks. Unicast streaming involves "one-to-one" distribution of a media stream from a central server to an end user's computer, where it is converted through a media player into an audiovisual format.[4] Streaming over peer-to-peer networks involves a media stream being passed through the Internet among network participants, rather than from a central server to an end user.[5] In both cases, the technologies enable real-time retransmissions of live telecast signals on a worldwide basis.

Unicast streaming is the primary means for distribution of live video on the Internet. In 2007, NetResult, an intellectual property protection firm based in London, England, identified more than 370 unicast streaming websites engaged in the piracy of live sports telecasts.[6] As will be discussed in Part III, several of these websites have been the target of anti-piracy lawsuits brought by sports and other live event organizations.

That said, signs are pointing toward the rise of SOP as the dominant driver

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3. Pamela Samuelson, *Intellectual Property Arbitrage: How Foreign Rules Can Affect Domestic Protections*, 71 U. CHI. L. REV. 223, 223 (2004).

4. *See* Definition of Unicast, ZDNET.COM, http://dictionary.zdnet.com/index.php?d=Unicast (last visited Jan. 15, 2008).

5. *See* Definition of Peer-to-Peer Networks, ZDNET.COM, http://dictionary.zdnet.com/definition/P2P+TV.html (last visited Jan. 15, 2008).

6. Interviews with Christopher Stokes, President, NetResult (Nov. 26, 2007, & Jan. 18, 2008).

of online live sports piracy. This technology has come on strong in a short period of time. In September 2005, *The Wall Street Journal* identified the People's Republic of China as the "hotbed" of pirate services utilizing SOP technology, reporting that "a rising number of people are using [such services] to watch channels such as HBO, ESPN and MTV."[7] SOP services now operate out of several countries, including China, South Korea,[8] and the United States, and make available end user interfaces in languages including Chinese, English, and Korean. They routinely make hundreds of "channels" of live television network programming available from networks across the globe. Evidence indicates that in 2007, SOP services were used to pirate programming from the following U.S. networks: ABC, CBS, Comedy Central, ESPN, Fox, HBO, NBA TV, NBC, NFL Network, Nickelodeon, Spike TV, TBS, TNT, and a number of regional sports networks.

In these services, pirated sports and other live event telecasts typically are either retransmitted with the rest of the telecasters' programming or parsed out and identified separately on service "channels."[9] According to NetResult, nineteen SOP services have been identified that enable live sports telecast piracy, and more than 300 sites leverage off them, either by embedding SOP service streams into their own websites or linking to them.[10] Evidence indicates that in 2007, SOP services were used to pirate thousands of hours of live sports telecasts, including those of the following sports leagues and

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7. Geoffrey A. Fowler & Sarah McBride, *Newest Export from China: Pirated Pay TV*, WALL ST. J., Sept. 2, 2005, at 131. According to Chinese government statistics, as of March 2007, China has the world's largest population of Internet users, with approximately 225 million, compared to the United States' 217 million. Loretta Chao, *China Web Use Takes Leap*, WALL ST. J., Mar. 14, 2008, at 3. China's Internet penetration rate is only 19%, compared to the United States' 69.7%. *Id.* The Chinese government recognizes a corresponding rise in online piracy. *See, e.g.*, Ben Blanchard, *China Says Struggling to Control Online Piracy*, REUTERS.COM, Jan. 17, 2008, http://www.reuters.com/article/ internetNews/idUSPEK3665020080117?sp=true (quoting Mr. Yan Xiaohong, Deputy Director of the National Copyright Administration, as stating: "Especially following the rapid development of Internet technology, online piracy cases have proliferated [in China], and the fight is far from over").

8. *See* Jon Herskovitz & Jessica Kim, *TV Sets a Turn-Off for South Korea's Youth*, REUTERS.COM, Nov. 15, 2007, http://www.reuters.com/article/technologyNews/idUSN14216 36520071115 ("[I]n South Korea, peer-to-peer video services have exploded. . . . The Internet is the distribution platform of choice and the content at [one's] fingertips is a dizzying array of pirated TV shows and movies.").

9. Many of these services also have an on-demand aspect, making available previously recorded television shows and movies. As BBC News reported in November 2006, "The pirating of popular TV shows is a growing problem for the TV industry . . . . An on-demand culture plus the growing speed and uptake of broadband are making TV the most pirated asset on the Internet . . . ." Jane Wakefield, *Millions Turn to Net for Pirate TV*, BBCNEWS.COM, Nov. 27, 2006, http://news.bbc.co.uk/2/hi/technology/6151118.stm.

10. Interviews with Christopher Stokes, *supra* note 6.

organizations: Association of Tennis Professionals Tour, Fédération Internationale de Football Association (FIFA), MLB, Minor League Baseball, National Association of Stock Car Auto Racing, National Basketball Association (NBA), National Collegiate Athletic Association (NCAA) basketball and football, National Football League (NFL), National Hockey League (NHL), Professional Golfers Association (PGA) Tour, Premier League, The Championships, Wimbledon, Union of European Football Associations (UEFA), and United States Tennis Association (USTA).

These services are open doors, permitting any type of programming to be distributed by anyone, without regard to copyright, trademark, signal, and related rights. The primary source of programming is from individuals who route signals from their home cable or satellite television accounts onto SOP networks. To do this, one only needs to have a personal computer equipped with a PC-TV tuner, an inexpensive piece of hardware that comes standard in many personal computers, broadband internet access, and an SOP service's "broadcast software" download from the service's website.

What accounts for the spread of SOP live sports piracy outward from China to a more international footing? A turning point might have been the 2006 FIFA World Cup, culminating with the July 9, 2006 final match of Italy versus France. This live sports event with tremendous international popularity, evidenced by a reported cumulative global television audience for the final match of more than 715 million viewers,[11] appears to have served as a sort of showcase for SOP sports piracy. *CNET* reported that "thousands" downloaded a particular SOP service player to watch matches.[12] As companion *CNET Asia* reported about that service:

> Can't afford to fork out for local pay-per-view? . . . Though we doubt the legality of this site (smacks of allofmp3.com to us), it's one of the best kept World Cup secrets in the peer-to-peer world. Imagine live video streams of World Cup matches from ESPN? It's a budget soccer fan's dream come true.[13]

Later in 2006, *BBC News* reported that "[a]lmost all English Premiership matches are available to watch live and for free, as are other leagues and sports. The coverage, mainly from Chinese sport channels, is put on peer-to-

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11. *2006 FIFA World Cup Broadcast Wider, Longer and Farther Than Ever Before*, FIFA.COM, Feb. 6, 2007, http://www.fifa.com/aboutfifa/marketingtv/news/newsid=111247.html.

12. Greg Sandoval, . . . *Another Napster?*, CNETNEWS.COM, Oct. 24, 2006, http://www.news.com/...Another-Napster/2100-1025_3-6128775.html.

13. CNET ASIA, Audio Arsonist, 2006, http://asia.cnet.com/reviews/techbuzz/audio_arsonist/0,39041384,3936729800.htm.

peer applications and can be watched anywhere in the world."[14] By the end of 2007, a significant amount of U.S.-originated live sports telecasts had been pirated via Chinese-based SOP services.

SOP's rise is also attributed to the fact that, again from the end-user's perspective, word about where to find these rogue services, and how to use them to watch programming, has spread virally through message boards, blogs, and "guerilla" or "linking" websites. These websites provide programming schedules and links to pirated content, including television programming.[15]

In the United States, word has also percolated up through mass media outlets. For example, in late 2007, several NFL regular season game telecasts were carried on an exclusive basis by the NFL Network. Fans without either DirecTV or a cable television service carrying NFL Network could not watch them at home. In a November 29, 2007 discussion about the matter on WFAN Sports Radio 66 New York's top-rated *Mike and the Mad Dog* sports talk show, a listener called in and described how he found a "probably illegal" website where users could watch NFL Network games for free on the Internet.[16]

Looking at the SOP piracy problem from an economic perspective, there are other signs pointing to growth. By utilizing peer-to-peer technology as the means for video retransmission and consumption, neither individual "broadcasters" nor end users typically bear any additional bandwidth cost. The prerequisites for end users are simply broadband service access and SOP service player downloads, and for "broadcasters" a PC-TV tuner card. SOP piracy, therefore, has the advantage of being able to scale up to accommodate audiences of material size without marginal cost to the parties involved. Audience capacity limits are addressed by making a pirated sports telecast available on multiple channels.[17] In contrast, unicast streaming can scale up

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14. Ian Youngs, *Illegal Net Sport Faces Crackdown*, BBCNEWS.COM, Nov. 29, 2006, http://news.bbc.co.uk/1/hi/entertainment/6192264.stm.

15. Kevin J. Delaney, *Threat for Big Media: Guerilla Video Sites*, WALL ST. J., Apr. 17, 2007, at A1. In 2007, the Motion Picture Association of America (MPAA), on behalf of its member movie studios, commenced three copyright infringement lawsuits against guerilla sites in Los Angeles, California federal district court: Disney Enters. Inc. v. Showstash.com, CV 07-4510 (C.D. Cal. filed Sept. 7, 2007); Warner Bros. Entm't v. PeekVid.com, CV 07-4185 (C.D. Cal. filed June 26, 2007); Universal City Studio Prod. v. YouTVPC.com, CV 07-4181 (C.D. Cal. filed June 26, 2007). *See also* Cooper v. Universal Music Austl. Proprietary Ltd., [2006] FCAFC 187 (operator of mp3s4free.net liable for infringement because the site was structured to allow Internet users to obtain easy access to copyrighted music files by means of links).

16. *Mike & the Mad Dog* (WFAN Sports Radio 66 radio broadcast Nov. 29, 2007) (on file with author).

17. Interviews with Christopher Stokes, *supra* note 6.

only with increasing streaming costs being borne by either or both parties. This is probably one reason why most SOP pirate services are available for free, while many unicast pirate services are available only on a pay basis.

That SOP pirate services do not charge end users does not mean they cannot generate revenue. Some services and guerilla sites appear to earn money through advertising and requests for donations. Advertising has been observed from service home pages, superimposed over a portion of the pirated content itself and before a content stream starts.

From a technological perspective, the "broadcasting" process is simple, and the proliferation of PC-TV tuner cards in personal computers makes it possible for many people to do it. Then there is the familiarity that millions of Internet users have with peer-to-peer technology and its capabilities. According to a recent estimate, as much as sixty to seventy percent of Internet traffic today involves peer-to-peer network activity.[18]

As is well known, peer-to-peer network file sharing supercharged the piracy of music, motion pictures, and other pre-recorded content. In 2005, the subject reached the U.S. Supreme Court after copyright infringement lawsuits brought by movie studios, recording companies, song writers, and music publishers against the Grokster and StreamCast peer-to-peer networks were consolidated. In *Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd.,*[19] a unanimous Court observed that "the probable scope of copyright infringement [through these networks] is staggering."[20] The *Grokster* Court referred to an MGM study finding that nearly ninety percent of files available for download through StreamCast's network were copyrighted works, and a study from another case determined that eighty-seven percent of files available for download through Napster's network were also subject to copyright protection.[21] Said differently, "[a]s the facts of *Grokster* demonstrated, at least 50 million citizens have been seduced into copyright infringement—a civil wrong—by its ease and convenience using current technology."[22]

The peer-to-peer piracy variant described in *Grokster* mainly harms copyright owners of pre-recorded audio and audiovisual content, e.g., movie studios and record companies. However, with its capability to transmit streaming media in real-time, SOP piracy brings into the fray sports leagues

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18. In the Matter of Broadband Industry Practices, Comments of NBC Universal, No. 07-52 (F.C.C. July 16, 2007), *available at* http://www.publicknowledge.org/node/1093.

19. 545 U.S. 913 (2005).

20. *Id.* at 923.

21. *Id.* at 922 & n.5.

22. JAY DRATLER, CYBERLAW: INTELLECTUAL PROPERTY LAW IN THE DIGITAL MILLENNIUM, § 6.01[2] (2006).

and organizations and related stakeholders in the live sports telecasts value chain as adversely impacted stakeholders.

III. RESPONSES TO THE PROBLEM: ANTI-PIRACY LITIGATION

A. Introduction

One line of attack against intellectual property piracy, including online live sports telecast piracy, is litigation. As will be explained *infra*, sports and other live event organization plaintiffs are already responsible for much of the leading precedent in this area. Although claims in such lawsuits will vary depending on the facts and law to be applied, unicast and SOP pirate services should expect to be sued with increasing frequency by stakeholders, and found liable for copyright infringement, trademark infringement and dilution, interception of cable and satellite television service signals, and false advertising/unfair competition.[23]

This type of litigation will be characterized by the dynamic, international nature of the problem itself. Stakeholders will need to look through a kaleidoscope of law and jurisdictional choices to optimize results. Consider, for example, the choices that would need to be evaluated prior to initiating litigation against a unicast or SOP pirate service with the following fact patterns:

Unicast Service (see *Cricket Australia v. Swan (Swan II)*,[24] *infra*):
Scotland: Location of service operator
Gibraltar: Location of service operator's corporation
Russia: Location of the service's servers hosting the pirated content
Australia: Location of sports organization piracy victim
Worldwide: Distribution

SOP Service:
China: Location of SOP service operator
Canada: Location of individual "broadcaster"

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23. Courts have recognized that under similar circumstances, many infringement victims generally give preference to litigation against service providers or distributors, rather than uploaders and end users, for reasons including the "impracticability or futility of a copyright owner's suing a multitude of individual infringers." *In re* Aimster Copyright Litigation, 334 F.3d 643, 645 (7th Cir. 2003), *cert. denied*, 540 U.S. 1107 (2004). Another potential defendant is a broadband service provider through whose network the infringing materials travel. In the United States, Internet service provider liability for infringement of live sports telecast rights has not been adjudicated.

24. Order, Cricket Austl. v. Swan (*Swan II*), ScotCS (Sess. Nov. 21, 2006) (R.G. Glennie).

United States: Location of sports organization piracy victim
The Netherlands: Location of guerrilla site
Worldwide: Distribution

In each example, the sports organization victim cannot sue the service provider in the victim's home country and expect a meaningful result unless the pirate service defendant has assets or physical presence there. The Internet's low barriers to entry and worldwide reach create a hospitable environment for pirates to exploit differences in national legal systems by setting up shop in countries where they perceive either the domestic laws and/or judicial institutions to be favorable. A consequence of this intellectual property arbitrage is that higher-protection rules and regimes of one country can be undermined by the lower-protection rules and regimes in another.[25] The low barriers to entry also make it possible for pirates to attempt to evade enforcement action by changing locations. An example is the Piratebay.org peer-to-peer site that in 2006 temporarily relocated its operations from Sweden to the Netherlands in response to Swedish police action.[26]

B. Unicast Cases

Sports organizations and other live event rights holders have scored victories enforcing their copyright and related rights against unicast services. In these situations, the unauthorized retransmission of a live sports or event telecast is streamed directly from the unicast service provider's servers. As a result, these decisions generally involve direct liability for copyright infringement, bearing in mind that under the U.S. Copyright Act, live broadcasts of sports events are protected audiovisual works, provided that they are recorded simultaneously with their transmission.[27]

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25. Samuelson, *supra* note 3, at 223; Jane C. Ginsburg, *Copyright Use and Excuse on the Internet*, 24 COLUM.-VLA J.L. & ARTS 1, 44 (2000). This should be understood as a driver common to all forms of digital piracy, online live sports telecast piracy included. *See, e.g.*, U.K. INTELLECTUAL PROP. OFFICE, INTELLECTUAL PROPERTY CRIME REPORT 2007, at 42 (2007), *available at* http://www.ipo.gov.uk/ipcreport.pdf ("Generally problem sites encountered are based and/or hosted overseas in territories where copyright legislation and/or enforcement are weaker than in the UK.").

26. *Pirate Movie Site Is Back in Action*, AUSTRALIAN IT, June 6, 2006, at 37. In early 2007, apparently in search of a new location outside the reach of any rule of law, Piratebay.org solicited donations to purchase Sealand, a World War II-era military platform off the coast of Great Britain, whose owner claims it to be a sovereign nation. Kelvin Chan, *A Virtual Island for a Virtual World*, GLOBE AND MAIL (Toronto, Can.), Jan. 18, 2007, at A13.

27. When a football game is being covered by four television cameras, with a director guiding the activities of the four cameramen and choosing which of their electronic images are sent out to the public and in what order, there is little doubt that what the cameramen and the director are doing constitutes "authorship." The further

i. iCraveTV

In late 1999, Canadian-based iCraveTV provided Internet users with the ability to watch live television programming from U.S. broadcast stations on a real-time basis. iCraveTV received the broadcast signals, digitized them, and then streamed them onto the Internet, where end users could view the content using media player software.[28] The service included easily circumvented restrictions designed to limit the site to a Canadian audience.[29] Two copyright and trademark infringement lawsuits were promptly launched in the United States, the first by a coalition of television networks and studios,[30] and the second by the NBA and the NFL.[31] A third suit was launched in Canada by the Canadian Association of Broadcasters and a coalition of Canadian television networks.[32]

In February 2000, the federal district court in Pittsburgh, Pennsylvania, temporarily enjoined iCraveTV's transmission of copyrighted programming in the United States. The court held that the plaintiffs in the two lawsuits, by then consolidated, were likely to prevail on their copyright and trademark infringement claims.[33] Personal jurisdiction was obtained because iCraveTV's

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> question to be considered is whether there has been a fixation. If the images and sounds to be broadcast are first recorded (on a video tape, fil [sic], etc.) and then transmitted, the recorded work would be considered a "motion picture" subject to statutory protection against unauthorized reproduction or retransmission of the broadcast. If the program content is transmitted live to the public while being recorded at the same time, the case would be treated the same; the copyright owner would not be forced to rely on common law rather than statutory rights in proceeding against an infringing user of the live broadcast. Thus, assuming it is copyrightable—as a "motion picture" or "sound recording," for example—the content of a live transmission . . . should be regarded as fixed and should be accorded statutory protection if it is being recorded simultaneously with its transmission.

H.R. REP. NO. 94-1476, at 52-53 (1976), *as reprinted in* 1976 U.S.C.C.A.N. 5659; *see also* Nat'l Football League v. PrimeTime 24 Joint Venture, 211 F.3d 10, 13 (2d Cir. 2000); Balt. Orioles, Inc. v. Major League Baseball Players Ass'n, 805 F.2d 663, 668 (7th Cir. 1986).

28. Michael A. Geist, *iCraveTV and the New Rules of Internet Broadcasting*, 23 U. ARK. LITTLE ROCK L. REV. 223, 225 (2000).

29. *Id.* at 225-26.

30. Twentieth Century Fox Film Co. v. iCraveTV, 2000 U.S. Dist. LEXIS 1091 (W.D. Pa. Jan. 21, 2000).

31. Nat'l Football League v. iCraveTV, 2000 WL 64016397 (W.D. Pa. Jan. 21, 2000).

32. Notice of Application, Canadian Broad. Corp. v. TVRadionow Corp., (Super. Ct. of Justice, Toronto, Can., Jan. 31, 2000), *available at* http://www.cab-acr.ca/english/media/news/00/case_icravetv.shtm; *see also* Danistan Saverimuthu, *The Regulation of New Media Broadcasting in Canada Post-iCraveTV.com*, 19 J. MARSHALL J. COMPUTER & INFO. L. 331, 333 & n.6 (2001).

33. Twentieth Century Fox Film Corp. v. iCraveTV, No. Civ. A. 00-121, 2000 WL 255989 (W.D. Pa. Feb. 8, 2000).

advertising sales occurred out of a Pittsburgh office and two iCraveTV executives resided in the Western District of Pennsylvania.[34]

The court found sufficient nexus to the United States, including receipt of iCraveTV's pirated transmissions in the United States, to apply the U.S. Copyright and Lanham Acts to the defendants' activities.[35] Thus, although the infringing activities originated in Canada, the court held that the plaintiffs' exclusive public performance rights, codified in 17 U.S.C. § 106(4), were infringed by unauthorized "inbound" streaming of the live sports telecasts from Canada to U.S. end users.[36] The court also held that the plaintiffs were likely to succeed in their trademark infringement claims, which arose because the iCraveTV service included uses of plaintiffs' trademarks, including NBA and NFL trademarks.

iCraveTV is an important precedent for sports organization victims and related parties. Since most unicast and SOP pirate services are available to U.S. end users, *iCraveTV* has utility if jurisdiction can be obtained in the United States. *iCraveTV* makes it clear that only a portion of the infringing activities need to occur in the United States for the U.S. Copyright and Lanham Acts to apply.

1. *National Football League v. PrimeTime 24 Joint Venture*[37]

Although it did not involve unicast streaming, the U.S. Court of Appeals for the Second Circuit's subsequent decision in *PrimeTime 24* should be noted because it reinforces the *iCraveTV* result. In *PrimeTime 24*, the Second Circuit held that the U.S. Copyright Act applies to unauthorized "outbound" retransmissions of copyrighted material originating from U.S. broadcasters, even if those retransmissions were directed to locations outside the United States.[38] In *PrimeTime 24*, the defendants captured live NFL game telecasts in the United States, retransmitted them to Canada, and distributed them without the NFL's authorization via a pay satellite television service available only in Canada.[39] Relying in part on *iCraveTV*, the Second Circuit held that the U.S. Copyright Act applies to any "step in the process by which a protected work wends its way to its audience" occurring in the United States.[40]

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34. Complaint, Nat'l Football League v. TVRadioNow Corp., 2000 WL 34016397, ¶ 3 (W.D. Pa. filed Jan. 20, 2000); Ginsburg, *supra* note 25, at 42.

35. Ginsburg, *supra* note 25, at 42.

36. *iCraveTV*, 2000 WL 255989, at *3.

37. 211 F.3d 10 (2d. Cir. 2000).

38. *Id.* at 13.

39. *Id.* at 10-11.

40. *Id.* at 13 (quoting David v. Showtime/The Movie Channel, Inc., 697 F. Supp. 752, 759

In *iCraveTV* and *PrimeTime 24*, the defendants attempted to engage in intellectual property arbitrage by maintaining that their activities were compliant with Canadian law, and thus could not be found liable in the United States. The potential anomaly between Canadian and U.S. law prompted Canada to revise its laws toward harmonization.[41]

ii. *Live Nation Motor Sports, Inc. v. Davis*[42]

In *Live Nation*, a live event promoter was granted summary judgment on a copyright claim alleging that the defendant website, without authorization, streamed the live free audio webcast from another website of the promoter's motorcycle races. The defendant admitted to providing an audio webcast of the races, but argued that the stream was distributed for free by the event promoter on its website. The court rejected this argument, relying on *PrimeTime 24*.[43]

iii. *Cricket Australia v. Swan (Swan I)*[44]

In *Swan I*, Cricket Australia and its Australian telecast rightsholder, Nine Network, sued in Edinburgh, Scotland, alleging copyright infringement in violation of the Copyright, Designs & Patents Act 1988 ("UK Copyright Act") against defendants who had been selling streams of Nine Network's live telecasts of 2006 VB Series cricket matches on the Cricketon.tv website. Matches were scheduled during January and February 2006. In June 2006, the court issued a decree against "infringing the copyright in the coverage of the cricket matches included in the VB Series . . . to be filmed by Nine Network . . . in any manner whatever and, in particular, by . . . broadcast or streaming (live or otherwise) of the [remaining VB Series matches] on the internet on any website . . . ."[45]

iv. *Cricket Australia v. Swan (Swan II)*[46]

In *Swan II*, the plaintiffs returned to court against the same defendants, plus a new one, in order to enjoin the unauthorized live streaming of the 2006

(S.D.N.Y. 1988)).

41. An Act to Amend the Copyright Act, 2002 S.C., ch. 26 (Can.); John Borland, *Canada Blocks Free Net TV*, CNETNEWS.COM, Jan. 17, 2003, http://www.news.com/2100-1023-981254.html.

42. LiveNation Motor Sports, Inc. v. Davis, 2007 WL 79311 (N.D. Tex. Jan. 9, 2007).

43. *Id.* at *4.

44. Order, Cricket Austl. v. Swan (*Swan I*), ScotCS (Sess. Feb. 3, 2006) (R.G. McEwan).

45. *Id.*

46. Order, Cricket Austl. v. Swan (*Swan II*), ScotCS (Sess. Nov. 21, 2006) (R.G. Glennie).

Ashes Series cricket matches from the Cricketon.tv website. Matches were scheduled to start in late November, and plaintiffs saw advertisements about their upcoming availability on the Cricketon.tv and Livesportson.tv websites. The court issued a decree similar to the one it had previously issued with respect to the VB Series matches.[47]

The new defendant, Best Hosting, hosted the websites. Located in Moscow, Russia, Best Hosting claimed that it could not be found liable because Russian Federation law did not prohibit its activities.[48] *Swan II* is, therefore, another example of intellectual property arbitrage being played out, this time in an Edinburgh, Scotland court, rather than in a Pittsburgh, Pennsylvania court, as happened in *iCraveTV*, or in a New York, New York court, as happened in *PrimeTime 24*.

v. *Union des Ass'n Européennes de Football v. Briscomb*[49]

In *Briscomb*, claimants UEFA and British Sky Broadcasting Group sued in London, England, alleging copyright infringement in violation of the UK Copyright Act against defendants who had been selling live streams of UEFA Champions League matches as telecast by BSkyB and ITV on Sportingstreams.com and related websites.[50] The claimants identified sixteen matches that were pirated.[51] The court granted summary judgment in favor of the claimants based on "evidence of a good many live matches having been the subject of what are claimed to be infringing dissemination and copying by the defendants."[52]

vi. *Football Ass'n Premier League Ltd. v. Ayiotis*[53] & *Football Ass'n Premier League Ltd. v. Sayward*[54]

In 2007 the Premier League started two similar copyright infringement lawsuits pending in London, England, alleging unicast piracy of various soccer match telecasts from websites with self-explanatory names such as freelivefootball.co.uk and freepremierleague.com.[55] On February 20, 2008, in

47. *Id.*
48. Condescendence Supporting Summons, ¶ 10, *Swan II*, ScotCS (Sess. Nov. 21, 2006).
49. Union of European Football Ass'ns v. Briscomb, [2006] EWHC (Ch) 1268 (Eng.).
50. *Id.*
51. *Id.* ¶ 5.
52. *Id.*
53. Football Ass'n Premier League Ltd. v. Ayiotis, [2007] EWHC (Ch) 01572 (Eng.).
54. Football Ass'n Premier League Ltd. v. Sayward, [2007] EWHC (Ch) 01574 (Eng.).
55. *Ayiotis*, [2007] EWHC (Ch) 01572 (Eng.); *Sayward*, [2007] EWHC (Ch) 01574 (Eng.).

Sayward, the court granted judgment in favor of the Premier League, among other things restraining the defendants from "[o]rganising the provision of or providing the transmission or stream over the internet to any third party of any televised footage of any English Premier League football match."[56]

C. SOP Cases

In the United States, unauthorized peer-to-peer movie and music file sharing services have generally been held to be liable for copyright infringement under secondary liability principles, including theories of contributory and vicarious liability.[57] The leading secondary liability decisions, including *Grokster*, should support findings of secondary liability under the U.S. Copyright Act for SOP service providers described in this article.[58]

In *Grokster*, the Supreme Court described secondary liability as follows: "One infringes contributorily by intentionally inducing or encouraging direct infringement and infringes vicariously by profiting from direct infringement while declining to exercise a right to stop or limit it."[59] A non-exhaustive—and by no means necessary—list of reasons why secondary liability should attach to the SOP services described in this article is as follows: they have

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Premier League has a domestic Saturday afternoon telecast blackout intended to protect live attendance. In both lawsuits, Premier League alleges a "detrimental effect on attendances, ticket sales and revenues" as a result of defendants' alleged end-run around the blackout. Amended Particulars of Claim, ¶ 62(b), Football Ass'n Premier League Ltd. v. Ayiotis, [2007] EWHC (Ch) 01572 (Eng.); Particulars of Claim, ¶ 60(b), Football Ass'n Premier League Ltd. v. Sayward, [2007] EWHC (Ch) 01574 (Eng.). These allegations are notable because blackouts are common in many professional sports organization telecast rights schemes.

56. Order of Feb. 20, 2008, ¶ 2.1, *Sayward*, [2007] EWHC (Ch) 01574 (Eng.).

57. *See* DRATLER, *supra* note 22, § 5A.03.

58. *See also* Perfect 10, Inc. v. Amazon.com, Inc., 508 F.3d 1146 (9th Cir. 2007); *In re* Aimster Copyright Litig., 334 F.3d 643 (7th Cir. 2003); A&M Records v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001). Prospective decisions in the consolidated copyright infringement cases brought against Google's YouTube subsidiary could also potentially inform the secondary liability federal common law. Football Ass'n Premier League Ltd. v. YouTube, Inc., No. 07-CV-3582 (S.D.N.Y. filed May 4, 2007); Viacom Int'l, Inc. v. YouTube Inc., No. 07-CV-02103 (S.D.N.Y. filed Mar. 19, 2007). These lawsuits generally concern the availability of video clips of television programming on the YouTube service, having been uploaded to its servers by individual Internet users. YouTube is defending itself against liability in part by invoking the "safe harbors" of the Digital Millennium Copyright Act (DMCA), which are available under certain circumstances to statutorily-defined "online service provider[s]." Online Copyright Infringement Liability Limitation Act, Title II of the DMCA, 17 U.S.C. § 512 (2005). The defendant peer-to-peer file sharing services in *Aimster* and *Napster* raised DMCA defenses and failed. *Aimster*, 334 F.3d at 655; *A&M Records*, 239 F.3d at 1025; *see also* DRATLER, *supra* note 22, § 6.03 (DMCA's safe harbors are inapplicable to peer-to-peer technology).

59. Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 545 U.S. 913, 930 (internal citations omitted); *see also Perfect 10*, 508 F.3d at 1146.

actual knowledge of and encourage infringements by providing detailed programming directories, often with the look and feel of television guides. These directories are typically presented in terms of the television network and sports organization associated with a telecast, like the music indexes and directories provided by the Napster, Aimster, and Grokster peer-to-peer services.[60] These inducements fall squarely within *Grokster's* holding that "one who distributes a device with the object of promoting its use to infringe copyright, as shown by clear expression or other affirmative steps taken to foster infringement, is liable for the resulting acts of infringement by third parties."[61] They financially gain from their activities by placing advertising near or on top of the telecast streams or by charging a fee to access the service.[62] Finally, successful rights enforcement encounters with several SOP services makes it clear they have the right and ability to prevent infringements using "simple measures to prevent . . . damage to . . . copyrighted works . . .," again consistent with principles of secondary liability.[63]

There are only two known lawsuits involving SOP piracy of live television programming. This is probably a reflection of the fact that SOP piracy is relatively new, as compared to unicast piracy. They are as follows:

i. *Premier Fernsehen v. Cybersky TV*[64]

In late 2004, a German court issued an injunction in a copyright infringement lawsuit brought by pay-per-view broadcaster Premier Fernsehen GmbH & Co. KG against the developer and distributor of "Cybersky" peer-to-peer service software.[65] The injunction prohibited distribution of the software as long as it enabled peer-to-peer re-streaming of encrypted content from pay television providers.[66] On appeal, the Hamburg, Germany High Regional Court decided that a ban on the software was not warranted.[67] However, the court stated that the defendant was liable for copyright infringement because the software and service were advertised as a way to end-run plaintiff's pay

60. *A&M Records*, 239 F.3d at 1020-22; *Aimster*, 334 F.3d at 646; *Grokster*, 545 U.S. at 921.

61. *Grokster*, 545 U.S. at 936-37.

62. *Id.* at 937.

63. *Perfect 10*, 508 F.3d at 1172 (quoting Religious Tech. Ctr. v. Netcom On-Line Comme'n Servs., Inc., 907 F. Supp. 1361, 1375 (N.D. Cal. 1995)); DRATLER, *supra* note 22, § 5A.03[1].

64. *Germany: Software to Re-stream TV Programs Infringes Copyrights, Court Says*, BNA WORLD INTELL. PROP. REP., Apr. 1, 2006.

65. *Id.*

66. *Id.*

67. *Id.*

programming.[68]

ii. *Premier League v. Moffat*[69]

In June 2007, the Premier League commenced a copyright infringement lawsuit in London, England, alleging that defendant James McKeown operates premiershiplive.net, a subscription website offering access to pirated Premier League match telecasts distributed via peer-to-peer networks, including one operated out of China.[70]

D. Other Claims

i. Communications Act

To the extent that a defendant assists others in receiving, without authorization, television programming provided by U.S. cable or satellite services, that defendant may violate various provisions of the U.S. Communications Act.[71] These rights are generally enforced by cable and satellite television operators, but under certain circumstances, standing exists for entities with proprietary rights in the intercepted communication.[72]

ii. Subscription Service Terms/Computer Fraud and Abuse Act

A subscriber to an online streaming media subscription service might be able to re-encode a stream and forward it to a pirate service. This would likely be in violation of standard subscription service terms and, if so, enforceable as a breach of them. This conduct may also violate the U.S. Computer Fraud and Abuse Act because an unauthorized access of a computer is involved, with intent to defraud.[73]

E. Government Enforcement

Some of the above-described legal claims have civil and/or criminal government enforcement counterparts. For example, certain violations of the

68. *Id.*

69. Football Ass'n Premier League Ltd. v. McKeown, [2007] EWCA (Ch) 01573 (Eng.).

70. *Id.*

71. *See* 47 U.S.C. §§ 553, 605 (2006).

72. *See, e.g.*, Nat'l Football League v. McBee & Bruno's, Inc, 792 F.2d 726 (8th Cir. 1986) (NFL is an aggrieved party pursuant to § 605 for piracy of NFL game telecasts); Home Box Office v. Carlim, Inc., 838 F. Supp. 432 (E.D. Mo. 1993).

73. 18 U.S.C. § 1030(a)(4) (2006).

U.S. Copyright, Communications, and Computer Fraud and Abuse Acts are criminalized in the U.S. Code and enforced by the U.S. Department of Justice.[74]

IV. IMPROVING INTERNATIONAL COOPERATION

As described *supra*, intellectual property arbitrage enables online sports telecast piracy. Initiatives to reduce this phenomenon are therefore becoming a part of the strategy to combat this type of piracy.

Within the United States, there are public and private sector initiatives to encourage and maintain effective intellectual property rights protection and enforcement worldwide. However, knowledge about this new digital piracy paradigm within the intellectual property rights community is limited. For example, it is not specifically identified in the 2007 analyses of worldwide intellectual property rights infringement conducted by either the Office of the U.S. Trade Representative (USTR) or the United Kingdom Intellectual Property Office.[75] Proactive efforts to improve knowledge about the problem

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74. Copyright Act, 17 U.S.C. § 506(a) (2006); 18 U.S.C. § 2319 (2006); Communications Act, 47 U.S.C. § 501 (2006); Computer Fraud and Abuse Act, 18 U.S.C. § 1030(a)(2) (2006); *accord* U.S. DEP'T OF JUSTICE, EXECUTIVE OFFICE FOR UNITED STATES ATTORNEYS, PROSECUTING INTELLECTUAL PROPERTY CRIMES (2006), *available at* http://www.usdoj.gov/criminal/cybercrime/ipmanual/ipma2006.pdf.

75. Pursuant to the Trade Act of 1974, as amended by the Omnibus Trade and Competitiveness Act of 1988 and Uruguay Round Agreements Act (enacted in 1994) ("Special 301"), the USTR conducts an annual review of the global state of intellectual property rights protection and enforcement and identifies countries where particular problems exist. China is currently on USTR's "Priority Watch List." OFFICE OF THE U.S. TRADE REP., 2007 SPECIAL 301 REPORT 18-21 (2007), *available at* http://www.ustr.gov/assets/Document_Library/Reports_Publications/2007/2007_Special_301_Review/asset_upload_file230_11122.pdf; U.K. INTELLECTUAL PROP. OFFICE, *supra* note 25; OFFICE OF THE U.S. TRADE REP., 2007 REPORT TO CONGRESS ON CHINA'S WTO COMPLIANCE (2007), *available at* http://www.ustr.gov/assets/Document_Library/Reports_Publications/2007/asset_upload_file625_13692.pdf. In February 2007, MLB, MLBAM, NBA, NCAA, NFL, and NHL Enterprises (the licensing arm of the NHL) (the "Sports Coalition") submitted a joint letter to the USTR in response to its requests for comments about its 2008 Special 301 Report. Letter from Michael J. Mellis, Senior Vice President and General Counsel of MLBAM, to Jennifer Choe Graves, Director for Intellectual Property and Innovation and Chair of the Special 301 Committee, Office of the U.S. Trade Representative (Feb. 11, 2008), *available at* http://www.ustr.gov/assets/Trade_Sectors/Intellectual_Property/Special_301_Public_Submissions_2008/asset_upload_file441_14500.pdf. The Sports Coalition's letter requested that the USTR consider the problem of Internet piracy of live sports telecasts in formulating the 2008 Special 301 Report, and it recommended that resolution of the problem become a stated goal of U.S. trade policy. *Id.* A February 2008 Special 301 Report letter to USTR submitted by the Cable and Satellite Broadcasting Association of Asia referred to: "entire bouquets of [pirated] pay-TV channels . . . . Member companies have found numerous instances of pirate streaming of US-based channels, including HBO, ESPN, Discovery, CNN, the Disney Channel and Cartoon Network . . . ." Letter from the Cable and Satellite Broadcasting Association of Asia to the Office of the U.S. Trade Representative (Feb. 11, 2008), *available at* http://www.ustr.gov/assets/Trade_Sectors/Intellectual_Property/Special_301_Public_

include participation of the two coalitions of sports leagues and organizations in the process concerning the World Intellectual Property Organization's Standing Committee on Copyright and Related Rights (SCCR) proposed Treaty for the Protection of Broadcast Organizations (Broadcast Treaty) and are described *infra*. Another is the Coalition Against Online Video Piracy (CAOVP), a group of sports organizations, entertainment companies, telecasters, and trade associations concerned about online video piracy.[76] CAOVP's website states:

> From Internet sites and services, television channels from all over the world are available without authorization from rights holders, in disregard of fundamental copyright and broadcast rights. The Coalition operates as a forum through which organizations can share information, resources, experiences and strategies to stop this new breed of intellectual property rights piracy.[77]

CAOVP's membership includes over thirty premier professional and amateur sports organizations based in Australia, Europe, and North America.[78]

Within the U.S. public sector, intellectual property rights protection and enforcement is a part of U.S. trade policy. The USTR attempts to negotiate free trade agreements "which contain intellectual property chapters that establish strong protections for copyrights, patents, and trademarks, as well as rules for enforcement."[79] In the United States–Korea Free Trade Agreement (USKFTA), which became effective on June 30, 2007, online video piracy is addressed in a way that would appear to embrace the live telecast piracy variant; however, as stated *supra*, USTR has not yet identified online piracy of live television programming as a specific problem. In a confirmation letter

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Submissions_2008/asset_upload_file329_14481.pdf.

76. The author represents MLBAM at CAOVP.

77. Coalition Against Online Video Piracy, http:www.caovp.com (last visited Feb. 21, 2008).

78. Sports organization members include: 6 Nations Rugby, Australian Football League, Amateur Swimming Association, Australian Rugby League, Bundesliga, Cricket Australia, England and Wales Cricket Board, Premier League, European Professional Football Leagues, European Tour, Fédération Française de Tennis, FIFA, Lawn Tennis Association, The Football Association, The Football League, Formula 1, International Association of Athletics Federations, International Cricket Council, International Federation of Horseracing Authorities, International Rugby Board, International Tennis Federation, Ligue de Football Professionnel, London Marathon, MLB, MLBAM, Major League Soccer, NBA, NCAA, NFL, NHL, PGA Tour Australasia, Rugby Football League, Rugby Football Union, Ryder Cup, Scottish Premier League, Scottish Rugby, Tennis Australia, le Tour de France, UEFA, the Wimbledon Championships, Women's National Basketball Association (WNBA), World Marathon Majors, and World Snooker Association. *Id.*

79. OFFICE OF THE U.S. TRADE REP., *supra* note 75, at 4.

entitled "Online Piracy Protection," made a part of USKFTA, the United States and Korea agreed on "the objective of shutting down Internet sites that permit the unauthorized downloading (and other forms of piracy) of copyright works . . . and providing for more effective enforcement of intellectual property rights on the Internet, including in particular with regard to peer-to-peer . . . services."[80]

Another approach toward improving international cooperation is through multilateral treaties with provisions that would create either new or better tailored international remedies. A recent example within the realm of online telecast piracy is the proposed Broadcast Treaty, which is an effort to update the 1961 Rome Convention on the Protection of Performers, Producers of Phonograms, and Broadcasting Organizations. The most recent version, discussed at the June 2007 SCCR meeting in Geneva, Switzerland, would grant broadcasting organizations the "exclusive right of authorizing the retransmission of their broadcasts," which would cover Internet retransmissions.[81] In the U.S. delegation's June 19, 2007 statement about the Broadcast Treaty to SCCR, the United States identified the need for international law to be developed that "includes protection for broadcasters against the unauthorized simultaneous retransmission of their signals over the Internet. A major threat to broadcasters arises when someone places their signal on the Internet without permission."[82]

In 2007, sports organizations participated in the Broadcast Treaty process through two WIPO-accredited non-governmental organizations. One is the Coalition of Sports Organizations (Sports Coalition).[83] In its request to WIPO to be accredited, the Sports Coalition said this about online piracy of its sports telecasts:

> The members of the Sports Coalition license the rights to broadcast and retransmit broadcasts of thousands of live sports events each year, as well as highlights of those events. The Sports Coalition seeks to safeguard the value of these rights by

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80. Letter from Hyun Chong Kim, Minister for Trade, to Susan C. Schwab, U.S. Trade Rep. (June 30, 2007), *available at* http://www.ustr.gov/assets/Trade_Agreements/Bilateral/Republic_of_Korea_FTA/Final_Text/asset_upload_file631_12740.pdf?ht=.

81. *Non-paper on the WIPO Treaty on the Protection of Broadcasting Organizations*, Apr. 20, 2007, http://www.wipo.int/meetings/en/doc_details.jsp?doc_id=77333.

82. Unofficial Transcript of the U.S. Delegations' Remarks, United States Intervention to WIPO Plenary (Casting Negotiations), June 20, 2006, http://lists.essential.org/pipermail/a2k/2007-June/002409.html.

83. Consisting of: Canadian Football League, Ladies' PGA, MLB, MLBAM, NBA, WNBA, NCAA, NFL, NHL, PGA, PGA Tour, and USTA. The author attended the June 2007 SCCR session on behalf of the Sports Coalition.

> advocating for the passage of international treaties and domestic legislation that protect and do not impair these contract rights and obligations, and that provide adequate private remedies against those who pirate licensed broadcasts of sports events . . .
>
> Sports organizations, including Sports Coalition members, are also heavily affected by piracy, including the unauthorized retransmission over the Internet and other media of their copyrighted programs contained in the broadcast signals that are the subject of the proposed Treaty. Combating signal piracy in all its forms, including piracy of sports event telecasts, has been described as one of the major objectives of the proposed Treaty. Sports Coalition members are one of the major groups of rightsholders that will be affected by efforts to address such piracy through the proposed Treaty.[84]

The second is the Sports Rights Owners Coalition (SROC).[85] In its request to WIPO to be accredited, SROC said this about online piracy of its sports telecasts: "[SROC] seeks . . . effective protection for their rights under law . . . [including] prevent[ing] the theft of sports events broadcasts by pirates . . . ."[86]

The proposed Broadcast Treaty was discussed without resolution at the June 2007 SCCR meeting. The process is reported to be at a standstill because of the failure to reach consensus on basic issues.[87] Regardless, this or any

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84. WORLD INTELLECTUAL PROP. ORG., SECOND SPECIAL SESSION OF THE STANDING COMMITTEE ON COPYRIGHT AND RELATED RIGHTS, ACCREDITATION OF CERTAIN NON-GOVERNMENTAL ORGANIZATIONS, JUNE 18-22, 2007 (2007), *available at* http://www.wipo.int/edocs/mdocs/sccr/en/sccr_s2/sccr_s2_2.pdf. It should be noted that the Sports Coalition objected to the proposed Broadcast Treaty to the extent it would affect the traditional contractual and other rights of sports organizations in the broadcasts. *Id.*

85. Consisting of: 6 Nations Rugby, Australian Football League, Amateur Swimming Association, Australian Rugby, Bundesliga, Cricket Australia, England and Wales Cricket Board, Premier League, European Professional Football Leagues, European Tour, Fédération Française de Tennis, FIFA, The Football Association, Football Data Co., Ltd., The Football League, Formula 1, International Association of Athletics Federations, International Cricket Council, International Federation of Horseracing Authorities, International Rugby Board, International Tennis Federation, Ligue Football de Professionnel, London Marathon, Lawn Tennis Association, PGA Tour Australasia, Rugby Football Union, Ryder Cup, Scottish Premier League, Scottish Rugby, Tennis Australia, le Tour de France, UEFA, the Wimbledon Championships, World Marathon Majors, and World Snooker Association.

86. WORLD INTELLECTUAL PROP. ORG., *supra* note 84.

87. Monika Ermert, *Broadcasting Treaty: Council of Europe Picks Up Where WIPO Left Off*, INTELL. PROP. WATCH, Dec. 10, 2007, http://www.ip-watch.org/weblog/index.php?p=864&print=1 (reporting that the Council of Europe is considering whether to work on its own similar convention because of this situation); *Broadcasting Groups Lament Failure of Treaty Talks, Warn of Bypassing*

other relevant treaty would need to be ratified by a country with either deficient laws or enforcement mechanisms in order to have potential utility. And even then, in the absence of effective implementation by a signatory country, remedies may be available only through government action.[88]

These are significant hurdles to overcome, suggesting that sports organizations and other stakeholders will need to have a long-term strategy in order to help promote effective laws and enforcement mechanisms. Depending on the severity of the problem in the future, sports organizations may need to consider deeper collaborations and resource commitments, perhaps analogous to the establishment in 1992 of The Coalition to Advance the Protection of Sports logos (CAPS) by the Collegiate Licensing Company, MLB Properties, Inc., NBA Properties, Inc., NFL Properties LLC, and NHL Enterprises, L.P. CAPS addresses common trademark protection and enforcement matters.

V. COUNTER-TECHNOLOGIES

An emerging general trend toward better protection of intellectual property and related rights online involves the development and use of counter-technologies—such as watermarking, fingerprinting, and filtering—for the purpose of curbing online content piracy. In response to perceived market opportunities, venture capital is flowing into start-up ventures aiming at developing them.[89] Private sector stakeholders such as the International Federation of the Phonographic Industry,[90] MPAA,[91] and NBC Universal[92]

WIPO, BNA WORLD INTELL. PROP. REPORT, Sept. 2007, http://www.hostref4.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=BNAI:10.1048/Enu (reporting on points of disagreement at SCRR).

88. A current example is USTR's pursuit of remedies in the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) against the People's Republic of China for the alleged failure to give adequate protection to certain intellectual property rights and enforce those rights adequately. Press Release, Office of the U.S. Trade Representative, United States Requests WTO Panel in Case Challenging Deficiencies in China's Intellectual Property Rights Laws (Aug. 13, 2007), *available at* http://www.ustr.gov/Document_Library/Press_Releases/2007/August/United_States_Requests_WTO_Panel_in_Case_Challenging_Deficiencies_in_Chinas_Intellectual_Property_Rights_Laws.html.

89. *See, e.g.*, Kevin J. Delaney, *Copyright Tool Will Scan Web for Violations*, WALL ST. J., Dec. 18, 2006, at B1 (about Attributor Corporation); Michael Liedtke, *Audible Magic Emerging as Top Copyright Cop in Digital Revolution*, POST-GAZETTE.COM, Apr. 1, 2007, http://www.post-gazette.com/pg/07091/772887-96.stm (about Audible Magic, Inc.); Dionne Searcey, *AT&T Investment in Antipiracy Firm May Aid Video Push*, WALL ST. J., Nov. 14, 2007, at B3 (about Vobile, Inc.); *see also* Stephanie Kang, *Nielsen to Be Video Cop*, WALL ST. J., Dec. 5, 2007, at B3 (about Nielsen/Digimarc joint venture).

90. *See, e.g.*, Press Release, Int'l Fed'n of the Phonographic Indus., International Recording Industry Welcomes Groundbreaking Agreement in France to Help in the Fight Against Internet Piracy

are publicly embracing them as elements of their digital anti-piracy strategies. In the public sector, the French government recently brokered a multi-party "Agreement for the Development and Protection of Cultural Works and Programmes on New Networks," ("France Agreement") advocating its testing and adoption at both individual content and Internet service provider levels.[93]

In order to better describe this emerging trend, the France Agreement and other indicators are discussed *infra*, organized in terms of individual content and Internet service providers. The general trend is then considered in terms of the rise of the type of online piracy examined in this article.

A. Content Service Providers

Courts in the United States and elsewhere have ordered defendant peer-to-peer services to filter for unauthorized music files when fashioning injunctive relief in copyright infringement lawsuits.[94] Notably, late last year, following the Supreme Court's remand in *Grokster,* the district court issued a permanent injunction against defendant Streamcast's Morpheus peer-to-peer service that included a duty to filter.[95] Recognizing that filtering technology is both "evolving" and "highly technical," the court appointed a special master to assist in matters, including selection of an appropriate "filtering regimen," and retained the right to amend the injunction in light of future developments in the field.[96]

In October 2007, YouTube announced the "beta" launch of its "Video

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(Nov. 23, 2007), *available at* http://www.ifpi.org/content/section_news/20071123.html.

91. *See, e.g.*, *Web 2.0 Companies Turning to Tech to Combat Infringement, Panelists Say*, 2 BNA ELEC. COMMERCE & LAW 884 (2007); In the Matter of Broadband Industry Practices, WC Docket No. 07-52, Comment of Motion Picture Association of America, June 15, 2007; Peter Burrows, *Pirate-Proofing Hollywood*, BUS. WEEK, June 11, 2007, at 58.

92. *See* Comments of NBC Universal, Inc., *supra* note 18.

93. Ben Hall, *France Proposes to Cut-Off Persistent Internet Pirates*, FIN. TIMES, Nov. 23, 2007, http://search.ft.com/ftArticle?queryText=Sarkozy+fnac&y=0&aje=true&x=0&id=071123000098&ct=0; Unofficial English translation of Nov. 25, 2007 Agreement for the Development and Protection of Cultural Works and Programmes on New Networks, (on file with author) (a list of signatories is available at http://www.culture.gouv.fr/culture/actualites/conferen/albanel/organisationssignataires.pdf).

94. Universal Music Austl. Proprietary Ltd. v. Sharman License Holdings Ltd. (2005) F.C.A. 1242; Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 518 F. Supp. 2d 1197 (C.D. Cal. 2007); A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001), *aff'd*, 284 F.3d 1091 (9th Cir. 2002). *But cf.* Buma & Stemra/Kazaa, Gerechtshof [Hof] [Court of Appeal], Amsterdam, Mar. 28, 2002 (Neth.), *available at* http://www.solv.nl/rechtspraak_docs/KaZaA%20v.%20Buma%20Stemra%20-%20Court%20of%20Appeals%2028%20March%202002.pdf (rejecting plaintiff's proposal that defendant's Kazaa peer-to-peer music service should filter).

95. *Grokster*, 518 F. Supp. 2d at 1241.

96. *Id.* at 1239-40.

Identification" filtering technology designed to locate and block copyright-infringing video clips on its service.[97] That same month, a group of media and Internet companies, including News Corporation, owner of the MySpace social networking site, issued voluntary "Principles for User Generated Content Services," which called for implementing "effective content identification technology . . . with the goal of eliminating from their services all infringing user-uploaded audio and video content for which [c]opyright [o]wners have provided [r]eference [m]aterial."[98]

And, in the November 2007 France Agreement, French online content services have been called on to

> [e]xtend in the short term the effective filtering and fingerprinting and watermarking technologies, notably by establishing with them the acceptable fingerprinting technologies together with the catalogues of fingerprinting sources that the rightholders should help to create; [and to] define the conditions within which these technologies will be systematically implemented.[99]

B. Internet Service Providers

At the Internet service provider level, in June 2007, a Belgian court ordered defendant ISP Scarlet to "end violations of copyright, by rendering impossible all transmission or reception by P2P software of electronic files containing musical works from the [plaintiff's music] catalogue." The court ordered Scarlet to do this by selecting among technical measures identified by a court-appointed special panel.[100]

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97. Peter Burrows, *Ma Bell, the Web's New Gatekeeper*, BUS. WEEK, Nov. 19, 2007, at 38-39; *see also* YouTube Video Identification Beta, YOUTUBE.COM, http://www.youtube.com/t/video_id_about (last visited Mar. 12, 2008).

98. Principles for User Generated Content Services, http://www.ugcprinciples.com (last visited Feb. 24, 2008).

99. *See* Hall, *supra* note 93; Press Release, *supra* note 90; Unofficial English translation of Nov. 25, 2007 Agreement for the Development and Protection of Cultural Works and Programmes on New Networks, *supra* note 93.

100. *Brussels Court Orders ISP to Filter Access to P2P Sites*, BNA WORLD INTELL. PROP. REP., Aug. 1, 2007. There are also instances where courts have ordered an Internet service provider to block access to a specific website or service. *See, e.g.*, Ehud Kenan, *Internet Providers Ordered to Block File Sharing Website*, YNETNEWS.COM, Mar. 6, 2008, http://www.ynetnews.com/articles/0,7340,L-3515275,00.html (reporting that in late February 2008, a Haifa, Israel court "ordered the three largest internet service providers in Israel to block access to the Israeli file-sharing site httpshare, this following a petition levied by the 12 largest record companies in Israel"); John Oates, *AllofMP3 Hit by Danish Court Ruling*, THEREGISTER.CO.UK, Oct. 26, 2006,

AT&T, the largest U.S. Internet service provider, is reported to be considering a network-wide content-recognition system for the purpose of curbing the unauthorized distribution of copyrighted works.[101] And, returning to the France Agreement, Internet service providers have been called on to

> [w]ithin a maximum period of 24 months following the signature of the present agreement, to cooperate with the rightholders on the ways to test filtering technologies which are available but which deserve more preliminary in-depth research. They also undertake to apply them if the results prove convincing and if their general application proves technically and financially realistic. . . .[102]

Another development emerged in October 2007, when Comcast, the second largest U.S. Internet service provider, disclosed that "[d]uring periods of heavy peer-to-peer congestion, which can degrade the experience for all customers, we use several network management technologies that, when necessary, enable us to delay—not block—some peer-to-peer traffic."[103] Comcast says on its website: "Peer-to-peer activity consumes a disproportionately large amount of network resources, and therefore poses the biggest challenge to maintaining a good broadband experience for all users, including the overwhelming majority of our customers who do not use peer-to-peer applications."[104] In response to Comcast's disclosures, a consumer class action lawsuit started in California state court[105] and two petitions were filed with the FCC, one seeking a declaratory ruling that Comcast's practices violate FCC rules and another asking for the establishment of rules governing broadband network management practices.[106] In January 2008, the FCC

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http://www.theregister.co.uk/ 2006/10/26/itmueski _banned (reporting that a Copenhagen, Denmark court ruled that an Internet service provider must block access to the Allof MP3.com website).

101. Searcey, *supra* note 89; Burrows, *supra* note 97, at 38; *see also* Anne Broache, *Verizon: We Don't Want to Play Copyright Cop on Our Network*, CNetNEWS.COM, Jan. 30, 2008, http://www.news.com/8301-10784_3-9861402-7.html.

102. Unofficial English translation of Nov. 25, 2007 Agreement for the Development and Protection of Cultural Works and Programmes on New Networks, *supra* note 93.

103. Peter Svensson, *Comcast Admits Delaying Some Traffic*, MSNBC.COM, Oct. 23, 2007, http://msnbc.msn.com/id/2144566.

104. FAQ, *Is My Peer-to-Peer Activity Going to Be Impacted by Comcast?*, COMCAST.NET, http://www.comcast.net/help/faq/index.jsp?faq=Hot118986 (last visited Jan. 29, 2008).

105. Complaint, Hart v. Comcast of Alameda, Inc., No. 07355993 (Cal. Sup. filed Nov. 13, 2007).

106. Petition for Declaratory Ruling, In the Matter of Free Press, WC Docket No. 07-52 (filed Nov. 1, 2007); Petition to Establish Rules Governing Network Management Practices by Broadband Network Operators, In the Matter of Vuze, Inc., WC Docket No. 07-52 (filed Nov. 14, 2007), *available at* http://www.publicknowledge.org/pdf/vuze-petition-20071114.pdf. As a reference point

solicited public comments about the matter.[107]

Asserting that peer-to-peer networks are online content piracy hotspots, NBC Universal had earlier in 2007 made the argument to the FCC that peer-to-peer traffic management technologies can have an "incidental" effect on the general problem and ought to be mandated by the FCC for that reason.[108] It is, however, unknown whether Comcast's specific traffic management technologies have had any impact on the specific problem of live sports telecasts piracy over peer-to-peer networks.

C. The Trend and Internet Piracy of Live Sports Telecasts

What bearing these developments specifically have for the problem of Internet piracy of live sports telecasts online piracy is unclear. This is principally because the focus of counter-technologies to date has been on more mature forms of unauthorized pre-recorded content piracy. There is no demonstrated technological fix to stop the comparatively recent rise of live telecast piracy over SOP, although there are preliminary suggestions that already developed counter-technologies could be adapted for that purpose.[109]

Even if a live telecast piracy counter-technology were to become available at the individual content service provider level, the provider would need to cooperate in its deployment. Deployment would likely involve a process culminating in the provider's blocking of the unauthorized telecast stream identified by a filter. There is little reason to think that most of the service providers described in this article would cooperate. As the recidivism in the *Cricket Australia* cases demonstrates, the value proposition in that type of enterprise derives from the pirated content itself. So the utility of any future counter-technology for live online telecast piracy is therefore more likely to be realized through court orders than voluntary adoption.

As for content filtering at the Internet service provider level, there is scant information available about AT&T's plans other than statements of preliminary and general interest,[110] and no information about whether any

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on this topic, see Amy E. Bivins, *Internet Companies, Policy Groups Say Comcast Violates FCC's Neutrality Principles*, BNA E-COMMERCE LAW DAILY, Feb. 22, 2008, at A11.

107. Press Release, Fed. Commc'n Comm'n, Comment Sought on Petition for Declaratory Ruling Regarding Internet Management Policies (Jan. 14, 2008), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-08-91A1.doc.

108. Comments of NBC Universal, Inc., *supra* note 18.

109. *See, e.g.*, DIGITAL WATERMARKING ALLIANCE, DIGITAL WATERMARKING TECHNOLOGIES: APPLICATIONS IN P2P NETWORKS 10, http://www.digitalwatermarkingalliance.org/docs/dcia_whitepaper_p2p.pdf (last visited Mar. 12, 2007).

110. *See* Brad Stone, *AT&T and Other I.S.P.'s May Be Getting Ready to Filter*, NYTIMES.COM, Jan. 8, 2008, http://bits.blogs.nytimes.com/2008/01/08/att-and-other-isps-may-be-getting-ready-to-

technology that AT&T is considering would or could have any impact on live telecast piracy. That network-wide approaches are in their early-stages of development is reinforced by how the broadband service provider provisions in the France Agreement are qualified. The France Agreement calls for testing of such technologies that "deserve more preliminary in-depth research," and application of them "if the results prove convincing and if their general application proves technically and financially realistic."[111]

Considered together, these recent developments show the beginnings of a trend toward technologically-driven responses to counter the technologically-driven problem of online content piracy. Its evolution will likely continue to be as international and dynamic in scope as the problem itself.[112] With the focus of content owners, developers, individual content providers, Internet service providers, courts, and governments on other more mature forms of online content piracy, what this trend might mean for the Internet piracy of live sports telecasts is unclear. However, for victim sports organizations and others harmed by live telecast piracy, the directional potential of the trend is such that it deserves to be closely watched.

VI. CONCLUSION

Internet piracy of live sports telecasts is a growing problem that will demand greater attention from sports organizations and others in the surrounding global media business sector. An unfortunate convergence of circumstances is propelling it forward: readily available SOP technology; millions of Internet end users who by now are comfortable with consuming video online and using peer-to-peer networks; intellectual property arbitrage opportunities across national borders; and the worldwide popularity of the world's top amateur and professional live sports events.

To respond effectively against this new digital piracy paradigm, victim sports organizations and related stakeholders will need to pursue a broad

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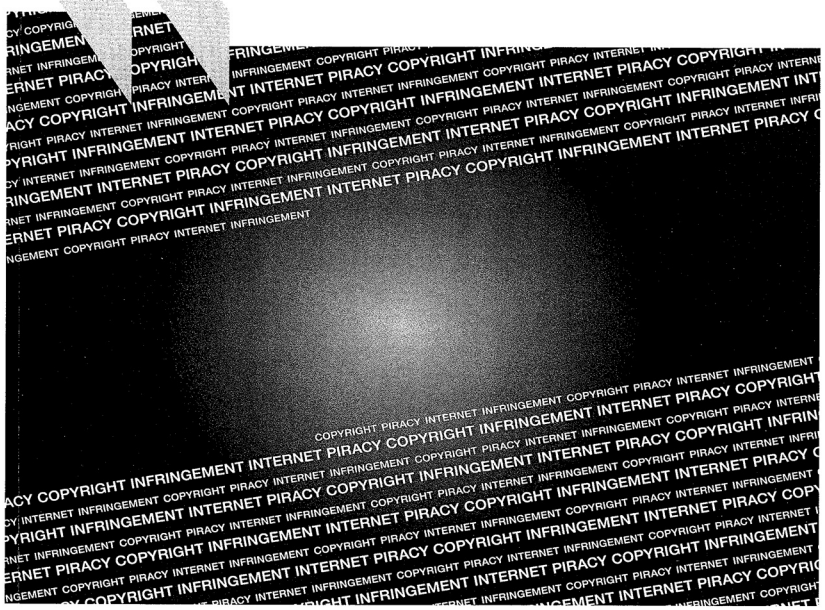
filter (quoting James Cicconi, AT&T's Senior Vice President, External and Legal Affairs, as follows: "We are very interested in a technology based solution and we think a network-based solution is the optimal way to approach this . . . . We recognize we are not there yet but there are a lot of promising technologies. But we are having an open discussion with a number of content companies . . . to try to explore various technologies that are out there.").

111. Unofficial English translation of Nov. 25, 2007 Agreement for the Development and Protection of Cultural Works and Programmes on New Networks, *supra* note 93.

112. Public policy issues surrounding this trend are beyond the scope of this article. As a reference point on this topic, see Saul Hansell, *Bits Debate: Should Internet Providers Block Copyrighted Works?*, NYTIMES.COM, Jan. 15, 2008, http://bits.blogs.nytimes.com/2008/01/15/bits-debate-should-internet-providers-block-copyrighted-works, featuring a debate between Rick Cotton, General Counsel of NBC Universal, and Tim Wu, Professor, Columbia Law School, about Internet service provider counter-technologies.

strategy of education and outreach to the intellectual property rights community, anti-piracy rights enforcement and litigation, and international cooperation initiatives. They will also need to closely monitor the emerging general trend toward technologically-driven responses to the problem.

Piracy of Digital Content



OECD

Executive Summary

This study of digital piracy covers the infringement of copyrighted content (such as music, films, software, broadcasting, books, etc.) where the end product does not involve the use of hard media, such as CDs and DVDs. Piracy involving hard media was covered in Phase I of the overall study.[1]

The study highlights the unique market dynamics of digital piracy,[2] where the existence of a large number of suppliers willing to provide pirated content at virtually zero price pose new and difficult challenges to copyright owners and policy makers in combating that piracy.

What is digital piracy?

While there are definitions of "pirated copyright goods", there is currently no specific legal definition of digital piracy, which would be more accurately described as "digital infringement of copyright".

This lack of a common definition is reflected in the different treatment of copyright infringement in different jurisdictions, which in varying degrees provide exceptions to the rights of the copyright owner, such as fair dealing, fair use and private and domestic use. What is illegal or criminal in one jurisdiction might not always be illegal or criminal in another.

Digital market characteristics

Suppliers and consumers are sometimes one and the same

Even though technically the markets for pirated digital products are made up of suppliers and consumers, in many cases a single individual serves as both. For example, this can happen when suppliers expect future reciprocity, or in some peer-to-peer networks (such as Bit Torrents) where consumers can be simultaneous suppliers of digital content.

In the digital piracy market the profit motive can be absent

This market is further complicated by the existence of a large number of suppliers whose principal objective is not profit, but who are driven by other non-market factors, such as gaining recognition within a peer group, or reciprocating free access to other users. This behaviour can be sustained because the marginal cost of reproduction and delivery of digital content is zero, or close to zero.

This in turn has created unique market dynamics...

Unlike other markets, where owners of copyright affected by piracy have to contend with pirates who will supply similar content at a much lower price, in this market they also need to compete with suppliers willing to provide content at zero price. In this context, non-price factors (such as legality, availability and quality) become especially important in allowing suppliers that require payment to continue to operate in the market.

While the rationale for the existence of an illegal sub-market where pirated products are exchanged against a price seems counterintuitive (in the face of competition from legitimate providers and free pirates sites), they nevertheless do exist, probably by servicing niche markets. When they do operate, they are likely to enjoy exceptionally high profits by exploiting their low cost operations, especially if they are able to mislead users into thinking that they are legitimate, and can price their services accordingly.

...with significant consequence for copyright owners and policy makers

A by-product of this new market dynamic is that the number of suppliers of pirated digital content (many of whom do not consider themselves as "pirates") has exploded, making detection and response much more difficult and costly for copyright owners and law enforcers. This is compounded by the fact that "pirates" operate globally in different jurisdictions with different laws and regulations, which hampers the efficiency of enforcement and makes it more difficult and costly. Economies with strong copyright protection tend to report lower rates of piracy, but the risk of penalties without effective enforcement does not always seem to succeed as a strong deterrent. Moreover, the flexibility of digital piracy allows pirates to easily shift their activities to markets where legal regimes are weaker.

In addition, the large number of very diffuse suppliers and customers means that it is also difficult to increase the awareness of offenders of the negative short and long-term effects of their actions.

What factors shape digital piracy?

The low cost of reproduction and delivery is a major factor

Digital products are very much in demand, especially by younger people, and the ease and very low cost of reproduction and transmission of digital products makes these very attractive to share.

Those involved in the digital infringement of copyright also take advantage of a characteristic of this market where users often place convenience above the ultimate quality of the digital product, especially when immediacy is a factor (such as film premieres or the live broadcast of a sporting event).

Technology is a great facilitator

Computing power and the Internet facilitate the collection and transmission of digital content, and this lubricates exchanges between suppliers and customers. The global nature of the Internet means that the market is potentially huge.

In turn, this has spawned on-line services aimed at facilitating data exchanges over the Internet. For example peer-to-peer networks (P2P) facilitate the sharing of digital content, and most P2P networks encourage users to be both consumers and suppliers, as this increases the efficiency of the network. In these networks heavy uploaders are usually rewarded with better service. One-click and Warez sites also facilitate these exchanges, but without the need or opportunity to simultaneously be a supplier as well as a customer. However, it should also be recognised that not all of these services were created for the purpose of facilitating piracy, and it should not be presumed that all users of these services infringe copyright.

The recent increases in storage capacities, including web servers, local hard drives and other portable storage facilities are also factors driving both the supply and demand for pirated digital content, and the reduction in the cost of storage media can also act as a driver of digital piracy.

Source material is easy to find

Sources of digital material are easy to find, and can extend from local sources (such as family, fellow students or colleagues) to the Internet, and the ability of digital content to be transmitted with very little loss of quality means that even high quality source material can be easily obtained.

Live broadcasts (such as sporting events) can also be captured by simple video cards installed in computers, and then streamed virtually in real-time by using Unicast sites (streaming individually to end users) or P2P networks by joining a "swarm" with others interested in the content.

Digital piracy is not often perceived as unethical

Existing studies suggest that consumers of pirated digital products are mostly aware that digital piracy is illegal. However, the exchange of pirated digital products free of charge is rarely perceived as unethical, given consumers' perception that no monetary profits are generated by the infringing parties from users.

In addition, many engaged in digital piracy are attracted to the possibility of being recognised within their peer groups, or for their technical capabilities, and it is status, rather than possible financial reward, that drives their activities. Collectivism within a group, and the desire to reciprocate for received digital content, also act as drivers. Lack of parental supervision was also identified as a factor contributing to the intensity in which younger individuals engage in digital piracy.

Security problems are not fully taken into account

Users that engage in digital piracy generally appear to be unaware of potential security risks associated with their file exchanging activities, which could leave them open to exposure to malicious software which is designed to infiltrate or damage a computer system. Even those that have some knowledge of potential security threats do not appear to consider these risks as significant.

Institutional and industry responses

There are often no specific remedies for digital piracy

In general, national laws and regulations do not distinguish between digital and non-digital uses of copyrighted materials.[3] As such, available legal remedies, be they civil proceedings or action under public law, are those that exist for infringements of copyright more generally.

These remedies can sometimes not be appropriate; for example, in the instance of live broadcasting, the value of the product is greatest while it is being broadcast, while legal or technical remedies may not be able to be brought to bear in that short window of opportunity, which means that the initial loss cannot be prevented.

The global and ephemeral nature of digital piracy makes it difficult to combat

Unlike counterfeiting and piracy that results in physical goods, as a practical matter digital piracy generally cannot be detected at national borders. The flow of pirated digital products is more difficult to track by law enforcement agencies from sellers, via distributors, to producers, than the flow of physical goods. The large numbers of individuals involved, and the often observed absence of a monetary transaction, present further challenges for effective international co-operation amongst enforcement agencies. However, governments and law enforcement agencies worldwide have some successful examples of co-operation in multi-jurisdictional investigations and prosecutions of other Internet-related conduct.[4] There are likely to be lessons learned from those efforts.

Issues for policy makers and industry to consider

The digital piracy market is very different from that of counterfeit and pirated physical goods. This creates special and unique problems for copyright owners and can multiply problems faced by policy makers and producers of digital products.

Existing laws and regulations may be too broad and general to deal adequately with the rapid technological developments that facilitate digital piracy, and policy makers may need to consider enacting some specific provisions to deal with these infringements.

Such provisions should not unduly impede legitimate digital communications, nor unreasonably impact on the Internet as an effective communications platform, commercial channel and educational tool – see the recommendation of the June 2008 Seoul Ministerial Declaration on the Future of the Internet Economy *(www.oecd.org/futureinternet)*, which provides important context in this regard.

Where digital piracy affects copyright products of a highly perishable nature (such as the live broadcasting of sports events, pre-release or simultaneous release of creative content), policy makers may need to consider ways of improving the speed at which the legal system responds to these infringements.

Legal action against web sites that sustain or promote the illegal transfer of digital content and action against individuals infringing copyright could still bring some results, and still remain an important part of the overall approach to deal with Internet piracy. However, the overall efficiency of such actions will be diminished over time, because of the potentially very large number of actors involved in different jurisdictions, and who operate in a decentralised manner independent of any central hub. Thus, new ways of dealing with digital piracy may be required including new legal approaches and education. These new ways need to be fair and equitable for all parties and in particular, must reflect a balance between the interests of copyright owners, users and intermediaries.

Even if consumers involved in digital piracy are generally aware that it is illegal, it is not always perceived as un-ethical, so continued emphasis should be placed on education and consumer awareness to overcome this perception. Industry and some governments have instituted extensive campaigns toward this end, and these actions can be paralleled with enforcement campaigns to reduce the likelihood of piracy. Policy makers should consider the role that public education and consumer awareness outreach plays to help users understand what is legal and illegal. Industry and some governments have instituted extensive campaigns towards this end. The global nature of digital piracy means that international co operation between governments, enforcement agencies, industry and consumers is even more important (but more difficult) than in other sectors, especially in identifying and taking down web sites that encourage or promote the transfer of pirated digital content.

In some market segments, business models are already evolving to respond to new market dynamics brought about by the low cost of reproduction and distribution of digital content. Consumers, who are offered attractive legal options, have less incentive to use the illegal alternatives. In this context, factors such as legality, quality and ease of use are becoming key factors in attracting customers. However, the pervasiveness of and easy access to unauthorised content operate as significant limiting factors in efforts to fully develop a robust, legitimate marketplace. Moreover, the development of new business models and content services that meet consumers' expectations should not be overlooked when considering ways to address piracy.

Notes

1. See *www.oecd.org/sti/counterfeiting*.
2. In the context of this study, the term "digital piracy" (as opposed to "physical piracy") refers to piracy that does not involve the use of hard media.
3. There are some significant exceptions, such as the US "No Electronic Theft" Act (NET).
4. The OECD Recommendation on Cross-Border Co-operation in Enforcement of Laws against Spam, and the OECD Recommendation on Cross-Border Co-operation in the Laws Protecting Privacy, are examples. See *www.oecd.org/sti/cultureofsecurity*.

Introduction

In response to rising concerns in government and the business community, the OECD has launched a project to assess the economic effects of counterfeiting and piracy. The objective of the project is to improve factual understanding and awareness of the effects that infringements of intellectual property rights, as described and defined in the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), have on governments, business and consumers in member countries and non-member economies.

The problem with counterfeiting and piracy is seen by governments, industry and affected labour groups as growing in complexity, and as well as the economic impacts there are often potentially serious health and safety consequences associated with an expansion in the quantity and range of fake products being marketed internationally. There is also increasing concern that criminal networks (including organised crime and terrorist groups) are among the principal beneficiaries of counterfeiting and piracy activities, with the proceeds from their activities being used to finance a range of illicit activities.

The project is being carried out in three separate phases. The Phase I report (OECD, 2008) published in June 2008 focuses on tangible products that infringe trademarks, copyrights, patents and design rights. Phase II partially covers digital piracy and Phase III will deal with all other infringements of intellectual property rights (IPR).

The objective of Phase II of the project on the Economic Impacts of Counterfeiting and Piracy is to assess the impact of piracy of digital content. The OECD Council mandate used the term "digital piracy" to mean piracy that did not involve the use of physical media (such as CDs, DVDs, and flash drives) as the means of passing music, film, and other content from pirate to consumer. "Physical" piracy was covered in Phase I of the project (see OECD, 2008).

Structure of the study

This study is structured as follows. Chapter 1 presents markets for pirated digital products and discusses their economic properties. Chapter 2 explores factors that drive supply and demand of digital piracy. Chapter 3 presents industry actions against digital piracy and outlines institutional remedies to counter this phenomenon. The last chapter contains a case study of digital piracy affecting sports rights owners. This book has three annexes. Annex A outlines the legal foundations for copyright and their infringement. Annex B presents the 2004 OECD Council Recommendation on Broadband Development. Annex C contains the 2008 Seoul Declaration for the Future of the Internet Economy.

Definitions and parameters

The precise definition of "digital piracy" is fundamental to this analysis as this term can be interpreted in a number of different ways. In this study the term "digital piracy" means copyright infringements that do not involve the use of physical media (such as CDs, DVDs, and flash drives) as the means of passing music, film, and other content from pirate to consumer.

There are four points related to this definition of digital piracy that should be kept in mind.

- First, in usual computer terminology the term "digital" generally applies to the format in which data is stored, used and manipulated in computers, CDs, DVDs, etc. In this context it is the opposite to the term "analogue" which is used to describe data stored in, for example, vinyl records. Therefore, while the use in this study of the term "digital content" refers to data presented and stored digitally, the term "digital piracy" is used in a very specific way that is unrelated to this general common usage and refers specifically to infringements of intellectual property rights, that *do not* involve the use of physical "hard media" (such as CD, DVD, flash drives, etc) for the reproduction and exchange of pirated material. Therefore, in the context of this study "digital piracy" covers only Internet and direct computer to computer transfers, LAN file sharing, mobile phone piracy and so on.
- Second, in the context of this study the term "piracy" is used to describe infringements of copyrights and related rights[1] only. While the IP rights described in the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) – which form the basis of the OECD's work on counterfeiting and piracy, could

potentially cover the digital infringement of trademarks and industrial designs, this study focuses on digital infringements of copyrights and related rights, which parallels the way the term "piracy" is used in TRIPS.[2]

- Third, while the term "digital piracy" as defined earlier is used liberally in this study, there are some differences between economies as to what is considered as a copyright infringing activity and what can be considered to be fair dealing, fair use and private and domestic use. This is because copyright as a legal right is given effect through national laws. While these national laws have many similarities, either because they result from similar legislative interests that result in the establishment of copyright protection, or because they result from the international treaties on copyright that set minimum standards for that protection, as a general rule, countries are entitled to a certain level of flexibility in the implementation of their treaty obligations. Countries may provide a level of copyright protection that may exceed the treaty minimum. A more detailed review of legal foundations for copyrights, and acts constituting its infringement in different economies, is presented in Annex A.
- Last, to our knowledge legal jurisdictions do not offer a formal legal definition of "digital piracy", so this term does not necessarily have a clear and unambiguous meaning outside of the context of this study. In particular, while in this study "digital piracy" should be synonymous with the "digital infringement of copyright", it is arguable that outside of the context of this study there could be a distinction between the two concepts, at least from the legal perspective.

To reiterate, for the purposes of this study, "digital piracy" is taken to be, as defined earlier, the copyright infringing transmission in a form that does not utilise "hard media" of any copyrighted material including recorded music, motion pictures, software, books and journals as well broadcast and recorded performances covered by copyright.

Notes

1. In other words, the rights of phonogram producers and performers.
2. See TRIPS, Article 61.

Reference

OECD (2008), *The Economic Impact of Counterfeiting and Piracy*, OECD, Paris, *www.oecd.org/sti/counterfeiting*.

Chapter 4

Case Study: The Sports Rights Owners Sector

What is the sports rights owners sector?

The sale of rights to broadcasters is a major source of income for those sport organisations and leagues that control and own sports and sporting events. Depending on individual contracts, the sale of those broadcast and associated rights could include:

- live broadcasting of sporting events (TV and radio).
- live or delayed streaming of events on the Internet.
- delayed broadcasts/streaming of those sporting events.
- packaging of highlights.
- subsequent DVD releases as individual events or as part of sport compilations.
- subsequent rebroadcasts as "classic" or "historic" events.

Broadcast rights may include regional or geographical limitations; for example, some broadcast rights may only cover specific countries or regions, and broadcasters in individual countries would have to obtain the rights to broadcast in their own territories. The most obvious example of this is the Olympics, where the successful host broadcaster generally re-sells the rights to national broadcasters that want to provide coverage of the Olympic events in their countries.

Apart from the Olympics, the owners of sports rights include all of the world's best known, and most high-profile sporting organisations, such as the *Fédération Internationale de Football Association* (FIFA, football), the *Fédération Internationale de l'Automobile* (FIA, motor racing), the National Basketball Association (NBA, basketball),Wimbledon (tennis), Cricket Australia and others.

While all of the portfolio of media rights listed above have value to the sports rights owners, the first two are clearly the most important and lucrative, as the live event is the product that has the greatest appeal to a prospective audience. While a short life span was identified in the main study as a special feature of digital products generally, the life span of live sports events is extremely short, and their value could deteriorate dramatically in minutes or even seconds (for example a horse race).

Once the sport event has ended, and the results known, interest (and therefore the value of the product) falls away sharply, even though its value does not totally disappear. Therefore, while acknowledging that there are a series of cascading commercial opportunities at risk from piracy involving sport broadcasting, this case study will largely focus on the first two elements in the list, representing the most valuable components of the broadcast rights, as well as being the segments that would be of greatest interest to pirates and their audiences.

What is at stake?

While this case study (and indeed its parent study) does not specifically measure the extent of digital piracy, it is nonetheless useful to briefly consider some examples of the magnitude of financial commitments around the world involving sport events that are at risk from piracy.

At an international level, broadcasters will pay USD 3.8 billion for exclusive rights to carry the 2010 Vancouver winter and 2012 London summer Olympics.[1] On a regional level, the Union of European Football Associations (UEFA) sold the rights to Euro 2008 for EUR 800 million,[2] while at a country level a consortium of Sony Television and World Sports Group was reported to have won a 10-year deal to telecast the Indian Cricket Board promoted Indian Premier League cricket matches for USD 1.026 billion.[3]

These are a few examples of the many sports broadcasting arrangements that exist around the world, and are intended to highlight the very significant investments made by sports broadcasters for the rights to those events. These investments, and in some cases possibly the future of individual sports, could be at significant risk if there is extensive piracy of the live broadcasts of events covered by those rights.

How is intellectual property created in this sector?

This case study specifically addresses the infringement of Intellectual Property Rights (as defined in the WTO TRIPS Agreement) when those infringements are associated with the sports owners rights sector. This means that while the sporting events themselves are not the subject of the

study, as the main study on digital piracy makes clear, in most legal jurisdictions the broadcasting of the sporting events (and recordings made of those broadcasts) are protected by copyright law, and unauthorised transmission, streaming or recording of those broadcasts would infringe on those rights. It is these rights that are covered in this case study.

The infringement of those copyrights (in the terminology of this study "the piracy") would include the live streaming of the broadcasts as well as post-event downloads of full games or highlights.

How does piracy take place?

Earlier in this case study, it was noted that the original, live broadcast of sporting events is the time when those events have the greatest intrinsic value. Therefore, piracy that takes place during (or immediately after) the broadcast have both the greatest interest to consumers and the greatest potential of inflicting significant damage to the owners of the rights.

In this respect, as was the case with the examination of the audio/visual sector in Phase I of the overall study (OECD, 2008a), rapidly developing technology has provided would-be pirates with the means of intercepting and re-transmitting those broadcasts, in virtual real-time, thus enabling them to compete directly with the authorised broadcast or Internet streaming of the individual sporting events.

While it has been technically possible for many years to record TV broadcasts (recordable VHS tapes came into existence in the mid-1970s, and moved through DVDs and hard disks), these could not readily be re-transmitted to a broader audience without access to extensive and expensive broadcasting facilities, and piracy was restricted to serving the after-market, well after the live event had ended.

However, modern computers with cheap and easily fitted TV cards (increasingly found as standard fittings on home computers), can capture live TV signals from terrestrial, cable, satellite and Internet broadcasts, and with the use of some simple, freely available software can re-transmit those signals through the Internet. These captured signals can also be converted to digital data files and saved on a hard disk for subsequent viewing or transmission.

This capturing of the signal is the single most important pivot point in the piracy of sports broadcasts, as it is the means by which the pirates can – in virtual real time – illegally distribute the pirated content in direct competition with the rights owners, and at the precise time when the pirated content has the greatest value.

Software capable of producing content in a form that can be streamed to other Internet users is freely available, including in the form of a built-in capability in the popular Windows Media Player. In addition, the websites Sopcast and TV Ants (both based in China) have been identified[4] as two of the principal sites (amongst many that can be found on the Internet) that freely provide the software that permit users to generate and re-transmit a live broadcast stream at virtual real time within their own networks.[5]

The availability of this technology, and the increasing availability and affordability of Broadband connections, means that virtually anyone can now stream live programs through the Internet, which (like making music and video content available illicitly through the Internet) creates significant problems for the owners of broadcast and subsequent IP rights.

In essence, as the live transmission signals are captured by the computer's video card, they can be re-transmitted on the Internet either to individual recipients through Unicast transmissions, or as part of a transmission "swarm" using peer-to-peer (P2P) technology.

Unicast transmissions

The basic operation of Unicast transmissions on the Internet is that captured digital content (in this case live sport broadcasts, but could involve any TV transmission), is routed and/or stored on powerful servers and made available through direct Internet streaming from Unicast providers to individual viewers.

This one-on-one approach distinguishes Unicast transmissions from the swarm approach of peer-to-peer, which is discussed in the next section. Depending on the quality of the signal originally captured, the density (bit-rate) of the transmission and the width of the broadband connection, Unicast transmissions can offer transmissions of acceptable quality directly into any typical media player found in home computers. This means that viewers would be able to watch sporting events with little initial delay (caused by the need to create the initial signal buffer), or subsequent pausing to replenish the buffer (this may happen, for example, if there is a slowing down of the Internet signal).

In other words, these transmissions can provide virtual live feeds, in acceptable quality and with very little delay, in direct competition with the original, legitimate broadcast.

This one-on-one format, especially if fed to a large number of end users, can be very demanding of computer processing power and bandwidth, and there is generally a considerable cost associated with running such an operation. As a consequence many of these services either require a paid

subscription, are supported by advertising or both. As such, they fit into that category of digital piracy (described in the principal study) that falls between the legitimate services offered by the broadcasting rights owner (whether a live TV signal and or live streaming on the Internet) and the generally free alternatives offered by the peer-to-peer networks.

There are clear incentives for sites offering Unicast services to appear as professional as possible in order to generate trust and attract customers, especially if subscription fees are charged. Many of these sites have sleek designs, smoothly operating interfaces and may feature logos from well know international companies, including sports rights owners and sponsors of the sport concerned. Additional apparent security (for the customer) is provided by the fact that payment for the transmission can be legitimately made through credit cards or PayPal. These are features that one would expect to find on legitimate site offering authorised transmissions (see Figure 4.1).

Such embellishments of the pirate sites encourage potential subscribers to view them as legitimate, and indeed in many cases it might be virtually impossible for most users to know (or even suspect) that such sites were not authorised to offer the streaming content.

If the quality of the streaming is good, then the pirate sites need not price their services at levels that are so far below those of legitimate sites that their provenance would be suspect. In any case, in these days of services being increasingly supported by advertising as well as subscription, price is not necessarily always a good basis for consumers to make judgements about the legitimacy of sites. Quite clearly this adds to the difficulties faced by the sports rights owners of the broadcast rights to stem the offerings from sites that can convince users into believing that they offer a legitimate service.

Figure 4.1. Screenshot of a typical Unicast site

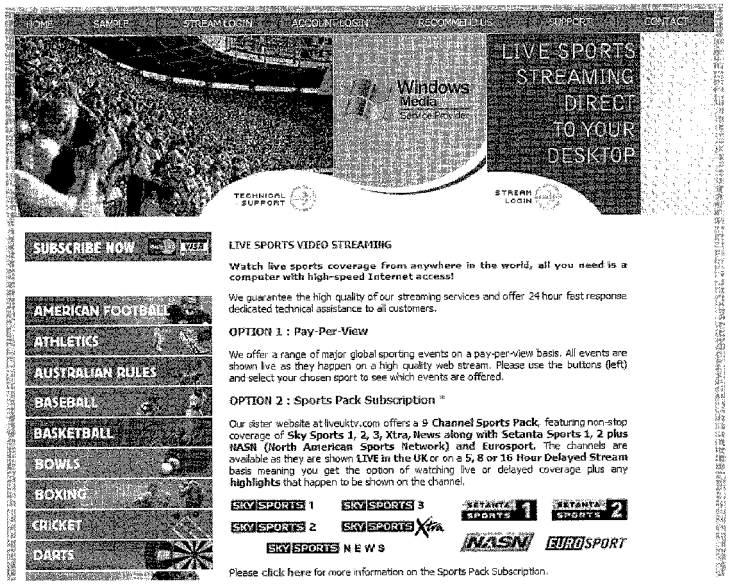


Figure 4.2. Screenshot of MyP2P

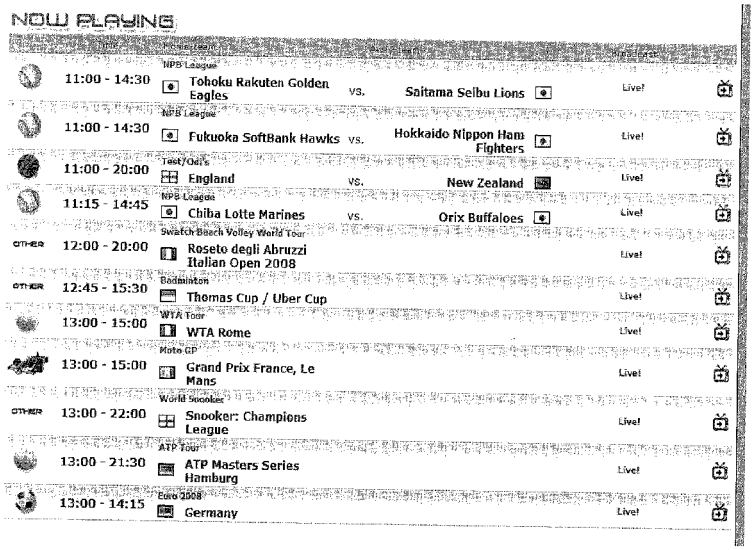


Figure 4.3. Sopcast screenshot

Sopcast
Current version: v3.0.3

Sopcast is, like all programs, also fully free. It's one of the older programs, and it has been developed very well with alot of interesting feautures and options. It's so far the best program, besides the fact it can't handle most busy moments. It's fully English, and many other languages are available aswell.

Release notes:
[Apr 30, 08] release 3.0.3

* Improve the data transfering performance
* Fixed a bug in data transfering layer
* Fixed a bug in lauching external player
* Add a FAQ tab in client
* Fixed some other minor bugs

Channels:
Alot of main channels like StarSports, ESPN, CCTV5, SHTV, Guandong, 3TV1 cable channels and many good best channels. Also many movie channels, series and music or stuff.

Instructions:
Install 3.0.3 by scrolling all the way down, at the bottom of the page!

New version, so it works great with an additional VOD function. VOD = Video on Demand, think of a movie, or a serie: you can watch it at any time you want, and it will always start from the first minute on!

*** How to install?**
Scroll down to the bottom of this page, and download the ZIP File. Unzip it, and run the Sopcast.exe file. It will ask you to install, so just do so. It's smart to close your browser (IE or Firefox) before installing.

*** How to watch?**
There are 2 ways to watch:
- Start a channel from our schedule pages, you click a link and then it starts Sopcast + the channel.
- Start sopcast manually and select a channel. You can login as anonymous, or register a free account on Sopcast.com . By dicking any channel it will open a new frame with the channel loading.

To watch VOD channels you need to have Reaplayer also!

*** Problems?**
See our FAQ Page: http://www.mvp2p.eu/faqitem.php?faggroupid=98=home

Enjoy sopcast!

Peer-to-peer (P2P) networks

As described in the principal study, as well as easier access to Broadband, the growing availability of increasingly sophisticated P2P software is a key driver that influences the demand and supply of pirated digital content, including live sports broadcasts.[6] In essence, P2P networks operate in the following way. Using one of the many available peer-to-peer networks, a person can establish a video stream that is available to others who join the stream. Software allows the stream to be broken up into small packets, which are then transmitted to others in the stream. As any given packet is downloaded and received by an end user, it then becomes immediately available to be uploaded to another user, thus creating a "swarm" on the network.

Generally, the more users are online the better the quality of the stream, with the end result that after some initial buffering of the signal, the quality of the transmission can be quite acceptable. It will, certainly be more than good enough for keen fans, who may not otherwise be able to access the live broadcast or are unwilling to pay for a legitimate service, and who will accept some degradation in quality in order to watch the sporting event live. A brief delay in the transmission (even of some minutes) would probably not significantly degrade the experience for many fans. In addition, the popularity of many sports, and the inability (or unwillingness) of many fans to watch the live transmission through legitimate services, would ensure that the on-line "community" for the more popular events would almost always have sufficient participants to ensure a successful P2P transmission.

The availability of web-based search tools means that it is not difficult to find P2P piracy streaming sites. However, for end users that task is made considerably simpler and more efficient through services that collate, index and promote sporting events. One such site is MyP2P,[7] which in a very lucid and comprehensive site (apparently supported by advertising from large and reputable multinational companies),[8] provides details of pirated live streaming covering a wide range of sports, from football (at the time of writing, all matches in the Euro '08 competition were being streamed) to cricket (which has a very large following in the sub-continent) – see Figure 4.2.

Using sites such as MYP2P simply require the downloading and installation of some free software, which then allows access to any of the live streams offered on that site. Detailed system information as well as on-line technical support is generally available to assist users in setting up their participation in the P2P networks (see Figure 4.3).

While the hosting site (sometimes called a tracker) organises and manages the different streams it does not actually distribute any video content; this is left to those users who participate in the peer-to-peer "swarm". In this respect, these live streaming sites operate in very similar fashion to other peer-to-peer and bit-torrent sites that are used to exchange and circulate digital content (even though not all of these activities involve the illicit exchange of copyright material).

Some distinctions between P2P and Unicast sites

While in the end the role of both of these forms of streaming technology, when applied to live broadcasts of sporting events, is to deliver a video stream to the end user, there are some factors that distinguish the forms of delivery:

- the Unicast sites, because of the need for significant computer processing power and Internet bandwidth to stream content to individual end users, generally apply subscription charges to end users wishing to access their services.
- while users of Unicast sites might have reason to believe that they are using a legitimate service provider (because of the professional appearance and a commercial feel to the sites), users of P2P sites would be under no illusion that they are using non-authorised sites to view the sporting events.
- users of Unicast sites are simply receivers of the video stream, but in the case of P2P sites they are (generally) simultaneously a receiver and a supplier of the content, and this may have different legal implications in some jurisdictions.

Other methods of pirating broadcasts of sports events

The Unicast and P2P methods are by far the most significant methods to pirate sports events, but they are not the only ones. Increasingly, sports events have been detected on user-generated content (UGC) sites; for example one sports rights owner reported that over 15 000 unauthorised clips were removed from one such site. In addition, while originally these sites were exclusively involved with archival content, *i.e.* recorded or delayed clips, in recent times a small number of UGC sites have been detected offering fans live streams via their servers.[9] While the majority of material on UGC sites probably does not infringe copyright, the growing popularity of these sites is likely to create further problems for sports rights owners in the future.

What are the market characteristics of the sports broadcasting sector?

In the broadest possible terms, the market for live sporting broadcasts would comprise all of the fans and other interested persons who are not present as spectators at the event, but who would nevertheless wish to share in the excitement of that event by watching a live broadcast/transmission.[10]

Many in this potential audience would be accommodated by the broadcast of the event either on free-to-air television, or on some form of paid television broadcast (perhaps delivered by satellite or cable) or (increasingly) by legitimate live streaming through the Internet.

However, this scenario leaves a proportion of potentially *legitimate* demand unfulfilled; that is customers who for one reason or another may be unable to access legitimate broadcasts/transmissions, for example:

- Legitimate live broadcasts may be region-specific and not available in all markets, perhaps because of contractual reasons, or because some markets may lack a sufficient audience base to make the broadcast financially attractive – cricket in continental Europe is a good example.
- Broadcast rights may exist, but only as delayed telecasts or through the provision of "highlights" packages, thus not meeting the requirement of potentially legitimate customers wishing to see the event "live".
- Large events with multiple activities (*e.g.* the Olympics or Wimbledon tennis) provide broadcasters with a choice of parallel sub-events that they can broadcast, which may leave a section of the potential audience unsatisfied with the broadcaster's choice; for example, a national TV channel may choose to focus on tennis matches featuring their home players, thus leaving other viewers unsatisfied.

This potentially legitimate market could consider itself as being forgotten or ignored by the broadcasters, and failing any other authorised alternative may turn to unauthorised live streams as a way of overcoming their "disadvantage". This attitude parallels the experiences in other digital content (such as popular TV shows or films) where licensing agreements and staggered roll-outs means that certain markets may have legitimate access to that content only after a considerable time from first release, or perhaps not at all, which encourages access to pirated alternatives.

In the live sports sector the effect of customer isolation from legitimate services is probably even more acute than other digital content, given that when the game has been played, and the result known, a lot of the interest

wanes from the sporting event. This would act as a further encouragement for those fans to seek whatever alternatives are available to view the events live.

In addition to this unsatisfied and potentially legitimate market, there is also an *illegitimate market*, composed of those who, for a variety of reasons, will choose illicit ways of viewing those sporting events. If the general market for pirated content is any guide, then this market segment will be large, and will respond to the same incentives as those that drive demand for pirated music, films software and other digital content. That is, the market will be composed of persons ranging from those who simply cannot afford the cost of the legal options, through to those who would always choose the illicit alternatives (especially if they are free) regardless of the legitimate options that may be available to them.

In the context of live sporting events this would mean the use of unauthorised live transmissions or streaming, instead of paying the cost of legitimate services, perhaps available only from cable/satellite services on either period subscription or pay per view formats. Additionally, the illegitimate market would also include those who have generally permissive attitudes to digital piracy, and who see their participation in P2P swarms as a "community" activity, which from their perspective would enable others to "benefit" from their on-line participation in such peer-to-peer activities. These and other related drivers of digital piracy are discussed in more detail in the main study.

The combination of the potentially legitimate viewers who cannot access authorised services, and those who seek unauthorised streams even when legitimate services are available, describe the audience that may wish to access these alternative services. Many of those that have suitable Internet access, and have sufficient technical know-how to access Unicast, P2Pand even some UGC sites, may choose to use these to avail themselves of the illicitly provided live streaming or other access to those sporting events.

No effort has been made to estimate the potential size of this market, as this is outside the terms of reference for this study. However, as a pointer to the kind of audiences that might tune in to live sports broadcasts captured and streamed through the Internet, information provided to the OECD (Sports Report, 2008) noted that in December 2007 a total of 1.2 million views were registered on a SopCast channel that streamed a match from the US National Basketball Association (NBA). From a large sample of those connected to the stream, the largest proportion (around 78%), were found to be located in China. Similarly, the highest number of viewers ever recorded for a single P2P stream for cricket was more than 700 000. A number of other similar examples representing other sports were also reported.

In summary, even allowing for today's broadcasting and Internet technology, because of geography, contractual arrangements and commercial imperatives, it is unlikely that legitimate live broadcasts and Internet streaming will meet the needs of everyone on the planet, and because of this there will inevitably be a very significant potential audience whose needs will be unmet (or unmet at a price that they can afford or are willing to pay for), and many of these will turn to other services to view broadcasts of their preferred sporting events.

How are choices made in this market?

As described in the main study, classic economic theory postulates that, everything else being equal, demand will drift towards the lowest available price, and that the lower the price for any good or service the greater the demand is likely to be. Where the price of a desirable good is zero, or virtually zero, then demand can be expected to virtually unlimited.

Also described in the main study is the phenomenon that the digital piracy market, unlike every other sector that is subject to counterfeiting and piracy, not only has legitimate content providers at one price and illegitimate providers at a (generally) lower price, but also a category of content providers who are willing to provide (or share) content at zero or near-zero price. The understanding of this type of market calls for the extension of traditional economic models.[11]

In the sport rights case, the role of "lower cost" providers are largely played by the Unicast sites, which on the basis of either a general or pay per view subscription, will stream live events to subscribers. While these prices are likely to be lower than the legitimate services (who must charge full economic prices), as noted earlier the computer processing power and Internet bandwidth required to provide such services means that totally free Unicast streaming is unlikely, unless supported by third party advertising.

On the other hand, the use and content of P2P streaming sites are generally free to users, with their only obligation likely to be the joining of the peer-to-peer "swarm", that is, to act as uploaders as well as downloaders. The main reasons for this apparently irrational market behaviour (that is, the provision of content at zero price) are catalogued in the main study, but in essence these reflect reciprocity amongst participants, and other non-monetary drivers (such as social recognition within the on-line community). Indeed, the only "costs" that might be perceived by users of P2P sites would be the possibility of receiving some viruses or malware, or perhaps being subject to some action by the copyright owner.

The existence of these essentially free streaming services means that the sports rights owners, along with other rights owners whose content can be transmitted digitally, face competition of a kind not encountered during the extensive analysis of counterfeiting and piracy that result in physical goods (such as handbags, CDs and DVDs), which apart from the cost of production must then also be transported, distributed and sold.[12]

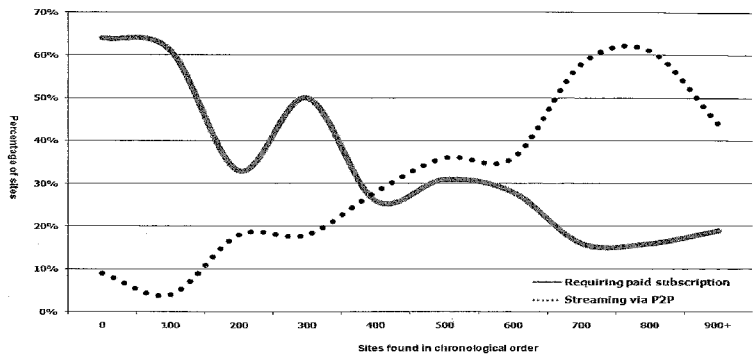
However, new economic paradigms or not, consumers generally tend to behave similarly, and the lure of streamed content at a low or even zero cost will inevitably attract customers, particularly where those consumers are unable or unwilling to access legitimate broadcasts or Internet streams. In keeping with normal market principles, all other things being equal, the greatest demand could be expected to occur at the lowest price offered, which with P2P streaming can be virtually zero.

Nevertheless, the fact that Unicast sites still exist means that price is not necessarily the only consideration, and again as described in detail in the main study, there are non-price factors that would drive demand. These could include legal concerns (a feeling of greater exposure in P2P streaming by virtue of being an uploader as well as a downloader), better quality (especially if P2P "swarms" are thin causing drop-outs and pauses for buffering) and a sense that paid sites are more professionally run and less likely to have malware embedded in their stream. The need for a certain degree of technical literacy in order to use the P2P networks, and perhaps even the belief by users that paid Unicast sites are legitimate, may also account for the continued existence of those sites.

It is also possible to conceptualise that similar factors (especially the issues of legality and quality) would be non-price factors that would encourage viewers to utilise legitimate broadcast and streaming services where these are available, rather than use the unauthorised alternatives.

The effects of these factors on the operation of the illegal sports broadcasting market can be seen in Figure 4.4, which shows the changing penetration over a three year period between paid Unicast sites (the falling trend line) and the generally free P2P sites that stream live broadcasts (the rising trend line).

Figure 4.4. Unicast *vs.* P2P streaming sites



Source: Sports Report (2008), "Background Report on Digital Piracy in Sporting Events", Envisional Ltd and NetResults Ltd.

Industry responses

In a live sports broadcast context, rights holders have a number of possible responses open to them to deal with the distribution of pirated content:

- Take civil action against the owners of the site that is providing the pirated content (including taking down, closing or suspending the site).
- Take civil action against those who receive the pirated content.
- If possible, employ technological responses to curb the transmission of unauthorised streams or downloads.
- Where this is available, work with law enforcement authorities to apply criminal law provisions against providers and consumers of pirated content.
- Work with governments on regulations at appropriate points in the Internet delivery chains to facilitate the identification of, and action against, those involved in the delivery and consumption of unauthorised content.

These responses recognise that in the case of digital piracy, unlike other forms of counterfeiting and piracy, there are no producing factories to close down, goods in transit to intercept, or vendors to apprehend at the sale points. In the case of digital piracy the available responses are generally limited to attempting to close down offending sites (which experience has shown can be reopened much more quickly than physical production sites) and efforts to seek remedies through legal recourse where this is available to the rights holders.

This range of responses is also available to the sports rights owners, but because of the short life span during which live sporting events have maximum value (essentially the live and delayed broadcasts) those rights owners have very narrow windows of opportunity in which to respond to the rebroadcasting/streaming of pirated content.

Taking down offending sites

With respect to both Unicast and P2P sites, rights holders can screen sites in advance of major events to search for those sites offering the streaming of those events, and attempt to either prevent the streaming of the particular event or close the site down completely. Because of the relatively lengthy legal procedures involved (presuming that the sites are in jurisdictions where such legal remedies are available) this discovery needs to be well in advance of the event in question; discovery during the live event or after it is over is unlikely to be productive.

As an example, it was reported in July 2008 that China's National Copyright Administration (NCA) had warned more than 20 websites for illegally streaming Olympic programming.[13] The report also noted that some sites had ignored the warnings.

Some of the problems experienced by sports rights owners attempting to minimise the impact of Unicast and P2P sites have been:

- Difficulty in locating those sites sufficiently far in advance to take successful legal action.
- Many sites are located off-shore from where the sports event is being broadcast, making legal redress more complex, difficult and expensive.
- Sites often located off-shore, in jurisdictions with weak or poorly functioning legal systems or rules.
- Ability of sites to set up mirror sites (in different legal jurisdiction) to thwart the effect of any successful legal action.

- Ability and willingness of sites that are temporarily closed or even permanently taken down to set up new sites (even in the same legal jurisdiction) which require fresh legal action to be taken.

Because of the short "shelf-life" of live sports broadcasts, action against offending sites needs to be taken as early as possible, and ideally before the live broadcast starts. This requires extensive and costly monitoring of web sites to identify those who could be offering unauthorised streaming video of the broadcast. As shown earlier, many of these web sites are very well organised and provide lists of upcoming events days or weeks in advance of the live broadcast, and because they are generally located in difficult jurisdictions (from an IP perspective) they appear to be able to continue to operate in a very open manner.

Other Unicast and P2P sites that offer unauthorised "live" content can spring up at very short notice, which makes it very difficult for rights owners to respond quickly, and generally any action to take the sites down before the live broadcast is difficult, if not impossible.

Some sports rights owners take a longer term view, and attempt to work with the largest sites to minimise the appearance of their content. An example quoted by the sports rights sector (Sports Report, 2008) was the US Major League Baseball (MLB), which convinced SopCast to ban its content on that site. This was considered to be a positive development, but the discussions to achieve that outcome were extensive, and the MLB content immediately appeared on a rival site, thus largely negating any redress that the MLB may have gained from its initiative. However, this at least demonstrated that some negotiation was possible with the organisers of P2P sites, and more significantly that those organisers have a measure of control over the material that is streamed over their networks. However, success varies by organisation, and other sports right owners have not had such similar success in dealing with Sopcast.

Legal action against facilitators and sites

While sport rights holders have a range of available legal actions against sites and services that facilitate illegal content, the reported experience of the sector seems to indicate that even in IP friendly legal regimes such action is expensive, time consuming, by necessity largely reactive and not always effective. Sports rights owners reported that in a recent 12-month period four sporting organisations spent over EUR 1.3 million in attempts to challenge unauthorised streams of their content (Sports Report, 2008), highlighting the high cost of such action.

Essentially the problem in seeking legal redress (compensation, damages, etc. – as opposed to simply taking down the site) is that these can be very lengthy before those responsible (if found, and this can be difficult) can face an appropriate court. This allows sites to re-establish themselves in different jurisdictions, where fresh action would have to be restarted. In the view of the sports rights sector their experience highlights the difficulties of legal responses that are by necessity country-based, whereas the Internet operates in a global context, with few boundaries, either physical or legal, to hinder their operations.[14]

A number of specific examples were provided to the study team, involving sports as diverse as football (especially the English Premier League and UEFA), Australian football and cricket, some of which are discussed in the next section. In each instance, a favourable decision after lengthy court action proved ultimately ineffective, as new sites were quickly re-established to continue the unauthorised streaming of live sports events. In this sense, the experiences of the sports rights sector mirror the experiences of other rights holders whose content can be transmitted through the Internet; that is, action is difficult when the providers of unauthorised content are ephemeral, reside/operate in different legal jurisdictions and where consumers are very numerous (and also live in different jurisdictions) and are frequently active participants in the distribution of that unauthorised material. This is the nature of digital piracy, and these are the characteristics that make this sector different from traditional forms of counterfeiting and piracy involving physical products.

Technological responses

As well as legal recourse there are some technical responses that could minimise the streaming of unauthorised content. One technique is *geographical blocking* (commonly referred to as geo-blocking), which is frequently used on the Internet when content providers wish to restrict access to their content to specific geographical regions. An example of this is the BBC iPlayer, which limits access to those whose IP addresses are located in the United Kingdom.[15]

While such blocking technology would be useful to minimise (or at least localise) the streaming of unauthorised content, this requires the co-operation of the offending site in the first instance, and this is unlikely to be the case unless action is backed by some more direct pressure such as a court order, or perhaps (as in the case of the MLB mentioned earlier) an agreement between the rights owner and the web site concerned.

Filtering is also possible on a broader scale, for example by governments wishing to limit access to specific web sites by its citizens, but this

enters into the very complex and sensitive field of personal freedom and rights, and apart from noting that this might be possible, it is not further explored.

Other technical responses, such as *traffic management and video fingerprinting* could also offer some scope for the sports rights sector to try to address the streaming of unauthorised content, but both have inherent problems. Traffic management is sometimes exercised by Internet service providers (ISPs) to manage their available bandwidth to ensure that it is not overwhelmed by large volume users (such as P2P streams). This traffic management tool is not really intended to block or slow down sites in response to possible IPR infringements, but could probably be technically feasible. Whether or not this may offer a further opportunity to prevent/ minimise the piracy of live sport broadcast is an issue for rights holders, ISPs and governments to address.

Video fingerprinting could be used to identify unauthorised copies, and apparently the technique is already being used in some music and video content, but the problem for the sports rights sector is that while it is technically feasible to track live video streams, there is no effective way of removing them.

In summary, while there are some nascent technical strategies that might possibly be used to minimise or prevent the illicit streaming of live sport events, these are not presently feasible, and would require considerable co-operation between governments, industry and consumers to deal with the sensitive issues associated with such responses. The recent involvement of ISP in some jurisdictions (for example the United Kingdom) to strengthen the opportunity of identifying and warning possible copyright infringers may indicate some movement in this direction.

Government regulation

From material provided to the OECD by the sports rights sector, there is a strong sense that Government regulations is seen as one of the best ways of ensuring protection for rights holders affected by digital piracy. There are two principal reasons for this perception. The first is that digital piracy is virtually a borderless activity, with the inherent problem that rights holders, providers and customers are likely to reside/operate in many different legal regimes, thus limiting the effectiveness of normal legal responses. In these circumstances, government regulation – especially if there were to be some kind of co-operation or consistency amongst governments in different legal jurisdictions – could be a way of facilitating responses and remedial action across those different jurisdictions.

Second, governments are often perceived as the only way of placing pressure on parties that have the potential ability to reduce the problem of digital piracy to act where they can, even if such action on their part is not seen as attractive or commercially desirable. In this context the Internet service providers are an obvious group for such attention, and their involvement in the battle against digital piracy (especially when this involves file sharing and P2P) streams) has been much reported. As this study was being written the announcement was made in the United Kingdom that ISPs had agreed on a plan with the music industry to address the problem of piracy. It was reported that under proposals by the UK government hard-core file sharers would be warned, and could see their broadband connections slowed.[16] A similar plan is currently under consideration in France.

No judgement is made here on whether this is an appropriate policy direction for governments and industry, but if this scheme does go ahead as planned (similar plans have been discussed in other jurisdictions) then this could also affect sports rights owners.

Specific industry examples

The sport rights sector made available to the OECD s a number of detailed examples of the experiences of specific sports in identifying and dealing with the piracy of live broadcasts (Sports Report, 2008 – from which much of the information in the following section was drawn). While the OECD was not in a position to verify the information provided in those examples, it has no reason to believe that they are not representative of the experiences of the sector. Only football, cricket and basketball are reflected here, principally because of the global popularity of these sports, their different characteristics and the range of data available for them. Other sports covered in the material made available to the OECD included baseball, tennis, Australian Rules football, rugby, motorsports, athletics, golf, American football and horseracing, thus indicating the very broad range of sports that are affected to a greater or lesser degree by unauthorised streaming of live events.

Football (soccer)

The experiences in football (soccer) have been reported by some of the largest leagues in Europe, including the Scottish and English Premier Leagues and Football League, Deutsche Fussball Liga (Germany) and Ligue de Football Professionnel (France), as well as football associations such as FIFA and UEFA.

Football is probably the most popular single sport in the world, and around 240 million people are reported to regularly play the game. FIFA estimated that the 2006 FIFA World Cup was shown on television in 214 countries across 376 channels with a cumulative television audience of 26 billion.[17] The magnitude of these numbers means that there is a very large pool of (frequently very passionate) supporters which would be a prime target for illicit streaming of live matches to meet the needs of those unwilling or unable to access legitimate broadcast and streaming services.

Monitoring of streaming sites involved activity across four major European football leagues, and the results are summarised in Table 4.1 below. The results for the Premier League and the German Bundesliga reflect season-long monitoring, while the Spanish La Liga, and the Italian Serie A comprised a snapshot of games across a single weekend.

Table 4.1. Sampling of illicit streaming sites affecting football

League	Monitoring period	Infringing sites	P2P-based	Unicast-based	Paid	Free	Viewers in China	Viewers outside China
English Premier League	2007-08 season	177	63%	37%	27%	73%	49%	51%
German Bundesliga	2007-08 season	85	96%	4%	10%	90%	73%	27%
Spanish La Liga	Snapshot during 2007-08 season	49	98%	2%	14%	86%	55%	45%
Italian Serie A		53	96%	4%	17%	83%	57%	43%
Average		*91*	*88%*	*12%*	*17%*	*83%*	*57%*	*43%*

This monitoring found that on average 91 infringing sites were found for each of the four leagues, although the Premier League appeared to face the worst problem, with 177 sites found by during season 2007-08 (barring the final weekend). The monitoring results indicated that a majority of all sites located were connected to P2P-based streaming, although the Premier League was subject to more attention from Unicast sites than the other leagues.

Significantly, the figures for infringing sites counted each located site once only; thus a portal site like MyP2P, which is likely to feature links to almost all football matches from the four leagues shown below was counted only once, despite providing links to many hundreds of individual matches. This of itself indicates the considerable number of streaming sites that were available to consumers, and correspondingly highlights the difficulties experienced by the rights owners to deal with them.

The sampled numbers also indicated that most viewers of monitored streams were based in China. While the distribution data was taken from only a small sample of P2P streams for each league, in the view of the monitoring company this reflected a large enough sample to show the large usage of such services in mainland China.

More specifically, the English Premier League found that during the 2007-08 season 177 different sites were located which contained or were connected to unauthorised streaming of matches. Of these, 122 (63%) used P2P methods to distribute the content, with the remaining 37% streaming direct through Unicast sites. Of the P2P streaming sites, 70 embedded streams into a web page, while 38 provided direct links to streams found on P2P streaming services or clients such as SopCast.

Compared to the other three leagues in Table 4.1, the Premier League appears to have a much greater problem with paid sites, where 27% of sites were accessible only after payment was made. This likely reflects the high level of demand for Premier League games and the realisation by owners of pirate sites that a section of viewers are prepared to pay for guaranteed access to Premier League games. In the context of the overall study these sites represent that segment of the market that exists between the legitimate broadcasters and those sites that provide (perhaps inferior services) at basically zero price.

As an indication of the impact of these illicit streaming sites, the site monitoring focussed its attention on the two largest illicit streams for an important match between the top two clubs in the Premier League in April 2008. The match was broadcast on the subscription channel Sky Sports in the United Kingdom and offered through various other broadcast means in over 200 other countries. Despite the availability of these authorised broadcasts, in total 238 000 viewers were estimated to have watched the game on the two SopCast streams.

A regional analysis of those viewers indicated that (consistent with the overall viewer location shown in Table 4.1) around 49% were located in China, with an additional 10% located in Hong Kong (China). The United Kingdom (home of the Premier League) comprised 13% of the viewers, with

other developed economies also registering significant numbers of viewers, indicating that the use of illicit streaming services is widespread.

The experience of the other leagues indicates some differing characteristics to those of the Premier League. The most obvious difference is that the proportion of Unicast sites is considerably lower in the other leagues, so that P2P streams are by far the preferred mode of streaming those matches. As a natural consequence of this, there are commensurately fewer sites that require some form of payment, so that most access is through free sites. Finally, the proportion of viewers in China for the other leagues is significantly higher than for the Premier League, with the German Bundesliga being the highest, with 73% of all its illicit viewers being located in China. These differences reflect the respective popularity of the different leagues and their power to attract viewers, which in turn dictates to some extent the potential for service providers to seek payment from those viewers, perhaps by providing a higher quality and more reliable service.

While Unicast and P2P sites attracted the greatest number of viewers, post-event downloads of copies of entire matches are also available through the Internet, principally through file sharing networks such as bittorrent and eDonkey. The tracking of individual matches (in late 2007) between well known and popular teams such as Manchester United, Roma and Barcelona, attracted downloads in the tens of thousands, rather than the hundreds of thousands recorded for live streaming of matches. This is consistent with the characteristic of digital products that they have a comparatively short shelf life, and that live sporting events have the shortest effective life of all. Nevertheless even if smaller in number these illicit downloads would still affect the ability of the rights owners to maximise their returns from delayed telecast, packaged highlights and subsequent re-showing of some matches as "classics".

Cricket

While football has universal appeal, cricket is interesting because while its spread is more limited, it is enormously popular in South Asia (particularly India and Pakistan) as well as the United Kingdom, the West Indies, Australia, South Africa and New Zealand. The absence of significant fan bases (except for expatriates) in mainland Europe, the Americas, the bulk of Africa and China means that the target audience is quite different from that attracted to football. However, this did not prevent the collected data indicating that cricket had become the sport most affected by unauthorised streams of live events, particularly in India and Pakistan where the sport is immensely popular.

According to monitoring data, in early May 2008, a SopCast channel for an Indian Premier League game saw over 120,000 viewers watching the game. The highest number of viewers ever recorded for a single P2P stream for cricket was more than 700 000.

The monitoring of a number of major international cricket series (including the 2007 Cricket World Cup) located almost 950 cases which involved the unauthorised streaming of live cricket. Of these, around 260 were dedicated servers used by streaming sites to provide a Unicast stream direct to viewers. A further 230 cases were sites which required a subscription to access the cricket content, while P2P streams made up 280 cases.

The ratio of Unicast to P2P over the period is greater than has been the experience in other sports, but the collected data also shows that the proportion of peer-to-peer streaming used in cricket is growing. In 2005, most streams located for cricket were Unicast, for which the provider often required viewers to pay in order to cover the cost of dedicated servers with enough bandwidth to support the direct streaming to possibly thousands of simultaneous users. However, over the last two years P2P technology has become the dominant method used to stream live cricket through the Internet. Not only has the technology become faster and easier to use, but P2P-based streaming services are almost always free at the point of consumption because the costs of re-broadcasting streams are so much cheaper. This is because the technology generally makes use of viewer's own upstream bandwidth to deliver the content to those within the stream, and there is little requirement for fast servers.[18]

Data collected also showed that streams broadcast with the SopCast service make up the majority (around 60%) of P2P-based live streams for cricket.

As a further development in cricket, there has been a steadily growing number of embedded streams, or links to streams found on free hosting services, particularly those connected to free blogging hosting, (such as Blogspot). The technology is simple, and it takes only a few minutes to set up and post content of any kind to a Blogspot-hosted page. There is no cost and financial penalty if and when a page or site is removed. Relevant sub-domains (such as *ipl-on-sopcast.blogspot.com*) are freely available which help promote each new site and page. Users post comments which update others as to working streams in real time as games progress. This user behaviour is consistent with the "community" and co-operative peer approaches that were identified by the main study as drivers for the distribution and consumption of digital content (both licit and illicit).

Basketball

The data collected for basketball focused on the American National Basketball Association (NBA), which as a national series differs markedly from the international reach (in terms of participation) of both football and cricket.

While the NBA is a domestic series, its global popularity has continued to grow. Games from the NBA are currently broadcast in more than 200 countries and territories across 41 languages. NBA content is extremely popular in China, where the NBA has more than 50 authorised telecast partners. The popularity of the sport in China has been furthered by the successful introduction of a number of prominent Chinese-born players into the league, so that according to monitoring results, an estimated 78% of viewers of unauthorised streamed NBA games are located in China.

Over the past two NBA seasons, 172 sites have been found which provided unauthorised streams of NBA games online. Of these, just under three-quarters (74%) were related to P2P streaming and most of these were directly embedded streams, while around 30% took the route of offering links to available streams. SopCast is by far the most utilised P2P service found to offer authorised NBA streams (around 60%).

Audience sizes on these streaming sites are very large. On 16 December 2007, almost 1.2 million viewers were registered on a SopCast channel that streamed the *Dallas Mavericks* vs. *Houston Rockets* game. From a large sample of those connected to this game, by far the largest proportion of viewers (78%) was located in China. This is the largest documented viewing for a SopCast NBA stream and was likely enhanced by the inclusion of Yao Ming, a Chinese-born player who played in the game.

Such a result, involving as it did a domestic game of basketball, emphasises the global nature of the Internet, and the appeal of some sports that go well beyond their natural borders. Prior to the growth of broadband Internet access and the development of associated streaming technology, it would have been impossible for such a seepage to occur from legitimate audiences for live events, and emphasise the unique challenges being faced by the owners of rights associated with digital content (not just sports broadcasters) when dealing with technological developments that greatly facilitate digital piracy.

As well as its very large recorded audiences to streamed games, basketball is also interesting because of its efforts to create partnerships with some of the most widely viewed sites distributing unauthorised streams of NBA games. From those partnerships, services have been created with both PPLive and PPStream to allow a large number of NBA games to be offered live, and

at no cost to the end user. Providing these legitimate streams of NBA programming may have had a positive effect as the average number of viewers of unauthorised streams of NBA games has declined since 2007, although the number of NBA games being streamed without authorisation has remained the same.

While strategic partnerships of this kind may offer an alternative way of dealing (at least in part) with unauthorised streaming of live matches, this model may not be available for other sporting leagues – particularly in the near-term when exclusive rights agreements have already been established for many sports in China and elsewhere.

Finally, the information provided with respect to the NBA notes that while China is the most significant problem area for the NBA, the problem of unauthorised streaming is not limited to there, and over the past year unauthorised streaming websites had also been identified in Europe, the United States, and Canada.

Conclusions

The purpose of carrying out a case study associated with the Phase II study on Digital Piracy is that it allows the detailed examination of the experiences of a particular sector affected by digital piracy to see how this actual experience reflects the analysis contained in the main study, as well as providing a practical snapshot of the experiences of a sector that distributes digital content in dealing with piracy.

The first point that becomes evident in the case study is that digital piracy can take a number of forms, and that each has its own particular characteristics. In the case of the sports rights owners sector, piracy takes the form of captured TV signals carrying live sports events that are then illicitly streamed through the Internet to customers around the world. Once captured, these events can also be made available subsequently by pirates as highlights or clips on a delayed basis.

A characteristic of digital piracy identified in the main study is that digital content has a much shorter shelf life than other material that is counterfeited or pirated, and the case study has shown that live sporting broadcasts have the shortest shelf life of all. This is because unlike other digital content (such as films, music, software, books, etc) which can have appeal for some time after they are first released, the maximum value of the live sports broadcasts (and perhaps other live events such as concerts) is when the live event is happening. Once the events are over, and the result known, interest wanes very rapidly, although they still retain a value to owners as highlight or archive material.

As is the case with digital piracy generally, technological advances (ability to capture TV signals, high-speed broadband connections and streaming technology) has enabled pirates to easily and cheaply stream the broadcasts virtually in real time, and at a quality which although not perfect is sufficient to meets the needs of the target audience.

This real-time competition creates particular problems for the owners of the sport rights sector, as they essentially have a very narrow window of opportunity to respond to those illicit streams, and this both complicates their responses and makes them less effective; taking down a site once the sport contest is finished is little comfort to the aggrieved party. In addition, the cost of such action can be very high.

As far as the providers of the illicit streaming services are concerned, these reflect the characteristics identified in the main study; that is as well as a lower cost supplier of the streamed event (in this case Unicast sites which generally charge a lower price than legitimate services), there are also many content providers who provide content (through P2P sites) at zero, or virtually zero, cost to the final consumer. This is an economic model that does not exist in counterfeiting and piracy of physical goods, where there is always a cost of production, transport and distribution, and where goods are therefore never provided to consumers at zero price.

Although there are exceptions[19] generally the cost of illicit streaming is kept extremely low by virtue of the P2P protocols, which use the bandwidth available to the many participants in the P2P "swarms" to facilitate the streaming of the live events. Where streaming is carried out one a one-to-one basis (by Unicast sites) the cost of powerful servers and bandwidth is generally recouped through subscriptions, advertising or both.

The capabilities of computers and the Internet, as well as allowing real time competition for the original products, also allow the production and distribution of the streaming content from sites scattered around the world; including in unhelpful legal jurisdictions. Similarly, customers (including P2P participants) can be located virtually anywhere in the world, which means that as with other digital piracy the rights owners face a global problem, but have only local responses available to them.

In other words, legal action available to the rights owners may have to be taken at different locations from where the sporting event in question is taking place, and this can make action much more difficult and expensive and probably also less effective, as it is difficult to track down persons who operate the sites and take action against them.

Also consistent with other digital content (especially films and TV shows), complex commercial and licensing arrangements and lack of adequate customer bases means that legitimate broadcasts may not be available in all locations where there may be fans wishing to see particular sporting events, which means that otherwise potentially legitimate customers may look for other ways to view those events, thus creating more consumers to sustain the illicit streaming sites.

Further, the ability of pirates to compete with authorised broadcasts of live sporting event in virtual real time (attacking the content at the time that it has maximum value to the rights owners), and in virtually any market in the world, means that the owners of sport broadcasting rights face circumstance that are particularly difficult, and in the current international climate lack the means to adequately respond to these threats.

In conclusion, this case study has highlighted that the findings and conclusions of the main study on digital piracy, and that the issues identified for the consideration of policy makers and industry, are also relevant in their specific application to this sector.

Notes

1. Reported on the unofficial London Olympics website *www.the2012londonolympics.com.*
2. Reported at *www.theglobeandmail.com* on 19 June 2008.
3. Reported in *uk.biz.yahoo.com* on 20 June 2008.
4. See the background report on digital piracy of sporting events (Sports Report, 2008).
5. See *www.sopcast.org* and *www.TVAnts.com* (latter in Chinese although mirror sites available, such as *www.tvants_ppstream.com*).
6. It should be noted that P2P technology may be used for both legal and illegal purposes, and references in this annexe are intended to refer to its use as a tool to distribute pirated content. Many legitimate services are adopting P2P technology to provide access to content, with the authorisation of rights holders, and these services are not the subject of this chapter.
7. Can be found at *www.myp2p.eu.*
8. In the course of a few minutes of research in June and July 2008, advertising was seen from Hertz, EDF (French electricity utility), Primagaz, Promovacances (French holiday site) and the University of Phoenix.
9. Information provided by NetResult in correspondence to the OECD.
10. While there is also demand for delayed telecasts, highlights and other packaged content, these are not specifically considered in this brief analysis.
11. See the main study for a detailed discussion of this economic model and the drivers that affect the behaviour of suppliers of pirated digital products.
12. For further details see OECD (2008), *The Economic Impact of Counterfeiting and Piracy.*
13. "Websites warned for IPR infringement on Olympic streaming in China": *http://english.sina.com/sports/1/2008/0707/170268.html.*
14. Information provided in private correspondence to the OECD.
15. See *iplayerhelp.external.bbc.co.uk/help/about_iplayer/termscon.*
16. See *news.bbc.co.uk/2/hi/technology/7522334.stm.*
17. See *www.fifa.com/aboutfifa/marketingtv/factsfigures/tvdata.html.*
18. Though at least the initial uploader of the content must have access to a connection fast enough to stream the live broadcast at a speed which does not induce pauses or buffering.
19. For example, Bensports charges USD 100 per month (*www.bensports.tv*).

TESTIMONY OF AYALA DEUTSCH,
SENIOR VICE PRESIDENT & CHIEF INTELLECTUAL PROPERTY COUNSEL
NBA PROPERTIES., INC.
BEFORE THE
COMMITTEE ON THE JUDICIARY
UNITED STATES HOUSE OF REPRESENTATIVES

"PIRACY OF LIVE SPORTS BROADCASTING OVER THE INTERNET"

DECEMBER 16, 2009

Chairman Conyers, Congressman Smith and Members of the Committee, my name is Ayala Deutsch and I am Senior Vice President & Chief Intellectual Property Counsel for NBA Properties, Inc., the exclusive licensing and merchandising arm of the National Basketball Association ("NBA"). We greatly appreciate the opportunity to describe to the Committee the NBA's experience with the growing problem of sports content piracy on the Internet and to provide information about online piracy that we hope the Committee will find pertinent to its inquiry into this issue.

NBA Game Telecasts and Digital Content Distribution

The NBA operates the premiere professional basketball league in the world and has, for decades, invested enormous resources in generating high quality sports entertainment. As a result of the great popularity of NBA basketball games, the NBA has established a highly successful business in licensing copyrighted game telecasts for distribution in the United States and internationally. Domestically, NBA game telecasts are distributed through over-the-air, cable and satellite television broadcasts -- including, nationally, on ESPN, TNT, ABC and NBA TV (the first 24-hour television network created and operated by a professional sports league) and, locally, through broadcast television stations and regional sports networks. Internationally, the NBA will broadcast its games in more than 200 countries around the world during the 2009-10 NBA season.

Building on the success of its television broadcasting business, the NBA has developed a flourishing and wide-ranging sports media business, which, increasingly, has included digital distribution of NBA content. NBA Digital, jointly managed by the NBA and Turner Sports, is the NBA's extensive cross-platform of digital assets including NBA

TV, NBA.com, NBA Mobile and NBA League Pass, the NBA's out-of-market subscription package.

The NBA has been at the forefront of online distribution of live sports content, including offering free streaming of select NBA games in the U.S. and other markets. Last season, the NBA launched a live Internet game webcast packages - NBA League Pass Broadband - which provide fans in 75 countries with access to a full season of live NBA game webcasts over the Internet. More recently, the NBA launched NBA League Pass Mobile, which for the first time allows fans to watch NBA games on their mobile devices.

Online Piracy of Live NBA Games

Given the NBA's substantial investment in its game telecasts and the great value of the exclusive ownership rights in those telecasts, the NBA is affected by any unauthorized distribution of NBA content, including over the Internet. The online piracy of live sporting events has a particular impact because of the great value to consumers of being able to access that content while the event is still in progress. Other video content offered online, including television programs and motion pictures, often remains popular well after its debut; in contrast, sports fans' interest in viewing live sporting events is greatest while the event is happening.

As a growing number of people choose to consume content online, the incidence of live content piracy continues to increase. At the same time, advances in technology have made it easier for individuals to capture live television signals and retransmit them over the internet in real-time, creating a live "stream". What previously required dedicated computer hardware and advanced technical knowledge now can be achieved

with nothing more than basic equipment and technology – a personal computer, a cable or satellite television connection, a TV tuner card, and an internet connection.

The technology used to stream live content over the Internet continues to evolve. Initially, the majority of streaming was conducted through unicasting, where the content was distributed directly from a web server to the end user. Over the last two years, there has been a shift to peer-to-peer (P2P) technology, which allows a single stream to be shared by a network of individuals through P2P hosting sites. Recently, "lifecasting" websites, which allow users to post live video streams, have become more widely used.

Regardless of the technology, information about how to access unauthorized streams of live sports content is widely available on message boards, blogs, and social networking sites. In addition, numerous sites dedicated to aggregating and indexing unauthorized streams make that content even easier to access.

All of these factors have contributed to the growth of live sports content piracy. Although it is difficult to accurately quantify the number of unauthorized streams that take place during any given NBA game, the NBA has seen a sharp increase over the past few seasons in both the number of websites offering pirated content and the overall number of unique pirated streams. During the 2008-09 NBA season, the NBA monitored approximately 500 websites for unauthorized streams of NBA games and captured evidence of thousands of pirated streams. For just one game of the 2008 NBA Finals, the NBA identified more than 50 unique unauthorized streams. Based on the limited data we have collected to date for the current season, we believe online piracy of NBA content will continue to increase.

While the problem of online piracy of live sports content continues to evolve in the United States, the NBA has encountered significant problems with unauthorized live streaming in countries throughout Asia and Europe. To date, more than half of all unauthorized streams the NBA has identified appear on P2P websites operated outside the United States, including in China. The volume of online piracy of NBA content in China reflects both the NBA's enormous popularity in that market and the ineffectiveness of existing enforcement regimes.

Currently, there is little reliable data reflecting the overall scope of unauthorized streams of live sporting events and the number of views each stream receives, in part because much of the piracy occurs on rogue off-shore sites, the operators of which do not have to answer for their illegal activity. Based on the limited information available, however, the extent of sports piracy could be significant; for example, one of the most egregious Chinese P2P websites touted its infringing technology last year by claiming that almost 1.2 million users viewed the stream of a single NBA Playoff game featuring Chinese-born Yao Ming from the Houston Rockets.

The NBA's Efforts to Combat Online Piracy

Although the impact of unauthorized streaming of live sports content cannot be quantified at this time, the NBA considers enforcement against content piracy to be a matter of the highest priority. The NBA dedicates considerable resources to combating online piracy in order to protect the value of NBA game telecasts, the increasing scope and diversity of the NBA's digital media business, and the NBA's exclusive right to control distribution of live games.

The NBA's anti-piracy efforts include allocating internal resources and retaining outside vendors to engage in the daily monitoring and enforcement of live streaming websites. In addition, NBA in-house legal staff and outside counsel send takedown notices and demand letters to pirate sites, conduct follow-up investigations, and pursue appropriate legal action.

The NBA also has explored business solutions to help reduce content piracy and facilitate enforcement efforts, engaging directly with aggregators and hosting sites whenever possible to advocate for the implementation of policies and practices that enhance the ability of rights owners to address unauthorized streaming.

In addition to its individual enforcement efforts, the NBA has participated with other rights holders in a variety of initiatives aimed at raising awareness of content piracy in the public sector, both in the United States and abroad. For example, the NBA has joined with other U.S. sports organizations in communicating with the USTR about sports content piracy, including through submissions made as part of the Special 301 Report to Congress in 2008 and earlier this year. The NBA also is a member of the Coalition Against Online Video Piracy, a group of representatives from leading sports organizations, motion picture studios and broadcasters that has been active in addressing content piracy, including engaging in an ongoing dialogue on that issue with officials from a number of interested Chinese government agencies.

Despite these efforts, effective enforcement against online piracy of live sporting events remains challenging. To date, no single technology has been proven to effectively stop unauthorized live streaming. Monitoring and takedown programs, which are the most widely available means to enforce against unauthorized streams, have proven to be

insufficient to fully address the problem. These programs require the rights owner to engage in several steps and often can result in a delay between submission of the takedown request and removal of the unauthorized stream. Given the relatively short duration of live sporting events, time is of the essence in removing unauthorized streams and any delay can be significant.

Even in those instances in which the NBA has direct access to an automated tool, takedown can be ineffective. Once an unauthorized stream has been removed, recidivist infringers are able to repost additional unauthorized streams of the same content in the absence of strict penalties imposed by the site operator to address repeat offenders.

Conclusion

The NBA continues to invest significant time, money and resources in enforcing against the unauthorized distribution of its valuable copyrighted content. Like other content owners, the NBA continues to face challenges in its enforcement efforts - including the global nature of illegal streaming activity and the inadequacy of enforcement measures available internationally to address piracy and the fast-moving evolution of technology and distribution models employed by those engaged in unauthorized streaming.

We continue to closely monitor online streaming of sports content and to explore possible solutions to address this illegal activity. We appreciate the Committee's interest in live sports content piracy and look forward to working with the Committee as it further examines this important issue.

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