The Politics of File Sharing in the United States: The Rise and Fall of SOPA and PIPA

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Abstract: The recent withdrawal of two bills before Congress designed to prevent the illegal hosting of copyrighted content by companies operating outside the United States provides an important example of the power of Internet-based political campaigns that are backed by large numbers of Internet users. The bills were backed primarily by content-owning firms in the film and recording industries who were looking for new ways to prevent the illegal use (which they call piracy) of their intellectual property via digital file sharing. It looked at first that the bills would sail through Congress with little opposition. But it turned out that a well-organized campaign by a wide variety of interests opposed to the legislation was successful to the surprise of many observers. In this paper, we will explore the origins of the controversy and attempt to explain the outcome.

Introduction

On October 26, 2011, Chairman of the House Judiciary Committee Representative Lamar Smith (R-Texas) and initially twelve other co-sponsors introduced the Stop Online Piracy Act (SOPA, H.R. 3261)[1] into the Judiciary Committee of the U.S. House of Representatives. A similar bill, the Protect Intellectual Property Act (PIPA, S. 968)[2], was introduced in the Senate on May 12, 2011, by Senator Patrick Leahy (D-Vermont) and eleven co-sponsors. The primary supporters of the two bills were the Recording Industry Association of America (RIAA) and the Motion Picture Association of America (MPAA). These two organizations had succeeded in lobbying for more favorable copyright laws in the past, and they hoped to get Congress to approve additional legislation that, in their view, would permit them to shut down websites overseas that violated their intellectual property rights. Opponents of the bills thought that the passage of the two bills would harm many legitimate businesses at home and abroad and thereby reduce the economic benefits of web-based innovation. They also worried about the potential for censorship and other restrictions on free speech.

It looked at first as though SOPA and PIPA would sail through the Congress with little opposition. Millions of dollars had been devoted to lobbying and there appeared to be firm bi-partisan support in both houses of Congress. In the end, however, the opposition prevailed. A major web-based mobilization of voters convinced many key supporters of the proposed legislation to change their minds. By the end of January 2012, the two bills were shelved. The purpose of this paper to explain what happened.

To do this we will review the evolution of copyright laws in the United States and of efforts to evade them. We will provide an analysis of the legal language of the two bills and a thorough examination of the arguments made by both proponents and opponents. We will try to explain the decision of the President to intervene and the defection of key supporters in January 2012. We will conclude with a brief discussion of alternative methods proposed for dealing with copyright-infringing web sites.

Background on the origins of U.S. copyright laws

The young American republic moved swiftly to pass laws regarding intellectual property. The Copyright Act of 1790 and the Patent Act of 1790 set a pattern for the encouragement of innovation that would continue for the next two centuries (see Table 1). The basic idea behind both laws was to grant inventors (through patents) and authors (through copyrights) a grace period during which those wishing to copy their inventions or published works would be required to pay them license or copyright fees for the privilege of doing so.

[1] H.R. 3261 – Stop Online Piracy Act, Bill Text, accessed at http://thomas.loc.gov/cgi-bin/query/z?c112:H.R.3261:

[2] S. 968 – Protect IP Act of 2011, accessed at http://thomas.loc.gov/cgi-bin/query/z?c112:S.968:

Table 1. Evolution of Copyright Law in the United States

1790	**Passage of the Copyright Act**
1830	**Act expanded to published music**
1856	**Act extended to published plays**
1870	**Act extended to works of art. The Library of Congress becomes a clearing house for all U.S. copyrights.**
1897	**Act extended to public performances.**
1909	**Act extended to reproductions (piano rolls).**
1912	**Act extended to motion pictures.**
1976	**Act extended to sound recordings and unpublished works.**
1980	**Act extended to computer programs.**
1984	**Supreme Court decision in Sony Corp v. University City Studios (Betamax case)**
1988	**Passage of Copyright Term Extension Act.**
1992	**Passage of the Audio Home Recording Act.**
1998	**Passage of the Copyright Term Extension Act.**
1998	**Passage of the Digital Millennium Copyright Act (DMCA).**
2004	**Introduction of the Inducing Infringement of Copyrights Act (shelved).**

The Copyright Act of 1790 was extended to published music in 1830, to published plays in 1856, and to works of art in 1870. The Copyright Extension Act of 1870 established the Library of Congress as a clearing house for all copyrights.

In 1897, the copyright was extended to public performances. The first recorded music, piano rolls, was included in the Copyright Extension Act of 1897. It was not until 1912 that motion pictures would be protected under copyrights; sound recordings were not protected until 1976.

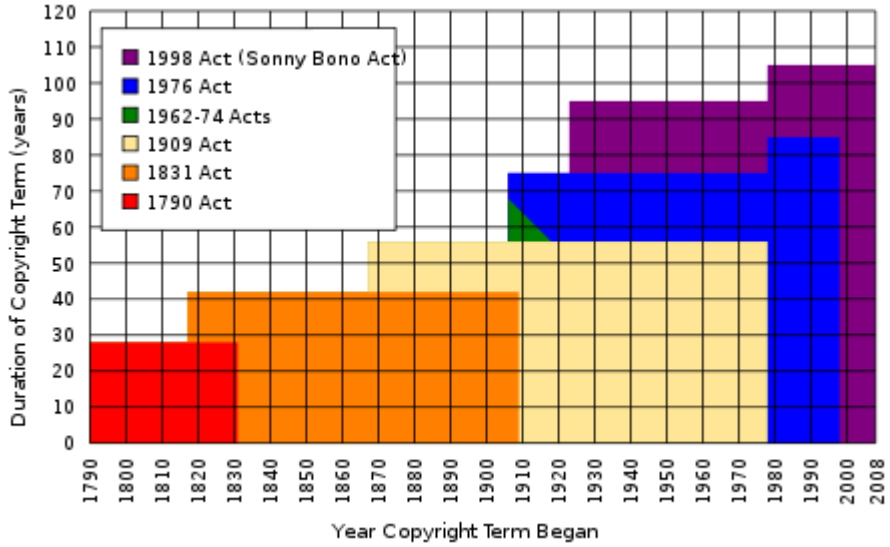
The invention of video cassette recorders (VCRs) in the 1970s occasioned a lawsuit by a movie studio (Universal Pictures) against a consumer electronics company (Sony) for the invention and sale of a device (the Betamax VCR) that the movie studio claimed made it possible for individuals to infringe their copyrights. The Supreme Court ruled in 1984, in a landmark decision called the Betamax case, that the movie studios could not prevent the sales of VCRs or any other recording technology unless those technologies were used solely for infringement purposes.[3] As long as there were significant non-infringing uses of the devices, the harm done to consumers and commerce by forbidding the sale of such devices generally outweighed the harm done to copyright holders. While the film industry did not like this ruling, nevertheless, it turned out that there would be a major market first in the sales and rental of VHS tapes and later DVDs: consumers generally did not use their VCRs for infringing purposes but rather for playing pre-recorded movies.

In 1998, Congress passed the Copyright Term Extension Act to lengthen the grace period granted to copyright holders during which they could collect fees for copies. This bill was

[3] For a good review, see Pamela Samuelson, "Computer programs and copyright's fair use doctrine," *Communications of the ACM*, 36 (September 1993), 19-25.

jokingly referred to as the Sonny Bono Act or the Mickey Mouse Protection Act, because Congressman Bono, acting on behalf of the Disney Corporation and Hollywood more generally, was a prime supporter of the bill. Figure 1 below illustrates how the 1998 bill extended the length of copyrights. You can see from the figure that the 1998 Act was only the most recent in a long series of extensions of the length of copyright terms.

Figure 1. Copyright Term Extensions in the 1998 Act and Previous Legislation



Source: http://en.wikipedia.org/wiki/Copyright_Term_Extension_Act

In June 2004, Senator Orrin Hatch (R-UT) introduced the Inducing Infringements of Copyrights Bill (S. 2560). Other supporters of the Bill included Patrick Leahy (D-VT), Bill Frist (R-TN), Lindsey Graham (R-SC), and Barbara Boxer (D-CA). The RIAA and MPAA were strong supporters. The proposed legislation was intended to make it illegal to use personal computers or the Internet to share copyright-infringing content. Manufacturers of equipment that encouraged people to infringe copyrights would be liable for damages caused by infringement. Some opponents argued that the proposed legislation would overrule the Betamax decision by making it illegal to use any recording device to record and playback copyrighted content for any purpose, including those considered to be "fair use" (e.g. for non-commercial or library use). Opponents included, among others, the Consumer Electronics Association, American Library Association, Public Knowledge, the Electronic Frontier Foundation, the Center for Democracy and Technology. Andrew Greenberg, the vice chairman of the IEEE-USA's intellectual property committee who initially supported the effort said: "…What we ended up with was a bill to punish bad technologies, whatever that means…Content owners should not be permitted to dictate the structure of …technologies unless they are doing something to actively induce a third

part to infringe."[4] The Inducing Infringements of Copyrights Bill was shelved in November 2004.

Background on the recent history of digital file sharing and efforts to prevent illegal sharing of copyrighted content

When digital technology began to replace analog technology for recording, distribution, and playback of audio and video content, the concerns of the recording and film industries about copyright infringement reached a new and higher level. The quality of copied sound and moving images using analog recording technology was generally inferior to the quality of originals. Copying was not fast or convenient.

Digital originals would be easier to copy than analog originals and there would be less reduction in quality. As computer and telecommunications technology improved, the time required to copy and share digital material would decline rapidly and so would the cost. Because digital audio files were so much smaller than digital video files (for a given length of recorded material), audio content would be initially more vulnerable to illegal copying and sharing than video content.

The Internet was designed from the beginning to facilitate the sharing of digital files via telecommunications networks. Part of the original set of protocols in the TCP/IP family of protocols was the "file transfer protocol (FTP)," which made it possible for the Internet to move a digital file from one computer to another is a fast and error-free manner. Prior to the existence of computer networks, sharing files required the copying of a file to a portable storage medium (such as a magnetic tape, disk, or diskette) and then physically transporting that medium to storage reading device for another computer. This was called a "sneaker net."

At the strong urging of the Motion Picture Association of America (MPAA) and the RIAA, the Congress passed a series of bills aimed at tightening enforcement of intellectual property rights in the new digital environment. The Digital Millennium Copyright Act (DMCA) of 1998, for example, established criminal penalties for the production and dissemination of technology to circumvent measures designed to control access to copyrighted works. The access control measures were called "digital rights management" or DRM.[5] The bill implemented treaties the U.S. government signed and ratified in 1996 connection with the World Intellectual Property Organization. In Title II of the DMCA, Internet service providers were exempted from liability for copyright infringement by their users under "safe harbor" arrangements. The safe harbor

[4] Katie Dean, "Senate Shelves Induce Review," *Wired*, October 7, 2004, accessed at http://www.wired.com/politics/law/news/2004/10/65255.

[5] "Digital Millennium Copyright Act," Library of Congress, http://thomas.loc.gov/cgi-bin/bdquery/z?d105:H.R.2281: "Digital Rights Management," Wikipedia entry, http://en.wikipedia.org/wiki/Digital_rights_management; Lawrence Lessig, *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity* (New York: Penguin, 2004); and Eberhard Becker, Willms Buhse, Dirk Guennewig, and Niels Rump, *Digital Rights Management: Technology, Economic, Legal and Political* Aspects (Berlin: Springer Verlag, 2004).

guarantee was contingent upon the service provider taking down links to infringing content promptly after receiving notification from a copyright holder.

The creation of the Internet made possible the sharing of digital files through peer-to-peer (P2P) networks. In a P2P network, a user at one computer used P2P software to locate a file on another computer (usually called a "server") and then to transfer that file to the first computer. There are two main types of transfers: 1) a full transfer of the complete file to the user's computer and 2) a transfer of a large enough portion of the file to permit the use of that portion of the file while the program is waiting for the rest of the file. The latter type is called "streaming" and is generally distinguished from the first type which is called "downloading." A streamed file might never actually fully reside on the user's computer following the transfer.

An early entry to the P2P file sharing world for recorded that became an overnight hit was Napster. Napster was co-founded in June 1999 by Shawn Fanning, John Fanning, and Sean Parker to allow users to share MP3 audio files hosted on a central server. In December 1999, the Recording Industry Association of America (RIAA) filed a copyright infringement law suit against Napster. The suit was successful and Napster, after losing an appeal and receiving an injunction in March 2001, had to close operations in July 2001. [6]

People wanting to continue sharing music files after the closing of Napster migrated to a new system that, unlike Napster, did not rely on a single server. The new file sharing software still used peer-to-peer networks, but instead of looking for only one server computer for downloading, the new P2P client software (called a gnutella client) searched for sets of possible working nodes. The first working node was "bootstrapped" and then permitted the user to locate other working nodes. Downloading would then proceed with packets coming from whatever nodes were available. Instead of relying on the FTP protocol, file transfers of this sort relied on the user datagram protocol (UDP) and on the hypertext transfer protocol (HTTP). In this manner, it was possible for the files being downloaded to be stored on multiple computers, so that shutting one down would not stop the file from being transferred.

There were quite a few gnutella clients in operation from around 2005 onward: including, among others, Grokster, Kazaa, iMesh, LimeWire, Morpheus, eDonkey, and BearShare. By June 2005, it was estimated that over 1.8 million computers were nodes on gnutella networks; by January 2006, there were over 3 million.

MGM Studios filed suit against Grokster for copyright infringement in 2003. After Grokster prevailed in lower courts, the Supreme Court ruled in 2005 that Grokster had actively induced its users to violate the copyrights of the plaintiffs. Unlike the lower courts, they did not think that their Betamax decision of 1984 required them to dismiss the suit. Instead, they referred to the criterion of "significant non-infringing uses" (SNIU) as a reason for not prohibiting a technology to be sold or a service to be purchased. In the Grokster case, unlike the Betamax case, they were convinced that SNUI was not in evidence. They were concerned that their ruling might inhibit innovation but felt that it was more important to protect intellectual property rights when the

[6] Timothy James Ryan, "Infringement.com: RIAA v. Napster and the War against Online Music Piracy," *Arizona Law Review*, 44 (2002), 495-520.

primary intention of the web site was to enable copyright infringement. In November 2005, Grokster ended its P2P file sharing services. It was ordered to pay a fine of $50 million to the music and recording industries.[7]

Shortly after the Grokster case, Arista Records sued LimeWire. The Southern District Court of New York ruled against LimeWire. The two parties finally agreed upon a permanent injunction in 2010, shutting down the LimeWire service.[8]

The eDonkey network was popular among European users. By 2005, it had about 2-3 million users. One of its server clusters, Razorback2, hosted about a million users. The Federal Belgian Police raided and seized the Razorback2 servers in February 2006. The network was shut down completely by 2007.[9]

Another P2P technology called BitTorrent came to replace the gnutella networks and clients. BitTorrent networks were even more decentralized than gnutella networks. Rather than downloading a file from a single source server, the BitTorrent protocol allowed users to join a "swarm" of hosts to download and upload from each other simultaneously. The process started with the creation of a "seed" -- which was a piece of the file that was being transferred -- and making that seed available on the network. All the users of a BitTorrent network could then both download the seed and after downloading it serve as a source of that seed for others. Now the various pieces of the file could cascade through the network to their ultimate destination as nodes become available. This was a highly efficient system for transferring files.

By 2009, it was estimated that BitTorrent traffic accounted for between 43 and 70 percent of all Internet traffic. There may be as many BitTorrent users in the world as there are users of Google and Facebook. Facebook, in fact, uses BitTorrent networks to distribute updates to its servers. There are many other legal applications of BitTorrent technology, but the recording and film industries are worried about the increased use of BitTorrents for sharing copyrighted content so they have turned their attention to finding ways to criminalize this activity. In addition, some Internet service providers have attempted to throttle BitTorrent traffic to prevent it from taking bandwidth away from other applications.

The Pirate Bay was a Swedish web site set up in November 2003 for file sharing using BitTorrents. For several years it was hosted by a PRQ, a Swedish firm owned by the creators of the Pirate Bay, Gottfrid Svartholm and Fredrik Neij, to provide a "highly secure, no-questions-asked hosting service to its customers."[10] The MPAA filed a complaint against the Pirate Bay in

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[7] Pamela Samuelson, "Three Reactions to MGM v. Grokster," *Michigan Telecommunications and Technology Law Review*, 13 (2006), 177-196.

[8] Annemarie Bridy, "Why Pirates (Still) Won't Behave: Regulating P2P in the Decade after Napster," *Rutgers Law Journal*, 40 (Spring 2009), 565-611.

[9] "eDonkey Network," Wikipedia entry, accessed at http://en.wikipedia.org/wiki/EDonkey_network.

[10] "The Pirate Bay," Wikipedia entry, accessed at http://en.wikipedia.org/wiki/The_Pirate_Bay.

November 2004. On May 31, 2006, Swedish police raided the offices in Stockholm and seized its servers. On April 17, 2009, Peter Sunde, Fredrik Neij, Gottfrid Svartholm, and Carl Lundstrom were found guilty of inducing the infringement of copyrights, sentenced to one year in prison, and fined 30 million Swedish kronors. The web site went offline in May 2010 but was restored shortly thereafter. A "usage policy" statement was added saying that the Pirate Bay would not censor users but that the "responsibility lies upon the user to not spread malicious, false or illegal material using the tracker."[11] As of 2012, the site had 5.5 million registered users and hosted 4 million files.[12]

The seizure of the Pirate Bay's servers created the impetus for the formation of the Swedish Pirate Party. Soon Pirate Parties were to be found in many other countries. In 2012, the Pirate Party of Germany won 4 seats in the parliament of Saarland. The previous year it won 11 seats in the Berlin provincial parliament. So far it has not passed the 5 percent of votes threshold needed for winning seats in the national parliament.

In August 2007, Comcast began to block file transfers on its network by customers using popular peer-to-peer (P2P) networks such as BitTorrent, eDonkey, and Gnutella. This was done without any public announcement, but after it was first detected by an engineer in Oregon, Robb Topolski, when he was trying to download some barber shop quartet music from a BitTorrent site. Topolski publicized the results of his efforts to understand what had happened in an online blog called TorrentFreak.[13] The Electronic Frontier Foundation and the Associated Press conducted their own tests and confirmed that Comcast was indeed engaging in the practices Topolski had identified.[14]

Apparently, Comcast had been applying an application called Sandvine that permitted them to throttle certain types of traffic (which they called "traffic shaping") even though the traffic was encrypted. BitTorrents works by sending parts (packets) of a file to a number of cooperating users' computers which are then used to speed up the transfer to its final destination in a process called "seeding." The Sandvine application stops or slows the transfer by recognizing the seeding and then refusing to acknowledge the transmissions.[15]

In November 2010, the Department of Homeland Security's Immigrations and Customs Enforcement (ICE) seized the domain of a large hiphop filesharing forum called Torrent-Finder. Three other music sites were also seized at this time: onsmash.com, rapgodfathers.com, and

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[11] The Pirate Bay, "Usage policy for the Pirate Bay tracker system," accessed at https://thepiratebay.se/policy.

[12] Ibid.

[13] Ernesto, "Comcast Throttles BitTorrent Traffic, Seeding Impossible," *TorrentFreak*, August 17, 2007. Accessed at http://torrentfreak.com/comcast-throttles-bittorrent-traffic-seeding-impossible/.

[14] Peter Svensson, "AP Tests Comcast's File-Sharing Filter," *Newsvine.com*, October 19, 2007. Accessed at http://www.newsvine.com/_news/2007/10/19/1035713-ap-tests-comcasts-file-sharing-filter.

[15] Robb Topolski, "Comcast is Using Sandvine to Manage P2P Connections," *DSL* Reports, May 12, 2007. Accessed at http://www.dslreports.com/forum/r18323368-Comcast-is-using-Sandvine-to-manage-P2P-Connections.

dajaz1.com. John T. Morton, the assistant secretary of ICE and representatives of the MPAA, at a joint press conference, call the seizures part of long-term effort against online piracy and that they would pursue suspected criminals anywhere in the world. Morton said:

> American business is under assault from counterfeiters and pirates every day, seven days a week. Criminals are stealing American ideas and products and distributing them over the Internet.[16]

The intention of copyright holders was clear. They wanted to close down P2P file sharing systems not just in the United States but also abroad. The Internet made it possible for many of their customers to get access to copyrighted material illegally from foreign websites. The U.S. government did not have jurisdiction over those websites and the only way to close them down was to obtain the cooperation of the government of the country in which those websites operated. The Swedish government cooperated, but many others did not, so the copyright holders turned to an indirect method for attacking what they called "rogue websites:" to cut off their access to advertising and payments from the United States and other like-minded countries where their users lived.

Analysis of the two bills

A. SOPA

SOPA was designed to allow the U.S. Department of Justice and copyright holders to seek court orders against websites outside the United States who were accused of enabling or facilitating the infringement of U.S. copyrights. Since the foreign websites themselves were outside the jurisdiction of the U.S. legal system, the court orders would bar U.S.-based payment facilitators and online advertising networks from doing business with the owners of the foreign website. Once the Department of Justice or the copyright holder petitioned for and received the necessary court order identifying the infringing website, it would then notify the payment facilitator or the ad network in writing concerning the identity of that infringing website. The payment facilitator or the ad network would then be required to notify the foreign infringing website that it was suspending services unless the infringing website provided a counter notification explaining how it was not in violation. The copyright holder would be able to sue for injunctive relief if the payment facilitator or ad network failed to suspend service (whether or not a counter notification was provided).

If payment facilitators or ad networks complied with the legislation, they would be granted immunity from liability, while copyright holders who knowingly misrepresented that a foreign website was a copyright infringer would be liable for damages.

A second important aspect of the bill was a section dealing with penalties for streaming video and selling counterfeit drugs, military materials, or consumer goods. Again the main intention

[16] Ben Sisario, "U.S. Shuts Down Web Sites in Piracy Crackdown," *New York Times*, November 26, 2010, accessed at http://www.nytimes.com/2010/11/27/technology/27torrent.html?_r=3.

was to prevent the streaming of copyrighted content and the sale of counterfeit goods that were protected by patents or other forms of intellectual property, such as pharmaceuticals. Stopping the sale over the Internet of prescription drugs from Canadian pharmacies was a major goal of this part of the legislation.

B. PIPA

The stated goal of PIPA was to curb access to "rogue websites dedicated to infringing or counterfeit goods," especially those registered outside the United States. PIPA was a rewritten version of the Combatting Online Infringement and Counterfeits Act (COICA) which failed to come to a vote in 2010. The bill defines infringement as the distribution of illegal copies, counterfeit goods, or technology to defeat digital rights management (DRM) measures.

It provides for "enhancing enforcement against rogue websites operated and registered overseas…" It authorizes the Attorney General to seek a court order *in rem* against websites dedicated to infringing activities. Once the court issues an order, the bill requires the Attorney General to notify U.S.-based financial transaction providers, Internet advertising services, Internet service providers, or information location tools (such as search engines but could also include websites that provide links to other websites) doing business with the infringing website. PIPA further stipulates that information location tools should take "technically feasible and reasonable measures, as expeditiously as possible, to remove or disable access to the Internet site associated with the domain name set forth in the order." In addition, it must delete all hyperlinks to the offending website. Trademark and copyright holders who have been harmed by the infringing website would be able to apply for a court injunction against the domain name of that infringing website to compel financial transaction providers and Internet advertising services to stop processing transactions to and from the infringing website.

C. Comparison of the two bills

The two bills have a lot in common. Both had provisions for filing complaints against US-based advertising and payments web sites that did business with a foreign web site that was suspected of inducing copyright infringement. Both at least mentioned the possibility of blocking access to the domain name of the offending web site. Figure 1 below provides Public Knowledge's take on the differences between the two bills:

Figure 2.

The PROTECT IP Act, "PIPA" (Senate bill S. 968)
v.
The Stop Online Piracy Act, "SOPA" (House bill H.R. 3261)

	PIPA	SOPA
Jeopardizes Online Community Platforms	✓	✓
Uses over-broad definitions of piracy to include websites and services you use to store, share, and link to media.	✓	✓
Threatens a large number of legal and innovative online services, including Twitter, Facebook, and YouTube.		✓
Sets a Bad Example for Internet Censorship Globally	✓	✓
Uses the same technical tools of censorship that other governments—like China's—use to suppress free speech and dissidents.	✓	✓
Sets an example for other countries to block any kind of unfavorable online content, which may lead to human rights violations.	✓	✓
Fractures the structure of the Internet.	✓	✓
Threatens Security Online	✓	✓
Orders U.S. providers of Domain Name System (DNS) servers to block users from reaching specific websites.	✓	✓
Interferes with ongoing efforts to improve security online, making you more vulnerable to identity theft and other cybersecurity issues.	✓	✓
Exposes those attempting to bypass DNS blocks to computer viruses. These infected computers can be hijacked for use in attacking other systems, putting the country at greater risk of cyber attacks.	✓	✓

Public Knowledge

SOPA required search engines to remove foreign infringing websites from their index, PIPA did not. PIPA unlike SOPA did not have a provision that penalized rights holders for knowingly making false claims of infringement.

Supporters and Opponents of the bills

In terms of interest groups, the primary business support for the two bills came from the MPAA and the RIAA (see Table 2C). The primary business opposition took the form of a coalition of Internet businesses represented by netCoalition[17] and consumer electronics firms represented by the Consumer Electronics Association. Individual firms also expressed support/opposition (see Table 2D). The two sides turned to legal scholars and other experts for additional support (see Table 2E).

In the U.S. Congress, key early supporters of SOPA and PIPA were Representative Lamar Smith (R-Texas) and Senator Patrick Leahy (D-Vermont). On November 27, 2011, Lamar Smith published an editorial in the Statesman explaining why he had introduced H.R. 3261 (SOPA). First he addressed popular misconceptions about counterfeiting and piracy. Rather than harmless street vendors trying to make a quick buck, he argued that "what many Americans may not realize is that there is a vast virtual market online run by criminals, who steal and sell America's intellectual property and keep the profits for themselves." He focused attention particularly on foreign "rogue sites" that offered not just movies and music but also "counterfeit medicine, automotive parts, and baby food."

> The problem of rogue websites is real, immediate and wide-spread. One recent survey found that nearly one-quarter of global Internet traffic infringes on copyrights. Another study found that 43 sites classified as "digital piracy" generated 53 billion visits per year. And 26 sites selling counterfeit prescription drugs generated 51 million hits annually.

In this editorial, Smith claimed further that "American intellectual property industries provide 19 million high-paying jobs and account for more than 60 percent of U.S. exports." The Congress should "not stand by and do nothing, while some of America's most profitable and productive industries are under attack." The proposed legislation, according to Smith, was supported by the U.S. Chamber of Commerce, the MPAA, the RIAA, the Copyright Alliance, Comcast, and GoDaddy, among others.[18]

On December 17, 2011, Patrick Leahy's office issued a press release saying:

> Few issues before Congress today are as well supported on both sides of the political aisle as the PROTECT IP Act, and boast the broad support that this legislation has received. As we continue to look for ways to bolster the economy and get Americans back to work, we can ill-afford to save the debate on how to counter online infringement for another day.

[17] http://www.netcoalition.com/.

[18] "Smith: Law needed to control cyber piracy," *The Statesman*, November 27, 2011, accessed at http://www.statesman.com/opinion/smith-law-needed-to-control-cyber-piracy-1997704.html.

A list of co-sponsors of PIPA can be found in Table 2A; co-sponsors of SOPA are listed in Table 2B. There was initially considerable bi-partisan support for the two bills. For example, influential Senators and Representatives from California and New York from both parties were initially supporters. A cursory examination of the sums of money donated to the campaign chests of Senators and Representatives by interest groups favoring the legislation make this easy to understand.[19] Those sums were not matched by contributions from interest groups who opposed the legislation. Opposing interest groups and their supporters were not paying much attention to the legislative process at first. Once they examined the drafts, however, opposing groups were able to mobilize quickly and many members of Congress who initially supported the bills changed their minds. Let's take a closer look at this and see the details of how it happened.

Table 2. Supporters and Opponents of SOPA and PIPA

A. In the Senate

For (@ = co-sponsor) (* = switched to against)	**Against**
Harry Reid (D-NV) *	Ron Wyden (D-OR)
Patrick Leahy (D-VT)	Olympia Snow (R-ME)
Lamar Alexander @	Maria Cantwell (D-WA)
Kelly Ayotte (R-NH) @*	Rand Paul (R-KY)
Michael Bennet (D-CO) @	Mark Warner (D-VA)
Richard Blumenthal (D-CT) @	Mark Begich (D-AK)
Roy Blunt (R-MO) @*	Scott Brown (R-MA)
John Boozman (R-AK) @*	James Inhofe (R-OK)
Barbara Boxer (D-CA) @*	Mike Johanns (R-NE)
Sherrod Brown (D-OH) @	Pat Toomey (R-PA)
Benjamin Cardin (D-MD) @	Lisa Murkowski (R-AK)
Robert Casey Jr. (D-PA) @	Mark Udall (D-CO)
Saxby Chambliss (R-GA) @	
Thad Cochran (R-MS) @	
Christopher Coons (D-DE) @	
Bob Corker (R-TN) @	
Richard Durbin (D-IL) @	
Michael Enzi (R-WY) @	
Dianne Feinstein (D-CA) @	
Al Franken (D-MN) @*	
Kirsten Gillibrand (D-NY) @*	
Lindsey Graham (R-SC) @	
Charles Grassley (R-IA) @*	

[19] Two sources of information on contributions to individual legislators from supporters and opponents of SOPA and PIPA are Propublica.org and Maplight.org. Specific data on campaign contributions can be found at: http://projects.propublica.org/sopa/pipa#roll_call and http://maplight.org/us-congress/bill/112-hr-3261/1019110/total-contributions.

Kay Hagan (D-NC) @	
Orrin Hatch (R-UT) @*	
Johnny Isaacson (R-GA) @	
Tim Johnson (D-SD) @	
Amy Klobuchar (D-MN) @	
Herb Kohl (D-WI) @	
Mary Landrieu (D-LA) @	
Joseph Lieberman (I-CT) @	
John McCain (R-AZ) @	
Robert Menendez (D-NJ) @*	
Jerry Moran (R-KS) @	
Bill Nelson (D-FL) @	
James Risch (R-ID) @	
Marco Rubio (R-FL) @*	
Charles Schumer (D-NY) @*	
Jeanne Shaheen (D-NH) @	
Tom Udall (D-NM) @	
David Vitter (R-LA) @*	
Sheldon Whitehouse (D-RI) @	
Mark Kirk (R-IL) *	
John Cornyn (R-TX) *	
Jerry Moran (R-KS) *	
Jim DeMint (R-SC) *	
Daniel Inouye (D-HI)	
John Kyl (R-AZ) *	
Jeff Sessions (R-AL) *	
Mike Lee (R-UT) *	
Tom Coburn (R-OK) *	

Sources:

B. In the House of Representatives

For (@=initial co-sponsor) (* = switched to against)	**Against**
Lamar Smith (R-TX)	Nancy Pelosi (D-CA)
Darrell Issa (R-CA) *	Ron Paul (R-TX)
John Conyers (D-MI) @	Gary Ackerman (D-NY)
Bob Goodlatte (R-VA) @	Todd Akin (R-MO)
Howard Berman (D-CA) @	Justin Amash (R-MI)
Mary Bono Mack (R-CA) @	Rob Andrews (D-NJ)
Marsha Blackburn (R-TN) @	Michele Bachmann (R-MN)
Steve Chabot (R-OH) @	Spencer Bachus (R-AL)

Elton Galleghy (R-CA) @	Dan Benishek (R-MI)
Ted Deutsch (D-FL) @	Judy Biggert (R-IL)
Timothy Griffin (R-AZ) @ *	Timothy Bishop (D-NY)
Dennis Ross (R-FL) @ *	Earl Blumenauer (D-OR)
Adam Schiff (D-CA) @	Bruce Braley (D-IA)
Lee Terry (R-NE) @*	Paul Broun (R-GA)
Debbie Wasserman-Schultz (D-FL) @	Richard Hanna (R-NY)
	Brian Higgins (D-NY)
	Kathy Hochul (D-NY)
	Todd Platts (R-PA)
	Todd Rokita (R-IN)
	Paul Ryan (R-WI)
	Louise Slaughter (D-NY)
	Paul Tonko (D-NY)

C. Interest Groups

For	**Against**
Motion Picture Association of America (MPAA)	netCoalition
Recording Industry Assoc. of America (RIAA)	Consumer Electronics Association
National Association of Theater Owners (NATO)	Center for Democracy and Technology
Directors Guild of America	Electronic Frontier Foundation (EFF)
American Federation of Musicians	Free Press
Screen Actors Guild (SAG)	Public Knowledge
AFL-CIO	Amnesty International
Intl. Brotherhood of Teamsters	MoveOn.org
U.S. Chamber of Commerce	Consumers Federation of America
National Association of Manufacturers	Consumers Union
Business Software Alliance	U.S. PIRG: The Federation of State PIRGs
Entertainment Software Association	American Library Association
Copyright Alliance	New American Foundation's Open Technology Initiative
	Freedom House
	Human Rights Watch
	Association of Research Libraries

D. Corporations

For (* = switched to against)	**Against**
News Corporation (including Fox)	Google

Paramount	Facebook
Sony	Wikipedia
Disney	Twitter
Warner Brothers	Amazon
Viacom	Yahoo!
L'Oreal	eBay
Acushnet	Reddit
CBS	Tumblr
Pfizer	Mozilla
GoDaddy *	Cheezburg
	YouPorn
	Zynga
	Union Square Ventures

E. Individuals (some legal experts)

For	**Against**
Hillel I. Parness	John Palfrey
Floyd Abrams	Marvin Ammori
Michael McCurry	Lawrence Tribe
	Rebecca McKinnon
	Jason Mazzano
	Lateef Mtima

Analysis of the Specific Arguments of Supporters and Opponents

The specific arguments for and against the two bills deserve closer scrutiny. We have seen above that the principle proponents of SOPA and PIPA made the following arguments:

- File sharing of copyrighted content constitutes theft or piracy and is therefore illegal.
- Illegal file sharing (piracy) is extremely damaging not just to the copyright holders but to the economy as a whole.
- Current laws have reduced illegal file sharing in the United States but not in many foreign countries.
- There are still U.S.-based companies and organizations that facilitate illegal file sharing activities.
- Since the U.S. government does not have jurisdiction over foreign web operators, it must use its jurisdiction over U.S. web operators to stop illegal file sharing abroad.
- SOPA/PIPA have adequate safeguards to prevent the possible negative effects of the legislation on U.S. firms and the U.S. economy.

Opponents make the following counter-arguments:

- Most agree that illegal file sharing is damaging to copyright holders but some opponents disagree strongly about the extent of the damage. They question the estimates provided by the MPAA and RIAA in particular.
- There are many legal uses of file sharing technologies and many users in the United States and abroad engage in legal file sharing. Thus, under the "fair use" criteria established in the Betamax decision of the U.S. Supreme Court, restrictions on technology which has substantial non-infringing uses (SNIU) should be avoided at all costs, especially when that technology may be used for creative and innovative purposes.
- The proposed legislation overturns current statutory "safe harbors" for U.S. Internet service providers established under the Digital Millennium Copyright Act of 1998.
- Monitoring requirements for U.S. web sites could potentially undermine free speech by forcing them to use "deep packet inspection" technologies commonly used in authoritarian political systems.
- Particular aspects of the legislation are potentially very harmful:
    - Restricting access to entire domains may damage the Domain Name System (DNS) and undermine the security of the entire Internet.
    - SOPA and PIPA place too much of a burden on the Department of Justice to initiate actions against foreign infringing websites. The Department of Justice does not have enough expertise in intellectual property law to do the job adequately.
    - Giving private firms (copyright holders and others) the power to initiate actions against foreign infringing websites that can financially harm U.S.-based search engines, advertising services, and/or payments web sites without adequate procedural safeguards is unwise and can hurt the overall economy.

[elaboration on the above to come later]

Internet-based mobilization of the public by opponents

Protests against SOPA and PIPA were a bit slow to materialize, but eventually large swaths of the public were mobilized to express their opposition to the proposed legislation. On November 16, 2011, Tumblr, Mozilla, Techdirt, and the Center for Democracy and Technology began to participate in the American Censorship Day by displaying black banners over their site logos with the words "STOP CENSORSHIP." Google linked to an online petition against the two bills and reported that it collected 7 million signatures.

Reddit announced plans to black out its site on January 18, 2012, in connection with the testimony of its co-founder, Alexis Ohanian, before a Congressional committee. Other web sites that joined the blackout effort on January 18 were: Cheezburger, Mojang, Major League Gaming, Boing Boing, BoadGameGeek, and the Oatmeal. Google, Facebook, Twitter, Yahoo, Amazon, AOL, LinkedIn, eBay, PayPal, and others said they were considering their own black outs. Wikipedia's black out began on January 18 and lasted until the next day. The black outs were widely reported in the media, including on the Daily Show.

Denial of Service Attacks Orchestrated by Hacktivist Groups

On January 1, 2012, a hacktivist group named Anonymous launched what it called "Operation Hiroshima," which was essentially a document dump on sites such as Scribd that contained personal and sensitive information about media executives, rather than the companies they represent.[20] The idea was to collect and provide digitally as much information as possible about these individuals for opponents of SOPA and PIPA to use as they wished.

On January 20, 2012, after the arrest of four employees of a file sharing website in New Zealand called Megaupload, Anonymous targeted the following websites.

Government:	**Private:**
Federal Bureau of Investigation	Universal Music Group
Department of Justice	Recording Industry Association of America
White House	Motion Picture Association of America
Copyright.gov	Universal Music Group
	Broadcast Music, Inc.

The President weighs in

On January 14, 2012, the Obama administration issued a formal statement on online piracy after examining two petitions filed through the "We the People" website.[21] This online petition website was created by the White House on September 22, 2011 to provide a channel for American citizens to practice their right to petition, as granted by the First Amendment. Even though the White House said that they shared the view of copyright holders that piracy needs to be stopped, they were more concerned about maintaining an "Open Internet." The president's U.S. Intellectual Property Enforcement Coordinator, Chief Technology Officer, and Cyber-Security Coordinator (Victoria A. Espinel, Aneesh Chopra, and Howard Schmidt, respectively) responded to the petitions of the opponents of SOPA and PIPA by defending the innovative nature of the Internet, and its centrality to economic and technological growth. At the same time, they emphasized a need to bolster cyber security by enacting legislation that would protect against online piracy. This statement suggests that the president desired to pursue a balance that

[20] Amy Chozick, "Fighting Antipiracy Measure, Hackers Click on Media Chiefs," *New York Times,* January 14, 2012, accessed at http://www.lexisnexis.com/lnacui2api/auth/checkbrowser.do?rand=0.3595504633599035&cookieState=0&ipcounter=1&bhcp=1.

[21] Victoria Espinel, Aneesh Chopra, and Howard Schmidt, "Comating Online Piracy while Protecting an Open and Innovative Internet," Official White House Response to Sto the E-PARASITE Act and 1 other petition, accessed at https://wwws.whitehouse.gov/petitions/!/response/combating-online-piracy-while-protecting-open-and-innovative-internet accessed on March 22, 2012.

prevented unconstitutional censorship laws, but also enhanced national security by preventing foreign piracy.[22]

Throughout the SOPA and PIPA debate, the Obama administration emphasized the need to maintain the integrity of the Internet, to eliminate the threat that the two bills placed on national security. That legislation might "tamper with the technical architecture of the Internet" proved perilous to cyber security itself.[23]

In a letter to Representative Zoe Lofgren (D-CA), Dr. Leonard M. Napolitano, Jr., Director of Computer Sciences and Information Systems at Sandia National Laborites expressed the view that the bills threatened cyber security by taking a "'whack-a-mole' approach that would only encourage users and offending websites to resort to low-cost workarounds." Furthermore, the filtering of Domain Name System (DNS) domains, as written into the SOPA and PIPA bills, would encourage Internet users to use foreign DNS servers to access pirated websites. Dr. Napolitano indicated how the use of these "untrusted servers" would put "the user in dangerous circumstances by routing sensitive DNS lookups and other Internet traffic through devices potentially controlled by criminals."[24] Aligning with Dr. Napolitano's views, the president explicitly opposed DNS filtering because of the risk that it posed to national cyber security.[25]

Key supporters jump ship: The Bills are shelved

Many of the initial co-sponsors of PIPA and SOPA responded to the anti-legislation campaigns mounted by the Internet firms and their allies by dropping their support for the two bills (see Tables 2A and 2B). 21 Senators who had initially co-sponsored PIPA switched to opposing the bill. Others who were not co-sponsors also stated their opposition.

On January 16, 2012, the House Majority Leader, Eric Cantor, informed House Republicans that there would be no vote on SOPA. Darrell Issa (R-CA) said:

[22] Victoria Espinel, et al., "Combatting Online Piracy…"

[23] Dominic Rushe, "SOPA plans set to be shelved as Obama comes out against piracy legislation," *The Guardian*, January 16, 2012, http://www.guardian.co.uk/technology/2012/jan/16/sopa-shelved-obama-piracy-legislation (accessed 3.1.12).

[24] Leonard M. Napolitano, Jr., letter to Representative Zoe Lofgren, November 16, 2011.

[25] Jay Carney, "Press Briefing by Press Secretary Jay Carney," *The American Presidency Project*, January 17, 2012, http://www.presidency.ucsb.edu/ws/index.php?pid=98985&st=DNS&st1=Obama#axzz1nyTbfGoX, (accessed March 1, 2012).

> The voice of the Internet community has been heard. Much more education for members of Congress about the workings of the Internet is essential if anti-piracy legislation is to be workable and achieve broad appeal.[26]

Wyden and Issa propose OPEN as an alternative to SOPA and PIPA

The Online Protection and Enforcement of Digital Trade (OPEN) Act was introduced in the Senate on January 18, 2012, by Senator Ron Wyden (D-Ore) and Representative Darrell Issa (R-CA) in the House. It was strongly supported by netCoalition and the Consumer Electronics Association. The bill aims to establish the International Trade Commission rather than the Department of Justice as the agency for enforcing anti-infringement measures against foreign websites.

In a Letter to the Internet entitled 'Innovators, Speakers, Thinkers, and Agents for Change," Wyden explained that OPEN was drafted in reaction to SOPA and PIPA.[27] He congratulated citizens who spoke up against the two bills and Internet companies that participated in the black out.

Internet and technology companies that support OPEN include AOL, eBay, Facebook, Google, LinkedIn, Mozilla, Twitter, Yahoo!, and Zynga.[28] They support the fight against foreign rogue websites that are devoted to copyright infringement or counterfeiting as long that does not cause "inflicting collateral damage on legitimate, law abiding U.S. internet companies." They believe collectively that the ITC is an appropriate and well-established legal forum for adjudicating international disputes over the enforcement of intellectual property rights.[29]

The day after the OPEN Act was introduced in the House, Representative Lamar Smith (R-TX), released a statement entitled "OPEN Act Increases Bureaucracy, Won't Stop IP Theft" In his press release, Smith claims that OPEN will create a, "safe harbor for foreign criminals who steal American technology, products and intellectual property." According to Smith, the OPEN Act is bad for small business because the lawyers that specialize in ITC litigation are expensive

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[26] Dominic Rushe, "Sopa plans set to be shelved as Obama comes out against piracy legislation," The Guardian, January 16, 2012, accessed at http://www.guardian.co.uk/technology/2012/jan/16/sopa-shelved-obama-piracy-legislation.

[27] Ron Wyden, "My Letter to the Internet," January 18, 2012, accessed at http://wyden.senate.gov/issues/issue/?id=417403d2-468a-47a6-863f-946b5dbe4a6a. See also Nate Anderson, "Censorship foes roll out antipiracy plan, say stop 'butchering the Internet,'" *Law and Disorder,* n.d., accessed at http://arstechnica.com/tech-policy/news/2011/12/censorship-foes-roll-out-antipiracy-plan-say-stop-butchering-the-internet.ars.

[28] "Members of Congress Supporting the OPEN Act," *keeptheweb#OPEN*, accessed at http://keepthewebopen.com/supporters.

[29] Letter of support for OPEN to Darrell Issa and Ron Wyden from AOL, eBay, Facebook, Google, LinkedIn, Mozilla, Twitter, Yahoo! And Zynga, accessed at http://keepthewebopen.com/assets/pdfs/12-13-11%20Big%20Web%20Companies%20OPEN%20Endorsement%20Letter.pdf.

compared with those who litigate in the U.S. Court system. The latter has handled illegal counterfeiting and intellectual property theft for decades. Another problem is that for the ITC agreement to be binding the owner or the operator must consent. He believes that the OPEN Act will not be effective at eliminating piracy because it "narrows the definition of an illegal infringing site to such an extreme that it will be virtually meaningless and nearly impossible to prove." Lastly, he claims that the OPEN Act excludes provisions preventing search engines from promoting illegal foreign sites.[30]

Soon after the Obama administration formalized its opposition to SOPA and PIPA, a few unnamed members of the Motion Picture Association of America (MPAA) withdrew their financial support from Obama's 2012 presidential campaign. The MPAA, an organization that lobbies Congress on behalf of the entertainment industry, was a major advocate of the two bills. Indeed, many MPAA members like Barry Meyer, Chief Executive and Chairman for Warner Brothers, were conflicted over whether to continue to support the campaign in the future, given the administration's opposition to the two bills.[31]

Even the debates surrounding the 2012 Republican primaries focused on the SOPA/PIPA legislation. Like the Obama administration, and many other companies such as Google, YouTube, and Facebook, Newt Gingrich believed that the Internet should be protected from the type of government intervention as seen in both SOPA and PIPA. Mitt Romney agreed with Gingrich and called the bills "intrusive," and "threatening," to First Amendment rights. And even though Rick Santorum disagreed that the Internet should be a "free zone," he called for the government to protect intellectual property rights of those in the United States.[32] While it appears as if the incumbent president and the presidential hopefuls believe that Congress is one step closer toward producing reliable piracy laws, they maintain that SOPA and PIPA should be written so as to reduce the threat against the First Amendment, innovation, and cyber and national security.

Conclusions

The debate of SOPA and PIPA went from being an insider legislative process with overwhelming support in the Senate and somewhat weaker support in the House to a successful

[30] Lamar Smith, United States House of Representatives, Committee on the Judiciary, "Open Act Increases bureaucracy, Won't Stop IP Theft," press released, January 19, 2012, accessed at http://judiciary.house.gov/news/01192012.html.

[31] Richard Verrier and Ben Fritz, "SOPA, PIPA Backlash Could Hurt Obama in Hollywood," *LA Times*, January 18, 2012, *http://latimesblogs.latimes.com/entertainmentnewsbuzz/2012/01/obama-could-lose-some-support-in-hollywood-over-sopa.html*, (accessed March 1, 2012).

[32] "Republican Candidates Debate in Charleston, South Carolina," *The American Presidency Project,* January 19, 2012, http://www.presidency.ucsb.edu/ws/index.php?pid=98936&st=SOPA&st1=#axzz1nyTbfGoX (accessed on March 1, 2012).

mass mobilization of Internet users by the opposing coalition. Internet firms used the technology at their disposal to great effect. Millions of people were able to express their opposition to the legislation through email messages and online petitions. Even though there was some negative reaction to the hacktivism of groups like Anonymous, the overwhelming public response was to tell Congress not to mess with their Internet (especially since the way the bills were drafted seemed to signal an incomplete understanding of the potential consequences). The president weighed in on the side of the opposition. Many initial supporters in the Congress jumped ship and the bills were shelved.

This appears to be a dramatic example of how people power can defeat moneyed interests. Sean Parker, co-founder of Facebook, called it the "Nerd Spring" – like the Arab Spring, an important win for democracy.[33] It has been argued that this is the first time the Internet has been employed in this way. But it is not that simple. A similar campaign several years ago kept the Congress from passing a bill that might have resulted in a loss of "net neutrality." The proponents of net neutrality legislation were pretty much the same individuals and groups who opposed SOPA and PIPA.[34]

What has changed in the past few years is the number of people who now believe that their lives depend on an open Internet and are willing to defend it. These views are still inchoate. It is possible for interest groups to manipulate popular opinion by framing debates in terms of "evil or stupid government regulation" vs. "reliance on the market" or on raising fears about censorship and restrictions on free speech.

What remains to be seen is whether it will be possible to arrive at a compromise between copyright holders and the rest of the world that will preserve the best aspects of the entertainment industry without damaging our ability to continue to benefit from faster and less expensive computing and telecommunications technologies.

[33] Anthony Ha, "Sean Parker: Defeating SOPA Was the 'Nerd Spring,'" Techcrunch.com, March 12, 2012, accessed at http://techcrunch.com/2012/03/12/sean-parker-defeating-sopa-was-the-nerd-spring/.

[34] Somewhat less impressive mobilizations occurred when the Clipper Chip was being introduced during the Clinton administration as a solution to problems of law enforcement in the digital age.