The Sky is Rising

A DETAILED LOOK AT THE STATE OF THE ENTERTAINMENT INDUSTRY

Engine Advocacy

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Executive Summary

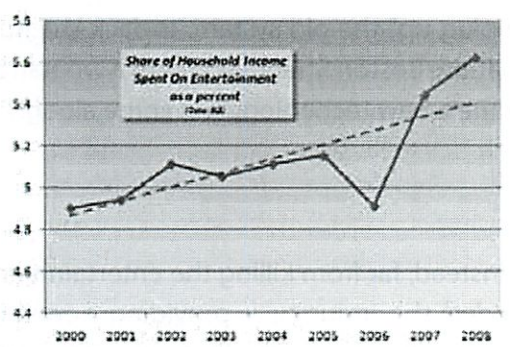
Has the internet decimated the entertainment industry, or are we living in a new renaissance for both content creators and consumers? Depending on who you talk to, you may have heard both stories.

This report explores the **true** state of the entertainment industry and concludes, quite simply, that the sky is not falling on the entertainment business, consumers or content creators themselves. Instead:

The Sky is Rising

In fact, what amazed us in going through every bit of data and research we could find, was how utterly consistent the results were: the wider entertainment industry is growing at a rapid pace (contrary to doom & gloom messages). Furthermore, more content creators are producing more content than ever before -- and are more able to make money off of their content than ever before. On top of that, consumers are living in a time of absolute abundance and choice -- a time where content is plentiful in mass quantities, leading to a true renaissance for them. This *does* present a unique challenge for some companies used to a very different market, but it's a challenge filled with opportunity: the overall market continues to grow, and smart businesses are snapping up pieces of this larger market. The danger is in standing still or pretending the market is shrinking. Therein lies the real threat: missing out on all that opportunity.

Indeed, you wouldn't know it, just listening to the entertainment industry talk about how much the entertainment industry is "dying," but data from PricewaterhouseCoopers (PwC) and iDATE show that from 1998 to 2010 the value of the *worldwide entertainment industry grew* from $449 billion... to $745 billion. That's quite a leap for a market supposedly being decimated by technological change.



Of course, the world economy grew over this period of time, but a particularly compelling bit of data shows that, in the US specifically, consumer spending on entertainment as a percentage of income has **continued to rise** significantly over the last decade. According to the Bureau of Labor Statistics, in 2000, 4.9% of total household spending went to entertainment. That number gradually increased over the decade -- and by 2008, it was up to 5.62%, an increase of nearly **15%** in the same decade as the internet went mainstream. In other words, for all the reports that people just want stuff for free, and are not willing to spend on entertainment, the actual data shows that they're spending noticeably ***more*** on entertainment today than they did ten years ago.

Similarly, reports of job losses in the sector are equally hard to square with reality. Once again, looking at the Bureau of Labor Statistics data, employment in the entertainment sector grew nicely in the decade from 1998 to 2008 -- rising by nearly 20% over that decade. The BLS continues to predict

similar growth for the next decade as well. Perhaps even more importantly, during that same period of time, BLS data shows that the number of people who were *independent artists* grew at an even faster rate -- over 43% growth in that same decade. In fact, this may be a strong hint as to why you hear reports of industry "demise" from certain legacy players: because new technologies and services have made it much easier for content creators to find success without going through the traditional gatekeepers. It also raises questions for those who claim that the changing marketplace has been most difficult for independent artists. The data simply does not back that up.

Finally, if you look at just about any area of the entertainment industry today, the amount of new content being produced has grown at a tremendous rate. In 2002, less than a quarter of a million new books were available on the market. By 2010 that number was over 3 million. In 2001, the Gracenote database had data showing just about 11 million song tracks. By 2010, that number had passed 100 million. According to the UN, in 1995, there were about 1,700 films produced worldwide. By 2009, it was more than 7,000. Meanwhile, during this same period of time, the video game industry ballooned massively, leaving its niche status behind, and becoming a major part of the wider entertainment industry.

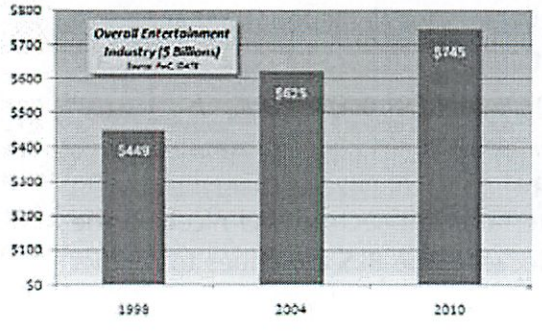
By any measure, it appears that we are living in a **true Renaissance era** for content. More money is being spent overall. Households are spending more on entertainment. And a lot more works are being created.

And yet, all we hear about is how the internet has decimated the entertainment industry.

Of course, for pretty much the entire history of the entertainment industry, there have been complaints about how almost any new technological innovation is a form of "piracy" that will represent the end of the wider industry. From John Philip Sousa insisting that *"These talking machines are going to ruin the artistic development of music,"* to the music industry fearing that radio had similarly destroyed the industry by decreasing the "life" of a song "from 18 months to 90 days," leading radio to "virtually plug up" the old system, to Jack Valenti's infamous prediction that the VCR would be to the film industry "what the Boston Strangler was to a woman at home," the industry has predicted its own demise each and every time a new technology has come along.

It's no different today, with the rise of the internet.

In the past, **every single one** of these predictions proved wrong. Instead, far from killing the entertainment industry, every single one of these innovations massively expanded the industry -- providing new and incredibly valuable abilities to create, distribute, promote and monetize their works.



The data in this report show that it is no different today. The internet has helped the wider entertainment industry grow and thrive, benefiting both consumers and content creators in massive ways.

This report seeks to dig in to the numbers to understand, more

clearly, what is truly happening in the entertainment industry. It looks closely at four sectors: film & video, music, books and video games, and discovers that each one has been growing quite nicely over the last decade. It explores how much of this growth is driven by the internet and new opportunities that the internet allows.

The comprehensive picture highlights a few key points:

1. For consumers, today is an **age of absolute abundance** in entertainment. More content is available in more ways than ever before. If we simply go by the terms of the US Constitution's clause from which copyright came, it seems clear that the "progress of science and the useful arts" is being promoted -- even as copyright is often being ignored or foregone. There is just a tremendous amount of content, a tremendous variety of content, it's more accessible to more people than ever before.
2. For content creators, it is an **age of amazing new opportunity**. Traditionally, to take part in the entertainment industry, you had no choice but to go through a gatekeeper, which served to keep the vast majority of people who wished to be content creators from ever making any money at all from content creation. Today, that is no longer true. More people are making more money from creating content than ever before -- with much of that coming via new tools that have allowed artists to use the internet to *create, promote, distribute and monetize* their works.
3. For the traditional middlemen, the internet **represents both a challenge and an opportunity**. There is no doubt that the internet has eaten away at some traditional means by which these businesses made money. But, as the data shows, there is more money going in to the overall market, more content being created, and many new ways to make money. That shows that there is a business model challenge -- and a marketing challenge -- but much more opportunity in the long run. The key challenge for business is in figuring out how to capture more of the greater revenue being generated by the wider entertainment industry. Legacy players certainly face a lot more competition (and fewer reasons that artists have to do deals with them) -- which can explain some of the public complaints about the "death" of various industries -- but overall, it's clear that by embracing new opportunities, there are plenty of ways to succeed.

Throughout the rest of this report, we explore the specifics of these three points in great detail, highlighted with brief "case studies" of content creators who appear to have figured out some of the key secrets to succeeding in this market -- capturing an increasing slice of the growing pie by really embracing what the technology has created. It's a story of a rapidly changing market -- but a story of success and opportunity at every turn for those who understand how to properly embrace the changes.

What comes out is undeniable -- despite some parties insisting otherwise. The amount of money and content in the entertainment industry has always trended upwards. The opportunity levels are tremendous. The real challenge is for creators and companies to figure out how best to capture that opportunity -- especially in the face of growing competition. But, absolutely nowhere is there any suggestion that the overall entertainment industry is at risk. Instead, it is clear. The sky is rising to incredible new heights.

Opportunities Abound: Enablers, Not Gatekeepers

One of the key lessons in the gradual shift in market power in the entertainment industry these days is that the power of the old gatekeepers is declining, even as the overall industry grows. The power, instead, has definitely moved directly to the content creators themselves, who no longer need to go through a very limited number of gatekeepers, who often provide deal terms that significantly limit the creator's ability to make a living.

Instead, what has happened is a major new opportunity has opened up, not for gatekeepers, but for organizations that enable artists to do the different things that the former gatekeeper used to do -- but while retaining much more control, as well as a more direct connection with fans. Three great examples of this are Kickstarter, TopSpin and Bandcamp.

At the close of 2011, Kickstarter announced that, over the course of the year, just about $100 million had been pledged to artists through its crowdfunding platform. While not all of the pledged money goes to successful projects, the company projected that approximately $84 million did, in fact, make it to those content creators whose projects were successfully funded. Kickstarter works by giving artists a way to let fans crowdfund the creation of new works. That is, rather than being a platform for directly buying a work already created, it lets artists offer different tiers through which fans can help fund a project, in the hope of reaching a funding threshold for the work to be created. Only after the threshold is met does the money change hands.

All sorts of creative works are funded via Kickstarter, and in 2011, over $32 million was pledged to film & video, almost $20 million was pledged to music, over $5 million pledged to publishing, and nearly $4 million pledged to games. And, of course, Kickstarter is just one of a number of similar platforms. However, this shows that not only are consumers willing to support many artists when given the chance, but that there are new business models that get around the traditional gatekeepers. One of the key reasons for going with a traditional player was to get that initial funding to create the art. But platforms like Kickstarter, IndieGoGo, PlegeMusic and others route around the old players.

TopSpin is an interesting player that provides tools to content creators (musicians, filmmakers, authors and more), to allow them to more easily create a direct-to-fan relationship via their website. This includes that ability to stream, sell or offer up downloads (sometimes with conditions), but also the ability to sell merchandise and things like direct concert ticket sales.

In the most recent data released from TopSpin, the average transaction price they saw was $26. And when an offer included a ticket for a live event, the average shot all the way up to $88. And the number appears to be rising. A year earlier, TopSpin noted that its average transaction price was about $22. What this shows, again, is that people are willing to spend if artists offer the right thing -- and it suggests that fans are even more willing to spend higher amounts when they know the money is going directly to the artists, rather than into a large company who may never pay royalties. That suggests a big opportunity in artists going increasingly direct to fans, rather than completely giving up revenue streams to gatekeepers.

Finally, a third player in the space, Bandcamp, lets musicians set up simple content stores for their works (and also allows for streams, pay-what-you-want, free or conditional downloads). While not as big as Kickstarter, the company recently announced that, for just the month of December, it helped artists make over a million dollars. Perhaps the most interesting statistic there is that when given the option of paying-what-you-want for albums with a suggested price, an impressive 40% of the time, fans are willing to pay more than the suggested price.

Obviously, these new players are smaller than the old gatekeepers today. But the trend lines are important, as are what the data shows. The key point is that new businesses, which act as enablers rather than gatekeepers, are springing up to allow the artists to be central to the process, and not limit their ability to make a career out of their works. And those enablers can be effective for those who use them well.

Furthermore, the data from each of these enablers suggest that consumers are willing to spend, and they're often willing to spend more, if they feel that they're really getting something of value and there's a direct connection to the artist.

Case Study
Louis CK: Open, Human & Awesome

At the end of 2011, comedian Louis CK presented a perfect example of how an artist could release content and make money in new and exciting ways. He made a one-hour special of a live performance of his new standup routine, but rather than go the traditional route of making it into a TV special, a DVD or a CD, he decided to release it directly to his fans on the internet, for a simple $5 payment.

He focused on making the process as absolutely seamless as possible: payment was easy (you didn't have to sign up for anything) and the files had no DRM to lock them up or make things difficult. You just paid and got the video.

But what was much more interesting was how he went about marketing this and getting people to buy. He chose to truly connect with people by being open, human and awesome.

The first part that made it work was that him being open. In launching the deal, he explained the situation, explained why he was doing things the way he was (and that it was an experiment) and explained why he hoped you would buy it. He didn't hide the fact that you could almost certainly get it for free online through unauthorized means. He just explained why he hoped you would choose otherwise. On top of that, he later was exceptionally open in explaining the results of the experiment -- highlighting not just how much he made (including a screenshot of the Paypal account), but also explaining his expenses and exactly how he was going to distribute the money. This kind of openness made people even more willing to pay.

Second, he was human. He didn't come across as corporate or fake. He came across as authentic and human. He did so by being polite and even relating some of his fears and thoughts as he went into the experiment. In addition, on the same day he released this video, he went on the popular discussion site Reddit, and ran a question and answer session (called an AMA -- for "ask me anything") where he chatted with tons of fans, all while explaining why he was doing what he was doing. The commitment to do that, and to answer all sorts of questions in a really human fashion, endeared people to him even more. This was entirely different than a traditional roll out with a big marketing campaign that obscures the real people behind the content. It also meant not treating fans like criminals, but as fans. He was always very appreciative of the fans in all of the interactions. As a way to compete with "infringement," this really helps because people felt a connection with a human being, rather than that they were being sold to by a faceless corporation.

Finally, there's the point that Louis CK is an awesome comic. This is an important point that gets missed in discussions of these business models: Don't Forget To Be Awesome (which is also the name of a small independent record label, who seems to get these things too). Louis has built up a well-deserved reputation over the years as a comic among comics -- one of the best there is. The reviews of the actual video were also quite high. No content is going to be successful if

the quality isn't there. You can have the best business model in the world, but if your content is no good, it's unlikely to work. In some cases, those who are complaining about failures of business models may actually need to look more closely at the content itself. But if the content is awesome, then you have one of the key ingredients needed.

The results for Louis CK were fast and obvious. Within 12 days, he had made over $1 million from this experiment -- more than he'd made from any of his previous video efforts. On top of that, Louis CK continued his "open, human and awesome" strategy by not just sharing the results, but by announcing plans to both give his team large bonuses and donate about a quarter of the income to charities -- some chosen by fans who had suggested them online. Louis CK demonstrates a perfect case study of how you can be quite successful even in the face of the easy nature of infringement: make things cheap and easy, but also make sure to connect by being open, human and awesome.

'Is this scalable'?

Section 1: The Video Market

The industry surrounding video media is divided into distinctly separate categories: film/movies, television and the "catch-all" silo of online video. These video market categories correlate with the variety of production budget sizes (blockbuster films generally have bigger budgets than TV shows), business models (TV relies more on advertising instead of ticket sales), distribution logistics and other operational variations. Despite the differences between all these visual works, however, there is obviously plenty of crossover between them, as TV shows are re-written into movies, as movies are shown on TV, and as nearly all forms of video eventually end up online.

Starting with the film industry, it's not too hard to see that the popularity of movies has grown steadily over its century-long history. Despite economic recessions, the movie industry generally continues to attract sizable audiences to theaters -- and the business has been called "depression proof," owing to the fact that, even during the depths of the Great Depression, movie-goers numbered between 60 and 80 million Americans per week (when the US population was about 122 million). However, the industry did have its share of problems in the 1930s, but it survived and thrived with innovative marketing tactics, such as door prizes, matinees and midnight screenings, and discounted ticket prices to get people into theater seats.

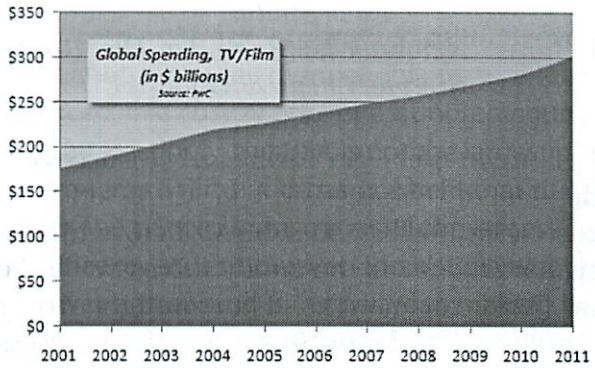
More recently, the movie industry has also been dubbed recession proof, due to the box office ticket sales that have held up rather well in comparison to other industries. In 2008, DreamWorks Animation CEO Jeffrey Katzenberg said, "Both traditionally as well as recently, we have seen that our product is, at worse, recession-resistant and, more optimistically and historically, has actually been recession-proof." Additionally, according to the MPAA, total worldwide box office ticket revenues have increased by 25%, from $25.5 billion in 2006 to $31.8 billion in 2010.

year	US & Canada ($ Billions)	Worldwide ($ Billions)
2006	9.2	25.5
2007	9.6	26.2
2008	9.6	27.7
2009	10.6	29.4
2010	10.6	31.8

According to PwC reports that include movie revenues beyond just box office ticket sales, the film industry has grown worldwide by almost 6% over the five-year period from 2005 to 2010, exceeding approximately $82 billion in value. For an industry that claims to be plagued by piracy, this steadfast level of growth during the Great Recession appears to justify the boastful statements of being recession proof.

Looking at the worldwide production of films, the UNESCO Institute for Statistics

(an organization that serves the United Nations) has been keeping track of various cultural events, such as quantifying the number of feature-length films produced, in a survey of over a hundred countries since 1995. Interestingly, the USA is not the largest producer of feature-length films and has not held that title for many years. (The US film industry is still the largest in terms of box office revenues, however.) India's Bollywood produces well over a thousand films per year, making it the most prolific film-making nation. (India comes in at third with box office revenues of $2.2 billion in 2010 behind the US's $10 billion and Japan's $2.5 billion, and China has only recently surpassed the $2 billion threshold.) Next on the production list, Nigeria's Nollywood has taken second place in the race to produce movies, churning out nearly a thousand films per year aimed at a thriving home theater market. (Nigeria actually produced more films than India circa 2007, but India has since re-claimed its number one spot.) Obviously, the US movie industry has many more well-known films than any other country, but it comes in third on the list of movie-making nations with roughly 700 feature-length movies made each year. Overall, these production numbers don't suggest any kind of a slow down in the production of movies. In fact, part of the reason for Nigeria's impressive movie figures is that the cost of film production is remarkably low -- less than $100,000 -- and Nigerian movie-makers have been adept at keeping their budgets low while expanding their audience reach. And as the costs of digital video production continue to decline, the global film industry looks very healthy as more audiences can be reached more easily and more cheaply.



year	# of feature films produced globally
2005	5635
2006	5255
2007	6416
2008	7020
2009	7193

In addition to feature-length films, there are also a wide variety of shorter movies that are not so well accounted for. The most provocative example is the adult film industry which is often cited to be a multi-billion dollar market, but exact numbers for it are difficult to confirm. In 2001, Forbes published an estimate that assumed around 13,000 video releases were created every year and pegged the entire US porn industry to be valued at less than $4 billion. The widespread piracy of these types of movies is putatively ubiquitous, but despite this copyright infringement, predictions for the demise of the adult film market seem to be dismissed easily, given that the demand for adult entertainment seems to be going strong.

Other films that deserve to be mentioned are independent films that don't generate mainstream box office ticket sales. In 2011, the Sundance film festival received around 4,000 entries, and independently-financed films are being produced with renewed vigor as production costs have dropped. Crowdfunding sites like KickStarter or PirateMyFilm have encouraged more and more filmmakers to try to produce short films in unique ways -- such as movies filmed entirely with cell phones or using iPhones or made in under 2 days (or in less than 24 hours). Furthermore, independent films have found more and more outlets to reach viewers at home with services like Netflix, LoveFilm, FilmBaby, Fandor, etc. With the cost of both production and distribution falling dramatically, different options for watching movies are more widely available than ever before, which creates an environment where a low budget film can potentially become enormously popular. Examples like

Case Study:
Ed Burns' Newlyweds: Back To The Roots; Simple, Cheap & Good

Ed Burns was an extremely successful independent filmmaker, kicking off his career with the Brothers McMullen, which is considered one of the most successful indie films. Made for about $25,000, it brought in over $10 million -- and gave Burns a path to success in the traditional Hollywood studio system. In fact, he appeared in a few Hollywood films, but has continued to stick close to his indie roots.

While some "indie" filmmakers are indie-in-name only (still signing huge deals, but doing it outside traditional major studios), Burns has really been testing out all sorts of new ways of making, marketing and selling indie films. His most recent film really shows the amazing ability to make a high quality film on the cheap. The Newlyweds cost a grand total of $9,000 to make -- with most of that money going to the actors involved. He used a basic DSLR camera that just about anyone can buy, but which looks incredibly professional. Outside of that, they used natural light wherever they could, and sought out locations that wouldn't cost money (such as asking a friend who owns a restaurant if they could film there as a favor).

One of the big questions that is asked about filmmaking in this day and age is how can big studios recoup $200 million budgets. Burns has flipped that question on its head, and asked why must budgets be so big. In an era of cheaper and better tools, it's possible to make fantastic movies for much less money. It's then significantly easier to profit off of those movies.

The end result is a lot more people making a lot more films -- and more of those films making more people money. It may not lead to more $200 million films, but it's unclear if the world really needs that many such films.

Paranormal Activity, *The Blair Witch Project* and *El Mariachi* might be rare, but they also demonstrate the very real possibility for moviemakers to produce incredibly profitable films without a $200 million budget. There may be some exaggerations regarding movie budgets, but memorable (and profitable) storytelling doesn't necessarily require an *Avatar*-sized budget.

In the early days of TV, a correlation between the growth of TV watching and the decline of movie attendance (and movie ticket revenues in the late 1940s) seemed to suggest that people preferred to stay at home in newly-formed suburbs to watch TV, rather than go to a movie theater. Obviously, that trend did not kill the movie industry, and TV didn't completely replace going to movie theaters. But TV watching has become the single most popular activity that Americans do in their free time, with Americans spending about half their leisure time (2.7 hours a day) with a TV. Pediatricians are even warning parents that there is some scientific evidence suggesting kids are watching too much TV. In a survey of young people (children aged 8 to 18), watching TV content is more than comparable to a full-time job -- with kids watching over 7 hours of TV per day, seven days a week. So, from a consumption standpoint, it looks like TV watching will remain a popular activity for at least another generation (if not longer).

In terms of global consumer spending, subscription TV services have risen with a compound annual growth rate of about 6% over the last several years (including the most recent recession), exceeding $200 billion in 2010. According to other PwC figures, TV advertising spending has been slightly more volatile than TV subscription spending, but it still exceeded $150 billion globally during the Great Recession -- and did so despite growing competition with internet advertising. Unlike the "recession-proof" film industry, the TV business isn't so immune from the effects of economic recessions. However, outside of advertising

cable prices grating

budgets, consumers are still willing to subscribe to television services in significant numbers even when free over-the-air broadcasts are widely available.

Historically, there have been very few industries that are completely impervious to economic or technological changes, so it shouldn't be too shocking that the advent of digital video is starting to cannibalize parts of the overall video industry. The movie industry has legally categorized some forms of online video distribution as piracy, but legal and legitimate online movies do exist -- and are even sanctioned by some movie studios as they experiment with releasing movies with more home viewing options (such as Video On Demand or online streaming versions) simultaneously with (or before) theatrical releases. These digital distribution methods for movies and shows are still in their infancy, but the convenience for viewers creates valuable services -- which appear to be in growing demand as traditional television networks are beginning to provide their own online video strategies. Online TV shows are also starting to pull cable/satellite TV subscribers away from their set top boxes, but not in enormous numbers just yet. Still, the potential for online video is great enough that it can't be ignored, and many companies (both traditional media and not), like Apple, Verizon and HBO Go, are looking to offer more direct-to-consumer online video services.

Purely online video services are clearly not yet collecting revenues at the same scale as the traditional TV and film industries, but the size of this audience is unquestionably large. Recently, Vimeo's subscription service for online videos stated that it has reached 150,000 paying subscribers out of its tens of millions of unique viewers. Other online players like YouTube don't rely on a subscription model and have started generating advertising revenues upwards of $400 million in 2010, and YouTube's audience is quite large with over 100 million unique viewers (conservatively) in a month. In 2011, YouTube also served up over a trillion views of its wide variety of online video content, and this online video giant is aiming to compete with traditional television networks. To attract even more advertisers, YouTube is planning to sponsor and provide more professionally-produced content to add to its already immense amount of amateur video. Impressively, YouTube received, from mostly amateurs, over 48 hours of video content every minute in 2011, up from users uploading 8 hours of video per minute in 2007. And from that vast amount of non-traditional video, series such as The Guild have gained popularity and success from this growing availability of low-cost video production and distribution. The line between amateur and professional video is even becoming difficult to define, as the children from the viral video "Charlie Bit My Finger" have gone on to become minor celebrities -- earning enough income for Charlie's family to afford a new house. Online videos are also a substantial traffic driver for social networking, with Facebook being one of the top ten online video destinations in the US. So, it is without a doubt that online video destinations will play an important and perhaps even a dominant role in future media consumption.

Overall, the evidence points to a very optimistic future for the video industry and all varieties of video creators. Costs for producing all types of video content are falling as video recording technology gets better and less expensive. It's also never been easier to distribute video content, since broadband connections are becoming more and more widely available, and the internet is cheaper for consumers to access. Movie makers of every kind should be able to benefit from the progress of technology. A TV show or movie can be produced for a fraction of the cost compared to a decade ago, so many more kinds of shows can be developed with less risk. There is a vast new army of amateur video producers who, as they hone their skills on short video clips, have every opportunity to create digital movies for a very large audience and to monetize their creations or obtain fan-funding for future videos. Viral videos can be made by professionals, too, and a growing number of filmmakers are experimenting with shorter promotional clips that can help them engage more with their

audiences. Watching videos has become one of the most popular activities to do, for nearly all age groups, so the demand for video content appears to be extremely solid. The movie industry may not be completely recession-proof, but there are very few industries that do as well as the movie industry when the economy sinks.

Case Study:
Kevin Smith's Red State: Profiting By Avoiding The Gatekeepers

Kevin Smith is a famous and successful filmmaker -- writer, director and actor -- who went in a different direction with a recent film, Red State. Historically, Smith is known for his humorous films, often targeted at young men. However, a few years back he had the idea for a horror/thriller film called Red State. Given his history in the comedy world, he found it more difficult than in the past to get financing for the film. At one point, he considered fan-funding the film, but changed his mind after some people said it would never work. He has said repeatedly since then that he made a mistake in not fan-funding the film.

He decided that he would not make the same mistake when it came to distributing the film. After building up some press buzz about the film, he promised to auction it off to a distributor (the traditional way films are sold) at Sundance. However, at the event, he "sold" the film to himself, and said that he, and his producer, Jon Gordon, had set up their own distribution company, and they would be distributing it themselves. But the key part was that he, himself, was going to tour with the film through theaters.

It's important to recognize a few things. Smith, over the years, has built up a large and loyal following not just with his films, but actively connecting with his fans in other ways as well. He was one of the first filmmakers to be very active online, setting up his own message forums, which he actively used to engage with fans. More recently, he took to podcasting, building up not just a single podcast, but an entire "online radio network" of podcasts, broadcasting all the time, and doing live shows and tours. On top of that, he's been a very active Twitter user, engaging directly with tons of fans.

diff way market works

Separate from that, he has built up a (well-deserved) reputation as a fantastic performer/story teller at the various question-and-answer events he has held over the years. Over the past few years, he has toured the world doing Q&A sessions (which often have high-priced tickets).

So, when it came time to promote Red State, he accurately recognize that he didn't need a distributor for traditional marketing or distribution. Instead, he could take the movie on tour himself, and use his huge (and loyal!) Twitter base to handle the marketing. Knowing that his fans already pay large sums to see him do a Q&A, he was able to bundle the two together, and do a film tour with a Q&A, meaning that his "per ticket" sale price was actually the highest in the business while the tour was ongoing. From there, while he sought to do a traditional film release -- which he admitted was more sentimental than anything else -- he also actively embraced any and all forms of video-on-demand, making sure that the movie was available in almost any manner that a fan might want to watch it.

The results were impressive. He barely spent a dime on marketing (he spent about $9,000 on ads that were required for Oscar consideration, though he hated having to do so),

meaning that his movie had to recoup a lot less than any movie going a more traditional route. As he's mentioned, while most people know the cost to make a movie, they don't realize that just as much, if not more, is added on top in marketing costs, all of which need to be recouped before any profit is made.

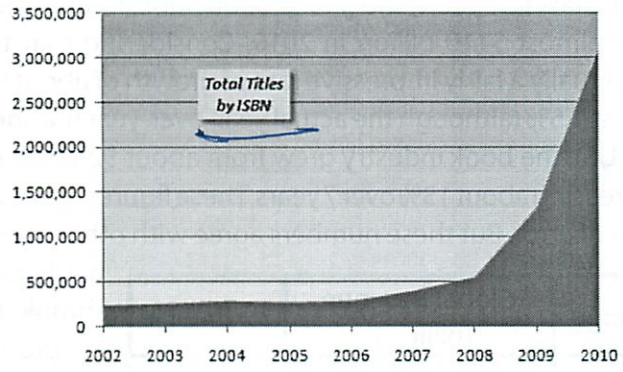
However, in Smith's case, he was able to fully repay his investors just from the initial tour and selling foreign rights. That means, within months of the film being completed, it was in the black, and all additional revenue was pure profit. This is almost entirely unheard of in the movie business. By doing things differently, he was able to create a very successful, profitable movie venture.

One footnote on this story: because of a legacy theater system that has also been resistant to adapting, many theaters shut Red State out from any sort of widespread theatrical release, in protest of him pushing the movie to video-on-demand before showing it in the theaters. Too often we see such legacy players prevent wider success.

Section 2: The Book Publishing Market

Historically, the consumer book industry has been relatively immune to economic downturns, according to PricewaterhouseCoopers' (PwC) Global Entertainment and Media Outlook, and the numbers seem to confirm that consumers continue to read, even when times are tough. From 2008 to 2010, the book publishing industry wasn't growing by leaps and bounds, but unlike a lot of other industries during that time period, it didn't fall.

Counting up all the books published in a year is no small task. The United States is, by all accounts, the largest market for books. The number of American publishers (including small, independent presses) was estimated to be about 3,000 in the 1970's. That number grew to over 60,000 publishers by the end of the 20th century. And over the past decade, the availability of print-on-demand technology has made it somewhat challenging to definitively state how many publishers exist, assuming we want to count self-publishing as a legitimate business activity. (We do.) The difficulty of determining how many publishers exist is especially acute, if the role of a publisher is simply defined by the ability to distribute text to a wide audience. Authors can (and have) become their own publishers as the technology to publish text has become incredibly affordable and widely available to anyone with the passion to write. As an extreme example, the progress of technology has allowed one Philip M. Parker to become a hyper-prolific "author", owing to his 100,000+ book titles, which he algorithmically generates from public data (and sells on amazon.com).



However, the number of book publishers is finite, so all is not lost. The ISBN (International Standard Book Number) provides a record of book titles that have been registered by an ISBN Agency, but not every book publisher obtains an ISBN. Still, this is the approach that BookStats used in its methodology to estimate the size of the US book market from 2008 to 2010. During that time, 35,800 publishers registered with an ISBN and BookStats gathered information from 1,963 of those publishers.

In its first annual study of the US publishing industry, BookStats surveyed about a couple thousand publishers for figures such as their annual revenues and unit sales data. And from these numbers, BookStats created a model to extrapolate the entire US book market, based on the primary data provided by publishers who were willing to participate.

BookStats categorized its surveyed publishers (who collectively bring in over $15 billion) according to the size of their revenues, then extrapolated to the wider market based on the record of total number of titles and publishers.

year	revenue (billions)	% change	units sold (billions)	% change
2008	$26.5		2.47	
2009	$27.1	2.3	2.51	1.6
2010	$27.9	3.1	2.57	2.4

The result of BookStats' statistical estimates was that the book market grew in the US from 2008 to 2010, both in revenue and units sold. The amount it grew is not necessarily impressive by itself, but considering that the financial crisis hit in 2008, it looks like the book market barely noticed the widespread economic turmoil in other parts of the economy.

But let's not simply accept BookStats' results without question. There are other publishing industry estimates out there, conducted independently, that should agree with these numbers (or not). The problem is that every statistical analysis is slightly different and defines the book market in its own way. Let's not worry about that too much for now, though, and just see if other numbers at least support this picture of a book publishing market that seems to ignore economic recessions.

As we mentioned earlier, PricewaterhouseCoopers also covers the book industry, but it does so by using some slightly mysterious methods. PwC relies on industry sources for historical data and then applies proprietary algorithms and mathematical models to factor in market influences such as population demographics, economic statistics, technological trends and other possible variables that could affect the industry. That said, it's not entirely clear how PwC arrives at its numbers, and more granular breakdowns of its figures are sometimes unavailable.

According to several PwC reports over the last few years, the global book publishing market was worth about $100 billion in 2004 and has grown to almost $110 billion in 2010. Considering that the Great Recession occurred during that time frame, that's actually a fairly impressive rate of growth of about 9% over 7 years with a compound annual growth rate of almost 1.5% (although the actual year-over-year numbers bounced around a little). For North America (not just the US), the book industry grew from about $28 billion to a little over $33 billion over the same period of time--increasing about 13% over 7 years. These figures are obviously approximate and likely subject to a significant margin of error. But these numbers agree with other estimates that the book publishing market has not shrunk, but rather has held its ground and expanded even while the global economy experienced historically bad times.

Year	North American Revenue (billions)	% Change	Global Revenue (billions)	% Change
2004	$29		100	
2005	$31	6.9	106	6.0
2006	$31	0	104	-1.9
2007	$32	3.2	110	5.8
2008	$33	3.1	110	0
2009	$33	0	108	-1.8
2010	$33	0	109	0

In other reports, the size of the global book publishing market has also been estimated to be around $111 billion (80

billion euros) by organizations such as the International Publishers Association (IPA), up significantly from its estimate of approximately $72 billion in 2006. That would be a remarkable growth rate (over 50%!), but the IPA has only recently started compiling comprehensive statistics on global publishing and its researchers admit that it's a difficult task -- largely due to the near-absence of statistics for sub-Saharan Africa and the Arab world. Ultimately, though, there seems to be consensus that the overall size of the book publishing market is steady in terms of publisher revenues and consumer spending. And, amazingly, this steadiness remains amid economic turmoil.

Interestingly, while these market estimates point to a remarkably stable environment for the book publishing industry, we should also put these numbers into context. The book publishing industry does not exist in a vacuum -- and books are in competition for consumer attention against a wide variety of other forms of entertainment, such as movies, video games and even outdoor activities. Additionally, we have purposely excluded other reading materials like newspapers, magazines, as well as the elephant in the room, the vast amount of textual information on the internet -- blogs, tweets, online comics and countless other websites. One might expect entertainment to be a zero-sum game, but somehow even in competition with numerous other activities that could take away from the book market, the book industry has remained incredibly stable.

In fact, despite all the stories that no one reads books anymore, there's been a curious increase in the number of books that were produced in recent years. (And don't forget, as we briefly mentioned earlier, BookStats estimated that the number of books sold in the US has also increased since 2008.) According to R.R. Bowker, the number of traditional book titles produced grew 5% in 2010 compared to 2009, and the output of non-traditional titles (such as print-on-demand books, self-published works and micro-niche publications) soared 169%. Bowker has been keeping track of ISBN registrations, and since 2002, the number of traditional books has grown by 47%. On top of that, the number of non-traditional books (those self-published books and print-on-demand works) exploded by over 8,400% from 2002. Looking at the absolute numbers, traditional books rose from 215,138 to 316,480 titles from 2002 to 2010. The astonishing part: non-traditional titles started at 32,639 in 2002 and numbered 2,776,260 in 2010 -- so now non-traditional titles outnumber traditional ones by more than 8 to 1. (It should be noted that audiobooks and ebooks are excluded from these ISBN counts.

Perhaps it shouldn't be so surprising that, as the cost of self-publishing has plummeted over the years, the number of books produced by non-traditional methods would seem to increase exponentially. However, this initial exponential increase in production has not, as we discussed previously, necessarily translated into a book market with spectacularly high growth rates for revenues. On the other hand, the vast diversification of publications and appearance of micro-niche categories most likely create an industry that isn't as volatile or reliant on a handful of best-selling authors. From the standpoint of individual authors, the steep drop

year	# of traditional titles	# of non-traditional titles	total titles
2002	215,138	32,639	247,777
2003	240,098	26,224	266,322
2004	275,793	19,730	295,523
2005	251,903	30,597	282,500
2006	274,416	21,936	296,352
2007	284,370	123,276	407,646
2008	289,729	271,851	561,580
2009	302,410	1,033,065	1,335,475
2010	316,480	2,776,260	3,092,740

in the costs to produce and distribute books has opened up innumerable opportunities. Authors with niche audiences can thrive nowadays, whereas they might never have been discovered -- or had their manuscripts simply rejected for publication in the past. Independent authors have eliminated some of the middlemen involved in book publishing, so even if the exponential growth of non-traditional books hasn't resulted in exponential revenue growth, the profit margins for individual authors can be higher than ever before.

Interestingly, the book market didn't stumble during the Great Recession, and it should be noted that this feat was performed even though the metrics in this industry rely heavily on the single revenue stream of just selling physical, printed books -- unlike other creative industries, which also earn significant revenues from sources such as advertising, licensing and hardware sales. Generally, movie licensing deals have not been counted in estimates of the size of the book market. (And some argue that movie licensing has not been particularly successful for the majority of rights owners of books.) Additionally, the sales of ebook hardware (e.g., the Kindle, Nook, iPad, etc.) are also not included in the book industry. However, these kinds of alternative sources of revenue are beginning to be explored -- especially as the ebook market matures and as publishers experiment further with business models. A salient example of a cross-platform book franchise is the upcoming online video game, Pottermore, based on the popular Harry Potter series. J.K. Rowling's publisher also has rumored plans for a social network and ebooks, to become on-going revenue generators for the Harry Potter franchise (in addition to merchandising and advertising opportunities).

The topic of ebooks is obviously an important sector of the book industry, but although there have been various electronic book devices commercially available since the 1990s, the popularity of ebook hardware is only just starting to really take off. And by just about every metric, the market for ebooks is soaring. Sales

Case Study:
JA Konrath and Barry Eisler:
The New Opportunities In Self-Publishing

These two authors of mystery thriller novels have been making quite a bit of news for their decisions to embrace ebooks directly. Both have been published by the big traditional publishers in the past (with Eisler's books being best sellers), but both have decided it's significantly more beneficial to just release ebooks directly on their own or, more accurately, with more modern partners who act more as enablers than as gatekeepers.

Not only do they have more control over the work, but they make more money. That's because, under the traditional model, the large publishers provide very small royalties to authors. Konrath and Eisler did the math, and realized that without having to give up 90% to publishers, they could price their books a lot lower, but still make more money per sale. By then making it easy and cheap to purchase their works, they could make more money in total.

In fact, in running various experiments, Konrath found that as he brought the price of his book lower and lower to around $0.99, he made increasingly more money (and built up an even larger fan base). By further connecting with those fans, and even encouraging fans to get free copies of some of his books, he was able to build up an even larger loyal audience, who were more than willing to jump at the chance to support him directly, as he came out with each new book.

Konrath recently noted that he's sold over 700,000 ebooks, and in December of 2011 made $140,000 from ebook sales. Without a publisher. There are clearly huge potential rewards for those who are able to embrace today's opportunities, while producing quality work.

Case Study:
Paulo Coelho: What If Piracy Increased Rather Than Decreased Sales

Paulo Coelho is one of the most successful authors of all time, having sold over 100 million books. However, a few years ago, he became very vocal in suggesting that one of the best ways to increase his own sales was to "pirate" his own books. He ran an experiment, secretly putting up a Russian translation of his most famous work, The Alchemist, on The Pirate Bay. Prior to that, he had almost no sales at all in Russia. However, after seeing the book start to be shared widely online (in violation of copyright law), he noticed that his Russian sales started increasing dramatically, from less than 1,000 to over 100,000 in just two years, without any other marketing effort. After seeing similar results elsewhere, he finally went public with this and convinced his publisher, Harper Collins, to be more comfortable with actually releasing official digital versions of his books for free.

Since then, Coelho has remained an outspoken supporter of using free distribution as a way to build up an even larger audience, and has yet to see his sales suffer in any way. In fact, the results have been just the opposite.

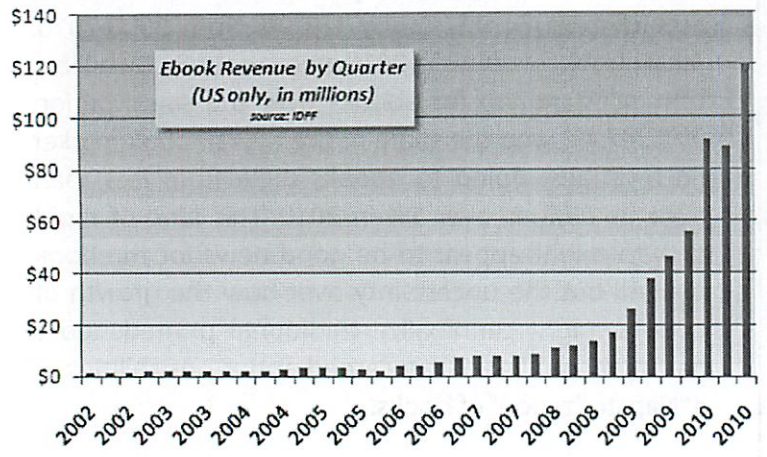
Of course, it's also worth noting that during this time, Coelho has remained very engaged with his fans. Using Twitter, Facebook and YouTube extensively, he's regularly in contact with many of his fans. He's also created gatherings, and encouraged his fans to create a movie out of one of his books, piecing together different fan-created sections into an overall work. What he's shown is that, when done right, these tools that are often blamed for destroying the industry, can be used to the advantage of the artists (and fans).

of ebooks have risen sharply over the last three years, according to BookStats, by 131.9% from 2008-2010. Total ebook revenues in 2010 were about $1.62 billion. Unit sales growth for ebooks over the same period was 347.4%, and the share of the overall book market (in revenues) going to ebooks grew from less than 0.5% in 2008 to over 5% in 2010. This kind of rapid growth might appear to be good news for the book market, but the uncertainty over how the growth of ebooks might cannibalize traditional printed books has many publishers concerned about possibilities of a "Napsterization" of books.

So while the overall book industry has been relatively stable over many years, digital ebooks appear to be set for explosive growth. Some publishers view ebooks as a complete replacement for printed books, and others see ebooks and printed books peacefully co-existing. Regardless of the outcome, the transition from a market dominated by printed paper books to one consisting of a sizable amount of downloadable software will be a challenging one for publishers, since the decisions that they make about ebooks may potentially set long-lasting consumer expectations.

Large book publishers are justifiably correct to be concerned that their "single source" revenue streams are about to face increasing competition. As we mentioned before, other media industries have more diversified sources of income. But for large publishers, a disruption of the sales of printed books could upset their main revenue stream. Some publishers make an analogy to the music industry, saying that Apple convinced music labels to sell songs for 99 cents -- without regard to whether that price could sustain the music industry. So book publishers are understandably wary of deals that might undervalue their works. However, there may be a bit of a "sour grapes" attitude here, in that publishers might be reaching for unattainable pricing structures, and ultimately, consumers may balk at prices that are too high.

Fortunately for the book industry, there is still a little bit of time. Technology has not yet produced a "perfect"



replacement for a printed book. E-readers have batteries that can die, pages that aren't always viewable in sunlight, restrictions on how they can be shared, and upfront hardware costs that are a significant barrier to entry for many consumers. These downsides to ebooks are not going to be completely eliminated anytime soon, so paper-based books aren't dead just yet.

That said, ebook sales revenues have recently surpassed the $1 billion mark, and are projected to triple in coming years. That would make ebooks still only about a tenth the size of the overall US book market, but the rate of growth of ebooks is astounding and can not be ignored. Also, the economics of ebooks points towards a future where publishers should consider their ebook strategy as their primary focus -- with printed books becoming akin to selling keepsakes. The logic behind this assertion is that the profitability of printing physical books has been declining, and even with print-on-demand, there is no technology on the horizon that can make printing on paper as cheap as storing, copying and displaying digital bits. An entire library of books can be held in a single hand on some digital device, and the technology that enables vast amounts of information to be readily available is not going to disappear.

The technology that enables widespread distribution of ideas and knowledge should not be viewed in a negative light. While traditional publishing revenues may be negatively affected by the growing demand for ebooks with lower unit pricing, the solution is not to restrain the growth of digital works -- but to encourage even more growth. This is one of the rare cases where the practical answer to lower profit margins can actually be to increase volume. The risks associated with producing ebooks are dramatically lower than managing a printing run of a paper book. Some have suggested that publishers need to fully embrace digital publishing by flooding the market with ebook titles -- making revenue wherever it is possible and growing profit with immense scale from selling low-cost ebooks and creating a convenient marketplace for consumers with an all-they-can-eat buffet. That suggestion may be a Utopian vision, but a half-measure approach of restricting some titles to printed editions creates a marketplace with potentially limited consumption from consumers having to navigate complex purchasing barriers. The anecdotal examples of Amazon.com and Apple providing convenient "1-click" shopping experiences gives some evidence that consumers gravitate towards simple pricing and delivery methods. Book publishers are already experimenting with various forms of ebook pricing models, so business models are currently being tested, and it seems likely that ebooks will continue their rapid growth -- especially as some of the questions around business models start to settle under recognizable patterns of what works.

In the book industry, there has been a history of stability for publishers and a fairly continuous streak of an increasing production of book titles. There is already an enormous and growing supply of book titles being produced, more than ever before, and there are both risks and opportunities to go along with this trend. The risks lie mostly with traditional publishers that are reliant on a production process with high upfront costs, which require massive sales numbers for a break-even point. However, as the costs of production and

distribution decrease, there are plentiful opportunities for self-publishing and non-traditional publishing. Traditional publishers will need to adapt to a market that may no longer contain a short list of predictable best-selling titles, but the diversification of book categories should make it easier, not harder, to sell more and more book titles.

There are additional factors that also point to a bright future for books. On a very macroscopic level, the world population continues to grow, and literacy rates are generally increasing. (There are concerted efforts to spread literacy all over the globe, and some developing nations may be able to take advantage of the lower infrastructural costs of ebooks in innovative ways.) As disposable income levels tend to increase, there has also been a correlated increase in media consumption, which includes reading books among other activities. In the US, there are roughly 62.4 million avid readers, who spend more than 5 hours per week reading. Studies have found that library patrons tend to read more and also purchase more books, so the possibility that the availability of "free books" could end the commercial market for books has at least some experimental evidence to the contrary. In general, the world is headed towards generating more books and more ideas with easier and cheaper access to information and media. The path to get to a world of ubiquitous books may not be easy for every author or publisher, but the aggregate market looks quite promising.

Yes → it seems weird

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Section 3: The Music Market

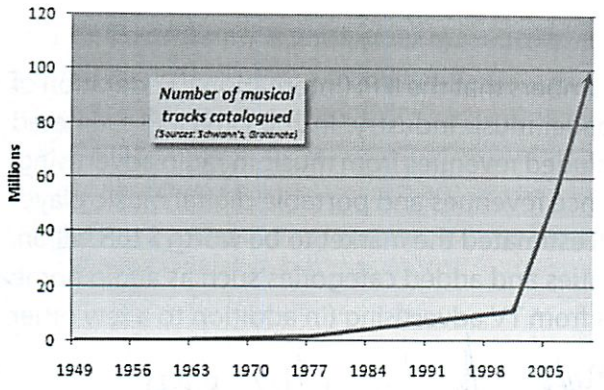
Defining the music industry is tricky -- it can be defined in several different ways and each method can leave out significant segments of the market. For instance, various music organizations and government statistics don't count (or vastly under-count) contributors to the music industry, such as self-employed artists who might work part-time or musicians working for non-profit activities like schools, churches or other cultural venues. There are also several independent music distributors that aren't counted in mainstream music industry statistics. Ultimately, music is a pervasive part of life, and the music industry is not a centralized, monolithic business. The music industry is made up of several music industries -- ranging from the major labels to piano teachers. If the book industry looked almost too vast to account for, then the music industry could seem even more daunting.

Unlike books, there isn't an analogous ISBN database for music tracks, but there are services like Gracenote, which provides a global media database for music (as well as videos, which we'll discuss separately). According to Gracenote's collected data, there are over 100 million songs from over 400,000 different artists. While that sounds like an impressive collection, it certainly doesn't contain every distinct musical composition ever recorded or composed, either. However, compared to similar musical databases, such as MusicBrainz or FreeDB, Gracenote's database is roughly an order of magnitude larger and has existed for over a decade. Gracenote also claims to cover a wide international distribution of music from over 200 countries in more than 80 languages.

year	number of tracks indexed by Gracenote (millions)
2001	11
2005	46
2006	55
2011	100

Over the last ten years, Gracenote has increased the number of music tracks in its database almost ten-fold, up from around 11 million songs in 2001. Now, that growth of the Gracenote database obviously includes a lot of older music that has only recently been indexed, so its expanding index doesn't exactly serve as the ideal proxy for the increasing rate of production of new music. However, the trend still clearly looks like the amount of music available to consumers is steadily growing -- with little sign of slowing down. More artists are undoubtedly making more music today, but the metrics for proving it aren't aggregated in a centralized way. Generally, independent musicians aren't necessarily registering their works as they perform them, but that shouldn't take away from the trend that it's easier than ever to record and

play music and that the production of music is rising.



There are other music production statistics, such as the number of new album releases, available from Nielsen SoundScan. Very roughly, tens of thousands of albums are released each year, based on Nielsen's figures. Nielsen reported approximately 38,000 new albums were released in 2003, and that number grew to nearly 80,000 new albums by 2007. (This number also ballooned to 106,000 in 2008, but then fell back to 75,000 by 2010.) However, this only covers the US market, and there is some concern that these Nielsen numbers omit a significant number of independent music releases. For example, CDBaby.com founder Derek Sivers estimated that his company (before he sold it in 2008) was producing music at 70,000 new albums in a year. More recently, TuneCore has argued that it produces a significant amount of music that Nielsen ignores -- an amount that could possibly double the size of the production of music in the US with 90,000 new releases in 2009. (On top of that, other independent music distributors are also not counted in Nielsen SoundScan's reports -- e.g., Jamendo, SoundClick.) Additionally, there are other problems with tracking the creation of albums. The whole concept of an "album" is eroding as the popularity of single tracks dominates the digital music market. (Tellingly, music industry trade groups have created statistics related to albums such as "track equivalent album" (TEA) numbers that attempt to count multiply-sold single tracks as the same as an album sale. Interestingly, album sales numbers could also be converted into single tracks sales, but that isn't a widely used metric.) Ultimately, though, the conclusion should still be that the production of music is growing and, at worst, being vastly under-counted.

year	overall sales transactions (million)
2000	845
2001	800
2002	693
2003	687
2004	848
2005	1,003
2006	1,198
2007	1,369
2008	1,513
2009	1,545
2010	1,507

On the consumption side, music is also being consumed at near record-setting levels. According to Nielsen SoundScan figures, the overall sale of music (including albums, singles, digital tracks, etc.) exceeded 1.5 billion transactions in 2010. That's up from 845 million transactions in 2000. These overall sales figures seem to rise and fall a bit over the years, but they don't necessarily drop during economic recessions.

Again, there are a few caveats with the Nielsen SoundScan sales data that should be mentioned. First of all, these are transactions without regard to the price of an item, so as we'll discuss later, this does not necessarily mean that consumers are spending more when they buy music. (In a move that will further complicate these metrics in the future, Nielsen has recently stated it will change its policy for counting transactions -- by completely ignoring transactions priced under $3.49.) Secondly, as we mentioned before, these numbers don't include a significant amount of independent music sales, including cash sales at local music events and concerts. Lastly, there have been accusations of SoundScan fraud by which these numbers are purposely manipulated in order for publishers to improve their sales reports and their rank on

Billboard charts. But presumably, this fraud does not constitute a majority of the music industry. Ultimately, while these transaction figures may be somewhat inaccurate, the trend of listeners consuming more and more music is still valid.

Another way of looking at the music industry is through the numbers that the IFPI (International Federation of the Phonographic Industry) publishes on what it calls "the broader music industry." In 2005, the IFPI estimated the global music industry to be worth $132 billion -- which included revenues from music in radio advertising, recorded music sales, musical instrument sales, live performance revenues and portable digital music player sales (among a few other income categories). By 2010, the IFPI estimated the market to be worth $168 billion, but it had also changed how it categorized some of the revenues and added categories such as audio home systems, music-related video game sales and music revenues from TV advertising (in addition to a few other categories).

year	the broader music industry (billions)
2005	$132
2006	$139
2007	$150
2008	$151.5
2009	$140
2010	$168

So according to these figures, music production and consumption look like they're generally healthy and growing. This shouldn't be too surprising, given that the means to produce music has become cheaper and easier over the years. In the 1990s, recording studios were able to charge "tens of thousands of dollars" for just an hour of access to their high-end audio equipment. Nowadays, extremely good-quality recording equipment for audio can be purchased by consumers (or pro-sumers), and home studios can produce digital musical recordings for a fraction of the cost that musicians used to spend on professional recordings. Perhaps the sound quality isn't as high as it used to be, but there's no mistaking that the costs to produce decent-sounding music have fallen dramatically. On the consumption side, music lovers are also enjoying the benefits of technological progress with better and cheaper ways to digitally store and replay music than ever before. The first portable MP3 players could hold several hundred songs, and that capacity has now grown to such ridiculously high levels that it's almost unnecessary to continue to advertise the storage capacity of digital music players.

But, despite the increasing production and consumption of music, the music industry doesn't seem rosy to everyone. The revenues from recorded music, such as CD sales, have been falling steadily over the last several years. This shouldn't come as a huge surprise, either. Historically, music has been sold on various kinds of physical media: vinyl records, 8-track cassettes, cassette tapes, CDs and other less well-known formats. Each of these formats has seen its peak, and each of them may someday cease to be sold entirely -- though that time has not come yet even for vinyl (as there are signs that vinyl records still have plenty of useful life left and their sales were up ~41% for 2011). Still, as the CD format wanes, the revenues from selling CD albums are diminishing, too. The problem, it seems, is that consumers are buying more single tracks now instead of entire albums and that consumers have an expectation that digital music tracks should be cheaper than purchasing plastic discs. The result is that the number of single digital tracks purchased is rising (initially with double-digit growth), but the revenues from selling single tracks isn't matching those of the peak years of selling CD albums. This trend was apparent in 2007, as the volume of physical recorded music was dropping (also by double digit percentages). The problem here is that the major labels have been relying on CD sales as their main income stream and are only just starting to diversify their revenue and business models. Interestingly,

Case Study:
Cee Lo Green: The New Music Success Story Is Not In Selling Music

Cee Lo Green is considered one of the most successful music artists on the scene today, but according to a recent case study in the NY Times, the sales for his actual album are on the low side for someone with such a high profile. However, the report also notes that this doesn't matter, because Green brought in over $20 million in 2011, with the "smallest slice of the pie" coming from actual music sales.

Green and his publisher/management team at Primary Wave, have realized that the modern music world has huge opportunities in changing the marketing equation, rather than focusing just on music sales. That is, the company has focused on building up Green as a brand, in and of himself, which has opened up all sorts of opportunities from sponsorship and endorsement deals to TV appearances and a hosting job on the TV show The Voice. He's also working on a theatrical show for Planet Hollywood.

The key recognition here is that, while the music is important, the real opportunity is in the brand built around the music. The more you can do with a brand, the more money can be made. The music still needs to be good (otherwise the brand will suffer), but then the music just becomes part of the tool to help promote the brand. And you can't "pirate" a musician's brand without the musician. In fact, the wider the music itself is spread, the more valuable the brand can become.

a former executive at Universal Music, Tim Renner, has said that the major labels had a chance to diversify their income streams when "they had the money and could have built the competence by buying concert agencies and merchandising companies." However, this hindsight isn't necessarily the way forward for the major music labels now.

At this point, it may be helpful to understand the state of the music industry and its history in order to get some perspective on its future. In the last century, there was a music recession that lasted from 1979-1985 in which album revenues fell by the same percentage as they did from 1999-2006, so this segment of music business is not immune to economic downturns, but it did recover from that slump by the mid-80s. Certainly, the music business has changed since then -- and as we pointed out, CDs are no longer the most convenient or desirable format for music listeners nowadays. (And it seems like unwarranted pessimism to think that the entire music industry won't recover from the end of the CD era.) Some popular artists, like Sting, have recognized that the CD era is ending and are even moving towards making music apps.

In the past, the success of an artist was measured when an album "went gold" -- meaning that it had sold more than 500,000 copies. By 1999, the RIAA had even created a Diamond award for an album (or single) that sold more than 10 million copies. However, since then, there has been much more fragmentation in the sale of music, and the number of albums with thousands or millions of copies sold may be declining. As the variety of music produced became wider and wider, the consumption of music hasn't remained confined to mega-artists in just a few genres. Adding to the music categories of pop, R&B, country and rock&roll, there has been an explosion of new genres and sub-genres: hiphop/rap, electronica, punk, emo, etc. Independent labels are producing an immense amount of diverse music, and listeners have a larger buffet to choose from than ever before. Unfortunately for the major labels, that doesn't necessarily create a market that favors them and the traditional process of releasing music in a highly-choreographed way. According to Nielsen data, the number of music tracks that sold over a million copies was "only" 36 in 2007, and during that same year, the number of tracks

that sold less than a hundred copies was well over 3 million. Of those songs that sold less than a hundred copies, about 968,000 sold just a single copy (and remember that Nielsen omits a large number of independent artists). This suggests that producing music is becoming much more of an experimental process where millions of songs can be tested out -- and that high-cost investments to produce an album may not be a sustainable strategy for a producer. It doesn't mean the production of music is dying or being reduced to unpaid amateurs, but that the traditional process of A&R is changing so that musicians aren't being picked by music executives for "rock-star" success. The layers between the artist and the fan, namely the number of middlemen, is on the decline. The evidence for this is in the growth of crowdfunded music projects from sites like KickStarter or SellaBand -- as well as the rise of ways for fans to more directly patronize their favorite artists.

Although the book industry has some time before e-readers really provide as much or more convenience than printed books, the music industry has no such luxury in the face of digital music. As soon as digital music was created, it gave listeners many more convenient ways to access music than formats like cassettes or CDs. However, the advantage that the music industry has over other creative industries is that music is a particularly pervasive product that can be associated with everything from soft drinks to cars to enterprise software/hardware. So the music industry has multiple opportunities to diversify its revenue streams.

While the music industry is generally associated with direct consumer spending, there are other ways for the music industry to diversify its revenue streams. The UK music industry's trade group BPI has even dubbed this expansion beyond consumer spending as "secondary

Case Study:
Jason Parker: One Working Musician Shows How People Will Pay

Jason Parker is a jazz musician in Seattle, who has been open about sharing just how he makes a living as "one working musician." He's tried various experiments, and been quite public about many of them. One case, involved testing out a "pay what you want" system. While "pay what you want" got plenty of attention back when Radiohead did it, many people have questioned if it really works for less-well-known artists. Parker had offered his existing albums for a $5 download price, but switched to $0 required with a "pay what you want" offering... and discovered that his sales shot up. Overnight, after making the the change, he got more sales than he had in the previous three or four months combined.

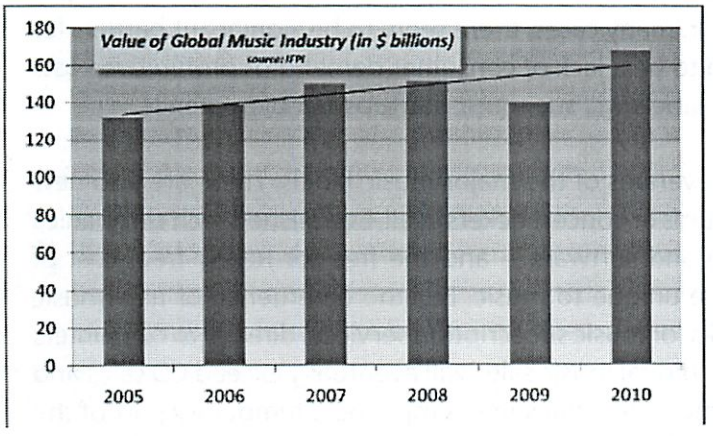
On top of that, despite the fact that you could download it for free, many people paid. He said that over a three day period, he made more money than any time since the first three days after the album was released. Since then, he's gone on to make all of his albums available under this system, and has seen much higher overall sales. And while the old price requirement was $5, he's now seeing an average price of $8.50 on those albums -- and he's still consistently selling more than he was before.

This wasn't just online. He also tried an experiment with doing a "pay what you want" shows and CDs, and again found that many, many people were willing to pay, and he was often able to earn much more than when he had a set price. His CDs used to sell for $10, but have averaged over $12 when he lets fans set the price. On a recent tour, he saw the average price shoot up to $14/CD. He noted that even the act of telling people that they could pay "whatever they think is fair" for the CD resulted in plenty of people just dropping a $20 bill into his hands.

Of course, he notes that much of this is dependent on continually connecting with fans. Excellent music doesn't hurt, either.

revenue," which includes all other incomes outside of physical music sales and digital music sales, such as advertising deals and licensing revenues from TV, movies and video games.

Additionally, live music and concerts have been doing pretty well as a business in recent years, in spite of the economy. From 1999 to 2009, concert ticket sales in the US tripled from $1.5 billion to $4.6 billion, according to Pollstar. Ticket prices and merchandise have become major sources of income for many popular rock stars like Lady Gaga, Madonna, Bruce Springsteen and for bands like U2. It's not easy to duplicate the experience of a live show, so concerts have become a source of revenue for musicians and aren't negatively affected by the availability of free downloadable music -- in fact, free music can encourage fans to attend live performances. There's actual scarcity (not artificial scarcity) for live music, but on the other hand, rock stars don't scale very well, either. So when Bono injured his back in 2010, the band stopped touring while he recovered. There really isn't a way to replicate rock stars like Bono, and many fans will do (or pay) almost anything to see them. Recognizing this, the major music labels (and some other promoters) have started signing more "360 deals" with artists to capture a fraction of the revenues of touring, merchandise and other non-traditional sales.



In other venues, more music is being discovered and sponsored by advertisers via contests like American Idol, The X Factor, The Voice and other popular TV shows with music-related themes. Several big retail chains (e.g., Starbucks) have also sponsored music events to help them better target specific demographic groups. There is even a market for using music to promote all kinds of consumer electronics. Apple is probably the most prominent example of a tech company that uses music to promote the sales of its products, but there are also other examples, such as Seagate, which has sponsored music to be freely given to consumers to promote its brand and products. Bundling products and services along with music has been done without formal deals for a long time, and music industry execs sometimes (wistfully) point out that telecom service providers have long benefited from delivering free music downloads and from the increased demand for internet bandwidth from digital music -- though telecoms have only recently started to license music and pay royalties for music services.

Despite the major music labels being slow to adapt to the digital world, there have been and are plenty of music startups trying to capitalize on digital music services. Algorithms may be replacing humans in some parts of discovering new talent (or at least discovering talent more cost-effectively). There are more than a few companies trying to datamine music metadata in order to serve better music recommendations to consumers or to predict which artists will be popular with target demographic groups. For example, Stockholm-based X5 creates popular classical music compilations and has carved out a profitable business from licensing existing music and making it easier to discover music that might be hard to find for some listeners. While not every music startup can become a success (and it isn't clear exactly how some music startups will succeed), there is clearly interest in investing in music businesses and music startups -- and that isn't an indicator of a dying industry.

In 2003, the IFPI noted there were less than 50 licensed music services in the world, and that number has grown to over 400 now. Some venture capitalists assert that the risk associated with music licensing isn't worth their investment, but others argue the risk in music is a myth. The rules of investing are never that cut and dried and, obviously, the founders of music startups believe that the music industry is an attractive market to target. MOG's CEO stated that "providing music content is a smaller-margin business" but that the "addressable market is massive," and that the second biggest leisure activity behind watching TV is listening to music. Still, VCs like David Pakman have a reasonable argument that music licensing costs for startups can be too much of a burden, based on the general observation that the major music labels tend to kill off music startups with exorbitant licensing fees. Pandora, which went public in 2011, almost met its end in 2007 due to newly-imposed licensing costs for every song it streamed, but it eventually settled with lower fees after two years of negotiations and efforts to lobby Congress to save its music service from more expensive royalties. Napster, the original digital music disruptor, was actually shut down by the Recording Industry Association of America via lawsuits and a court order (though Napster was recently bought by Rhapsody and may now completely cease to exist as its service is merged with Rhapsody). In many cases, there seem to be significant barriers for music startups, but the toughest barrier doesn't seem to be a lack of consumer demand or prohibitive costs for music production. It's more likely that major music labels will sue music startups out of existence.

Overall, the music industry isn't based solely on the revenues of the major music labels. There are also new entrants to this market who don't rely on selling CD albums or concert tickets at all. Established tech companies are looking to provide music along with advertising and software -- and the free (or nearly free) cost of distributing digital music offers opportunities that are unique to music. But the emergence of new music businesses doesn't mean that selling digital music tracks (or music subscription services) directly to consumers is a bad business at all. There are some predictions that digital music sales will eventually exceed CD sales and continue to grow, so the current slump for recorded music revenues may simply be a temporary part of the natural business cycle. So on top of selling digital tracks directly to consumers, there are also nascent business models for music that involve more business-to-business transactions, such as corporate sponsorship of music or music licensing for software development. Music licensing for online videos is a growing market as more and more people watch videos that are accompanied by music. Music in video games is another business that could become significant and generate massive revenues. As Amazon's VP of Movies and Music Bill Carr said, "We're not tied to any one business model. If we were, we'd still be only a book retailer." The music industry is actually positioned to have a wide variety of income streams as more and more people gain increasingly convenient ways to listen to music.

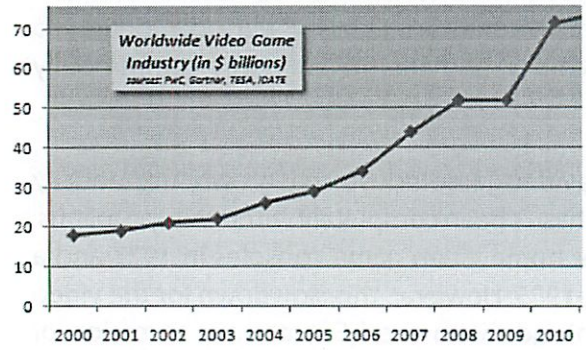
Section 4: The Video Game Market

The video game industry is by far the youngest of the creative arenas -- with the very earliest video games created in the late 1940s to early 1950s. The first commercial arcade video game, called *Computer Space*, was sold in 1971 with a manufacturing run producing 1,500 units of the coin-operated machines. Just one year later, Atari's *Pong* and Magnavox's *Odyssey* were competing to attract players to these game machines, and the industry was commercially established.

It's almost too obvious to say that the video game industry has grown substantially in the last 50 years, but the industry hasn't been completely without its problems. There was a minor market crash for home video game consoles in 1977 and a much larger contraction from 1983-1985. However, this slowdown for the video game industry did not actually coincide with the US economic recession of the early 1980s. During the early part of that recession, the video game game industry was growing wildly (at an ultimately unsustainable rate). In the US, the home market for game consoles had reported profits of around $3 billion in 1982, but it fell dramatically by 35% the following year. In 1983, there were numerous home video game consoles crowding the market, just when more general purpose home computers were becoming more affordable. Atari, the dominant game maker of the 80s, had peaked and overestimated the production run of its video game, *E.T. the Extra-Terrestrial,* which it had spent over $100 million to produce. Fortunately, the video game industry didn't end in the mid-1980s with a glut of lackluster games with which players were disappointed. The Nintendo Entertainment System appeared in the US in 1985, and the home video game market rebounded. Additionally, handheld game devices came out in the late 80s, and the beginnings of online games also started to become popular by the 1990s. And as technology improved, even more innovations were developed for games in the 21st century.

Recently, video game titles have done quite well, with some of the most popular ones generating revenues similar to record-setting movie box office hits. The latest *Call of Duty* release exceeded $1 billion in sales in just 16 days -- faster than *Avatar* hit the same milestone by one day. And despite the failure of E.T. as a video game, there have been several hit games based on movies. The Star Wars universe has spawned a long list of video game titles on many different gaming platforms over the years, from PCs to PlayStations to mobile phones and websites. However, it looks like EA spent nearly $100 million to develop the recent *Star Wars: The Old Republic* game, and there are some concerns that this game may need to modify its business model, or it may be the last of its kind as a big-budget massively multiplayer online (MMO) game that relies on monthly

subscribers. Other popular MMO games rely on a free-to-play business model that attract a large audience who then need to pay for in-game digital items that enhance gameplay. *Pottermore*, the MMO game based on the Harry Potter universe, is a nascent example of such an MMO game, since it is still in beta mode with over a million players testing out the game. Overall, video games are more popular than they have ever been, and game makers are adapting to their audiences and creating games with broad appeal and monetization strategies that are innovative and resilient.



Globally, the amount that consumers spend on video games -- for hardware, software and accessories -- has grown impressively (more than tripling!) from about $20 billion in 2000 to approximately $70 billion in 2011, according to various reports from PwC, Gartner and iDATE. In just North America, consumer spending on video games has more than doubled from about $10 billion in 2005 to over $25 billion in 2011, as reported by the Entertainment Software Association (ESA). Other reports state that the revenues for video games topped $33 billion in 2010, from over 3.2 billion game purchases. Undoubtedly, whichever numbers are used, the video game industry as a whole has performed extremely well over the last decade, and there are several reasons to believe this trend will continue for the foreseeable future.

The demographics of video game players has expanded greatly beyond the traditional core of boys and young men. Additionally, one survey notes that the number of video game players in the US has more than doubled from 56 million in 2008 to 135 million in 2011. Worldwide, the population of gamers has exploded from 250 million in 2008 to 1.5 billion in 2011. Carnegie Mellon Professor Jesse Schell observes, "There are games now for pretty much every age, every demographic." According to a 2010 survey of social gamers in the US and UK, more women are playing social games (eg. *Farmville* on Facebook) than men -- and the average age of these social gamers is over 40 years old. In fact, video games in general are being played by a more mature audience than the gamer stereotype might suggest, as the ESA reports that the average age of American gamers is 37 years old. (The ESA has also reported that 60% of all Americans over 6 years old play some kind of video game, and 29% of US gamers are over 50). Plenty of kids are playing video games, and the amount of time they're spending on video games has grown over the past several years as well -- from 26 minutes per day in 1999 to 1 hour and 13 minutes in 2009 -- according to surveys from the Kaiser Family Foundation. Kids are also increasingly playing video games on mobile devices, allowing them to squeeze more playing time into their busy days. Adult gamers play a sizable number of mobile games, too, with 55% of all US gamers playing on phones or handheld devices. So the video game industry has proven to be very nimble and able to follow players onto almost any consumer device and into nearly every aspect of consumers' lives.

The rapid pace of computer development makes it a bit difficult to track the growth of video games produced over the years. Video games are somewhat different from books or music or movies in that they require certain hardware -- and computer hardware can quickly become obsolete and hard to find. Entire game platforms can cease to be manufactured or sold, and if the proprietary hardware and software isn't preserved, it can be very difficult to try to port old video games to new machines. Still, there are some revivals of old games that have been brought to new gaming systems, but in general, the progress of video game development tends to leave

old games behind. In addition to games going out of style relatively frequently, since game platforms tend not to last much more than a decade, the number of game titles produced is complicated by duplication across platforms as some games are released separately on different consoles at slightly different times. One of the most popular platforms for games is Apple's iOS line of devices. Launched in July 2008, Apple's App Store had at least 6,000 games available to download by March 2009. A few months later in July 2009, the iOS platform had over 13,000 games. The next year in March 2010, there were over 30,000 games in the App Store, and some recent numbers put the number of games, just for Apple's iOS devices, at over 90,000 towards the end of 2011. So in just the last few years, the number of games on the iOS platform grew by about 1400%. Developers have been flocking to the iOS platform, and almost anyone can build fairly simple games for Apple's devices. And that is just a single platform, obviously there are other game consoles and PC game makers that have also produced many other games. Still, given that this proliferation of iOS games occurred during one of the worst recessions in history, there appears to be absolutely no slowdown in the creation of video games. However, as we mentioned earlier, when game development budgets rise to outrageously high levels, there may be cause for some concern for the genre of game that requires relatively high production costs. But as technology has made it easier and cheaper to develop games, it seems that the creation of video games continues to flourish and the demand for games is still quite healthy.

The game developer community has seen an enormous amount of change over the relatively brief history of the video game industry. Technological changes have been a constant in this industry and have prepared many developers to not rest on any laurels. The costs of game distribution have fallen steeply, just as they have for books, music and movies, but game makers haven't been so surprised by the economic and technological disruptions.

Case Study:
Valve: Infringement Is A Service Problem, Not A Legal Problem

Valve software is a video game developer and the maker of an amazingly popular digital distribution system for tons of video games, including many of the biggest games available today. Valve's CEO, Gabe Newell, has been adamant for many years that "piracy" was never a legal or enforcement problem, but merely a signal of customers being under-served. If anything, he has suggested, piracy is a form of market research of where there is demand that isn't being met.

A perfect example of this was in how Valve approached Russia. Many in the entertainment industry have declared Russia to be a lost cause, as infringement is rampant. However, Valve decided that it was a market opportunity and entered the Russian market with a convenient, well-priced offering. Newell noted that many in the industry warned that they'd never be able to make money in Russia. However, by offering a compelling, convenient and reasonably priced product, Russia has become Valve's second largest market, in terms of revenue, in Europe (just after Germany).

Furthermore, Valve has been quite active in experimenting with price. This has made the company realize that bad pricing is often a direct cause of infringement as well. In one famous experiment, Valve kept reducing the price of a game, and found that the total revenue they made increased significantly as the price decreased. A 10% decrease increased income by 35% -- which is a good start. But then Valve tried decreasing the price an astounding 75%, and saw revenue increase an amazing 1470%.

By offering a good product at a reasonable price, and realizing that infringement comes merely from customers who want something better, Valve has become a hugely successful behemoth in the video gaming market.

Case Study:
Minecraft:
Keep It Simple And Awesome

This simple-looking "open world" building game has become incredibly popular, and has made its creator, Markus Persson, quite wealthy at the same time. And it was all done with a focus on making the product worth buying. Persson has been quite clear that he doesn't mind people getting "pirated" copies of his work. He's said that the impetus is on him to add value to the game to make it worth buying. He has also noted that those who get infringing copies still help by advertising his game for free by word of mouth.

In the end, though, he's made it simple and inexpensive to support his efforts, and the fans of the game have supported him all along.

While the game was still in beta (and offered at a cheaper price), Persson's company was making well over $100,000 per day on sales, even though it was quite easy to get unauthorized copies. Persson himself, under the name "notch," has made a personal connection with tons of fans by interacting directly with Minecraft fans online. He recently publicly told fans that if they can't afford the game, he hopes they'll find an infringing copy, and then come back and pay him later. It seems to be working.

Persson has shown with Minecraft that as long as you connect with fans, make it easy to buy, and don't treat fans as criminals, those fans are more than willing to pay to support your work.

Digital distributors have taken advantage of the ability to circumvent selling games in brick and mortar stores -- with examples like the game downloading platform Steam, which started in 2003 and now has over 35 million registered users and a peak of 5 million concurrent users. Independent game developers are, more often than not, under pressure to keep costs low and to develop games in modest offices -- or messy bedroom apartments. Independent games provide quite a bit of variety to the game industry and can be just as popular as more mainstream games. For example, *Minecraft* has sold over 4 million copies and has over 16 million registered users, and the game was originally created by a single programmer working part-time on it. An attempt to ridicule the success of *Farmville*, the game *Cow Clicker*, was greeted by some unexpected genuine popularity and demonstrated that social games could be remarkably simple and yet addictive. There are nearly endless examples of a single developer creating a game that meets with modest success, so the opportunity for game developers appears to be quite rosy even for individuals with scant resources. Clearly, not every game succeeds in popularity or profits, but the innovation in the video game industry has endured several technological shifts and encourages creativity for attracting players and for creating games. Technology platforms and business models for the video game industry can come and go, but the demand for entertaining games remains.

The video game industry has developed several ways to monetize their products. Initially, coin-operated machines required players to keep inserting quarters for cathode-ray tube entertainment. Then, consumers went to stores to buy boxes of software on cartridges, diskettes, CDs/DVDs, etc. Now, downloadable game software is widely available. But in addition, there are various game rental services, casual games and free-to-play games, and ways to sell digital goods and more engaging in-game experiences. Physical merchandise is yet another option (selling items like *Angry Birds* plush toys), and social games are gaining popularity among a broad audience. Game makers are also selling virtual ads, and the practice has become a standard way for games to earn additional revenues. The diversification of revenue streams for the video game market has been amazingly innovative, and there have been predictions that every part of our lives will eventually be turned into a game. "Gamification," as the trend is called, has

cast a wide net over all human activities and could potentially encourage people to change their behavior to benefit the environment, to perform their jobs better, to lose weight, to buy products, or to perform almost any task imaginable. The use of video games to enrich our lives is nearly ubiquitous now, but there is still room for growth as games continue to expand into previously untapped demographics and niche markets. For example, some commercial enterprises are even developing games for employee training purposes, with Canon offering a game for its repair technicians to learn how to diagnose and fix its copying machines. In fact, various non-profit organizations are even soliciting for donations or raising awareness with games. The Dutch government even promoted a printing of commemorative coins with an online game.

Compared to other creative industries, the video game market is especially well positioned to take advantage of digital goods and the benefits of disruptive technologies. Game designers are adapting to a very wide audience and creating games that can entertain anyone with spare leisure time. Games are even encroaching into vocational education, so video games are no longer even restricted to leisure. As technology becomes cheaper and more widely affordable, it's unthinkable that more video games will not be included in the distribution of portable devices and common consumer electronics. Optimism for the video game industry appears to be well-founded, and as long as people desire to be entertained, it looks like video games will meet players wherever they are.

Case Study:
Humble Indie Bundle: Making People Want To Buy

Recently, a new project called the Humble Indie Bundle has taken the video gaming world by storm. Started as an experiment, where a few independent video game makers agreed to bundle up a few different games and allow people to buy them on a "name your own price" basis, it's now become a huge phenomenon with new bundles released at regular intervals -- each one seeming to earn more than the last, often now able to earn millions of dollars from a single bundle offering.

The projects actually offer a few different innovations, all of which seem to excite fans and keep them buying. The first is that it's a pure "pay what you want" system. But, making it more interesting is that they make statistics available for people to see -- including the top 10 prices paid. This has actually created a form of "advertising," with some paying large sums for the sake of having their names listed on the leader board. There are also additional stats around which platforms are use, with the open source Linux users always leading the way (showing that those who prefer free software are certainly happy to pay for things they feel are worthwhile).

Another innovation was allowing some portion of the money to go to charities -- and allowing the buyer to determine how the money ought to be allocated. Yes, the buyer gets to determine how much money goes to charities and to which charities. A recent study suggested that people pay more in a "pay what you want" offering if there's a charitable component, and Humble Indie Bundle's success has certainly shown that to be the case.

A third innovation is in making everything simple. Rather than force users to pay with a single system, users can choose from a variety of payment systems. On top of that there is no DRM and buyers can re-download games that they purchased, at a later date.

By making things simple, allowing the consumer to set the price, and by having a nice charitable component, the Humble Indie Bundle has become a very successful enterprise as a way to distribute and sell video games.

Changing the Debate

Unfortunately, it feels like much of the debate about copyright law over the past few decades has been based on claims about the state of an industry that simply don't match up to reality. Rather than decrying the state of the entertainment industry today and seeking new laws to protect certain aspects of the industry, we should be celebrating the growth and vitality of this vibrant part of our economy -- while consumers enjoy an amazing period of creativity.

We hope that this report will help shift the debate away from a focus on a narrow set of interests who have yet to take advantage of the new opportunities, and towards a more positive recognition of the wide-open possibilities presented by new technologies to create, promote, distribute, connect and monetize. We're living in a truly amazing time for the entertainment industry, and it's time that our national debate reflects that reality.

In a time of disruptive change, it is important that any regulatory efforts be supported by actual data. Instead of reflexively trying to protect traditional entertainment businesses, this research should provide a starting point for many to rethink some of the assumptions that have been made in the past about the state of the industry.

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NY Times: RIAA & MPAA Exaggerate Piracy Impact Stats... But We're Going To Assume They're True Anyway

from the *really?* dept

Overhype
by Mike Masnick
Tue, Feb 7th 2012
7:37am

Filed Under: eduardo porter, infringement, piracy, stats
Companies: mpaa, riaa

Permalink.

Sometimes you have to wonder if the NY Times is simply trying to hurt its own credibility. That's the only conclusion I can come to after reading the editorial by Eduardo Porter concerning the impact of unauthorized file sharing on the economics of the creative industries. While he admits that the RIAA and MPAA have "tended to exaggerate piracy's economic costs and threat to jobs," he then goes on to more or less repeat their arguments anyway. But the editorial is a classic case of how one misleads with statistics in a variety of ways. First, he shows the declines in recorded music sales and in-home movie sales, as if that's proof that the industry has been harmed by infringement. But, as we just recently showed with our ***The Sky Is Rising*** report, people are still spending more on entertainment -- it's just that some of the money has gone elsewhere.

And is it really any surprise at all that money has moved away from direct sales? It's not a piracy problem, it's a market adjustment thanks to the shift in the ability to buy singles in music, combined with the more efficient means of distribution, meaning that people no longer have to pay $20 for a CD to get the one or two songs they want. In the meantime, all of that money stayed in the *wider* industry (something that Porter completely ignores -- why?!?). The amount of money that's gone to concert tickets has gone way up. The amount of money from publishing? Up. The amount of money from licensing? Up. And here's the key part that Porter totally and completely ignores: those other areas of the business which are all up? Those are the areas that give much bigger cuts to actual artists. Artists rarely made any money from direct music sales in the past anyway. So, today more people are making more money from music than ever before... but you wouldn't know that from Porter's laughable analysis.

> *The top album in 1999, "Millennium" by the Backstreet Boys, sold 9.4 million copies. The top 2011 album, Adele's "21," sold 5.8 million.*

Two things on this: (1) again, while not everyone is buying the music, the money is still going to the artists -- in fact I'd bet that Adele made out nicely on the live side. (2) What Porter completely ignores is that *there's a lot more competition* today. So of course the top selling album sells less. Because unlike in 1999, not everyone is being pressured into listening to just one or two superstars, but we can all find our own niches. Some of us think this is a good thing. And then there's Porter,

> *Hollywood was hit by piracy somewhat later because movie files are bigger and require more Internet bandwidth. But home entertainment sales -- a huge chunk of movie revenues -- fell every year from 2004 to 2010.*

Perhaps we should stop here to mention that if Hollywood had had its way 30 years ago, *there would be no home movie business*. That's because the MPAA fought hard to ban the VCR as an evil tool of piracy -- just like torrent search engines and cyberlockers today. So, forgive me for not exactly caring when Hollywood whines about this particular bit of revenue going away.

But, once again, let's look at what really happened here. The key reason why the sales fell over that time was because as most people shifted online, the studios fought as hard as possible to keep movies from being sold online. Instead, they focused on a ridiculous, years-long fight over which would be the new *physical disc* standard: HD-DVD or Blu-ray. That fight is what killed sales more than anything else. People didn't want to buy because they didn't want to commit to a standard that only had some movies, and which might go away, leaving people stranded. By the time Blu-ray finally won, there was enough bandwidth that people just wanted their movies online... but Hollywood had no interest in delivering it. When Netflix finally was able to start offering some movies online, the massive success of that setup caused Hollywood to freak out, and spend the next few years trying to either limit Netflix (and any competitors) or jack up the prices on Netflix to make it hard for Netflix to make money without raising its own prices.

So, sorry, but the problems Hollywood has with home theater revenue? That's got nothing to do with piracy.

> *While box-office revenues have benefited from rising ticket prices, movie attendance has been steadily declining.*

I've seen this point made a few times, and all I can think is *who cares*? I mean, honestly, the whole point is to maximize revenue, not to maximize attendance. If the goal was to maximize attendance, then that's easy: just throw the doors open for free and you'll have maximum attendance. But, of course, that's not the goal. As for fewer people going, once again, we're talking about a market with much more competition, especially from the internet (legally!) and

video games.

> *Of course, not every pirated download displaces the sale of a book, album or movie. But when it comes to music, most economic studies have concluded that piracy accounts for the vast majority or even entirety of the sales decline.*

Sorry, but we have to call bull on this one. "Most" economic studies? I've never seen any. In this case, the study points to a recent study done by Stan Liebowitz, the entertainment industry's favorite economist. He's been making the same claims for years, and I've yet to see a single other economist agree with him. So I have no idea where this "most" comes from. Most of the economic evidence I've seen suggests otherwise.

From there, Porter just gets downright insulting. He dismisses all of the tons of new content being produced by claiming that it's just hobbyists, and somehow those people don't count:

> *Many Internet enthusiasts say that this change isn't unhealthy, and that the Web makes more ventures possible. They point out that while piracy may be cutting the pay of record label executives, it doesn't seem to have stopped musicians from making new music. According to Nielsen, 75,300 albums were released in 2010, 25 percent more than in 2005. But new releases that sold more than 1,000 copies fell to about 4,700 from 8,000 during that time. The wave of creation that is more hobby than profession has little to do with piracy, and would likely be unaffected by laws to curb illicit downloads.*

Yes almost no good evidence of this

This isn't just insulting, it's missing the point. First, Nielsen numbers are hardly complete, as Jeff Price at TuneCore constantly reminds the world (apparently Porter doesn't pay much attention to anyone outside of Nielsen). But, more importantly, Porter once again seems to assume that the only way to make money is through selling music. That's wrong.

> *But if professional musicians, movie directors and writers can't make money from their art, they will probably make less of it.*

Probably? The evidence says two things: (1) they're actually making more money -- perhaps just not from "selling their art," and (2) they seem to be making more of it, not less. Instead of Porter's "probably" why don't we go with reality? *Independent producers say piracy is already making it harder to raise money for small and mid-budget movies.* And yet, as was *just* reported in the NY Times (the paper Porter writes for), new technologies and services are popping up every day to help finance small and mid-budget movies... such as Kickstarter.

The big problem with Porter's analysis is he assumes a static world in which no one can change or adapt. What we've seen, out here in reality, is that content creators *are adapting*. So, sure, as we've said, infringement will hurt your business *if you're stupid and don't adapt*. But if you actually take the time to understand what the market wants, and then embrace your fans, the artists who do that are finding that they're making *more money* than they were before. So, yes, piracy harms you: if you're stupid. That's no reason to change the law.

Wait ? penalties do anything

or making it harder piracy

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Read 10/23

SOPA: How much does online piracy really cost the economy?

By Brad Plumer, Published: January 5, 2012

The Stop Online Piracy Act (SOPA) has been widely panned as a dubious idea, uniting both liberals and conservatives in opposition. But doesn't the bill, at the very least, identify a serious problem? Isn't online piracy inflicting all sorts of damage on the U.S. economy? That's the argument. But the actual numbers are surprisingly hard to pin down.

John Vizcaino

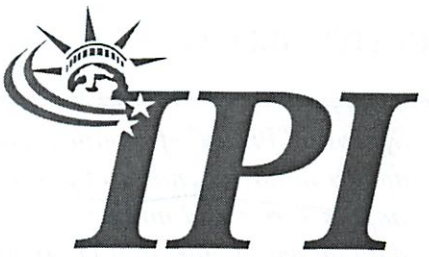
Reuters

For example, the Motion Picture Association of America estimates that piracy costs the U.S. movie industry some $20.5 billion per year. But Julian Sanchez scrutinizes these figures and finds they don't hold up. After you remove all the double-counting and restrict the focus solely to American users — which is the only thing SOPA addresses, anyway — then, he notes, those industry-estimated losses come to just $446 million per year ("roughly the amount grossed globally by *Alvin and the Chipmunks: The Squeakquel*").

And even those numbers might not be right. The Government Accountability Office has raised further questions and concerns about the copyright industry's claims of losses here. Part of the difficulty here is that it's not always easy to tally up the true costs of piracy. For instance, if a person illegally downloads a movie or song that he never would've downloaded otherwise, then it's not clear what the losses actually amount to (the benefits, by contrast, are fairly clear).

More to the point, as the GAO observes, just because the movie and record industries lose a certain amount of money from online piracy in the United States doesn't mean the economy *as a whole* suffers by that exact same amount — particularly if the money that would have been spent on those pirated movies and albums just ends up getting spent elsewhere. Exactly!

Now, none of that is to suggest that online piracy is a non-issue. And these are hardly the strongest arguments against SOPA — the more substantive concerns are that the bill would impinge on free speech, impose an undue burden on companies like Google, and potentially fracture the architecture of the Internet. Still, it's worth getting a better sense of the actual scale of the relevant problem here.



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Read 10/23

The True Cost of Sound Recording Piracy to the U.S. Economy

By Stephen E. Siwek

POLICY REPORT 188

AUGUST 2007

Executive Summary

Synopsis: "Piracy" of recorded music costs the U.S. sound recording industries billions of dollars in lost revenue and profits. These losses, however, represent only a fraction of the impact of recorded music piracy on the U.S. economy as a whole. Combining the latest data on worldwide piracy of recorded music with multipliers from a well established U.S. government model, this study concludes that recorded music piracy costs American workers significant losses in jobs and earnings, and governments substantial lost tax revenue.

There is little debate that U.S. sound recordings are "pirated" in vast numbers in the U.S. and in international markets. Piracy of these works harms the intellectual property owner, who loses the revenue that would have been gained had the legitimate recording been purchased. These "direct" losses, however, represent only part of the story. Piracy also causes significant and measurable harm to the "upstream" suppliers and "downstream" purchasers who also would have benefited from the sale of legitimate, copyright protected sound recordings. Indeed, the harms that flow from pirate activities produce a cascading effect throughout the economy as a whole. These harms include lost output, lost earnings, lost jobs and lost tax revenues.

In order to alert policy makers to the magnitude of these ripple effects, this paper estimates the true impact of piracy in the sound recording industry on the overall U.S. economy. Using the RIMS II mathematical model maintained by the U.S. Bureau of Economic Analysis (BEA), this study estimates the impact of piracy in the sound recording business on the U.S. economy as a whole. The effects of music piracy on the U.S. economy are quantified in terms of lost economic output, jobs, employee earnings and tax revenue.

The true cost of sound recording piracy far exceeds its impact on U.S. producers and distributors of sound recordings. Piracy harms not only the owners of intellectual property but also U.S. consumers and taxpayers.

Specifically, the analysis demonstrates that:

a. As a consequence of global and U.S.-based piracy of sound recordings, the U.S. economy loses $12.5 billion in total output annually. Output includes revenue and related measures of economic performance.

b. As a result of sound recording piracy, the U.S. economy loses 71,060 jobs. Of this amount, 26,860 jobs would have been added in the sound recording industry or in downstream retail industries, while 44,200 jobs would have been added in other U.S. industries.

c. Because of sound recording piracy, U.S. workers lose $2.7 billion in earnings annually. Of this total, $1.1 billion would have been earned by workers in the sound recording industry or in downstream retail industries while $1.6 billion would have been earned by workers in other U.S. industries.

d. As a consequence of piracy, U.S. federal, state and local governments lose a minimum of $422 million in tax revenues annually. Of this amount, $291 million represents lost personal income taxes while $131 million is lost corporate income and production taxes.

As policy makers turn their attention to the viability of the U.S. economy in the global marketplace, it seems obvious that the problem of music piracy should be afforded a high place on the policy agenda in coming years.

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The True Cost of Sound Recording Piracy to the U.S. Economy

by Stephen E. Siwek

Introduction

Widespread piracy of copyright protected works through both physical and electronic media harms the companies that create and sell these products. Since many of these companies are U.S. firms, the harm of global piracy falls disproportionately on U.S. companies, their stockholders and employees, and on U.S. federal and state governments.

The U.S. companies that are most directly affected by piracy have long sought to increase understanding of the scope of this problem and to encourage government-wide efforts to address this threat. However, until recently, there has been little reliable economic information available to U.S. policymakers to assist them in balancing the importance of enforcing intellectual property rights as against other priorities. In order to address this issue, in 2005, I published a study entitled *Engines of Growth: Economic Contributions of the U.S. Intellectual Property Industries.*[1] In that study, I analyzed the contributions to the U.S. economy of the U.S. "IP industries" – industries that rely most heavily on copyright or patent protection to generate revenue, employ and compensate workers and contribute to real growth. The study found, among other things, that these IP industries are the most important growth drivers in the U.S. economy, contributing nearly 40% of the growth achieved by all U.S. private industry and nearly 60% of the growth of U.S. exportable products. It also found that the IP industries were responsible for one-fifth of the total U.S. private industry's contribution to GDP and two-fifths of the contribution of U.S. exportable products and services to GDP.

Subsequently, in September 2006, the Institute for Policy Innovation (IPI) published my new study entitled, "*The True Cost of Motion Picture Piracy to the U.S. Economy.*"[2] In that study, (hereinafter, the "*Motion Picture Piracy*" study) I measured the true cost of motion picture piracy to the U.S. economy as a whole. I concluded that global piracy of motion pictures resulted in $20.5 billion annually in lost output among all U.S. industries, $5.5 billion annually in lost earnings for all U.S. workers and 141,030 U.S. jobs that would otherwise have been created. In addition, as a result of piracy, governments at the federal, state and local levels are deprived of at least $857 million in tax revenue each year.

The *Motion Picture Piracy* study was an initial effort to measure the economic impact of motion picture piracy on the U.S. economy as a whole.

In the current study, the basic methodology and approach that was pioneered in the *Motion Picture Piracy* study will be applied to another industry—the U.S. Sound Recording industry. In this analysis, as in the motion picture study, estimates of sound recording industry losses to piracy will be used in conjunction with industry-specific multipliers from the U.S. Bureau of Economic Analysis to derive economy-wide

losses in output, employee earnings and jobs. In addition, these estimates, in conjunction with other data, will be used to derive estimates of the tax receipts that are lost as a result of sound recording piracy.

The analysis of the impact of sound recording piracy that is presented here will also serve as an essential input in yet another upcoming IPI study that will consider the *combined* effects of piracy in four separate copyright-dependent industries. The industries to be included in this broader effort will include the U.S. sound recording industry as well as the U.S. motion picture, business and entertainment software and video games industries.

I. Background: Measuring the Harm Caused by Sound Recording Piracy

U.S. Sound Recording Industries

In this study, the principal focus of analysis will be the U.S. Sound Recording Industries that are identified in the North American Industry Classification System as a four-digit industry group - NAICS 5122.[3] This industry group "comprises establishments primarily engaged in

- producing and distributing musical recordings,
- in publishing music,
- or in providing sound recording and related services."[4]

NAICS 5122 is part of the broader Motion Picture and Sound Recording Industry sub sector (NAICS 512) which is, in turn, part of the "Information" industry sector (NAICS 51).

According to the U.S. Census Bureau, the "employer firms" in NAICS 5122 generated revenue of $18.7 billion in 2005.[5] This total represented an increase of $2.2 billion or 13.7% over 2004. In that year, (2004), the Census Bureau also found that the Sound Recording Industries had 25,101 paid employees in 3,405 establishments.[6] These employees received a total payroll of $1.965 billion.

Within the four-digit Sound Recording Industries group, the largest five-digit NAICS industry is NAICS 51222-integrated record production and distribution. In 2005, the NAICS 51222 industry reported revenues of $12.866 billion. Of this total, 87 percent or $11.242 billion was generated through the sale of recordings.[7] In 2005, the NAICS 51222 industry reported total expenses of $11.122 billion. This total represented an increase of 24.6% or $2.194 billion over total expenses in 2004.[8] Personnel costs alone rose from $1.631 billion in 2004 to $2.173 billion in 2005.

U.S. Sound Recording Retail Trade

The full impact of sound recording piracy is not limited to the U.S. companies that create and sell copy protected music products. In particular, U.S. retailers of compact disks face reduced sales and lower profits as a result of pirate activities that occur in the United States. The International Federation of the Phonograph Industry (IFPI) has reported that in 2005, U.S. sales of recorded music generated record company "trade" revenues of $7.012 billion.[9] At the retail level, however, these same sales of recorded music in the U.S. cost consumers $12.270 billion. Clearly, in the U.S., recorded music piracy hurts both producers and retailers of recorded music.

Our Interlocking Economy

In fact, the impact of music piracy flows throughout the U.S. economy. Piracy in one segment of the economy can affect other industries because the economy is an "interlocking" system. Changes in supply or demand in one industry can and do affect supply and demand in other industries.

For example, assume that personal watercraft suddenly become very popular and shortages develop. In this situation, the price of personal watercraft will rise and so will the profits of the manufacturers. However, in order to continue to earn these higher profits, the manufacturers will have to make more personal watercraft. In the process, they will buy, among other things, more waterproof seats from seat manufacturers.

Of course, it doesn't stop there. In order to produce more seats, the seat manufacturers will have to buy more plastic and more padding. And the plastic and padding manufacturers will have to buy more of the particular materials that they need.

The cascade does not even end with the suppliers of personal watercraft manufacturers but continues downstream as well. The retail sellers of personal watercraft who buy from the manufacturers will also be able to earn more money by raising prices or by increasing volume. These kinds of interactions among industries are captured in input-output tables. Input-output tables measure the interrelationships that exist among different industries. With this information, one can estimate what impact a specific change in one industry will have on other industries.

What is true for personal watercraft is equally true for recorded music. If the revenue generated by making and selling recorded music increases (In this case, not by higher demand but by a decrease in piracy), record companies will make more recordings, invest in higher quality, broader distribution or marketing, or some combination of these activities in order to capture more profits. (See sidebar "A Decrease In Piracy Expands Production").

A Decrease in Piracy Expands Production

In this study, we estimate the gains to U.S. industries, to U.S. workers and to U.S. national, state and local governments that would occur absent piracy of recorded music. This analysis can be viewed either as an estimate of the *damages* sustained by the U.S. as a result of music piracy in the past year or as an estimate of the *gains* that could be realized in the future if global piracy were substantially curtailed.

This analysis begins with an assessment of the *increased demand* for legitimate U.S. music products that would be observed throughout the world if piracy did not exist. The increased demand for U.S. recorded music is quantified on a market-by-market basis using a variety of industry sources including the most recent IFPI report on the global recording industry.[1] This increased demand is then adjusted to reflect an assumed response, by former consumers of pirated works, to higher legitimate prices.

From the *supply side* perspective, we assume that the market for the production and distribution of recorded music would remain intensely competitive as it is today. We see little reason to assume, in the alternative that absent piracy, producers of recorded music would (or even could) cease to compete with each other.

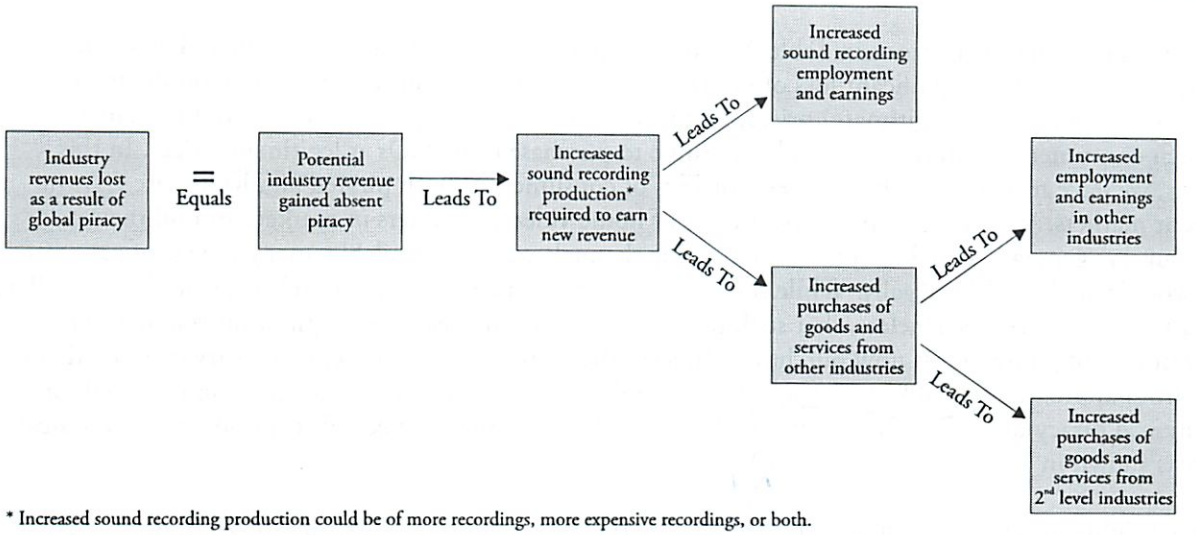
We also assume that with a larger potential market for legitimate music products, profit seeking music producers and distributors could readily expand their development efforts to market the music of new artists or to increase the development and marketing budgets for existing artists or both. The music industry does not face many of the production bottlenecks that might limit the ability of other industries to satisfy increased demand for their products. More importantly, music producers would likely seek to exploit the expansion of the market for legitimate U.S. sound recordings, not only by creating more recordings but also by increasing the audience appeal of each recording through the use of more expensive inputs.

Indeed, as a general matter, we would expect profit-seeking music producers to spend more on creative inputs the larger the potential market for the music. Higher quality inputs, in turn should increase the producer's share of revenue from the market and increased share is more valuable in a larger market. Because of these considerations, music producers could (and as competitors, clearly would) attempt to meet the increased demand for legitimate U.S. recordings through a variety of strategies. These strategies might involve the release of more recordings or more expensive recordings or both. Precisely because of this flexibility, however, there is little reason to believe that supply side constraints would inhibit the U.S. sound recording industries from satisfying even a significant increase in the demand for its products.

[1] International Federation of Phonographic Industry (IFPI), *2006 Global Recording Industry in Numbers*.

not payable extra $ would go to more art — kinda

FIGURE 1 IMPACT OF PIRACY THROUGHOUT THE ECONOMY



* Increased sound recording production could be of more recordings, more expensive recordings, or both.

II. METHODOLOGY: PIRACY LOSS ESTIMATES FOR THE SOUND RECORDING INDUSTRY

GLOBAL LOSSES FROM PHYSICAL PIRACY

In the *Motion Picture Piracy* study, estimates of the global losses to the U.S. industry from motion picture piracy were available from the extensive piracy survey analysis conducted for the Motion Picture Association of America by L.E.K. Consulting. At this writing, no such comprehensive analysis of piracy exists for the recorded music industry. However, many of the underlying building blocks of such an analysis do exist in a variety of industry and trade publications. For this study, the most important of these sources was *2006 Global Recording Industry in Numbers* which is published by the International Federation of the Phonogram Industry (IFPI).

The IFPI report contains detailed, country-by-country information on actual sales of recorded music by year and as between physical and digital media. The report also establishes two separate measures of value for the recorded music that is sold in each country. These measures are record company "trade" value and the "retail" value paid by the consumer for the purchase of a music product. The IFPI report shows, by country, the number of physical units sold by medium (i.e. CD, DVD etc.) and the number of single units sold (i.e. songs) by physical and digital media. Finally, the IFPI report publishes an estimate of the physical piracy rate for each market analyzed.[10] Country-by-country data from the IFPI 2006 report are reproduced in Appendix A.

In this report, physical piracy refers to manufactured pirate CDs, copied CDs and manufactured or copied music video DVDs. The calculations used to derive worldwide losses from physical piracy of recorded music are shown in Table 1. The calculations begin with an estimate of the losses sustained by the worldwide recorded music industry from physical piracy. As set forth in Appendix A, the IFPI provides estimates of the physical piracy rates experienced in all major markets of the world. These calculations are used, in conjunction with legitimate sales quantities to derive the number of pirate units sold by market. As shown in Table A-3 of Appendix A, this quantity was 1.398 billion units in 2005. If these units could have been sold at the average retail price that prevailed in each market, the global industry would have earned an additional $6.460 billion (Table A-3).

Substitution of Legitimate Product for Pirate Product — Physical Piracy

However, unlike the calculations in Table A-3, in this analysis it is conservatively assumed that absent piracy, there would be a significant loss of pirate quantities as former consumers of those products would likely have to pay higher (legitimate) prices. Unfortunately, there is no precise measure of the degree to which consumers of pirated CD would continue to purchase those CDs at legitimate prices. In this analysis, we have reviewed results of several surveys of consumers of both pirated and legitimate CDs in different markets. We have also reviewed surveys of home video consumers in markets around the world. These surveys generally conclude that if counterfeit channels were not available, many buyers of counterfeit CDs would purchase CDs legally. While the degree to which these legitimate purchases would occur differs by market, it appears nevertheless, that such purchases would comprise a very significant fraction of the total number of pirated CDs now purchased. Indeed, the "substitution" rates cited by survey respondents range from approximately 40% to 70%.[11] In this study, the weighted average substitution rate used for the physical piracy of recorded music is 65.7%. A calculation of the implied substitution rate for physical piracy is shown in Table 2.

With a weighted average substitution rate of 65.7%, the estimated global loss from physical piracy falls from $6.460 billion (100% substitution at retail prices) to $4.068 billion. (See Table 1) This value must

Table 1 Sound Recording Industry Direct Losses Due to Piracy

Sound Recording Industries: NAICS 512200 [a] (Part One)

Part One: Worldwide Losses of U.S. Sound Production/Distribution & Related Industries.

		Billions of U.S. Dollars
Global Loss to U.S. Industry from Physical Piracy		
Estimated Global Losses at Trade Value [b]	$4.068	$4.068
Assumed Net Return to Vendor [c]	60.7%	
U.S. Share of Pirated Physical Works [d]	66%	
Estimated Physical Piracy Losses to U.S. Integrated Firms		**$1.630**
Global Loss to US Industry from Download Piracy		
Global Illegal Songs Downloaded (in millions) [e]	20,000	
Illegal Downloads of U.S. Repertiore (in millions)	13,200	
Lost Legitimate Unit Sales (in millions) (20%) [f]	2,640	
Unit P=$2.31 * Net Return [g]	$1.403	
Estimated Download Piracy Losses to U.S. Integrated Firms		**$3.703**
Sub-Total Piracy Losses (Part One)		**$5.333**

[a] NAICS 512200 - Sound Recording Industries includes production, distribution, music publishing, recording, producing and promoting of sound recordings.
[b] See Appendix A - IFPI Data, Table A-4.
[c] Equals world average trade price ($8.58) divided by world average retail price ($14.13). See Appendix A - IFPI Data, Table A-1, A-2.
[d] Greater investment in U.S. product increases the likelihood that U.S. product will be pirated more frequently than domestic product. Add 10% to assumed split of 60% U.S. product.
[e] Based on IFPI 2006 Global Recording Industry in Numbers, page 9.
[f] Based on review of published articles on the effects of music downloading.
[g] For legitimate downloads (90%), sales at $0.99 per song. For legitimate CDs (10%), average retail price. See Table 2.

TABLE 2 ASSUMPTIONS: SUBSTITUTION RATES AND PRICING

Assumptions for the Substitution of Legitimate Physical Product for Pirated Physical Product.

1. No. of pirated units at **trade price**. See Appendix A, Table A-4

   $4,068.15 *divided by* 2.91 *equals* 1,398

2. No. of pirated units at **retail price** if revenue is **held constant**. Table A-5

   $4,068.15 *divided by* 4.43 *equals* 918

3. Implied reduction in number of pirate units sold absent piracy 480

4. Implied substitution rate for legitimate product **65.7%**

Assumptions for the Pricing of Legitimate On-Line and Physical Product that would Substitute for Pirate Downloads of Recorded Music.

1. Average Price for a Legitimate Downloaded Song as per IFPI:

   Assume Legitimate World and U.S. on-line price of $0.99 per downloaded song. $0.99

2. Average Retail Price for Legitimate CD as per IFPI:

   World Average Price $14.13

   U.S. Average Price $15.64

3. Weighted Average "But-For" Price Absent Piracy [a]

	World Weight	Price Sub-Total	U.S. Weight	Price Sub-Total
Download	90%	$0.89	90%	$0.89
CD	10%	$1.41	10%	$1.56
	World Price	**$2.30**	**U.S. Price**	**$2.46**

[a] Absent piracy, experienced downloaders would be unlikely to purchase bundled CDs when they could legally download individual songs. Assume 90% of download substitution purchases go to legitimate on-line music services.

then be divided between the music retailer and the music producer. For this purpose, we again use the IFPI data to derive the weighted average world trade price ($8.58) and the weighted average world retail price ($14.13).[12] The ratio of the trade price average to the retail price (60.7%) is used for this purpose. (See Table 1)

Finally, we must determine the share of piracy losses that represents U.S. recorded music. In its Special 301 filings with the U.S. Trade Representative's office, the U.S. industry develops an "estimate of the local pirate market that is classified international repertoire and takes, on average, 60% of this as U.S. repertoire. This figure is based on legitimate market repertoire data."[13] In this analysis, we increase this percentage by 10% (to 66%) to reflect the belief that greater investment in the development and marketing of U.S. product (relative to non-U.S. product) increases the likelihood that U.S. product will be pirate.

Based on these assumptions, the total loss to U.S. sound recording producers from physical piracy is estimated as $1.630 billion. (See Table 1)

GLOBAL LOSSES FROM DOWNLOAD PIRACY

The U.S. recorded music industries sustain losses not only from physical piracy but also increasingly from illegal downloads of recorded music. Many of these songs are downloaded from peer-to-peer (P2P) networks whose users increasingly are responsible for recent declines in the number of legitimate CD

sales in the U.S. IFPI estimates that in 2005, 20 billion songs were illegally downloaded worldwide.[14] In this report, the calculations used to derive the recorded music industries' losses from download piracy are provided in Table 1.

Substitution of Legitimate Product for Pirated Product — Download Piracy

As reported in Table 1, the calculation begins with the IFPI estimate of 20 billion illegal downloads worldwide. For reasons set forth above in connection with the physical piracy estimates, it is further assumed that 66% of all illegal downloads represent downloads of U.S. recorded music. It is then assumed that only 20% (1 in 5) of these downloaded songs would have been purchased legitimately if piracy did not exist.[15]

For the 20% of downloaded U.S. songs that, absent piracy would be purchased legitimately, it is then necessary to derive the legitimate price that these consumers (who formerly downloaded recorded music illegally) would now pay. Since these consumers are all familiar with the Internet and capable of downloading computer files, it is reasonable to assume that most (but not all) of their substitution efforts would occur in the form of legal downloads from legitimate web sites.

For these downloads, we assume a legitimate price of $0.99 per song. (See Table 2) We further assume that 90% of these songs would ultimately be acquired through legitimate music downloads while the remaining 10% of songs would be purchased on a legitimate CD.[16] The weighted average legitimate price used for worldwide downloads of U.S. music is $2.30. (See Table 2)

As shown in Table 1, the legitimate price of $2.30 times the net return to the record producer (60.72%) times the total estimated song substitutions (2.640 billion) yields total download piracy losses to U.S. firms of $3.703 billion. When combined with the physical piracy losses of $1.630 billion, the total piracy loss to the sound recording industries from global piracy equals $5.333 billion. (See Table 1)

U.S. Retail Losses from Sound Recording Piracy

As noted earlier, piracy losses to U.S. industries are not limited to the losses sustained by U.S. producers of recorded music. Recorded music is sold through a wide variety of retail distribution channels and U.S.-based music piracy reduces those legitimate sales. Calculations in support of the piracy losses estimates for U.S. retail industries are provided in Table 3.

The calculations in Table 3 follow on from the calculations provided in Tables 1 and 2. As shown in Table 3, U.S. retail sales and profits are affected by both physical and download piracy. The physical piracy loss estimate begins with the U.S. losses from physical piracy that occur within the United States. As shown in Table 3, this value is $335 million as per IFPI. (See Table A-4, Appendix A). This value is then adjusted to reflect only the retail portion of these losses. The net U.S. retail loss from physical piracy is shown as $151 million. (Table 3)

The download piracy losses to U.S. retailers are calculated using an assumed value of 4.0 billion illegal downloaded songs in the U.S. in 2005. This value (based primarily on a review of confidential sources) implies that of the 20 billion illegal songs downloaded globally in 2005, some 20% or 4 billion were downloaded to U.S. consumers.

Again assuming a 20% substitution rate, these 4 billion downloaded songs translate into 800 million lost legitimate sales. This figure is then adjusted for the weighted average price of legitimate purchases for download consumers and by the retail margin. These calculations lead to download piracy losses to U.S. retailers of $890 million and total U.S. retail losses (from both download and physical piracy) of $1.041 billion. See Table 3.

TABLE 3 SOUND RECORDING RETAIL TRADE LOSSES DUE TO PIRACY

U.S. Sound Recording Industries, Retail Trade: NAICS 44-45 [a]

Part Two: U.S. Losses of U.S. Retail industries that sell or rent sound recording products.

Losses to U.S. Retail Industires from U.S. piracy of			Billions of U.S. Dollars
Physical	**Sound Recording Products**		
	U.S. Losses in U.S. Market at Trade Value	$0.335	
	Assumed Net Return to U.S. Retail [b]	45.2%	
	Total Losses to U.S. Retail Industries		**$0.151**
Downloaded	**Sound Recording Products**		
	Illegal Downloaded Songs in U.S. (millions) [c]	4,000	
	Lost legitimate unit sales (millions) (20.0%)	800	
	Unit P = $2.46 * (.452)	$1.112	
	Total Losses to U.S. Retail Industries		**$0.890**
	Sub-Total Piracy Losses (Part Two)		**$1.041**

[a] NAICS 44-45 includes all industries engaged in retailing merchandise, generally without transformation, and rendering services to the sale of merchandise.

[b] Assumes US Retail Price of $15.64 and U.S. Trade Value Price of $8.57. See Appendix A.

[c] In March 2007, NPD group reported 3.4 billion song downloads in the U.S. for 2005 and 6.0 billion song downloads in the U.S. for 2006. However, in 2006, the total number of U.S. Households downloading via P2P networks increased by only 8% in 2006. If the number of illegal downloads per P2P household in 2006 had also applied to 2005, there would have been more than 4.6 billion illegal downloads in the U.S. in 2005. In this analysis we adopt a figure of 4.0 billion illegal songs downloaded in the U.S. in 2005.

THE APPLICABLE RIMS II MULTIPLIERS — PRODUCTION

The recording industry production and retail losses calculated above reveal only the direct impact of piracy on the sound recording industry and its retail trade. To derive and estimate additional losses throughout the economy, we use multipliers from the RIMS II model.

The RIMS II model contains five types of multipliers for many U.S. industries. For each industry, there are three "Final Demand" multipliers for output, earnings, and employment and two "Direct- Effect" multipliers for "direct" earnings and employment. In this analysis, the Final Demand multipliers tell us the total effects of sound recording piracy on the output, earnings, and employment of all U.S. industries. The Direct Effects multipliers tell us the specific effects of piracy on the sound recording industries themselves. This analysis uses all five types of multipliers.

The RIMS II model defines industries based on the North American Industry Classification System (NAICS), a classification system maintained by the U.S. Government that tracks increasing levels of specialty within each classification. As noted earlier in this report, the U.S. Sound Recording Industries are classified in NAICS 5122.

A total of five multipliers were acquired from the Bureau of Economic Analysis for NAICS 5122. The three Final Demand multipliers are designed to estimate the changes in total economic output, total earnings (of workers), and total employment that result from a specified change in Final Demand. The two Direct Effect multipliers are used to derive the changes in earnings and employment levels only for workers

who are directly employed in the industry under study. In Table 4, all five multipliers are reported for the states of California, New York, Tennessee, Florida and Texas. A detailed discussion of the reasons for this determination is provided in Appendix B.

TABLE 4 MULTIPLIERS FOR U.S. SOUND RECORDING INDUSTRIES Part One

U.S. Sound Recording Industries: NAICS 512200		
Final Demand Multipliers for Primary States [a]		
Output:		
	California	2.0156
	New York	1.8183
	Tennessee	1.9436
	Florida	1.7499
	Texas	1.9659
Earnings:		
	California	0.4250
	New York	0.3190
	Tennessee	0.3827
	Florida	0.3545
	Texas	0.3999
Employment:		
	California	9.6
	New York	6.7
	Tennessee	11.0
	Florida	10.3
	Texas	9.7
Direct Effect Multipliers for Primary States [a]		
Earnings:		
	California	2.9689
	New York	2.6418
	Tennessee	2.7321
	Florida	2.5628
	Texas	2.8671
Employment:		
	California	4.3948
	New York	3.6664
	Tennessee	3.0776
	Florida	2.9544
	Texas	4.4529

[a] In the 2002 Census, California, New York, Tennessee, Florida and Texas collectively employed 74.3% of all workers in NAICS 512200. California employed 41.46% of this subtotal while the remaining four states employed the following shares; New York = 39.11%, Tennessee = 9.99%, Florida = 5.41%, and Texas with 4.02%.

The Applicable RIMS II Multipliers — Retail

As noted previously, sound recording piracy affects other U.S. industries in addition to the industries that are classified in NAICS 5122. In particular, U.S. retailers of compact disks face reduced sales and lower profits as a result of piracy. However, the inter-industry relationships that affect these industries differ from the inter-industry relationships that exist in the sound recording industries. As a result, the multipliers that apply to the retailing of compact disks should also differ from the multipliers that were calculated for NAICS 5122. In this study, the economic effects of piracy on U.S. sound recording retailers are measured using multipliers for U.S. retail trade (NAICS 44-45).

The five multipliers used in the retail calculations in this study are shown in Table 5. Multipliers are reported for eight states: California, New York, Texas, Ohio, Pennsylvania, Illinois, Florida, and New Jersey. In the U.S., the retail industries that sell compact disks to consumers are less geographically concentrated than the industries that produce sound recordings. In this study, it is assumed that the retail multipliers for these eight states appropriately and reasonably capture the economic relationships that exist for the U.S. sound recording retailing sector as a whole.

More detailed information on the RIMS II multipliers used in this analysis may be found in Appendix B.

Table 5 **Multipliers for U.S. Sound Recording Industries**
Part Two

U.S. Sound Recording Industries: Retail Trade NAICS 44-45

Final Demand Multipliers for Primary States [a]

States	Output	Earnings	Employment
California	2.2996	0.7244	24.4
New York	2.0293	0.5820	19.9
Texas	2.2242	0.6809	25.1
Ohio	2.1855	0.6692	26.3
Pennsylvania	2.1873	0.6562	25.0
Illinois	2.3286	0.7077	25.3
Florida	2.0600	0.6549	25.3
New Jersey	2.1566	0.6280	21.0

Direct Effect Multipliers for Primary States [a]

States	Earnings	Employment
California	2.1447	1.7520
New York	1.8618	1.5392
Texas	2.0205	1.7222
Ohio	2.0312	1.6773
Pennsylvania	2.0238	1.6387
Illinois	2.1579	1.6914
Florida	1.9406	1.6689
New Jersey	2.0227	1.6420

[a] In the 2002 Census the top eight states for establishments and employment in NAICS 45122 - Prerecorded Tape, Compact Disk and Record Stores, were responsible for 50% of the total establishments and employment in NAICS 45122 for the U.S. as a whole.

III. Findings: The Impact of Sound Recording Piracy on the Overall Economy

Total Lost Output, Employment and Earnings

To produce industry-specific estimates of the impacts of piracy on the U.S. economy, the estimated losses from piracy for the sound recording industry are combined with the appropriate multipliers. The three "Final Demand" estimates of the overall impact of piracy on the U.S. economy are reported in Table 6.

As shown in Table 6, as a result of piracy, the sound recording industries have sustained a reduction in Final Demand for their products in the amount of $5.333 billion in 2005. Using the relevant industry

Table 6 Economic Impacts of Increased Final Demand for Recorded Music

Part One: Absent Piracy, Final Demand in U.S. Sound Recording industries would increase.

State	Allocation Factor	Final Demand ($ Millions)	Output ($ Millions)	Earnings ($ Millions)	Employment (Number)
		$5,333.21			
California	0.4146		$4,456.79	$939.74	21,227
New York	0.3911		$3,792.64	$665.38	13,975
Tennessee	0.0999		$1,035.53	$203.90	5,861
Florida	0.0541		$504.89	$102.28	2,972
Texas	0.0402		$421.48	$85.74	2,080
		Sub-Total	**$10,211.33**	**$1,997.03**	**46,114**

Part Two: Absent Piracy, Final Demand in U.S. Sound Recording Retail would also increase.

State	Allocation Factor	Final Demand ($ Millions)	Output ($ Millions)	Earnings ($ Millions)	Employment (Number)
		$1,040.97			
California	0.2967		$710.25	$223.74	7,536
New York	0.1607		$339.47	$97.36	3,329
Texas	0.1471		$340.58	$104.26	3,843
Ohio	0.0919		$209.08	$64.02	2,516
Pennsylvania	0.0847		$192.85	$57.86	2,204
Illinois	0.0837		$202.89	$61.66	2,204
Florida	0.0798		$171.12	$54.40	2,102
New Jersey	0.0554		$124.37	$36.22	1,211
		Sub-Total	**$2,290.61**	**$699.52**	**24,946**

Economic Impacts of Increased Final Demand for Sound Recordings

Output ($ Millions)	Earnings ($ Millions)	Employment (Number)
$12,501.94	**$2,696.55**	**71,060**

multipliers, this loss is converted into an estimate of the total loss in U.S. output. This total loss figure is $10.211 billion. In addition, the "direct" loss sustained by retailers of U.S. sound recordings ($1.04 billion) would provide an additional $2.290 billion in total lost output to the U.S. economy. As a result, the full impact of sound recording piracy on U.S. output was an overall loss of **$12.501 billion.**

TABLE 7 DIRECT EFFECTS OF INCREASED FINAL DEMAND FOR RECORDED MUSIC

Part One: Absent piracy, the Direct Effects of increased Final Demand on U.S. Sound Recording industries would increase.

State	Total Employment (Number)	Direct Employment (Number)	Total Earnings ($ Millions)	Direct Earnings ($ Millions)
California	21,227	4,830	$939.74	$316.53
New York	13,975	3,812	$665.38	$251.86
Tennessee	5,861	1,904	$203.90	$74.63
Florida	2,972	1,006	$102.28	$39.91
Texas	2,080	467	$85.74	$29.90
	Sub-Total	**12,019**	$1,997.03	**$712.84**

Part Two: Absent piracy, the Direct Effects of increased Final Demand on the U.S. Sound Recording industries would also increase.

State	Total Employment (Number)	Direct Employment (Number)	Total Earnings ($ Millions)	Direct Earnings ($ Millions)
California	7,536	4,301	$223.74	$104.32
New York	3,329	2,163	$94.36	$52.29
Texas	3,843	2,232	$104.26	$51.60
Ohio	2,516	1,500	$64.02	$31.52
Pennsylvania	2,204	1,345	$57.86	$28.59
Illinois	2,204	1,303	$61.66	$28.57
Florida	2,102	1,259	$54.40	$28.03
New Jersey	1,211	738	$36.22	$17.91
	Sub-Total	**14,841**		**$342.84**

Direct Effects of Increased Final Demand for Sound Recordings

Total Direct Employment (Number)	Total Direct Earnings ($ Millions)
26,860	**$1,055.67**

With regard to lost earnings of U.S. workers, the comparable loss figures are $1.997 billion that stem from the losses sustained by the sound recording production and distribution industries and $699 million from the losses of retail sales of legitimate music CDs. Thus, the total loss in earnings to workers in 2005 was **$2.697 billion.**

Finally, in terms of losses in employment that would have been created, the effects of piracy on the sound recording industries in NAICS 5122 cost the United States 46,114 jobs and the effects on U.S. retail distribution cost 24,946 jobs. Thus, the total loss in U.S. employment that has resulted from piracy of U.S. sound recordings in 2005 was **71,060 jobs.**

Direct Lost Employment and Earnings

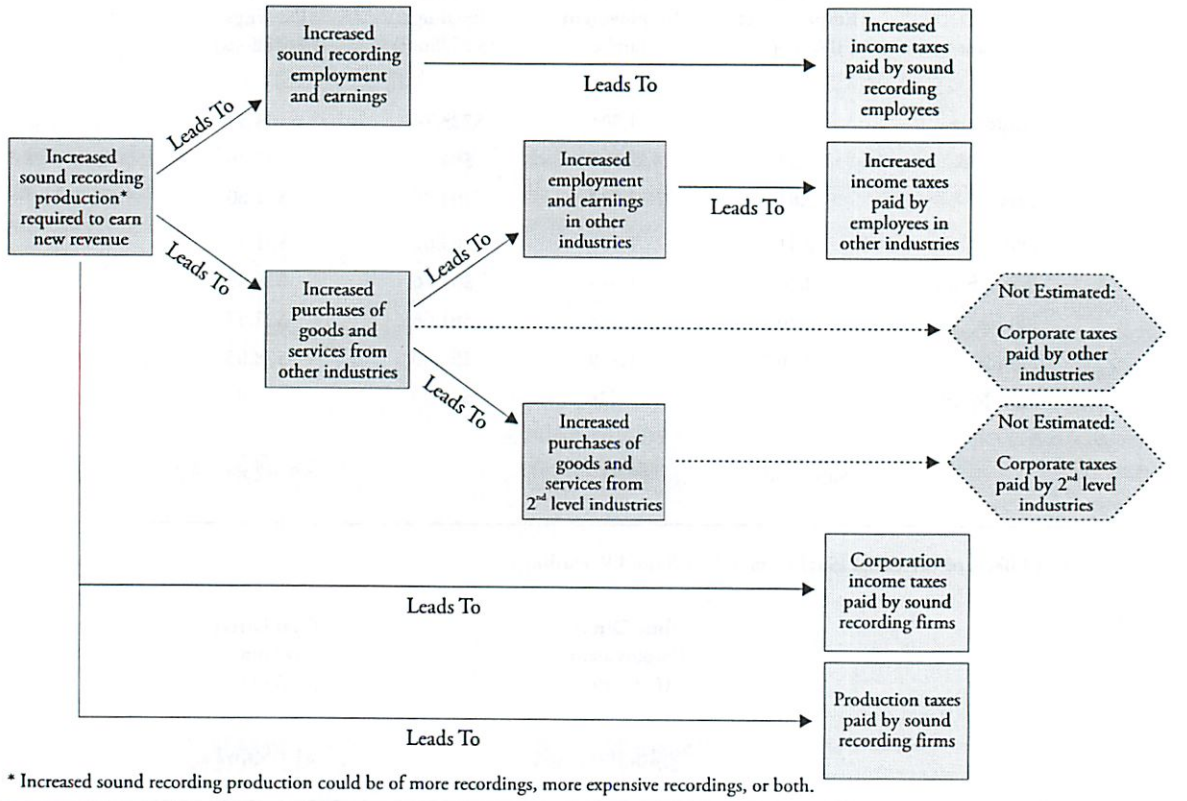
As noted above, the RIMS II model also provides multipliers that measure the economic effects of a change in final demand solely on the industries that are directly affected by that change. Using these multipliers, as shown in Table 7, we estimate that the direct loss in employee earnings in the U.S. sound recording and retail industries that results from pirate activities is **$1.056 billion.** The direct loss in employment at these industries was **26,860 jobs.**

Lost Tax Revenues

In total, sound recording piracy costs government at all levels, conservatively $422 million annually.

Tax multipliers are not provided in RIMS II. For the tax loss estimates presented in this study, the methodology previously used in the Motion Picture Piracy study was again applied to the sound recording industry.

Figure 2 Sound Recording Piracy Tax Effects



* Increased sound recording production could be of more recordings, more expensive recordings, or both.

As in the *Motion Picture Piracy* study, in this study, tax loss estimates are developed for three categories of taxes. These are lost personal income taxes that would have been paid by sound recording industry employees, lost corporate income taxes and lost production and other business taxes. In Table 8A, we calculate the income taxes that would have been paid on the employee earnings that would have been paid absent piracy in sound recordings. As shown in Table 8A, these personal income taxes would have exceeded $113 million from sound recording employees alone and more than **$291 million** from the total employees directly and indirectly affected by sound recording piracy.

TABLE 8A PERSONAL INCOME TAX LOSSES

U.S. Sound Recording Industries: NAICS 5122

I. Personal Income Taxes on Lost Employee Earnings: NAICS 5122 Only

	($ Billions)	Assumed Tax Rate [a]	NAICS 5121 Personal Taxes ($ Billions)
Direct Employee Earnings Loss: NAICS 5122	**$1.056**	**10.8%**	**$0.114**

IA. Personal Income Taxes on Lost Employee Earnings: NAICS 5122 Plus All Input Industries

	($ Billions)	Assumed Tax Rate [a]	NAICS 5121 Plus All Input Industries Personal Taxes ($ Billions)
Total Employee Earnings Loss: All Affected Industries	**$2.697**	**10.8%**	**$0.291**

[a] See Appendix C, Table C-1.

In Table 8B, we estimate other tax losses that result from pirate activities in the sound recording industry. For example, focusing only on corporate income taxes, we estimate that the sound recording industry alone would have generated additional taxes of **$81 million** each year. In addition, lost "production" taxes from the U.S. sound recording industry would have exceeded **$50 million** annually.

It is important also to recognize that the tax loss estimates presented here do not encompass a full accounting of all tax losses attributable to piracy. The estimates for both corporate income tax losses and production tax losses reflect only the direct losses sustained by the sound recording industries themselves. The estimates do not include additional tax losses that would result from lower income and lower sales in those U.S. industries that supply inputs to the U.S. copyright industries. *Thus the corporate income tax and production tax estimates do not include tax losses sustained at U.S. industries that are indirectly affected by piracy.*

CONCLUSION

As set forth in this report, the U.S. sound recording industries are now sustaining approximately $5.33 billion in losses as a result of global and U.S. piracy. In addition, U.S. retailers are losing another $1.04 billion. These estimates suggest total "direct" losses to all U.S. industries from music piracy that exceed $6.37 billion.

These direct losses then cascade through the rest of the U.S. economy and the losses of economic output, jobs and employee earnings "multiply."

Based on the analyses set forth in this paper, because of music piracy, the U.S. economy loses a total of $12.5 billion in economic output each year.

TABLE 8B CORPORATE INCOME AND PRODUCTION TAX LOSSES

U.S. Sound Recording Industries: NAICS 5122

II. Corporate Income Taxes Lost: NAICS 5122 Only

	($ Billions)	Apply to Direct Earnings NAICS 5122 ($ Billions)	Estimate of Other GOS NAICS 5122 ($ Billions)
Other GOS (Corporate) NAICS 512	$12.028		**$0.550**
Employee Compensation NAICS 512	$23.100	**$1.056**	
Ratio of Other GOS to Employee Comp.	**52.1%**		
Assumed Tax Rate [a]			**14.8%**
Equals Estimated Corporate Income Tax Loss in NAICS 5122			**$0.081**

III. Taxes on Production Lost: NAICS 5122 Only

	($ Billions)	Apply to Direct Earnings NAICS 5122 ($ Billions)	Estimate of Taxes on Production NAICS 5122 ($ Billions)
Taxes on Production NAICS 512 [b]	$1.100		**$0.550**
Employee Compensation NAICS 512 [b]	$23.100	**$1.056**	
Ratio of Taxes on Prod. to Employee Comp.	**4.8%**		
Equals Estimated Production Tax Loss in NAICS 5122			**$0.050**

[a] See Appendix C, Table C-1.
[b] See Appendix C, Table C-2.

Furthermore, the U.S. economy also loses 71,060 jobs. Of this amount, 46,114 jobs are lost at the U.S. production level for sound recordings while 24,946 jobs are lost at the U.S. retail level.

Because of global piracy in recorded music U.S. employees lose $2.7 billion in total earnings annually. Of this total, $2.0 billion is lost at the U.S. production level while $700 million is lost at the U.S. retail level.

Finally, as a consequence of piracy in sound recordings, U.S. federal, state and local governments lose a minimum of $ 422 million in tax revenues annually. Of this amount, $291 million represents lost personal income taxes while $131 million is lost corporate income and production taxes.

Appendix A — IFPI Reference Data

The International Federation of the Phonographic Industry (IFPI) is an international organization that represents the recording industry worldwide. Its membership comprises some 1,400 major and independent companies in more than 70 countries. It also has affiliated industry national groups in 48 countries.

The data shown in Tables A-1 through A-5 were obtained from an IFPI report entitled: *2006 Global Recording Industry in Number.*

not looking at close enough
to really analyze - only skimming

TABLE A-1 IFPI GLOBAL RECORDING INDUSTRY DATA - RETAIL VALUES OF LEGITIMATE UNITS

Rank	Country	Retail Value ($ Millions)	Less: Digital	Equals: Physical Units at Retail Value ($ Millions)	Physical Units Sold (Millions)	Retail Price Per Unit
1	USA	$12,269.5	$636.0	$11,633.5	743.7	$15.64
2	Japan	$5,448.2	$277.5	$5,170.7	235.5	$21.96
3	UK	$3,446.0	$69.2	$3,376.8	182.0	$18.55
4	Germany	$2,210.6	$39.1	$2,171.5	133.7	$16.24
5	France	$1,990.0	$28.1	$1,961.9	112.2	$17.49
6	Canada	$731.9	$14.7	$717.2	56.8	$12.63
7	Australia	$674.4	$7.5	$666.9	41.8	$15.95
8	Italy	$669.3	$15.7	$653.6	33.4	$19.57
9	Spain	$555.1		$555.1	34.6	$16.04
10	Brazil	$394.2		$394.2	53.3	$7.40
11	Mexico	$411.6		$411.6	67.4	$6.11
12	Netherlands	$430.6	$4.9	$425.7	25.2	$16.89
13	Switzerland	$267.3		$267.3	16.4	$16.30
14	Russia	$387.6		$387.6	96.5	$4.02
15	Belgium	$329.4		$329.4	15.0	$21.96
16	South Africa	$254.4		$254.4	23.2	$10.97
17	Sweden	$240.4		$240.4	16.1	$14.93
18	Austria	$284.9		$284.9	11.2	$25.44
19	Norway	$252.6		$252.6	11.4	$22.16
20	Denmark	$180.1		$180.1	9.9	$18.19
21	India	$156.2		$156.2	103.6	$1.51
22	Turkey	$147.5		$147.5	27.2	$5.42
23	Taiwan	$109.1		$109.1	10.0	$10.91
24	Ireland	$149.0		$149.0	8.3	$17.95
25	Finland	$132.4		$132.4	7.8	$16.97
26	Portugal	$113.9		$113.9	8.3	$13.72
27	China	$119.7		$119.7	57.9	$2.07
28	New Zealand	$122.0		$122.0	7.2	$16.94
29	South Korea	$132.4	$11.8	$120.6	10.6	$11.38
30	Thailand	$106.3		$106.3	28.0	$3.80
31	Hong Kong	$79.4		$79.4	6.8	$11.68
32	Greece	$143.0		$143.0	7.4	$19.32
33	Poland	$99.7		$99.7	9.8	$10.17
34	Argentina	$108.2		$108.2	14.9	$7.26
35	Indonesia	$66.7		$66.7	30.1	$2.22
36	Hungary	$53.4		$53.4	5.3	$10.08
37	Singapore	$38.3		$38.3	4.8	$7.98
38	Colombia	$58.0		$58.0	7.2	$8.06
39	Czech Republic	$42.0		$42.0	3.6	$11.67
40	Chile	$38.8		$38.8	5.4	$7.19
41	Malaysia	$28.4		$28.4	4.3	$6.60
42	Phillipines	$24.8		$24.8	4.7	$5.28
	TOTAL	**$33,497.3**	**$1,104.5**	**$32,392.8**	**2,292.5**	**$14.13**

TABLE A-2 IFPI GLOBAL RECORDING INDUSTRY DATA - TRADE VALUE OF LEGITIMATE UNITS

Rank	Country	Trade Value ($ Millions)	Less: Digital Sales	Equals: Physical Units at Trade Value ($ Millions)	Physical Units Sold (Millions)	Sales Price Per Unit
1	USA	$7,011.9	$636.0	$6,375.9	743.7	$8.57
2	Japan	$3,718.4	$277.5	$3,440.9	235.5	$14.61
3	UK	$2,162.2	$69.2	$2,093.0	182.0	$11.50
4	Germany	$1,457.5	$39.1	$1,418.4	133.7	$10.61
5	France	$1,248.3	$28.1	$1,220.2	112.2	$10.88
6	Canada	$544.3	$14.7	$529.6	56.8	$9.32
7	Australia	$440.0	$7.5	$432.5	41.8	$10.35
8	Italy	$428.5	$15.7	$412.8	33.4	$12.36
9	Spain	$368.9		$368.9	34.6	$10.66
10	Brazil	$265.4		$265.4	53.3	$4.98
11	Mexico	$262.7		$262.7	67.4	$3.90
12	Netherlands	$246.3	$4.9	$241.4	25.2	$9.58
13	Switzerland	$205.9		$205.9	16.4	$12.55
14	Russia	$193.7		$193.7	96.5	$2.01
15	Belgium	$161.8		$161.8	15.0	$10.79
16	South Africa	$158.8		$158.8	23.2	$6.84
17	Sweden	$148.2		$148.2	16.1	$9.20
18	Austria	$138.7		$138.7	11.2	$12.38
19	Norway	$133.1		$133.1	11.4	$11.68
20	Denmark	$113.1		$113.1	9.9	$11.42
21	India	$111.6		$111.6	103.6	$1.08
22	Turkey	$105.3		$105.3	27.2	$3.87
23	Taiwan	$99.7		$99.7	10.0	$9.97
24	Ireland	$91.2		$91.2	8.3	$10.99
25	Finland	$81.2		$81.2	7.8	$10.41
26	Portugal	$81.1		$81.1	8.3	$9.77
27	China	$79.8		$79.8	57.9	$1.38
28	New Zealand	$77.5		$77.5	7.2	$10.76
29	South Korea	$77.4	$11.8	$65.6	10.6	$6.19
30	Thailand	$77.2		$77.2	28.0	$2.76
31	Hong Kong	$66.2		$66.2	6.8	$9.74
32	Greece	$65.1		$65.1	7.4	$8.80
33	Poland	$63.9		$63.9	9.8	$6.52
34	Argentina	$51.4		$51.4	14.9	$3.45
35	Indonesia	$50.2		$50.2	30.1	$1.67
36	Hungary	$33.4		$33.4	5.3	$6.30
37	Singapore	$33.1		$33.1	4.8	$6.90
38	Colombia	$27.0		$27.0	7.2	$3.75
39	Czech Republic	$24.8		$24.8	3.6	$6.89
40	Chile	$24.1		$24.1	5.4	$4.46
41	Malaysia	$23.1		$23.1	4.3	$5.37
42	Phillipines	$19.1		$19.1	4.7	$4.06
	TOTAL	**$20,771.1**	**$1,104.5**	**$19,666.6**	**2,292.5**	**$8.58**

TABLE A-3 IFPI GLOBAL RECORDING INDUSTRY DATA - RETAIL VALUE OF PIRATE UNITS

Country	Legitimate Units Sold (Millions)	Retail Price Per Unit	IFPI Midpoint Piracy Rates [a]	Total Physical Units [b] (Millions)	Pirate Units Sold [c] (Millions)	Pirate Sales at Retail Prices ($ Millions)
USA	743.7	$15.64	5%	782.8	39.1	$612.3
Japan	235.5	$21.96	5%	247.9	12.4	$272.1
UK	182.0	$18.55	5%	191.6	9.6	$177.7
Germany	133.7	$16.24	5%	104.7	7.0	$114.3
France	112.2	$17.49	5%	118.1	5.9	$103.3
Canada	56.8	$12.63	5%	59.8	3.0	$37.7
Australia	41.8	$15.95	5%	44.0	2.2	$35.1
Italy	33.4	$19.57	38%	53.9	20.5	$400.6
Spain	34.6	$16.04	17%	41.7	7.1	$113.7
Brazil	53.3	$7.40	38%	86.0	32.7	$241.6
Mexico	67.4	$6.11	63%	179.7	112.3	$686.0
Netherlands	25.2	$16.89	17%	30.4	5.2	$87.2
Switzerland	16.4	$16.30	5%	17.3	0.9	$14.1
Russia	96.5	$4.02	63%	257.3	160.8	$646.0
Belgium	15.0	$21.96	5%	15.8	0.8	$17.3
South Africa	23.2	$10.97	38%	37.4	14.2	$155.9
Sweden	16.1	$14.93	5%	16.9	0.8	$12.7
Austria	11.2	$25.44	5%	11.8	0.6	$15.0
Norway	11.4	$22.16	5%	12.0	0.6	$13.3
Denmark	9.9	$18.19	5%	10.4	0.5	$9.5
India	103.6	$1.51	63%	276.3	172.7	$260.3
Turkey	27.2	$5.42	63%	72.5	45.3	$245.8
Taiwan	10.0	$10.91	38%	16.1	6.1	$66.9
Ireland	8.3	$17.95	5%	8.7	0.4	$7.8
Finland	7.8	$16.97	17%	9.4	1.6	$27.1
Portugal	8.3	$13.72	17%	10.0	1.7	$23.3
China	57.9	$2.07	88%	482.5	424.6	$877.8
New Zealand	7.2	$16.94	5%	7.6	0.4	$6.4
South Korea	10.6	$11.38	17%	12.8	2.2	$24.7
Thailand	28.0	$3.80	38%	45.2	17.2	$65.2
Hong Kong	6.8	$11.68	17%	8.2	1.4	$16.3
Greece	7.4	$19.32	38%	11.9	4.5	$87.6
Poland	9.8	$10.17	38%	15.8	6.0	$61.1
Argentina	14.9	$7.26	63%	39.8	24.9	$180.7
Indonesia	30.1	$2.22	88%	250.8	220.7	$489.1
Hungary	5.3	$10.08	38%	8.5	3.2	$32.7
Singapore	4.8	$7.98	5%	5.1	0.3	$2.0
Colombia	7.2	$8.06	63%	19.2	12.0	$96.7
Czech Republic	3.6	$11.67	38%	5.8	2.2	$25.7
Chile	5.4	$7.19	63%	14.4	9.0	$64.7
Malaysia	4.3	$6.60	38%	6.9	2.6	$17.4
Phillipines	4.7	$5.28	38%	7.6	2.9	$15.2
	2,292.5			**3,690.7**	**1,398.2**	**$6,460.08**
				Average Piracy Rate 38%		

[a] Countries with Piracy Rates > 50% divided into <75% and >75% sub-groups.
[b] Equals Legitimate Units Sold divided by (1 - piracy rate).
[c] IFPI reports that in 2005, 1.2 million pirate CDs, or 37% of all CDs were purchased.

TABLE A-4 IFPI GLOBAL RECORDING INDUSTRY DATA - PIRATE SALES AT TRADE PRICES

Country	Legitimate Units Sold (Millions)	Retail Price Per Unit	IFPI Midpoint Piracy Rates [a]	Total Physical Units [b] (Millions)	Pirate Units Sold [c] (Millions)	Pirate Sales in Retail Prices ($ Millions)
USA	743.7	$8.57	5%	782.8	39.1	$335.6
Japan	235.5	$14.61	5%	247.9	12.4	$181.1
UK	182.0	$11.50	5%	191.6	9.6	$110.2
Germany	133.7	$10.61	5%	140.7	7.0	$74.7
France	112.2	$10.88	5%	118.1	5.9	$64.2
Canada	56.8	$9.32	5%	59.8	3.0	$27.9
Australia	41.8	$10.35	5%	44.0	2.2	$22.8
Italy	33.4	$12.36	38%	53.9	20.5	$253.0
Spain	34.6	$10.66	17%	41.7	7.1	$75.6
Brazil	53.3	$4.98	38%	86.0	32.7	$162.7
Mexico	67.4	$3.90	63%	179.7	112.3	$437.8
Netherlands	25.2	$9.58	17%	30.4	5.2	$49.4
Switzerland	16.4	$12.55	5%	17.3	0.9	$10.8
Russia	96.5	$2.01	63%	257.3	160.8	$322.8
Belgium	15.0	$10.79	5%	15.8	0.8	$8.5
South Africa	23.2	$6.84	38%	37.4	14.2	$97.3
Sweden	16.1	$9.20	5%	16.9	0.8	$7.8
Austria	11.2	$12.38	5%	11.8	0.6	$7.3
Norway	11.4	$11.68	5%	12.0	0.6	$7.0
Denmark	9.9	$11.42	5%	10.4	0.5	$6.0
India	103.6	$1.08	63%	276.3	172.7	$186.0
Turkey	27.2	$3.87	63%	72.5	45.3	$175.5
Taiwan	10.0	$9.97	38%	16.1	6.1	$61.1
Ireland	8.3	$10.99	5%	8.7	0.4	$4.8
Finland	7.8	$10.41	17%	9.4	1.6	$16.6
Portugal	8.3	$9.77	17%	10.0	1.7	$16.6
China	57.9	$1.38	88%	482.5	424.6	$585.2
New Zealand	7.2	$10.76	5%	7.6	0.4	$4.1
South Korea	10.6	$6.19	17%	12.8	2.2	$13.4
Thailand	28.0	$2.76	38%	45.2	17.2	$47.3
Hong Kong	6.8	$9.74	17%	8.2	1.4	$13.6
Greece	7.4	$8.80	38%	11.9	4.5	$39.9
Poland	9.8	$6.52	38%	15.8	6.0	$39.2
Argentina	14.9	$3.45	63%	39.8	24.9	$85.8
Indonesia	30.1	$1.67	88%	250.8	220.7	$368.1
Hungary	5.3	$6.30	38%	8.5	3.2	$20.5
Singapore	4.8	$6.90	5%	5.1	0.3	$1.7
Colombia	7.2	$3.75	63%	19.2	12.0	$45.0
Czech Republic	3.6	$6.89	38%	5.8	2.2	$15.2
Chile	5.4	$4.46	63%	14.4	9.0	$40.2
Malaysia	4.3	$5.37	38%	6.9	2.6	$14.2
Phillipines	4.7	$4.06	38%	7.6	2.9	$11.7
	2,292.5			**3,690.7**	**1,398.2**	**$4,068.15**
				Average Piracy Rate 38%		

[a] Countries with Piracy Rates > 50% divided into <75% and >75% sub-groups.
[b] Equals Legitimate Units Sold divided by (1 - piracy rate).
[c] IFPI reports that in 2005, 1.2 million pirate CDs, or 37% of all CDs were purchased.

TABLE A-5 IFPI GLOBAL RECORDING INDUSTRY DATA - IMPLIED SUBSTITUTION RATES

Country	Pirate Sales at Trade Value ($ Millions)	Retail Prices	Substitute Units [a]	Original Pirate Units	Implied Substitution Rate [b]
USA	$335.6	$15.64	21.5	39.14	54.8%
Japan	$181.1	$21.96	8.2	12.39	66.5%
UK	$110.2	$18.55	5.9	9.58	62.0%
Germany	$74.7	$16.24	4.6	7.04	65.3%
France	$64.2	$17.49	3.7	5.91	62.2%
Canada	$27.9	$12.63	2.2	2.99	73.8%
Australia	$22.8	$15.95	1.4	2.20	64.9%
Italy	$253.0	$19.57	12.9	20.47	63.2%
Spain	$75.6	$16.04	4.7	7.09	66.5%
Brazil	$162.7	$7.40	22.0	32.67	67.3%
Mexico	$437.8	$6.11	71.7	112.33	63.8%
Netherlands	$49.4	$16.89	2.9	5.16	56.7%
Switzerland	$10.8	$16.30	0.7	0.86	77.0%
Russia	$322.8	$4.02	80.4	160.83	50.0%
Belgium	$8.5	$21.96	0.4	0.79	49.1%
South Africa	$97.3	$10.97	8.9	14.22	62.4%
Sweden	$7.8	$14.93	0.5	0.85	61.6%
Austria	$7.3	$25.44	0.3	0.59	48.7%
Norway	$7.0	$22.16	0.3	0.60	52.7%
Denmark	$6.0	$18.19	0.3	0.52	62.8%
India	$186.0	$1.51	123.4	172.67	71.4%
Turkey	$175.5	$5.42	32.4	45.33	71.4%
Taiwan	$61.1	$10.91	5.6	6.13	91.4%
Ireland	$4.8	$17.95	0.3	0.44	61.2%
Finland	$16.6	$16.97	1.0	1.60	61.3%
Portugal	$16.6	$13.72	1.2	1.70	71.2%
China	$585.2	$2.07	283.1	424.60	66.7%
New Zealand	$4.1	$16.94	0.2	0.38	63.5%
South Korea	$13.4	$11.38	1.2	2.17	54.4%
Thailand	$47.3	$3.80	12.5	17.16	72.6%
Hong Kong	$13.6	$11.68	1.2	1.39	83.4%
Greece	$39.9	$19.32	2.1	4.54	45.5%
Poland	$39.2	$10.17	3.8	6.01	64.1%
Argentina	$85.8	$7.26	11.8	24.89	47.5%
Indonesia	$368.1	$2.22	166.1	220.73	75.3%
Hungary	$20.5	$10.08	2.0	3.25	62.5%
Singapore	$1.7	$7.98	0.2	0.25	86.4%
Colombia	$45.0	$8.06	5.6	12.00	46.6%
Czech Republic	$15.2	$11.67	1.3	2.21	59.0%
Chile	$40.2	$7.19	5.6	9.00	62.1%
Malaysia	$14.2	$6.60	2.1	2.64	81.3%
Phillipines	$11.7	$5.28	2.2	2.88	77.0%
TOTAL	**$4,068.2**		**918.4**	**1,398.2**	**65.7%**

[a] Substitute Units = Trade Value/Retail Price
[b] Country-specific studies put substitution rate between 45% and 75%.

Appendix B — Sound Recording Industry Multipliers

The estimates in this report are based on an analytical framework known as an *input-output* (I-O) table. For every industry in the economy, an I-O table shows the distribution of the inputs purchased and the outputs sold. Using this framework, the U.S. Bureau of Economic Analysis (BEA) has developed a method for estimating I-O *multipliers*. Using multipliers, it is possible to measure not only the direct effects of piracy (i.e. the lost 1st round of output) but also the indirect effects (i.e. the lost 2nd and subsequent rounds of output) as piracy reduces the need for inputs from factor suppliers in other industries. In addition, the BEA multipliers also consider the "induced" economic effects that arise from the piracy-driven loss in labor income that is borne by workers in the legitimate industries and which results in a consequent decrease in household consumption.

In this analysis, the multipliers used to estimate the full effects of sound recording piracy were derived using BEA's Regional Input-Output Modeling System or (RIMS II). The RIMS II model produces industry-specific "final demand" multipliers for output (in dollars), employment (in numbers of employees) and earnings of those employees (in dollars). The RIMS II model also provides industry-specific "direct effects" multipliers for employment and earnings. The actual multipliers that were used in this analysis are shown in Table 4 (U.S. Sound Recording Industries – NAICS 512200) and in Table 5 (U.S. Sound Recording Industries: Retail Trade – NAICS 44-45).

Defining Regions by Industry

The RIMS II model produces industry-specific final demand and direct effects multipliers. However, the RIMS II model is fundamentally a regional model that estimates multipliers within a pre-defined geographic area. Thus, for example, an analyst might be tasked with estimating the economic effects of building a new sports stadium within a given metropolitan region. In this example, the analyst would first pre-specify the relevant metropolitan region for which the RIMS II model should be calibrated. Subsequently the analyst would select the relevant industry multipliers to be derived within that region. The pre-specification of a region directly effects the RIMS II multipliers because, all else equal, the smaller the region, the greater the chance that that necessary inputs will be obtained from outside the region. When inputs are obtained from outside of the pre-specified region in RIMS II, they may no longer "count" as in-region effects of the initial change in final demand. Thus, with a narrowly defined area, the indirect economic effects of a given change in final demand might be too low.

This study differs from the more typical RIMS II analysis in that the economic effects of sound recording piracy are generally not focused on one or a few small geographic areas. For example, according to the U.S. Census Bureau, in 2002, the U.S. Sound Recording Industries (NAICS 5122) employed workers in 43 different states. For this reason, further analyses were conducted of the state-by-state employment patterns in the U.S. Sound Recording Industries.

Multipliers for U.S. Sound Recording Production/Distribution

A review of the sound recording industry's employment levels on a state-by-state basis revealed that in 2002 only five states: California, New York, Tennessee, Florida and Texas employed 74.3% of all U.S. workers in NAICS 5122. Forty-one percent of the workers in this subset were located in California while 39.1% were employed in New York. The remaining three states employed the following shares: Tennessee – 10.0%; Florida – 5.4% and Texas – 4.0%.

In certain instances, sound recording industry centers may specialize in particular music genres. The sound recording industry in Tennessee, for example, has long been associated with country music while sound recording centers in Florida and Texas increasingly emphasize Spanish language music. In this analysis, it is assumed that absent piracy, legitimate sound production would increase in those geographic regions that already specialize in the production of sound recordings. However, if piracy were eliminated, other

regions that already specialize in particular music genres would also see growth in their production of sound recordings in those genres. For these reasons, the final multipliers used to analyze the sound recording production and distribution industries in NAICS 5122 include multipliers for both the major production states of California and New York and for the states of Tennessee, Florida and Texas where the sound recording industries are both smaller and more genre-specific.

Five categories of multiplier were acquired from the Bureau of Economic Analysis in order to analyze the effects of piracy in NAICS 5122. The three Final Demand multipliers related to output, earnings (of workers) and employment. The two Direct Effect multipliers also related to earnings (of workers) and employment. These multipliers were specific to both NAICS 5122 and to the states of California and New York. As noted above, the actual multipliers that were used in the analysis of NAICS 51122 are shown in Table 4.

Multipliers for U.S. Sound Recording Retail Trade

As noted previously, sound recording piracy affects other U.S. industries in addition to the industries that are classified in NAICS 5122. In particular, U.S. retailers of music CDs and of legitimate downloads face reduced sales and lower profits as a result of pirate activities that occur in the United States. However, the inter-industry relationships that affect these industries differ from the inter-industry relationships that exist in the sound recording industry itself. As a result, the multipliers that apply to the retailing of recorded music should also differ from the multipliers that were calculated for NAICS 5122. In this study, the economic affects of piracy on U.S. sound recording retailers are measured using multipliers for U.S. retail trade (NAICS 44-45).

In this study, the five multipliers used to assess the effects of music piracy on U.S. retailers were obtained for eight U.S. states. These states were: California, New York, Texas, Ohio, Pennsylvania, Illinois, Florida and New Jersey. In the US, the industries that sell music CDs directly to consumers are far less geographically concentrated than the industries that produce and distribute sound recordings. Nevertheless, all states are not equal even with regard to CD sales and. In 2002, the U.S. Census Bureau calculated state-by-state figures for the number of U.S. establishments and paid employees in NAICS 45122 – Prerecorded Tape, Compact Disk and Record Stores. For both establishments and employment, eight states were responsible for 49.1% of the U.S. totals within this industry.[17] Those states were the eight states shown in Table 5. In this study, it is assumed that the retail industry multipliers for these eight states appropriately and reasonably capture the economic relationships that exist for the U.S. sound recording retail sector as a whole.

Appendix C — References for Tax Calculations

The principal calculations that support the estimates of lost taxes that are set forth in this report are reported in the text at Tables 8A and 8B. Those calculations reflect the application of estimated tax rates to the employee earnings loss estimates that were derived elsewhere in this report. This Appendix provides the supporting calculations that were used to determine the appropriate tax rates for use in these estimates.

Table C-1 provides the calculations used to determine the average tax rates to be applied to the employee compensation and corporate profits that are lost as a result of sound recording piracy. These calculations rely on U.S. National Accounts data. For personal income taxes, the total amount of personal current taxes reported for the economy is divided by total U.S. Personal Income. These calculations suggest an average personal income tax rate of 10.8%.

In Table C-1, for corporate income taxes, the total amount of U.S. taxes on corporate income is divided by both corporate profits and "U.S. Other Gross Operating Surplus" or "GOS." This calculation is required because national estimates of corporate profits are not, to our knowledge, broken out by specific industries. By contrast, the Bureau of Economic Analysis does provide data on Other GOS figures for individual industries. This derived tax rate is then applied to the Other GOS values reported for NAICS 512, the U.S. Motion Picture and Sound Recording Industries combined. Subsequently, (in Table 8B) these calculations are then adjusted to reflect tax payments solely from sound recording industry firms.

The supporting calculations that reflect the Other GOS values for NAICS 512 are reported in Table C-2.

TABLE C-1 SUPPORTING CALCULATIONS FOR PRODUCTION TAXES

I. Tax Rates on Personal Income:

		2004 ($ Billions)	2004 ($ Billions)
	U.S. Disposable Personal Income		$8,664.2
Plus	**Personal Current Taxes**		**$1,049.1**
Equals	**U.S. Personal Income**		**$9,713.3**
	Compensation of Employees	$6,687.6	
	Proprietors' Income	$889.6	
	Rental Income	$134.2	
	Personal Income Receipts/Assets	$1,396.5	
	Personal Current Transfers	$1,427.5	
Less	Contrib. Govern. Social Insurance	$(822.2)	
Equals	**U.S. Personal Income**	**$9,713.2**	**$9,713.2**
	Pers. Cur. Tax/Pers. Income		**10.8%**

II. Tax Rates on Corporate Income:

	2004 ($ Billions)
U.S. Corporate Profits with Adjustments	$1,161.5
Taxes on Corporate Income	$271.1
Corporate Income Taxes/Corporate Profits	23.3%
U.S. Other GOS (Corporate)	$1,822.9
Taxes on Corporate Income	$271.1
Corporate Income Taxes/U.S. other GOS (Corporate)	**14.9%**

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE C-2 SUPPORTING CALCULATIONS FOR PRODUCTION TAXES

		U.S. Economy As a Whole ($ Billions)	NAICS 512 [a] Movies and Records ($ Millions)
	Output:	**$21,346.0**	**$94,100.0**
Equals	**Value Added:**	**$11,734.3**	**$47,300.0**
	Employee Compensation	$6,693.4	$23,100.0
	Taxes on Production + Imports less Subsidies	$809.4	$1,100.0
	Gross Operating Surplus	$4,231.5	$23,100.0
Plus	**Intermediate Inputs**	**$9,611.8**	**$46,800.0**
	Tax on Prod./Employee Compensation	**12.1%**	**4.8%**
	Gross Operating Surplus:	**$4,231.5**	**$23,130.0**
	Current Surplus Gov. Enterprises	$(3.0)	—
	Consumption of Fixed Capital	$461.9	—
	Business Current Transfer Payment	$91.1	$149.0
	Other GOS (Corporate) [a]	$1,822.9	$12,028.0
	Other GOS (Non-Corporate)	$1,858.6	$10,953.0
	Sub-Total	$4,231.5	$23,130.0
	Corporate Income Tax ($271.1 B)/Other GOS (Corp.)	**14.9%**	

[a] Other GOS (Corporate) includes corporate profits before tax plus corporate net interest and miscellaneous payments and adjustments.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

ENDNOTES

1. http://nbcumv.com/corporate/Engines_of_Growth.pdf
2. Siwek, Stephen, E., *The True Cost of Motion Picture Piracy to the U.S. Economy*, Institute for Policy Innovation, Policy Report 186, September 2006.
3. In the RIMS II model, the U.S. Bureau of Economic Analysis does not publish multipliers for sound recording industries at the five digit or six digit levels.
4. See Executive Office of the President, Office of Management and Budget, *North American Industry Classification System: United States 2002*, National Technical Information Service and Bernan, a Division of The Klaus Organization Ltd., page 662.
5. U.S. Census Bureau, 2005 Service Annual Survey, Table 3.0.1.
6. U.S. Census Bureau, Statistics of U.S. Businesses: 2004, U.S., Sound recording industries.
7. U.S. Census Bureau, *2005 Service Annual Survey*, Table 3.2.5.
8. U.S. Census Bureau, *2005 Service Annual Survey*, Table 3.2.5.
9. IFPI, *2006 Global Recording Industry in Numbers*, page 26.
10. The piracy rate (or level) is measured as a percentage of total (legitimate and pirate) unit sales.
11. For example in U.K., 45% of counterfeit CD purchasers would "definitely" purchase legitimate titles if counterfeit CDs were unavailable while 69% of counterfeit CD purchasers would "definitely" or "probably have bought" such titles. See: BPI Market Information, No. 274, August 25, 2006, page 4.
12. Table A-1, A-2.
13. See International Intellectual Property Alliance, *2006 Special 301: Methodology*, page 5.
14. IFPI, *2006 Global Industry in Numbers*, "The key figures in 2005," page 9.
15. A number of academic studies have attempted to estimate the impact that file sharing has had on sound recording sales. The specific estimate of 20% is taken from Pietz, M. and Waelbroeck, P., *The Effect of Internet Piracy on Music Sales: Cross Section Evidence*, Review of Economic Research on Copyright Issues, 2004, vol. 1(2), pp 78.
16. Based on confidential survey data, it appears that many consumers of pirated sound recordings also purchase significant quantities of legitimate sound recordings.
17. 3,431 out of 6,987 establishments and 30,742 out of 62,647 employees in NAICS 45122 were located in the eight states listed above.

ABOUT THE AUTHOR

Stephen E. Siwek is Principal at Economists Incorporated, a research and consulting firm with offices in Washington D.C. and in the San Francisco Bay area. Active in research and consulting for over 30 years, Mr. Siwek specializes in the analysis of economic, financial, and accounting issues. He has testified as an expert witness before regulatory bodies and courts on more than 80 occasions.

Mr. Siwek has particular expertise in the economic analysis of the U.S. entertainment industries and of the related U.S. industries that depend on the effective protection of their copyrights. Since 1990, Mr. Siwek has published eleven studies on behalf of the International Intellectual Property Alliance ("IIPA") that analyzed in detail the economic importance of the U.S. "copyright" industries (including the sound recording industry) to the U.S. economy. In these studies, Mr. Siwek quantified the substantial contributions made by the copyright-based industries to U.S. economic growth, employment and foreign trade.

Mr. Siwek has also been instrumental in furthering the efforts of the World Intellectual Property Organization ("WIPO") to encourage other nations to measure the economic contribution of copyright-based industries in their own countries. In this regard, Mr. Siwek has been closely associated with the development of the WIPO "Guide" for the measurement of copyright industry contributions and he has directly assisted a number of foreign governments in the preparation of their own studies.

Mr. Siwek is co-author of *International Trade in Films and Television Programs* (American Enterprise Institute/Ballinger Publishing Company, 1988) and *International Trade in Computer Software* (Quorum Books, 1993).

In 2005, Mr. Siwek authored a widely reported study entitled *Engines of Growth: Economic Contributions of the U.S. Intellectual Property Industries* (Commissioned by NBC Universal, 2005). In that study, Mr. Siwek quantified the substantial contributions made by the IP sector as a whole to real U.S. growth. More recently, Mr. Siwek authored a study on the effects of motion picture piracy on the U.S. economy as a whole. That study was entitled *The True Cost of Motion Picture Piracy to the U.S. Economy*, (Institute for Policy Innovation, Policy Report 186, September 2006).

In February of 2007, Mr. Siwek participated as a panelist in the Motion Picture Association of America's first-of-its-kind industry symposium entitled, *The Business of Show Business*. In May 2007, he also served

as a panelist for the launch of the Copyright Alliance, a non-profit education group whose 29 member organizations represent an estimated 11 million Americans working in the copyright sector.

Mr. Siwek earned his undergraduate degree at Boston College and his M.B.A. at George Washington University.

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How Copyright Industries Con Congress

Posted by Julian Sanchez

I've yet to encounter a technically clueful person who believes the Stop Online Piracy Act will actually do anything to meaningfully reduce—let alone "stop"—online piracy, and so I haven't bothered writing much about the absurd numbers the bill's supporters routinely bandy about in hopes of persuading lawmakers that SOPA will be an economic boon and create zillions of jobs. If the proposed solution *just won't work*, after all, why bother quibbling about the magnitude of the problem? But then I saw the very astute David Carr's otherwise excellent column on SOPA's pitfalls, which took those inflated numbers more or less as gospel. If only because I'm offended to see bad data invoked so routinely and brazenly, on general principle, it's important to try to set the record straight. The movie and music recording industry have gotten away with using statistics that don't stand up to the most minimal scrutiny, over and over, for years, to hoodwink both Congress and the general public. Wherever you come down on any particular piece of legislation, this is not how policy should get made in a democracy, and it's high time they were shamed into cutting it out.

The bogus numbers Carr cites—which I'll get to in a moment—actually represent a substantial *retreat* from even *more* ludicrous statistics the copyright industries long peddled. In my previous life as the Washington editor for the technology news site *Ars Technica*, I became curious about two implausible sounding claims I kept seeing made over and over—and repeated by prominent U.S. Senators!—in support of more aggressive antipiracy efforts. Intellectual property infringement was supposedly costing the U.S. economy $200–250 billion per year, and had killed 750,000 American jobs. That certainly sounded dire, but those numbers looked suspiciously high, and I was having trouble figuring out exactly where they had originated. I did finally run them down, and wrote up the results of my investigation in a long piece for *Ars*. Read the whole thing for the full, farcical story, but here's the upshot: The $200–250 billion number had originated in a 1991 sidebar in *Forbes*, but it was *not* a measurement of the cost of "piracy" to the U.S. economy. It was an unsourced estimate of the total size of the global market in counterfeit goods. Beyond the obvious fact that these numbers are decades old, counterfeiting of physical goods imported in bulk and sold by domestic retail distributors is, rather obviously, a totally different phenomenon with different policy implications from the problem of illicit individual consumer downloads of movies, music, and software. The 750,000 jobs number had originated in a 1986 speech (yes, 1986) by the secretary of commerce estimating that counterfeiting could cost the United States "anywhere from 130,000 to 750,000" jobs. Nobody in the Commerce Department was able to identify where those figures had come from.

These are the numbers that were driving U.S. copyright policy *as recently as 2008*—and I'm *still* seeing them repeated in "fact sheets" circulated by SOPA boosters. Finally, in 2010, the Government Accountability Office released a report noting that these figures "cannot be substantiated or traced back to an underlying data source or methodology." Now, if a single journalist could discover as much with a few days work, minimal due diligence should have enabled highly paid lobbyists to arrive at the same conclusion. The only way to explain the longevity of these figures, if we charitably rule out deliberate deception, is to infer that the people repeating them simply did not care whether what they were saying was true. If I were a legislator, I would find this more than a little insulting

As Carr's piece suggests, SOPA's corporate backers have fallen back on new numbers, but they're still entirely bogus:

> The Motion Picture Association of America cites figures saying that piracy costs the United States $58 billion annually. Mark Elliot, an executive from the U.S. Chamber of Commerce, said in a letter to The New York Times that such piracy threatened 19 million American jobs

Only $58 billion! We're making progress! So where does that figure come from? The source here is a paper released by the Institute for Policy Innovation, and authored by one Stephen Siwek, an MBA and principal of a consulting firm called Economists Incorporated that produces economic analysis for hire on behalf of (among others) businesses seeking to influence policy makers. That does not, in itself, invalidate the research, but we should at least begin with the recognition that we are not dealing here with impartial academic studies produced by a university or government research agency.

What does invalidate the "research" is the inappropriate use of "multiplier" effects to double—and triple—count loss estimates that were dubious to begin with. As the GAO report notes in its typically understated fashion:

> Most of the experts we interviewed were reluctant to use economic multipliers to calculate losses from counterfeiting because this methodology was developed to look at a one-time change in output and employment.

In other words, Siwek is taking a method that's useful for analyzing *where* in the economy we will likely see the effects of demand shifts, and pretending that it somehow reflects aggregate economic losses. As my colleague Tim Lee has pointed out, this is Bastiat's Broken Window Fallacy on steroids:

> [I]n IPI-land, when a movie studio makes $10 selling a DVD to a Canadian, and then gives $7 to the company that manufactured the DVD and $2 to the guy who shipped it to Canada, society has benefited by $10+$7+$2=$19. Yet some simple math shows that this is nonsense: the studio is $1 richer, the trucker is $2, and the manufacturer is $7. Shockingly enough, that adds up to $10. What each participant cares about is his profits, not his revenues.

So, to stay focused on movies, Siwek takes an estimate of $6.1 billion in piracy losses to the U.S. movie industry, and through the magic of multipliers gets us to a more impressive sounding $20.5 billion. That original $6.1 billion figure, by the way, was produced by a study commissioned from LEK Consulting by the Motion Picture Association of America. Since even the GAO was unable to get at the underlying research or evaluate its methodology, it's impossible to know how reliable that figure is, but given that MPAA has already had to admit significant errors in the numbers LEK generated, I'd take it with a grain of salt.

Believe it or not, though, it's actually *even worse than that*. SOPA, recall, does not actually *shut down* foreign sites. It only requires (ineffective) blocking of foreign "rogue sites" for U.S. Internet users. It doesn't do anything to prevent users in (say) China from downloading illicit content on a Chinese site. If we're interested in the magnitude of the piracy harm that SOPA is aimed at addressing, then, the only relevant number is the loss attributable specifically to *Internet piracy by U.S. users*.

Again, we don't have the full LEK study, but one of Siwek's early papers does conveniently reproduce some of LEK's PowerPoint slides, which attempt to break the data down a bit. Of the total $6.1 billion in annual losses LEK estimated to MPAA studios, the amount attributable to online piracy by users in the United States was $446 million—which, by coincidence, is roughly the amount grossed globally by *Alvin and the Chipmunks: The Squeakquel*.

So in a fantasy world where U.S. movie pirates don't just circumvent blockage with a browser plugin, and SOPA actually stops *all online movie piracy* by American users, we get a $446 million economic benefit to the United States in the form of movie revenues, and presumably comparable benefits in music and software revenues? Well, no. Remember our old friend the Broken Window Fallacy. It's true that *some* illicit U.S. downloads displace sales of legal products. But what happens to the money the pirates *would* have otherwise spent on those legal copies? They don't eat it! As that same GAO report helpfully points out:

> (1) in the case that the counterfeit good has similar quality to the original, consumers have extra disposable income from purchasing a less expensive good, and (2) the extra disposable income goes back to the U.S. economy, as consumers can spend it on other goods and services.

As one expert consulted by GAO put it, "effects of piracy within the United States are mainly redistributions within the economy for other purposes and that they should not be considered as a loss to the overall economy." In many cases—I've seen research suggesting it's about 80 percent for music—a U.S. consumer would not have otherwise purchased an illicitly downloaded song or movie if piracy were not an option. Here, the result is actually pure consumer surplus: The downloader enjoys the benefit, and the producer loses nothing. In the other 20 percent of cases, the result is a loss to the content industry, but not a let loss to the economy, since the money just ends up being spent elsewhere. If you're concerned about the overall jobs picture, as opposed to the fortunes of a specific industry, there is no good reason to think eliminating piracy by U.S. users would yield *any* jobs *on net*, though it might help boost employment in copyright-intensive sectors. (Oh, and that business about 19 million jobs? Also bogus.)

Does that mean online piracy is harmless? *Of course not*. But the harm is a dynamic loss in *allocative efficiency*, which is much harder to quantify. That is, in the cases where a consumer would have been willing to buy an illicitly downloaded movie, album, or software program, we want the market to be accurately signalling demand for the products people value, rather than whatever less-valued use that money gets spent on instead. This is, in fact, very important! It's a good reason to look for appropriately tailored ways to reduce piracy, so that the market devotes resources to production of new creativity and innovation valued by consumers, rather than to other, less efficient purposes. Indeed, it's a good reason to look for ways of doing this that, unlike SOPA, *might actually work*.

It is not, however, a good reason to spend $47 million in taxpayer dollars—plus untold millions more in ISP compliance costs—turning the Justice Department into a *pro bono* litigation service for Hollywood in hopes of generating a jobs and a revenue bonanza for the U.S. economy. Any "research" suggesting we can expect that kind of result from Internet censorship is a fiction more fanciful than singing chipmunks.

jobs there!

Julian Sanchez • January 3, 2012 @ 3:07 pm
Filed under: Law and Civil Liberties; Telecom, Internet & Information Policy
Tags: broken window fallacy, copyright, government intervention, piracy, Stop Online Piracy Act

LAW & DISORDER / CIVILIZATION & DISCONTENTS

PROTECT IP Act would cost taxpayers $47 million, private sector much more

The Congressional Budget Office says the government would spend about $10 ...

by Timothy B. Lee - Aug 18 2011, 7:13pm EDT

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Photograph by Bob With

The Congressional Budget Office has released a new estimate of the cost of the PROTECT IP Act, the controversial legislation to force private ISPs, search engines, and other parties to censor websites accused of facilitating copyright infringement. Based on personnel estimates supplied by the Obama administration, the CBO estimates that the enforcement activities of PROTECT IP will cost taxpayers about $10 million per year.

The bulk of the money would be spent on hiring staff. The Justice Department would need additional agents to "commence legal actions against individuals who operate or register an Internet site dedicated to activities infringing on copyrights of others," the CBO says. "DOJ anticipates that it would need to hire 22 special agents and 26 support staff to execute its new investigative responsibilities under the bill."

The price tag for bringing on those new workers? $47 million over five years, or just under $10 million per year. Of course, this is just a rough estimate. The actual costs will be controlled by future Congressional appropriations and the enforcement priorities of the administration.

An extra $10 million in spending is a drop in the bucket in a federal budget that now exceeds $3 trillion. But the estimate comes with two important caveats. First, the personnel requirements were estimated by the Obama administration, which may have an incentive to downplay the bill's costs in order to speed its passage. So it's possible that the government would devote significantly more resources to enforcement once the legislation was enacted.

The bigger concern is that the estimate doesn't include potential costs to the private sector. The Unfunded Mandates Reform Act requires the CBO to estimate whether proposed legislation will cost the private sector more than $142 million. The CBO says it can't do that in this case because of "uncertainty about how often and against whom the Department of Justice or copyright holders would use the authority" provided by the legislation.

We've never had the kind of large-scale Internet censorship infrastructure mandated by the PROTECT IP Act, so it's hard to predict how much it would cost private ISPs, search engines, and credit card networks to comply. But maintaining, updating, and enforcing blacklists could be expensive, and these costs would be multiplied across hundreds, if not thousands, of private firms.

READER COMMENTS 59

Timothy B. Lee / Timothy covers tech policy for Ars, with a particular focus on patent and copyright law, privacy, free speech, and open government. His writing has appeared in Slate, Reason, Wired, and the New York Times.

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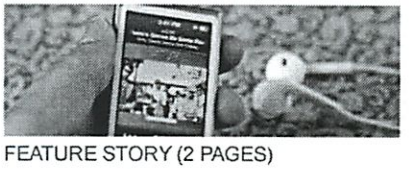

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Report to Congressional Committees

April 2010

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Observations on Efforts to Quantify the Economic Effects of Counterfeit and Pirated Goods

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GAO-10-423

April 12, 2010

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Highlights

Highlights of GAO-10-423, a report to congressional committees

INTELLECTUAL PROPERTY

Observations on Efforts to Quantify the Economic Effects of Counterfeit and Pirated Goods

Why GAO Did This Study

In October 2008, Congress passed the Prioritizing Resources and Organization for Intellectual Property Act of 2008 (PRO-IP Act), to improve the effectiveness of U.S. government efforts to protect intellectual property (IP) rights such as copyrights, patents, and trademarks. The act also directed GAO to provide information on the quantification of the impacts of counterfeit and pirated goods. GAO (1) examined existing research on the effects of counterfeiting and piracy on consumers, industries, government, and the U.S. economy; and (2) identified insights gained from efforts to quantify the effects of counterfeiting and piracy on the U.S. economy.

GAO interviewed officials and subject matter experts from U.S. government agencies, industry associations, nongovernmental organizations, and academic institutions, and reviewed literature and studies quantifying or discussing the economic impacts of counterfeiting and piracy on the U.S. economy, industry, government, and consumers. GAO is making no recommendations in this report.

What GAO Found

According to experts and literature GAO reviewed, counterfeiting and piracy have produced a wide range of effects on consumers, industry, government, and the economy as a whole, depending on the type of infringements involved and other factors. Consumers are particularly likely to experience negative effects when they purchase counterfeit products they believe are genuine, such as pharmaceuticals. Negative effects on U.S. industry may include lost sales, lost brand value, and reduced incentives to innovate; however, industry effects vary widely among sectors and companies. The U.S. government may lose tax revenue, incur IP enforcement expenses, and face risks of counterfeits entering supply chains with national security or civilian safety implications. The U.S. economy as a whole may grow more slowly because of reduced innovation and loss of trade revenue. Some experts and literature also identified some potential positive effects of counterfeiting and piracy. Some consumers may knowingly purchase counterfeits that are less expensive than the genuine goods and experience positive effects (consumer surplus), although the longer-term impact is unclear due to reduced incentives for research and development, among other factors.

Three widely cited U.S. government estimates of economic losses resulting from counterfeiting cannot be substantiated due to the absence of underlying studies. Generally, the illicit nature of counterfeiting and piracy makes estimating the economic impact of IP infringements extremely difficult, so assumptions must be used to offset the lack of data. Efforts to estimate losses involve assumptions such as the rate at which consumers would substitute counterfeit for legitimate products, which can have enormous impacts on the resulting estimates. Because of the significant differences in types of counterfeited and pirated goods and industries involved, no single method can be used to develop estimates. Each method has limitations, and most experts observed that it is difficult, if not impossible, to quantify the economy-wide impacts. Nonetheless, research in specific industries suggest that the problem is sizeable, which is of particular concern as many U.S. industries are leaders in the creation of intellectual property.

Negative Effects of Counterfeiting and Piracy, by Stakeholder

Stakeholders	Negative effects
Consumers	Health and safety risks, low quality goods
Industries	Lost sales and brand value, increased IP protection costs
U.S. government	Lost tax revenue, increased enforcement costs, and risks to supply chains with national security or safety implications
U.S. economy	Lower growth and innovation, declining trade with countries having weak IP rights enforcement

Source: GAO analysis.

View GAO-10-423 or key components.
For more information, contact Loren Yager at (202) 512-4347 or yagerl@gao.gov.

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Abbreviations

BSA	Business Software Alliance
CBP	Customs and Border Protection
DHS	Department of Homeland Security
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FDA	U.S. Food and Drug Administration
FTC	Federal Trade Commission
HHS	Department of Health and Human Services
IP	intellectual property
ITC	International Trade Commission
OECD	Organization for Economic Cooperation and Development
PRO-IP ACT	Prioritizing Resources and Organization for Intellectual Property Act of 2008
RIMS II	Regional Input-Output Modeling System
TRIPS	Agreement on Trade-Related Aspects of Intellectual Property Rights
USTR	Office of the U.S. Trade Representative
WTO	World Trade Organization

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United States Government Accountability Office
Washington, DC 20548

April 12, 2010

The Honorable Patrick J. Leahy
Chairman
The Honorable Jeff Sessions
Ranking Member
Committee on the Judiciary
United States Senate

The Honorable John Conyers, Jr.
Chairman
The Honorable Lamar S. Smith
Ranking Member
Committee on the Judiciary
House of Representatives

In October 2008, Congress passed the Prioritizing Resources and Organization for Intellectual Property Act of 2008 (PRO-IP Act) (P.L. 110-403), to strengthen and improve the effectiveness of U.S. government efforts to protect the intellectual property (IP) of U.S. industries and IP rights holders. In the PRO-IP Act, Congress noted that U.S. IP industries have created millions of highly skilled, high-paying U.S. jobs and continue to represent a major source of creativity, innovation, economic growth, and competitiveness.

The PRO-IP Act directed GAO to provide information on the quantification of the impacts of counterfeit and pirated goods on the economy and industries of the United States to help the U.S. government better protect the IP of rights holders.[1] Our work: (1) examined existing research on the effects of counterfeiting and piracy on consumers, industries, government, and the U.S. economy; and (2) identified insights gained from efforts to quantify the effects of counterfeiting and piracy on the U.S. economy.

[1]The PRO-IP Act also directed GAO to report on the nature and scope of IP statutory and case laws and the extent that they are being used to investigate and prosecute acts of trafficking and counterfeits. As agreed with congressional committees, this part of the mandate was addressed by GAO's report, *Intellectual Property: Federal Enforcement Has Generally Increased, but Assessing Performance Could Strengthen Law Enforcement Efforts*, GAO-08-157 (Washington, D.C.: Mar. 11, 2008).

To address these objectives, we interviewed officials and representatives from U.S. government agencies, industry associations, nongovernmental organizations, academic institutions, and a multilateral organization, and we reviewed documents and studies quantifying or discussing the impacts of counterfeiting and piracy on the U.S. economy, industry, government, and consumers. We met with officials and reviewed documents from the Departments of Justice (Justice), Homeland Security (DHS), Commerce (Commerce), and Health and Human Services (HHS), the Office of the U.S. Trade Representative (USTR), and the International Trade Commission (ITC). We conducted a literature search of studies and estimates of the economic impact of IP infringements published since 1999 to examine various aspects of the economic impacts of counterfeiting and piracy, and to identify other insights about the role IP plays in the U.S. economy.[2] Among the studies we reviewed was the Organization for Economic Cooperation and Development's (OECD) 2008 report, *The Economic Impact of Counterfeiting and Piracy*.[3] Although this study was global rather than focused on the U.S. economy, its unique nature and prominence as the most comprehensive attempt to quantify the impacts of counterfeiting and piracy warranted its inclusion within our reviews. We also interviewed subject matter experts from a range of governmental, nongovernmental, academic and industry sources, and OECD officials to discuss efforts to quantify the economic impacts of counterfeiting and piracy and to obtain their views on the range of impacts of counterfeits and piracy, insights on counterfeiting activities and markets, and the role of IP in the U.S. economy. Unless otherwise noted, in our discussion of the impacts and insights on counterfeiting and piracy, we do not distinguish between imported counterfeit and pirated goods and those produced domestically. The literature we reviewed and experts we spoke with focused primarily on imported counterfeit goods rather than those produced within the United States. We determined that the U.S. government did not systematically collect data and perform analysis on the impacts of counterfeiting and piracy on the U.S. economy and, based on our review of literature and interviews with experts, we concluded that it was not feasible to develop our own estimates or attempt to quantify the economic impact of counterfeiting and piracy on the U.S. economy. We shared a copy of the draft report with officials from Commerce, DHS, HHS, Justice, ITC, USTR, and the Office of the U.S. Intellectual Property

[2]See the Bibliography for a list of studies and estimates that we reviewed.

[3]Organisation for Economic Cooperation and Development (OECD), *The Economic Impact of Counterfeiting and Piracy*. Paris: OECD, 2008.

Enforcement Coordinator to obtain technical comments. We received comments from the DHS and Justice, and the Office of the U.S. Intellectual Property Enforcement Coordinator and made changes as appropriate.

We conducted our work from April 2009 to April 2010 in accordance with all sections of GAO's Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations to our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions in this product. For additional details regarding our scope and methodology, see appendix I.

Background

Importance of Protection for Innovators Has Long Been Recognized in the United States

The importance of patents and other mechanisms to enable inventors to capture some of the benefits of their innovations has long been recognized in the United States as a tool to encourage innovation, dating back to Article 1 of the U.S. Constitution and the 1790 patent law. Ensuring the protection of IP rights encourages the introduction of innovative products and creative works to the public. Protection is granted by guaranteeing proprietors limited exclusive rights to whatever economic reward the market may provide for their creations and products.

Today, eight federal agencies and entities within them undertake the primary U.S. government activities in support of IP rights. These agencies and entities include Commerce, HHS, DHS, Justice, ITC, State, USTR, the Copyright Office, and entities such as Customs and Border Protection (CBP), the U.S. Patent and Trademark Office, and the Federal Bureau of Investigation (FBI).

In addition to domestic efforts for protecting IP, the U.S. government participated actively in negotiating the World Trade Organization's (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which came into force in 1995 and broadly governs the multilateral protection of IP rights. Under TRIPS, all WTO member countries are obligated to establish laws and regulations that meet a minimum standard for protecting various areas of IP rights. It also provides for enforcement measures for members. One of USTR's priorities in recent years has been negotiating free trade agreements. Since 2000,

USTR has completed negotiations for free trade agreements that have entered into force with Australia, Bahrain, Central America,[4] Chile, Jordan, Morocco, Oman, Peru, and Singapore.[5] According to officials at USTR, these agreements offer protection beyond that required in TRIPS.[6]

Intellectual property is an important component of the U.S. economy, and the United States is an acknowledged global leader in the creation of intellectual property. According to the USTR, "Americans are the world's leading innovators, and our ideas and intellectual property are a key ingredient to our competitiveness and prosperity." The United States has generally been very active in terms of advocating strong IP protection and encouraging other nations to improve these systems for two key reasons. First, the U.S. has been the source of a large share of technological improvements for many years and, therefore, stands to lose if the associated IP rights are not respected in other nations. Secondly, a prominent economist noted that IP protection appears to be one of the factors that has helped to generate the enormous growth in the world economy and in the standard of living that has occurred in the last 150 years. This economist pointed out that the last two centuries have created an unprecedented surge in growth compared to prior periods. Among the factors attributed to creating the conditions for this explosion in economic growth are the rule of law, including property rights and the enforceability of contracts.[7]

[4]Participants in the Central America Free Trade Agreement are Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and the United States.

[5]The United States also has signed free trade agreements with Colombia, Korea, and Panama, but Congress must enact legislation to approve and implement each individual agreement in order for them to go into effect. Prior to 2000, two other free trade agreements had entered into force: the U.S.-Israel Free Trade Agreement (entered into force in 1985) and the North American Free Trade Agreement between Canada, Mexico, and the United States (entered into force in 1994).

[6]For example, these protections include adherence to new World Intellectual Property Organization Internet treaties, a longer minimum time period for copyright protection, additional penalties for circumventing technological measures controlling access to copyrighted materials, transparent procedures for protection of trademarks, stronger protection for well-known marks, patent protection for plants and animals, protection against arbitrary revocation of patents, new provisions dealing with domain name disputes, and increased enforcement measures.

[7]William J. Baumol, *The Free-Market Innovation Machine: Analyzing the Growth Miracle of Capitalism.* (Princeton, N.J.: Princeton University Press, 2002).

While these conditions are clearly important for generating economic growth, determining the contributions of innovation to economic growth at the level of the overall economy has been a challenging task. Economists have used a variety of techniques to better understand the role of innovation in growth, and historical evidence shows that growth rates have periodically been driven upward by major technological improvements, beginning with the industrial revolution and the role of electricity, and continuing with the current revolution in information technology.[8]

Common Protections Related to IP

Generally, individual countries grant and enforce IP rights. IP is any innovation, commercial or artistic, or any unique name, symbol, logo, or design used commercially. IP rights protect the economic interests of the creators of these works by giving them property rights over their creations.[9]

- *Copyright.* A set of exclusive rights subsisting in original works of authorship fixed in any tangible medium of expression now known or later developed, for a fixed period of time. For example, works may be literary, musical, or artistic.
- *Trademark.* Any sign or any combination of signs capable of distinguishing the source of goods or services is capable of constituting a trademark. Such signs— in particular, words (including personal names), letters, numerals, figurative elements, and combinations of colors, as well as any combination of such signs— are eligible for registration as trademarks.

[8]Edwin Mansfield, *Industrial Research and Technological Innovation.* (New York, N.Y.: W.W. Norton, 1968); Nathan Rosenberg, *Exploring the Black Box: Technology, Economics, and History.* (Cambridge, United Kingdom: Cambridge University Press, 1994); J. Schumpeter, *Business Cycles, A Theoretical and Statistical Analysis of the Capitalist Process.* (New York, N.Y.: McGraw-Hill, 1939).

[9]In addition to copyrights, trademarks, and patents, two other IP protections are trade secrets and geographical indications. Trade secrets are defined as any type of valuable information, including a formula, pattern, compilation, program device, method, technique, or process that gains commercial value from not being generally known or readily obtainable; and for which the owner has made reasonable efforts to keep secret. Geographical indications are defined as indications that identify a good as originating in a country, region, or locality, where a given quality, reputation, or other characteristic of the good is essentially attributable to its geographic origin. Definitions used in this report for the various types of IP are provided by the U.S. Patent and Trademark Office.

- *Patent.* Exclusive rights granted to inventions for a fixed period of time, whether products or processes, in all fields of technology, provided they are new, not obvious (involve an inventive step), and have utility (are capable of industrial application).

"Pirated copyright goods" refer to any goods that are copies made without the consent of the right holder or person duly authorized by the right holder. "Counterfeit goods" refer to any goods, including packaging or bearing without authorization, a trademark that is identical to a trademark validly registered for those goods, or that cannot be distinguished in its essential aspects from such a trademark, and that, thereby, infringes the rights of the owner of the trademark in question. According to the U.S. Food and Drug Administration (FDA), "counterfeit drugs" are defined under U.S. law as those sold under a product name without proper authorization, where the identity of the source drug is knowingly and intentionally mislabeled in a way that suggests that it is the authentic and approved product.[10]

Counterfeiting and Piracy Cover a Wide Range of Goods

CBP data show that between fiscal years 2004 and 2009, the domestic value and number of U.S. seizures of counterfeit goods imported from other countries have fluctuated.[11] These seizures have been concentrated among certain types of products. For example, seizures of footwear, wearing apparel, and handbags accounted for about 57 percent of the aggregate domestic value of goods seized in those 6 years. Table 1 shows the percent of total domestic value for different types of commodities seized as well as the domestic value of all goods seized and total number of seizures. The value of wearing apparel and cigarette seizures generally declined, while the value of pharmaceutical seizures generally increased. Several factors influence trends in seizure values. For example, values of

[10]Counterfeit drugs under this definition may include products without the active ingredient, with an insufficient quantity of the active ingredient, with the wrong active ingredient, or with packaging that falsely suggests the drug was manufactured by an FDA-approved manufacturer.

[11]CBP data represent seizures made by CBP or Immigration and Customs Enforcement. CBP measures IP activity two ways: number of seizure actions and estimated domestic value of goods seized. The number of goods in one seizure action can range from a few items shipped via international mail to hundreds of boxes in an ocean-going cargo container. Domestic value is calculated as the landed cost plus profit (the cost of the merchandise when last purchased, plus all duties, fees, broker's charges, profit, unlading charges, and U.S. freight charges to bring the good to the importer's premises), a value generally lower than the price at which the goods might sell to the final consumer.

seized goods can vary from year to year due to counterfeiters' responses to changes in marketplace demand or enforcement actions. For instance, in fiscal year 2006, a federal enforcement investigation resulted in the seizure of 77 cargo containers of counterfeit Nike Air Jordan shoes and one container of counterfeit Abercrombie & Fitch clothing. The estimated domestic value of these goods was about $19 million, representing about 12 percent of the total domestic seizure value that year. In addition, the level of federal border enforcement effort varies across ports, resulting in different seizure rates, which is discussed in a later section of this report.

Table 1: DHS Seizures of IP-Infringing Goods, Expressed as a Percentage of Total Domestic Value of Goods Seized Annually, Fiscal Years 2004–2009

Dollars in millions

Commodity	2004 (percentage)	2005 (percentage)	2006 (percentage)	2007 (percentage)	2008 (percentage)	2009 (percentage)	Reported percentage of 2004-2009 totals
Footwear	1	10	41	40	38	38	32
Wearing apparel	37	17	16	14	9	8	15
Handbags/wallets/ backpacks	17	16	9	7	11	8	11
Consumer electronics	6	9	5	8	8	12	9
Computers/ hardware	1	5	9	5	3	5	5
Pharmaceuticals	-	2	1	6	10	4	5
Cigarettes	17	10	-	-	2	1	4
Media	4	-	4	4	2	4	3
Watches/parts	2	3	2	-	-	6	2
Toys/electronic games	3	9	-	-	-	2	2
Batteries	2	-	-	-	1	1	1
Sunglasses/parts	-	-	-	2	3	1	1
Perfumes	-	3	-	1	2	1	1
Jewelry	-	-	-	-	-	4	1
Headwear	-	-	2	-	-	-	-
Health care	-	-	2	-	-	-	-
All other commodities	10	15	8	14	10	3	9
Total domestic value of all seizures	**$139**	**93**	**155**	**197**	**273**	**261**	**$1,118**
Total number of seizures	**7,255**	**8,022**	**14,675**	**13,657**	**14,992**	**14,841**	**73,442**

Source: GAO analysis of CBP data.

Note: Where percentages are not provided, CBP either did not report the commodity as a separate category in a given year or the percentage seized of the commodity was less than 1 percent of the total domestic value of all commodities seized. Seizures of these commodities may be included in the "All other commodities" category. The percentage values may not add up to 100 percent due to rounding.

According to CBP data, seized counterfeit goods are dominated by products from China. During fiscal years 2004 through 2009, China accounted for about 77 percent of the aggregate value of goods seized in the United States. Hong Kong, India, and Taiwan followed China, accounting for 7, 2, and 1 percent of the seized value, respectively. CBP data indicate certain concentrations of counterfeit production among these countries: in 2009, about 58 percent of the seized goods from China were footwear and handbags; 69 percent of the seized goods from Hong Kong were consumer electronics and watch parts; 91 percent of the seized goods from India were pharmaceuticals and perfume; and 85 percent of seized goods from Taiwan were computers and consumer electronics. CBP data show that goods were also seized frequently from Russia, Korea, Pakistan, Vietnam, and certain Southeast Asian countries. Unlike imported counterfeits, there is little information on the extent and sources for domestically produced counterfeits. According to the Congressional Research Service, the United States is especially concerned with foreign counterfeits of U.S. intellectual property. Compared to foreign countries, counterfeits produced in the United States are estimated to be relatively low.

Another significant aspect of IP infringement is the piracy of digital copyrighted products, which is not captured by CBP seizure data. The development of technologies that enable the unauthorized distribution of copyrighted works is widely recognized as leading to an increase in piracy. The rapid growth of Internet use, in particular, has significantly contributed to the increase. Digital products are not physical or tangible, can be reproduced at very low cost, and have the potential for immediate delivery through the Internet across virtually unlimited geographic markets. Sectors facing threats from digital piracy include the music, motion picture, television, publishing, and software industries. Piracy of these products over the Internet can occur through methods including peer-to-peer networks, streaming sites, and one-click hosting services. There is no government agency that systematically collects or tracks data on the extent of digital copyright piracy.

These technological developments, along with an increase in the sophistication of packaging for counterfeit goods, have changed the nature of counterfeiting and piracy substantially in recent years. Industry

associations with whom we met commented that technological changes and increased sophistication among counterfeiters have affected their businesses significantly.

Counterfeiting and Piracy Have a Wide Range of Effects on U.S. Consumers, Industry, Government, and the Economy

According to experts we spoke with and literature we reviewed, counterfeiting and piracy have produced a wide range of effects on consumers, industry, government, and the economy as a whole, depending on the type of infringements involved and other factors. Most of the information and views we obtained from our interviews and literature review focused on the significant direct negative effects of counterfeiting and piracy on stakeholders, including health and safety risks, lost revenues, and increased costs of protecting and enforcing IP rights. However, some experts and literature point out that certain stakeholders may experience some positive effects from counterfeits and piracy, though there is little information available on potential positive effects. Table 2 summarizes the positive and negative effects by stakeholder, based on our discussions with experts and literature we reviewed.

Table 2: Potential Direct Effects of IP Infringements in the United States by Stakeholder

Stakeholders	Potential effects
Consumers	Negative effects • Damage to health and safety • Costs incurred when product fails due to lower quality of counterfeit good
	Positive Effects • Perceived benefits from lower prices of counterfeit and pirated goods
Industry	Negative effects • Lost sales • Lost brand value or damage to public image • Cost of IP protection • Decreased incentive to invest in research and development
	Positive effects • Increased sales of legitimate goods based on consumer "sampling" of pirated goods

Stakeholders	Potential effects
Government	Negative effects • Lost tax revenue due to illegal sales of counterfeit and pirated goods • Cost of IP enforcement • Risks of counterfeits entering supply chains with national security or civilian safety implications
Economy as a whole	Negative effects • Lower economic growth as a result of reduced incentives to innovate • Lost revenue from declining U.S. trade in countries with weak IP rights regimes

Source: GAO analysis of data collected through interviews with experts and literature reviewed.

Note: These effects may differ greatly in magnitude by industry and stakeholder, with specific impacts depending on which product or industry is being discussed.

Consumer Effects Include Danger to Health and Safety

A commonly cited concern about counterfeit trade is that certain types of counterfeit goods can have harmful effects on consumers' health and safety, causing serious illness or death. Experts we spoke with and literature we reviewed identified certain counterfeit products, such as pharmaceuticals, automotive parts, electrical components, toys, and household goods, as having potentially damaging health and safety effects. According to experts we spoke with, a key characteristic of these types of counterfeit goods, which distinguishes their effects from other types of counterfeiting or piracy, is that U.S. consumers are likely to have been deceived about the origin of the product. In addition, some studies and an expert reported that counterfeiters have increasingly diversified beyond their traditional products, such as luxury goods, to more functional products such as baby shampoo and household cleaners, and will continue to expand their product portfolios since the profit incentives are large. Examples of the types of counterfeit products that may have negative health and safety effects on consumers are presented below.

- Counterfeit pharmaceuticals may include toxic or nonactive ingredients, correct ingredients in incorrect quantities, or other mislabeling. These products can be ineffective in treating ailments or may lead to adverse

reactions, drug resistance, or even death.[12] The FDA has specifically highlighted and issued warnings to U.S. consumers on the dangers of buying prescription drugs over the Internet.

- Counterfeit automotive products may be substandard. A representative of a U.S. automotive parts supplier stated that it tested a supply of counterfeit timing belts that did not meet industry safety standards and could potentially impair the safety of vehicles.
- Counterfeit or pirated software may threaten consumers' computer security. The illegitimate software, for example, may contain malicious programming code that could interfere with computers' operations or violates users' privacy.

Effects Vary Across Industries and Include Lost Sales and Reduced Incentives to Innovate

Counterfeit or pirated products that act as substitutes for genuine goods can have a wide range of negative effects on industries, according to experts we spoke with and literature we reviewed. These sources further noted that the economic effects vary widely among industries and among companies within an industry. The most commonly identified effect cited was lost sales, which leads to decreased revenues and/or market share. Many industries lose sales because of consumers' purchases of counterfeit and pirated goods, particularly if the consumer purchased a counterfeit when intending to purchase a genuine product. In such cases, the industry may lose sales in direct proportion to the number of counterfeit products that the deceived consumers purchased. Industries in which consumers knowingly purchase counterfeits as a substitute for the genuine good may also experience lost sales. For example, recording companies have lost sales on a wide scale as a result of pirated music distributed over the Internet and producers of high-end fashion goods have lost sales from purchases of counterfeit goods made to look similar to genuine products.

Lost revenues can also occur when lower-priced counterfeit and pirated goods pressure producers or IP owners to reduce prices of genuine goods. In some industries, such as the audiovisual sector, marketing strategies must be adjusted to minimize the impact of counterfeiting on lost revenues. Movie studios that use time-related marketing strategies—introducing different formats of a movie after certain periods of time—

[12]For example, the FDA in recent years has found cases of a counterfeit HIV/AIDS drug that contained nonsterile tap water instead of an active ingredient; a fake schizophrenia medication that contained aspirin; a counterfeit influenza vaccine; and a misbranded cough suppressant that caused the death of five consumers.

have reduced the time periods or "windows" for each format as a countermeasure, reducing the overall revenue acquired in each window. Experts stated that companies may also experience losses due to the dilution of brand value or damage to reputation and public image, as counterfeiting and piracy may reduce consumers' confidence in the brand's quality. Consumers who are unaware that a product is counterfeit may blame the manufacturer of the legitimate good for negative effects of the fake. Some manufacturers learn of the existence of counterfeit versions of their products from returns of inferior counterfeit goods.

Companies are affected in additional ways. For example, to avoid losing sales and liability issues, companies may increase spending on IP protection efforts. In addition, experts we spoke with stated that companies could experience a decline in innovation and production of new goods if counterfeiting leads to reductions in corporate investments in research and development. Another variation in the nature of the effects of counterfeiting and piracy is that some effects are experienced immediately, while others are more long-term in nature, according to the OECD. The OECD's 2008 report cited loss of sales volume and lower prices as short-term effects, while the medium- and long-term effects include loss of brand value and reputation, lost investment, increased costs of countermeasures, potentially reduced scope of operations, and reduced innovation.

Finally, one expert emphasized to us that the loss of the IP rights is much more important than the loss of revenue. He stated that the danger for the United States is in the accelerated "learning effects"—companies learn how to produce and will improve upon these goods. They will no longer need to illegally copy a given brand—they will be in the aftermarket. He suggested that companies should work to ensure their competitive advantage in the future by inhibiting undesired knowledge transfer.

U.S. Government Loses Tax Revenue, Incurs Enforcement Expenses, and Faces Risks to Supply Chains

Many of the experts we interviewed identified lost tax revenue as an effect of counterfeiting and piracy on governments. IP owners or producers of legitimate goods who lose revenue because of competition from counterfeiters pay less in taxes. The U.S. government also incurs costs due to IP protection and enforcement efforts. Researchers have found anecdotal evidence that organized criminal and terrorist organizations are involved in counterfeiting and piracy. A 2009 RAND Corporation study, for

example, presented case studies showing the involvement of organized crime or terrorist groups involved in film piracy to generate funding for their activities.[13] Because criminal networks are involved, government law enforcement priorities may be affected since more resources are devoted to combating these networks. Researchers have identified economic incentives that have contributed to the increase in counterfeiting and piracy in recent years. Economic incentives include low barriers to entering the counterfeiting and piracy business, potentially high profits, and limited legal sanctions if caught.

The federal government also incurs costs to store and destroy counterfeit and pirated goods. Seized goods have to be secured, as they have potential value but cannot be allowed to enter U.S. commerce. Storage may be prolonged by law enforcement actions, but the goods are generally destroyed or otherwise disposed of when they are determined to be illegal and are no longer needed. According to CBP officials, as seizures have increased, the agency's storage and destruction costs have grown and become increasingly burdensome. CBP reported that it spent about $41.9 million to destroy seized property between fiscal years 2007 and 2009.

Counterfeits also pose a threat to the reliability of supply chains that have national security or civilian safety significance. According to a recent Commerce report, counterfeit electronics parts have infiltrated U.S. defense and industrial supply chains and almost 40 percent of companies and organizations—including the Department of Defense—surveyed for the report have encountered counterfeit electronics.[14] Commerce reported that the infiltration of counterfeit parts into the supply chain was exacerbated by weaknesses in inventory management, procurement procedures, and inspection protocols, among other factors. The Federal Aviation Administration (FAA) tracks and posts notifications of incidents of counterfeit or improperly maintained parts entering airline industry supply chains through its Suspected Unapproved Parts Program in an effort to improve flight safety. The FAA program has identified instances of counterfeit aviation parts, as well as fake data plates and history cards to make old parts look new. FAA's program highlights the risks that counterfeit parts pose to the safety of commercial aircraft.

really ?

Who lies to sell that ?

[13]RAND Corporation, *Film Piracy, Organized Crime, and Terrorism*, RAND Safety and Justice Program and the Global Risk and Security Center, (Santa Monica, Calif., 2009).

[14]Commerce, Bureau of Industry and Security, Office of Technology Evaluation, *Defense Industrial Base Assessment: Counterfeit Electronics* (Washington, D.C., January 2010).

The U.S. Economy May Experience Slower Growth

The U.S. economy as a whole may grow at a slower pace than it otherwise would because of counterfeiting and piracy's effect on U.S. industries, government, and consumers. According to officials we interviewed and OECD's 2008 study, to the extent that companies experience a loss of revenues or incentives to invest in research and development for new products, slower economic growth could occur. IP-related industries play an important role in the growth of the U.S. economy and contribute a significant percentage to the U.S. gross domestic product. IP-related industries also pay significantly higher wages than other industries and contribute to a higher standard of living in the United States. To the extent that counterfeiting and piracy reduce investments in research and development, these companies may hire fewer workers and may contribute less to U.S. economic growth, overall. The U.S. economy may also experience slower growth due to a decline in trade with countries where widespread counterfeiting hinders the activities of U.S. companies operating overseas.

In addition to the industry effects, the U.S. economy, as a whole, also may experience effects of losses by consumers and government. An economy's gross domestic product could be measured as either the total expenditures by households (consumers), or as the total wages paid by the private sector (industry). Hence, the effect of counterfeiting and piracy on industry would affect consumers by reducing their wages, which could reduce consumption of goods and services and the gross domestic product. Finally, the government is also affected by the reduction of economic activity, since fewer taxes are collected.

Certain Stakeholders May Experience Positive Economic Effects of Counterfeiting and Piracy

Some experts we interviewed and literature we reviewed identified potential positive economic effects of counterfeiting and piracy. Some consumers may knowingly purchase a counterfeit or pirated product because it is less expensive than the genuine good or because the genuine good is unavailable, and they may experience positive effects from such purchases. For example, consumers in the United States and other countries purchase counterfeit copies of high-priced luxury-branded fashion goods at low prices, although the products' packaging and sales venues make it apparent they are not genuine. Consumers may purchase movies that have yet to be released in theaters and are unavailable in legitimate form. Lower-priced counterfeit goods may exert competitive pressure to lower prices for legitimate goods, which may benefit consumers. However, according to the OECD, the longer-term impact for consumers of falling prices for legitimate goods is unclear, as these changes may affect the speed of innovation.

There are also certain instances when IP rights holders in some industries might experience potentially positive effects from the knowing consumption of pirated or counterfeit goods. For example, consumers may use pirated goods to "sample" music, movies, software, or electronic games before purchasing legitimate copies, which may lead to increased sales of legitimate goods. In addition, industries with products that are characterized by large "switching costs," may also benefit from piracy due to lock-in effects. For example, some experts we spoke with and literature we reviewed discussed how consumers after being introduced to the pirated version might get locked into new legitimate software because of large switching costs, such as a steep learning curve, reluctance to switch to new products, and search costs incurred by consumers to identify a new product to use.

Some authors have argued that companies that experience revenue losses in one line of business—such as movies—may also increase revenues in related or complementary businesses due to increased brand awareness. For instance, companies may experience increased revenues due to the sales of merchandise that are based on movie characters whose popularity is enhanced by sales of pirated movies. One expert also observed that some industries may experience an increase in demand for their products because of piracy in other industries. This expert identified Internet infrastructure manufacturers (e.g., companies that make routers) as possible beneficiaries of digital piracy, because of the bandwidth demands related to the transfer of pirated digital content. While competitive pressure to keep one step ahead of counterfeiters may spur innovation in some cases, some of this innovation may be oriented toward anticounterfeiting and antipiracy efforts, rather than enhancing the product for consumers.

Lack of Data Hinders Efforts to Quantify Impacts of Counterfeiting and Piracy

According to experts we spoke with and literature we reviewed, estimating the economic impact of IP infringements is extremely difficult, and assumptions must be used due to the absence of data. Assumptions, such as the rate at which consumers would substitute counterfeit goods for legitimate products, can have enormous impacts on the resulting estimates and heighten the importance of transparency. Because of the significant differences in types of counterfeit and pirated goods and industries involved, no single method can be used to develop estimates, and each method has limitations. Nonetheless, research in specific industries suggest that the problem is sizeable. Most experts we spoke with and the literature we reviewed observed that despite significant

efforts, it is difficult, if not impossible, to quantify the net effect of counterfeiting and piracy on the economy as a whole.

Lack of Data Is the Primary Challenge for Quantifying Economic Impacts of Counterfeiting and Piracy

Quantifying the economic impact of counterfeit and pirated goods on the U.S. economy is challenging primarily because of the lack of available data on the extent and value of counterfeit trade. Counterfeiting and piracy are illicit activities, which makes data on them inherently difficult to obtain. In discussing their own effort to develop a global estimate on the scale of counterfeit trade, OECD officials told us that obtaining reliable data is the most important and difficult part of any attempt to quantify the economic impact of counterfeiting and piracy. OECD's 2008 report, *The Economic Impact of Counterfeiting and Piracy*, further states that available information on the scope and magnitude of counterfeiting and piracy provides only a crude indication of how widespread they may be, and that neither governments nor industry were able to provide solid assessments of their respective situations. The report stated that one of the key problems is that data have not been systematically collected or evaluated and, in many cases, assessments "rely excessively on fragmentary and anecdotal information; where data are lacking, unsubstantiated opinions are often treated as facts."

In cases in which data on counterfeits are collected by federal agencies, such as CBP or FAA, it is difficult to know how complete the data are. For example, it is difficult to determine whether CBP's annual seizure data in table 1 reflect the extent and types of counterfeits entering the United States in any given year, the counterfeit products that were detected, or the level of federal border enforcement effort expended. FAA's notifications on counterfeit parts through its Suspect Unapproved Parts Program rely, in part, on reported incidents or complaints from members of the aviation community.

Commerce and FBI officials told us they rely on industry statistics on counterfeit and pirated goods and do not conduct any original data gathering to assess the economic impact of counterfeit and pirated goods on the U.S. economy or domestic industries. However, according to experts and government officials, industry associations do not always disclose their proprietary data sources and methods, making it difficult to verify their estimates. Industries collect this information to address counterfeiting problems associated with their products and may be reluctant to discuss instances of counterfeiting because consumers might lose confidence. OECD officials, for example, told us that one reason some industry representatives were hesitant to participate in their study was

that they did not want information to be widely released about the scale of the counterfeiting problem in their sectors.

Assumptions Are Used to Compensate for the Lack of Data

Because of the lack of data on illicit trade, methods for calculating estimates of economic losses must involve certain assumptions, and the resulting economic loss estimates are highly sensitive to the assumptions used. Two experts told us that the selection and weighting of these assumptions and variables are critical to the results of counterfeit estimates, and the assumptions should, therefore, be identified and evaluated. Transparency in how these estimates are developed is essential for assessing the usefulness of an estimate. Two key assumptions that typically are required in calculating a loss estimate from counterfeit goods include the substitution rate used by consumers and the value of counterfeit goods.

- *Substitution rate.* The assumed rate at which a consumer is willing to switch from purchasing a fake good to the genuine product is a key assumption that can have a critical impact on the results of an economic loss estimate. For example, if a consumer pays the full retail price for a fake movie thinking that it is the genuine good, an assumption can be made that a legitimate copy would have been bought in the absence of the fake product, representing a one-to-one substitution rate. However, this one-to-one substitution rate requires three important conditions: (1) the fake good is almost identical in quality to the genuine one; (2) the consumer is paying full retail price for the fake product; and (3) the consumer is not aware he is purchasing a counterfeit product. When some of these conditions are not met (e.g., the consumer paid a significantly lower price for the counterfeit), the likelihood that the consumer would have purchased the genuine product at full price is not clear. Substitution rates also vary by industry, since factors such as product quality, distribution channels, and information available about the product can differ significantly.

- *Value of fake goods.* Valuation of the fake goods constitutes another set of assumptions that has a significant impact. There are several measures of value that can be used, such as the production cost, the domestic value, or the manufacturer's suggested retail price. For example, CBP announced in a January 2010 press release that it had seized 252,968 DVDs with counterfeit trademarks. The agency reported that the manufacturer's suggested retail price of the shipment was estimated to be more than $7.1 million and the domestic value was estimated at $204,904. Officials from the International Trade Commission stated that counterfeits are very difficult to price and estimates of economic impact would benefit from

including a range of prices, from the spot price of the fake on the street corner at the bottom to the manufacturer's suggested retail price at the top.

The level or extent of deception that consumers face is also an important factor to consider when developing assumptions for the substitution rate and value of the fake goods. If a consumer is completely deceived, it could be reasonable to assume a one-to-one substitution rate (i.e., the purchase of a legitimate good in lieu of the counterfeit one) and a full retail price (i.e., the manufacturer's suggested retail sales price). Price, packaging, and location of the transaction are the most important signs to the consumer indicating the legitimacy of a good. Many of the experts we interviewed said that a one-to-one substitution rate is not likely to exist in most circumstances where counterfeit goods are significantly cheaper than the legitimate goods. Some experts also noted that the level of consumer deception varies across industries. For example, consumers who purchase counterfeit pharmaceuticals are more likely to be deceived, particularly when the counterfeit good is sold through the same distribution channel as the genuine product. Some experts observed that few, if any, consumers would willingly purchase a pharmaceutical product they knew might be counterfeit.[15] However, the extent of deception among consumers of audiovisual products is likely lower because sales venues for counterfeit audiovisual goods tend to be separate from the legitimate ones. Unless the assumptions about substitution rates and valuations of counterfeit goods are transparently explained, experts observed that it is difficult, if not impossible, to assess the reasonableness of the resulting estimate.

Three Widely Cited Estimates Sourced to U.S. Agencies Cannot Be Substantiated

Three commonly cited estimates of U.S. industry losses due to counterfeiting have been sourced to U.S. agencies, but cannot be substantiated or traced back to an underlying data source or methodology. First, a number of industry, media, and government publications have cited an FBI estimate that U.S. businesses lose $200-$250 billion to counterfeiting on an annual basis. This estimate was contained in a 2002 FBI press release, but FBI officials told us that it has no record of source data or methodology for generating the estimate and that it cannot be corroborated. Second, a 2002 CBP press release contained an estimate that U.S. businesses and industries lose $200 billion a year in revenue and 750,000 jobs due to counterfeits of merchandise. However, a CBP official

[15]A FDA official told us that most of the fake pharmaceutical purchases were made through the Internet, where consumers were seeking drugs without prescription.

stated that these figures are of uncertain origin, have been discredited, and are no longer used by CBP. A March 2009 CBP internal memo was circulated to inform staff not to use the figures. However, another entity within DHS continues to use them. Third, the Motor and Equipment Manufacturers Association reported an estimate that the U.S. automotive parts industry has lost $3 billion in sales due to counterfeit goods and attributed the figure to the Federal Trade Commission (FTC). The OECD has also referenced this estimate in its report on counterfeiting and piracy, citing the association report that is sourced to the FTC. However, when we contacted FTC officials to substantiate the estimate, they were unable to locate any record or source of this estimate within its reports or archives, and officials could not recall the agency ever developing or using this estimate. These estimates attributed to FBI, CBP, and FTC continue to be referenced by various industry and government sources as evidence of the significance of the counterfeiting and piracy problem to the U.S. economy.

No Single Approach for Quantifying Impacts of Counterfeiting and Piracy Can Be Used, but Different Studies Indicate Problem Is Sizeable

There is no single methodology to collect and analyze data that can be applied across industries to estimate the effects of counterfeiting and piracy on the U.S. economy or industry sectors. The nature of data collection, the substitution rate, value of goods, and level of deception are not the same across industries. Due to these challenges and the lack of data, researchers have developed different methodologies. In addition, some experts we interviewed noted the methodological and data challenges they face when the nature of the problem has changed substantially over time. Some commented that they have not updated earlier estimates or were required to change methodologies for these reasons. Nonetheless, the studies and experts we spoke with suggested that counterfeiting and piracy is a sizeable problem, which affects consumer behavior and firms' incentives to innovate. The most commonly used methods to collect and analyze data, based on our literature review and interviews with experts, are presented below.

Extrapolation of Enforcement Seizure Data

Seizure data from CBP is one of the few types of hard data sources available and is often used to extrapolate the level of counterfeit and pirated trade. This approach provides hard evidence of the minimum quantity of counterfeit goods, but a major limitation is that levels of border enforcement efforts can vary. For example, in our study of seizures made by the CBP field offices, we calculated "seizure rates" for the top 25 U.S. ports, based on the dollar value of IP seizures at each port compared to

the dollar value of IP-related imports there. These ports accounted for over 75 percent of the value of all IP-related imports into the United States in fiscal year 2005.[16] We found that the top 3 ports seized over 100 times more IP counterfeits than the lowest 5 of these ports per dollar of IP-related imports. As a result, it appears that the importance of IP enforcement and the skill of the personnel at the ports have significant impact on the level of seizures. This suggests that seizure data might be useful as a floor, but are not indicative of the actual level of U.S. imports of counterfeit goods.

A study conducted by the Los Angeles County Economic Development Corporation, *A False Bargain: The Los Angeles County Economic Consequences of Counterfeit Products*,[17] used extrapolation of seizure data as one of its three approaches to estimate the economic impact of counterfeits.[18] The authors noted that the key variable in extrapolating seizure data from CBP was to determine CBP's success rate in interdicting illegal goods, which they acknowledged was "unknowable." One of the study's estimates that used CBP seizures to extrapolate the value of counterfeit and pirated goods in Los Angeles County calculated a range between $1 billion and $4.6 billion in 2005. This range was based on different assumptions used for seizure rates and other variables.

Another challenge when extrapolating seizure data is determining the dollar value to assign to the seized good, which can have a significant impact on the magnitude of the estimates. For example, in 2009, CBP seized a shipment of counterfeit sunglasses from China and reported an estimated total domestic value at $12,146 and a manufacturer's suggested retail price at $7.9 million.

Shows how huge the markup is

[16]This method enabled us to perform a better comparison across ports by reducing the influence of non-IP-related imports, as well as eliminating the impact of the fact that some ports handle many times the volume of imports compared to other ports. For a more detailed explanation of U.S. custom seizure data and our analysis see GAO, *Intellectual Property: Better Data Analysis and Integration Could Help U.S. Customs and Border Protection Improve Border Enforcement Efforts*, GAO-07-735 (Washington, D.C.: Apr. 26, 2007).

[17]Gregory Freeman, Nancy D. Sidhu, and Michael Montoya, *A False Bargain: The Los Angeles County Economic Consequences of Counterfeit Products*. (Los Angeles, Calif.: Los Angeles County Economic Development Corporation, February 2007).

[18]The authors used the extrapolation method in combination with two other methods as tests of reasonableness.

Surveys of Supply and Demand

Researchers have conducted surveys to gather data on the consumption or sales patterns of counterfeit or pirated goods. The main advantage of this method is that it can also show consumers' behavior in terms of their preferences. For example, a survey could collect information on the consumer's willingness to pay for a counterfeit good; the number of counterfeit units purchased in a determined period of time; the minimum expected quality; the necessary price reduction of the legitimate good to avoid the consumer's purchase of the counterfeit good; the knowledge of sanctions if caught purchasing the counterfeit good; and the knowledge of potential "side effects" due to the purchase of fake goods. However, a survey can be a labor-intensive project and can cost in the millions of dollars. Moreover, one expert stated that the bias in surveys is hard to identify. For example, he commented that students, who are often the subjects in surveys of illegal file sharing, may either not admit that they are engaging in illegal activity, or may admit to such behavior because it may be popular for this demographic.

The Business Software Alliance publishes piracy estimates based on a set of annual surveys it conducts in different countries.[19] Based on its survey results, the industry association estimated the U.S. piracy rate at 20 percent for business software, carrying a loss of $9 billion in 2008. This study defined piracy as the difference between total installed software and legitimate software sold, and its scope involved only packaged physical software. While this study has an enviable data set on industries and consumers located around the world from its country surveys, it uses assumptions that have raised concerns among experts we interviewed, including the assumption of a one-to-one rate of substitution and questions on how the results from the surveyed countries are extrapolated to nonsurveyed countries.

Another example of the use of surveys is the study by the Motion Picture Association, which relied on a consumer survey conducted in several countries.[20] This study found that U.S. motion picture studios lost $6.1 billion to piracy in 2005. It is difficult, based on the information provided in the study, to determine how the authors handled key assumptions such

[19]Business Software Alliance (BSA), *Sixth Annual BSA-IDC Global Software 08 Piracy Study*. (Washington, D.C.: BSA, May 2009).

[20]L.E.K. Consulting, *The Cost of Movie Piracy*, sponsored by the Motion Picture Association, 2006.

as substitution rates and extrapolation from the survey sample to the broader population.

In a smaller-scale example of a survey method, Rob and Waldfogel[21] surveyed students in American universities during parts of 2003 and 2004, asking not only about the amount of music albums they purchased and illegally downloaded, but also the titles and their valuation for the albums they purchased and illegally downloaded. Their main findings are: (1) downloading reduces legitimate purchases by individuals by 20 percent in the sample, that is, every five music downloads substitute one legitimate purchase; (2) on average, respondents downloaded music that they valued one-third to one-half less than their legitimately purchased music, suggesting that some of the music that was downloaded would never have been purchased as an album; and (3) while downloading reduces per capita expenditures by $25, it raises per capita consumers' surplus by $70. The study indicated that downloading illegal music can have a positive effect on total consumer welfare. However, as explained by the authors, this experiment cannot be generalized; the data consist of a snapshot of undergraduate students' responses, which is not representative of the general population.

As previously discussed, Commerce recently conducted a survey of 387 companies and organizations participating in U.S. defense and industrial supply chains and reported that almost 40 percent of them encountered counterfeit products between 2005 and 2008.[22] The report focused on basic electronic parts and components, including microcircuits and circuit boards, throughout the entire electronics industrial base in the United States. The report noted that these parts are key elements of electronic systems that support national security missions and control essential commercial and industrial operations. Information provided by these companies and organizations also demonstrated an increase in the number of reported counterfeit incidents from 3,868 in 2005 to 9,356 in 2008. Some of these counterfeit incidents could include DOD-qualified parts and components.

[21]Rafael Rob and Joel Waldfogel, *Piracy on the High C's: Music Downloading, Sales Displacement, and Social Welfare in a Sample of College Students*. Journal of Law and Economics, vol. XLIX, April 2006.

[22]Commerce, Bureau of Industry and Security, Office of Technology Evaluation, *Defense Industrial Base Assessment: Counterfeit Electronics* (Washington, D.C., January 2010).

Use of Economic Multipliers to Estimate Effects on the U.S. Economy

Economic multipliers show how capital changes in one industry affect output and employment of associated industries. Commerce's Bureau of Economic Analysis guidelines make regional multipliers available through its Regional Input-Output Modeling System (RIMS II). These multipliers estimate the extent to which a one-time or sustained change in economic activity will be attributed to specific industries in a region.[23] Multipliers can provide an illustration of the possible "induced" effects from a one-time change in final demand. For example, if a new facility is to be created with a determined investment amount, one can estimate how many new jobs can be created, as well as the benefit to the region in terms of output (e.g., extra construction, manufacturing, supplies, and other products needed). It must be noted that RIMS II multipliers assume no job immigration or substitution effect. That is, if new jobs are created as a result of investing more capital, those jobs would not be filled by the labor force from another industry.

In the case of estimating the effect of counterfeiting and piracy, RIMS II economic multipliers are applied to U.S. industry loss figures, which have been derived from other studies, and used to calculate the harm on employment and output due to reduced investments. Using the RIMS II multipliers in this setting does not take into account the two-fold effect: (1) in the case that the counterfeit good has similar quality to the original, consumers have extra disposable income from purchasing a less expensive good, and (2) the extra disposable income goes back to the U.S. economy, as consumers can spend it on other goods and services.

Most of the experts we interviewed were reluctant to use economic multipliers to calculate losses from counterfeiting because this methodology was developed to look at a one-time change in output and employment. Nonetheless, the use of this methodology corroborates that the effect of counterfeiting and piracy goes beyond the infringed industry. For example, when pirated movies are sold, it damages not only the motion picture industry, but all other industries linked to those sales.

The Institute of Policy Innovation has commissioned three studies in the audiovisual industries using economic multipliers; the most expansive of the studies covers motion pictures, sound recordings, business and

[23]Commerce, Bureau of Economic Analysis and Economics and Statistics Administration, *Regional Multipliers. A User Handbook for the Regional Input-Output Modeling System (RIMS II)* 3rd ed., Washington, D.C.: 1997.

entertainment software, and video games for the year 2005.[24] This study found that losses in the U.S. economy due to piracy accounted for $58 billion in output, over 370,000 jobs, and $2.6 billion in tax revenue. It was calculated by taking industry estimates of loss revenue and applying the RIMS II multipliers to these figures.[25]

Other Data Collection and Modeling Methods

Several additional studies that we reviewed provided alternative data collection and modeling techniques to quantify the effect of counterfeiting on a specific industry or, in the case of the OECD, on world trade. The OECD, for example, adopted an approach of combining different methodologies to develop a single estimate. The OECD triangulated a combination of data sets: extrapolating seizure data provided by national customs authorities, comparing the seizure data to international trade data, and using these data in an econometric model. The seizure data were used to develop a model that would measure the magnitude of global counterfeit trade.

The OECD estimated that the magnitude of counterfeit and pirated goods in international trade could have accounted for up to $200 billion in 2005, and later updated this estimate to $250 billion based on 2005-2007 world trade data.[26, 27] As noted by the OECD, most of the international trade data were supplied by national governments and relevant industries, and the OECD did not independently assess the reliability of the figures. Its methodology is based on matching, to the best of its knowledge, the industry data with customs seizure data from the OECD members, acknowledging the limitations of working with customs seizure data. OECD heavily qualified this estimate, however, reporting that "the overall degree to which products are being counterfeited and pirated is unknown and there do not appear to be any methodologies that could be employed to develop an acceptable overall estimate." A second phase of the OECD project covered digital piracy, but did not attempt to quantify the effects.

[24]Stephen E. Siwek, *The True Cost of Copyright Industry Piracy to the U.S. Economy*, Institute for Policy Innovation (IPI), IPI Center for Technology Freedom, Policy Report 189, (October 2007).

[25]In some cases, the author adjusted the industry estimates of loss revenue in order to make them comparable across industries.

[26]The OECD estimate was limited to internationally traded hard goods and did not include digital piracy or counterfeit goods produced and consumed within the same country.

[27]OECD, *Magnitude of Counterfeiting and Piracy of Tangible Products: An Update*, Paris: OECD, November 2009.

In a more narrowly focused study on downloads of music, Oberholzer-Gee and Strumpf[28] used modeling to determine that illegal downloads have no effect on record sales. They concluded that, in contrast with industry estimates, declining sales over the period of 2000-2002 were not primarily caused by illegal downloads. The results were found after compiling a data set of illegal downloads from a prominent server and testing the variation between illegal downloads and legal sales in the United States of specific albums on a weekly basis for 17 weeks in the second half of 2002. This was done by modeling album sales as a function of the quantity of album downloads and other album specific characteristics. While this is an enviable data set of actual illegal downloads, the study has two main limitations: first, the study uses a static model which does not reflect the effect of downloads apart from the week the download occured. Second, the study only observed the supply side of music. Thus, it is not clear if consumers who are illegally downloading music would have purchased the genuine albums.

Hui and Png's[29] study provided another example that used modeling. This study estimated that piracy in the music industry caused revenue losses of 6.6 percent in 1998. The authors stated that their estimate is significantly less than the industry loss estimate. In particular, for the year 1998 in the United States, legitimate sales of CDs were 3.73 CDs per capita, and the average loss in sales per capita due to piracy was 0.044 CDs. The data set included CD prices, music CD demand, piracy level and country-specific characteristics for 28 countries, mostly provided by the International Federation of the Phonographic Industry.[30] The main limitation for this study was that it only covered physical piracy. While digital piracy was not a major concern during the time period sampled, it has become so for at least the last decade due to the Internet. Another limitation is that the study used piracy rates that assumed a one-to-one substitution rate, including those used by the Business Software Alliance.

[28]Felix Oberholzer-Gee and Koleman Strumpf, *The Effect of File Sharing on Record Sales: An Empirical Analysis.* Journal of Political Economy, vol. 115, no. 1, 2007.

[29]Kai-Lung Hui and Ivan Png, *Piracy and the Legitimate Demand for Recorded Music,* Contributions to Economic Analysis & Policy, Volume 2 Issue 1, Article 11, 2003.

[30]The piracy rates used in the study were provided by the International Federation of the Phonographic Industry and Business Software Alliance for music cassettes and business computer software, respectively.

Many experts we interviewed also agreed that general or partial equilibrium models would offer useful insights if the input data existed. These involve modeling the supply and demand of a good and simulating the effect of how counterfeiting affects the market for that good (in the case of a partial model) and the economy as a whole (for a general equilibrium model). The approach allows a systematic analysis of the problem, but depends on the quality of the data used to develop the models. The benefit of an equilibrium model is that assumptions can be tested based on the results obtained and modified if the results fall outside of established parameters. Experts agreed on the potential benefits of this approach, but recognized that data limitations make it currently close to impossible to implement. Officials from the International Trade Commission and other industry experts said that this would be their preferred approach to think of the problem in question, but they also acknowledged that data reliability is a major concern, as with the other methodologies.

"Rule of Thumb" for Measuring Counterfeit Trade as a Proportion of World Trade

According to experts we interviewed and the literature we reviewed, there is no evidence to support a "rule of thumb" that measures counterfeit trade as a proportion of world trade to estimate the amount of counterfeit trade that occurs in a local economy. The advantage of finding a so-called "rule of thumb" for counterfeit trade is that it can be applied generally and does not try to take into consideration the different rates of counterfeiting and piracy for each of the different industry sectors. However, as noted earlier, piracy rates differ enormously across industries, so it is not possible to generalize findings. Moreover, not all goods from world trade can be counterfeited or pirated.

The most commonly cited "rule of thumb" is that counterfeit trade accounts for 5 to 7 percent of world trade, which has been attributed to the International Chamber of Commerce. The Office of the Comptroller of the City of New York used this rule of thumb in its 2004 study to estimate the total dollar exchange of counterfeit goods in the United States and in New York State.[31] This study first applied a 6 percent rule (an average of 5 to 7 percent "rule of thumb") to the total value of world trade in 2003 ($7.6

Where in all world is that from?

[31]William C. Thompson, Jr., *Bootleg Billions: The Impact of the Counterfeit Goods Trade on New York City,* (New York City Office of the Comptroller, November 2004).

trillion) to calculate the value of world trade that is made up of counterfeit goods, arriving at $456 billion.[32]

This rule of thumb was widely spread by a 1998 OECD report, although OECD and experts cautioned that this estimate was not verifiable and the source data were not independently calculated. In its 2008 report, *The Economic Impact of Counterfeiting and Piracy*, the OECD commented that the "metrics underlying the International Chamber of Commerce's estimates are not clear," nor is it clear what types of IP infringements are included in the estimate. In a 2009 update to the report, the OECD estimated the share of counterfeit and pirated goods in world trade as 1.95 percent in 2007, increasing from 1.85 percent in 2000. Many of the experts we interviewed also expressed skepticism over the estimate that counterfeit trade represents 5 to 7 percent of world trade.

Economy-Wide Impact of Counterfeiting and Piracy Is Unknown

While experts and literature we reviewed provided different examples of effects on the U.S. economy, most observed that despite significant efforts, it is difficult, if not impossible, to quantify the net effect of counterfeiting and piracy on the economy as a whole. For example, as previously discussed, OECD attempted to develop an estimate of the economic impact of counterfeiting and concluded that an acceptable overall estimate of counterfeit goods could not be developed. OECD further stated that information that can be obtained, such as data on enforcement and information developed through surveys, "has significant limitations, however, and falls far short of what is needed to develop a robust overall estimate." One expert characterized the attempt to quantify the overall economic impact of counterfeiting as "fruitless," while another stated that any estimate is highly suspect since this is covert trade and the numbers are all "guesstimates."

To determine the net effect, any positive effects of counterfeiting and piracy on the economy should be considered, as well as the negative effects. Experts held different views on the nature of potentially offsetting effects. While one expert we interviewed stated that he did not believe there were any positive effects on the economy due to counterfeiting and piracy, other experts stated that there were positive effects and they

[32]This study does not specify which industries are covered or whether it includes piracy, and does not explain the linear proportion between trade and counterfeiting for the world or the United States.

should be assessed as well. Few studies have been conducted on positive effects, and little is known about their impact on the economy. Although some literature and experts suggest that negative effects may be overstated, in general, literature and experts indicate the negative effects of counterfeiting and piracy on the U.S. economy outweigh the positive effects. Since there is an absence of data concerning these potential effects, the net effect cannot be determined with any certainty.

The experts we interviewed also differed regarding the extent to which net effects of counterfeiting and piracy could be measured in certain parts of the economy. For example, one expert we spoke with has conducted research that found that employment numbers may be lost to the U.S. economy when copyright industries lose business due to piracy. Other experts we interviewed stated that, in their view, employment effects are unclear, because employment may decline in certain industries or rise in other industries as workers are hired to produce counterfeits. Another expert told us that effects of piracy within the United States are mainly redistributions within the economy for other purposes and that they should not be considered as a loss to the overall economy. He stated that "the money does not just vanish; it is used for other purposes." Other experts we spoke with focused more on the difficulties of aggregating the wide variety of effects on industries into a single assessment.

We are sending copies of this report to interested congressional committees; the Secretaries of Commerce, Health and Human Services, and Homeland Security; the Attorney General; the Chairman of the International Trade Commission; the U.S. Trade Representative, and the Intellectual Property Enforcement Coordinator. This report will also be available at no charge on GAO's Web site at http://www.gao.gov.

If you or your staffs have any questions about this report, please contact me at (202) 512-4347 or yagerl@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report.

Loren Yager
Director, International Affairs and Trade

Appendix I: Objectives, Scope, and Methodology

The Prioritizing Resources and Organization for Intellectual Property Act of 2008 (PRO-IP Act) directed GAO to conduct a study on the quantification of the impacts of imported and domestic counterfeits on the U.S. manufacturing industry and the overall economy of the United States. After conducting initial research, we determined that the U.S. government did not systematically collect data and perform analysis on the impacts of counterfeiting and piracy on the U.S. economy, and concluded that it was not feasible to generate our own data or attempt to quantify the economic impact of counterfeiting or piracy on the U.S. economy based on the review of existing literature and interviews with experts. In addition, we noted that many of the existing studies and literature on economic effects address both counterfeiting and piracy. Based on discussions with staff from the House and Senate Judiciary Committees, we agreed that we would (1) examine existing research on the effects of counterfeiting and piracy on consumers, industries, government, and the U.S. economy; and (2) identify insights gained from efforts to quantify the effects of counterfeiting and piracy on the U.S. economy. To address both of these objectives, we interviewed officials and representatives from industry associations, nongovernmental organizations, academic institutions, and U.S. government agencies and the multilateral Organization for Economic Cooperation and Development (OECD). We also reviewed documents and studies quantifying or discussing the impacts of counterfeiting and piracy on the U.S. economy, industry, government, and consumers.

Specifically, we reviewed quantitative and qualitative studies published since 1999 of the economic impact of intellectual property (IP) infringements to examine the range of impacts of counterfeiting and piracy on various stakeholders (both positive and negative) and to identify other insights about the nature of counterfeit markets, approaches to developing estimates, and the role IP plays in the U.S. economy. We identified these reports and studies through a literature search and discussions with representatives from industry associations, nongovernmental organizations, academic institutions, U.S. government agencies, and the OECD to obtain their views on the most relevant studies to review. Our literature review also included the OECD studies that examined the economic impact of counterfeiting and piracy. Although the OECD studies are global in scope rather than focused on the U.S. economy, their unique nature and prominence as the most comprehensive attempt to quantify the impacts of counterfeiting and piracy warranted their inclusion within our scope. See the bibliography for a partial list of references we consulted. We did not assess or evaluate the accuracy of quantitative estimates or other data found in these studies. We reviewed the studies primarily to obtain information on the range of effects from counterfeiting and piracy,

different methods and assumptions used in determining effects, and insights gained from these efforts. In selecting studies for review, we sought to include a range of industries and methodologies. In some cases, we interviewed the authors of these reports to obtain additional information.

We conducted structured interviews with subject matter experts to obtain their views on efforts to quantify the economic impacts of counterfeiting and piracy and methodological approaches, the range of impacts of counterfeits and piracy, and insights on counterfeiting activities and markets. We identified experts through a literature review and discussions with relevant government officials, industry and consumer representatives, academics, and other stakeholders. These subject matter experts were selected from a population of individuals from government, academia, industry, and professional organizations. More specifically, our criteria for selecting experts to interview included:

- type and depth of experience, for instance, whether the expert had authored a widely referenced study or article on the topic, and whether the expert was referred to us by at least one other interviewee as someone knowledgeable about the topic;
- relevance of published work to this engagement;
- representation of a range of perspectives;
- representation of relevant organizations and sectors including, where applicable, representatives from government, academia, industry, and professional organizations; and
- other subject matter experts' recommendations.

We developed a common list of structured interview questions that we asked of each of the experts. We pretested our questions with two of our initial respondents and refined our questions based on their input. The structured interviews included questions on definitions of counterfeit and pirated goods; effects of counterfeiting and piracy; and their views on methodologies and studies that quantify the effects of counterfeiting and piracy, as well as assumptions used. Individuals or organizations that we met with for these structured interviews are listed below:

- Business Software Alliance (BSA)
- Peggy Chaudhry, Villanova University
- International Trade Commission
- Joe Karaganis, Social Science Research Council
- Keith Maskus, University of Colorado
- OECD
- Felix Olberholzer-Gee, Harvard University
- Stephen Siwek, Economists Inc.
- John Spink, Michigan State University
- Thorsten Staake, ETH Zurich, Department of Management, Technology, and Economics
- Office of the U.S. Trade Representative
- Alan Zimmerman, City University of New York

We also met with representatives from other industry associations and other organizations outside of the structured interview process in order to gain more in-depth information and additional perspectives on both of our objectives. In addition, we interviewed U.S. agency officials and reviewed documents from the Departments of Justice, Homeland Security, Commerce, and Health and Human Services, the Office of the U.S. Trade Representative, and the International Trade Commission. U.S. agency documents that we reviewed included counterfeiting and piracy studies, press releases, and other documents. For background purposes, we updated CBP data on counterfeit seizures and costs to store and destroy seized counterfeit goods from our 2007 report, *Intellectual Property: Better Data Analysis and Integration Could Help U.S. Customs and Border Protection Improve Border Enforcement Efforts* (GAO-07-735). To assess the reliability of the seizure data, we reviewed our prior work that reported on seizure data, examined them for internal consistency, and discussed with CBP how the data are collected and reviewed. We found the data to be sufficiently reliable for background purposes of reporting trends in law enforcement seizures. We shared a copy of the draft report with officials from the Departments of Commerce, Justice, Homeland

Security, Health and Human Services, the Office of the U.S. Trade Representative, the International Trade Commission, and the Office of the U.S. Intellectual Property Enforcement Coordinator to obtain technical comments. We received comments from the Departments of Homeland Security and Justice, and the Office of the U.S. Intellectual Property Enforcement Coordinator and made changes as appropriate.

The PRO-IP Act also directed us to report on the nature and scope of IP statutory and case laws and the extent that they are being used to investigate and prosecute acts of trafficking and counterfeits. As agreed with Congressional committees, this part of the mandate was addressed by our 2008 report, *Intellectual Property: Federal Enforcement Has Generally Increased, but Assessing Performance Could Strengthen Law Enforcement Efforts* (GAO-08-157).

We conducted our work from April 2009 to April 2010 in accordance with all sections of GAO's Quality Assurance Framework that are relevant to our objectives. The framework requires that we plan and perform the engagement to obtain sufficient and appropriate evidence to meet our stated objectives and to discuss any limitations to our work. We believe that the information and data obtained, and the analysis conducted, provide a reasonable basis for any findings and conclusions in this product.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Loren Yager, (202) 512-4347 or yagerl@gao.gov

Staff Acknowledgements

In addition to the contact named above, Christine Broderick, Assistant Director; Jeremy Latimer; Catherine Gelb; Pedro Almoguera; Shirley Brothwell; Karen Deans; Matthew Jones; and Diahanna Post made key contributions to this report. In addition Virginia Chanley and Ernie Jackson provided technical assistance.

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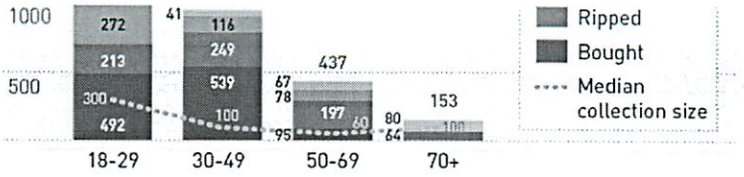
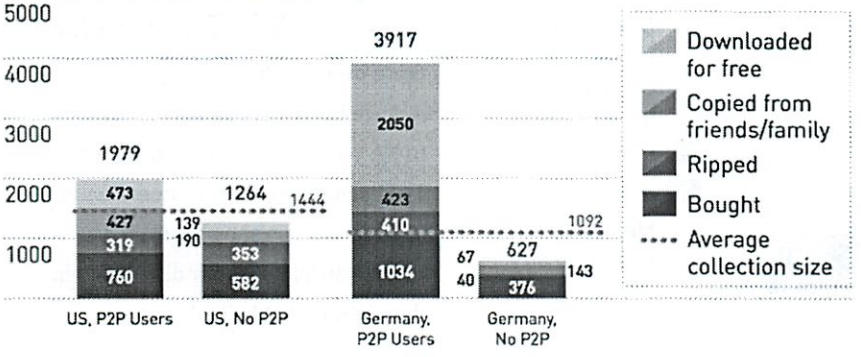


and downloading don't matter–that copying is just gratis on top of otherwise stable purchasing habits. But averages can be misleading. We could combine music buying saints with sinning pirates to get these results–on average. Call this the RIAA worldview: a world divided between music job creators and moochers.

But let's not discard that idea yet. The next chart compares a 'high-piracy' group (P2P users) to a 'low-piracy' group (non-P2P users).

Music File Collections: P2P Users versus non-P2P Users (US and Germany)

[AMONG THOSE WHO OWN MUSIC FILES]



US P2P users have larger collections than non-P2P users (roughly 37% more). And predictably, most of the difference comes from higher levels of 'downloading for free' and 'copying from friends/family.'

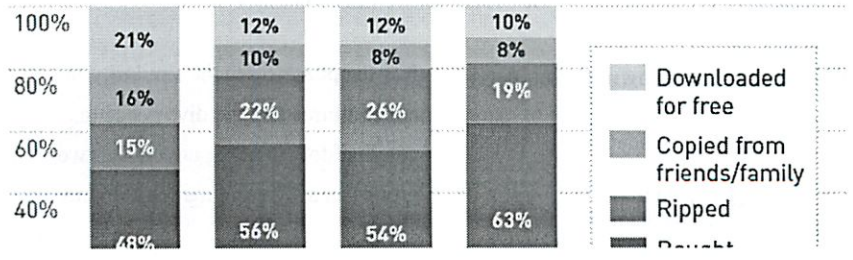
But some of it also comes from significantly *higher legal purchases* of digital music than their non-P2P using peers–around 30% higher among US P2P users. Our data is quite clear on this point and lines up with numerous other studies: *The biggest music pirates are also the biggest spenders on recorded music.*

Our German results appear to confirm this finding–in fact, extravagantly so. German P2P users buy nearly 3 times as much digital music as their non-P2P using peers. We qualify this because the German results are based on too small a sample to be statistically reliable: only 4% of respondents (39 people) reported using P2P networks. Yet the results are consistent with our wider findings. German P2P use is mostly the province of digital music aficionados who download in large quantities *and who also buy in much larger quantities than their non-P2P peers*.

What else can we take from this?

First, that 'copying from friends/family' is comparable in scale and prevalence to 'downloading for free.' This becomes clearer if we focus on the average music file owner rather than the average collection (thereby reducing the impact of the big online file sharers). How does the average music file owner get his or her music? In the US, predominantly through legal sources–bought directly or ripped from one's own CDs. In Germany, because 'copied from friends/family' is legal under private copy rules, through *overwhelmingly* legal channels.

Sources of Music File Collections (US)



The prevalence of private copying is consistent with our findings on attitudes, which show a high degree of acceptance, among young people, of sharing media with friends and family. And it has implications for

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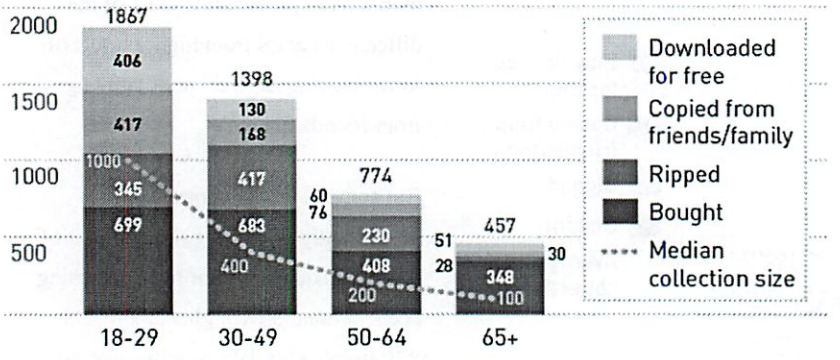
Where do Music Collections Come From?

Posted on October 15, 2012 by karaganis

In our last installment, we noted that there's a sharp generational divide (in the US and Germany) in attitudes toward copying and file sharing, with those under 30 showing more acceptance of these practices in general and much more acceptance of sharing within loosely-defined communities of 'friends.' Not rocket science, right? But how does that translate into actual behavior? Here are average music file collections, divided by age group:

Music File Collections (US) [AMONG THE 50% WHO OWN MUSIC FILES]



A few things to note about this chart. Around 79% of 18-29 year olds have music files, compared to only 14% of those over 64. Accordingly, the overall average US collection falls pretty close to the young end of the distribution, at 1444 songs. Also: collection sizes are self-reported, so should be taken as rough estimates. Minor differences in this chart probably don't matter.

For both reasons, the most important (and reliable) data here involves the first two age groups, 18-29 and 30-49. And as the chart makes clear, the key difference between them is not the change in average collection size, but in the median. From 18-29 to 30-49, average collection size falls from 1867 to 1398–about 25%. But the median plummets from 1000 to 400.

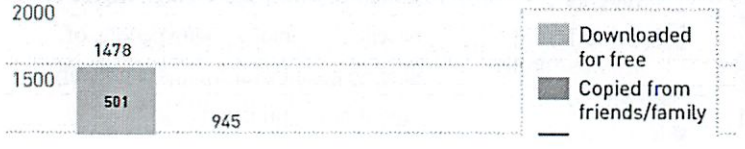
This means, first of all, that even among digital music owners, most people in the 30-49 age group do not have large digital music collections. The median collection has only 30 or so albums worth of music. For comparison, the median *CD* collection size in this age group is around 50. This is still a group in mid-transition to digital.

Second, it means that the average collection size is propped up by heavy collectors at the top of the distribution. 5% in this group have collections of over 10,000 songs (compared to 6% of the 18-29 year olds.)–after which, collection sizes drop off very quickly.

What about the the sources of these collections? 18-29 year olds and 30-49 year olds show very similar patterns of purchasing digital music and ripping their own CDs. Age makes virtually no difference in the scale of either practice. The difference in average collection size comes, instead, from higher levels of 'copying from family and friends' and 'downloading for free.' This is part of what we mean when we say that copy culture is youth culture.

Is this unusual? No. Our German results are very similar–albeit with smaller collections and much wider divergence between average and mean (indicating the larger role of a handful of big collectors in the overall music file economy.)

Music File Collections (Germany) [AMONG THE 42% WHO OWN MUSIC FILES]



It is tempting to see the similarity in expenditures and the divergence in copying/downloading among the two groups as a sign that maybe copying

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18 Responses to *Where do Music Collections Come From?*

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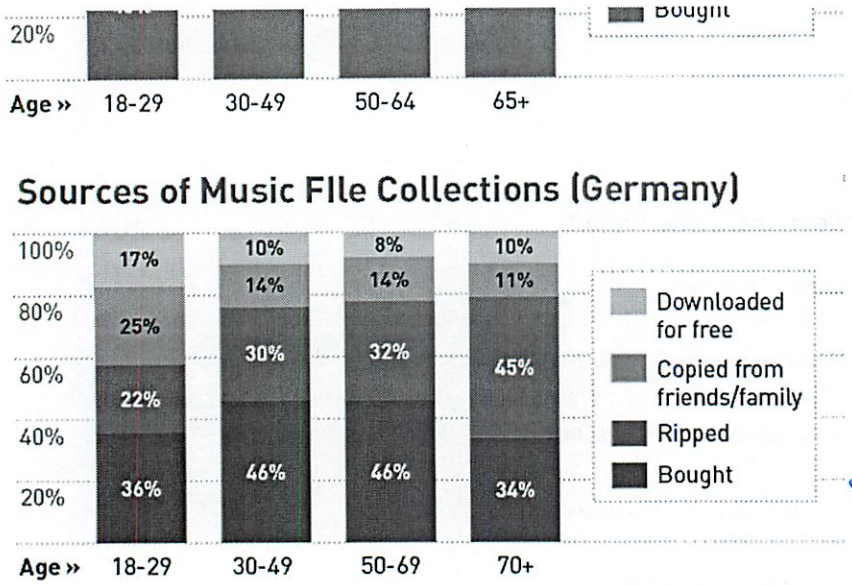

enforcement: current internet-based enforcement proposals, whether directed against P2P users or cyberlocker sites, do nothing to deter such copying–in fact they're likely to increase it as people shift toward less exposed forms of exchange. Which raises an important question: will the major content companies be satisfied to leave this vast realm of private copying alone? By all appearances, the answer is no, no, and no.

And that's a problem. There is ultimately no "solution" to copy culture that does not lead toward a wider war on general-purpose computing–a lockdown of personal computing through, in the MPAA and RIAA's anodyne words, "consumer tools for managing copyright infringement from the home." And so we should be careful and understand the real stakes. This isn't a debate about who pays for recorded music, but about how much they pay.

If absolute spending is the metric, then P2P users value music more highly than their non-P2P using, digital-collecting peers, not less. They're better digital consumers. But is also clear that this investment has fallen vis à vis large CD-based collections. The survey offers ample evidence of this shift in the way music aficionados relate to music–no longer organized around large CD collections or measured in terms of individually priced songs or albums, but rather defined by a mix of legal and illegal strategies for accessing everything now. Large digital collections are beginning to approximate such universal access, with contents that extend far beyond any possible listening habits and that connect, in turn, to much larger archives in the cloud. This shift is not a secret, of course. Most of the innovation in the music sector in the past several years has been an effort to (re)commercialize this demand for universal access through paid streaming services. And with some success: in the US, according to our survey, 29% of those under 30 listen to 'most or all' of their music via streaming services. 11% have paid subscriptions.

Have we already hit peak music file? Almost certainly not, as collections measured in the 10s or 100s of gigabytes continue to wash through the music ecosystem. But, at this point, this slow loss of control of the catalog should simply be viewed as the new baseline. We are past peak music file *relevance* to decisions about audiences, business models, and enforcement.

ps. I've responded to what I take to be the RIAA response here.

pps. And the IFPI response here.

How will universal access change TV?

MARCH 21, 2012 | BY PARKER HIGGINS

Graduated Response Deal Steamrollers On Towards July 1 Launch

Last week, RIAA CEO Cary Sherman confirmed that the country's largest ISPs will voluntarily roll out by July 1 a "graduated response" program aimed at discouraging unauthorized downloading. A Memorandum of Understanding published last summer outlines the program, which was developed without user feedback. Under the new system, a rightsholder accusing an ISP subscriber of infringment will trigger a series of ever-increasing consequences. The responses are graduated in the sense that they escalate after each accusation, beginning with steps aimed at educating users about copyright and culminating in the Orwellian-sounding "mitigation measures" -- bandwidth throttling or account suspension.

As we said last year, this deal is tilted against subscribers. That's not surprising, given that no one solicited subscriber input in advance. In fact, some online commenters have expressed concern that the agreement runs afoul of antitrust law.

One key problem is the arrangement shifts the burden of proof: rather than accusers proving infringement before the graduated response process starts against a subscriber, the subscriber must disprove the accusation in order to call a halt to it. Worse, accused subscribers have to defend themselves on an uneven playing field. For example, they have only ten days to prepare a defense, and with only six pre-set options available. Of course, there's no assurance that those who review the cases are neutral, and the plan sorely lacks consequences for an accuser who makes mistaken or fraudulent claims.

There are still more problems. The plan calls for "education" after the first accusations, but based on the information now available on the website launched last year by the Center for Copyright Information (the entity charged with administering the system), it's likely to be both deceptive and scare-mongering. And the whole system lacks in transparency: while it includes some minimal reporting requirements, those reports need not be made public.

The final rub: subscribers will doubtless be paying for their own "re-education," as ISPs pass on their portions of the administration costs in the form of higher fees.

What can users do at this point? In some cases, they can vote with their feet. This agreement is voluntary for now, and while the participating ISPs include many major companies -- AT&T, Verizon, Comcast, Cablevision, and Time Warner Cable -- there are other options. Users lucky enough to have a choice of providers for their Internet service should consider switching to a service that opted not to "cooperate." For example, companies like Sonic and Cox Communications have a history of fighting for their users where they can, and are notably absent from this arrangement.

Otherwise, users have little choice for now but to watch their ISP roll out this new system against their interests, and maybe familiarize themselves with the six pre-approved responses available to them after an accusation. EFF will continue to follow developments in this agreement closely, and will be offering users a way to speak out against it soon. Stay tuned to updates about these actions on our EFFector mailing list, or by following EFF on Identi.ca or Twitter.

Intellectual Property

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HADOPI law

From Wikipedia, the free encyclopedia

The French **HADOPI law** or **Creation and Internet law** (French: *Haute Autorité pour la diffusion des œuvres et la protection des droits sur internet*,[1] "law promoting the distribution and protection of creative works on the internet") was introduced during 2009, providing what is known as a graduated response as a means to encourage compliance with copyright laws. HADOPI is the acronym of the government agency created to administer it.

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Legislative passage

Despite strong backing from President Nicolas Sarkozy, the bill was rejected by the French National Assembly on 9 April 2009.[2][3][4] The French government asked for reconsideration of the bill by the French National Assembly and it was adopted on 12 May 2009 by the assembly,[5] and on 13 May 2009 by the French Senate.

Debate included accusations of dubious tactics made against the promoters of the bill. There were complaints that the government's official website misrepresented the bill,[6] that the French Wikipedia pages on it were falsified by the Ministry of Culture on 14 February 2009.[7] and a "petition of 10,000 artists" in support of the bill was questioned as allegedly fraudulent.[8]

Timeline

- The bill was presented to the French Senate by the government on June 18, 2008.
- On October 23, 2008, the government shortened the debate by making the bill a *matter of urgency*, meaning it could be read only once in each chamber, under art. 45 of the French constitution.
- The bill was adopted by the Senate on October 30, 2008.
- The bill was presented to the Assembly on March 11th, 2009 where it was amended and the amended version adopted on April 2, 2009.
- Since the two legislative chambers had now adopted different versions, a parliamentary commission (seven members of the Senate and seven members of the Assembly) was constituted on April 7, 2009, mandated to produce a common text to be voted on by both chambers without further debate.
- The resultant bill was unanimously adopted by the Senate on April 9, 2009. On the same day, it was defeated in the Assembly (21-15), a consequence of absenteeism on the part of French socialist party MPs who later explained themselves in an open letter to the newspaper *Libération*.[9] published on April 27, 2009; coauthored by Jean-Marc Ayrault, Patrick Bloche, François Brottes, Corinne Erhel, Michel Françaix, Jean-Louis Gagnaire, Didier Mathus, Sandrine Mazetier, Christian Paul
- The bill was re-presented to the National Assembly on April 29 when 499 amendments were moved, most of which were rejected[10]
- The amended bill was adopted by the Assembly on May 12, 2009 (296-233). All present French socialist party members voted against it except Jack Lang
- The Senate voted in favor of the bill on May 13, (189-14), all senators of the socialist party abstaining, except Samia Ghali.
- On May 17, members of the National Assembly contested the constitutionality of the law and submitted it to the Constitutional Council for examination.
- On June 10, the Constitutional Council declared the main part of the bill unconstitutional, therefore making it useless. The council found that the law violated the 1789 Declaration of the Rights of Man and of the Citizen, and in particular presumption of innocence, separation of powers and freedom of speech.[11] [12]
- On 22 October 2009, the Constitutional Council approved a revised version of HADOPI, requiring judicial review before revoking a person's internet access, but otherwise resembling the original requirements.[13]

Details of the law

Government agency

The law creates a government agency called *Haute Autorité pour la Diffusion des Œuvres et la Protection des Droits sur Internet* (HADOPI) (English: *the High Authority for Transmission of Creative Works and Copyright Protection on the Internet*); replacing a previous agency, the ARMT (Regulation of Technical Measures Authority) created by the DADVSI law.[14]

The new government agency is headed by a board of nine members, three appointed by the government, two by the legislative bodies, three by judicial bodies and one by the *Conseil supérieur de la propriété littéraire et artistique* (Superior Council of Artistic and Literary Property), a government council responsible to the French Ministry of Culture.[15] The agency is vested with the power to police Internet users.

Mandate

To ensure that internet subscribers "screen their internet connections in order to prevent the exchange of copyrighted material without prior agreement from the copyright holders" (Art. L. 336-3 of the bill). HADOPI also retains mandates previously attributed to the ARMT.

Enforcement

On receipt of a complaint from a copyright holder or representative, HADOPI may initiate a 'three-strike' procedure:

- (1) **An email message** is sent to the offending internet access subscriber, derived from the IP address involved in the claim. The email specifies the time of the claim but neither the object of the claim nor the identity of the claimant.

The ISP is then required to monitor the subject internet connection. In addition, the internet access subscriber is invited to install a filter on his internet connection.

If, in the 6 months following the first step, a repeat offense is suspected by the copyright holder, his representative, the ISP or HADOPI, the second step of the procedure is invoked.

- (2) A certified letter is sent to the offending internet access subscriber with similar content to the originating email message.

In the event that the offender fails to comply during the year following the reception of the certified letter, and upon accusation of repeated offenses by the copyright holder, a representative, the ISP or HADOPI, the third step of the procedure is invoked.

- (3) The ISP is required to suspend internet access for the offending internet connection, that which is the subject of the claim, for a specified period of from two months to one year.

The internet access subscriber is blacklisted and other ISPs are prohibited from providing an internet connection to the blacklisted subscriber. The service suspension does not, however, interrupt billing, and the offending subscriber is liable to meet any charges or costs resulting from the service termination.

Appeal to a court is possible only during the third phase of the action (after the blocking of internet access) and an appeal can result in shortening but not cancellation of the blocking. The burden of proof is on the appellant.

According to the CNIL, action under the HADOPI law does not exclude separate prosecution under the French code of Intellectual Property,[16] particularly its articles L331-1 or L335-2, or limit a claimant's other remedies at law. (See CNIL opinion, below).

Background

Implementation of the European Copyright Directive resulted in the French DADVSI law which has been in force since 2007, creating the crime of *lack of screening of Internet connections in order to prevent exchange of copyrighted material without prior agreement from the copyright holders* (art.

L335.12).[17] The DADVSI law did not prescribe any punishment. It has been partially invalidated by the Constitutional Council of France's rejection of the principle of escalation,[18] and retains only the crime of copyright-infringement, punishable by up to 3 years' prison and a fine of up to €300,000.

The HADOPI law is supposed to address the concerns of the Constitutional Council of France, in addition to replacing the DADVSI law, which has yet to be enforced.

Olivennes report and Elysée agreement

On September 5, 2007, the French Minister of Culture, Christine Albanel asked the CEO of the major French entertainment retailer (Fnac), Denis Olivennes, to lead a task force to study a three-strike sanction, to conform with the ruling of the French Constitutional Council. After consulting representatives of the entertainment industry, internet service providers and consumer associations, the Olivennes committee reported to the Minister on November 23.[19] The report was signed by 40 companies at the Elysée and presented as the "Olivennes agreement". It was later renamed the "Elysée agreement".

The HADOPI law is the implementation of the Olivennes report, supported by the Olivennes agreement, in which representatives of the entertainment and media industries gave their assent to the law's enforcement procedures. Nevertheless some companies, notably the ISPs Orange and Free, later dissented from the agreement. [20]

Lobbying for the bill

Owing to its controversial nature, the bill became a subject of intense campaigning in various media, which was redoubled after its parliamentary defeat on April 9, 2009.

Head of state

On October 4, 2008, President Nicolas Sarkozy, a personal supporter of the law, interceded with the president of the European Commission regarding the non-scheduling of the then Amendment 138 (see Amendment 46 (previously 138)) of the Telecoms Package susceptible to invalidate the law. The European Commission rejected his representation on October 6, 2008.

Government

The French government created a promotional website in support of the country's entertainment industry. The content of the website was criticised as misleading.[21]

It was also alleged that French Wikipedia pages relative to HADOPI were edited by the Ministry of Culture on February 14, 2009.[22]

Entertainment industry

SACEM and other entertainment industry players mounted a petition of "10,000 artists" in support of the HADOPI law. The list has been challenged on several grounds:

- Many signatories are said to be unconnected with artistic activities ascribed to them
- Some signatories are bogus or fictitious, an example being Paul Atreides.[23]
- Some artists listed as signatories have denied that they support it.[24]

Lobbying against the bill

Consumer associations

The leading French consumer association UFC Que Choisir has positioned itself against the law and has set up a website to support opposition.[25]

A group called *La Quadrature du Net* is a strong lobbyist against the law.[26]

Following an open letter in the newspaper Libération[27] signed by Chantal Akerman, Christophe Honoré, Jean-Pierre Limosin, Zina Modiano, Gaël Morel, Victoria Abril, Catherine Deneuve, Louis Garrel, Yann Gonzalez, Clotilde Hesme, Chiara Mastroianni, Agathe Berman and Paulo Branco producteurs which was published on May 7, 2009, and co-authored notably by Victoria Abril and Catherine Deneuve, an informal group has been constituted under the name *Creation Public Internet*[28] and is composed of UFC Que Choisir, *La Quadrature du Net*, some syndicated artists and the Internet Society.

On March 12, 2009, the British Featured Artists Coalition publicised its opposition to the principle of the HADOPI law.[29]

Political groups' positions

With the exception of the French Green Party who campaigned against the law, other political groups represented in the legislative chambers were not active lobbying for or against the law, though individual members did so. The French Socialist Party was probably the most divided. While it initially favored the law (voted *yes* in the Senate's first reading), it was chiefly responsible for the surprise rejection of the bill after the first reading in the National Assembly, as well as requesting the Constitutional Council's ruling. The Pirate Party (France) although not represented in the legislative chambers also campaigned against the law.

Logo incident

Shortly after HADOPI's agency logo was presented to the public by Minister of Culture and Communication Frédéric Mitterrand, it was revealed that the logo used an unlicensed font. The font was created by typeface designer Jean François Porchez, and is owned by France Télécom. The design agency that drew the logo, Plan Créatif, admitted to using the font by mistake and the logo was redone with another font.[30]

See also

- Graduated response

- Copyright aspects of downloading and streaming
- Music download
- Ley Sinde
- Telecoms Package

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HADOPI full translation

From La Quadrature du Net

DISCLAIMER: This is a purely indicative translation. It was mostly done by Peter K (amazing job!), but may still contain errors. In case of doubt refer to the original version in French and feel free to correct this page.

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CHAPTER I

Clauses modifying the intellectual property code

Article 1

Article L. 132-27 of intellectual property code is amended by the addition of a paragraph as follows:

"Organizations representing producers, professional associations of authors and organizations for the management of rights mentioned in title II of book III may jointly establish a common set of practices for the profession."

Article 2

The intellectual property code is changed as follows:

A. - At the end of the fourth paragraph of article L. 331-5, the references "to articles L. 331-6 and L. 331-7" are replaced by the references "in 1 of article L. 331-39 and in article L. 331-40";

B. - At the beginning of article L. 331-6, the words "The Authority for the regulation of technical measures set forth in article L. 331-17" are replaced with the word "It";

C. - Article L. 331-7 is changed as follows:

1 In the second sentence of the first paragraph, in the first and last sentences of the fourth paragraph, in the first sentence of the fifth and sixth paragraphs and in the two last sentences of the last paragraph, the words "the authority" are replaced with the words "the High Authority";

2 In the first sentence of the first and last paragraphs, the words "the Authority for the regulation of technical measures" are replaced with the words "the High Authority";

D. - Article L. 331-8 is changed as follows:

1 In the first paragraph, the words "in this article are guaranteed by these clauses of this article and of articles L. 331-9 and L. 331-16" are replaces with the words "in 2 of article L. 331-39 is guaranteed by the clauses of articles L. 331-7 to L. 331-10, L. 331-41 to L. 331-43 and L. 331-45";

2 At the beginning of the second paragraph, the words "The Authority for the regulation of technical measures set forth in article L. 331-17" are replaced with the word "It";

3 After the fifth paragraph are inserted two paragraphs as follows:

"- and in article L. 331-4.

"It watches also that the emplacement of technical protection measures does not have the effect of depriving persons entitled to make reproductions for the purpose of collecting, conserving, and consulting on site mentioned in 2 of article L. 132-4 and in articles L. 132-5 and L. 132-6 of the national heritage code.";

4 In the last paragraph, the words "articles L. 331-9 to L. 331-16, the authority" are replaced with the words "articles L. 331-7 to L. 331-10, L. 331-41 to L. 331-43 and L. 331-45 of this code, the High Authority";

E. - In the second sentense of the first paragraph of article L. 331-9, the reference "to article L. 331-8" is replaced with the reference "to 2 of article L. 331-39";

F. - In article L. 331-10, the reference "L. 331-9" is replaced with the reference "L. 331-7";

G. - In article L. 331-13, the reference "to article L. 331-8" is replaced with the reference "to 2 of article L. 331-39", and the words "the Authority for the regulation of technical measures" are replaced with the words "the High Authority";

H. - In article L. 331-14, the words "the Authority for the regulation of technical measures" are replaced with the words "the High Authority";

I. - Article L. 331-15 is changed as follows:

1 In the first sentence of the first paragraph, the words "the Authority for the regulation of technical measures" are replaced with the words "the High Authority";

2 In the first and second sentences of the second paragraph, the words "the authority" are replaced with the words "the High Authority";

J. - Article L. 331-16 is changed as follows:

1 At the end of the first sentence, the word "section" is replaced with the word "subsection";

2 At the end of the second sentence, the reference "L. 331-12" is replaced with the reference "L. 331-10";

K. - Article L. 331-17 is changed as follows:

1 The first paragraph is changed as follows:

a) The first sentence is deleted;

b) At the beginning of the second sentence, the words "It assures a general aim" are replaced with the words "For the sake of its aim to regulate and";

c) These words are added: ", the High Authority exercises the following functions:";

2 The two last paragraphs are modified as follows:

"The High Authority pay take referrals under advice through one of the entities set forth in article L. 331-40 for any question related to the interoperability of technical measures.

"It may also take referrals under advice through an entity benefiting from one of the exceptions mention in 2 of article L. 331-39 or through a licensed legal entity which represents it, of all questions relating to placing this exception in operation.";

L. - Articles L. 331-16 to L. 331-17, through changes in them resulting from this article and article L. 331-22 are renumbered as follows:

1 Article L. 331-6 becomes 1 of article L. 331-39;

2 Article L. 331-7 becomes article L. 331-40;

3 The first paragraph of article L. 331-8 becomes article L. 331-6;

4 The second to last paragraphs of article L. 331-8 become 2 of article L. 331-39;

5 Article L. 331-9 becomes article L. 331-7;

6 Article L. 331-10 becomes article L. 331-8;

7 Article L. 331-11 becomes article L. 331-9;

8 Article L. 331-12 becomes article L. 331-10;

9 Article L. 331-13 becomes article L. 331-41;

10 Article L. 331-14 becomes article L. 331-42;

11 Article L. 331-15 becomes article L. 331-43;

12 Article L. 331-16 becomes article L. 331-45;

13 The first paragraph of article L. 331-17 becomes the first paragraph of article L. 331-39;

14 The second and third paragraphs of article L. 331-17 become article L. 331-44;

15 Article L. 331-22 becomes article L. 331-11;

M. - Articles L. 331-18 to L. 331-21 are removed.

Article 3

In articles L. 131-9, L. 332-1, L. 335-1, L. 335-3-2, L. 335-4-2 and L. 342-3-2 of the intellectual property code, the reference "L. 331-22" is replaced with the reference "L. 331-11".

Article 4

The heading of title II of book II of the first part of the intellectual property code is changed thus: "Prevention, procedures, and sanctions".

Article 5

The first chapter of title III of book III of the first part of the same code is amended by the addition of a section 3 as follows:

"Section 3

"High Authority for the dissemination of works and the protection of rights on Internet

Subsection 1

"Areas of competence, composition and organization

"The High Authority for the dissemination of works and the protection of rights on Internet is an independent public authority. To this end it is granted authority to appear legally as an entity ["moral personality"].

"The High Authority assures:

"1 An aim to encourage the development of legal offerings and oversight of the licit and illicit use of works and objects to which are attached a right of authorship or a related right on the electronic communications networks used to furnish public on line services;

"2 An aim to protect these works and objects against violations of these rights committed on the electronic communications networks used to furnish public on line services;

"3 An aim to regulate and watch over the area of technical measures to protect and identify works and objects protected by a right of authorship or a related right.

"For the purposes of these aims, the High Authority may recommend any legislative or regulatory change. It may be consulted by the Government about any legal undertaking or decree bearing on the protection of literary or artistic property rights. It may also be consulted by the Government or by parliamentary committees on any question relating to its areas of competence.

"The High Authority sends to the Government and to Parliament each year a report of its activities, of the execution of its missions and methods, and of how its responsibilities and undertakings are affecting those who work in the various sectors concerned. This report is made public.

"The High Authority is composed of a governing body and of a committee for the protection of rights. The president of the governing body is the president of the High Authority.

"In the absence of legislation to the contrary, the aims placed on the High Authority are exercised by the governing body. In the exercise of their responsibilities, the members of the governing body and of the committee for the protection of rights are not directed by any other authority.

"The governing body of the High Authority is composed of nine members, including the president, appointed for a term of six years:

"1 A current member of the Council of State designated by the vice president of the Council of State;

"2 A current member of the Supreme Court [Cour de cassation] designated by the chief justice of the Supreme Court

"3 A current member of the Accounting Court designated by the chief justice of the Accounting Court;

"4 A member of the Superior Council for literary and artistic property designated by the president of the Superior Council for literary and artistic property;

"5 Three qualified persons jointly designated by the ministers responsible for electronic communication, consumer affairs, and culture;

"6 Two qualified persons designated respectively by the President of the National Assembly and by the President of the Senate.

"The president of the governing body is elected by the members from among the persons referred to 1, 2, and 3.

"For the members designated under qualifications 1 through 4, applicants for membership are designated following the same conditions.

"If the seat of a member of the governing body falls vacant for any reason, that seat is filled through the nomination, following the conditions set forth in this article, of a new member for the remainder of the term for that seat.

"The terms of members may be neither revoked nor renewed.

"Except in case of resignation, a member's participation may not be terminated except through impeachment by the governing body under conditions which it defines.

"Art. L. 331-17. - The committee for the protection of rights must take the measures set forth in articles L. 331-26 to L. 331-31 and in article L. 331-33.

"It is composed of three members including the president, appointed by decree for a term of six years:

"1 A current member of the Council of State designated by the vice president of the Council of State;

"2 A current member of the Supreme Court designated by the Chief Justice of the Supreme Court;

"3 A current member of the Accounting Court designated by the Chief Justice of the Accounting Court.

"Applicants for membership are nominated following the same conditions.

"If the seat of a member of the committee for the protection of rights falls vacant for any reason, that seat is filled through the nomination, following the conditions set forth in this article, of a new member for the remainder of the term for that seat.

"The terms of members may be neither revoked nor renewed.

"Except in case of resignation, a member's participation may not be terminated except through impeachment by the committee under conditions which it defines.

"The functions of a member of the governing body and a member of the committee for the protection of rights are incompatible.

"Art. L. 331-18. - I. - The functions of a member and of the general secretary of the High Authority are incompatible with exercising, or having exercised during the last three years:

"1 The functions of director, employee, or adviser of an organization regulated by title II of this book;

"2 The functions of director, employee, or adviser of an enterprise which produces sound recordings, video recordings, or the publication of works protected by a right of authorship or related rights;

"3 The functions of director, employee, or adviser of an enterprise of audiovisual communication;

"4 The functions of director, employee, or adviser of an enterprise offering services making available works or objects protected by a right of authorship or related rights;

"5 The functions of director, employee, or adviser of an enterprise whose activity is to offer access to public on line services.

"II. - After the cessation of their work, the members of the High Authority and its general secretary are subject to the clauses of article 423-13 of the penal code.

"The members of the High Authority and its general secretary may not, either directly or indirectly, retain any interest in a society or enterprise mentioned in I of this article.

"A decree establishes the model for a declaration of interests which each member must file at the time of his appointment.

"No member of the High Authority may take part in a deliberation concerning a business or an organization controled, in the sense of article L. 233-16 of the commercial code, by an enterprise in which he has, in the course of the three years preceding the deliberation, exercised any function or held any authority.

"Art. L. 331-19. - The High Authority makes use of services under the authority of its president. A general secretary, appointed by that latter, is responsible for the functioning and the coordination of such services under the authority of the president.

"The functions of a member of the High Authority and of the general secretary are incompatible.

"The High Authority establishes its bylaws and the code of ethics applicable to its members and to the agents of its services.

"The rapporteurs responsible for pursuing the High Authority's cases are appointed by the president.

"The High Authority may make use of experts. It may also, as needed, solicit the advice of administrative authorities, external organizations, or associations representing the users of electronic communication networks, and it may be consulted for advice by these same authorities or organizations.

"The High Authority proposes, in the course of preparing the [Government's] annual budget, the amount needed to accomplish its aims.

"The president presents the accounts of the High Authority under the supervision of the Accounting Court.

"Art. L. 331-20. - The decisions of the governing body and of the committee for the protection of rights are made by majority vote. Within the governing body, in case of a tie vote the president's vote is decisive.

"Art. L. 331-21. - For the exercise by the committee for the protection of rights of its [attributions?], the High Authority uses sworn public agents authorized by the president of the High Authority under conditions established by a decree of the Council of State. This authorization does not provide exemption from the clauses defining procedures authorizing access to secrets protected by the law.

"The members of the committee for the protection of rights and the agents mentioned in the first paragraph receive referrals addressed to the committee under the conditions set forth in article L. 331-24. They proceed to examine the facts and certify the material status of failures to comply with article L. 336-3.

"They may, as necessitated by the procedure, obtain all documents of whatever type, including data held or processed by the operators of electronic communications in applying article L. 34-1 of the code concerning e-mail and electronic communication and the service suppliers mentioned in 1 and 2 of I of article 6 of law 2004-575 of 21 June 2004 for confidence in the digital economy.

"They may also obtain copies of the documents mentioned in the preceding paragraph.

"They may, in particular, obtain from the operators of electronic communications the identity, the postal address, the electronic address and the telephone numbers of the subscriber whose access to public on line communication services has been used to reproduce, represent, make available, or communicate to the public protected works or objects without authorization from the owners of the rights set forth in books I and II when it is required.

"Art. L. 331-22. - The members and public agents of the High Authority are bound by professional secrecy concerning the facts, acts, or information of which they have knowledge in the exercise of their functions, under the conditions set forth in article 413-10 of the penal code and, except for what is needed to establish cases, the recommendations and requirements in article 226-13 of that code.

"Under the conditions set forth in article 17-1 of law 95-73 of 21 January 1995 for training relative to security, the granting authority nto the agents mentioned in article L. 331-21 of this code is preceded by administrative inquiries intended to verify that their comportment is not incompatible with the exercise of their functions or aims.

"The agents must, moreover, fulfill the moral conditions and observe the ethical rules defined by decree of the Council of State.

Subsection 2

"Aim to encourage the development of legal offerings and a view of the licit and illicit use of works and objects protected by a right of authorship or by a related right on the electronic communications networks

"Art. L. 331-23. - In order to fulfill its aim to encourage the development of legal offerings, commercial

or not, and to keep under observation the use, licit or illicit, of works and objects protected by a right of authorship or by a related right on electronic communication networks, the High Authority publishes each year a list of indicators established by decree. It presents the development of legal offerings in the report mentioned in article L. 331-14.

"Under conditions established by decree of the Council of State, the High Authority provides to the offers of persons whose activity is to offer on line communication service to the public a label permitting the users of this service to identify clearly the legal nature of these offers. These labels are reviewed periodically.

"The High Authority supervises the establishment, the validity, and the maintenance up to date of a reference portal for the aforementioned offers.

"In addition, it evaluates experiments conducted in the area of technologies to recognize content and filtering by the creators of these technologies, the owners of rights to the works and objects protected and the persons whose activity is to offer public on line services. It takes account of the principal developments in this matter, particularly concerning the effectiveness of such technologies, in its annual report set forth in article L. 331-14.

"It identifies and studies the technical means permitting the illicit usage of works and objects protected by a right of authorship or by a related right on electronic communication networks. In the report set forth in article L. 331-14, it proposes solutions to remedy these, as the case may be.

Subsection 3

"Mission to protect works and objects to which is attached a right of authorship or a related right

"Art. L. 331-24. - The committee for protection of rights acts on the referral of sworn agents licensed following the conditions defined in article L. 331-2 who are designated by:

"- duly constituted professional organizations

"- organizations for the management of rights;

"- the National Center for Cinematography.

"The committee for protection of rights may also act on the basis of information transmitted to it by the national prosecutor.

"It may not take referrals on acts older than six months.

"Art. L. 331-25. - The measures taken by the committee for protection of right are limited to those necessary to end a violation of obligations defined in article L. 336-3.

"Art. L. 331-26. - When it proceeds on acts that may constitute violation of obligations defined in article L. 336-3, the committee for protection of rights may send to the subscriber, under its seal and on its own, by electronic means and through the entity whose activity is to offer access to on line communication services to the public which has a contract with the subscriber, an injunction referring to the clauses of article L. 336-3, enjoining him to respect the requirement that body defines and warning of the sanctions risked if that presumed violation continues. This injunction also contains information for the subscriber

about legal cultural offerings on line, on the existence of security methods to warn of failure to meet the requirements defined in article L. 336-3, and on the dangers for the renewal of artistic creation and for the economy of the cultural sector of practices which do not respect the right of authorship and related rights.

"If, within a period of six months from the sending of the injunction described in the first paragraph, there is repetition of acts which may constitute violation of the obligation defined in article L. 336-3, the committee may deliver a new injunction constituting the same information as the previous one by electronic means following the conditions set forth in the first paragraph. It may add to this injunction a receipted letter or any other method needed to establish proof of the date this injunction was sent.

"Injunctions sent on the basis of this article state the date and the time at which the acts possibly constituting violation of the obligation defined in article L 336-3 took place. However, they do not divulge the content of the protected works or objects affected by this violation. They indicate the telephone numbers and postal and electronic addresses to which the addressee may, if he wishes, send comments to the committee for protection of rights and obtain, if he expressly asks, the specifics of the content of the protected works or objects which are the concern of the violation of which he is accused.

"The validity of injunctions sent on the basis of this article may not be contested except by appeal for recourse directed against a decision to sanction pronounced in applying article L. 331-27.

"Art. L. 331-27. - When it is held that the subscriber has failed to recognize the obligation defined in article L 336-3 during the year following the reception of an injunction sent by the committee for protection of rights and accompanied by a receipted letter or any other method needed to establish proof of the date that the injunction was sent and that when the subscriber received it, the committee may, after a hearing, pronounce, as a result of the gravity of the violations and the use of access, one of the following sanctions:

"1 The suspension of access to service for a duration of two months to one year accompanied by making it impossible for the subscriber to subscribe during that period to another contract giving access to a public on line communication service with any operator;

"2 A warning to take, within a time it determines, measures to prevent the renewal of the accused violation, particularly a method of security found on the list defined in the second paragraph of article L. 331-32, and to inform the High Authority, if necessary under duress.

"The sanctions set forth in this article are imposed under the following conditions.

"The committee reminds the subscriber of the injunctions he has already received, as well as their background. It notifies him of the new acts of which he is accused and indicates to him the measures it may take against him. The subscriber is also informed that he may use a lawyer's help, may have access to the entirety of the case file concerning him, and present written and oral observations.

"The committee may also hear any person whose testimony seems to it likely to contribute to its information.

"The decisions through which the committee imposes one of the sanctions set forth in this article are explained. They specify the reasons for which the elements gathered in the hearing are insufficient to cast doubt on the existence of the presumed violation of the obligation for vigilance defined in article L. 336-3, nor to sustain the existence of any of the reasons for exoneration set forth in the same article.

"The committee notifies the subscriber of the sanction imposed on him and informs him of the methods and scheduling of appeal and, if the sanction consists of the suspension of access to service, of his placement on the register prescribed in article L. 331-33 and the temporary impossibility to suscribe, during the period of suspension, to another contract for access to public on line communication service with any operator.

"No sanction may be taken on the basis of this article for acts concerning a protected work or object all of whose rights-holders reside in a foreign State or a territory outside France with privileged fiscal status, mentioned in article 238 A of the general tax code, with the persons mentioned in article L. 331-24 being required to specify that the object of their referral to the committee for protection of rights does not fall within this case.

"Sanctions taken under this article may be appealed for annulment or modification by the conflicting parties in courts of law, taken within thirty days following notification to the subscriber.

"A decree of the Council of State establishes the conditions in which sanctions may be postponed.

"A decree determines the jurisdictions competent to hear these appeals.

"Art. L. 331-28. - Before imposing a sanction procedure under the conditions set forth in article L. 331-27, the committee for protection of rights may propose to the subscriber a transaction whereby he undertakes not to repeat the accused violation of his obligation set forth in article L. 336-3 or to prevent its repetition. In this case, the subscriber is informed of his right to be aided by legal counsel. The transaction may entail one of the following sanctions:

"1 Suspension of access to service for a duration of one to three months, accompanied by the impossibility, during that period, of subscribing to another contract for access to a public on line communication service with any operator;

"2 An obligation to take, within a period that the committee for protection of rights determines, measures intended to prevent the repeated declared violation, particularly a means of security found on the list defined in the second paragraph of l'article L. 331-32, and to report on them to the High Authority.

"No sanction may be imposed on the basis of this article for acts concerning a protected work or object all of whose rights-holders reside in a foreign State or a territory outside France with a privileged fiscal environment mentioned in article 238 A of the general tax code, the persons mentioned in article L. 331-24 having the responsibility to specify that the object of their referral to the committee for protection of rights is not such a case.

"Art. L. 331-29. - If the subscriber fails to execute a transaction which he has accepted, the committee for protection of rights may impose one of the sanctions set forth in article L. 331-27.

"Art. L. 331-30. - The suspension of access mentioned in articles L. 331-27 and L. 331-28 does not, in itself, affect paying the price of subscription to the service provider. Article L. 121-84 of the consumer code does not apply during the period of suspension.

"The costs of a possible closure of the subscription during the period of suspension are born by the subscriber.

"The suspension applies only to access to public on line communication services and to electronic

communications. When this access service is purchased as part of commercial composite services including other types of services, such as telephone or television services, the decision of suspension does not apply to these services.

"Art. L. 331-31. - When the sanction mentioned in article L. 331-27 or in article L. 331-29 or the transaction mentioned in article L. 331-28 constitutes suspension of the subscriber's access, the committee for protection of rights notifies that suspension to the entity whose activity is to offer access to public on line communication services which has a contract with the concerned subscriber, and enjoines it to put this suspension in place within a period of from at least forty-five days to at most sixty days.

"If this entity fails to obey the injunction sent to it, the committee for protection of rights may, after a hearing, impost on it a monetary sanction up to a maximum of 5,000 [euro] per accused violation of the obligation set forth in the first paragraph.

"Sanctions imposed in the application of this article may be subject to appeal for annulment or modification by the contesting parties in judicial court.

"A decree of the Council of State establishes the conditions under which sanctions may be postponed

"A decree determines the jurisdictions competent to hear these appeals.

"Art. L. 331-32. - After consultating the creators of means of security intended to prevent illicit use of access to a public on line communication service, entities whose activity is to offer access to such a service, as well as companies governed by title II of this book and duly constituted professional societies, the High Authority makes public the functionally pertinent specifications presented by these means considered, in its view, as exonerating from responsibility the owners of such access under the conditions of article L. 336-3.

"In the course of a procedure of certified evaluation of their conformity to the specifications set forth in the first paragraph and their effectiveness, the High Authority establishes a list characterizing the methods of security whose use exonerates the owner of access of his responsibility with respect to article L. 336-3. This characterization is periodically reviewed.

"A decree of the Council of State specifies the evaluation procedure to characterize these methods of security.

"Art. L. 331-33. - The High Authority establishes a national register of persons who have been subject to suspension of their access to a public on line communication service through the application of articles L. 331-27 to L. 331-29.

"An entity whose activity is to offer access to public on line communication services verifies, upon entering into every new contract or renewal of an expiring contract for furnishing such service, whether the co-contractant appears in this register. It may also verify when one of its subscribers wishes to terminate his contract because an interruption of service justifies this, according to him, whether the subscriber appears in this register.

"For each accused violation of the requirement for consultation set forth in the first phrase of the second paragraph or for each contract made by this person with the provider not checking his appearing in the register, the committee for protection of rights may, after an appeal hearing, impose a monetary sanction in an amount no greater than 5,000 euros.

"Sanctions taken in applying this article may be subject to appeal for annulment or modification by the conflicting parties in a court of law.

"A decree of the Council of State determines the conditions under which sanctions may be postponed.

"A decree determines the jurisdictions competent to hear these appeals.

"Art. L. 331-34. - Information gathered in verifications against the register mentioned in article L. 331-33 by the entities whose activity is to offer access to public on line communication services, under the conditions defined in the same article, may not be retained by these entities, nor be communicated except to the extent of concluding or not concluding the contract to furnish the communication services which led to this verification.

"Art. L. 331-35. - Entities whose activity is to offer access to public on line communication services include in the contracts made with their subscribers, clearly and readably, the clauses of article L. 336-3 and the measures which may be taken by the committee for protection of rights as well as the means of recourse possible possible in applying articles L. 331-26 to L. 331-31 and L. 331-33. They also include in the contracts made with their subscribers the penal and civil sanctions for violation of authorial rights and related rights.

"Moreover, entities set forth in the first paragraph of this article inform their new subscribers and persons continuing their subscription contracts about legal on line cultural offerings, about the existence of means of security to warn against violations of the obligation defined in article L. 336-3, as well as the dangers for the renewal of artistic creation and for the economy of the cultural sector of practices not respecting authorial rights and related rights.

"Art. L. 331-36. - The committee for protection of rights may retain technical data placed at its disposition during the period necessary for the exercise of the tasks confided to it in this subsection and, at the latest, until such time as the suspension of access set forth by these clauses has been entirely carried out.

"The entity whose activity is to offer access to public on line communication services must inform the committee for protection of rights of the end of the suspension so that the latter may delete data held.

"Art. L. 331-37. - The High Authority is authorized to create automated handling of personal data bearing on persons who are the object of a precedure in the context of this subsection.

"This handling has as its end to put into place, by the committee for protection of rights, the measures set forth in this subsection and of all related procedures, as well as the national register set forth in article L. 331-33, in particular permitting entities whose activity is to offer access to public on line communication service to make available, in the form of a simple inquiry, the information strictly necessary to proceed with the verification set forth in the same article.

"A decree of the Council of State, taken after advice from the national Committee on Informatics and Liberties, sets the means by which the present article is applied. It specifies particularly:

"- the categories of data recorded and how long they are kept;

"- who is authorized for access to these data, specifically the entities whose activity is to offer access to public on line communication services;

"- the conditions under which interested persons may exercise, with the High Authority, their right of access to data concerning them in conformance with law 78-17 of 6 January 1978 relating to informatics, files, and liberties.

"Art. L. 331-38. - A decree of the Council of State establishes the rules applicable to the procedure and the handling of cases before the governing body and the committee for protection of rights of the High Authority.

"Concerning measures pronounced by the committee for protection of rights in applying article L. 331-27, this decree specifies in particular the conditions under which the exercise of the rights of defense guarantees, in an effective way, respect for the principle of personal responsibility of the subscribers penalized. To this end it defines the conditions under which may be produced for use, at each stage of the procedure, all elements that may establish that he has put into use one of the methods of security on the list mentioned in the second paragraph of article L. 331-32, that the violation of the right of authorship or a related right is the act of a person who has fraudulently used access to the public on line communication service, or the existence of force majeure."

Article 6

Section 3 of chapter I of title III of book III of the first part of the same code, in its edited version resulting from article 5, is amended by the addition of a subsection 4 headed:

"Aim of regulating and watching over the area of technical measures of protection and identification works and objects protected by a right of authorship or a related right" which comprises articles L. 331-39 to L. 331-45.

Article 7

4 of article L. 32-1 and article L. 335-12 of the same code are deleted.

Article 8

Article L. 335-3 of the same code is amended by the addition of a paragraph as follows:

"Equally a crime of counterfeiting is any total or partial capture of a cinematographic or audiovisual work in a cinema theater."

Article 9

The title of chapter VI of title III of book III of the first part of the same code is changed thus: "Prevention of downloading and illicitly making available works and objects protected by a right of authorship or a related right".

Article 10

Article L. 336-2 of the same code is changed as follows:

"Art. L. 336-2. - In the presence of infringement of a right of authorship or a related right within the contents of a public on line communication service, the Superior Court, decreeing as required on the form of the hearing, may order at the request of the owners of protected works and objects, of the holders of their rights, of societies for the management of rights set forth in article L. 321-1 or professional organizations set forth in article L. 331-1, all measures needed to prevent or halt such damage to a right of authorship or a related right, against any entity able to help remedy it."

Article 11

Chapter VI of title III of book III of the first part of the same code is amended by the addition of two articles L. 336-3 and L. 336-4 as follows:

"Art. L. 336-3. - The owner of access to online public communication services has an obligation to watch that this access is not being used for purposes of reproduction, representation, making available or communication to the public of works or objects protected by right of authorship or a related right without permission of copyright holders when it is required as stated in books I and II.

"No sanction can be taken against the owner of the access in the following cases:

"1 If the owner of the access has secured his access through one of the means on the list mentioned in the second paragraph of article L. 331-32 ;

"2 If the rights infringement referred to in the first paragraph of this article is committed by a person who fraudulently used the access to online public communication service;

"3 In case of force majeure.

"The breaching of the obligation defined in the first paragraph by an access owner hasn't the effect of involving his penal reponsibility.

"Art. L. 336-4. - The essential characteristics of authorized usage of a protected work or object made available by a public on line communication service are brought to the user's attention in an easily accessible way, in conformance with article L. 331-10 of this code and with article L. 111-1 of the consumer code."

Article 12

Article L. 342-3-1 of the same code is changed as follows:

1 At the end of the second paragraph, the words "in articles L. 331-8 and following" are replaced with the words "in 2 of article L. 331-39 and in articles L. 331-7 to L. 331-10, L. 331-41 to L. 331-43 and L. 331-45";

2 In the last paragraph, the words "the Authority for regulation of technical measures set forth in article L. 331-17" are replaced with the words "the High Authority for the dissemination of works and the protection of rights on Internet set forth in article L. 331-12".

CHAPTER II

Clauses modifying law 2004-575 of 21 June 2004 for confidence in the digital economy

Article 13

1 of I of article 6 of law 2004-575 of 21 June 2004 for confidence in the digital economy is amended by the addition of a paragraph as follows:

"The entities set forth in the preceding paragraph inform them also of the existence of means of security able to warn of violations of the obligation defined in article L. 336-3 of the intellectual property code and and proposing to them at least one of the methods on the list set forth in the second paragraph of article L. 331-32 of the same code."

CHAPTER III

Clauses modifying the code of mail and electronic communications

Article 14

To the first sentence of II of article L. 34-1 of the code of mail and electronic communications, after the words "penal infractions" are inserted the words "of a violation of the obligation defined in article L. 336-3 of the intellectual property code", and after the words "the judicial authority" are inserted the words "or of the High Authority mentioned in article L. 331-12 of the intellectual property code".

CHAPTER IV

Clauses modifying the education code

Article 15

Article L. 312-6 of the education code is amended by the addition of a paragraph as follows:

"In the framework of these teachings, students are informed of the dangers of downloading and of illicitly making available works or objects protected by a right of authorship or a related right for artistic creation."

Article 16

Article L. 312-9 of the education code is amended by the addition of a paragraph as follows:

"Within this framework, in particular when preparing secondary students for the certificate in informatics and Internet, they receive from teachers previously sensitized in this subject information on the risks

associated with using public on line communication services, on the dangers of downloading and illicitly making available works and objects protected by a right of authorship or a related right for artistic creation, as well as the sanctions for violating the obligation defined in article L. 336-3 of the intellectual property code and the crime of counterfeiting. This information also covers the existense of legal offerings of works and objects protected by a right of authorship or a related right on public on line communication services."

CHAPTER V

Clauses modifying the film industry code

Article 17

Title II of the film industry code is amended by the addition of a chapter IV as follows:

"CHAPTER IV

"Delays in the exploitation of cinematographic works

"Art. 30-4 - A cinematographic work may be exploited in the form of video recordings intended for sale or rental for private use by the public at large at the expiration of a delay of four months counting from the date of its first showing in cinema theaters. The stipulations of the contract for acquiring rights for this exploitation may derogate this delay under the conditions set forth in the second paragraph. The stipulations of the contract for acquiring right for this exploitation predict the conditions under which may be applied a longer delay in conformance with the modalities set forth in the third paragraph.

"Establishing a shorter delay is depends on a showing by the national Center for cinematography, particularly in light of the results of displaying the cinematographic work in cinema theaters, of a derogation giving under the conditions fixed by decree of the Council of State. This derogation may not effectually reduce the delay by more than four weeks.

"Complaints related to setting a longer delay may be subject to mediation by the cinema mediator in the framework of the aims confided in him by article 92 of law 82-652 of 29 July 1982 on audiovisual communication.

"Art. 30-5. - I. - The contract agreed upon by a producer of on-demand audiovisual media services for the acquisition of rights related to making publically available a cinematographic work incorporate the delay to the term in which this availability may intervene.

"When there exists a professional agreement bearing on the delay applicable to a method of exploiting cinematographic works by on-demand audiovisual media services, the delay expected under this agreement applies to the producers of services and to the signatory members of professional organizations. This agreement may bear on one or several categories of services. It may be made mandatory for all the interested parties of the sectors of activity and the producers of services concerned under the conditions set forth in article 30-7.

"In the absence of a professional agreement made mandatory within a month counting from the publication of law [number unassigned] encouraging the dissemination and the protection of creation on

Internet, the cinematographic work may be made publically available by a producer of on-demand audiovisual services under the conditions set forth in article 30-4 for services paid per use and under the conditions set forth by decree for other services.

"The contract agreed upon by a producer of television services for the acquisition of rights relative to the dissemination of a cinematographic work incorporate the delay to the period in which this dissemination may intervene.

"When there exists a professional agreement bearing on the delay application to the mode of exploitation of cinematographic works by the television services, the delay set forth by this agreement is binding on the producers of services and on members of the signatory professional organizations. This agreement may bear on one or several categories of services. It may become mandatory for all interested parties of the sectors of activity and for the producers of the relevant services under the conditions set forth in article 30-7.

"The professional agreements mentioned in articles 30-5 and 30-6 may become mandatory by order of the minister of culture if they have been signed by the professional organizations representing the cinema sector, and, depending on the case:

"- one or several professional organizations representing the relevant sectors;

"- one or several professional organizations representing the relevant sectors and a group of the producers of services representative of one or several categories of services;

"- a group of the producers of services representative of one or several categories of services.

"The extent to which a professional organization or a group of producers of services is representative is proportional in particular to the number of operators concerned and to their importance in the market under consideration. If the need arises to determine the extent to which a professional organization of a group of producers of services is representative, they furnish the minister of culture the elements they have to show this importance.

"Subject to the sanction set forth in 2 of article 13:

"1 Disregard for the minimum delay resulting from the clauses in article 30-4 and the decree mentioned in II or article 30-5;

"2 Disregard for the delay set forth by a professional agreement made mandatory under the conditions set forth in article 30-7."

CHAPTER VI

Various clauses

Article 18

In the second sentence of the second paragraph of article L. 462-1 of the commercial code, after the word "industry" are inserted the words "of the High Authority for the dissemination of works and the

protection of rights on Internet,".

Article 19

I. - A decree of the Council of State sets forth the modalities according to which the obligations to which are subject, in applying articles L. 331-31, L. 331-33, L. 331-34 and L. 331-35 of the intellectual property code, entities whose activity is to offer access to public on line communication services come into force, particularly concerning contracts in course.

II. - Articles L. 331-5 to L. 331-45 of the same code, in their edited form resulting from this law, come into force on the date of the first meeting of the High Authority for the dissemination of works and the protection of rights on Internet, and at the latest 1 November 2009.

III. - Procedures in course before the Authority for regulating technical measures at the date of the first meeting of the High Authority for the diffusion of works and the protection of rights on Internet are to be pursued automatically before the governing body of the High Authority.

IV. - For the constitution of the governing body of the High Authority mentioned in article L. 331-16 of the same code, the president is elected for six years. The term of office of the other eight members is established by drawing lots at two years for three of them, at four years for three others, and at six years for the two last.

For the constitution of the committee for protection of rights mentioned in article L. 331-17 of the same code, the president is named for six years. The term of office for the two other members is established by drawing lots at two years for one of them and at four years for the other.

The measures set forth in articles L. 331-27 and L. 331-28 of the intellectual property code, in their changed form resulting from this law, may not be taken unless the new violation, following on those which justified applying the recommendations mentioned in article L. 331-26 of the intellectual property code, was committed after the expiration of a delay of three months following the first publication by the High Authority, of the list mentioned in article L. 331-32 of the same code, in its form resulting from this law.

Article 20

I. - The intellectual property code is changed as follows:

1 The last paragraph of article L. 121-8 is replaced with two paragraphs as follows:

"For all works published by the press in the sense of article L. 132-35, the author retains, unless it is stipulated to the contrary, the right to reproduce and to exploit his works in any form whatever, except for rights ceded under the conditions set forth in section 6 of chapter II of title III of book I.

"In all cases, the author's exercise of his right supposes that this reproduction or this exploitation is not such as to compete with this press title.";

2 Chapter II of title III of book I of the first part is amended by the addition of a section 6 as follows:

"Section 6

"Right to exploit the works of journalists

"Art. L. 132-35. - By press title is understood, in the sense of this section, the organ of the press to which the professional journalist has contributed, as well as all versions of the title in any form, any means of dissemination and consultation. Excluded are audiovisual communication services in the sense of article 2 of law 86-1067 of 30 September 1986 relating to freedom of communication.

"Included within publication under a press title is the dissemination of all or part of its contents by a public on line communication service or by any other service, produced by a third party, when such dissemination is made under the editorial control of the director of the publication whose content is disseminated or when it appears in a space dedicated to the press title from which the disseminated content is extracted.

"Also included within publication under a press title is the dissemination of all or part of its content by a public on line communication service produced by the press enterprise or by the group to which it belongs or produced under their responsibility, where the aforementioned press title is required to appear.

"Art. L. 132-36. - Except for the clauses of article L. 121-8, the convention binding a journalist who is professional or included within the sense of articles L. 7111-3 and following of the labor code, who contributes either permanently or part time to the work of a press title, and his employer accords to the owner, unless stipulated to the contrary, exclusive possession of the rights of exploitation of the journalist's works made in the framework of this title, whether published or not.

"Art. L. 132-37. - The exploitation of the journalist's work in differeent media, in the framework of the press title defined in article L. 132-15 of this code, has as its sole reward the salary, during a period fixed by agreement with the enterprise or, by default, by any other collective agreement in the sens of articles L. 222-1 and following of the labor code.

"This period is determined taking into consideration particularly the periodicity of the press title and the nature of its contents.

"Art. L. 132-38. - The exploitation of the work in the press title, after the period set forth in article L. 132-37, is remunerated in the form of authorial rights or salary, under conditions determined by the agreement with the enterprise or, by default, by any other collective agreement.

"Art. L. 132-39. - When the producing company or the company which controls it, in the sense of article L. 233-16 of the commercial code, produces several press titles, an enterprise-wide agreement may set forth the dissemination of the work by other titles of this business or the group to which it belongs, if these titles and the initial press title belong to the same coherent press family. This agreement defines the notion of coherent press family or establishes the list of each of the press titles concerned.

"The exploitation of the journalist's work within the coherent press family must incorporate permit the identification of the said journalist and, if the agreement sets it forth, the press title in which the work was first published.

"These re-uses outside the press title such as defined in article L. 132-35 of this code give rise to remuneration, in the form of authorial rights or salary, under conditions determined by the enterprise-wide agreement mentioned in the first paragraph of this article.

"Art. L. 132-40. - Any cession to exploit the work outside the initial press title or of a coherent press

family must be by an express agreement made beforehand by its individual author or under a collective agreement, without prejudice in the second case to the exercise to the journalist's moral right.

"These uses give rise to remuneration in the form of authorial rights under the conditions determined by individual or collective agreement.

"Art. L. 132-41. - When the author of a fixed image is a professional journalist who earns most of his income from exploiting such works or who works part time in preparing a press title, the cession of the rights of exploitation such as set forth in article L. 132-36 does not apply unless this work was ordered by the press enterprise.

"The conditions under which the second paragraph of article L. 121-8 apply to ceded works in applying the first paragraph of this article are specified by a collective or individual agreement.

"Art. L. 132-42. - The authorial rights mentioned in articles L. 132-38 and following are not in the form of salary. They are determined in confirmance with articles L. 131-4 and L. 132-6.

"Art. L. 132-43. - Collective agreements may assign the management of rights mentioned in articles L. 132-38 and following to one of the societies for managing rights mentioned in articles L. 321-1 and following.

"Art. L. 132-44. - A committee is created, headed by a representative of the State, and further composed in half by representatives of representative professional press organizations and in half by representatives of representative unions of professional journalists.

"The State representative is appointed from among the members of the Supreme Court, the Council of State or the Accounting Court, by decree of the minister for communication.

"Unless there is an enterprise-wide agreement is concluded within six months counting from the publication of law [number unassigned] encouraging the dissemination and protection of creation on Internet, and in the absence of any other applicable collective agreement, one of the parties to negotiating the enterprise-wide agreement may approach the committee to determine the modes and bases of the remuneration due in exchange for rights of exploitation. The demand may also bear on the identification of the titles comprising a coherent press family within the group, in application of article L. 132-39.

"For enterprise-wide agreements concluded for a fixed duration which expire or for those which are rejected by one of the parties, the committee may be approached under the same conditions and for the same questions as in the preceding paragraph, if no enterprise-wide agreement is reached in the six months following the date of the expiration of the agreement of fixed duration or lacking the formation of a substitute agreement within the delay set forth in article L. 2261-10 of the labor code following rejection of the previous agreement.

"The committee seeks with the parties a compromise solution to arrive at an agreement. To this end it may refer to existing relevant agreements with respect to the form of press under consideration. It renders its decision within a delay of two months counting from when it is approached.

"The committee makes its decision by a majority of its members present. In case of tie, the president's vote is decisive.

"The decisions of the committee come into force if, within one month, its president has not demanded a second deliberation. They are communicated to the parties and to the minister of communication, who assures that they are published.

"The intervention of the committee's decision does not prevent the press businesses concerned from engating in a new collective negotiating. The collective agreement resulting from this negotiation replaces the committee's decision, after it is filed with the more diligent party with the administrative authority, conformant with article L. 2231-6 of the labor code.

"A decree of the Council of State sets the conditions of application of this article, in particular the composition, the modalities of involvement, and the functioning of the committee as well as the means of legal recourse against its decisions.

"Art. L. 132-45. - Article L. 132-41 applies counting from the entry into force of a branch agreement determining the minimum salary of professional journalists who make their principal income from the exploitation of fixed images and who work part time on a press title. This agreement takes account of whether the cession is exclusive or not.

"In the absence of an agreement within two years counting from the publication of law [number unassigned] encouraging the dissemination and protection of creation on Internet, a decree establishes the conditions which determine this minimum salary."

II. - The labor code is changed as follows:

1 After article L. 7111-5 is inserted an article L. 7111-5-1 as follows:

"Art. L. 7111-5-1. - Collaboration between a press business and a professional journalist applies to the entirety of means of publication of the press title such as defined in the first paragraph of article L. 132-35 of the intellectual property code, unless stipulated to the contrary in the work contract or in any other regular convention.";

2 Article L. 7113-2 is changed as follows:

"Art. L. 7113-2. - All work ordered or accepted by the producer of a press title in the sense of article L. 132-35 of the intellectual property code, whatever its means of publication, is remunerated, even if it is not published.";

3 Chapter III of title I of book I of the seventh part is amended by the addition of two articles L. 7113-3 and L. 7113-4 as follows:

"Art. L. 7113-3. - When the work of a professional journalist gives rise to publication under conditions defined in article L. 132-37 of the intellectual property code, the remuneration which he receives is a salary.

"Art. L. 7113-4. - The mandatory negotiation set forth in articles L. 2241-1 and L. 2241-8 bear also on salaries paid to professional journalists who contribute, either permanently or part time, to a press title."

III. - After article L. 382-14 of the social security code is inserted an article L. 382-14-1 as follows:

"Art. L. 382-14-1. - Income paid in application of article L. 132-42 of the intellectual property code are

subject to deductions for social insurance and family allocations under conditions set forth in this chapter."

IV. - During the three years following publication of this law, agreements related to the exploitation of the different means of publication of journalists' works signed before the entry into force of this law continue to apply until their date of expiry, unless rejected by one of the parties. In press businesses where such agreements have not been concluded by the date of entry into force of this law, agreements mentioned in article L. 132-37 of the intellectual property code determin, in particular, the amount of remuneration owed to professional journalists in application of articles L. 132-38 to L. 132-40 of the same code, for the period comprising the entry into force of this law and the entry into force of these agreements.

Article 21

I. - The beginning of 8 of article L. 122-5 of the intellectual property code is changed as follows:

"8 The reproduction of a work or its representation made for the purpose of conservation or to preserve the conditions to consult it for purposes of research or private study by individuals, on the site of the establishment and on terminals for that purpose in libraries... (the rest unchanged)".

II. - In 7 of article L. 211-3 of the same code, after the word "reproduction" are inserted the words "and of representation" and the words "on site" are replaces with the words "for purposes of research or private study by individuals, on the site of the establishment and on terminals for that purpose".

Article 22

In the second sentence of the first paragraph of article 15 of law 2006-961 of 1 August 2006 concerning the right of authorship and of related rights in the information society, the words "is required to transmit to this service" are replaced with the words "is required, at the request of this service, to transmit to it".

Article 23

I. - Deleted:

1 Article 89 of law 82-652 of 29 July 1982 on audiovisual communication;

2 Article 70-1 as well as the third and fourth paragraphs of article 79 of law 86-1067 of 30 September 1986 concerning freedom of communication

II. - In the penultimate paragraph of IV of article 30-2 of law 86-1067 of 30 September 1986 concerning freedom of communication, the referencd "L. 331-11" is replaced with the reference "L. 331-9".

III. - 1. law 96-299 of 10 April 1996 concerning experimentation in the area of information technologies and services is deleted.

2. In article 15 of law 97-283 of 27 March 1997 bringing into the intellectual property code EC Council directives 93/83 of 27 September 1993 and 93/98 of 29 October 1993, the words "mentioned in article 3 of law 96-299 of 10 April 1996 concerning experimentation in the area of information technologies and services" are deleted.

3. III of article 22 of law 96-659 of 26 July 1996 regulating telecommunications is deleted.

4. Article 18 of law 99-533 of 25 June 1999 orienting toward the durable management and development of the land and modifying law 95-115 of 4 February 1995 orienting toward the durable management and development of the land is deleted.

Article 24

The fifth paragraph of article 99 of law 86-1067 of 30 September 1986 previously cited is changed as follows:

1 In the first sentence, after the word "analogue" are inserted the words "unencrypted national services";

2 After the first sentence is inserted a sentence as follows:

"It establishes, at least three months in advance, for each geographic zone, the date when analog transmission of local and national services whose authorization for this mode expires before 30 November 2011."

Article 25

I. - The national Center for Cinematography is charged to initiate or set out, before 30 June 2009, setting up a reference portal to encourage the development of legal offerings of French or European cinematographic works.

II. - Within three months counting from the entry into validity of this law, public on line communication services that propose the on line sale of sound recordings form, for the exploitation of this service and respecting recognized rights and exclusivities, an agreement to commercialize these sound recordings in the framework of an offer without technical protection measures when this does not permit interoperability.

Article 26

I. - Except for articles 15 and 16, of III de of article 27 and of article 28, this law applies to Wallis and Futuna and in New Caledonia.

II. Article L. 811-1 of the intellectual property code is changed as follows:

1 The words "Mayotte except for the fourth paragraph of article L. 335-4 and articles L. 133-1 to L. 133-4 and taking account of changes set forth in the following articles. Taking the same account, they are applicable" and the words ", in the southern Territories and French Antartic" are deleted;

2 After the first paragraph are inserted two paragraphs as follows:

"Not applicable in Mayotte are articles L. 133-1 to L. 133-4, as well as the fourth paragraph of article L. 335-4.

"Not applicable in the southern Territories and French Antartictic are articles L. 133-1 to L. 133-4, L.

421-1 to L. 422-13 and L. 423-2, as well as the fourth paragraph of article L. 335-4."

III. - The first paragraph of article L. 811-2 of the same code is changed as follows:

"For the application of this code in Mayotte and in the southern Territories and French Antarctic as well as for the application of the clauses which it makes applicable in French Polynesia, in the Wallis and Futuna islands and in New Caledonia, the following words enumerated below are respectively replaced with the following words:

IV. - 2 of I and II of article 23, article 24 and I and II of article 27 of this law are applicable in French Polynesia.

Article 27

I. - Article 1 of law 86-897 of 1 August 1986 reforming the legal environment of the press is amended by the addition of two paragraphs as follows:

"On line press services are taken to mean any public on line communication service of a professional nature by a natural person or an entity with independent legal standing which controls its editorial content, consistent with producing and making available to the public original content of general interest, regularly renewed, made up of information presenting a link with news and treated in a journalistic way, which does not consist of a tool of promotion or an accessory to ain industrial or commercial activity.

"A decree specifies the conditions under which an on line press service may be recognized, taking note particularly to benefit from the advantages thereto pertaining. For on line press services presenting information of political and general nature, this recognition implies using, in a regular way, at least one journalist who is a professional in the sense of article L.l 7111-3 of the labor code."

II. - Article 93-3 of law 82-652 of 29 July 1982 on audiovisual communication is amended by the addition of a paragraph as follows:

"When the infraction results from the content of a message sent by a user to a public on line communication service and made publically available by this service in a space for personal contributions identified as such, the director or codirector of publication is not penally responsible as principal author if it is established that he had no effective knowledge of the message before it was placed on line or if, from the moment when he became aware of it, he acted promptly to remove this message."

III. - After 1(2) of article 1458 of the general tax code is inserted a 1 part 3 as follows:

"1(3) On line press services recognized as of 1 January of the year of impisition of the conditions specified by the decree set forth in the third paragraph of article 1 of law 86-897 of 1 August 1986 reforming the legal environment of the press;

IV. - III applies to impositions established counting from the year which follows the publication of the decree set forth in the third paragraph of article 1 of law 86-897 of 1 August 1986 reforming the legal environment of the press in its version resulting from this article, and at the latest counting from 31 December 2009.

Article 28

I. - Article 39(2) A of the general tax code is changed as follows:

A. - 1 is changed as follows:

1 In the first paragraph, after the word "general" are inserted the words ", or an on line press service recognized under article 1 of law 86-897 of 1 August 1986 reforming of the legal environment of the press, devoted in large part to political and general information";

2 (a) is changed as follows:

a) After the word "exploitation" are inserted the words "of the on line press service,";

b) After the first and the third occurrences of the word "enterprises" the words "of the press" are deleted;

c) After the word "paragraph" are inserted the words "or the exploitation of an on line press service mentioned in the same paragraph";

3 In (b) the words ", excerpted from the periodical or the publication," are deleted;

4 After (b) is inserted a (c) as follows:

"c) Fixed expenses allocatable to research, to technical development and to innovation at the profit of the on line press service, periodical, or publication.";

B. - 2 is changed as follows:

1 In the first sentence of the first paragraph, after the word "publications" are inserted the words "and for recognized on line press services";

2 After the first sentence of the first paragraph is inserted a sentence as follows:

"For the application of the preceding sentence, the limit is calculated for businesses exploiting a recognized on line press service and engaged in other activities, beginning with the sole profit taken from this on line press service";

C. - In 2(2), the words "mentioned in 1 and 2 which are considered" are replaced with the words "and of the on line press services mentioned in 1 and 2 which are considered";

D. - In the second paragraph of 3, after the words "of publications" are inserted the words "and for recognized on line press services".

II. - I applies to undertakings concluded counting from the publication of this law.

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January 1, 2012

The Danger of an Attack on Piracy Online

By DAVID CARR

By invoking the acronym SOPA right at the get-go, I may be daring many of you to check the next column over for something a little less chewy. After all, SOPA, which stands for Stop Online Piracy Act, sounds like a piece of arcane Internet government regulation — legislation that entertainment companies desperately care about and that leaves Web nation and free-speech crusaders frothing at the mouth. The rest of us? What were we talking about again?

Stay with me here.

SOPA deals with technical digital issues that may seem to be a sideshow but could become crucial to American media and technology businesses and the people who consume their products. The legislation is the rare broadly bipartisan piece of apple pie. The House Judiciary Committee is expected to resume hearings on it this month and all indications are that it will approve the measure, setting up a vote in the full chamber. The Senate is also expected to vote on its own version of the bill when it returns from the holiday break.

Virtually every traditional media company in the United States loudly and enthusiastically supports SOPA, but that doesn't mean it's good for the rest of us. The open consumer Web has been a motor of American innovation and the attempt to curtail some of its excesses could throw sand in the works of a big machine on which we have all come to rely.

Rather than launch into a long-winded argument about why the legislation is a bad idea — it is, as currently written — I thought it might be worthwhile to boil SOPA down into a series of questions.

A NONEXISTENT PROBLEM? Hardly. Regardless of what Web evangelists tell you, SOPA is an effort to get at the very real problem of rogue Web sites — most operating from overseas — offering illicit downloads of movies, music and more. The Motion Picture Association of America cites figures saying that piracy costs the United States $58 billion annually.

Mark Elliot, an executive from the U.S. Chamber of Commerce, said in a letter to The New York Times that such piracy threatened 19 million American jobs. Those figures surely include some politically motivated hyperbole, but anybody who has spent time around a twentysomething consumer knows that piracy is a thorny fact of life for content companies.

In an effort to stanch the flow, on Oct. 26 Representative Lamar Smith, Republican of Texas, introduced the legislation that has come to be known as SOPA. The Senate version, called the Protect IP Act, is seen by tech companies as less onerous because it targets domain name providers and ad networks and not Internet service providers. Both bills seek to create remedies to pirated content because most of the foreign-based sites operate outside of the United States' legal system.

WOULD IT FIX THE PROBLEM? Probably not, and even if it made some progress toward reining in rogue sites, the collateral damage would be significant. Under the terms of each proposed bill, the federal Department of Justice, as well as copyright holders, could seek a court order against a Web site that illegally hosts copyrighted content and then wall off the site permanently.

Under the House version, private companies would be allowed to sue Internet service providers for hosting content that they say infringes on copyright. That represents a very big change in the current law as codified in the Digital Millennium Copyright Act, which grants immunity to Web sites as long as they act in good faith to take down infringing content upon notification.

WHY ALL THE ALARM? The bill has exposed a growing fracture between technology and entertainment companies. Digitally oriented companies see SOPA as dangerous and potentially destructive to the open Web and a step toward the kind of intrusive Internet regulation that has made China a global villain to citizens of the Web.

Entertainment companies think that technology companies are aiding and abetting thieves on a broad scale, but the legislation is alarming in its reach, potentially creating a blacklist of sites and taking aim at others for unknowingly hosting a small fraction of copyrighted material. In a joint letter to Congress, Google, Facebook, Twitter, AOL, Yahoo, eBay and many other companies made it clear that they perceived a broader threat in the effort to thwart pirate sites.

"We support the bills' stated goals — providing additional enforcement tools to combat foreign 'rogue' Web sites that are dedicated to copyright infringement or counterfeiting," the letter read, which was published in a full page ad in The Times.

"Unfortunately, the bills as drafted would expose law-abiding U.S. Internet and technology companies to new uncertain liabilities, private rights of action and technology mandates that would require monitoring of Web sites."

Laurence H. Tribe, the noted First Amendment lawyer, said in an open letter on the Web that SOPA would "undermine the openness and free exchange of information at the heart of the Internet. And it would violate the First Amendment."

You can see why big Internet guys are upset by SOPA. Maybe you and I should be, too.

WHY THE POLITICAL SUPPORT? Various amendments intended to tone down SOPA or limit its damage were voted down by large majorities in the House Judiciary Committee in mid-December, an indication that the indignation of various constituencies on the Web is having little impact.

That's partly because entertainment companies have deep and long-lasting relationships inside the Beltway. Maplight, a site that researches the influence of money in politics, reported that the 32 sponsors of the legislation received four times as much in contributions from the entertainment industry as they did from software and Internet companies.

There is also a cultural divide at work, according to Yancey Strickler, one of the founders of Kickstarter, a Web site that helps raise funds for creative projects, and a critic of SOPA.

"The schism between content creators and platforms like Kickstarter, Tumblr and YouTube is generational," he wrote in an e-mail. "It's people who grew up on the Web versus people who still don't use it. In Washington, they simply don't see the way that the Web has completely reconfigured society across classes, education and race. The Internet isn't real to them yet."

The debate has highlighted how little Congress knows about the Internet they are proposing to re-tool. In a piece often cited on the Web, the computer culture journalist Joshua Kopstein watched the debate in Congress in which members bragged about their online ignorance, and he wrote an open letter on the technology Web site Motherboard titled, "Dear Congress, It's No Longer O.K. to Not Know How the Internet Works."

Whether they know what they are doing or not, lawmakers seem intent on moving forward.

Congressional supporters of piracy legislation have been in a big hurry because the Web is starting to come alive with opposition — nearly 90,000 Tumblr users have phoned members of Congress and more than a million people have signed an online petition protesting the legislation.

Last week, in a much talked about blog post, Declan McCullagh of CNet speculated that even though big Web companies like Google, Amazon and Facebook are outgunned in terms of political connections, they have the capability to turn their sites into billboards denouncing SOPA and utilizing their close, constant relationship with consumers.

I like my movies (and music and television) as much as the next couch potato, probably more. And I wouldn't steal content for any reason, in part because I make a living generating a fair amount of it. But it's worth remembering that the film industry initially opposed the video cassette recorder and the introduction of DVDs, platforms that became very lucrative businesses for them and remarkable conveniences for the rest of us.

Given both Congress's and the entertainment industry's historically wobbly grasp of technology, I don't think they should be the ones re-engineering the Internet. The rest of us might have to just hold our noses and learn enough about SOPA to school them in why it's a bad idea.

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This article has been revised to reflect the following correction:

Correction: January 5, 2012

The Media Equation column on Monday, about legislative measures to curb online piracy, misspelled the surname of a founder of the Web site Kickstarter, who commented on the effort. He is Yancey Strickler, not Stickler.

LAW & DISORDER / CIVILIZATION & DISCONTENTS

750,000 lost jobs? The dodgy digits behind the war on piracy

Two statistics have become a staple of calls for stronger IP enforcement: 750, ...

by Julian Sanchez - Oct 8 2008, 0:30am EDT

0

A 20-year game of Telephone

If you pay any attention to the endless debates over intellectual property policy in the United States, you'll hear two numbers invoked over and over again, like the stuttering chorus of some Philip Glass opera: 750,000 and $200 to $250 billion. The first is the number of U.S. jobs supposedly lost to intellectual property theft; the second is the annual dollar cost of IP infringement to the U.S. economy. These statistics are brandished like a talisman each time Congress is asked to step up enforcement to protect the ever-beleaguered U.S. content industry. And both, as far as an extended investigation by Ars Technica has been able to determine, are utterly bogus.

"I have said it thrice," wrote Lewis Carroll in his poem *The Hunting of the Snark*, "what I tell you three times is true." And by that standard, the Pythagorean Theorem is but schoolyard gossip compared with our hoary figures. As our colleagues at *Wired* noted earlier this week, the 750,000 jobs figure can be found cited by the U.S. Department of Commerce, Customs and Border Patrol, and the U.S. Chamber of Commerce, among others. Both feature prominently on TheTrueCosts.org, an industry site devoted to trumpeting the harms of piracy. They're invoked by the deputy director of the U.S. Patent and Trademark Office. And, of course, they're a staple of indignant press releases from the congressional sponsors of tough-on-piracy legislation.

By more conventional standards of empirical verification, however, the numbers fare less well. Try to follow the thread of citations to their source, and you encounter a fractal tangle of recursive reference that resembles nothing so much as the children's game known, in less-PC times, as "Chinese whispers," and these days more often called "Telephone." Usually, the most respectable-sounding authority to cite for the numbers (the FBI for the dollar amount, Customs for the jobs figure) is also the most prevalent—but in each case, that authoritative "source" proves to be a mere waystation on a long and tortuous journey. So what is the secret origin of these ubiquitous statistics? What doomed planet's desperate alien statisticians rocketed them to Kansas? Ars did its best to find the fountainhead. Here's what we discovered.

Looking for lost jobs

First, the estimate of 750,000 jobs lost. (Is that supposed to be per year? A cumulative total over some undefined span? Those who cite the figure seldom say.) Customs is most often given as the source for this, and indeed, you can find press releases from as recently as 2002 giving that figure as a U.S. Customs and Border Patrol estimate. Eureka! But when we contacted CBP to determine how they had arrived at that imposing figure, we were informed that it was, in essence, a goof. The figure, Customs assured us, came from somewhere else, and was mistakenly described as the agency's own. This should come as no great surprise: CBP is an enforcement agency, whereas calculating the total loss of jobs

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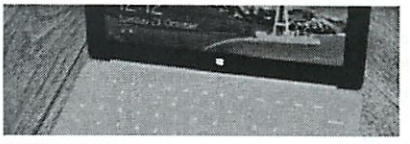

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from IP infringement would require some terrifyingly complex counterfactual modeling by trained economists. Similar claims have appeared in Customs releases dating back at least to 1993, but a CBP spokesperson assured us that the agency has never been in the business of developing such estimates in-house.

With Customs a dead end, we dove into press archives, hoping to find the earliest public mention of the elusive 750,000 jobs number. And we found it in—this is not a typo—1986. Yes, back in the days when "Papa Don't Preach" and "You Give Love a Bad Name" topped the charts, *The Christian Science Monitor* quoted then-Commerce Secretary Malcom Baldridge, trumpeting Ronald Reagan's own precursor to the recently passed PRO-IP bill. Baldridge estimated the number of jobs lost to the counterfeiting of U.S. goods at "anywhere from 130,000 to 750,000."

Where did that preposterously broad range come from? As with the number of licks needed to denude a Tootsie Pop, the world may never know. Ars submitted a Freedom of Information Act request to the Department of Commerce this summer, hoping to uncover the basis of Baldridge's claim—or any other Commerce Department estimates of job losses to piracy—but came up empty. So whatever marvelous proof the late secretary discovered was not to be found in the margins of any document in the government's vaults. But no matter: By 1987, that Brobdignagian statistical span had been reduced, as far as the press were concerned, to "as many as 750,000" jobs. Subsequent reportage dropped the qualifier. The 750,000 figure was still being bandied about this summer in support of the aforementioned PRO-IP bill.

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November 18, 2011

Rogue Web Sites

To the Editor:

Re "Stop the Great Firewall of America," by Rebecca MacKinnon (Op-Ed, New York Times on the Web, Nov. 16):

Rogue Web sites that steal America's innovative and creative products attract more than 53 billion visits a year and threaten more than 19 million American jobs. Congress is considering legislation that could help cut these criminals off from the American market. I take issue with Ms. MacKinnon's views about this much-needed rogue sites legislation.

Rogue sites are often located outside the United States, beyond the reach of our enforcement agencies. Proposed legislation authorizes a federal court to direct the suspension of services (payment processing, advertisements and linking) to rogue sites.

Contrary to Ms. MacKinnon's assertion that a Web site will be blocked "without a court hearing or trial," the process includes notice and all due-process protections as in any other civil federal case.

Protecting American innovation, jobs and consumers from foreign criminals is critical to a secure Internet and a prosperous future.

MARK ELLIOT
Executive Vice President
Global Intellectual Property Center
U.S. Chamber of Commerce
Washington, Nov. 17, 2011

MOTION PICTURE ASSOCIATION OF AMERICA, INC.

FOR IMMEDIATE RELEASE
December 16, 2011

MPAA STATEMENT ON STRONG SHOWING OF SUPPORT FOR STOP ONLINE PIRACY ACT

WASHINGTON — *The House Judiciary Committee today recessed its markup of the Stop Online Piracy Act (H.R. 3261), a bill that would provide the Justice Department with major new tools to seek court orders to curb online content theft and counterfeiting by foreign rogue websites. The action came after the Committee had considered over 25 amendments to the bill, consistently voting by a 2-1 margin against measures that would have made it more difficult to combat online theft and counterfeiting. The following is a statement by Michael O'Leary, Senior Executive Vice President for Global Policy and External Affairs for the Motion Picture Association of America Inc. (MPAA).*

"We applaud Chairman Lamar Smith, Ranking Member John Conyers and the members of the House Judiciary Committee for taking up and showing such strong bi-partisan support for legislation to curb online content theft and counterfeiting by foreign rogue websites, which are costing hundreds of thousands of American jobs and billions in lost wages and benefits.

The Chairman and the supporters of this important legislation are to be commended for continuing to work with interested parties to fashion a strong bill that has a growing base of support. The Judiciary Committee's overwhelming support for the bill shows that the legislative process, when allowed to work, can result in strong, bi-partisan legislation that will protect millions of American jobs and creativity. It also illustrates the strong commitment in Washington to take steps to combat foreign theft of American products this Congress.

Over the past two days, the Committee has carefully considered and defeated dozens of amendments that would have weakened the bill and would have made it more difficult to stop online content theft and counterfeiting. When the Committee resumes its work, we believe the bill will be approved by a strong bi-partisan margin and will be taken up by the full House and approved.

It is critical that this legislation, along with the PROTECT IP Act (S. 968), which was already approved unanimously by the Senate Judiciary Committee, move forward to preserve American

jobs and help grow our economy. Every day of delay means foreign criminal websites and companies profiting from these websites continue to reap financial gain at the expense of American jobs and Americans' hard work, investment and ingenuity.

Content theft is not a victimless crime. More than 2.2 million hard-working, middle-class people in all 50 states depend on the entertainment industry for their jobs and many millions more work in other industries that rely on intellectual property. For all these workers and their families, online content and counterfeiting by these foreign sites mean declining incomes, lost jobs and reduced health and retirement benefits.

According to the Institute for Policy Innovation, more than $58 billion is lost to the U.S. economy annually due to content theft, including more than 373,000 lost American jobs, $16 billion in lost employees earnings, plus $3 billion in badly needed federal, state and local governments' tax revenue."

About the MPAA

The Motion Picture Association of America, Inc. (MPAA) serves as the voice and advocate of the American motion picture, home video and television industries from its offices in Los Angeles and Washington, D.C. Its members include: Walt Disney Studios Motion Pictures; Paramount Pictures Corporation; Sony Pictures Entertainment Inc.; Twentieth Century Fox Film Corporation; Universal City Studios LLC; and Warner Bros. Entertainment Inc.

# # #

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The Economic Impact of Counterfeiting

Organisation for Economic Co-operation and Development
Organisation de Coopération et de Développement Economiques

1998

FOREWORD

This report has been prepared by Ms Hema Vithlani of the ICC Counterfeiting Intelligence Bureau, for the Industry Division of the OECD's Directorate for Science, Technology and Industry. It was initially presented to the Industry Committee on 12-13 March 1997 and subsequently revised. It is published on the responsibility of the Secretary-General of the OECD.

It provides a comprehensive overview of the menace that counterfeiting imposes to industry world-wide. The problem is not limited to a few products and certain countries but, as the report shows, it is a global problem affecting a wide range of industries. Moreover, it may have a devastating impact on society as a whole.

The report discusses the means of protection against counterfeiting and presents policy initiatives. It lists contact details of organisations that can assist in the fight against counterfeiting.

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EXECUTIVE SUMMARY

This report aims to introduce some of the key issues relating to the cost of counterfeiting and prime areas of concern.

The legal framework

For the purpose of the report, the term "counterfeiting" is used in its broadest sense and encompasses *any manufacturing of a product which so closely imitates the appearance of the product of another to mislead a consumer that it is the product of another.* Hence, it may include trademark infringing goods, as well as copyright infringements. The concept also includes copying of packaging, labelling and any other significant features of the product.

Overview of industries affected by counterfeiting

It is very hard to obtain accurate statistics on counterfeiting, mainly because it is a clandestine activity. However, the copyright industries of America have collected detailed information on piracy of their products for a number of years. These sectors suffer the largest losses. About half of all motion picture videos, more than 40 per cent of all business software and a third of all music recordings sold in 1996 were pirated copies.

Counterfeit clothing, both fashion and sportswear, is very prevalent in Europe. A common technique is to import plain clothing and attach the labels in one EU Member State and then release the products for sale in another Member State, benefiting from the free movement of goods across borders.

In the spare-parts industries, counterfeits are part of the overall problem of unapproved spare parts. They are traded on the grey market, together with over-runs, recycled items, copy parts and stolen goods, making it very difficult to control the market and separate the illegal items from the legal.

Geographical spread of counterfeit products

While most countries have some trade in counterfeit goods, some have become notorious for producing and exporting large quantities of fakes. Information from the customs services of the United States and EU Member States provides an insight into which countries are the biggest exporters of fakes and the types of products that are being counterfeited.

The top five suppliers of counterfeit goods to the United States in 1997, were China, Korea, Chinese Taipei, Hong Kong (China) and the Philippines. The most common products were media

(CDs, videos, computer games, etc.), wearing apparel and lighting/power goods. In total, the US Customs seized IPR-infringing goods worth US$54 million during fiscal year 1997.

The main sources of fakes imported to the European Union were Poland, Thailand, Turkey and the United States. Clothing accounted for more than half of the items seized.

The impact of counterfeiting

Industry world-wide loses large amounts to counterfeiters. These losses not only affect the producers of genuine items, but they also involve social costs. The ultimate victims of unfair competition are the consumers. They receive poor-quality goods at an excessive price and are sometimes exposed to health and safety dangers. Governments lose out on unpaid tax and incur large costs in enforcing intellectual property rights. There is also an increasing concern that counterfeiting is related to other criminal activities, such as trade in narcotics, money laundering and terrorism.

It is estimated that trade in counterfeit goods is now worth more than 5 per cent of world trade. This high level can be attributed to a number of factors: *i)* advances in technology; *ii)* increased international trade, emerging markets; and *iii)* increased share of products that are attractive to copy, such as branded clothing and software.

Protection against counterfeiting

Companies, as well as enforcement agencies, are becoming increasingly aware of the problems of counterfeiting. All companies need to make sure that their trademarks are adequately protected and to implement anti-counterfeiting policies to deal with the menace. A number of technologies, such as holograms, smart cards, biometric markers and inks, can be employed to protect and authenticate genuine products. These devices vary considerably in the degree of sophistication and cost. However, in order to be implemented the technology must be cost-effective, compatible with the product and distribution chain, resistant and durable.

The lack of information sharing is often perceived to be one of the main obstacles in the fight against counterfeiters. The World Customs Organisation (WCO) and Interpol now react proactively. They employ databases on counterfeits and conduct training for officials in partnership with private industry.

A number of policy initiatives exist at both the private and the official level. Countries with a strong representation of trademark owners have established anti-counterfeiting associations. These are membership organisations, whose main activities include promoting adequate IPR protection, information gathering and liaison with enforcement agencies.

Some trade associations are very active in assisting their members to combat counterfeiting. These include the Business Software Alliance (BSA) and the International Federation of the Phonographic Industry (IFPI). The latest international initiative is the Global Anti-counterfeiting Group (GACG) which is a forum for discussion aimed at raising awareness of the health and safety hazards of fakes.

1. THE COUNTERFEITING INDUSTRY – THE LEGAL FRAMEWORK

Definitions and terminology

Counterfeiting is ultimately an infringement of the legal rights of an owner of intellectual property.

The Agreement on Trade-related Aspects on Intellectual Property Rights (the TRIPs Agreement) defines counterfeiting and piracy as follows:

For the purpose of this Agreement:

a) *"counterfeit trademark goods" shall mean any goods, including packaging, bearing without authorisation a trademark which is identical to the trademark validly registered in respect of such goods, or which cannot be distinguished in its essential aspects from such a trademark, and which thereby infringes the rights of the owner of the trademark in question under the law of the country of importation;*

b) *"pirated copyright goods" shall mean any goods which are copies made without the consent of the right holder or person duly authorised by the right holder in the country of production and which are made directly or indirectly from an article where the making of that copy would have constituted an infringement of a copyright or a related right under the law of the country of importation.*

Technically, the English term "counterfeiting" only refers to specific cases of trademark infringement. However, in practice, the term is allowed to encompass any making of a product which so closely imitates the appearance of the product of another as to mislead a consumer that it is the product of another. Hence, it may also include the unauthorised production and distribution of a product that is protected by other intellectual property rights, such as copyright and neighbouring rights. This is in line with the German term "*Produktpiraterie*" and the French term "*contrefaçon*", which both cover a broader range of intellectual property right infringement (Clark, 1997).

In fact, different types of IPR infringements often overlap. Music piracy for example, mostly infringes copyright as well as trademark protection. Fake toys are often sold under a different name but infringe the design protection of the toy. Even where there is no trademark infringement, the evolving factual problems and subsequent legal issues often bear a close resemblance to cases of counterfeiting. For the purpose of this report, it is therefore easiest to use one term to address counterfeiting, piracy and related issues. The concept will include the copying of packaging, labelling or any other significant features of the goods.

Related activities

A number of activities, such as parallel trading and factory over-runs, are treated as counterfeiting by trademark owners but not by enforcement agencies.

"Parallel trading" refers to situations where products are legitimately bought in one territory and diverted for sale to another territory without the consent of the right holder in the receiving territory. It is facilitated by two principles that limit the rights of an IPR owner: *i)* the principle of territoriality, *i.e.* the IPR protection is valid only for specific countries or regions; and *ii)* the principle of exhaustion, *i.e.* the right owner has very limited rights to prevent further distribution of a product that is put on the market with his consent.

Parallel trading, or grey-market trade, is now well established and operates side by side with the "authorised" market. Prior to the Trademark Directive of 1989, several Member States of the European Union applyied the doctrine of international exhaustion which implies that the rights are considered to be exhausted as soon as the goods have been sold in any territory. The doctrine limits the function of Trademark Law only as a guarantee of the authenticity of the commercial origin of the goods and restricts further control by the trademark owner (Khur, 1997). However, the 1989 Trademark Directive has narrowed the exhaustion to the territory of the European Economic Area (EEA).

Consequently, the importation of trademark-protected goods from a country outside the EEA would constitute a trademark infringement. Many trademark owners treat the goods as counterfeits and try to take legal action against the parallel traders. However, the goods are authentic in the sense that they originate from the trademark owner and would have been legitimate according to the old doctrine. Therefore, enforcement agencies are reluctant to take action against parallel traders and even civil litigation may be difficult to win.

A related problem for trademark owners is the unauthorised production by legitimate suppliers. In some sectors, such as toys and spare parts, it has become the practice for suppliers to produce "over-runs" – extra quantities of products which they do not account for – and sell them on the black market. The trademark owner again considers the goods to be counterfeits but finds it difficult to take action. Courts and enforcement agencies treat over-runs as a breach of contract rather than as a trademark infringement.

Civil, administrative and criminal offence

Civil action

As intellectual property rights have become more important for companies and received more attention from governments, countries have responded to domestic and international pressures and have strengthened legal protection in favour of right holders.

The most common action against counterfeiters is civil litigation. The action generally involves proceedings against those directly involved in the production, distribution and sale of counterfeit goods. Judicial procedures for some form of litigation are in place in most countries and Article 42 of the TRIPs Agreement includes it as a basic protection for right holders:

"Members shall make available to right holders civil judicial procedures concerning the enforcement of any intellectual property right covered by this Agreement".

Whilst the Agreement outlines basic fair and equitable procedures, their efficiency may vary significantly. The right holder often has difficulties in obtaining and preserving the necessary evidence of counterfeiting and, even if the court awards substantial damages, it may be difficult to secure any payment.

Criminal offence

During the last two decades, many countries have taken steps towards introducing legislation that makes product counterfeiting a criminal offence. The liability can either be based on general matters of criminal law such as an attempt to defraud, or result from provisions in trademark legislation. Product counterfeiting will inevitably be criminalised in all countries that are committed to the TRIPs Agreement. Article 61 of the Agreement obliges contracting parties to:

"...provide for criminal procedures and penalties to be applied at least in cases of wilful trademark counterfeiting or copyright piracy on a commercial scale..."

However, despite the development in legislation, trademark owners may still face difficulties in persuading enforcement authorities to take action against counterfeiters. This is due to a number of factors: *i)* counterfeiting is often given a low priority compared to other criminal offences; *ii)* it may be difficult to uncover the full scale of a counterfeiter's activities; and *iii)* the procedural rules are often too complex to make it worthwhile to enforce the law (Clark, 1997).

Administrative action

Administrative intervention is often necessary to prevent the distribution of counterfeit goods. This is particularly important in the case of international trade in counterfeits where the customs authorities play an important role. Article 51 of the TRIPs Agreement obliges contracting parties to:

"...adopt procedures to enable a right holder, who has valid grounds for suspecting that the importation of counterfeit trademarks or pirated copyright goods may take place, to lodge an application in writing with competent authorities, administrative or judicial, for the suspension by customs authorities of the release into free circulation of such goods..."

Trademark owners face several problems in trying to initiate administrative intervention in some countries. They are often required to provide very specific information about the suspect consignment, which may be difficult to obtain and there are often high costs involved in applying for suspension.

2. OVERVIEW OF INDUSTRIES AFFECTED BY COUNTERFEITING

Various figures are quoted on the impact of counterfeiting. Unfortunately, only a few of them are based on any substantial analysis, mainly because it is so difficult to obtain accurate statistics in this field. Some estimates are made by trade associations, whereas others are put forward by journalists. Very few of the figures have changed over the last two years, a fact that undermines their reliability.

The statistics and intelligence are being used to inform governments and influence them into taking action. The US Copyright industry, including the Business Software Alliance (BSA), the International Federation of Phonographic Industry (IFPI) and the Motion Picture Association (MPA), have been groundbreaking in this field. The loss estimates are interesting but should be treated with caution since they may be on the high side.

Table 1. **Share of counterfeit products in total sales of the sector**

Sector	Share of counterfeit goods as a percentage of turnover
Watches[1]	5
Medicine[1]	6
Perfumes[2]	5
Aircraft spare parts (SUP)[2]	10
Toys[1]	12
Music[2]	33
Video[2]	50
Software[2]	43

1. Not related to any year, estimation without any account for analysis.
2. Figures for 1996, ostensibly with some analysis.

Source: Various trade associations and press.

Inaccurate data is an important problem since statistics form a basis for the decision-making process for both private companies deciding on anti counterfeiting policies and for governments seeking a mandate for enforcement of IPR rights.

Software

The problem of piracy is almost exclusively related to packaged software which is written in standard form, mass produced and sold as a commodity product "off-the-shelf". The main software producers are based in the United States where the industry has become notorious for combating piracy, with good reason.

The industry has collected systematic information on the extent of counterfeiting. A number of reports on global software piracy have been commissioned, the latest being by the International Planning and Research Corporation (IPR), *Global Software Piracy Report. Facts and Figures, 1994-*

1996 (Business Software Alliance, 1997), hereafter referred to as the "IPR report". The IPR report encompasses the sales and piracy of packaged business-related software world-wide for 1996. It quotes somewhat different statistics from a previous report by Price Waterhouse (Business Software Alliance, 1994), presumably due to different accounting methods.

According to the IPR study, the number of new business applications, both legal and pirated, increased by 29 per cent in 1996. This is slightly less than the growth rate reported for 1995, which was 32 per cent. The data indicates that nominal losses due to piracy increased from US$12.3 billion in 1994 to US$13.3 billion in 1995 but decreased to US$11.2 billion in 1996. According to IPR, the decline in losses can be attributed to the erosion of the price of business software (Business Software Alliance, 1997).

Global piracy rates have, however, steadily decreased during the same period – from 49 per cent in 1994, to 46 per cent in 1995 and 43 per cent in 1996. Yet, as shown in the table below, rates vary significantly on a regional level. Eastern Europe has the highest piracy rate with 80 per cent, followed by the Middle East at 79 per cent. North America has the lowest rate at only 28 per cent and Western Europe the second lowest at 43 per cent (Business Software Alliance, 1997).

The Business Software Alliance (BSA) was formed by the leading software companies in 1988 as a direct response to the piracy problem. Its aim is to increase the legitimate market for software and discourage abuse of copyright-protected work around the world. It is active in 60 countries and works with government officials and industry groups to improve enforcement of IPR and educate the public on piracy.

Table 2. **Software piracy estimates, 1996**

Region	Percentage share of world-wide total	Losses US$
Eastern Europe	80	800 000
Middle East	79	300 000
Africa	70	250 000
Latin America	68	990 000
Asia/Pacific	55	3 700 000
Western Europe	43	2 600 000
North America	28	2 700 000
World-wide	**43**	**11 200 000**

Source: Business Software Alliance, 1997.

Music recordings

The world music market totalled 4 billion units valued at US$39.8 billion in 1996. The United States dominates sales with US$13 billion, followed by Japan with US$6 billion. Europe accounted for about US$13 billion of the sales, of which Germany spent about US$3.2 billion, the United Kingdom US$2.7 billion and France US$2.3 billion (International Federation of the Phonographic Industry, April 1997).

The world-wide manufacturing *capacity* for CDs has however risen from 2.5 billion units in 1992 to 9 billion units in 1996. The excess capacity doubles the demand for legitimate sales and this massive surplus has inevitably created an increase in piracy. This over-capacity is considered to be

one of the most serious threats to the recording industry (International Federation of the Phonographic Industry, September 1997).

The music industry acknowledges that modern technology has enabled an unprecedented level of production, decreased the costs of piracy and improved the quality of pirate copies. A number of developing countries are perceived to be saturated by pirated recordings creating barriers to importation by genuine producers. Furthermore, the music organisations claim to have found evidence that the manufacturing and distribution of pirate CDs has become an organised, large scale criminal activity operating on a global level (International Federation of the Phonographic Industry, September 1997).

Russia is the top priority country for combating CD piracy. It has a piracy level of 70 per cent of the total sale amounting to US$350 million per annum compared with legitimate sales worth only US$230 million. Cassette piracy is rife in Latin America and in Brazil, which is the largest market in the region, IFPI estimates the cassette piracy level to be virtually 100 per cent. In Europe, Greece has the highest level of piracy in terms of number of units, mainly because of high levels of cassette piracy. Italy, however, accounts for the highest amount of losses equalling US$105 million per year. In China, more than half of all units sold are pirated but, because of much lower prices, the pirate sales total only US$165 million, compared with legitimate sales worth US$177 million.

World-wide, recorded piracy levels have increased from about 20 per cent to more than 30 per cent of the total unit sales equalling US$5 billion in 1996 compared with about US$2 billion in 1995. The extraordinarily high increase is attributed to a change in methodology of estimating piracy losses (International Federation of the Phonographic Industry, September 1997).

The International Federation of the Phonographic Industry (IFPI) represents the majority of all record producers world-wide. It campaigns for adequate enforcement of copyright protected works and co-ordinates the anti-piracy activities of the recording industry world-wide. It lobbies governments to introduce adequate legislation and enforcement, collects information on music piracy and advises members on technical solutions for combating piracy. IFPI has also been involved in a number of investigations into the trade of infringing CDs and tapes and assists its members in preparing prosecutions.

Table 3. **Music piracy estimates, 1996**

Priority countries	**Legitimate sales Million US$**	**Pirate sales Million US$**	**Pirate sales as a percentage of total unit sales[1]**
Russia	230.0	350	70
Brazil	1 394.5	200	45
China	177.5	165	54
Italy	637.5	105	22
India	298.0	100	30
Mexico	399.3	70	50
Argentina	285.3	65	30
Saudi Arabia	100.9	35	30
Greece	128.7	22	25
Malaysia	99.9	18	20
World-wide total			
Sales (million US$)	39 800	5 000	12.5%
Units	4 000	1 500	33%

1. Mainly cassette piracy in Latin American countries.

Source: International Federation of Phonographic Industry.

Motion pictures

The market for motion pictures encompasses service providers and providers of pre-recorded cassettes. The market for service providers includes public performance, broadcast TV and cable/satellite. It is regulated by statutes with compulsory licensing, and controlled by governments and international associations that collect and distribute the royalties. However, a common method used by pirates in this market is signal theft, that is the unauthorised interception of cable and satellite signals by individuals or commercial establishments such as hotels, bars and restaurants.

Piracy rates for this sector are not available in most countries, but sporadic data show the prevalence of motion-picture piracy around the world last year. The Motion Picture Association (MPA) reports a broadcast TV piracy rate of up to 50 per cent in Greece, Russia and the Ukraine, while the former Yugoslavia had a level above 80 per cent. Cable and satellite piracy dominate the market in Russia, Bulgaria and Yugoslavia, with a piracy rate higher than 80 per cent. Interestingly, MPA reported high levels of cable and satellite piracy in some countries one wouldn't have suspected, such as Finland (40 per cent), Germany (50 per cent), Norway (20 per cent), Spain (20 per cent) and Switzerland (10 per cent). A piracy level of 50 per cent in public performance was found in Hungary, Portugal and South Africa, whiles Cyprus, France, Italy and Norway had a level of more than 20 per cent (Motion Picture Association, 1998).

The market for pre-recorded video cassettes is more difficult to control since it comprises a large number of small players. Furthermore, it is relatively easy to duplicate a video cassette and to lease or sell it. Basic technology enables video taping of television for commercial purposes, film to tape transfers of current cinema releases, and duplication in general of video cassettes. Piracy rates are bluntly recorded at about 100 per cent in many countries, particularly in Africa and South America. The piracy rates for Western European countries vary significantly between 30 per cent in Italy followed by 27 per cent in Ireland, 25 per cent in Greece and Cyprus, 22 per cent in Germany and the Netherlands, 15 per cent in Switzerland, 12 per cent in France and the United Kingdom, etc. Russia, with a piracy rate of 85 per cent, has been overtaken as a problem area by Turkey which reports a level of 95 per cent. It is widely believed that most of the pirate recordings found in Europe are imported from Turkey.

It will be interesting to see whether the soon-to-be-launched Digital Video Disks (DVDs) will have any effect on the piracy levels. DVDs employ the same principle as CDs but can store 30 times more data – enough for a digitised video of a film. Manufacturers are concerned about how easy it is to copy CDs and are incorporating a number of security features to prevent piracy. It is impossible to say in advance who will win the battle – the manufacturers or the pirates.

The United States clearly dominates the world film industry, both as producers of films and victims of piracy. The loss in potential revenue from piracy to the US film industry was estimated to be more than US$2.3 billion in 1997 (Motion Picture Association, 1998). The two main organisations combating the problem of film piracy are the Motion Picture Association (created in 1945) and the Motion Picture Association of America (created in 1922). Both organisations work closely together in a similar way since the MPA represents the world-wide film industry while the MPAA, as the name suggests, represents the US industry.

Table 4. **US motion picture piracy, 1995-97**

Seven largest countries in terms of losses	Losses in million US$ 1995	Losses in million US$ 1996	Losses in million US$ 1997
Russia	312	312	312
United States	250	250	250
Italy	294	275	220
Japan	108	142	149
China	124	120	120
Brazil	90	100	110
United Kingdom	112	100	70

Source: Motion Picture Association, 1998.

Luxury goods and fashion clothes

Theft of original ideas is the worst form of robbery in the fashion industry. A considerable amount of effort is spent in inventing distinctive designs and in establishing a trademark. Yet, it is a common attitude among enforcement agencies to treat counterfeiting of luxury goods as a "soft" crime. Some consumers buying fake luxury items do so knowingly and would not be prepared to pay the price of the genuine item. There is also a belief that counterfeits actually contribute to the marketing of the brand without causing any significant loss in profits.

This lax attitude may be a contributory factor to the increase in the counterfeiting of luxury goods in Europe. The United Kingdom and Italy, in particular, have become notorious for counterfeit fashion wear. Significant evidence of this trend came to light when UK customs officials smashed a £4.25 million racket in 1997 involving 100 000 counterfeit designer labels (HM Customs, 1997). The batches included labels for Ralph Lauren, Calvin Klein and Timberland, among others. The labels would most likely have been sewn into cheap fashion garments such as shirts, jeans and T-shirts made in the United Kingdom.

It is a common technique to import plain clothing in one batch, produce the labels on-site or import them in another batch at another date, and then attach the labels over night close to the point of sale. This makes it much more difficult to detect the fakes while they are still in sufficiently large quantities to justify action.

Counterfeit clothing, particularly from Italy, is becoming very difficult to combat. In the past a counterfeit shirt would often fall apart or lose colour after the first wash, but there has been a significant improvement in the quality of fakes. Very often the fakes are made by the same manufacturer that is contracted to produce the original items. The copies are therefore indistinguishable from the genuine item, but are sold for less than half the price. These "over-runs", as they are called, are difficult to stop for the trademark owner.

There is no international trade association for the fashion clothing industry. Most luxury brand owners employ in-house anti-counterfeiting officers and are members of national pan-industry anti-counterfeiting associations, such as the *Comité Colbert* and the *Union des Fabricants*.

Sportswear

Whereas the 1980s was the decade of the French fashion houses with glamour and beauty salons, the 1990s has, if anything, been the decade of health and fitness. This has been promoted at all levels, including everything from healthy eating, fitness centres and hiking holidays. The sportswear industry recognised this trend early and has spent large amounts of money on marketing a "sporty" lifestyle for their clothes.

The inevitable drawback with the sportswear industry turning into a fashion industry is that it attracts counterfeiters. Statistics on seizures by the US customs in 1994 relating to IPR infringements shows that counterfeit sporting goods accounted for 10 per cent of all goods seized that year. However, the "sporting goods" category was not specified at all in the list of seizures for 1997, indicating that the amounts seized vary significantly from year to year.

Counterfeit sportswear is relatively easy to produce for a number of reasons. First, international trade in counterfeit clothing is relatively straightforward since the counterfeiter can import plain clothing and attach logos close to the point of sale. Another method that is becoming increasingly common, is to use grey-market channels. It is not uncommon for parallel traders to send genuine samples to the importer and mix the consignment with counterfeits.

Second, the sale of counterfeit sportswear is closely connected to large events. Concerts and championships or other major events normally attract organised counterfeiters who set up trade around the venues. The vendors are very mobile and carry small stocks, making police action ineffective. Police investigations in Europe have found evidence of international rackets specialising in selling fakes at large events.

Third, the main target customer for counterfeit sportswear are youngsters who are the most willing to buy fakes. A recent poll in the United Kingdom on public attitudes to counterfeiting showed that 40 per cent of consumers knowingly go shopping for fakes and of these, more than 50 per cent were between the ages of 15 to 24 (Anti-counterfeiting Group, 1997).

Large-scale counterfeiters of sportswear generally target only a few brands that are market leaders, such as Adidas and Nike. These companies have in-house facilities to deal with counterfeits. While there is no formal agreement within the industry to join forces in combating counterfeiting, there is significant informal information exchange between the various companies.

Perfumes

The perfume manufacturing market is characterised by a few large companies with strong brands at the top end of the price range and a large number of small cheap branded perfume manufacturers. The main costs for the top-of-the-range manufacturers include marketing and brand protection. This segment of the industry is dominated by French fashion houses, where the perfumes are not only a source of revenue, but are also considered important for marketing and brand positioning. Throughout the rest of the world, the American brands are popular targets for counterfeits, particularly Calvin Klein.

The distribution of perfumes is normally restricted to exclusive retailers and cause price stability. Counterfeiting is a well-advertised problem in this industry. Ninety per cent of fakes are sold on the

grey market through alternative channels such as street traders and smaller shops at bargain prices. Most consumers buying these fakes are aware that it is not the genuine item and that the product is of a lower quality. It is very common, however, for the trader to pretend that the goods are stolen in order to deceive the consumer about the quality.

There are generally three types of fake perfumes: those displaying a reasonable standard of fake packaging; look-alikes which are similar, but not identical; and cheap replicas claiming a false origin. The industry estimated their losses in 1996 at more than 5 per cent of annual turnover and spent on average 1 to 2 per cent of their annual turnover in combating the illicit trade (Comité Colbert, 1997).

According to a 1995 survey by the French Institute of Industrial Statistics (*Service des Statistiques Industrielles*, SESSI), more than 80 per cent of French perfume companies have experienced problems with counterfeiting. The same survey indicates that seven out of ten counterfeit luxury goods are of French products (Service des Statistiques Industrielles, 1996).

The French Federation of Perfume Manufacturers is the main industry representative. This organisation assists members in investigating fakes, lobbies the French government for adequate intellectual property protection and works as an information source for the industry.

Toys

The toy industry can be divided into two segments, traditional toys and electronic toys, the latter being the fastest increasing segment. The industry for traditional toys is dominated by a few large manufacturers who also act as distributors. Counterfeiting of toys is slightly different from "normal" trademark infringement. It often happens that the design of the product is copied and sold under a similar, but not identical, trademark. This is harder to combat for the trademark owners, especially in Asia where design protection is not as strong as trademark protection.

Counterfeiting of toys, either through illegal copying or the production of near copies, is of increasing concern for the industry. Not only does it cause financial losses, more importantly it involves serious health and safety risks to small children. It is estimated that counterfeit toys account for 12 per cent of the European toy market. The main problem area for the toy industry is China. Most toy manufacturers have located their production in a few regions in China. These regions are now sources for genuine products as well as for counterfeit toys. Another country of concern is Turkey, where there is less production of genuine toys and more of counterfeits.

Toy Industries of Europe (TIE) was founded in 1990 to promote the interests of the European toy industry to the European institutions. TIE works mainly as a lobby group and has taken an active part in refining the intellectual property laws within the European Union.

Electronic toys, particularly computer games, are one of the fastest growing segments in the toy industry. The main manufacturers of these games are based in South-East Asia and the United States, and this segment overlaps the computer industry and the traditional toy industry. The computer industry estimates that counterfeiting in Hong Kong (China)'s game sector alone is costing the industry US$90 million in lost revenue per year. The manufacturing itself is believed to be carried out in China, the CDs are then smuggled into Hong Kong (China) and slipped into pre-printed sleeves in the shops. CDs are extraordinarily easy to smuggle due to their size and adaptability.

Nintendo, the largest producer of video game products, claims that China, Chinese Taipei and Hong Kong (China) are the largest sources of counterfeit video games in the world. Trade in pirated software is said to be carried out through cartels with connections in all three countries and the United States. The operations of these cartels cost some US$800 million in losses to the US market for Nintendo in 1996 (Reuters News Service, 1990-97).

Aircraft components

Although very stringent controls exist for the supply of spare aircraft parts, there have been a number of incidents of aeroplane crashes caused by fake components.

Components for aircraft, such as washers, bolts, nuts and screws, are made by a large number of small companies. The supply chain is, in theory, controlled strictly by Defence Departments as well as by non-governmental trade associations but, in practice, there have been a number of incidents where counterfeit components have found their way into the supply chain. This has the potential to cause huge problems since thousands of parts are used on each aircraft and it takes only one fake component to lead to a disaster.

The Far East is commonly pinpointed by the US aviation industry as the problem area. In fact, cases and seizures indicate that the United States has had more reported incidents on domestically produced counterfeit aircraft parts than imports from any other region (Jackson, 1994).

Industry experts believe that up to 10 per cent of spare parts in the US are Suspected Unapproved Parts (SUPs). This includes parts that are either counterfeit, stolen or, as in the majority of cases, lack the right paperwork. The US Department of Transport has estimated that there could be up to US$1 billion worth of "unapproved parts" in the warehouses of US airlines and parts distributors. The bogus spares industry is believed to attract criminals because of its high profits and low risk. Whilst a genuine nut is costly to produce and may sell for US$400, a counterfeit can be manufactured for a fraction of the amount and sold on the black market for a high profit. The black market for aircraft parts in the United States is virtually unregulated and includes more than 5 000 brokers (Jackson, 1994).

In 1990, the Department of Transport launched an investigation into SUPs. The agents were authorised to investigate airlines, suppliers, manufacturers, brokers, FAA Approved Repair Stations, and the FAA itself. In the year before "prioritisation" only nine SUPs were reported throughout the United States. In 1991, that figure increased to 52 and the following year it soared to 362, followed in 1994 by 411 SUP reports, each of them potentially dangerous. In 1995 the figure came to 317, and within the first half of 1996 the total exceeded 220 (*Automotive News*, 1997).

The FBI has identified four basic fraud schemes involving SUPs (*Automotive News*, 1997):

- ◊ Affixing a yellow FAA airworthiness tag, which certifies a part has been rebuilt or overhauled, to a used part on which no work has been done.
- ◊ Making a part based on manufacturer specifications but with inferior material, so it resembles the genuine item without meeting flight specifications or having been tested.
- ◊ Buying, then reselling, production over-runs from part makers that supply major aircraft manufacturers. Such parts may be airworthy, but they can also be factory rejects.

- ◊ Obtaining parts that are fatigued, worn or damaged to the point of being unworkable and selling them as refurbished.

Spare parts and car accessories

Many motor companies have only recently started to discuss the problems of large-scale counterfeiting and then only in relation to unauthorised spare parts. Unauthorised spare parts include:

- ◊ Over-runs by authorised suppliers, including non-branded genuine parts that are sold directly from the supplier to the dealer without the consent of the brand owner.
- ◊ Counterfeit parts – including trademark-infringing spare parts and accessories.
- ◊ Grey-market imports – including genuine parts that have been diverted from one market to another without the consent of the brand owner.
- ◊ Copy parts by independent suppliers. It is legitimate to sell these if they are of matching quality, do not bear an infringing trademark and the consumer is notified that the part is unauthorised.

Various products have been subject to counterfeiting, such as car mats, wheel trims, lamps, mud flaps and electrical parts. In general, counterfeiters target short-duration products, standard parts that are sold off-the-shelf and can be fitted to different models and parts with low per-unit costs since they are less likely to carry any security device.

The motor industry estimates that it loses US$12 billion from sales in unauthorised parts, including counterfeits, of which the United States accounts for US$3 billion and Europe for the largest share of the remaining US$9 billion (*Automotive Marketing*, 1998). (It should be noted that this estimate has remained the same since 1993.) General Motors believes that the company and its suppliers lose some US$1.2 billion annually from lost sales to counterfeit parts. In France, Peugeot claims to lose FF 400 million, and Renault estimates losses of between FF 600 and 900 million per annum.

The main production areas have been named as Italy, Spain and Portugal in Europe, and Turkey, Chinese Taipei, Singapore and Iran.

The industry has no formal organisation devoted to combating counterfeiting. Ford in Germany and the United Kingdom, General Motors in the United States and Peugeot-Renault in France are very active and have in-house anti-counterfeiting programmes. Some of the other motor manufacturers are looking into solutions.

Pharmaceuticals

Counterfeit pharmaceuticals have far-reaching public health implications and have therefore attracted considerable concern from public bodies, in particular from the World Health Organisation (WHO).

Counterfeit medical products are defined by the WHO as ones that are "deliberately and fraudulently mislabelled with respect to identity and/or source" (WHO/IFPMA, 1992). The products

may include correct ingredients in incorrect quantities or composed according to a wrong formula, non-active substances all together, toxic substance, or correct content but in fake packaging.

Mainly affected are the developing countries with weak drug regulatory control and enforcement. The problem is further exacerbated by a number of other factors: scarcity and/or erratic supply of basic medicines, uncontrolled distribution chains, large price differentials between genuine and counterfeit medicines, lack of effective intellectual property right protection, lack of regard for quality assurance and corruption in the health-care system.

In general, most developing countries have a local production of generic drugs that infringe on patents owned by international pharmaceutical companies simply because intellectual property protection is not available for pharmaceuticals in these countries. Italy, the Lebanon, India, Pakistan, Argentina, Mexico and Brazil have, furthermore, been pointed out as sources of counterfeit drugs distributed internationally.

Counterfeiting of drugs has only been reported since the beginning of the 1980s and gained press coverage only in this decade. The WHO has a team devoted to improving protection in the developing world and intelligence gathering. However, companies are reluctant to release information on incidences of counterfeiting of their products for fear of undermining sales of, and confidence in, their legitimate products.

The main industry action in this field is the Pharmaceutical Security Initiative (PSI). It was created in 1996 and operates from Rome.

Estimating the financial impact of counterfeit pharmaceuticals is very difficult. The total losses for the legitimate chemical and pharmaceutical industry have been estimated in excess of US$17 billion (Jayasuriya, 1997). Developing countries account for the largest shares, with up to 60 per cent of all medicine sold in some African countries being fake. In Nigeria, for example, only a quarter of some 500 samples purchased from street vendors appeared to be genuine (WHO/IFPMA, 1992).

Some examples of counterfeit medicines found in EU Member States include Selokeen and Losec (Astra), Zantac (Glaxo) and Fansidar (Welcome). In the case of Zantac, the trail ran from raw material to drugs on the shelf through at least four countries. The raw material came from Turkey, the product was manufactured in Greece and then went through a Swiss broker to a Dutch importer. The more complex the path through the supply chain, the easier it is for a counterfeit product to enter the system.

3. GEOGRAPHICAL SPREAD OF COUNTERFEIT PRODUCTS

The European Commission surveyed seizures by European Union Customs Authorities between July 1995 and June 1997. Of 4 133 cases reported, the vast majority of products arrived from Poland (740) and Thailand (724). Turkey and the United States were also very common sources, with 497 and 438 seizures. Most cases reported from Spain involved products arriving from the United States. In Germany, most cases involved, not surprisingly, products arriving from Poland, Turkey and the Czech Republic (EC, 1998).

Table 5. **Origins of counterfeits seized by EU customs services**
July 1995 to June 1997

Country	Percentage share
Poland	17.9
Thailand	17.5
Turkey	12.0
United States	10.5
Hong Kong (China)	5.8
China	4.7
Czech Republic	3.6
Korea	2.3
Indonesia	1.2
Chinese Taipei	1.1
Total	**100.0**

Source: Report from the European Commission, Document 98/0018 (ACG), 28 January 1998.

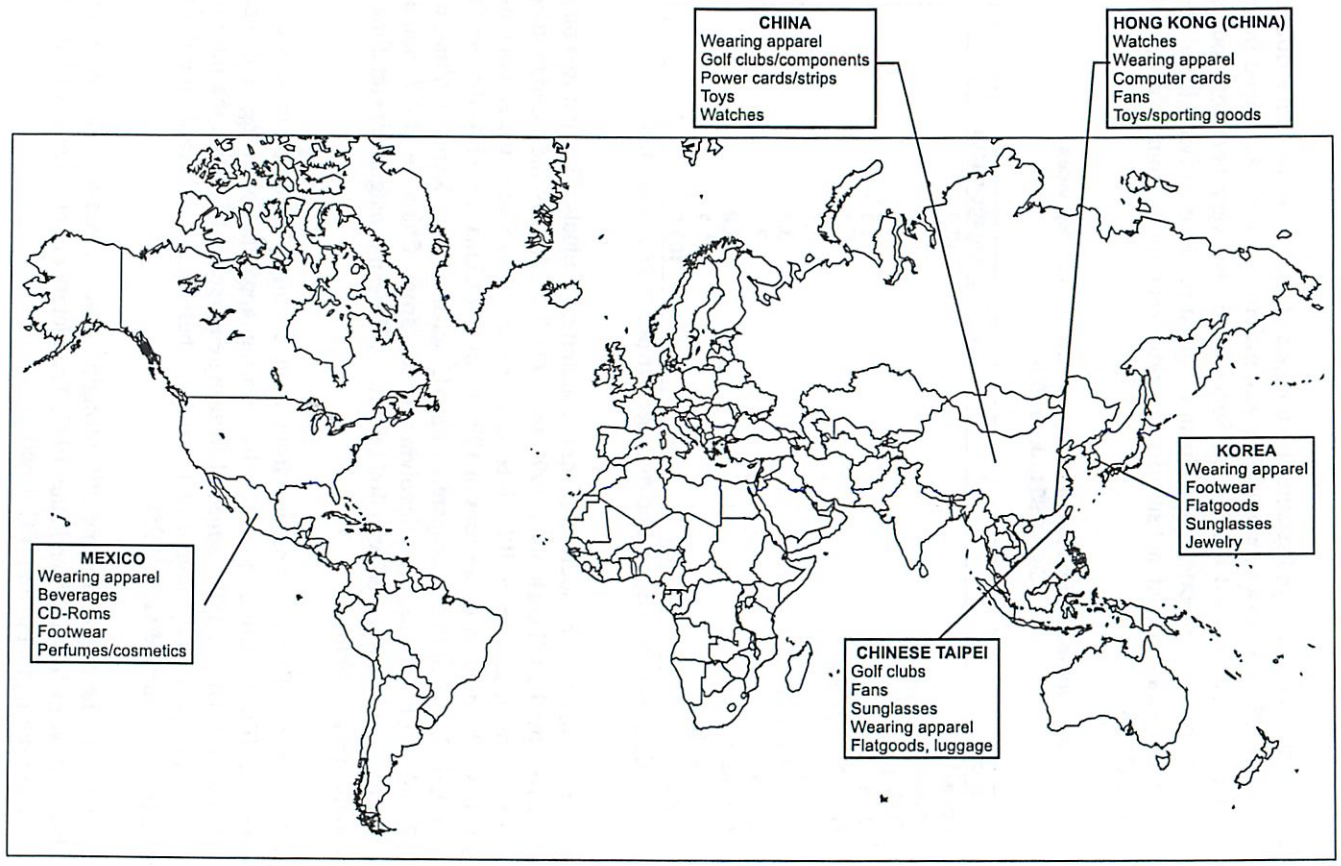
The following maps indicate the sources of some counterfeit products. The first two maps show counterfeit goods seized by the US customs in 1996 and 1997 from the five most common countries of origin. China was the main supplier of IPR violating merchandise by value, and Korea ranked first by number of seizures. The number of seizures in 1996 involving China was only 105 but the value amounted to more than US$5 million, compared with 645 seizures from Korea totalling the same value. The total value of 250 seizures involving goods from China in 1997 amounted to US$14.5 million, which can be compared with 460 seizures of Korean consignments totalling US$3.6 million (US Customs Service, 1998).

The maps list the top five commodities from each country. Overall, media was the top commodity seized for IPR violation, followed by wearing apparel. Following a campaign by Underwriters Laboratories (UL) in 1997, aimed at focusing enforcement towards the interception of lighting and power supplies bearing fraudulent UL marks, these products became the third largest commodity seized (US Customs Service, 1998).

The third map shows the origin of some IPR-infringing goods seized by customs authorities of the European Union between July 1995 and June 1997. The picture is not exhaustive but includes a few significant seizures during that period (EC, 1998).

Map 1. **Geographical origin of some IPR-infringing goods seized by US customs in 1996**

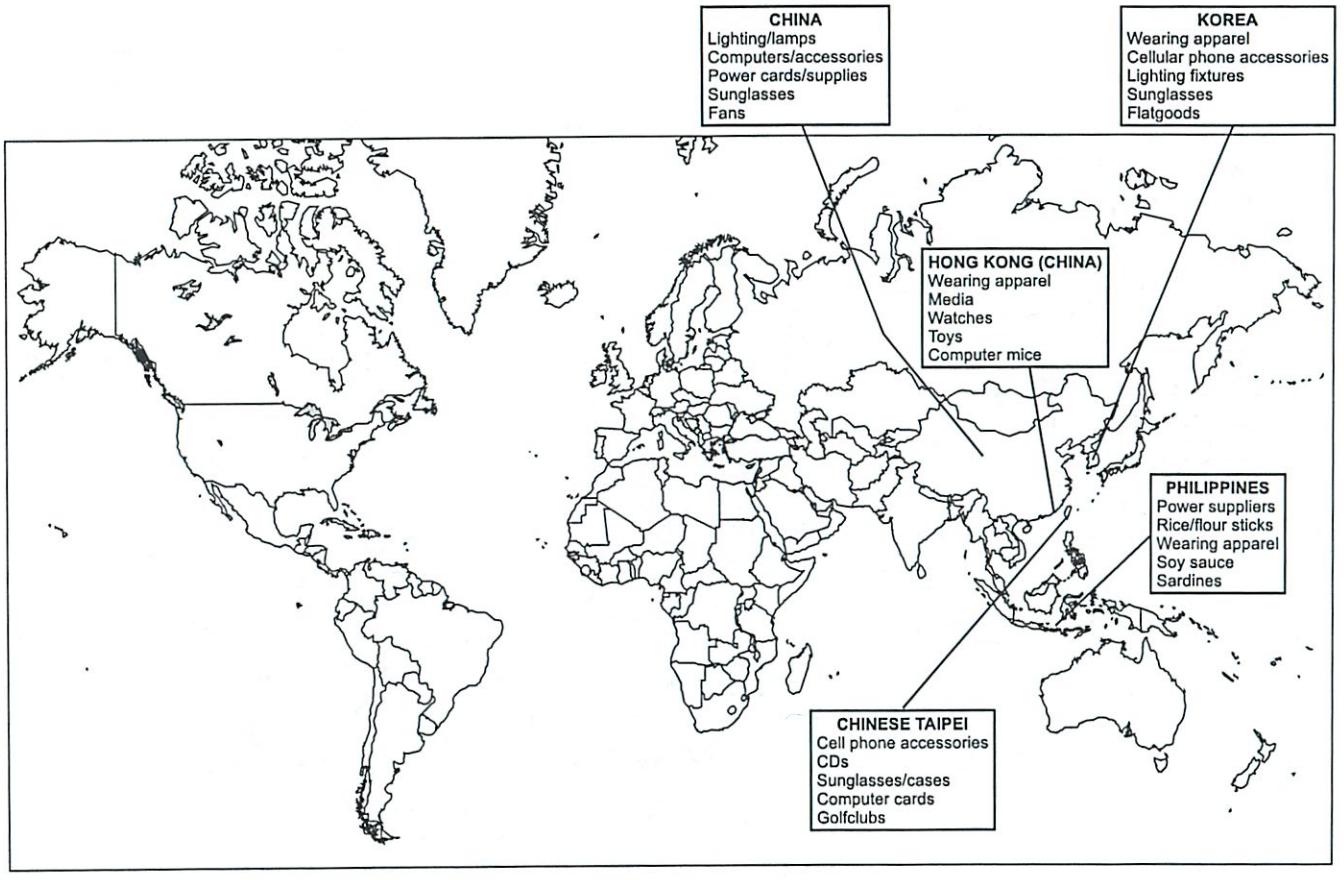
Top 5 products from top 5 countries



Source: United States Customs Service, 10 February 1998.

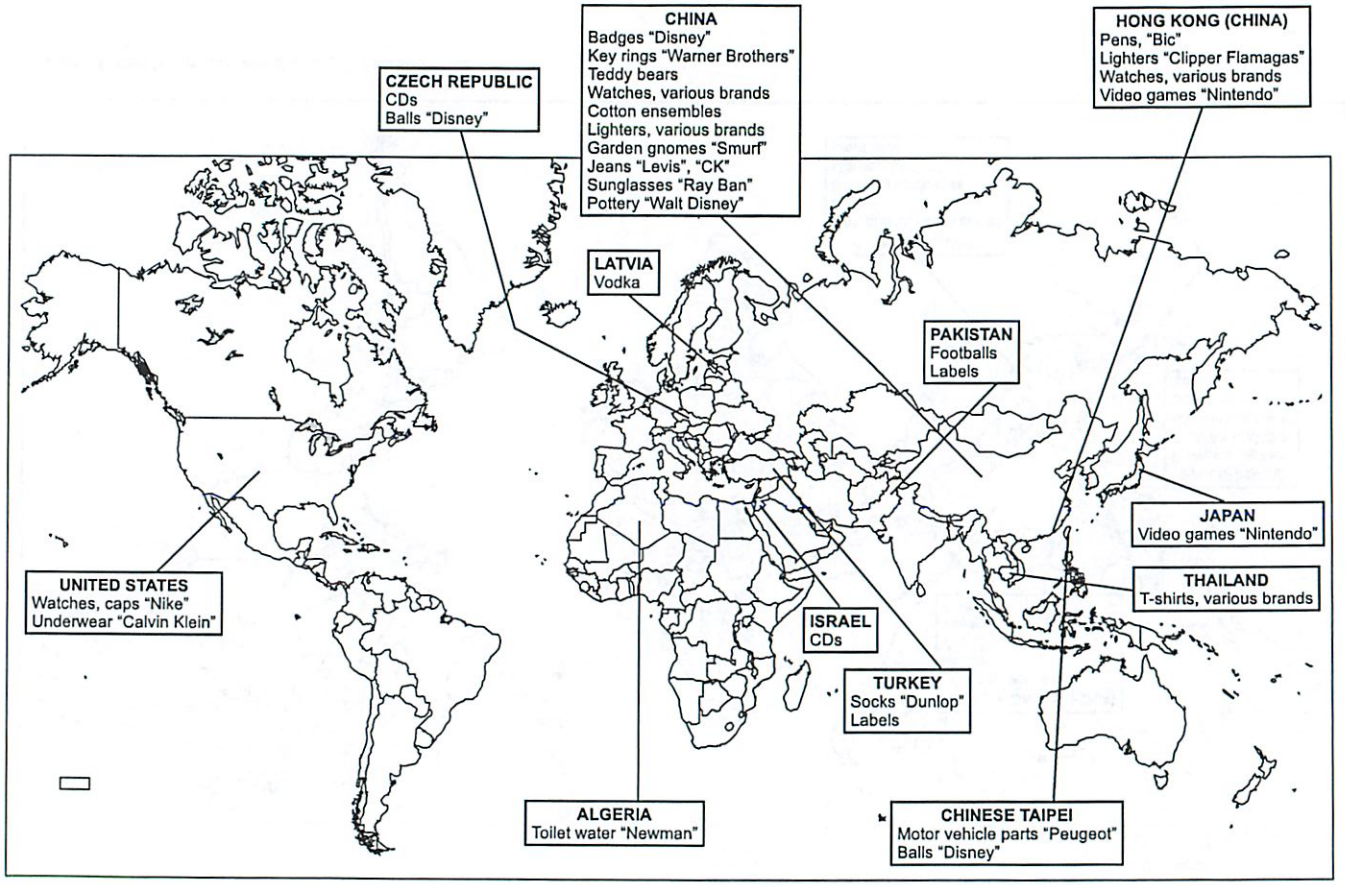
Map 2. **Geographical origin of some IPR-infringing goods seized by US customs in 1997**

Top 5 products from top 5 countries



Source: United States Customs Service, 10 February 1998.

Map 3. **Geographical origin of some IPR-infringing goods seized by EU customs, July 95-June 97**



Source: European Commission, 28 January 1998.

4. THE IMPACT OF COUNTERFEITING

The costs

Costs to the right holder

Industry world-wide loses billions of dollars every year to counterfeiters. These costs impact on victim countries in a number of different ways. First of all, industries which find themselves in direct competition with counterfeiters suffer a *direct loss in sales*. Indeed, some markets are even dominated by counterfeiters, creating barriers of entry for the producers of the genuine product. Some would argue that the buyers of the fakes would not have bought the genuine item but that is a very narrow argument and can only apply to a small segment of luxury goods. Many counterfeit products today are of higher quality and compete directly with the genuine items.

In addition, consumers who are deceived into believing that they bought a genuine article when it was in fact a fake, blame the manufacturer of the genuine product when it fails, creating a *loss of goodwill*. Even cheaper and obvious copies that are bought in good faith represent a serious threat to the company that wants its brands associated with quality and exclusivity.

Thirdly, beside direct losses of sales and goodwill, one should not forget the expenditure involved in *protecting and enforcing* intellectual property rights. The right owner becomes involved in costly investigations and litigation when combating counterfeiters and may also have to spend further sums on product protection. The budget for anti-counterfeiting is rarely well defined within an organisation, but spans across several departments such as marketing, human resources, product development and legal departments.

Costs to countries where counterfeiting takes place

Such countries suffer both tangible and intangible *losses*. First, foreign producers of reputable products become reluctant to manufacture their products in countries where counterfeiting is rife as they cannot rely on the enforcement of their intellectual property rights. Hence, such countries not only *lose direct foreign investment* but also *miss out on foreign know-how*.

Second, if many products from such countries, including genuine ones, gain a reputation of being of poor quality, this will cause export losses which in turn implies both *job losses* and *loss of foreign exchange*. It could be argued that the counterfeiting industry creates jobs but these jobs are often poorly paid, often involve substandard working conditions and sometimes use child labour.

Third, the foundation for new business development in a country is the existence of a legal system to protect the rights of the entrepreneur and to promote fair competition. The prevalence of

counterfeiters in a market *discourages inventiveness* in that country since it deters honest producers from investing resources in new products and market development.

A further direct loss for the government of countries that become havens for counterfeiters, are *tax losses*, since the counterfeits are normally sold through clandestine channels and counterfeiters are not generally keen to pay tax on their ill-gotten gains. Fiscal losses are increasingly shown to justify action by enforcement officials.

Costs to countries where counterfeits are sold

Countries promoting tougher enforcement of intellectual property rights in the world have a strong case for doing so. The economic costs of counterfeiting for such "victim" countries include *job losses, missed sales opportunities and lost tax revenues*.

In the long run counterfeiting *discourages investment in product development* since a company will not get all the benefit from its investment. The governments of countries where counterfeits are sold will also have to expend increasing amounts of money in funding police and other *investigation and enforcement* operations. Furthermore, the *judicial authorities*, including the courts and prison service, need to spend additional time and money in sentencing and dealing with counterfeiters.

Social costs

Ultimately, it is the consumer who pays the cost of unfair competition. Although many consumers believe they are getting a bargain when they buy counterfeits, the actual value of the product is normally much lower. Hence, they end up *paying an excessive price for an inferior product*.

The *inferior quality of many counterfeits*, particularly those relating to *health and safety*, have had disastrous effects. It is no longer rare to find counterfeit parts in aircraft and other vehicles causing death and injuries, or counterfeit pharmaceuticals in hospitals. Workers in factories where counterfeits are produced are frequently *exploited.* They often work in a poor working environment and are repeatedly exposed to health and safety risks. In addition, they are generally poorly paid.

Counterfeiting has attracted both organised and petty criminals who have not only derived huge profits from this trade but have also used it, both as a means to invest the proceeds of crime and to *finance other crimes*.

Estimating the problem

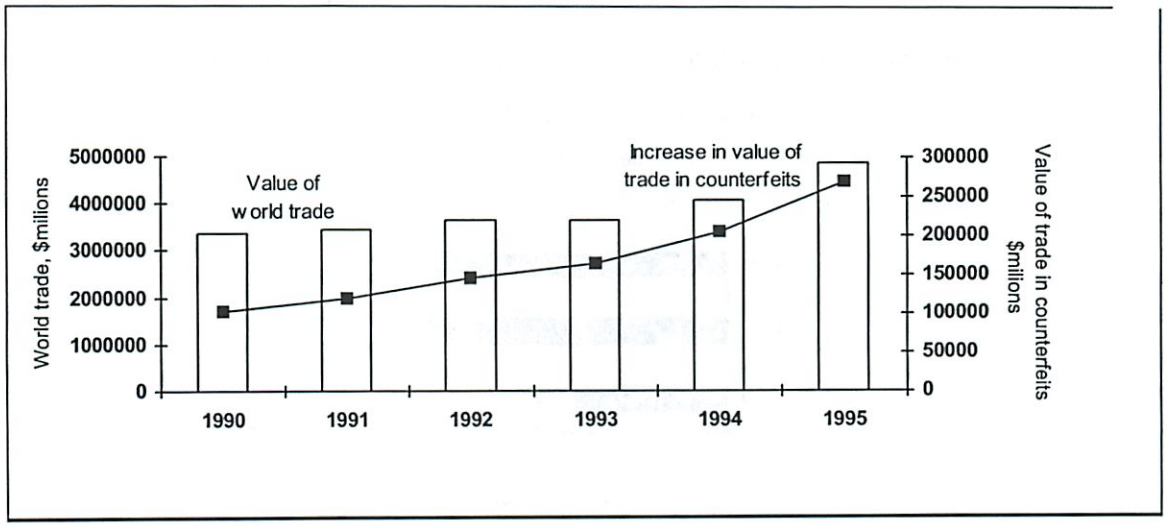
Aggregated losses

Counterfeiting is a severe problem and the common perception is that it is increasing. However, it is virtually impossible to find accurate statistics to substantiate these perceptions, not least because of the clandestine nature of the activity. The overall costs of counterfeiting in the world today are normally estimated to be 5-7 per cent of world trade. There is no substantial aggregated data to support the high percentages, but the figures are now accepted and used to illustrate the extent of the counterfeiting problem.

In 1997, the Counterfeiting Intelligence Bureau (CIB) of the International Chamber of Commerce (ICC) calculated the nominal value of the estimated share of counterfeit goods as a percentage of world trade (ICC Counterfeiting Intelligence Bureau, 1997). They used aggregated data on total world trade provided by the World Trade Organisation and took the general assumption that counterfeiting has increased from 3 per cent in 1990 to more than 5 per cent in 1995, giving an annual average of 0.5 per cent.

With world merchandise export levels of nearly US$5 000 billion in 1995, 5 per cent would represent approximately US$250 billion for that year (WTO, 1996). In 1990, world trade was worth almost US$3 400 billion, and the value of counterfeit goods was assumed to be around 3 per cent of world trade, which gives losses of approximately US$100 million per annum. This implies that, while world trade increased by about 47 per cent during the five-year period 1990-95, the value of trade in counterfeit goods increased by more than 150 per cent over the same period.

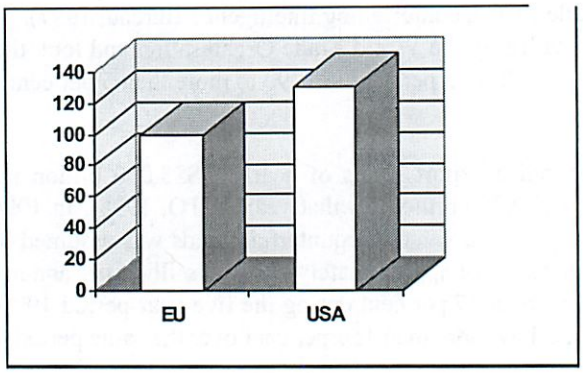
Figure 1. **Increase in value of counterfeiting as a percentage of world trade**



Source: Compiled by the Counterfeiting Intelligence Bureau of the ICC, world trade figures provided by the WTO.

Direct losses in sales are sometimes referred to in terms of job losses, which is actually just another way of saying the same thing. The numbers are derived by taking the loss of sales of a sector or a company due to counterfeiting, and calculating the number of additional people that could have been employed with that revenue. Estimates in the United States and Europe imply that more than 200 000 jobs are lost due to counterfeiting in these two regions alone.

Figure 2. **Job losses due to counterfeiting**

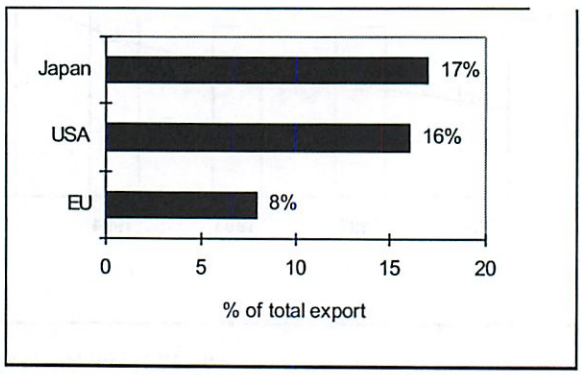


Source: European Commission, US International Trade Commission, 1996.

Attempts have also been made to estimate the losses in terms of loss of exports.

Figure 3. **Loss of exports due to counterfeiting**

As a percentage of total exports



Source: La Tribune des Fossés, 16 February 1995.

Some factors behind the rapid increase in counterfeiting

While counterfeiting existed prior to industrial revolution, large-scale counterfeiting is a post-industrial phenomenon and the modern wave of international trade in counterfeits originated in the mid-1960s. A number of factors can be attributed to the rapid increase experienced during the last few decades:

Advances in technology

New technology has not only benefited manufacturers of genuine products, but also counterfeiters. The photocopying machine is, for example, considered to be one of the main tools in a counterfeiter's tool box. New techniques have furthermore enabled counterfeiting of what were

normally considered as "high-tech" products, too complicated to fake. Pharmaceuticals, electronic components and rescue equipment are some examples. The counterfeiter can demand a higher price for his low-cost products since these products have a high value-added element.

Increased international trade

International trade, including trade in counterfeit products, has increased dramatically over the last few decades. Virtually all regions are both production and consumption areas for counterfeit products. Although an expansion of border measures would enhance the means of combating international trade in counterfeit goods, it is unlikely to produce significant results unless matched by a corresponding increase in the resources available to customs authorities to devote to anti-counterfeiting work. It is noteworthy that, despite inspecting only 3 per cent of shipments, US Customs confiscated more than US$37 million of counterfeit goods in 1994 alone (US Customs Service, 1997).

In view of the world-wide growth of regional economic integration (*e.g.* the European Union and the North American Free Trade Agreement), the effects of any expansion in border measures to combat counterfeiting have been offset by a more general trend in favour of dismantling border controls to ease the flow of international trade.

Emerging markets

A number of economies that were previously controlled are now being transformed into free market economies. Unfortunately, the speed of transformation has been somewhat too fast for the enforcement agencies, particularly in Eastern Europe and the former Soviet Union. These markets are now emerging as both large producers and consumers of fakes.

Although counterfeiting occurs more or less throughout the world, East Asia, including China, is still pinpointed as the main source of fakes. This region has increased its relative share in world trade, implying increased exports of counterfeits along with genuine products.

Emerging products

The share of semi-manufactured and manufactured products have increased world trade at the expense of trade in raw materials. Manufacturing now accounts for 75 per cent of total world exports. Processed, high value-added goods are naturally also more likely to be counterfeited. Electronic products, such as software and music recordings, are not included in world trade figures. These are rapidly becoming the products most affected by counterfeiting.

It is difficult to predict whether counterfeiting will decrease or increase in the foreseeable future. On the one hand, technological development is enabling counterfeiters to produce fakes relatively cheaply and easily. The distribution of fakes is becoming increasingly sophisticated through international networks and the range of products targeted has widened, increasing the total market for fakes. On the other hand, there is a greater awareness among enforcement agencies and the public about the health and safety risks of fakes, intellectual property protection has been improved throughout the world and companies are able to protect their products with increasingly sophisticated anti-counterfeiting technologies

Difficulties in measuring the market for fakes

Whereas the arguments support the general perception of an increase in counterfeiting activity, they cannot really be empirically tested. Estimates are difficult, mainly due to the following two difficulties:

- ◊ *Measuring production.* Counterfeiting is a clandestine activity and fakes are produced, distributed and sold outside the recorded market. Virtually no counterfeiters register their operations or pay tax. Therefore, the production of fakes cannot be quantified.
- ◊ *Measuring sales.* The losses to producers of genuine items cannot be quantified by subtracting the number of items sold from the total number of units that could be absorbed by the market, *i.e.* the total market size. The market for genuine products and that for counterfeits should be treated as two separate markets, where the tools to measure the former will not necessarily apply to the latter.

Other aspects

There have been very few attempts to discuss the economic aspects of counterfeiting for the following indirect reasons:

- ◊ Traditionally, the people involved in this field have been lawyers, marketing personnel or security officers who are practitioners and not always interested in the economic aspects of counterfeiting or aggregated statistics.
- ◊ Many of the anti-counterfeiting organisations are lobby groups and have an incentive to present exaggerated figures that may bias the true picture.
- ◊ This is inevitably a grey area and a true calculation of the total effects of counterfeiting should not only include the costs but also the benefits. However odd it might sound, counterfeiting does contribute to some extent to the overall economy of the country where it takes place.

Private estimates

Is there a role model?

The International Intellectual Property Alliance (IIPA) compiled detailed piracy figures for its members and an account of piracy losses and piracy levels (International Intellectual Property Alliance, 1996).

These calculations use such information as legitimate sales of copyright protected products, sales of hardware (*e.g.* VCRs and PCs), and the estimated sales of unauthorised products. They do not indicate how the unauthorised sales are estimated, only that the information is gathered through staff, representatives and agents world-wide. Piracy losses are only related to the US-based copyright industry and the losses are included in the country of manufacture rather than in the country of ultimate sale.

Piracy levels refer to the share of a country's market that consists of pirate sales. A piracy level of 33 per cent means that more than three in every ten copies used are illegitimate. Piracy levels are believed to provide a more accurate figure of the scope of piracy in a given country than do absolute losses. A country with a high degree of enforcement will have a lower piracy level but may show high losses due to the large size of market and vice versa.

Estimating software piracy

The software industry has become well-known for its accurate figures on piracy losses. Their calculations are normally based on the sale of hardware and an assumption that each computer will, on average, use at least three software packages.

The Business Software Alliance commissioned Price Waterhouse to survey the *Contribution of the Packaged Business Software Industry to the European Economies* (Business Software Alliance, 1994). The report estimates the costs of piracy in terms of losses in employment and fiscal contribution in Western Europe. The estimations are based on the size of the total market for business software in Western Europe, the market share of BSA members and growth estimations.

Employment figures for the packaged business software sector were calculated by assuming a gross margin on retail distribution and other related activities, assuming furthermore that a percentage of this gross margin represents the costs of employment, calculating the gross wage from these assumptions and dividing it by an estimated average gross earning in the distribution sector.

The number of jobs that could be created is derived by assuming that income from employment represents about 45 per cent of total final expenditure; dividing this figure by the number of employees gives the average gross earnings. The total sales of the business software industry are then multiplied by 45 per cent to obtain the income from direct employment generated by these sales, and divided by the average gross earnings to get the number of jobs generated by the sales.

The tax contribution from the business software industry to the governments of Europe were estimated by adding corporate taxes paid by the relevant companies, VAT receipts from their sales, personal taxes and contributions to social security paid by the number of people that could be employed in the absence of piracy.

The average level of illegal copying of packaged business applications software is arrived at by comparing industry data on actual software sales to hardware sales. This produces a ratio of applications packages sold per personal computer. The industry assumes that between 3.0 and 3.6 software application packages are used per PC in each country. By comparing the ratio of sold applications with the assumed average, BSA can estimate the piracy level in a specific country. The losses from piracy are simply calculated by multiplying the average price of a software package with the difference between sales of software packages and software in use.

The job losses are derived from the number of jobs that could have been generated according to the model described above. This is the most detailed model that has been presented to calculate piracy losses. However, there are a number of drawbacks in the model which makes it difficult to accept:

- ◊ it is based on a very general assumption of the number of applications that are used with each piece of hardware;

- ◊ it is static and does not take into account the dynamics of the market;
- ◊ it is likely to exaggerate the losses since the market segment for genuine software is not necessarily identical to that for illegal copies in terms of consumers' willingness to pay, etc.;
- ◊ it attributes all losses in sales to counterfeiting, although a significant share may be unauthorised imports from other countries and nevertheless genuine;
- ◊ the number of jobs generated is unlikely to be in direct proportion to sales.

However, the estimations by the software industry are very typical for most copyright-protected industry, including the music and motion picture industries.

5. PROTECTION AGAINST COUNTERFEITING

With counterfeiting soaring to US$250 billion per annum, more and more companies are taking a proactive role in preventing their products from being counterfeited. It would be unrealistic to expect any measures to eliminate counterfeiting forever, but the aim should be to make it unattractive for the fraudsters to target the company's products.

Safeguards against counterfeiting within private organisations have three main ingredients: anti-counterfeiting policy, technologies and legal enforcement.

Anti-counterfeiting policy

Most companies that market their products internationally have experienced some problems with counterfeiting. Yet, for many, it is only during the last few years that they have formulated any systematic anti-counterfeiting policy. Strategies are now discussed in wider groups and most conferences on product counterfeiting will have at least one company sharing its experiences of combating counterfeiting. Anti-counterfeiting work is regarded as goodwill raising, and more and more companies are seeing the advantages of publicising their efforts. It is not only the most heavily counterfeited industries, such as software and music, but also companies from the wine and spirits and motor industries that participate at these conferences.

Due diligence

The concept of due diligence is most developed in the finance sector in the preparation of financial documents. It involves taking steps to ensure, as far as is reasonable, that if challenged, it can be proved that all due care was in fact taken. It goes beyond the duty of care into strict regulatory mechanisms involving not only the basic care theme but also a series of well-defined procedures and tests (ICC International Maritime Bureau, 1994).

An obligation for manufacturers to exercise due diligence can be seen as a legal tool for regulators and enforcement agencies to ensure proper procedures of affirmative care have been taken. This is particularly important where counterfeits can cause injuries and health hazards, such as pharmaceuticals, spirits and motor parts, etc. Here, due diligence not only provides a shield for liability, but also protection against loss of reputation and adverse public opinion.

The series of procedures that form the basis of due diligence are in fact proactive measures implemented to reduce the negative effects of counterfeiting. These measures reduce the risk of counterfeiting in the first instance, as well as enabling the company to react much faster should it occur. Procedures such as training, internal control and adherence to accepted codes of practice are likely to have commercial benefits. In order to implement a due diligence strategy, an organisation

must comprehend almost every risk-related function that it faces and implement response procedures accordingly. The concept, therefore, enters into the realm of risk management.

Proper labelling, overt anti-counterfeiting technologies and training in recognising counterfeits would, for example, significantly assist officials enforcing the intellectual property rights of the trademark owners. It is a well-known fact that customs authorities fail to seize large amounts of counterfeits either because they do not know how to recognise the fakes, or because the process of gathering statements from trademark owners is too time-consuming.

In conclusion, there are a number of factors supporting the introduction of due diligence in the field of anti-counterfeiting:

- ◊ Only the manufacturer of the genuine product knows whether an item is fake or genuine. Therefore, it makes sense that manufacturers should be obliged to assist in identifying copies of their products.
- ◊ The financial burden is shifted to the right holder, who is usually the financially stronger party compared with enforcement agencies. Many companies are already financing training and the setting up of data bases for enforcement agencies.
- ◊ The diversity of products targeted by counterfeiters will require a more proactive approach from the industry groups in order to obtain protection for their specific products. For the moment, virtually all goods seized by customs in the United Kingdom are clothing and encompass a limited number of the most well-known brands.
- ◊ Increased competition in the market for genuine goods makes it necessary for the company to maintain consumer confidence. Too many competing substitutes are ready to replace the market leader as soon as consumers lose confidence in that brand.

Anti-counterfeiting technologies

Overview

Technologies are increasingly employed to protect and authenticate products. In the past, this field was somewhat neglected partly because of the limited availability of suitable technologies as well as the perception that the implementation of the technologies would not be cost-effective. However, this trend has changed with more victims of counterfeiting becoming aware of the potential that technological solutions hold out and the falling costs of implementing these.

The overriding requirement of any anti-counterfeiting system is to change the risk-return profile for the counterfeiters – raising the risk and thereby minimising the return. The counterfeiter will carry out some form of direct or indirect cost-benefit analysis before embarking on criminal enterprises. The total cost of crime for a counterfeiter includes, beside the direct costs of producing and distributing the fakes, an indirect risk factor. The risk factor weighs the risk of being caught, the probability of being convicted, and the severity of any penalties likely to be imposed. The risk varies considerably across countries.

It is impossible, however, to fully protect products from being counterfeited for "what one man can make, another can copy". Indeed one only has to look at the counterfeiting problem in the banknote field, where numerous sophisticated security features are incorporated and which has

historically been plagued by counterfeiting, to see that total protection is an impossibility. Despite this, few people would nowadays argue against the fact that the use of anti-counterfeiting technologies can significantly reduce the risk of counterfeiting. The problem is more to identify the best solution for the company's particular problem.

In general, the technology has to be cost-effective, compatible with the distribution of the product, consumer-friendly, resistant and durable. For the most part it is only possible to build in security that will frustrate the counterfeiter for a period of time. Effective product protection can only generally be achieved by using a combination of different product-protection devices.

The various technologies available today vary considerably in the degree of sophistication and in the principles on which the protection against counterfeiting is based. They range from simple cost-effective printing technologies through optical technology, biotechnology, chemical and electronic fields. The nature of the product, and the type of counterfeit risks will determine the most appropriate technology.

It is common nowadays to have a system of solutions that comprise a combination of covert and overt technologies. Besides its primary use as a means of protection, the overt (or easily visible) device also serves to indicate the product's authenticity to consumers and distribution staff. The covert (or secret) device, on the other hand, needs to be carefully guarded and only disclosed to certain individuals charged with product protection since it serves as a back-up security device in the event that the overt feature is compromised and provides a means of protecting the integrity of the distribution chain.

The available technologies can broadly be categorised as follows.

Optical technologies

Some of the leading anti-counterfeiting technologies are found in the optical field and involve the use of light and its many properties. Among the optical technologies, holograms have become widely used as a means of product protection. A hologram is a recording of laser light which allows a two- or three-dimensional image to be recorded on a flat surface as a micro-relief diffraction pattern. The use of holograms as security devices has been successful for a number of reasons. They have a strong visual appeal, coupled with the difficulty and high investment necessary to replicate them. There is a large range of other optically variable anti-counterfeiting devices, including optically variable thin films, retro-reflective material and scrambled images.

Electronics

The electronic anti-counterfeiting technologies encompass a range of different options. Magnetic stripes are the leading security technology used to protect bank and credit cards. They are able to store a considerable amount of information in coded form in magnetisable particles which can be read by a contact scanner.

Smart cards incorporate another electronic technology that is rapidly developing and receiving growing acceptance as an anti-counterfeiting device. A smart card is a plastic card incorporating a computer chip which provides the means to write into or read information from the card with various degrees of security. Phone cards in some countries and credit cards are good examples of "smart"

technology. One of the long-term developments is for a super smart card which will contain a user interface for entering data on a keypad as well as a visual display.

The video, recording and software industries have devoted a good deal of research to finding ways of defeating counterfeiters electronically, and continue to do so. The systems developed generally involve electronic encryption that encodes original videos with a disturbance signal to confuse videocassette recorders during copying. The effect is to render any copies produced poor-quality and generally unviewable.

Another electronic anti-counterfeiting system involves using a hardware key to prevent software piracy. This is an add-on security device that attaches to the serial port of a computer or a parallel printer and "unlocks" software products designed to function only with the key.

Biotechnology

Breakthroughs in biotechnology have improved the understanding of the unique characteristics of biological proteins such as antibodies, enzymes and DNA. The identification of certain chemical structures and their capabilities to bring about specific reactions, has made biotechnology an increasingly important field among anti-counterfeiting technologies.

One well-known technology in this field has developed specific monoclonal antibodies to "recognise" certain antigens or marker chemicals. The marker chemicals are added in tiny concentrations to products such as pharmaceuticals or liquor and are detected by using a test kit containing the specific antibodies.

This type of anti-counterfeiting system has the advantage that the anti-counterfeiting technology is part of the product itself (which is usually edible). Furthermore, it is not possible for anyone else to break the codes because the concentrations are too low to be detected by conventional methods and the markers are present with other chemicals that mask them.

Chemical technologies

In what can broadly be termed the chemical field, anti-counterfeiting technologies include photochromic (or light-reactive) and thermochromic (or heat-reactive) inks. These are typically applied on product labels and packaging. When exposed to either heat or light they change colour, and when exposed again the colour reverts to the original. Generally the effect is reversible as often as required. Inks have also been developed that are invisible to the human eye but which can be read by bar-code scanners. These have been used in the fragrance and pharmaceutical industries to authenticate products. Other reactive inks change colour when brought into contact with specific substances, for example ink from a felt-tipped pen.

Another type of anti-counterfeiting device in this field involves the use of plastic "tags". These were originally developed as a means of marking and tracing explosives. By incorporating microscopic plastic tags into bulk explosives, the origin of the explosive can be determined both before and after use.

A microscopic tag is a virtually indestructible, microscopically small plastic particle of random irregular shape, constructed from up to ten different coloured layers. The sequence of colours denotes

the unique code of the tag and the total number of possible codes ranges up to 4.5 billion. The tags can be applied to both product and packaging in a number of ways, including incorporation in clear varnish.

Enforcement of rights: public-private partnership

Infringement of intellectual property rights is still seen as a white-collar crime among many enforcement officials, and enforcement of rights is regarded as an aid to self-help. There is no doubt that the right holder has to be proactive in pursuing the enforcement of his rights and provide all the necessary support to police and customs in order to achieve success.

Up to the beginning of the 1990s, most companies would bring civil actions against counterfeiters rather than notifying police or customs. However, during the last decade this has changed and there has been an increased interest in public-private partnership against counterfeiting. The industry had to understand that, although the enforcement agencies do work against counterfeiting, tight budgets and other crimes, such as drug smuggling, make it difficult for the officials to give it the priority it deserves.

Another problem has been information sharing. Companies receiving regular reports on counterfeiting of their products did not know how to share the information with the police, while the police could not justify concerted action since the crimes were not reported often enough.

There has been a radical change in attitudes, particularly since the drafting of the TRIPs Agreement. One of the basic objectives of the TRIPs Agreement was to ensure the availability of effective enforcement measures, while not creating obstacles to trade.

The TRIPs Council has encouraged the interest and activities of the World Customs Organisation (WCO) with regard to the enforcement of IPR. In 1995, the WCO adopted model legislation which countries could use for preparing national legislation with regard to fighting counterfeiting and piracy (Woosnam, 1997).

The model contains provisions regarding relations between customs authorities, right holders, importers and exporters and the procedures for disposal of counterfeit trademark or pirated goods. It provides a means by which right holders can ask customs to suspend the clearance of goods suspected of being counterfeit or pirated. It also states when customs can take *ex-officio* (by virtue of one's office) action in cases of suspect goods.

Nevertheless, the WCO states explicitly that the trademark and copyright holders have the ***prime responsibility*** for taking measures to protect their rights. The model recognises that the role of Customs is to ***assist*** in the enforcement of IPRs, which is reasonable. The WCO is formalising customs/business co-operation with Memoranda of Understanding (MOU) on international as well as on national levels. On the international level, the WCO has concluded IPR MOUs with organisations such as ICC Commercial Crime Services and the international umbrella organisation of national mechanical copyright societies (BIEM).

Interpol has teams specialised in counterfeiting who monitor international developments in this field and facilitate international action against counterfeiting and piracy. The main responsibility for the industry, according to Interpol, is to ensure that all criminal cases are reported to the appropriate law enforcement agency and that complaints are duly filed. Interpol acknowledges that many officers

in member states still consider counterfeiting to be a normal economic activity and that there are significant problems in connection with certain countries, but a sufficiently high level of complaints filed is necessary in order to obtain a mandate to act (Takizawa, 1997).

Co-operation between private industry and enforcement agencies needs to be re-enforced. Police and customs officers lack sufficient expertise to be able to identify goods that infringe a company's intellectual property rights. Infringers employ various *modus operandi* and are very innovative. Both parties – business and officials – have now realised that the internationalisation of fraud, its growth in magnitude, and the sophistication of infringers, renders it impossible for any company to successfully address the problem in isolation.

6. POLICY INITIATIVES

National policy initiatives

Intellectual property (IP) protection can be very misleading for some right holders. Applicants have to go through extensive procedures in applying for protection and pay expensive renewal fees for maintaining their exclusive rights, and on top of that have to defend their rights when these are infringed. Some countries have criminalised counterfeiting, which lifts the burden from right holders to some extent, but enforcement of IP is still regarded as a matter of self-help in most countries. The right holders must be active and show an interest in protecting their rights in order to initiate any enforcement action. There are few countries in which officials have taken anti-counterfeiting measures on their own initiative. Measures tend to be put forward only when the industry of a country gains influence over decision makers. Becoming a member of an anti-counterfeiting organisation is a way for IP owners to lobby policy makers to provide adequate enforcement.

There are a large number of national anti-counterfeiting organisations around the world. Although most were established during the last two decades, some are much older, the oldest being the Union des Fabricants formed at the end of the last century. The majority liaise closely with their national governments and influence policy in relation to the combat against counterfeiting. All are membership organisations of brand owners, law firms, or other bodies interested in intellectual property protection. Some have an independent secretariat, although the smaller or newly established organisations are run on a *pro bono* basis, usually by lawyers. The activities of the national anti-counterfeiting organisations involve liaising with enforcement authorities in the country, publicising the harm caused to their members due to IP theft and lobbying for adequate enforcement of intellectual property rights. Some associations provide training for customs officials on the detection of counterfeits.

The size of the organisations and their responsibilities vary considerably. Some are more engaged in lobbying, whereas others work on more practical enforcement. The current trend is to encourage the formation of national anti-counterfeiting groups in each industrialised nation (see Annex for a comprehensive list of anti-counterfeiting organisations).

Base	Organisation	Acronym
Bangladesh	Anti-Counterfeit Association	
Belgium	Anti-Counterfeit Association	BACA
France	Comité Colbert (luxury goods)	
France	Union des Fabricants	
Germany	Anti-Piracy Organisation	VBP
Hungary	Brand Protection Association	BPA
Italy	Anti-Counterfeiting Advisory Group	
Italy	International Anti-Counterfeiting Committee	COLC
Japan	Customs IP Information Centre	CIPIC
Korea	Korean IP Office	KIPO
Netherlands	Anti-Counterfeiting Foundation	
Philippines	COMPACT	
Philippines	The IP Association	IPA
Spain	ANDEMA	
Sweden	Anti-Counterfeiting Group	ACG
Thailand	Anti-Counterfeiting Committee	MOEA
United Kingdom	Anti-Counterfeiting Group	ACG
United States	International Anti-Counterfeiting Coalition	IACC
United Kingdom/France	Counterfeiting Intelligence Bureau	CIB

Private/industry initiatives

Certain industries that are significantly affected by counterfeiting have formed trade associations devoted to fighting the problem for the specific industry. The most active organisations internationally are from the US copyright industry, *e.g.* the Business Software Alliance (BSA), the International Federation of the Phonographic Industry (IFPI) and the Motion Picture Association (MPA).

These associations publish regular statistics on the impact of piracy and counterfeiting in their industry, promote adequate legislation and enforcement, run campaigns to educate the public and assist their members in conducting investigations into counterfeit goods.

Table 6. **List of industrial organisations engaged in anti-counterfeiting work**

Product	Organisation	Acronym	Base
Software	Business Software Alliance	BSA	United States
General	European Brands Association	AIM	Belgium
Audio films	International Federation of Film Producers	FIAPF	France
Musical recordings	International Federation of the Phonographic Industry	IFPI	United States
Copyrights	International Intellectual Property Alliance	IIPA	United States
Spirits	International Federation of Spirit Producers		Hong Kong (China)
Motion pictures	Motion Picture Association	MPA	United States
Watches	Swiss Watch Federation		Switzerland
Toys	Toy Industries of Europe	TIE	Brussels

International initiatives

In line with the globalisation of the industry and the increased international trade in counterfeit goods, there have been a number of cases where the trail from raw material to products on the shelf has run through a large number of countries. This international production and trade in counterfeits often involves organised criminals with extensive international networks.

Yet the enforcement of trademark protection is still on a national level. Although some bodies promote co-operation between enforcement agencies, *e.g.* Interpol and the WCO, very few cases of counterfeits are followed back to the source. Cases involving foreign fraudsters and victims are normally given lower priority due to budgetary constraints.

Many organisations have attempted to address this problem by setting up databases. On a public level, Interpol and the WCO have constructed databases on counterfeiting, but so far neither have been successful in getting national agencies to contribute regular information. On a private level, some trade associations have been successful in maintaining specialised databases, but very few have managed any cross-industry database. The ICC Counterfeiting Intelligence Bureau has made several attempts to encourage victims of counterfeiting to share information. The basic problem is that all companies would like to have more information, but few wish to contribute.

During 1997, there were two major initiatives on the international arena, REACT and GACG.

- ◊ REACT (*Réseau Européen Anti Contrefaçon*) was formed in June 1997 by the Dutch and Belgian anti-counterfeiting groups and is supported by the European Commission. Its core function is to set up a central database to support investigations by national coalitions as well as law enforcement agencies.
- ◊ GACG (*Global Anti-counterfeiting Group*) was formed in December 1997 under the auspices of the ICC and its Counterfeiting Intelligence Bureau. The group has wider support among organisations and currently acts more as a discussion forum aiming to improve international co-operation between the various anti-counterfeiting organisations and to raise awareness of the health and safety hazards of fakes. It is, so far, the only global initiative of its kind and has been well received in the business community.

Public initiatives

United States

The United States are by far the biggest producer of copyright-protected products (film and music recording and software). A study prepared for IIPA on the *Copyright Industries in the US*, showed that the copyright industry is the fastest growing industry in the United States and among the largest export sectors (International Intellectual Property Alliance, 1996). The US copyright industry is reporting the biggest losses due to piracy and, as a result, the US Government has proved to be the most active in working together with its industry to combat piracy.

The United States has a section in its Trade Act that gives the US Trade Representative (USTR, 1997) authority to determine whether the acts, policies and practices of foreign countries deny adequate and effective protection of intellectual property rights or fair and equitable market access for US persons who rely on intellectual property protection. "Special 301", as it is called, was amended in the Uruguay Round Agreements Act to specify that a country can be found to deny adequate and effective intellectual property protection even if it is in compliance with its obligations under the TRIPs Agreement. It was also amended to direct the USTR to take into account a country's prior status and behaviour under "Special 301".

Once this pool of countries have been determined, the USTR is required to designate which, if any, of these countries should be designated "priority foreign countries". "Priority foreign countries" are those countries that:

1. have the most onerous and egregious acts, policies and practices which have the greatest adverse impact (actual or potential) on the relevant US products; and
2. are not engaged in good faith negotiations or making significant progress in negotiations to address these problems.

The USTR undertakes a review of foreign practices each year after the issuance of the National Trade Estimate (NTE) Report. The interagency Trade Policy Staff Committee that advises the USTR on implementation of "Special 301", obtains information from the private sector, American embassies abroad and the United States' trading partners.

The United States also has an advanced system for border control. The Copyright Act and the Trademarks Act state that infringing goods shall be prevented by the customs authorities. As a result, counterfeit goods that are detected at the border are subject to seizure and forfeiture, and the customs authority has a duty to destroy the goods if the right owner does not consent to any other use. The US customs authorities seized goods worth US$54 million in 1997 alone (US Customs Service, 1998).

European Union

Product counterfeiting is not confined to national borders, and organised networks of counterfeiters often operate across several countries. This is particularly the case within the European Union because of the free internal market, and trade is likely to increase as the Member States converge into the Single Market. Other factors are the trends towards conformity of consumer choices (most youngsters watch the same programmes on TV and desire similar designs) and legal steps aiming at removing border controls, such as the Schengen Agreement.

However, at the EU level, there have been a limited number of anti-counterfeiting initiatives (Khur, 1997). The main treaty in this field is the Anti-Counterfeiting Regulation (EEC 3842/86, amended EC 3295/94), in force since July 1995. The treaty deals mainly with substantive law and measures relating to border control. It does not address the core issues of remedies and enforcement of rights. These issues are left to the individual Member States and the legislative acts of EU only impose general obligations on Member States to provide appropriate remedies in respect of infringement of the rights provided in EC regulations.

There are indications that the protection and enforcement of IP is about to improve within the European Union. During this last decade many Member States have extensively harmonized their IP legislation. The European Union is also showing an increased interest in counterfeiting issues and is currently working on a Green Paper addressing these problems.

It is widely held by the industry that the main problems in combating counterfeiting stem from lack of efficient border controls. Free trade enables counterfeiters to import a consignment of counterfeits through ports where control is poor and then transport the consignment anywhere in the Union without risk of being caught. The police or other enforcement agencies that discover fakes on the market find it difficult to pursue their investigations through other countries due to lack of communication and tight budgets and often end up by dropping the case. In the end, the major beneficiaries of the pitfalls in the system are the counterfeiters.

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