TIME FOR THE RECORDING INDUSTRY TO FACE THE MUSIC: THE POLITICAL, SOCIAL AND ECONOMIC BENEFITS OF PEER-TO-PEER COMMUNICATIONS NETWORKS

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ISSUE BRIEF

PIRACY PANICS V. THE PUBLIC INTEREST

A critical debate over a technological revolution is underway in the U.S. that will have far reaching implications for economic growth and global competitiveness, technological innovation and creativity, and the capacity of an open, democratic society to adapt to breakthroughs in the way we communicate. This debate is over advances in peer-to-peer technologies and whether their growth will be driven by the capacity of human innovation or hindered by special interests reluctant to embrace change. This debate is unfolding in the U.S. court system, the halls of Congress at universities and research organizations, and among entrepreneurs everywhere from corporate boardrooms to the lone innovators looking for next great invention.

If vested interests in the recording and movie industries have their way, innovation and progress will be the victim of a public relations campaign intended to paint file sharing as "piracy." Big movie studios and recording companies are attempting to squelch peer-to-peer networks just as their potential to deliver economic growth and technological progress is only beginning to be exploited. However, contrary to the copyright holder claims that peer-to-peer communications networks are copyright infringement schemes, decentralized peer-to-peer networks have become the dominant form of Internet communications because they are vastly more efficient. Peer-to-peer technologies eliminate the congestion and cost of central servers and distribute bandwidth requirements throughout the network. In so doing they become a powerful force to expand freedom of expression and the flow of information, stimulate innovation, and promote the economic interests of consumer and creative artists alike (see Exhibit EX-1).

This report explains why public policy should embrace peer-to-peer technologies. It examines the history of technological innovation in communications and the "piracy panics" they cause among entrenched incumbents. For three centuries, in battles over the printing press, telegraphy, mechanical pianos, cinematography, radio, cable television, photocopying, video and audio recorders, and the current generation of digital technologies, public policy has favored technological innovation by refusing to allow copyright to regulate technology. The paper reminds policymakers of the historic lesson that technological innovation promotes political, cultural, and social development, and economic growth. The analysis demonstrates the social and economic harms of the "tyranny of copyright" that recording companies and movie studios seek to impose on peer-to-peer technologies, as well as the legal and public policy grounds for rejecting this tyranny.

THE ATTACK ON PEER-TO-PEER COMMUNICATIONS NETWORKS

In a case before the U.S. Supreme Court, *Metro-Goldwyn-Mayer (MGM) Studios, Inc. vs. Grokster, Ltd*., MGM is attempting to hold Grokster and Streamcast Networks liable for illicit file sharing activities undertaken by users of their technology – attempting to hold the innovator accountable for the way in which the innovation is used. They want the Supreme Court to turn its back on the sound legal principals enunciated in 1984 in the Sony Betamax case that protected the innovations that sprung from the VCR in spite of protests from the movie industry that it would destroy Hollywood.

The recording companies and movie studios would fundamentally alter the nature of peer-to-peer communications networks to secure greater protection for their copyrighted materials by punishing technologies that facilitate file sharing, imposing technology mandates that inhibit file sharing, short-circuiting citizen rights to due process, and invading consumer privacy to speed lawsuits. They would create a surveillance society that casts a long shadow over freedom of expression and innovation. They demand a "hub and choke" architecture of central servers and lists that the Internet has left behind.

They would force network operators to assert control over every bit of communication that takes place in the peer-to-peer communications network. Indeed, they angrily disparage network operators for removing themselves from the conversation that the users of the networks have. In essence, they would make it illegal to refuse to install eavesdropping capacity in the networks. They would then require network operators to fingerprint every file, tag every user and monitor every transaction. They would hold technologists accountable, not only for what the users of those networks do, but also for anticipating what they might do. Similar demands have been pushed in Congress, as in the United States Senate, where the recording and film industries have backed the so-called "Induce Act," a clear break from the precedent of protecting innovators from liability for illicit uses of their creations.

Much like the motion picture industry's discredited "piracy panic" in the 1980s - in which it sought (and failed) to judicially enjoin distribution of Sony's Betamax on the grounds that VCRs posed a threat to movie copyright holders - the recording companies and movie studios are seeking judicial intervention against peer-to-peer communications networks. In now famous testimony from 1982 before a Congressional hearing on the use of the VCR for home recording, president of the Motion Picture Association of America Jack Valenti declared: "I say to you that the VCR is to the American film producer and the American public as the Boston strangler is to the woman home alone." Two decades later, the motion picture industry has not only thrived during the age of the VCR, but sales and rentals of tapes and DVDs have generated over $25 billion in annual revenues for the industry - twice as much revenue as theatrical showings.

The paper presents a comprehensive review of the legal and public policy issues glossed over by the rhetoric of "piracy panic." It examines the impact of peer-to-peer communications networks as a multi-faceted, broad purpose technology in the long line of advancement of (1) "technologies of democracy," 2) "technologies of innovation," 3) "technologies of distribution," 4) "technologies of creativity."

TECHNOLOGIES OF DEMOCRACY

The attack on peer-to-peer networks by the record companies and movie studios involves much more than entertainment industry economics. It is also a dispute about striking the proper relationship between the private and public spheres. It raises profound questions about how far our society should go in projecting the state-conferred and constitutionally limited private monopolies into public *fora* where citizens rely on information and communications technology to enable personal expressive freedom. Beyond the entertainment area, individual citizens communicating without mediation are increasingly sharing critical information with each other in rapidly expanding peer-to-peer communications networks that enable them to not only consume information and entertainment products in the precise quantities and at the time they want, but to produce content as well.

The resolutions of past "piracy panics" in favor of preventing copyright from suppressing expression share a central theme. Consistent with the free-speech ideals, technological innovation historically has progressed via the mechanism of consumer access leading to grass roots quality control and "research and development." As reflected in important fair use decisions, including the Sony Betamax decision, technological innovation often originates in minds freshly exposed to the work of others. In addition, a technology's original producers often only become aware of improvements after consumers test their products. Greater access to technology also has had the socially desirable effect of expanding the market to which entrepreneurs might cater. Correspondingly, the competition to obtain greater shares of a growing market leads to more efficient distribution of resources and to incentives for improving existing technologies and services.

Because peer-to-peer networks lower the cost of moving large files to a fraction of what they are with the client-server, central-index networks, they dramatically expanding the ability of ordinary people and noncommercial entities to speak in the digital age, to distribute video and other content in new and innovative ways. More than ever, digital communications over the Internet allow individuals to communicate and express themselves. For example, self-published, public domain and authorized non-musical works are exchanged in peer-to-peer networks. Political speech has been fostered for candidates and citizens, not to mention dissidents living under authoritarian regimes. Journalists and media critics have turned to peer-to-peer to enrich their documentary and commentary activities. Educators, librarians, historians and archivists find that peer-to-peer greatly expands their ability to catalogue and make available informative materials.

These are the reasons why First Amendment advocates on the left, like the American Civil Liberties Unions and Free Press, and the right, like the American Conservative Union and the Eagle Forum Education and Legal Defense Fund, and institutions dedicated to expanding the availability and use of content, like the Creative Commons, the Free Software Foundation, and Media Studies Professors, have weighed in at the Supreme Court against the demands of the recording companies and movie studios.

TECHNOLOGIES OF INNOVATION

Obsessed with copyright above all else, the recording companies and movie studios are blind to the fact that Internet and communications network architecture has evolved away from the centralized structure for obvious design and economic reasons. They see only a conspiracy to undermine their rights, while network efficiency is the driving force behind architectural design.

The current demands of the recording companies and movie studios seek to radically expand copyright law into a broad regulatory role over technology innovation. In short, the digital "piracy panic" has driven the recording companies to seek to freeze Internet technology and to lock in a "hub and choke" design – because it provides a useful control point to protect their interests.

Peer-to-peer networks, especially in their most recent form, are a perfect example of Internet architecture. They are decentralized communications networks that rely on distributed intelligence. They promote direct communication between users at the edge of the network.

On the supply-side, peer-to-peer communications networks are efficient, robust and scalable. As long as principles of open architecture prevail, efficient solutions will economize on scarce resources by exploiting more abundant resources. As hardware and communications costs declined and larger faster PC's penetrated the market, the design principles of the Internet made it inevitable that software would seek to escape the central server bottleneck by tapping into the abundant resources that are now available on the edges of the network. By building multi-level connectivity that adds redundancy, the network becomes more robust. By adding points of communication, it becomes more scalable.

On the demand-side, peer-to-peer communications networks encourage three different forms of relationships directly between individuals – exchange, viral communications and collaboration. The recording companies lament the fact that these networks facilitate exchange between individuals. The searchability of the network and direct relationships undermine control over exchanges between equals. As the capacity for networks to facilitate exchange increases, they exhibit classic demand-side economies of scale, or network effects.

However, peer-to-peer networks exhibit much more. These networks encourage not only exchange, which so concerns the record industry, but also viral communications and collaboration. Some musicians and politicians, not to mention commercial companies, have begun to discover the ability of information and ideas to spread virally among members of peer-to-peer networks. Viruses spread autonomously by infecting neighboring individuals who are susceptible to the message. Action-oriented individuals can seek out and influence others. Humans infected by ideas can go one step farther. Like-minded people can find each other and form communities, encouraging and reinforcing action. Exchange and/or viral communication can serve as a launch pad for collaboration, resulting in new, joint products. Consumers become producers, fulfilling the aspiration of the First Amendment and returning the nation to the digital age equivalent of its pamphleteer origins.

These are the reasons why computer, software, and communications companies, large (e.g. Intel and the Cellular Telecommunications & Internet Association) and small (e.g. Altnet and Shared Media Licensing, Inc.), the National Venture Capital Association and the National Association of Shareholder and Consumer Attorneys, and over a hundred professors and scholars, specializing in copyright, intellectual property, technology and Internet law, economics, innovation and computer science, have all weighed in at the Supreme Court against the demands of the recording companies and movie studios. These groups have also strenuously have opposed Congressional efforts to stymie peer-to-peer technology.

TECHNOLOGIES OF DISTRIBUTION

The business model that the industry is defending is a tight oligopoly in which a handful of companies control the distribution of content. Anticompetitive practices and anti-consumer policies have forced the public to buy overpriced CDs. Over the course of the 1990s, the record companies fixed prices and eliminated singles. The industry maximizes its control and profits by promoting a small number of blockbuster albums. Most artists receive little if any compensation for their albums and the public receives a narrow range of products at high prices.

File sharing technology entered this market as an "arbitrage" opportunity. These observations are not intended to condone copyright infringement, but to help explain its social antecedents and to put the industry's claims of harm in context. The growth of sales in 2004, and particularly the explosion of sales of digital singles, reinforces this view and throws the whole industry argument into doubt.

Rigorous statistical analysis does not support the claim that peer-to-peer has reduced sales sufficiently to threaten the health of the recording industry or that it harms society. Simply put, the results are all over the map. Some studies have found increases in sales resulting from stimulation of sales in some population segments (older consumers) that offset losses in others (younger users). Others have found little or no effect. Still others have found losses that are not large. Moreover, because of recording industry pricing practices, even where industry revenue declined as a result of peer-to-peer, consumer welfare may increase. One econometric study of downloading found that the increase in consumer surplus was almost 200 percent larger than the loss of industry revenue.

Digital distribution threatens the control of the recording companies. It dramatically lowers manufacturing and distribution costs, while putting pressure on marketing and overhead costs. In a digital delivery environment, consumers should never be forced to pay for songs they do not want in order to get songs they do want. Having failed to shut peer-to-peer distribution down over the course of five years, in 2004 the record industry finally decided to begin to adapt its business model, at the same time that it continued its litigation.

The results were remarkable. The industry sold more singles in 2004 than at any time since 1984. Assume, based on the evidence of downloading, an average of 1.5 songs downloaded per album. With 150 million downloads in 2004, consumers would have been forced to buy 100 million albums to get the satisfaction of owning the songs they wanted. At an average price per CD of $13, that would have cost consumers some $1.3 billion. Buying digital singles at $1 per single, they spent only $150 million. The gain in consumer surplus could be over $1 billion and is likely to be at least hundreds of millions of dollars.

Part of the gain is in the form of money not spent, part of it in music purchased that would not otherwise have been purchased.

These are the reasons why consumer advocates, like Consumers Union and U.S. PIRG, and consumer equipment manufacturers, like the Consumer Electronics Association, have weighed in at the Supreme Court and in Congress against the demands of the recording companies and movie studios.

INCENTIVES FOR ARTISTS

While the anti-consumer practices of the recording industry are proven as a matter of law, some have argued that the worst aspect of the industry, though harder to prove, is its anti-artist and therefore anti-social impact. Pricing abuse only costs the consumer money; the centralized, star-oriented system that the industry enforces tyrannizes artists and impoverishes our culture.

It is a frequent lament in the music industry that few albums and almost no artists ever make any money on the sale of records. The spread in income between the handful of stars and the vast body of artists is huge. The range of works that is played and circulated widely is narrow. A handful of companies select a small number of releases and promote them heavily, marketing them through distribution channels that are expensive.

Peer-to-peer technologies are a win-win for consumers and creative artists, particularly in the music business because they lower the costs of production, marketing, promotion and distribution. They eliminate the "brick and mortar" middlemen, enabling creators to reach and communicate directly with their audiences cheaply and effectively. As costs fall, the highly centralized blockbuster system that benefits a handful of recording companies and a few star artists by restricting the variety of content that reaches the public, will recede. New approaches to digital distribution enable more artists to earn more selling singles through peer-to-peer networks at a fraction of the cost of albums. Because they can charge less and earn more, more artists will succeed financially and a broader range of work will receive wider distribution.

There should be little wonder that the musicians are supportive of the use of the Internet to advance their works and careers, but more divided on file sharing. Substantial majorities feel that the Internet has helped them, particularly in connecting with fellow musicians, expanding and reaching their audience, and promoting their performances. Just over one third of musicians said downloading is not bad and another one third said it was both good and bad. Just under one-quarter said it is bad.

The instincts and actions of the musicians who are supportive of peer-to-peer networks are easily explained by economic theory. The obvious reduction in search costs and improvement in information quality should lower total cost and increase demand. More importantly, from the artist's point of view, the new technologies change the social relations of production. Peer-to-peer networks disintermediate the recording companies.

The ultimate cost savings in marketing and distribution comes from both the supply-side and the demand side. On the demand-side, the ability to sample "is an information-pull technology... a substitute to marketing and promotion, an information-push technology." As the cost structure of the industry changes through the adoption of digital

technologies performance improves, since "variable costs relative to fixed costs are more important for music downloads than for CDs. This suggests that acts with a smaller audience can succeed in the digital music market. As a consequence, we could observe more music diversity and a less skewed distribution of sales among artists."

These are the reasons why many recording artists have embraced peer-to-peer distribution of their works and have weighed in at the Supreme Court against the demands of the recording companies and movie studios.

CONCLUSION: PUBLIC POLICY AND LEGAL PRINCIPLES FAVOR PROTECTING CONSUMERS AND PEER-TO-PEER NETWORKS

Fortunately, neither public policy nor law will tolerate the tyranny of copyright pushed by the recording companies and movie studios. The legal prospects for rebuffing the assault of the record companies on this new technology are good. Indeed, the constitution and three centuries of jurisprudence lean in the opposite direction. Promoting progress takes precedence over protecting copyrights. The Supreme Court should not only rejects the demands of the recording companies and movie studios to extend their copyright to regulate technology, but also takes this opportunity to put an end to the reign of litigation terror that the copyright holders have launched in an effort to slow technological progress. The Supreme Court must make it clear that technology is not the villain and send a signal to the lower courts to dismiss out of hand the frivolous litigation brought by the recording companies and movie studios.

The public must not be lulled into a false sense of security, however, even with a victory in the courts. Piracy panics are potent afflictions and the copyright holders have been in a fever since the advent of the Internet and the emergence of digital technologies. Copyright holders rarely accept court decisions when the underlying laws can be amended to do their bidding. There will be protracted legislative fights before the digital piracy panic subsides. In order to protect their rights as citizens and consumers, the public must become aroused and engaged to balance the immense monetary and political power of the record companies and movie studios.

EXHIBIT ES-1: EXAMPLES OF SUPPLY-SIDE AND DEMAND-SIDE BENEFITS OF PEER-TO-PEER TECHNOLOGY

SUPPLY-SIDE

Efficiency

BitTorrent allows a large number of computers that have a file to share in copying it to a person seeking it. Because the sharing is simultaneous (each computer that has the file transfers a portion of it at the same time as other computers that have it) the transfer can avoid or lessen bottlenecking that occurs if the entire file is copied from a single computer…

To maximize literacy, education and entertainment through the distribution of information to the public peer-to-peer systems such as Grokster can be of critical assistance in achieving these goals…. For example… Project Guttenberg's goal is... by 2013… over 1 million titles will be part of the collection and available to the public…

Peer-to-Peer networks also play an important role in the Internet Archive's effort. The Internet archive currently hosts about 60,000 books, music, software and video items. Approximately one terabyte of data is downloaded from the Internet Archive each day… traditional web-based distribution of material in such volumes – especially large files like audio and video files – can become tremendously expensive and, at a certain point, cost-prohibitive. That is because web-based publishing requires the host to bear both the data storage costs and the bandwidth costs associated with traffic to and from its site…It is precisely because peer-to-peer networks reduce costs that some content providers are increasingly relying on them to distribute their products.

By bundling Altnet's technology to interoperate with peer-to-peer software applications like those at issue in this case, Altnet can distribute music and movies at a small fraction of the cost needed to operate Petitioners' "brick and mortar" distribution businesses. Altnet also competes with several of the Petitioner-owned and sponsored *Amici*, such as MusicNet, who operate "web-based" business for internet distribution of licensed content. Altnet possesses competitive advantages over *amici* because the use of peer-to-peer distribution technology does not require the same investment in web-based server architecture, and it is more popular among consumers.

Scalability

While decentralized PtP systems inherently are more scalable and frugal on bandwidth than centralized systems, BitTorrent is far more efficient and especially fast at exchanging very large content files. Indeed, BitTorrent originally was invented (and continues to be utilized) for the lawful sharing and distribution of huge Linux operating systems and application programs among developers and licensed users…

A judicially imposed regime that would require Respondents' technology, BitTorrent, and their inevitable technological progeny to impose a centralized hub choke point to filter out infringing files would degrade these technologies to destroy the intrinsic advantages of speed, frugality in consumption of bandwidth, and scalability.

Robustness

Designing large-scale networks is notoriously difficult. Large networks must cope with vexing issues of scale, reliability, robustness and security that simply do not arise in smaller networks. Consequently, researchers are looking more to P2P networks, which offer

significant advantages over client-server networks that have bottlenecking problems when many users try to access a web site, and can easily be taken down due to single points of failure and denial of service attacks…. One beneficiary of such lessons is the National Science Foundation-funded Infrastructure for Resilient Internet Systems (IRIS) Project. IRIS… a multi-institutional collaboration… seeks to use P2P design strategy to support large-scale Internet services.

DEMAND-SIDE

Exchange:

Peter Jackson… is keeping an online reduction diary of the making of the film… he is using BitTorrent to share the work of distributing the files… [A]fter the Tsunami, naturally there was great interest in seeing the video that had been taken on scene. A number of trackers are available for those amateur videos. A rule that would make a developer… secondarily liable for copyright infringement, merely because his software can be and is used for infringing purposes would also cripple advances in large scale design.

Red Hat, a major packager of Linux software, uses a torrent tracker to save bandwidth in the distribution of software…

Skype is the first Internet telephony technology to use P2P distributed computing. P2P telephony utilizes decentralized networking technology to significantly increase call completion rates compared to more costly, centralized voice-over-IP technologies. Skype allows for free calls to other Skype users, paid calls to all land and cellular telephones, file transferring, and instant messaging. Skype relies on P2P technology not only for completing phone calls, but also for distributing its telephony software by bundling its applications with popular P2P software.

Ms. Ian has been significantly helped by peer-to-peer technology. Traffic to her website (www.janisian.com) has increased dramatically since the rise of P2P technology, going from approximately 60,000 unique visitors annually to five times as many. Because people have been able to discover her music on P2P networks, her compact disc sales on her website have increased over 250%, generating an additional $5,000 to $10,000 annually. P2P technology allowed her to save money on marketing while expanding the reach of her music.

Viral communications

Shared Media Licensing operates the DRM technology known as “Weed.” When a file is protected by Weed technology, that file may be played up to 3 times for free. After this, if the user wishes to continue to play the file, he or she must pay for it. The price for any given file is set by the rights holder. The file can be copied to other users for free, whether across the Internet or otherwise. If the file is copied onto another machine, the file can be played 3 times without payment. When a user purchases a file, the rights holder receives 50% of the money paid by the purchaser and 15% of the purchase price goes to Shared Media as a processing fee. The remaining 35% of the purchase price is shared among those who previously purchased and distributed the music. This payment system is designed to encourage users to actively distribute authorized files.

Heart supports the use of peer-to-peer technology and believes that it is a very efficient means of distributing music. Encrypted with “Weed” technology (www.weedshare.com), “Jupiter Darling” was released on the Internet and has been shared on P2P networks. Heart’s “Weed” files outsold those on Apple’s iTunes during the third week of their availability on both services.

The Jun Group estimates that 2.5 million copies of one of his classic songs were downloaded. The initial impact on the star's new album, solely attributable to peer-to-peer file-sharing, was an eight times increase in sales in some regions.

According to Jun Group, by conservative estimates, P2P represents more than 8 million people online at any given time executing over 600 million content searches per day. In 2003, the company released five files from Kevin Martin and the Hiawatts on behalf of YooHoo Chocolate Drink. The Music was downloaded more than two million times over a four-week period and helped YooHoo achieve the largest spike in website traffic since the inception of its site.

Collaboration

In recent years, as digital technologies and powerful networks granted remarkable creative tools to scholars, teachers and students, the climate of panic and fear induced by the uncertainties of fair use in the new digital environment has generated a chilling effect. University and school administrators are cautious about or vehemently against experimenting with new methods of distribution, even for educational or research purposes. For example, Professor Henry Jenkins at the Massachusetts Institute of Technology uses – as most media studies teachers do – clips and quotes from copyrighted works in his courses. On advice from MIT lawyers, the university has not allowed Jenkins to post the essential clips on its open courseware servers – only on server spaced closed to readers who are not registered MIT students. However, MIT allows students from Harvard to take courses at MIT. Such material is inaccessible to Jenkins' students from Harvard….

Many scholars use peer-to-peer technology in their work. Some seek a song or a video clip that is out of print and unavailable in their libraries, so they use the vast publicly generated library of files as an efficient index and virtual library…

Colin Mutchler… believes that P2P technology is a great catalyst for musical collaboration. In 2003, he contributed an acoustic guitar song entitled "My Life" to the website Opsoud.com, licensing it with the permission to be downloaded, shared on peer-to-peer networks and reused. In just a few weeks, a young violinist from North Carolina who Mr. Mutchler had never met added to it and renamed it "My Life Changed." The most recent remix, which includes artists from three different continents, would never have been possible without peer-to-peer networks… Mr. Mutchler's first commercial album is due later this year. He anticipates that his sales will be much higher because of his Internet collaborations and the exposure of his music to audiences through P2P technology.

Mr. Holowach released his first album, a solo effort, for free on the Internet. One of his songs was then remixed by another musician hundreds of miles away, Andrew Vavrek, spawning a professional collaboration and the formation of their band Tryad. The band now releases all of its songs through Creative Commons licensing.

Sources: All of these examples are from Supreme Court briefs of *Amici Curiae.* See text at 39-43, 64-65.