Hadopi, cultural assets and internet use: practices and perceptions of French internet users.

Sunday 23 January 2011

Hadopi

Hadopi

1 METHODOLOGY

DIMANCHE 23 JANVIER 2011

Hadopi

Objectives

In order to find out the level of familiarity of French web users with the law, and to better understand their habits in relation to the legal and illegal use of cultural assets and their reactions to it, a first measuring point was established in the form of a photograph at moment T (Study T0).

There is a dual objective to this study:

- **Make an initial assessment of the perceptions and practices of web users** concerning the legal and illegal use of cultural assets, assess their level of familiarity with the law and the consequences of legal and illegal internet use.
- **Assess their level of awareness and familiarity with Hadopi and its objectives.**

Hadopi

Methodological approach

To meet the objectives, an online quantitative study was conducted on **two independent representative samples of the French web-user population (i.e. currently 67% of the French population aged 15 and over according to the Profiling study performed by Ipsos Média in October 2010, and 70% of the French population aged 11 and over according to Médiamétrie July 2010).**

The quality of the access panel is essential. The respondents were recruited using a quota method, and the resulting sample is very representative in terms of the socio-demographic profiles of the web users.

In the first sample, analysis of the study results allows us to establish **a declarative summary of the perceptions and practices of web users concerning the legal and illegal usage of cultural assets, and to assess their level of familiarity with the law and the consequences of legal and illegal internet use.**

This summary also allows us to assess how aware and how familiar French web users are with Hadopi.

Methodological approach

In the second sample, not all of the questions about the legal and illegal use of cultural assets were asked to avoid potential effects of such questioning on the rest of the questionnaire.

The aim here is not to directly ask respondents to summarise their personal use, but to measure the perception they have of other French web users.

This second sample allowed us to check that the responses given about the use of paid content, free content, illegal use, barriers to legal use and the perception of Hadopi and its work are not influenced by responses given on illegal use by those questioned.

This allows an assesment to be made on the **practices and perceptions of web users in terms of legal and illegal access to cultural content on the Internet.**

Methodological approach

Hadopi has asked four expert service providers to help implement this first phase of the assessment.

Laurent FLORES, PhD in Management Sciences (marketing), Research Professor at *Université Paris II – Panthéon Assas* and founder of the market survey company crmmetrix. He is a recognised Internet survey specialist and supervised the methodology and the initial data processing.

Guillaume MAIN, a statistics consultant and blogger at statosphere.fr, ensured that there was no biais either in the semantics used in the questionnaire, the methodology used to draw the sample population questioned or in producing the conclusions.

TOLUNA, an on-line Access Panel specialist, conducted the interviews on its Access Panel.

SOCIO Logiciels, for 35 years this company has specialised in survey data processing, and was responsible for the quality of the data results and analysis.

Data collection method: online

The interviews were conducted on an online access panel, from 25 October to 4 November 2010, by TOLUNA, on a representative sample of French web users (according to the quotas of the Credoc study, June 2009), **aged 15 and over.**

2687 individuals were questioned; they were distributed over 2 samples:

- **Sample 1: 1624 web users** assessed their personal habits concerning the illegal use of cultural assets, then the habits of French web users in general (projective questions).

- **Sample 2 – control sample: 1063 web users** assessed the habits of French web users concerning the illegal use of cultural assets.

To ensure the representativeness of the target population, quotas were set for both samples according to the following criteria: gender, age, professional category of the main householder and place of residence. Sample 1 (1600) is almost twice the size usually used for a national representative sample (800 to 1000) so that reliable analyses can be made on the sample fractions.

So that the results can be compared, **both samples are matched** in terms of gender, age, professional category, place of residence, household size, frequency and history of internet use and type of home internet connection.

Statistical data analysis

SOCIO Logiciels was responsible for the quality of the results using various processes:

- **Effectiveness of data recovery**
- **Data cleaning**
- **Validation of the results**
- **Statistical processing and detailed analyses**

Industry rules were adhered to during the processing of this data, especially the confidentiality and anonymity of individual data (principle of individual interchangeability: the individual in question as a representative of individuals with the same socio-demographic and behavioural characteristics).

Statistical data analysis

1. Effectiveness of data recovery

Data was recovered at two levels:

• Matching of 2 samples to make them comparable on internet usage frequency questions.

• Recovery on the population of origin, on the following quotas: gender, age, professional category of the respondent and place of residence.

This usually results in a **minimum weight of 0.66 and a maximum weight of 1.43.** This avoids some individuals weighing a lot more than others, which can be a problem, especially in tables on small sub-populations.

2. Data cleaning

This was done using an outlier search ("atypical individuals" or "incoherent in their responses"), and "monotonous" individuals.

The 4 outliers identified were considered as "off-screen" in this survey.

3. Validation of the results

The overall results gave rise to a systematic verification on each question.

Statistical processing and analyses

Some of the cross tabulations (question depending on another question, or variable modalities) have been produced, for which the main results can be found below, with regard to their discriminating characteristic on one or other sub-population.

Type of internet users:

• **Users admitting to illegal use, i.e. 49%** = web users that have stated that they have illegaly accessed cultural products on the internet at least once.

• **Users stating legal use, i.e. 51%** = web users that have stated that they have never illegaly accessed cultural products on the internet.

Profiles:

• **Gender** and **Age** (15-24 / 25-39 / 40 and over)

• **Professions and Socio-professional categories:**

Professional category + = Farmer, Artisan, Shopkeeper, Entrepreneur, Executive, Academic professionals, Middle managers.

Professional category - = Employee, manual workers

Non-working population = Retired, Student, Pupil, Other non-workers.

• **Place of residence** (Paris, Paris Metropolitan Region / Provinces).

NB: Crossings were validated using statistical tests (CHI2, Student).

Quality of gross samples

Q1 - You are	TOTAL	SAMPLE 1	SAMPLE 2
Q1 - SEX			
A man	49%	50%	48%
A woman	51%	50%	52%
Q2 - AGE			
age 15 - 17	13%	14%	12%
age 18 - 24	13%	13%	13%
age 25 - 39	29%	29%	30%
age 40 - 59	33%	33%	33%
age 60 and over	11%	11%	12%
Q3 - Profession			
Professional category+	31%	32%	30%
Professional category-	29%	28%	30%
Non-working population	40%	40%	40%
Q4 - Region			
Paris - Paris Metropolitan Region	20%	21%	18%
Provinces	80%	79%	82%
Q5a - How often do you use the Internet?			
Many times a day	77%	77%	78%
1 - 2 times per day	20%	21%	19%
2 - 3 times per week	2%	2%	3%
Once a week	0%	0%	0%
2 - 3 times per month	0%	0%	0%
1 time per month	0%	0%	0%

Very high sample quality – no difference in terms of descriptors or internet usage frequency.

2 Hadopi

Spontaneous awareness of authorities or laws which regulate the Internet

Hadopi was cited spontaneously by a third of users, far more frequently than other internet regulation authorities.

In your opinion, what are all the bodies or laws that regulate the Internet? UNPROMPTED	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
HADOPI	32%	34%	31%
CNIL	8%	7%	8%
CSA	2%	3%	2%
ARCEP	1%	1%	1%
ARJEL	1%	1%	1%
Other / Don't know	69%	68%	69%

100% refers to the overall respondents and not the sum of the responses

Assisted awareness of Hadopi

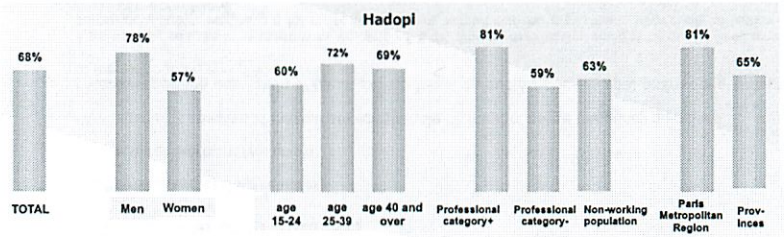
Hadopi enjoys very strong assisted awareness in the area of Internet regulation (68%) at the same level as other, older authorities.

Hadopi came in first position among web users admitting to illegal internet use (70%), and the opposite is true among self-declared legal users (2nd position).

Which of the following bodies that regulate the Internet do you know, even if only by name?	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
Hadopi - High authority for the circulation of works and rights protection on the Internet	68%	70%	65%
The CSA - High audiovisual council	67%	64%	71%
The CNIL - National computing and freedoms commission	64%	62%	67%
The ARCEP - Electronic and postal communications regulatory authority	12%	14%	10%
The ARJEL - Online games regulatory authority	10%	12%	8%
None of these	12%	12%	11%

Assisted awareness of Hadopi by profile

Strong assisted awaress of Hadopi among men (78%), those aged 25-39 (72%), Professional category + and Paris Metropolitan Region residents (respectively 81%).



Assisted awareness of Hadopi by profile

Which of the following bodies that regulate the Internet do you know, even if only by name?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Hadopi - High authority for the circulation of works and rights protection on the Internet	68%	78%	57%	60%	72%	69%	81%	59%	63%	81%	65%
The CSA - High audiovisual council	67%	69%	65%	54%	70%	74%	76%	64%	61%	72%	67%
The CNIL - National computing and freedoms commission	65%	67%	62%	47%	70%	72%	78%	59%	57%	76%	62%
The ARCEP - Electronic and postal communications regulatory authority	12%	19%	5%	11%	16%	11%	19%	8%	9%	21%	10%
The ARJEL - Online games regulatory authority	10%	15%	5%	11%	11%	9%	13%	7%	10%	14%	9%
None of these	12%	8%	16%	19%	9%	9%	6%	14%	16%	7%	13%

Assisted awareness of Hadopi by profile

Assisted awareness of Hadopi is greater among men (78% vs. 68% on average), those aged 25-39 (72%), Professional categories+ and Paris Metropolitan Region residents (respectively81%).

Awareness of the CSA is greater among those aged 40 and over (74% vs. 67% on average) and those aged 25-39 (70%) as well as among Professional categories + (78%).

Awareness of the CNIL is greater among those aged 40 and over (72% vs. 65% on average) and those aged 25-39 (70%) Professional categories + (78%) Paris Metropolitan Region residents (76%).

Awareness of Hadopi

Most of those surveyed became aware of Hadopi by watching the television (61%). However, web users admitting to illegal use were also made aware of it by the press (46%), the Internet (37%) and their friends and family (14%).

How did you hear about Hadopi ?	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
On television	61%	62%	60%
In the press	41%	46%	36%
On the radio	33%	34%	32%
On the Internet	30%	37%	24%
By a friend or family member, or a colleague mentioned it to me	11%	14%	8%
By email	3%	5%	2%
Other	2%	1%	3%
Don't know	20%	18%	22%

Awareness of Hadopi by profile

How did you hear about Hadopi ?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
On the television	61%	68%	54%	54%	66%	63%	68%	57%	58%	66%	60%
In the press	41%	49%	32%	33%	46%	42%	55%	33%	34%	56%	38%
On the radio	33%	41%	25%	23%	39%	35%	46%	29%	24%	41%	31%
On the Internet	30%	39%	21%	31%	33%	28%	38%	28%	28%	36%	29%
By a friend or family member, or a colleague mentioned it to me	11%	12%	10%	17%	13%	6%	11%	11%	11%	14%	10%
By email	3%	4%	2%	4%	3%	3%	3%	4%	3%	3%	3%
Other	2%	2%	3%	3%	2%	2%	2%	2%	2%	1%	2%
Don't know	20%	12%	29%	27%	17%	18%	11%	27%	24%	12%	22%

Awareness of Hadopi by profile

Most internet users have heard of Hadopi as a result of the television, particularly men (68% vs 61% on average), those aged 25-39 (66%), Professional categories + (68%).

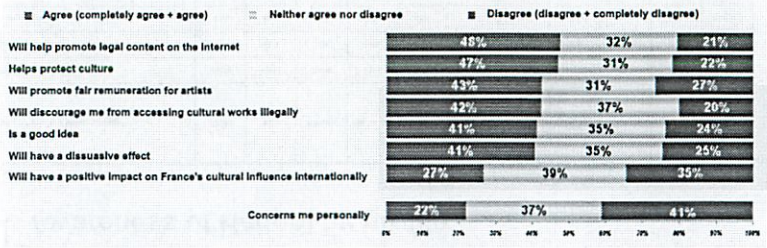
The press comes next, with similar profiles, men (49% vs 41% on average), those aged 25-39 (46%) and Professional categories + (55%) and (56%). The same goes for radio, men (41% vs 33% on average), those aged 25-39 (39%) and Professional categories + (46%).

Younger respondents were more likely to be made aware by their friends and family than other groups (17% vs 11% on average).

Perception of Hadopi

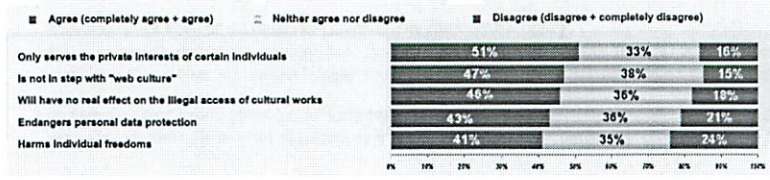
There is significant agreement among web users with positive statements on the work of Hadopi which essentially refer to its relevance and its impact on individual behaviour.

A good third of web users did not answer and a quarter believed themselves to be personally concerned by its work.



Perception of Hadopi

The same proportion of web users did not respond to negative statements about Hadopi which also find significant agreement and essentially concern its illegitimacy and its supposed impact on illegal use in general.



Perception of Hadopi

The diverging opinions among web users admitting to illegal use are more marked in response to the statements concerning "*private interests*" (57%), the *"web culture"* (55%), *"individual freedoms"* (51%) and *"personal data protection"* (51%). They feel more concerned (26%) than those that claim to use the internet legally.

Here is a list of statements which could apply to HADOPI (Completely agree + agree)	TOTAL	Illegal use	Legal use
TOTAL	100%	100%	100%
Will help promote legal content on the internet	48%	43%	52%
Helps protect culture	47%	40%	53%
Will discourage me from accessing cultural works illegally	42%	39%	46%
Will promote fair remuneration for artists	42%	36%	49%
Is a good idea	41%	33%	49%
Will have a dissuasive effect	41%	40%	41%
Will have a positive impact on France's cultural influence internationally	26%	23%	30%
Only serves the private interests of certain individuals	51%	57%	45%
Is not in step with "web culture"	47%	55%	40%
Will have no real effect on the illegal access of cultural works	46%	51%	42%
Endangers personal data protection	43%	51%	36%
Harms individual freedoms	41%	51%	32%
Concerns me personally	22%	26%	18%
None of these reasons	11%	10%	12%

Perception of Hadopi by profile

Here is a list of statements which could apply to Hadopi (Completely agree + agree)	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Helps promote legal content on the internet	48%	41%	54%	47%	43%	51%	47%	49%	47%	49%	47%
Helps protect culture	47%	38%	55%	49%	37%	52%	42%	45%	52%	48%	47%
Promotes fair remuneration for artists	43%	35%	50%	44%	33%	48%	36%	42%	48%	43%	42%
Will discourage me from accessing cultural works illegally	42%	36%	47%	42%	39%	45%	39%	44%	44%	42%	43%
Is a good idea	41%	33%	49%	41%	33%	47%	36%	42%	45%	41%	41%
Will have a dissuasive effect	41%	39%	42%	42%	36%	43%	37%	42%	43%	42%	40%
Will have a positive impact on France's cultural influence internationally	27%	23%	30%	29%	20%	29%	21%	29%	30%	22%	27%
Only serves the private interests of certain individuals	51%	60%	42%	53%	54%	49%	54%	49%	50%	55%	50%
Is not in step with "web culture"	47%	55%	40%	48%	56%	42%	55%	42%	45%	54%	46%
Will have no real effect on the illegal access of cultural works	46%	49%	44%	52%	46%	42%	47%	43%	47%	50%	45%
Endangers personal data protection	43%	49%	38%	47%	48%	38%	43%	45%	42%	46%	43%
Harms individual freedoms	41%	48%	35%	46%	45%	36%	43%	42%	40%	42%	41%
Concerns me personally	22%	24%	20%	31%	19%	20%	23%	20%	24%	24%	22%
None of these reasons	11%	11%	11%	15%	11%	9%	9%	12%	13%	7%	12%

Perception of Hadopi by profile

Currently, opinion on Hadopi is divided. Those aged 15-24 feel more "*personally affected*" (31% vs 22% on average).

There is a positive perception of the work of Hadopi, particularly among women, who believe that Hadopi "*is a good idea*" (49% vs 41% on average) or "is *useful for protecting culture*" (55% vs 47% on average), those aged 40 and over (respectively 47% and 52%), the non-working population (respectively 45% and 52%).

Inversely, the most sceptical are men, who think that Hadopi "only *serves the private interests of certain individuals*" (60% vs 51% on average) and the youngest respondents. Professional categories + think that the work of Hadopi "*is not in step with web culture*" (55% vs 47% on average), as do redidents of the Paris Metropolitan Region (54%), men (55%) and those aged 25-39 (56%).

Impact of Hadopi on the downloading behaviour of web users

Does HADOPI make you likely to change your habits of online access to music, videos, videogames, books, TV series, photos or software?	TOTAL	Illegal use	Legal use
TOTAL	100%	100%	100%
Yes	25%	33%	18%
No	52%	50%	53%
No opinion	23%	17%	29%
Does HADOPI make you likely to access cultural works from sites that obey copyright more regularly?	**TOTAL**	**Illegal use**	**Legal use**
TOTAL	100%	100%	100%
Yes	36%	35%	36%
No	39%	45%	33%
No opinion	25%	19%	31%
Does HADOPI make French web users more likely to access cultural works from sites that obey copyright more regularly?	**TOTAL**	**Illegal use**	**Legal use**
TOTAL	100%	100%	100%
Yes	40%	35%	43%
No	38%	48%	29%
No opinion	23%	17%	28%

On these three points we can see that around a quarter of web users did not respond.

Although half of web users admitting to illegal use do not plan to change their behaviour, a third of them have a positive attitude overall and plan to change their online habits.

They say that they are willing to access cultural works on sites that obey copyright and think that the same applies for all French web users.

The future work of Hadopi will therefore be of utmost importance.

Impact of Hadopi on the downloading behaviour of web users by profile

Does HADOPI make you likely to change your habits of online access to music, videos, videogames, books, TV series, photos or software?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Professional category+	Professional category -	Non-working population	Paris Metropolitan Region	Province
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Yes	25%	25%	25%	30%	24%	23%	24%	26%	26%	26%	25%
No	52%	57%	47%	49%	57%	50%	57%	51%	48%	54%	51%
No opinion	23%	19%	28%	21%	20%	27%	19%	25%	26%	21%	24%

Does Hadopi encourage you to access cultural works from sites that obey copyright more regularly?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris	Provinces
100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
TOTAL	36%	32%	40%	37%	32%	38%	34%	36%	37%	32%	37%
Yes	39%	46%	32%	39%	47%	33%	44%	37%	36%	44%	38%
No	25%	23%	28%	24%	21%	29%	22%	27%	27%	25%	26%
No opinion											

Does HADOPI make French web users more likely to access cultural works from sites that obey copyright more regularly?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Professional category+	Professional category -	Non-working population	Paris Metropolitan Region	Province
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Yes	39%	37%	42%	38%	34%	44%	38%	40%	40%	39%	39%
No	38%	43%	33%	39%	47%	32%	43%	37%	35%	43%	37%
No opinion	23%	21%	25%	23%	19%	25%	20%	23%	25%	18%	24%

Impact of Hadopi on the downloading behaviour of web users by profile

Web users who did not give an opinion were mainly women (28% vs 23% on average) and those aged 40 and over (27%).

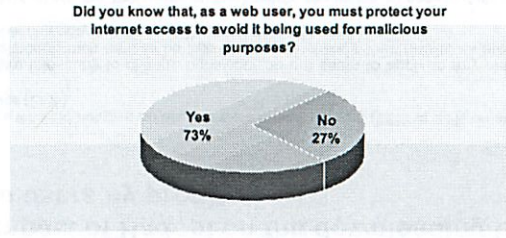
The positive intentions to change behaviour do not seem to apply to any one population more than another, although men tend to be less inclined to change their habits, as are those aged 25-39 and Professional category + (57% vs 52% respectively on average).

When asked about the behaviour of the French population in general (which does not include the respondent), web users, and particularly those aged 40 and over (44% vs 39% on average), have a slightly more positive attitude than when commenting on their own behaviour.

3 SECURITY

Awareness of the need to ensure access security

73% of web users know that they must protect their internet access.

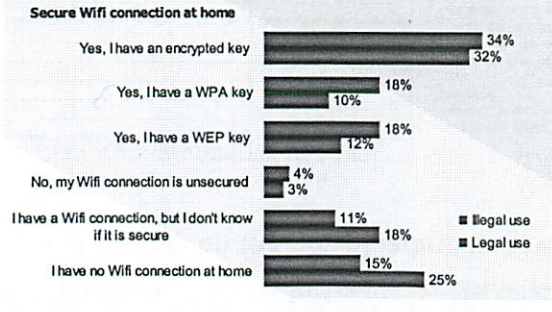


Awareness of the need to ensure access security

Did you know that, as a web user, you must protect your internet access to avoid it being used for malicious purposes?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Yes	73%	75%	72%	75%	73%	72%	73%	71%	75%	73%	73%
No	27%	26%	28%	25%	27%	28%	27%	29%	25%	27%	27%

Awareness of the need to ensure access security

Web users admitting to illegal use are more aware of WiFi security matters (WPA key 18% vs. 10% on average, WEP key 18% vs. 12% on average).



Awareness of the need to ensure access security by profile

Do you currently have a secure Wifi connection at home?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Yes, I have an encrypted key which makes my connection secure	33%	29%	37%	41%	30%	30%	28%	34%	36%	33%	33%
Yes, I have a WPA key which makes my Wifi connection secure	14%	17%	11%	13%	19%	11%	19%	12%	12%	13%	14%
Yes, I have a WEP key which makes my Wifi connection secure	15%	19%	10%	17%	16%	12%	17%	14%	13%	20%	14%
No, my Wifi connection is unsecured	4%	4%	3%	4%	3%	4%	5%	3%	4%	5%	4%
I have a Wifi connection, but I don't know if it is secure	15%	12%	17%	11%	13%	18%	14%	16%	14%	13%	15%
I have no Wifi connection at home	20%	19%	22%	13%	18%	26%	17%	22%	22%	16%	21%

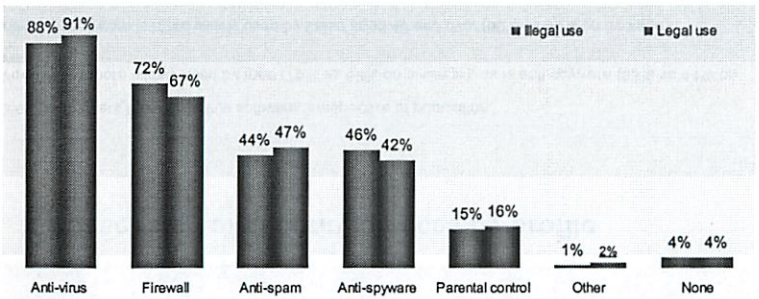
Awareness of the need to ensure access security by profile

The 15-24 age group has the most respondents claiming to have an encrypted key to secure their Wifi connection (41% vs 33% on average). WPA keys are more widespread among Professional category +, those aged 25-34 (19% vs 14% respectively on average), and men (17%).

Those aged 40 and over are more likely to state that they do not have a secure Wifi network at home (26% vs 20% on average), or that they do not know (18% vs 15% on average).

Possession of security devices

Anti-virus software is the most frequently installed means of network protection in the home (around 9 out of 10 web users), followed by firewalls. Anti-spam and anti-spyware programs are also present, but to a lesser extent. There is no difference by type of web user.



Possession of security devices by profile

Which of these security measures have you installed on your home computer?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
A firewall	69%	75%	63%	68%	72%	68%	70%	70%	68%	70%	69%
Parental control	16%	15%	16%	16%	17%	14%	12%	19%	18%	13%	16%
Anti-virus	90%	89%	90%	87%	90%	91%	90%	90%	89%	88%	90%
Anti-spyware	44%	53%	35%	48%	43%	48%	47%	41%	44%	47%	44%
Anti-spam	46%	48%	43%	42%	42%	50%	43%	47%	47%	43%	46%
Other	2%	2%	1%	2%	1%	1%	1%	2%	1%	0%	2%
None	4%	4%	4%	5%	4%	4%	4%	4%	4%	5%	4%

Possession of security devices by profile

93% of web users have anti-virus software, irrespective of population.

Firewalls are more widely used by men (75% vs 69% on average), as is anti-spyware (53% vs 44% on average).

Anti-spam software is more widely used by those aged 40 and over (50% vs 46% on average).

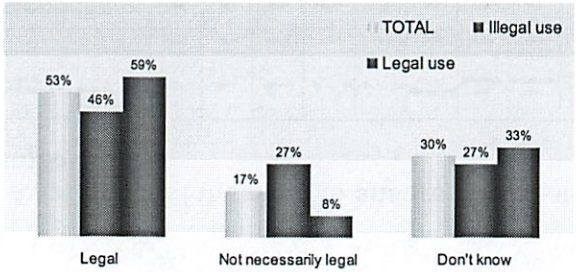
Parental control tends to be more widely used among Professional category- (19% vs 16% on average).

4 ONLINE USE OF CULTURAL ASSETS

Lack of understanding, lack of distinction between legal and illegal offerings, confusion between legal and paid-for

Paying for content guarantees legality according to web users claiming legal use (59% vs. 53% on average), as opposed to web users who admit to illegal use (46%). Users who admit illegal use are more likely to know that paying for content does not make it legal to access (27% vs. 17% on average). Almost a third of internet users "*do not know*".

When you access cultural content online, If you have paid for this content, do you think that accessing it is.....



Lack of understanding, lack of distinction between legal and illegal offerings, confusion between legal and paid-for by profile

When you access cultural content online, if you have paid for this content, do you think that accessing it is:	TOTAL	Men	Women	age 18 - 34	age 35 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Legal	53%	52%	53%	45%	56%	55%	59%	53%	47%	54%	52%
Not necessarily legal	17%	20%	15%	26%	18%	11%	18%	14%	20%	20%	17%
Don't know	30%	28%	32%	29%	26%	33%	24%	34%	33%	26%	31%

Lack of understanding, lack of distinction between legal and illegal offerings, confusion between legal and paid-for by profile

It is those from Professional category+ that make the strongest connection between content being legal and paying for it (59% vs 53% on average), whereas those aged 15-24 seem to be the most well-informed of the nuances (*"not necessarily legal"* 26% vs 17% on average).

Lack of understanding, lack of distinction between legal and illegal offerings, confusion between legal and paid-for

The best guarantees of legality are a charter, familiarity with the name and certification (49% and 42% respectively). The proportion of *"don't knows"* is slightly higher among web users claiming legal use.

Which of the following indicates to you that a site offering cultural products or services is legal?	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
When the site has a charter and conditions of use	49%	46%	53%
When the brand / name of the site is well-known	49%	48%	50%
When the site is certified or sponsored by a trustworthy body	42%	42%	42%
When the owner is clearly identified	38%	37%	39%
When you have to pay to use it	35%	35%	35%
When it is possible to contact the site owner by telephone or email	22%	21%	23%
When the site looks professional	17%	17%	17%
When there is a large catalogue of cultural products offered online	9%	9%	9%
Other	2%	2%	1%
Don't know	16%	13%	19%

Lack of understanding, lack of distinction between legal and illegal offerings, confusion between legal and paid-for by profile

Which of the following indicates to you that a site offering cultural products or services is legal?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
When the site has a charter and conditions of use	50%	46%	53%	54%	45%	50%	50%	49%	50%	55%	48%
When the brand / name of the site is well-known	49%	50%	48%	50%	49%	49%	53%	49%	46%	58%	47%
When the site is certified or sponsored by a trustworthy body	42%	41%	42%	51%	42%	37%	43%	39%	43%	48%	41%
When the owner is clearly identified	38%	41%	35%	40%	35%	39%	43%	31%	39%	42%	37%
When you have to pay to use it	35%	32%	38%	41%	36%	30%	36%	35%	34%	35%	35%
When it is possible to contact the site owner by telephone or email	22%	22%	22%	27%	20%	21%	21%	20%	24%	24%	22%
When the site looks professional	17%	18%	16%	19%	17%	15%	19%	16%	16%	17%	17%
When there is a large catalogue of cultural products offered online	9%	10%	8%	10%	7%	9%	10%	10%	7%	9%	9%
Other	2%	1%	2%	2%	1%	2%	1%	2%	2%	1%	2%
Don't know	16%	16%	17%	10%	16%	20%	12%	19%	17%	14%	17%

Lack of understanding, lack of distinction between legal and illegal offerings, confusion between legal and paid-for by profile

The presence of a charter is more highly valued by Paris Metropolitan Region residents (55% vs 50% on average), those aged 15-24 (54%) and women (53%).

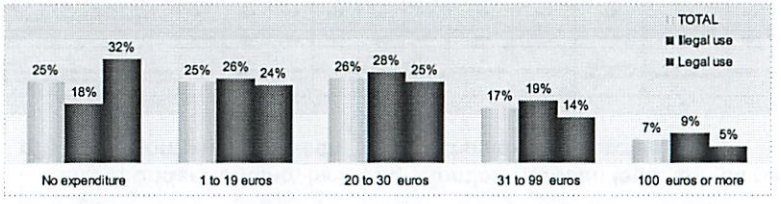
Familiarity with the name is mentioned most frequently by Paris Metropolitan Region residents (58% vs 49% on average) and Professional category+ (53%).

Certification is considered more important by those aged15-24 (51% vs 42% on average) for whom it occupies 2nd position (vs 3rd on average).

Monthly expenditure on cultural assets

This expenditure includes the purchase of physical cultural assets on the Internet. Web users admitting illegal use spend slightly more than average (+1 to +2 points depending on age group), they are less likely on average to respond "*no expenditure*". On the contrary, web users claiming legal use spend slightly less (-3 to -1 points depending on age group) and are more likely on average to respond "*no expenditure*".

Generally, how much do you spend on average per month on accessing cultural products or services on the Internet?



Monthly expenditure by profile

Average monthly expenditure is 27 euros for the internet user population as a whole, and 36 euros for the 75% of web users that spend one euro or more.

Generally, how much do you spend on average per month on accessing cultural products or services on the Internet?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
No expenditure	25%	24%	26%	27%	18%	29%	17%	26%	32%	23%	26%
1 - 19 euros	25%	24%	26%	29%	29%	20%	25%	25%	25%	24%	25%
20 - 30 euros	26%	25%	27%	24%	25%	26%	27%	26%	25%	22%	27%
31 - 99 euros	17%	18%	16%	14%	21%	16%	20%	18%	13%	20%	16%
100 euros or more	7%	9%	5%	6%	7%	8%	11%	6%	5%	10%	7%
Average monthly spend	27 €	29 €	24 €	23 €	28 €	28 €	33 €	27 €	21 €	33 €	25 €

Monthly expenditure by declared use

Generally, how much do you spend on average per month on accessing cultural products or services on the Internet?	TOTAL	Illegal use	Legal use
No expenditure	25%	18%	32%
1 - 19 euros	25%	26%	24%
20 - 30 euros	26%	28%	25%
31 - 99 euros	17%	19%	14%
100 or more euros	7%	9%	5%

Monthly expenditure by profile

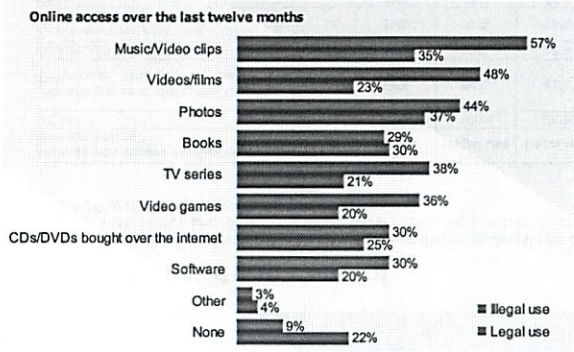
The consumers that spend the most on cultural assets are Professional category+ ("*100 euros or more*" 11% vs. 7% on average) and Paris Metropolitan Region residents (10%).

A third of the non-working population has zero expenditure (32% vs. 25% on average), as do those aged 40 and over (29%).

Those aged 15-24 and those aged 25-39 spend less than the others ("*1 to 19 euros*" 29% vs. 25% respectively).

Type of cultural assets accessed on-line over the last twelve months

Among illegal web users, music is the most frequently-downloaded cultural product (57%), followed by films (48%).



Type of cultural assets accessed on-line over the last twelve months by profile

Which of the following cultural products or services have you already accessed on the internet over the last 12 months?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Music / Videoclips	46%	47%	45%	66%	48%	32%	44%	41%	51%	48%	45%
Photos	40%	36%	44%	48%	43%	34%	39%	40%	41%	42%	40%
Videos / films	38%	37%	33%	56%	36%	20%	34%	30%	40%	41%	34%
Books	30%	27%	32%	23%	36%	29%	37%	29%	24%	32%	29%
TV series	29%	25%	34%	46%	35%	15%	29%	29%	31%	32%	29%
Video games	28%	33%	23%	43%	30%	18%	24%	26%	33%	29%	28%
CDs / DVDs purchased on the internet	28%	29%	26%	25%	32%	26%	34%	28%	21%	32%	26%
Software	25%	32%	17%	28%	23%	24%	28%	21%	25%	31%	24%
Other	4%	4%	4%	1%	3%	7%	5%	3%	3%	4%	4%
None	16%	15%	16%	8%	12%	23%	14%	18%	15%	15%	16%

Type of cultural assets accessed on-line over the last twelve months by profile

Those aged 15-24 access various cultural assets and access much more content than other groups. Also, the oldest web users are more likely not to access any cultural assets (40 and over: 23% vs 16% on average).

Music is most commonly accessed by: those aged 15-24 (66% vs 46% on average), the non-working population (51%).

Photos: by those aged 15-24 (48% vs 40% on average), women (44%).

Videos/films by: those aged 15-24 (56% vs 35% on average), Paris Metropolitan Region residents (41%), the non-working population (40%).

Books by: Professional category+ (37% vs 30% on average), those aged 25-39 (36%).

TV series by: those aged 15-24 (46% vs 29% on average), those aged 25-39 (35%), women (34%).

Video games: those aged 15-24 (43% vs 28% on average), the non-working population, men (33%)

CDs/DVDs bought on the Internet: by Professional category+ (34% vs 28% on average), Paris Metropolitan Region residents and those aged 25-39 (32%)

Software: by men (32% vs 25% on average), Paris Metropolitan Region residents (31%).

Methods of accessing paid-for cultural content

The main methods used to access paid-for cultural content are paying platforms (47%), streaming sites or platforms (28%) and direct download sites (23%). There is an over-representation of web users declaring illegal use on all three content sources.

Methods of accessing paid-for cultural content	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
Paying platforms (iTunes, Amazon MP3, VirginMega, FNAC...)	47%	52%	42%
Streaming sites or platforms (Spotify Premium, Deezer Premium, Allostreaming...)	28%	46%	12%
Direct download sites (MegaUpload Premium, RapidShare Premium...)	23%	36%	11%
Newsgroups (Usenext, Giganews...)	7%	12%	3%
None	33%	19%	47%

Methods of accessing paid-for cultural content by profile

How do you access paid-for cultural content?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Paying platforms (iTunes, Amazon MP3, VirginMega, FNAC...)	47%	47%	47%	46%	51%	44%	52%	45%	44%	52%	46%
Streaming sites or platforms (Spotify Premium, Deezer Premium, Allostreaming...)	28%	31%	25%	46%	30%	16%	30%	27%	28%	29%	28%
Direct download sites (MegaUpload Premium, RapidShare Premium...)	23%	23%	23%	35%	26%	14%	24%	21%	25%	26%	23%
Newsgroups (Usenext, Giganews...)	7%	9%	6%	14%	7%	4%	7%	5%	10%	9%	7%
None	33%	31%	36%	21%	28%	45%	29%	36%	35%	29%	34%

Methods of accessing paid-for cultural content

Paying platforms are more commonly used by Professional category+ and Paris Metropolitan Region residents (52% respectively vs 47% on average).

Those aged15-24 are more likely to use streaming sites (46% vs 28% on average), direct download sites (35% vs 23% on average) and newsgroups (14% vs 7% on average).

Free sources of cultural content

The main sources of free cultural content preferred by web users declaring illegal use are streaming sites (64%), Peer-to-Peer sites (42%) and direct download sites (37%). Specialised search engines, which provide access to P2P or direct download links, come in 2nd place.

How do you access content on the Internet without paying?	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
Streaming sites or platforms (Youtube, Dailymotion, Vimeo, Spotify, Deezer, Webradios...)	54%	64%	43%
Specialised search engines	28%	29%	27%
Direct download sites (MegaUpload, RapidShare...)	25%	37%	13%
Blogs, forums, newsletters, personal sites	20%	23%	16%
Instant messaging software (Windows Live Messenger, ICQ...), live dialogue software (IRC..)	19%	20%	17%
Total Peer-to-Peer	25%	42%	8%
Via Peer-to-Peer shareware (eMule, Limewire, Gnutella, eDonkey...)	*16%*	*26%*	*5%*
Via Peer-to-Peer torrent links (Bitorrent, uTorrent, Vuze...)	*9%*	*16%*	*3%*
None	24%	13%	34%

Free sources of cultural content by profile

How do you access content on the Internet without paying?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*	*100%*
Streaming sites or platforms (Youtube, Dailymotion, Vimeo, Spotify, Deezer, Webradios...)	54%	53%	54%	78%	57%	37%	49%	51%	59%	57%	53%
Specialised search engines	28%	29%	28%	25%	27%	32%	32%	28%	26%	29%	28%
Direct download sites (MegaUpload, RapidShare...)	25%	27%	23%	44%	27%	11%	22%	22%	29%	25%	25%
Blogs, forums, newsletters, personal sites	20%	18%	21%	29%	17%	15%	19%	18%	21%	24%	19%
Instant messaging software (Windows Live Messenger, ICQ...), live dialogue software (IRC..)	19%	18%	21%	24%	16%	17%	14%	19%	22%	18%	19%
Via Peer-to-Peer shareware (eMule, Limewire, Gnutella, eDonkey...)	16%	15%	16%	22%	15%	10%	15%	15%	16%	16%	16%
Via Peer-to-Peer torrent links (Bitorrent, uTorrent, Vuze...)	9%	10%	9%	14%	12%	5%	11%	7%	10%	9%	10%
None	24%	24%	24%	11%	20%	34%	25%	26%	22%	25%	24%

Free sources of cultural content by profile

Those aged 40 and over are most likely to not access cultural assets for free (34% vs 24% on average). However, they are more likely to use specialised search engines (which provide P2P or direct download links), as are Professional category + (respectively 32% vs 28% on average).

Peer-to-Peer sites are most commonly used by those aged 15-24 (36% vs 25% on average) and to a lesser degree, those aged 25-39 (30%). They are used much less by those aged 40 and over (15%).

Streaming sites are most often used by those aged 15-24 (76% vs 54% on average), the non-working population (59%) and those aged 25-39 (57%).

Direct download sites are most often used by those aged 15-24 (44% vs 25% on average) and the non-working population (29%) .

Instant messaging services are most often used by those aged 15-24 (24% vs 19% on average), the non-working population (22%) and women (21%).

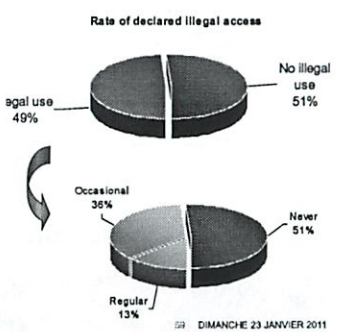
Finally, those aged 15-24 make more use of blogs/forums (29% vs 20% on average).

5 ILLEGAL ONLINE USE OF CULTURAL ASSETS

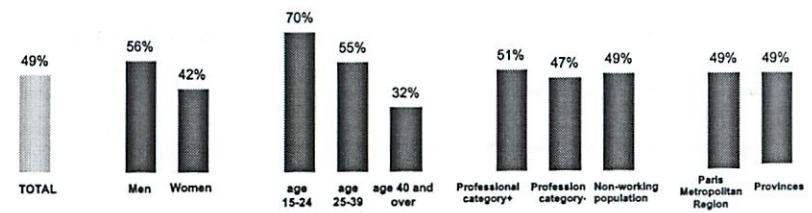
Declared illegal access to cultural assets

Almost half of respondents declared illegally accessing cultural assets (49%), of which 13% do so regularly and 36% do so only occasionally or exceptionally.

Generally, when you access music, videos, videogames, books, TV series, photos or software on the Internet, would you say that you do so illegally?	TOTAL
TOTAL	100%
ILLEGAL USE (at least once)	**49%**
Regular illegal use	13%
Of which always	4%
Of which often	9%
Occasional or exceptional illegal use	36%
Of which sometimes	15%
Of which rarely	21%
NO ILLEGAL USE (never)	**51%**



Declared illegal access to cultural assets by profile



Declared illegal access to cultural assets by profile

Generally, when you access music, videos, videogames, books, TV series, photos or software on the Internet, would you say that you do so illegally?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
ILLEGAL USE (at least once)	49%	56%	42%	70%	55%	32%	51%	47%	49%	49%	49%
Regular illegal use	13%	17%	10%	21%	14%	7%	13%	12%	14%	13%	13%
- of which always	4%	5%	3%	6%	4%	3%	4%	4%	5%	5%	4%
- of which often	9%	11%	6%	15%	10%	4%	9%	8%	9%	8%	9%
Occasional or exceptional illegal use	36%	39%	33%	49%	41%	25%	38%	36%	35%	37%	36%
- of which sometimes	15%	19%	11%	25%	17%	7%	14%	15%	15%	16%	15%
- of which rarely	21%	20%	22%	24%	24%	17%	24%	19%	20%	21%	21%
NO ILLEGAL USE (= never)	51%	43%	58%	30%	45%	68%	49%	53%	51%	51%	51%

Declared illegal access to cultural assets by profile

49% of web users admit to illegal use, 13% regularly and 36% occasionally. These are mostly men aged 15 to 39.

Inversely, the group most likely to declare not having accessed content illegaly are those aged 40 and over (68% vs 51% on average) and women (58%).

There is no significant difference between professional status or geographical locations.

Declared history of illegally accessing cultural content

A quarter of web users who declared illegal use think that they have been accessing cultural products for over 5 years, 29% said they started to do so *"in the last 6 months"*.

Vous avez répondu qu'il vous arrive de consommer de façon illégale de la musique, des vidéos, des jeux vidéo, des livres, des séries TV, des photos ou des logiciels, depuis combien de temps est ce le cas ?	Usages illicites
TOTAL	100%
Depuis moins de 6 mois	29%
De 6 à 12 mois	10%
De 1 à 2 ans	13%
De 2 à 3 ans	10%
De 3 à 4 ans	6%
De 4 à 5 ans	7%
Depuis plus de 5 ans	25%

Declared history of illegally accessing cultural content by profile

You stated that you illegally access music, videos, videogames, books, TV series, photos or software. How long have you been doing this?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Less than 6 months	29%	26%	33%	36%	22%	29%	19%	32%	36%	28%	30%
6 to 12 months	10%	8%	13%	10%	8%	12%	10%	10%	9%	9%	10%
1 to 2 years	13%	14%	11%	14%	11%	14%	8%	15%	15%	12%	13%
2 to 3 years	10%	9%	12%	10%	10%	10%	11%	10%	9%	6%	11%
3 to 4 years	6%	5%	4%	7%	6%	7%	9%	5%	5%	9%	6%
4 to 5 years	7%	7%	7%	7%	7%	6%	8%	10%	6%	5%	7%
For over 5 years	25%	29%	20%	17%	36%	23%	37%	19%	18%	32%	23%

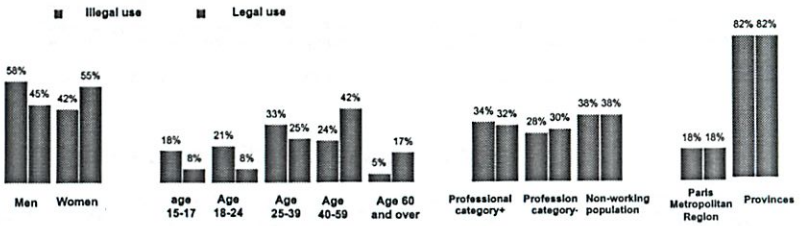
Declared history of illegally accessing cultural content by profile

Web users most likely to admit to illegally accessing cultural assets for less than 6 months are those aged 15-24 and the non-working population (36% vs 29% on average) and women (33%), while those most likely to admit to illegally accessing cultural assets for over 5 years are those in Professional category+ (37% vs 25% on average), those aged 25-39 (36%), Paris Metropolitan Region residents (32%) and men (29%).

Profiles (gender, age, profession and socio-professional category, location)

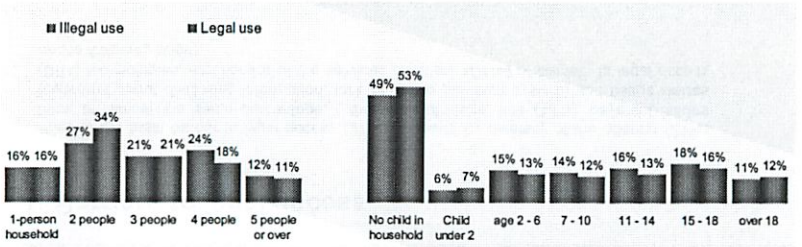
Several profiles are over-represented among web users declaring illegal use: men and those aged 15 to 39. Inversely, web users declaring legal use are mostly women, and they are in the higher age brackets.

There is no difference in terms of socio-professional category or geographical location.



Profiles (household type, age of children)

Web users declaring illegal use are more widely represented in 4-person households, although the age of the children in the household has no influence.



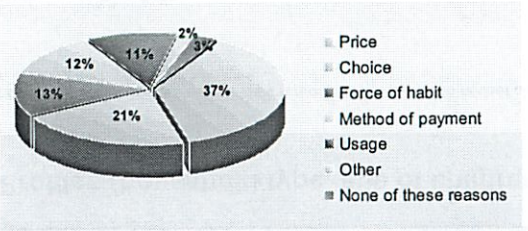
Difference between declared illegal access and perceptions of what the French do

49% of web users said that they accessed cultural assets illegally; however, almost all web users (95%) think that all French web users illegally access cultural assets.

	Generally, when you access music, videos, videogames, books, TV series, photos or software on the Internet, would you say that you do so illegally?	Generally, when French web users access music, videos, videogames, books, TV series, photos or software on the Internet, would you say that they do so illegally?	Illegal use	Legal use
TOTAL	100%	100%	100%	100%
Always	4%	2%	3%	2%
Often	9%	43%	54%	33%
Sometimes	15%	41%	33%	50%
Rarely	21%	8%	8%	9%
Never	51%	5%	3%	7%

Barriers to legal access

Price is the main barrier to legal access (37%), followed by diversity of the offering (21%) then, at almost the same percentage, the habit of illegal use (13%), payment issues (concerns about disclosing information, lack of online payment system) and usage issues (DRM technologies, ergonomics of the services on offer). (*Detail of barriers to legal access on the following page*).



Barriers to legal access

The main reason stated by web users declaring illegal use (at least one in two) concerns the unit cost of the legal offering (57%) and subscription cost (50%).

For what reason do you not access music, videos, videogames, books, TV series, photos or software legally?	Illegal use		
Unit price is too high	57%	Price	37%
Subscription price is too high	50%		
Offering on sites is too limited	21%	Choice	21%
Not easy to find the work I'm looking for (too new, translations unavailable)	21%		
I cannot discover new releases quickly this way	19%		
Why should I pay for something when I can get it for free?	22%	Habit	13%
By force of habit, I've always accessed content for free	17%		
I'm afraid of disclosing my bank details	26%	Payment method	12%
I have no bank card or other methods of payment (Paypal, gift certificates)	9%		
DRM technologies prevent you from saving or accessing the content on other devices	21%	Usage	11%
The sites are not easy to use	10%		
I don't know of any paid-for, legal sites	7%		2%
None of these reasons	9%		3%

Reasons grouped and percentage re-calculated as 100% of reasons.

All the reasons mentioned are added together = 290% (almost 3 reasons given per individual) and the total is re-percentaged over the total of reasons given to estimate the weight of each barrier (cf graph on previous page).

Barriers to legal access by profile

For what reason do you not access music, videos, videogames, books, TV series, photos or software legally?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Unit price is too high	57%	60%	53%	61%	59%	49%	55%	55%	59%	57%	57%
Subscription price is too high	50%	52%	47%	53%	51%	45%	47%	53%	51%	50%	49%
Offering on sites is too limited	21%	22%	20%	23%	22%	18%	23%	19%	21%	27%	20%
Not easy to find the work I'm looking for	21%	20%	21%	23%	23%	15%	24%	16%	21%	30%	19%
I can't discover new releases quickly this way	19%	22%	15%	20%	23%	15%	21%	16%	20%	28%	18%
Why should I pay for something when I can get it for free?	22%	25%	19%	30%	21%	14%	17%	25%	25%	18%	23%
By force of habit, I've always accessed content for free	17%	20%	13%	22%	18%	9%	17%	14%	19%	21%	16%
I'm afraid of disclosing my bank details	26%	22%	31%	33%	19%	23%	16%	29%	32%	18%	27%
I have no bank card or other methods of payment (Paypal, gift certificates)	10%	9%	10%	18%	4%	4%	2%	5%	19%	6%	10%
DRM technologies prevent you from saving or accessing the content on other devices	21%	26%	14%	18%	27%	16%	27%	17%	19%	29%	19%
The sites are not easy to use	10%	10%	9%	12%	7%	10%	9%	9%	11%	12%	9%
I don't know of any paid-for, legal sites	7%	5%	9%	7%	7%	6%	5%	9%	6%	6%	7%
None of these reasons	9%	8%	10%	6%	5%	17%	10%	11%	7%	9%	9%

Barriers to legal access by profile

Price as a major barrier to legal access is mentioned accros the board by all populations.

Lack of choice was cited mostly by Paris Metropolitan Region residents *"not easy to find the content"* (30% vs 21% on average), *"doesn't help you find out about new content"* (28% vs 19% on average).

Force of habit is mentioned particularly by those aged 15-24, but is insignificant among those aged 40 and over: *"why pay for something when I can get it for free?"* (those aged 15-24 30% vs 22% on average / those aged 40 and over 14%) – *"through force of habit I've always accessed content for free"* (those aged 15-24 22% vs 17% on average / those aged 40 and over 9%).

Methods of payment, *"I'm concerned about revealing my bank details"*, are a particular problem for those aged 15-24 (33% vs 26% on average), the non-working population (32%) and women (31%), as is *"I don't have a bank card"* the non-working population (19% vs 10% on average) and those aged 15-24 (18%).

Usages and particularly DRM technologies are mentioned more frequently by Paris Metropolitan Region residents (29% vs 20% on average), Professional category+ and those aged 25-39 (respectively 27%) as well as by men (26%).

Web users' equipment

Web users declaring illegal use are better-equipped, particularly in terms of products such as laptops (68%), external hard drives (53%), games consoles (52%), smartphones (33%) and netbooks (15%).

Which of the equipment below do you own?	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
Digital camera	84%	83%	85%
Mobile phone	83%	83%	83%
Webcam	70%	74%	65%
Computer	70%	70%	71%
Laptop	64%	68%	61%
External hard drive	47%	53%	41%
MP3 player (iPod, Archos)	45%	51%	39%
Games console (PS3, Xbox360, Wii)	45%	52%	38%
Portable games console (DS, PSP)	34%	39%	30%
Smartphone (iPhone, Blackberry, HTC)	27%	33%	22%
Portable DVD player	21%	23%	20%
Internet TV	20%	22%	18%
Video player (iPod, Archos)	15%	20%	11%
Netbook or touch tablet (iPad)	12%	15%	10%
PDA (electronic diary)	5%	6%	5%
Electronic book (eBook, Kindle)	1%	1%	1%
None of these products	1%	0%	1%

Web users' equipment by profile

Which of the equipment below do you own?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Digital camera	84%	81%	87%	76%	86%	87%	86%	86%	80%	85%	84%
Mobile phone	83%	78%	88%	81%	81%	85%	80%	87%	82%	82%	83%
Computer	70%	74%	67%	59%	67%	79%	70%	72%	69%	66%	71%
Webcam	70%	71%	68%	72%	69%	69%	71%	69%	68%	72%	69%
Laptop	64%	64%	64%	68%	71%	58%	74%	59%	59%	72%	62%
External hard drive	47%	53%	41%	44%	56%	43%	57%	43%	41%	56%	45%
Games console	45%	46%	43%	57%	53%	32%	45%	50%	41%	47%	44%
MP3 player	45%	44%	46%	57%	47%	36%	46%	44%	44%	49%	44%
Portable games console	34%	32%	36%	42%	41%	25%	33%	39%	32%	33%	35%
Smartphone	27%	35%	19%	27%	34%	23%	40%	23%	20%	40%	25%
Portable DVD player	21%	22%	21%	22%	22%	20%	23%	21%	20%	24%	20%
Internet TV	20%	18%	22%	19%	18%	22%	19%	23%	19%	21%	20%
Video player	15%	16%	13%	24%	12%	13%	17%	13%	17%	19%	15%
Notebook or touch tablet	12%	14%	11%	15%	13%	11%	15%	11%	11%	16%	12%
PDA	5%	7%	3%	4%	4%	6%	9%	3%	4%	12%	4%
Electronic book	1%	2%	1%	2%	1%	1%	2%	1%	1%	3%	1%
None of these products	1%	1%	0%	2%	0%	0%	0%	1%	1%	1%	1%

Web users' equipment by profile

More laptops among Professional category+ (74% vs 64% on average), Paris Metropolitan Region residents (72%) and those aged 25-39 (71%).

More external hard drives among Professional category+ (57% vs 47% on average), Paris Metropolitan Region residents , those aged 25-34 (56%) and men (53%)

More games consoles among those aged 15-24 (57% vs 45% on average), those aged 25-39 (53%) and Professional category- (50%).

More portable games consoles among those aged 15-24 (42% vs 34% on average), those aged 25-39 (41%), Professional category- (39%) and women (38%).

More smartphones among Professional category+, Paris Metropolitan Region residents (40% vs 27% on average), men (35%) and those aged 25-39 (34%).

Frequency of Internet use

77% of web users say that they use the Internet "*many times a day*". This response is more frequent (82%) among those who admit to using the internet illegally.

How often do you use the Internet?	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
Many times a day	**77%**	82%	72%
1 or 2 times a day	**21%**	16%	24%
2 or 3 times per week	**2%**	2%	3%

Frequency of Internet use by profile

How often do you use the Internet?	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Many times a day	77%	80%	74%	79%	80%	74%	80%	73%	78%	83%	76%
1 or 2 times a day	20%	18%	23%	17%	18%	24%	19%	24%	19%	15%	21%
2 or 3 times per week	2%	2%	3%	3%	2%	2%	2%	3%	3%	2%	3%

What users do on the Internet

Web users admitting to illegal use spend more time on the Internet than the overall sample, accessing cultural assets (65% vs. 55% on average), instant messaging services (63%), social networking sites (60%) and to a lesser extent playing online video games (22%) and participating in forums (19%).

Internet activities engaged in at least once a week	TOTAL	Illegal use	Legal use
TOTAL	*100%*	*100%*	*100%*
Send and receive emails with friends and family or colleagues	**86%**	83%	88%
Look at the news	**71%**	69%	72%
Look at your bank accounts	**58%**	60%	56%
Send and receive instant messages (like MSN, Skype) with friends and family	**55%**	63%	47%
Listen to music, watch videos, read books online	**55%**	65%	45%
Check your profile page on a social networking site (Linkedin, Facebook, Viadeo, Twitter)	**54%**	60%	47%
Plan purchases (by looking for practical information)	**29%**	31%	27%
Buy or reserve products or services online	**19%**	21%	17%
Play video games online (World of Warcraft, Second Life)	**18%**	22%	14%
Participate in forums (by leaving comments)	**16%**	19%	13%
Participate in blogs (by leaving comments)	**12%**	12%	11%
Create online editorial content (e.g. write an article on a blog)	**9%**	9%	9%
Upload music / videos, a blog (YouTube, Dailymotion)	**8%**	9%	6%
Gambling (Poker, sport)	**7%**	9%	5%
Buy software, videogames online	**3%**	4%	2%

What users do on the Internet by profile

Internet activities engaged in at least once a week	TOTAL	Men	Women	age 15 - 24	age 25 - 39	age 40 and over	Prof. category+	Prof. category-	Non-working population	Paris Metropolitan Region	Provinces
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Send and receive emails with friends and family or colleagues	86%	84%	87%	71%	91%	91%	94%	86%	78%	90%	85%
Look at the news	71%	75%	68%	48%	77%	80%	81%	69%	63%	79%	69%
Look at your bank accounts	58%	59%	57%	38%	66%	66%	68%	65%	45%	59%	58%
Send and receive instant messages (like MSN, Skype) with friends and family	55%	49%	62%	74%	55%	44%	47%	57%	61%	50%	56%
Listen to music, watch videos, read books online	55%	56%	54%	76%	59%	38%	53%	52%	59%	55%	55%
Check your profile page on a social networking site (Linkedin, Facebook, Viadeo, Twitter)	54%	49%	59%	70%	57%	42%	48%	56%	57%	50%	55%
Plan purchases (by looking for practical information)	29%	30%	28%	19%	33%	32%	35%	29%	23%	33%	28%
Buy or reserve products or services online	19%	18%	20%	11%	24%	21%	28%	16%	13%	26%	17%
Play video games online (World of Warcraft, Second Life)	18%	21%	14%	30%	15%	12%	13%	13%	25%	16%	18%
Participate in forums (by leaving comments)	16%	18%	14%	20%	17%	13%	17%	13%	17%	18%	16%
Participate in blogs (by leaving comments)	12%	12%	12%	18%	10%	9%	10%	10%	15%	12%	12%
Create online editorial content (e.g. write an article on a blog)	9%	9%	9%	12%	6%	9%	12%	7%	8%	10%	9%
Upload music / videos, a blog (YouTube, Dailymotion)	8%	8%	8%	14%	6%	5%	7%	5%	11%	8%	8%
Gambling (Poker, sport)	7%	10%	4%	8%	9%	6%	8%	7%	6%	7%	7%
Buy software, videogames online	3%	5%	1%	4%	3%	3%	3%	3%	3%	4%	3%
None	1%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%

6 CONCLUSIONS

Some conclusions

Hadopi is well-known. Around 45% of web users agree with positive statements on its work (relevance and impact on individual behaviour). Negative statements (illegitimacy and supposed effect on illegal access in general) also attracted widespread support. It is important to note that a third of web users, all questions included, did not give an opinion and are certainly waiting to see what happens.

As far as security is concerned, three quarters of the population know that they must make their Internet access secure; this awareness is greater among those admitting to illegal use.

In terms of the cultural offerings on the Internet, there is some confusion between what is legal and what is illegal, particularly as some illegal services have to be paid for. Certification is the 3rd most important factor determining whether an offering is considered to be legal.

75% of web users spend on average 36 euros per month on cultural assets (including online purchases). Web users declaring illegal use spend more on average. The main barriers to legal use cited are price and choice.

Hadopi

Some conclusions

Half of web users admit to illegal use (at least once), while 95% of those questioned think that French web users behave illegally. There is, therefore, a significant gap between what is declared and what is projected. Illegal use is concentrated mainly among those aged 15-39 and men, and there is no difference between residents of the Paris Metropolitan Region and the Provinces. The practice is not slowing down and is becoming more diverse.

In terms of equipment, those declaring illegal use are better-equipped in general and particularly as regards external hard drives, smartphones and audio /video players.

In terms of impact, almost half of web users declaring illegal use say that Hadopi will not change their behaviour, while a third would be willing to change and a fifth (17%) gave no response. Hadopi can now start to work in an context of openness.

http://www.hadopi.fr/

For more information, please contact the communications team on + 33 1 42 18 39 56 ou presse@hadopi.net

Hadopi

<< Lameflix: Netflix Hires Actors To Give... Lily Allen Said To Be Suing Apple Over Her... >>

Leaked Report Admits That Hadopi First Strike Accusations Won't Be Reviewed For Accuracy

from the *accuse-away!* dept

Filed Under: france, hadopi, oversight, review, three strikes
Companies: tmg

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As the French "three strikes" Hadopi process begins, with tens of thousands of notices being sent out to accused file sharers (their "first strike"), things may be even more ridiculous than previously assumed. Guillaume Champeau fills us in on the details of a leaked report from the French privacy commissioner (Google translation from the original French). Basically, the privacy commissioner CNIL admits that, due to the number of notices being sent, Hadopi will simply not be able to review the accusations for accuracy, and will need to accept the claims from TMG, the company hired by the entertainment industry to accuse people. Here's Champeau's summary:

> *"Rights holders have been authorized in June to collect IP addresses on P2P networks, by recruiting the services of the French company TMG. It will monitor P2P networks, store the IP addresses it believes illegally shares copyrighted works, and their rights holder customers will forward the ones they want to the French HADOPI.*
>
> *Early this week, an internal report by the CNIL was leaked. The CNIL is the Privacy Commissioner in France. It is the Commission which has allowed rights holders to use the TMG services and collect IP addresses.*
>
> *The report says that "due to the high number of expected cases (25 000 a day at first, then 150 000 a day), it is impossible for the [right holders' agents] to check the [infringement] reports one by one. Nonetheless, the system does not have particular control procedures, for instance by sampling, which would allow an agent to detect anomalies in a collection session".*
>
> *It says that **"the actions of the Hadopi will be limited to accepting or denying the transmitted findings, without the ability to check them. The first steps of the "three strikes" process will therefore lay only upon the collection operated by the TMG system".***
>
> *Despite these concerns, the CNIL did authorize the right holders to collect the IP addresses, and did not oppose the 3 strikes process by the Hadopi.*

Read that bold part carefully. What this is saying is that *despite* the fact that you can be kicked off the internet based solely on *accusations*, not convictions, and *despite* all of the problems with false accusations and the fact that an IP address alone does not accurately identify an individual, and *despite* the fact that the massive number of notices being sent out mean that there will surely be false positives, the *only people reviewing these notices to make sure they're accurate will be employed by the agent hired by the copyright holders themselves*. Due process? It's dead.

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RSC Policy Brief:
Three Myths about Copyright Law and Where to Start to Fix it:

November 16, 2012

RSC Staff Contact: Derek S. Khanna, Derek.Khanna@mail.house.gov, (202) 226-0718

This paper will analyze current US Copyright Law by examining three myths on copyright law and possible reforms to copyright law that will lead to more economic development for the private sector and to a copyright law that is more firmly based upon constitutional principles.

1. **The purpose of copyright is to compensate the creator of the content:**
It's a common misperception that the Constitution enables our current legal regime of copyright protection – in fact, it does not. The Constitution's clause on Copyright and patents states:

"To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries;" (Article I, Section 8, Clause 8)

Thus, according to the Constitution, the overriding purpose of the copyright system is to "promote the progress of science and useful arts." In today's terminology we may say that the purpose is to lead to maximum productivity and innovation.

This is a major distinction, because most legislative discussions on this topic, particularly during the extension of the copyright term, are not premised upon what is in the public good or what will promote the most productivity and innovation, but rather what the content creators "deserve" or are "entitled to" by virtue of their creation. This lexicon is appropriate in the realm of taxation and sometimes in the realm of trade protection, but it is inappropriate in the realm of patents and copyrights.

Strictly speaking, because of the constitutional basis of copyright and patent, legislative discussions on copyright/patent reform should be based upon what promotes the

maximum "progress of sciences and useful arts" instead of "deserving" financial compensation.

2. **Copyright is free market capitalism at work:**
Copyright violates nearly every tenet of laissez faire capitalism. Under the current system of copyright, producers of content are entitled to a guaranteed, government instituted, government subsidized content-monopoly.

It is guaranteed because it is automatic upon publishing.

It is a system implemented and regulated by the government, and backed up by laws that allow for massive damages for violations. These massive damages are not conventional tort law damages, but damages that are vastly disproportionate from the actual damage to the copyright producer. For example, Limewire was sued for $75 trillion, based upon Section 504(c)(1) of the Copyright Action enabling such large fines per violation. This potential award is more money than the entire music recording industry has made since Edison's invention of the phonograph in 1877, and thus in no way corresponds to the actual demonstrated "damages," to the record industry. By Congress creating an arbitrary statutory fine for damages the government has implemented its own system for dissuading copyright violation, above and beyond conventional tort law for a perceived "property" like right.

In addition, it is a government-subsidized monopoly in another sense. Copyright violators can face jail time, and government agencies are tasked with investigating copyright violations and stopping these activities. This may be a good decision or a bad decision, but, it is a form of the government subsidizing the costs of recovering assets that may or may not be considered to have been "stolen." There are other industries where the government has also chosen to subsidize in a similar manner, but the point here is that this is not a strictly laissez faire capitalistic institution.

Wave stronger than my pov!

3. **The current copyright legal regime leads to the greatest innovation and productivity:**

There is surely an argument in favor of copyright, and it is the argument that our Founding Fathers were familiar with. While the size and scope of current copyright violations are vastly disproportionate to anything in previous history, in the 18th century our Founding Fathers were familiar with copyright violation. In fact Great Britain was quite angry at what was perceived to be rampant theft in the colonies of their intellectual property in the form of literature.

With this in mind, our Founding Fathers wrote the clause in the Constitution on protecting content. But they knew that there was a very serious cost for this government-instituted monopoly. It is a balancing test to ensure that we have the maximum amount of productivity overall.

With no copyright protection, it was perceived that there would be insufficient incentive for content producers to create new content – without the ability to compensate them for their work. And with too much copyright protection, as in copyright protection that carried on longer than necessary for the incentive, it will greatly stifle innovation. In addition, excessive copyright protection leads to what economists call "rent-seeking" which is effectively non-productive behavior that sucks economic productivity and potential from the overall economy.

This Goldilocks-like predicament – not too little and not too much – was what our Founding Fathers had in mind with the phrase "securing for limited Times."

Current status of Copyright Law?:

Under the Copyright Act of 1790, the first federal copyright act, it stated that the purpose of the act was the "encouragement of learning" and that it achieved this by securing authors the "sole right and liberty of printing, reprinting, publishing and vending" their works for a term of 14 years, with the right to renew for one additional 14 year term should the copyright holder still be alive. This is likely what our Founding Fathers meant when they wrote in the Constitution for a "limited time." Gradually this period began to expand, but today's copyright law bears almost no resemblance to the constitutional provision that enabled it and the conception of this right by our Founding Fathers.

- **Original Copyright Law:** 14 years, plus 14 year renewal if author is alive.

- **Current Copyright Law:** Life of author plus 70 years; and for corporate authors 120 years after creation or 95 years after publication.

Critics of current law point out that the terms of copyright continue to be extended perpetually, ensuring that works never actually enter the public domain – particularly Walt Disney's production of Steamboat Willey, the first Mickey Mouse film. If this is true, if copyright is to be indefinitely extended, then that would effectively nullify Article I, Section 8, Clause 8 of the Constitution which provides protection only for "limited times."

Disney - - -

Can we ever have too much copyright protection?:

Yes. The Federal government has gotten way too big, and our copyright law is a symptom of the expansion in the size and scope of the federal government.

Today's legal regime of copyright law is seen by many as a form of corporate welfare that hurts innovation and hurts the consumer. It is a system that picks winners and losers, and the losers are new industries that could generate new wealth and added value. We frankly may have no idea how it actually hurts innovation, because we don't know what isn't able to be produced as a result of our current system. But we do know that our copyright paradigm has:

A. Retarded the creation of a robust DJ/Remix industry:

Many other countries have a robust culture of DJ's and remixing, but the United States, quite perplexingly as the creator of a large portion of the world's content, is far behind. DJ/remix culture is a democratizing system where self-starters can compete based upon merit. In other countries, every 16-year-old with a computer and "Virtual DJ" software can remix various songs and compete based upon talent. As a result there are thriving DJ/remix markets in Turkey and other countries. These DJ's put their content online or sell mix-tapes (no longer tapes) and there is a meritocratic system that continues to innovate.

However, in the United States this culture is heavily retarded.

DJ's in the United States are mainly live performers, as there are heavy restrictions on what they are allowed to release and sell as mix-tapes. There are convoluted rules are on what parts of songs that they can sample, often requiring input from lawyers to avoid massive fines or lawsuits. As a result, in the United States there are great live performer DJ's, but selling most "real" mix-tapes by small level DJ's is illegal and disincentivized. This stifles most forms of mash-ups or selling of remixed songs by independent artists.

This does not completely eliminate the remix market. While the producing artists themselves can remix their own songs, and major DJ's or other artists can remix other people's songs and pay high level royalties in the $100,000's-per-song range. However, this prohibitively high price range stifles most average DJ's from legally releasing their own mash-up or remixed songs. While there is an underground remix black market, this market is nothing like it would be if this were legalized.

market is tilted towards the big corp

Since these prospective new remixes would not replace the original songs, but merely supplement them and perhaps even increase sales of the original songs, overall productivity is greatly hampered by making production of these materials effectively illegal.

B. Hampering scientific inquiry:

Scientific papers from the early portion of the 20th century are still under copyright. . . This is illogical, as the purpose of most scientific papers is to further intellectual inquiry, and the goal of most authors of scientific papers is to advance their field and to be cited in other publications. Many professors are assessed upon the number of citations for their major works. For these reasons, keeping their work in what are effectively *locked vaults* defeats the purpose of much of their work.

Academic copyright is silly

Obviously these producers need to be compensated to justify the cost of their research, but after around14 years, most, if not nearly all, of the earning capacity of their work has been exhausted, and at that point the overriding interest is in ensuring that these works are available for others. While there are exceptions in the law for the use of this material for good faith exceptions, there are numerous examples where for-profit entities want to use published journal articles but are unable to do so without negotiating a payment to the producer of the content.

If however, these older papers were available online for free on Google Scholar to anyone to access and use after a reasonable period of time then it would greatly increase the availability and utilization of scientific analysis.

C. Stifling the creation of a public library:

Many of our country's smartest and most successful people were autodidacts who taught themselves far beyond that of conventional studies through intellectual inquiry of their own and a voracious appetite for reading. Benjamin Franklin conceived the idea of a subscription library because libraries allow for information to be democratized to the masses. Today the sheer amount of information available to the average person is several orders of magnitude beyond that available in 1990, let alone in 1790. But still today an enormous amount of intellectual knowledge in locked behind physical books, rather than accessible on the general internet.

Project Gutenberg is trying to change that by becoming an online repository for a readable/downloadable version of every book available without copyright. Project Gutenberg's full potential will be to provide the greatest amount of intellectual knowledge ever assembled in the history of the world to any person with the click of a button.

But this potential of knowledge drops off around 1923 when materials are not in the public domain. Imagine the potential for greater learning as a result of obtaining books from the 1920-1980 periods. Assigned books in high school classes could be all downloaded to a student's Kindle, rather than bought in a book store. The

Online = subscription period

pre 80s books don't encourage innovation
could argue long term rev part of biz model but so rare

threshold cost for learning will virtually vanish, and with that, the potential for greater learning would skyrocket.

From a technological perspective, the data size of books is very small - for example, every book in the Kindle store could fit on one of the largest available consumer hard drives – thus in a few years it may be technologically possible to have every book ever written on our computer or IPAD at the click of a button (though not necessarily worthwhile because it's easier to just access the books you need when you need them online).

D. Discouraging added-value industries:

While the current paradigm may work great for content producers, it doesn't work great for the creation of other industries. There is enormous potential for other added-value industries on top of existing media. For example, in a world where movies, television shows and books that were 30+ years old were available in the public domain, you would likely see new industries crop up to offer a new experience on top of this media.

A. Reading a book with pop-up text on extra information on given topics.

B. Watching a movie with "VH1 Pop-up video" add-ons to provide trivia and relevant information. There would be thousands of fan generated content analyzing Star Wars by providing commentary and analysis.

E. Penalizes legitimate journalism and oversight:

This effect is perhaps the most extreme effect of our current copyright law and the most unacceptable. Current copyright law allows for producers of written materials, such as memos or other documents, to claim copyright when they are seeking to hide incriminating information. While these materials can be produced in court, producing this information in the media or through an oversight organization is often illegal.

Imagine if there were a memo published by a well-known DC think-tank during World War 2 and this memo was on the topic of endorsing Nazism and Adolph Hitler. Likely if it were published in the 1940's, few memos would still be around, and it would likely fade into history never to be remembered. But if an enterprising reporter or political organization were to find a copy of these memos they would still likely be protected by copyright. If that reporter or political organization put the memo on their website as proof of the think-tank endorsing Nazism and Hitler, then they are liable for significant damages for copyright violation. The think-tank is likely to sue them or threaten to do so to avoid the memo going public in the first place.

News interest

This is a disgusting use of copyright, yet there are numerous examples of copyright being used in this manner – in order to stifle oversight and hide incriminating information. This is not the purpose of copyright, and our democracy functions best when the fourth estate is able to provide this type of information to the public.

Potential Policy Solutions:

1. **Statutory Damages Reform:**

Copyright infringement has statutory damages, which most copyright holders can and do use in litigation (rather than having to prove actual damages). The government sets a range – which is $750 to $30,000 per infringement – but that goes up to $150,000 if the infringement is "willful." Evidence suggests that the content holder almost always claims that it is willful. This fine is per infringement. Those rates might have made sense in commercial settings (though even then they arguably seemed high), but in a world where everyone copies stuff at home all the time, the idea that your iPod could make you liable for a billion dollars in damages is excessive.

Further, this system creates a serious clogging of the courts, because copyright holders now recognize that they can accuse anyone of infringement, and include the threat of $150,000 awards per violation. But in reality, most people then settle for less than that sum, say $3,000. Scaring a large number of potentially innocent people into settling should not be an effect of copyright law.

Copyright awards were meant to make the copyright holder whole – they were not supposed to be punitive. Reforming this process is an important element of federal tort reform, which unlike other forms of tort reform is clearly within the federal prerogative.

2. **Expand Fair Use:**

Right now, it's somewhat arbitrary as to what is legally fair use based upon judicially created categories. One example: parodies are considered protected by fair use but satire is not. There's an excellent book (and a shorter paper) called Infringement Nation that details how things you do every single day are infringing and leave every single person liable for billions in damages each year (http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1029151).

3. **Punish false copyright claims:**

Because there is minimal or nearly non-existent punishment for bogus copyright claims today, false takedown requests are common and have a chilling effect upon legitimate speech. While those filing a takedown request have to swear on the threat of perjury, that swearing is only in regard to whether the work is theirs but not whether the work is

actually infringing. The court has said that their needs to be "subjective bad faith" in order to be sanctioned for false takedown requests. This often leads to de facto censorship.

4. **Heavily limit the terms for copyright, and create disincentives for renewal:**

Because of the reasons explained in this paper, the constitutional conception of copyright was for a limited period of time. For our Founders this was 14 years for copyright with a potential renewal for another 14 years if the author was alive.

Current public policy should create a disincentive for companies to continue their copyright indefinitely because of the negative externalities explained in this paper. Unlike many forms of government revenue, generating revenue by disincentivizing activities with negative externalities is one way for the government to pay for its operations. This is a far superior way for the government to generate revenue rather than having a tax system that disincetivizes work.

Below is a suggestion for one such proposal:

A. Free 12-year copyright term for all new works – subject to registration, and all existing works are renewed as of the passage of the reform legislation. If passed today this would mean that new works have a copyright until 2024.
B. Elective-12 year renewal (cost 1% of all United States revenue from first 12 years – which equals all sales).
C. Elective-6 year renewal (cost 3% of revenue from the previous 12 years).
D. Elective-6 year renewal (cost 5% of revenue in previous 6 years).
E. Elective-10 year renewal (10% of ALL overall revenue – fees paid so far).

This proposal would terminate all copyright protection after 46 years. This is obviously a steep cliff, particularly from the extension of copyright from 36 to 46 years. But the point is to discourage indefinite copyright.

Conclusion: To be clear, there is a legitimate purpose to copyright (and for that matter patents). Copyright ensures that there is sufficient incentive for content producers to develop content, but there is a steep cost to our unusually long copyright period that Congress has now created. Our Founding Fathers wrote the Constitution with explicit instructions on this matter for a limited copyright – not an indefinite monopoly. We must strike this careful Goldilocks-like balance for the consumer and other businesses versus the content producers.

It is difficult to argue that the life of the author plus 70 years is an appropriate copyright term for this purpose – what possible new incentive was given to the content producer for content protection for a term of life plus 70 years vs. a term of life plus 50 years? Where we have

reached a point of such diminishing returns we must be especially aware of the known and predictable impact upon the greater market that these policies have held, and we are left to wonder on the impact that we will never know until we restore a constitutional copyright system.

Current copyright law does not merely distort some markets – rather it destroys entire markets.

<< Unsealed Megaupload Seizure Warrants Reveal... Nick Grossman's Favorite Techdirt Posts Of... >>

House Republicans: Copyright Law Destroys Markets; It's Time For Real Reform

from the *congress-wakes-up* dept

Surprises
by Mike Masnick
Fri, Nov 16th 2012
7:39pm

1

Filed Under: congress, copyright reform, sopa

Permalink.

Update: Wow. It took less than 24 hours for the RSC to fold to Hollywood pressure. They have now retracted the report and attempted to claim that it was not properly vetted.

Right after the Presidential election last week, Chris Sprigman and Kal Raustiala penned an opinion piece suggesting that one way the Republicans could "reset", and actually attract the youth vote, would be to become the party of copyright reform. We had actually wondered if that was going to happen back during the SOPA fight, when it was the Republicans who bailed on the bill, while most of those who kept supporting it were Democrats. Since then, however, there hadn't been much movement. Until now. Late on Friday, the Republican Study Committee, which is the caucus for the House Republicans, released an amazing document debunking various myths about copyright law and suggesting key reforms.

If you're used to Congress not understanding copyright, prepare to be surprised. It's clear, thorough and detailed about just how problematic copyright has become and why it needs to change. To give you a sense of where the document heads, note the final line:

> *Current copyright law does not merely distort some markets -- rather it destroys entire markets.*

There is a lot in this document, and we can't go through it all, but I highly recommend reading through it. The three "myths" it attacks are:

1. **That the purpose of copyright is to compensate the creator.** No, it correctly notes, it's about benefiting the public:

> *Thus, according to the Constitution, the overriding purpose of the copyright system is to "promote the progress of science and useful arts." In today's terminology we may say that the purpose is to lead to maximum productivity and innovation.*
>
> *This is a major distinction, because most legislative discussions on this topic, particularly during the extension of the copyright term, are not premised upon what is in the public good or what will promote the most productivity and innovation, but rather what the content creators "deserve" or are "entitled to" by virtue of their creation. This lexicon is appropriate in the realm of taxation and sometimes in the realm of trade protection, but it is inappropriate in the realm of patents and copyrights.*

2. **That copyright is a representation of free market capitalization.** The paper properly notes that the reality is the exact opposite:

> *Copyright violates nearly every tenet of laissez faire capitalism. Under the current system of copyright, producers of content are entitled to a guaranteed, government instituted, government subsidized content-monopoly.*

3. **That the current copyright regime leads to the greatest level of innovation and productivity.** That makes no sense at all, the paper says:

> *Today's legal regime of copyright law is seen by many as a form of corporate welfare that hurts innovation and hurts the consumer. It is a system that picks winners and losers, and the losers are new industries that could generate new wealth and added value. We frankly may have no idea how it actually hurts innovation, because we don't know what isn't able to be produced as a result of our current system.*

From there, it goes on to look at some of the specific harms of today's copyright law, including harming remix culture and a lot of commercial activity around it, that it "hampers scientific inquiry," discouraging value added industries and others.

Finally, it puts forth suggestions for copyright reform that go way, way, way beyond anything we've seen legitimately discussed in Congress, ever. Below I just show some snippets from the recommendations, so go read the full thing.

1. ***Statutory Damages Reform:***

   Copyright infringement has statutory damages, which most copyright holders can and do use in litigation (rather than having to prove actual damages). The government sets a range - which is $750 to $30,000 per infringement - but that goes up to $150,000 if the infringement is "willful." Evidence suggests that the content holder almost always claims that it is willful. This fine is per infringement. Those rates might have made sense in commercial settings (though even then they arguably seemed high), but in a world where everyone copies stuff at home all the time, the idea that your iPod could make you liable for a billion dollars in damages is excessive.

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   Because there is minimal or nearly non-existent punishment for bogus copyright claims today, false takedown requests are common and have a chilling effect upon legitimate speech. While those filing a takedown request have to swear on the threat of perjury, that swearing is only in regard to whether the work is theirs but not whether the work is actually infringing. The court has said that their needs to be "subjective bad faith" in order to be sanctioned for false takedown requests. This often leads to de facto censorship.

4. ***Heavily limit the terms for copyright, and create disincentives for renewal:***

   Current public policy should create a disincentive for companies to continue their copyright indefinitely because of the negative externalities explained in this paper. Unlike many forms of government revenue, generating revenue by disincentivizing activities with negative externalities is one way for the government to pay for its operations. This is a far superior way for the government to generate revenue rather than having a tax system that disincetivizes work.

It goes on to suggest a sliding scale for copyright renewal, after a free initial term of 12 years. The fee for renewal would be a percentage of revenue from the work, and that percentage increases with each additional renewal term. Under such a system, those who are still exploiting the copyright can continue to hold one, but for most, where there is greater benefit to have the work in the public domain, the work goes into the public domain.

This document really is a watershed moment. Even if it does not lead to any actual legislation, just the fact that some in Congress are discussing how copyright *has gone way too far* and even looking at suggestions that focus on what *benefits the public the most* is a huge step forward from what we've come to expect. In many ways, this is the next logical step after the completion of the SOPA fight. Rather than just fighting bad policy, it's time for Congress to recognize that *existing copyright law is bad policy* and now is the time to fix it. It comes as a surprise, but kudos to the Republican Study Committee -- and specifically Derek Khanna, the policy staffer who wrote the document -- for stepping up and saying what needed to be said, but which too many in Congress had been afraid to say for fear of how the entertainment industry lobbyists would react.

Draft 11/8

STS.085 Project

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Proposal

2012 saw the reemergence of copyright legislation in the public consciousness, especially in the wake of SOPA and PIPA, which sought to combat piracy on the Internet. The resulting backlash against these bills—both from Internet users and businesses themselves, as well as from political opposition—indicate divisive attitudes over the effectiveness of the proposed anti-piracy mechanisms. Our project aims to develop a framework for the cost-benefit analysis of such anti-piracy mechanisms. In order to do this, we will design a model that will evaluate different metrics of effectiveness and pose a number of questions. Will the policy actually make a difference? Can the policy be implemented robustly? Can pirates easily avoid the mechanism? What are the costs and challenges of implementation? Does the policy violate the standards of the Internet? Will the policy prevent us from accomplishing other goals, such as tightening up cyber security? Will certain actors incur a cost, and if so, who will pay for it? To supplement this analysis, we will review existing literature on the economic costs of online piracy and develop a system of classifying these losses. Based on these issues, the long-term goal for this evaluative framework will be to encompass a common set of values, standards, and metrics for the analysis and discussion of future proposed anti-piracy mechanisms. With this model, we hope to enable a more robust discussion of how to address the piracy problem without compromising the underlying structures of the open Internet and—by extension—the civil liberties guaranteed by those structures and the ecosystem for innovation that they have enabled. This analysis will also take into account pragmatic issues of economic costs, possible political challenges, and other barriers to comprehensive implementation. We will also be sure to examine copyright law pre- and post- Internet, to see how notions of intellectual property and proper enforcement of those exclusive rights have changed over time, in order to better contextualize the issue. To illustrate the usefulness of such a framework, we will show it in action by running an analysis of recent graduated response policies proposed to combat online piracy—specifically, the HADOPI law in France and the "six strikes" Copyright Alert System being implemented here in the US as part of an agreement between the MPAA, the RIAA, and a number of major ISPs. To put this assessment into perspective, we will also use our framework to evaluate the effectiveness of the previous anti-piracy paradigm of filing lawsuits against individual users, using it as a benchmark for comparison. Through this analysis, we will be able to identify the merits and downsides of graduated response mechanisms, discuss them in relation to traditional copyright litigation strategies, and provide comprehensive policy suggestions. Ideally, the framework we develop in this project can also be extended to other anti-piracy mechanisms and create a more standardized system for analyzing and deciding between these kinds of policies.

Exec Summary

Review of current literature

Piracy has been and continues to be a big problem for the creative content industries. While estimates on the scale of the problem vary, most people believe something should be done to reduce the availability of unauthorized copies of work.

Should something be done?

For the last decade, the content industries have been trying to fight unauthorized sharing online. A number of methods have been tried, including having the industry sue individual downloaders. However, recent efforts have been coalescing around so called "graduated response" efforts. Under a graduated response system, a user is sent a number of warnings, before a penalty, which might include service termination. Such systems can be mandated by law, such as in France, or through a voluntary agreement with Internet Service Providers (ISPs).

We attempt to establish a framework to evaluate proposals to combat piracy. As part of this we will evaluate currently existing information and studies. We will evaluate recent graduated response systems against our framework.

Evaluative framework

Is if effective in reducing piracy?

1. Is effective in reducing piracy
    a. Ease of circumvention

The first question to ask about any policy is "is the policy effective in reducing piracy?" A policy that does not reduce piracy should not be considered further.

Ease of Circumvention

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

It is certainly possible to download a program from the internet to make copies of DVDs, but the very fact that it is not easy prevents vast amounts of Americans from even trying.

It is not even that hard to find out how to do it. Searching for "how to rip a DVD" yielded instructions on the first result. Now such instructions are somewhat complicated, with instructions to download a .dll to a certain programs folder location, but it still requires moderate tech skills.

Keeping material illegal makes it harder to find. Even though the industry has been unsuccessful in shutting down the Pirate Bay, it has prevented it from becoming a legitimate business. By keeping the business illegal and keeping it on the run, the industry has made the life of the Pirate Bay harder.

However there is still a core group of techies and dedicated other folks who have the knowledge to learn how to circumvent these measures and cover their tracks.

This can hamper the effectiveness of certain proposals. For example, SOPA proposed altering DNS information to remove sites that infringed on copyright.[1] However, a user could just enter the IP address of a site instead. For example, thepiratebay.se is located at 194.71.107.15. Entering this into ones browser brings on to The Pirate Bay even if the DNS service is down.

Now if the Pirate Bay ever has to change servers, then moving their IP address would be hard, as these are usually assigned in blocks (could add more details). However, then "darknet" DNSes could be set up, out of reach of the United States. They could even be distributed, much in the way of Bittorrent itself is. (explain more) which would frustrate any attempt to take it down, because almost every node would need to be taken offline to bring it down.

Economic

2. Does it make economic sense
    a. Revenue in reclaimed sales
    b. Positive effects on employment

Costs

Next, one should look at the costs of a policy to evaluate whether the benefits of the policy outweigh the costs of the policy. In addition, who bears the costs? The content industry? The government? Internet service providers?

How much does the government spend on anti-piracy?

How much is lost by piracy?

(do we put these questions here)

Need to go through studies and write this

Employment

Need to go through studies and write this

Technical

3. Has minimal negative repercussions on internet
    b. e.g. DNS

Internet Infrastructure

Any proposal should not weaken the underlying infrastructure of the internet. For example, the above described proposal would have big effects on the internet.

(research)

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[1] cite

How in infringement detected today?
Trackers?

Etc

Research

Minimally necessary

4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services

Non-infringing Uses
Proposals should not add chilling effects on legitimate uses of copyright technology. For example, United States law permits fair use.

Section 1201 Process
The Digital Millennium Copyright Act was widely panned[2] because it made few exceptions for Fair Use. There was a process set up by Section 1201 of the DMCA.

Every three years, the Library of Congress holds hearings in which citizens can ask for exemptions of the DMCA to make noninfringing use of protected works.[3] For example, in the most recent rulemaking, the Federal Registrar stated that:

> "The primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access control measures is diminishing the ability of individuals to use copyrighted works in ways that are not infringing and to designate any classes of works with respect to which users have been adversely affected in their ability to make such noninfringing uses."[4]

Specifically the Register and the Librarian look at:

(1) The availability for use of copyrighted works
(2) the availability for use of works for nonprofit archival, preservation, and educational purposes
(3) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research
(4) the effect of circumvention of technological measures on the market for or value of copyrighted works

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[2] cite
[3] See http://www.copyright.gov/1201/
[4] http://www.copyright.gov/fedreg/2012/77fr65260.pdf

(5) such other factors as the Librarian considers appropriate.[5]

However, the process is heavy in bureaucracy, taking about one year from initial notice to final rules published in the Federal Registrar.[6] Congress requires that the Register and the Librarian solicit input from a wide range of stakeholders in consideration of a "broad range of current or likely future adverse impacts."

In addition, exemptions expire every 3 years.

Beforehand/Afterhand

In addition, many of today's technologies do not account for fair use. For example, YouTube's Content ID system does not account for fair use before a work is removed.[7] It is only after a work is removed, that the uploader may go to YouTube and contest the removal of the work. One of these options is that the work falls under fair use protection. (screenshots?) The uploader can then describe why they feel the work should receive fair use protection. A YouTube employee then reviews the rationale and decides whether or not to accept the rational. (what happens next?)
Certainly fair use is finicky. The fair use guidelines include:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.[8]

The boundaries are not clear for fair use.

It is especially difficult for a computer to determine if these tests are met. This many services, such as Google's YouTube take down the content first.

Beneficial Services

Many services which make copyright infringement easy can also be used for non-infringing use.

The first significant example is the Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417 case. In this 1984 case, the Supreme Court of the United States found that Betamax machines have "significant non-infringing uses." Furthermore, the time shifting feature of the devices is allowed:

> one potential use of the Betamax plainly satisfies this standard, however it is understood: private, noncommercial time-shifting in the home. It does so both (A) because respondents have no right to prevent other copyright holders from authorizing it for their programs, and (B)

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[5] DMCA Section 1201
[6] http://www.copyright.gov/fedreg/2012/77fr65260.pdf
[7] cite
[8] 17 U.S.C. § 107

> because the District Court's factual findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use

Another example is BitTorrent. Although widely used to download copyright infringing materials, the protocol is also being used to quickly distribute large files without requiring much infrastructure. For example, game developers use BitTorrent to distribute updates to their games.[9] These updates can be quite large (over 500MB). Traditionally companies would buy or rent many racks of servers to provide this content. In addition, these servers would require a lot of bandwidth. As bandwidth grows scarcer, this is becoming a growing concern. Under a BitTorrent model, the company only has to *seed* a few updates to members of the community around the world from their own servers. Other players then download a copy of the update from other users. Not only does this save the game company from requiring extra bandwidth, it also makes the download for the user, especially in countries with limited bandwidth. This is because the file is being downloaded from someone nearby. In addition, this decongests the Internet, requiring less bandwidth. It is win-win scenario.

One example of a case that is currently in progress is Megaupload. Megaupload was a direct-file hosting and download site. Users upload file to Megaupload and then receive a URL. Users could use the site to transmit files larger than email. They could send the URL they received to a friend or business colleague in an email message. Because the actual file was not attached to the email, the email is small enough to be sent on almost all systems. For example, a video production house might use Megaupload to distribute a preview copy of a video to a client. Persons could also use Megaupload as a backup service. They could upload a copy of their important files to Megaupload. If their computer were to crash, they could visit Megaupload again to download the file.

One such ongoing case is the case of Kyle Goodwin.[10] Mr. Goodwin is a videographer. He used Megaupload as a backup service. Shortly before the government's January raid, Mr. Goodwin's hard drive crashed. His only copies of his videos are the ones stored on Megaupload. However, the government is resisting restoring his files.

Stakeholders

No matter how effective, economically and technologically viable, or minimally necessary an anti-piracy mechanism might be, perhaps the most important factor to consider is the political feasibility of such a proposal. Even if a proposed mechanism is a good idea, it must also be acceptable to the various stakeholders involved, whether it be the general population, Hollywood, artists, the tech/internet industry, the international community, and other forms of potential political opposition.

Implementation

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and

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[9] http://torrentfreak.com/bittorrent-to-speed-up-game-distribution-080915/

[10] http://torrentfreak.com/u-s-accuses-megaupload-user-of-storing-pirated-music-121031

Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

Costs of implementation

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

Possible Political Challenges

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

5. Will be acceptable to stakeholders (political/legal argument)
    d. Who will implement? Legal authority/precedents?
    e. Costs of implementation/enforcement
    f. Political views/possible challenges of stakeholders, e.g. industry, citizens, artists

Meta-analysis of Framework

strengths, weaknesses, possibilities for future improvement

Current Policy Debates

HADOPI (Stephen)

6 Strikes vs Lawsuit – Plaz

In early July 2011, the RIAA and the MPAA signed a voluntary agreement with many of the country's largest Internet Service Providers (ISPs) to introduce a "6 Strikes" graduated response system to the United States.[11] The system is officially called the Copyright Alert System or CAS, but in the popular press, the name "6 Strikes" is often used.

[11] Link to agreement itself

Description

Under the system, copyright owners could make complaints against IP addresses to users.[12] ISPs will then forward those complaints on to users – without actually revealing information about the user to the copyright holder. [13]

The "6 Strikes" system establishes the Center for Copyright Information (CCI). The center is tasked with administering the CAS as well as educating the public on copyright issues.[14] The Center is governed by a 6 member advisory board, with 3 members appointed by the content industries and 3 members from Internet Service Providers.[15] There is also a four member advisory board, with members from the Center for Democracy and Technology, Public Knowledge, iKeepSafe, and the Future of Privacy Forum.[16] Reports indicate that these members are serious about a balanced approach and are independent from the other players.[17] However, these members are only advisory. The executive board has no requirement to listen to them. [18] The MOU also requires the executive committee to retain independent technical experts.[19] The MOU prohibits sending alerts from methods deemed to be "fundamentally unreliable."[20] However, the names of these experts is not public. In addition, the reports generated by the experts are not required to be public.

Under the CAS, Copyright owners provide ISPs with documented evidence of infringement.[21] However, there is no common standard format or implantation plan. Instead, each ISP is able to define their own implementation form and data format.[22] Each ISP is also able to define what each of the six strikes definitively means. However, the MOU lays out an outline of what each strike could be.

The first two alerts are purely educational.[23] They do not require any response or action form the user. The alerts will contain information that copyright infringement is illegal, that there are lawful ways to download content, and that further sanctions may follow. The third and fourth alerts also educate the user, albeit in stronger language.[24] They also require the user to take some affirmative action to close the alert.

Finally with the last two alerts, "mitigation measures" or "sanctions" can be taken. The MOU does not mention specific sanctions, but instead offers a menu from which ISPs can choose:

> Such measures include, but are not limited to, a temporary reduction in transmission speed, a temporary step-down in the subscriber's service tier, a temporary redirection to a landing page for completion of a program of copyright instruction, a temporary redirection to a

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[12] MOU Pg 8
[13] MOU Pg 8
[14] MOU Pg 3
[15] MOU Pg 3-4
[16] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[17] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[18] MOU Pg 4
[19] MOU Pg 5
[20] MOU Pg 6
[21] MOU Pg 4
[22] MOU Pg 7
[23] MOU Pg 8
[24] MOU Pg 8

landing page until the subscriber contacts a customer service representative, or a temporary suspension of access.[25]

Unlike some media reports, ISPs are not required to suspend a user's internet access.[26] Instead the ISP may decide which sanctions to implement. Notices reset after 12 months without receiving an alert.[27] Seven days are allowed between each alert that counts towards the six.[28]

Appeal Process

After getting a fifth and sixth notice, a user has 14 days to file an appeal via an "Independent Review Program" before the mitigation measure is imposed.[29] The Independent Review Program is a non-judicial program set up by CCI with the American Arbitration Association (AAA).[30] The overhead of the program is paid by CCI, which is funded equally by content groups and by ISPs.

A user can also appeal their first through fourth notices upon receiving their fifth notice.[31] However, if a user does not appeal those earlier notices at that time, then they cannot again appeal those in the future.[32]

In order to file an appeal, a user fills out an online "Application to Commence Independent Review" or "ACIR" form.[33] In addition, a user must pay a $35 fee on appeal, however, such fee is refundable if a user prevails in their appeal.[34] The user may select from 6 possible defenses:

(1) account misidentification
(2) unauthorized use of account
(3) authorized use of content
(4) fair use
(5) misidentification of content
(6) work published before 1923[35]

The user must include a basis for each defense and possibly provide the corresponding backup material.[36] For example, if a user asserts authorized use, the user must provide specific, written authorization. If a user claims fair use, then they must provide (1) a copy of each file, and (2) an explanation of each use, and the basis for claiming fair use.

The ISP and the Copyright owner will also be able to submit information.

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[25] MOU Pg 11
[26] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 21
[27] MOU Pg 13
[28] MOU Pg 7
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[30] MOU Pg 26
[31] MOU Pg 30
[32] MOU Pg 30
[33] MOU Pg 29
[34] MOU Pg 30
[35] MOU Pg 26-28
[36] MOU Pg 29

The review process is designed to be automated; in addition one reviewer per case is selected by the AAA.[37] Reviewers must be lawyers, but they are not required to have specific copyright experience.[38] However, they are required to have training from a CCI-Approved Copyright expert.[39]

Analysis

Is effective in reducing piracy?

We believe that this method will be effective in reducing piracy (look at Hadoopi).

Compared to the previous system where the content industries directly sued users the new system is much more scalable. Under the old system, companies had to file individual John Doe lawsuits in order to ask a court to unmask a user's identity.[40] The case could then go to a lengthy and expensive trial.[41] Although in many cases, the user settled by paying an average of $1,xxx.[42] This was not cost effective for the industry.[43] The industry did it because they believed it would be a disincentive for users to illegally download files.[44] The new system seems much more efficient in comparison.

Does the policy make economic sense?

The proposal appears to cost very little. In particular, the system attempts to automate as much of the process as possible - it is built for scale. The cost would be mostly in the initial setup of the system.

By having a low cost, the system only needs to stop a little amount of piracy in order to be cost effective.

Does it have minimal negative repercussions on the Internet?

This depends on how the policy is implemented. In the past, some ISPs have intercepted pages and have added banners onto pages in midflight.[45] For example, in 2008 Rogers added a quota message to the top of the Google home page by inserting Javascript into the page using an active version of Deep Packet Inspection. This technology is sold by companies such as PerfTech.[46] Many (who) find the practice of modifying other sites' pages over the Internet to be abhorrent.

Meanwhile almost all wireless access points use some sort of redirection technique to bounce first time visitors to a log in page. (research) However a similar technique may pose problems for the internet. For example, a user may be uploading data in the background when their internet connection is redirected to this message – causing the update to break. Or perhaps a user is connecting to a computer via remote access when the redirection happens. If the redirection is not properly implemented, it could break the remote access connection.

The right DPI technology needs to be implemented to be able to show a message without breaking the internet.

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[37] MOU Page 30 and 31
[38] MOU Pg 33
[39] MOU Pg 35
[40] Reseach/cite
[41] Cite
[42] Cite
[43] Find the quote on how much it cost them
[44] Find quote
[45] http://lauren.vortex.com/archive/000337.html
[46] http://www.perftech.com/

ISPs are not looking for infringement themselves

Is it the minimal necessary? (we should rename this)
This technique still makes no attempt to filter out fair use requests ahead of time. Instead, a user must lend the AAA $35, fill out paperwork, and then wait for a response. The burden of proof of showing fair use is on the user.

It remains to be seen what technical measures are used to identify infringement. This will give us more information of whether it will alarm on the use of services that provide non-infringing use such as Megaupload. (didn't they say just P2P?) (they also can't use the same methods)

Is it acceptable to stakeholders?
Wait for Stephen's section

Other
6 Strikes takes down content first. Can appeal as fair use – but only afterwards

And only then on the 5th and 6th notices

Likely be effective againts main problem

Good to educate people

Good balance

Should be able to complain easily

Not so many long procedural hurdles

Penalities small next to $1000 settlements or hundred k judgements

Should be automated and streamlined

But if you have a problem, should be able to reach someone who has authority over the phone

The fact that the copyright expert needs to be CCI approved is troubling. Content industries have a long history of putting out biased, extreme, or just plain wrong information on copyright. (must cite/backup)

Upcoming policy debates

When evaluating future policies to protect against copyright infringement, policy writes should consider the framework we have outlined above.

Michael E Plasmeier

From: Donald Nathan Stone Unger
Sent: Wednesday, November 14, 2012 7:53 PM
To: Michael E Plasmeier; Stephen J Suen
Cc: 6.805-staff
Subject: Group Ten Project Draft, CI Feedback
Attachments: Group 10 Project Draft DU rsp.docx

Follow Up Flag: Follow up
Flag Status: Flagged

Will the policy actually make a difference?

Can the policy be implemented robustly?

Can pirates easily avoid the mechanism?

What are the costs and challenges of implementation?

Does the policy violate the standards of the Internet?

Will the policy prevent us from ~~accomplishing other goals, such as~~ tightening up cyber security?

Dear Stephen and Michael,

I enjoyed reading this and you are covering interesting and important territory. I've made a couple of marginal notations or organizational suggestions on the draft itself (attached). But my primary observation has to do with degree of specificity.

I've pulled the list above from the first paragraph of your draft. In just about every question, the key word or phrase needs to be made clear, often needs to have a clear metric attached to it. What do you mean by: "make a difference," "robust implementation," "easily avoid," "challenges," "standards of the Internet," or "tightening up security"?

In most cases, the *casual* meaning of what you are saying can be inferred. But for a research or policy document, I would like to see something more readily measurable. So, for example, you might write:

Usually for a policy doc I've never included this

"We grade antipiracy policies or technologies that have been demonstrated to reduce the illicit transfer of a copyrighted movie by 90% as Grade A, 80% Grade B, 70% Grade C, below 70% F. For our statistics we rely on the MPAA."

said will think about this at end

I might quibble with your numbers, in the statement above, and I might have some question about the methodology or the reliability of the MPAA, but I would have a clear idea of how you were measuring success or failure, what numbers you were using, where those numbers came from.

In a related vein, it seems to me that the reality (especially the speed) of technological change means that evaluating the efficacy of a policy has to do at least some "pointing forward." When you write about how easily an anti-piracy measure can be defeated, for example, that's always in flux: the DVD players available to consumers start out "play only"; then DVD burners migrate to home computers; then DVD copying software becomes freely available on the web.

Can you build a degree of flexibility into your terms of assessment to do something to take account of this? If you can, you vastly increase the value of your policy recommendations.

best,

Don

Donald N.S. Unger, MFA, PhD
Lecturer, Program in Writing and Humanistic Studies
Massachusetts Institute of Technology, 12-112
donunger@mit.edu

http://men-can.com
http://www.temple.edu/tempress/titles/2024_reg.html

Don's comments on 11/8
Draft
& Writing Instructor 11/14

STS.085 Project

Michael E Plasmeier <theplaz@mit.edu>

Stephen J Suen <ssuen@mit.edu>

(Copy proposal to Exec Summary)

Proposal

~~2012 saw the reemergence of copyright legislation in the public consciousness, especially in the wake of SOPA and PIPA, which sought to combat piracy on the Internet. The resulting backlash against these bills—both from Internet users and businesses themselves, as well as from political opposition—indicate divisive attitudes over the effectiveness of the proposed anti-piracy mechanisms.~~ Our project aims to develop a framework for the cost-benefit analysis of ~~such~~ anti-piracy mechanisms. ~~In order to do this,~~ Ideally, the framework we develop in this project can also be extended to other anti-piracy mechanisms and create a more standardized system for analyzing and deciding between these kinds of policies.

~~w~~We will design a model that will evaluate different metrics of effectiveness and pose a number of questions.

Will the policy actually make a difference?

Can the policy be implemented robustly?

Can pirates easily avoid the mechanism?

What are the costs and challenges of implementation?

Does the policy violate the standards of the Internet?

Will the policy prevent us from ~~accomplishing other goals, such as~~ tightening up cyber security?

~~Will certain actors incur a cost, and if so,~~ who will pay ~~for it~~?

To supplement this analysis, we will review existing literature on the economic costs of online piracy and develop a system of classifying these losses. Based on these issues, the long-term goal for this evaluative framework will be to encompass a common set of values, standards, and metrics for the analysis and discussion of future proposed anti-piracy mechanisms. With this model, we hope to enable a more robust discussion of how to address the piracy problem without compromising the underlying structures of the open Internet and—by extension—the civil liberties guaranteed by those structures and the ecosystem for innovation that they have enabled. This analysis will also take into account pragmatic issues of economic costs, possible political challenges, and other barriers to comprehensive implementation. We will also be sure to examine copyright law pre- and post- Internet, to see how notions of intellectual property and proper enforcement of those exclusive rights have changed over time, in order to better contextualize the issue. To illustrate the usefulness of such a framework, we will show it in action by running an analysis of recent graduated response policies proposed to combat online piracy—specifically, the HADOPI law in France and the "six strikes" Copyright Alert System being implemented here in the US as part of an agreement between the MPAA, the RIAA, and a number of major ISPs. To put this assessment into perspective, we will also use our framework to evaluate the effectiveness of the previous anti-piracy paradigm of filing lawsuits against individual users, using it as a benchmark for comparison. Through this analysis, we will be able to identify the merits and downsides of graduated response mechanisms, discuss them in relation to traditional copyright litigation strategies, and provide comprehensive policy suggestions. ~~Ideally, the framework we develop in this project can also be extended to other anti-piracy mechanisms and create a more standardized system for analyzing and deciding between these kinds of policies.~~

Comment [D1]: The highlighted words or phrases below are insufficiently clear.

(Winda the point)

Exec Summary

Review of current literature

Piracy has been and continues to be a big problem for the creative content industries. While estimates on the scale of the problem vary, most people believe something should be done to reduce the availability of unauthorized copies of work.

Should something be done?

For the last decade, the content industries have been trying to fight unauthorized sharing online. A number of methods have been tried, including having the industry sue individual downloaders. However, recent efforts have been coalescing around so called "graduated response" efforts. Under a graduated response system, a user is sent a number of warnings, before a penalty, which might include service termination. Such systems can be mandated by law, such as in France, or through a voluntary agreement with Internet Service Providers (ISPs).

We attempt to establish a framework to evaluate proposals to combat piracy. As part of this we will evaluate currently existing information and studies. We will evaluate recent graduated response systems against our framework.

Evaluative framework

Is if effective in reducing piracy?

1. Is effective in reducing piracy
    a. Ease of circumvention

The first question to ask about any policy is "is the policy effective in reducing piracy?" A policy that does not reduce piracy should not be considered further.

Ease of Circumvention

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

It is certainly possible to download a program from the internet to make copies of DVDs, but the very fact that it is not easy prevents vast amounts of Americans from even trying.

It is not even that hard to find out how to do it. Searching for "how to rip a DVD" yielded instructions on the first result. Now such instructions are somewhat complicated, with instructions to download a .dll to a certain programs folder location, but it still requires moderate tech skills.

Keeping material illegal makes it harder to find. Even though the industry has been unsuccessful in shutting down the Pirate Bay, it has prevented it from becoming a legitimate business. By keeping the business illegal and keeping it on the run, the industry has made the life of the Pirate Bay harder.

However there is still a core group of techies and dedicated other folks who have the knowledge to learn how to circumvent these measures and cover their tracks.

This can hamper the effectiveness of certain proposals. For example, SOPA proposed altering DNS information to remove sites that infringed on copyright.[1] However, a user could just enter the IP address of a site instead. For example, thepiratebay.se is located at 194.71.107.15. Entering this into ones browser brings on to The Pirate Bay even if the DNS service is down.

Now if the Pirate Bay ever has to change servers, then moving their IP address would be hard, as these are usually assigned in blocks (could add more details). However, then "darknet" DNSes could be set up, out of reach of the United States. They could even be distributed, much in the way of Bittorrent itself is. (explain more) which would frustrate any attempt to take it down, because almost every node would need to be taken offline to bring it down.

Economic

2. Does it make economic sense
    a. Revenue in reclaimed sales
    b. Positive effects on employment

Costs

Next, one should look at the costs of a policy to evaluate whether the benefits of the policy outweigh the costs of the policy. In addition, who bears the costs? The content industry? The government? Internet service providers?

How much does the government spend on anti-piracy?

How much is lost by piracy?

(do we put these questions here)

Need to go through studies and write this

Employment

Need to go through studies and write this

Technical

3. Has minimal negative repercussions on internet
    b. e.g. DNS

Internet Infrastructure

Any proposal should not weaken the underlying infrastructure of the internet. For example, the above described proposal would have big effects on the internet.

(research)

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[1] cite

Comment [D2]: The matter of "cost" is important to address, but it's also very nebulous as it relates to IP like e-books, music, or movies. Steal a car and you can reasonably be said to have stolen something worth the Blue Book value of that car. Steal digital IP and you have stolen bits. If a (legit) movie DVD sells for $10, yielding $4 in profit for Paramount, it is not necessarily true that Paramount has "lost" that $4; that argument rests on the idea that the purchaser would have bought the movie from Paramount absent the street (or web) opportunity to get the pirated version. You could even argue that pirated movies amount to advertising for the media companies, spreading their wares to people and places that would not have access at market prices, building interest for a time when the purchasers have the wherewithal to buy these items legitimately.

I cared kinda
Can expand

How in infringement detected today?

Trackers?

Etc

Research

Minimally necessary

4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services

Non-infringing Uses

Proposals should not add chilling effects on legitimate uses of copyright technology. For example, United States law permits fair use.

Section 1201 Process

The Digital Millennium Copyright Act was widely panned[2] because it made few exceptions for Fair Use. There was a process set up by Section 1201 of the DMCA.

Every three years, the Library of Congress holds hearings in which citizens can ask for exemptions of the DMCA to make noninfringing use of protected works.[3] For example, in the most recent rulemaking, the Federal Registrar stated that:

> "The primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access control measures is diminishing the ability of individuals to use copyrighted works in ways that are not infringing and to designate any classes of works with respect to which users have been adversely affected in their ability to make such noninfringing uses."[4]

Specifically the Register and the Librarian look at:

> (1) The availability for use of copyrighted works
> (2) the availability for use of works for nonprofit archival, preservation, and educational purposes
> (3) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research
> (4) the effect of circumvention of technological measures on the market for or value of copyrighted works

---

[2] cite

[3] See http://www.copyright.gov/1201/

[4] http://www.copyright.gov/fedreg/2012/77fr65260.pdf

(5) such other factors as the Librarian considers appropriate.[5]

However, the process is heavy in bureaucracy, taking about one year from initial notice to final rules published in the Federal Registrar.[6] Congress requires that the Register and the Librarian solicit input from a wide range of stakeholders in consideration of a "broad range of current or likely future adverse impacts."

In addition, exemptions expire every 3 years.

Beforehand/Afterhand

In addition, many of today's technologies do not account for fair use. For example, YouTube's Content ID system does not account for fair use before a work is removed.[7] It is only after a work is removed, that the uploader may go to YouTube and contest the removal of the work. One of these options is that the work falls under fair use protection. (screenshots?) The uploader can then describe why they feel the work should receive fair use protection. A YouTube employee then reviews the rationale and decides whether or not to accept the rational. (what happens next?)
Certainly fair use is finicky. The fair use guidelines include:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.[8]

The boundaries are not clear for fair use.

It is especially difficult for a computer to determine if these tests are met. This many services, such as Google's YouTube take down the content first.

Beneficial Services

Many services which make copyright infringement easy can also be used for non-infringing use.

The first significant example is the Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417 case. In this 1984 case, the Supreme Court of the United States found that Betamax machines have "significant non-infringing uses." Furthermore, the time shifting feature of the devices is allowed:

> one potential use of the Betamax plainly satisfies this standard, however it is understood: private, noncommercial time-shifting in the home. It does so both (A) because respondents have no right to prevent other copyright holders from authorizing it for their programs, and (B)

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[5] DMCA Section 1201
[6] http://www.copyright.gov/fedreg/2012/77fr65260.pdf
[7] cite
[8] 17 U.S.C. § 107

because the District Court's factual findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use

Another example is BitTorrent. Although widely used to download copyright infringing materials, the protocol is also being used to quickly distribute large files without requiring much infrastructure. For example, game developers use BitTorrent to distribute updates to their games.[9] These updates can be quite large (over 500MB). Traditionally companies would buy or rent many racks of servers to provide this content. In addition, these servers would require a lot of bandwidth. As bandwidth grows scarcer, this is becoming a growing concern. Under a BitTorrent model, the company only has to *seed* a few updates to members of the community around the world from their own servers. Other players then download a copy of the update from other users. Not only does this save the game company from requiring extra bandwidth, it also makes the download for the user, especially in countries with limited bandwidth. This is because the file is being downloaded from someone nearby. In addition, this decongests the Internet, requiring less bandwidth. It is win-win scenario.

One example of a case that is currently in progress is Megaupload. Megaupload was a direct-file hosting and download site. Users upload file to Megaupload and then receive a URL. Users could use the site to transmit files larger than email. They could send the URL they received to a friend or business colleague in an email message. Because the actual file was not attached to the email, the email is small enough to be sent on almost all systems. For example, a video production house might use Megaupload to distribute a preview copy of a video to a client. Persons could also use Megaupload as a backup service. They could upload a copy of their important files to Megaupload. If their computer were to crash, they could visit Megaupload again to download the file.

One such ongoing case is the case of Kyle Goodwin.[10] Mr. Goodwin is a videographer. He used Megaupload as a backup service. Shortly before the government's January raid, Mr. Goodwin's hard drive crashed. His only copies of his videos are the ones stored on Megaupload. However, the government is resisting restoring his files.

Stakeholders

No matter how effective, economically and technologically viable, or minimally necessary an anti-piracy mechanism might be, perhaps the most important factor to consider is the political feasibility of such a proposal. Even if a proposed mechanism is a good idea, it must also be acceptable to the various stakeholders involved, whether it be the general population, Hollywood, artists, the tech/internet industry, the international community, and other forms of potential political opposition.

Implementation

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and

[9] http://torrentfreak.com/bittorrent-to-speed-up-game-distribution-080915/
[10] http://torrentfreak.com/u-s-accuses-megaupload-user-of-storing-pirated-music-121031

Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

Costs of implementation

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Possible Political Challenges

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

5. Will be acceptable to stakeholders (political/legal argument)
    d. Who will implement? Legal authority/precedents?
    e. Costs of implementation/enforcement
    f. Political views/possible challenges of stakeholders, e.g. industry, citizens, artists

Meta-analysis of Framework

strengths, weaknesses, possibilities for future improvement

Current Policy Debates

HADOPI (Stephen)

6 Strikes vs Lawsuit – Plaz

In early July 2011, the RIAA and the MPAA signed a voluntary agreement with many of the country's largest Internet Service Providers (ISPs) to introduce a "6 Strikes" graduated response system to the United States.[11] The system is officially called the Copyright Alert System or CAS, but in the popular press, the name "6 Strikes" is often used.

[11] Link to agreement itself

Description

Under the system, copyright owners could make complaints against IP addresses to users.[12] ISPs will then forward those complaints on to users – without actually revealing information about the user to the copyright holder. [13]

The "6 Strikes" system establishes the Center for Copyright Information (CCI). The center is tasked with administering the CAS as well as educating the public on copyright issues.[14] The Center is governed by a 6 member advisory board, with 3 members appointed by the content industries and 3 members from Internet Service Providers.[15] There is also a four member advisory board, with members from the Center for Democracy and Technology, Public Knowledge, iKeepSafe, and the Future of Privacy Forum.[16] Reports indicate that these members are serious about a balanced approach and are independent from the other players.[17] However, these members are only advisory. The executive board has no requirement to listen to them. [18] The MOU also requires the executive committee to retain independent technical experts.[19] The MOU prohibits sending alerts from methods deemed to be "fundamentally unreliable."[20] However, the names of these experts is not public. In addition, the reports generated by the experts are not required to be public.

Under the CAS, Copyright owners provide ISPs with documented evidence of infringement.[21] However, there is no common standard format or implantation plan. Instead, each ISP is able to define their own implementation form and data format.[22] Each ISP is also able to define what each of the six strikes definitively means. However, the MOU lays out an outline of what each strike could be.

The first two alerts are purely educational.[23] They do not require any response or action form the user. The alerts will contain information that copyright infringement is illegal, that there are lawful ways to download content, and that further sanctions may follow. The third and fourth alerts also educate the user, albeit in stronger language.[24] They also require the user to take some affirmative action to close the alert.

Finally with the last two alerts, "mitigation measures" or "sanctions" can be taken. The MOU does not mention specific sanctions, but instead offers a menu from which ISPs can choose:

> Such measures include, but are not limited to, a temporary reduction in transmission speed, a temporary step-down in the subscriber's service tier, a temporary redirection to a landing page for completion of a program of copyright instruction, a temporary redirection to a

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[12] MOU Pg 8
[13] MOU Pg 8
[14] MOU Pg 3
[15] MOU Pg 3-4
[16] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
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[25] MOU Pg 11
[26] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 21
[27] MOU Pg 13
[28] MOU Pg 7
[29] MOU Pg 14
[30] MOU Pg 26
[31] MOU Pg 30
[32] MOU Pg 30
[33] MOU Pg 29
[34] MOU Pg 30
[35] MOU Pg 26-28
[36] MOU Pg 29

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Compared to the previous system where the content industries directly sued users the new system is much more scalable. Under the old system, companies had to file individual John Doe lawsuits in order to ask a court to unmask a user's identity.[40] The case could then go to a lengthy and expensive trial.[41] Although in many cases, the user settled by paying an average of $1,xxx.[42] This was not cost effective for the industry.[43] The industry did it because they believed it would be a disincentive for users to illegally download files.[44] The new system seems much more efficient in comparison.

Does the policy make economic sense?
The proposal appears to cost very little. In particular, the system attempts to automate as much of the process as possible - it is built for scale. The cost would be mostly in the initial setup of the system.

By having a low cost, the system only needs to stop a little amount of piracy in order to be cost effective.

Does it have minimal negative repercussions on the Internet?
This depends on how the policy is implemented. In the past, some ISPs have intercepted pages and have added banners onto pages in midflight.[45] For example, in 2008 Rogers added a quota message to the top of the Google home page by inserting Javascript into the page using an active version of Deep Packet Inspection. This technology is sold by companies such as PerfTech.[46] Many (who) find the practice of modifying other sites' pages over the Internet to be abhorrent.

Meanwhile almost all wireless access points use some sort of redirection technique to bounce first time visitors to a log in page. (research) However a similar technique may pose problems for the internet. For example, a user may be uploading data in the background when their internet connection is redirected to this message – causing the update to break. Or perhaps a user is connecting to a computer via remote access when the redirection happens. If the redirection is not properly implemented, it could break the remote access connection.

The right DPI technology needs to be implemented to be able to show a message without breaking the internet.

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[37] MOU Page 30 and 31
[38] MOU Pg 33
[39] MOU Pg 35
[40] Reseach/cite
[41] Cite
[42] Cite
[43] Find the quote on how much it cost them
[44] Find quote
[45] http://lauren.vortex.com/archive/000337.html
[46] http://www.perftech.com/

ISPs are not looking for infringement themselves

Is it the minimal necessary? (we should rename this)
This technique still makes no attempt to filter out fair use requests ahead of time. Instead, a user must lend the AAA $35, fill out paperwork, and then wait for a response. The burden of proof of showing fair use is on the user.

It remains to be seen what technical measures are used to identify infringement. This will give us more information of whether it will alarm on the use of services that provide non-infringing use such as Megaupload. (didn't they say just P2P?) (they also can't use the same methods)

Is it acceptable to stakeholders?
Wait for Stephen's section

Other
6 Strikes takes down content first. Can appeal as fair use – but only afterwards

And only then on the 5th and 6th notices

Likely be effective againts main problem

Good to educate people

Good balance

Should be able to complain easily

Not so many long procedural hurdles

Penalities small next to $1000 settlements or hundred k judgements

Should be automated and streamlined

But if you have a problem, should be able to reach someone who has authority over the phone

The fact that the copyright expert needs to be CCI approved is troubling. Content industries have a long history of putting out biased, extreme, or just plain wrong information on copyright. (must cite/backup)

Upcoming policy debates

When evaluating future policies to protect against copyright infringement, policy writes should consider the framework we have outlined above.

Yi Wu

Overall, this draft is clearly written but needs to be better organized. In the proposal section, the purpose and the problem are stated concisely. It includes the series of questions that the authors are trying to answer as well as some of the approaches they will take to solve the problem. However, the model that evaluates different metrics of effectiveness of a particular anti-piracy policy is still unclear. In many places of the draft, the idea is there but needs to be developed further. The transition between subtopics is not always smooth. Below are some specific suggestions:

Yes

1) In "review of current literature" section, the authors mentioned "graduated response" efforts. How did this come about? What are some of the cases/policies that led to this widely-accepted policy *see body!*
2) "Evaluative framework" section: Consider providing a list of all the points of the framework in the beginning before going into details about each one of them. ✓
3) Need to expand the "economic" section. How would you measure the positive effects on employment
4) In the "technical" section, elaborate what DNS actually is. "For example, the above described proposal would have…" Where is the described proposal? Maybe consider writing it out again because it is not obvious. Give examples of the technology in infringement detection today ✓ *done*
5) "Minimally necessary": The authors should provide a clearer metric to evaluate whether the policy is minimally necessary. Is there any existing law/guidelines that will determine that?

all stuff I was planning to add

6) The flow of logic in section titled "Beneficial Services" is confusing. "Another example is BitTorrent…" What was the first example? "One such onging case is the case of Kyel Goodwin." One of what such case? The paragraph before does not talk about an issue that the case of Kyle Goodwin is trying to solve
7) "Costs of implementation" and "possible political challenges" have the same text so need to be revised.
8) The word "ironclad" is use too commonly in the paper *lol only once*
9) "Will be acceptable to stakeholder": Please expand the bullet points and give examples of something that the stakeholders will accept as well as the reason behind it.
10) Consider including another analysis of a current policy debate. This section needs to be better put together to be a more cohesive section. *to-do*
11) I'm not sure what the "other" section is talking about on the last page *yea stuff to add*
12) You should include more information on the future of anti-piracy and the effects of your framework will have on the Internet

L thought did whole section on that (recently added)

(also I added a lot more meat, but little stuff)

Katherine Fang
6.805
11/14/12

Critique of Group 10 (Michael Plasmeier, Stephen Suen)'s Draft

Audience

Overall, I was unclear about the target audience for the report. In the proposal section, the group states that it wants to design a framework to address anti-piracy. Is this framework supposed to be implemented by Congress or by a specific regulatory body? Once this framework is in place, who will be in charge of evaluating its effectiveness and maintaining it?

Review of Current Literature

In this section, the group could elaborate using specific numbers and citing published reports. For example, the group says that piracy is a "big problem for creative content industries." I suggest incorporating monetary estimates on the cost of piracy – how much do different sources estimate the cost of piracy to be for content producers, publishers, and distributors? How does piracy affect industries other than creative content industries?

The report says that on "most people" believe action should be taken against piracy. In addition to creative content industries, who are the major proponents of anti-piracy? Are there specific companies or organizations that have been very active in their lobbying efforts? What are the strategies they advocate to combat piracy, as well as the pros and cons of those strategies? Understanding the major players in the field may help the group understand its target audience and key players who can help them implement their proposed framework. Furthermore, researching the major players' stances may help the group formulate its proposed framework.

Evaluative Framework: Costs of Piracy

I agree that the group should consider the costs of piracy in their evaluative framework. The costs of piracy create a strong case for anti-piracy action. The group states that it plans to look into research on the costs due to loss of employment and other tangible factors. It would also be interesting to consider intangible costs, such as loss of innovation. For example, have artists or studios demonstrated that they are less likely to produce new content due to the lack of piracy laws in the U.S. (as compared to other countries?)

Policy Recommendations

The group could be more specific about its proposed policy recommendations and anti-piracy framework. They present the "6 strikes" system as a model that is both effective and cost-efficient. However, the current "6 strikes" system is adopted voluntarily. Is the group suggesting that "6 strikes" should be a mandatory system? If so, would making such a system mandatory require legislation?

Furthermore, the group cites Section 1201 of the Digital Millennium Copyright Act as an effective anti-piracy law. The Act prohibits the duplication of DVDs, but allows the duplication of CDs. The group writes that "a policy does not need to be ironclad in order to reduce piracy." Does the group's proposed framework target certain types of piracy? Are there are some types of piracy that should be addressed before other types? Overall, the report lacked specific policy recommendations and instead analyzed the benefits of existing policies. Perhaps the group could focus on incorporating certain aspects of existing policies into its own recommended framework.

Stephen Call

1/25

Me: Added content

Then organized

He is writing Tech survey stuff...

Finding political feasibility papers

- legal precidence - overboard?
  not min nessary
  legal perspective
  give gov too much pow

Who pays Fin barden

0

Game Theory + Nash = libitums ?

Try to define arbitrary scale...

Economic

- Classify entertainment arguments

He'll continue stuff

↳ he'll do tedious stuff — fix citations

Time

He'll finish framework stuff

- Send stuff @ two

he has two free

talk two

he says 1000 words

I say 2000

Draft 11/28

STS.085 Project

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Stephen J Suen <ssuen@mit.edu>

Contents

Proposal (for reference)

2012 saw the reemergence of copyright legislation in the public consciousness, especially in the wake of SOPA and PIPA, which sought to combat piracy on the Internet. The resulting backlash against these bills—both from Internet users and businesses themselves, as well as from political opposition—indicate divisive attitudes over the effectiveness of the proposed anti-piracy mechanisms. Our project aims to develop a framework for the cost-benefit analysis of such anti-piracy mechanisms. In order to do this, we will design a model that will evaluate different metrics of effectiveness and pose a number of questions. Will the policy actually make a difference? Can the policy be implemented robustly? Can pirates easily avoid the mechanism? What are the costs and challenges of implementation? Does the policy violate the standards of the Internet? Will the policy prevent us from accomplishing other goals, such as tightening up cyber security? Will certain actors incur a cost, and if so, who will pay for it? To supplement this analysis, we will review existing literature on the economic costs of online piracy and develop a system of classifying these losses.

Based on these issues, the long-term goal for this evaluative framework will be to encompass a common set of values, standards, and metrics for the analysis and discussion of future proposed anti-piracy mechanisms. With this model, we hope to enable a more robust discussion of how to address the piracy problem without compromising the underlying structures of the open Internet and—by extension—the civil liberties guaranteed by those structures and the ecosystem for innovation that they have enabled. This analysis will also take into account pragmatic issues of economic costs, possible political challenges, and other barriers to comprehensive implementation. We will also be sure to examine copyright law pre- and post- Internet, to see how notions of intellectual property and proper enforcement of those exclusive rights have changed over time, in order to better contextualize the issue.

To illustrate the usefulness of such a framework, we will show it in action by running an analysis of recent graduated response policies proposed to combat online piracy—specifically, the HADOPI law in France and the "six strikes" Copyright Alert System being implemented here in the US as part of an agreement between the MPAA, the RIAA, and a number of major ISPs. To put this assessment into perspective, we will also use our framework to evaluate the effectiveness of the previous anti-piracy paradigm of filing lawsuits against individual users, using it as a benchmark for comparison. Through this analysis, we will be able to identify the merits and downsides of graduated response mechanisms, discuss them in relation to traditional copyright litigation strategies, and provide comprehensive policy suggestions. Ideally, the framework we develop in this project can also be extended to other anti-piracy mechanisms and create a more standardized system for analyzing and deciding between these kinds of policies.

(

"what other types of mechanisms
"non 6 strikes

Exec Summary

TBD

Review of current literature

Piracy has been and continues to be a big problem for the creative content industries. While estimates on the scale of the problem vary, most people believe something should be done to reduce the availability of unauthorized copies of work. estimates on scale of problem

Should something be done?

For the last decade, the content industries have been trying to fight unauthorized sharing online. A number of methods have been tried, including having the industry sue individual downloaders. However, recent efforts have been coalescing around so called "graduated response" efforts. Under a graduated response system, a user is sent a number of warnings, before a penalty, which might include service termination. Such systems can be mandated by law, such as in France, or through a voluntary agreement with Internet Service Providers (ISPs). as in the United State

We attempt to establish a framework to evaluate proposals to combat piracy. As part of this we will evaluate currently existing information and studies. We will evaluate recent graduated response systems against our framework.

Copy

Evaluative framework we've estapli

1. Is effective in reducing piracy?
    a. Ease of circumvention
2. Does it make economic sense?
    a. Revenue in reclaimed sales
    b. Positive effects on employment
3. Has minimal negative repercussions on internet
    a. e.g. DNS
4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services
5. Will be acceptable to stakeholders (political/legal argument)
    a. Who will implement? Legal authority/precedents?
    b. Costs of implementation/enforcement
    c. Political views/possible challenges of stakeholders, e.g. industry, citizens, artists

Is if effective in reducing piracy?

1. Is effective in reducing piracy
    a. Ease of circumvention

The first question to ask about any policy is "is the policy effective in reducing piracy?" A policy that does not reduce piracy should not be considered further.

Ease of Circumvention

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

It is certainly possible to download a program from the internet to make copies of DVDs, but the very fact that it is not easy prevents vast amounts of Americans from even trying.

It is not even that hard to find out how to do it. Searching for "how to rip a DVD" yielded instructions on the first result. Now such instructions are somewhat complicated, with instructions to download a .dll to a certain programs folder location, but it still requires moderate tech skills.

Keeping material illegal makes it harder to find. Even though the industry has been unsuccessful in shutting down the Pirate Bay, it has prevented it from becoming a legitimate business. By keeping the business illegal and keeping it on the run, the industry has made the life of the Pirate Bay harder.

However there is still a core group of techies and dedicated other folks who have the knowledge to learn how to circumvent these measures and cover their tracks.

This can hamper the effectiveness of certain proposals. For example, SOPA proposed altering DNS information to remove sites that infringed on copyright.[1] However, a user could just enter the IP address of a site instead. For example, thepiratebay.se is located at 194.71.107.15. Entering this into ones browser brings on to The Pirate Bay even if the DNS service is down.

URL	IP Address
thepiratebay.se	194.71.107.15

If the Pirate Bay ever has to change server hosts, then moving their IP address would be almost impossible, as these are assigned in blocks. For example, when the internet was first created large organizations such as MIT were given large blocks of IP addresses. For example, MIT has all of the IP addresses starting with 18. Servers then through BGP have rules to forward all traffic destined for IP addresses starting with 18 towards MIT since MIT is an "Autonomous System." The same applies to Internet Service Providers or Hosting Providers. If the Pirate Bay changed hosting providers, their IP address would change. Under DNS, the Pirate Bay can slowly phase in their new IP address transparently.

[1] dyn.com/sopa-breaking-dns-parasite-stop-online-piracy/

However, if their IP address was publically known, they would have to disseminate their new IP address, for example by posting it in Twitter or in a newspaper ad. There are even more subtle ways to do this on the Internet. Persons not in the United States could ~~set up~~ "darknet" DNSes. These DNSes would have addresses that the US had blocked. explain operate

The United States government would have to be super careful about how it distributes the blacklist. If it was just a simple list that was public, then some people would just feed this list into their DNS system to allow users to continue to reach all of their old content. In addition, this list of copyright infringing sites would tell copyright thieves exactly where to look!

They could even be distributed, much in the way of BitTorrent itself is. For example, BitTorrent Distributed Hash Tables (DHT) work by giving each node a copy of the table or part of the table. A node then asks other nodes to share their tables. That way there is no one authoritative owner which would frustrate any attempt to take it down, because almost every node would need to be taken offline to bring it down.

(kinda unneeded details - got into the weeds)

(should these details be elsewhere?)

This raises an interesting question: is it illegal to know the phone number of an illegal service? For example, say someone had the phone number of a drug operation. Is that in and of itself illegal? (research) No, it's only evidence that corroborates a story and could provide extra evidence against a person in court. By itself it is not illegal. ~~Telling someone that phone number is not illegal.~~

Then how are knowing IP addresses any different? DNS is just a mapping of a name to a number. There are other ways to accomplish this same mapping. Are we ready to make this association illegal? (there is probably a better way to say this)

Banning by IP -> banning the whole mall

Economic

2. Does it make economic sense
    a. Revenue in reclaimed sales
    b. Positive effects on employment

Costs

Next, one should look at the costs of a policy to evaluate whether the benefits of the policy outweigh the costs of the policy. In addition, who bears the costs? The content industry? The government? Internet service providers?

How much does the government spend on anti-piracy?

Find current costs spent on enforcement

http://arstechnica.com/tech-policy/2011/08/protect-ip-act-would-cost-taxpayers-47-million-private-sector-much-more/

For example, the Prioritizing Resources and Organization for Intellectual Property Act of 2008 (H.R. 4279) was estimated by the Congressional Budget Office to cost an additional $425 million dollars over 4 years by hiring a Intellectual Property Enforcement Representative in the Office of the President at $30 million per year, 10 intellectual property attachés to serve in United States embassies or other

diplomatic missions for $21 million a year, and $64 million in additional funding for the FBI. [2] There are already 8 attachés in Brazil, China, Egypt, India, Russia, and Thailand.[3] The CBO budgets about $1 million dollars per agent for 4 years of service. Additionally the CBO predicts no substantial impact from increasing damages or asset forfeitures for the Crime Victims Fund or the Assets Forfeiture Fund. Additionally, the Title III would allow the Office of the United States Intellectual Property Enforcement Representative would be allowed to accept gifts, but the CBO does not predict much of an impact from this.[4]

too much detail

How much is lost by piracy?

Global recorded music sales have plunged from nearly $27 billion US dollars in 2000 to $15 billion in 2010.[5]

Cite RIAA/IFPI stats – be quantitative

However, we must separate those losses from general declines in the business of the industry.

Use http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1932518 here (not just what the paper says but what sources it uses)

Sky is Rising paper http://www.techdirt.com/skyisrising/ takes the contrarian view which we should include as well

http://www.ipi.org/ipi_issues/detail/the-true-cost-of-sound-recording-piracy-to-the-us-economy

http://www.oecd.org/sti/38707619.pdf

http://www.cato-at-liberty.org/how-copyright-industries-con-congress/

http://www.hollywoodreporter.com/news/piracy-costs-megaupload-kim-dotcom-318374

http://www.washingtonpost.com/blogs/ezra-klein/post/how-much-does-online-piracy-really-cost-the-economy/2012/01/05/gIQAXknNdP_blog.html

http://www.mpaa.org/resources/5a0a212e-c86b-4e9a-abf1-2734a15862cd.pdf

http://www.gao.gov/products/GAO-10-423

Review the studies and try to mediate an explanation; I've started outlining the various arguments below

There can be other explanations besides just piracy which are causing a change. Some may be linked to technology. For example, the shift to people listening to music on iPods could have changed the way people listen to music (any studies). On iTunes people can just buy a single popular track instead of buying the entire album (any studies?). This naturally leads to less revenue.

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[2] http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/91xx/doc9197/hr4279.pdf
[3] ibid
[4] ibid
[5] IFPI 2010 study including both digital and physical sales of recorded music

Another effect in the motion picture industry is that rental sites such as Netflix and Redbox are decreasing the demand for DVDs. (I know this from my summer at Disney, but any public info?)

On TV people are spending more of their entertainment time surfing the Internet than watching television (studies). This naturally leads to a drop in the amount of hours people watch television, leading to a drop in advertising rates. DVRs, such as Tivo, have also changed television watching by allowing users to time-shift their favorite shows and fast forward through commercials. Advertisers don't like this and exempt these viewers from viewership data (cite).

In some ways

Effects of HADOPI Law in France

One study conducted by researchers at Wellesley College and Carnegie Mellon University looked at the implementation of the Hadopi law in France and compared the sales of music on iTunes with other European countries who did not have a similar law.[6] The study found a 25.5% increase in track sales in the control group, but a 48% increase in France, indicating that sales were 22.5% higher in France then the rest of Europe, likely due to the Hadopi law.[7] There was a similar result for album sales.[8] Additionally this general trend was true for all labels, so it's unlikely that these effects were due to a particular artist being popular in France.[9] In addition, these results did not occur when other countries were isolated.

put elsewhere (HADOPI section)

(also explore what sources it uses)

The study also looked particular genres of music. First the study looked at a survey taken by EMI which asked people how much they are likely to pirate each type of genre of music.[10] They then found the largest sales increase in genres which were reported to be heavily pirated.[11] For example, Rock and Pop were both the genres most pirated, and the genres which experienced the largest increase in sales after the HADOPI law than before the law.

This shows that it is unlikely that there is any other explanation for this phenomenon than the HADPOI law. For example, increased sales in France suggest that Apple could have just heavily started promoting iTunes in France. But this genre comparison suggests that it is an unlikely explanation. It is also interesting to note that the lines started diverging right as parliament started debating HADOPI, not when it came into force. In addition, when this study was written no one had yet received a third/disconnect notice.[12]

Bhattacharjee et al showed an awareness of copyright infringement lawsuits did cut the number of pirates, but found that the effect was short-lived.[13]

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[6] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1989240
[7] Ibid p 14
[8] Ibid p 14
[9] ibid p15
[10] Ibid p 16
[11] Ibid p16
[12] Ibid p 20
[13] http://digitalcommons.calpoly.edu/mgmt_fac/7/

What are the Costs of Piracy?

We must be careful about what the costs of piracy are. Many studies just cite the cost of piracy as the list price of the item being stolen.[14] However, there are multiple problems with that. First, as any economist will tell you, the number of people who demand a particular good is inversely proportional to the price. For example, standard economics tells us that less people will buy a CD priced at $20 than at $10. It follows then that many more will "buy" something if it is free. In fact, the difference between 1 cents and free is pretty substantial according to Dan Ariely in the New York Times bestseller Predictably Irrational.

Copyrighted content has no to very little marginal cost. This opens up an entirely new type of pricing model compared to traditional industrial goods. It also makes losses due to piracy more interesting.

But also a higher price may lead to more revenue, while also leading to higher "piracy" costs. Say for instance a TV show has 1 million users who watch for free. The TV network makes $1 off each user in advertising. Revenue is $1 million, while the piracy loss is 0. Then say the TV network switches to a paid model in which an episode costs $4. Say 300,000 take the deal, and 100,000 decide to switch to piracy. 550,000 stop watching all together. The network would make $1.2 million in revenue, which is more than before. They would also point to $400,000 in piracy "losses." Under the new strategy, they are making more money than before, but also are experiencing piracy.

The question then is if piracy was made harder, how many of these 100,000 pirates would switch to the paying $4. As was discussed earlier, it is very likely not all 100,000 would now pay. But how many would?

Ideally, the networks would like to segment each person out by their willingness to pay. Say half of these 100,000 would be willing to pay $1. The network would not want to simply lower the price to $1 because then they would have 350,000 each paying $1, for revenue of $350,000 which is even worse than the ad-supported model. But if they were able to get the original 300,000 to pay at the old price, plus the 50,000 at $1 then they would have $1.25 million in revenue, and piracy losses of $50,000. Revenue is up, and losses due to piracy are down.

Tracking Piracy

It is difficult to know exactly how much piracy is going on because it is hard to track the transfer of pirated materials online.

Expand

?some studies on network traffic of BitTorrent – but then how much is pirated?

Artists

There is some disagreement on how much money actually goes to artists.

That book I have

Do we want to cut this?

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[14] http://www.cato-at-liberty.org/hulu-pricing-strategies-and-the-costs-of-piracy/

Employment

Another area for contention is how much profits at record labels actually lead to employment. The industry argues that additional profit allows them to invest more in the future, leading to more employment for artists. Cite explain

Others claim that industry profits are unlikely to be redirected to _____.

For example, some look at the last 10 years of the industry. Profits are down XX%, but employment only XX%. Where did the lost value go to? How sustainable is that in the long run?

This has been controversial because some studies have cited a larger impact in jobs than the number of people who are actually employed by the music industry.

In addition, employment studies often try to include the "multiplier effect" of jobs. For example, person who works in the record industry spends money

Cite RIAA stats

Cite/explain

Money Redirected

Some argue that the money saved by consumers by not buying CDs is spent on other things. For example, rather than spending $10 on a CD, a consumer uses that same discretionary income to buy a sandwich instead. If the user would have spent the money on a CD, they would have not bought a sandwich. Thus the economic, including employment effect is merely transferred across industries, and does not actually hurt the economy.

Cite/explain

Technical

3. Has minimal negative repercussions on internet
    b. e.g. DNS

Internet Infrastructure

Any proposal should not weaken the underlying infrastructure of the internet. For example, the above described proposal would have big effects on the internet.

(research) – there is more further down we need to bring up here Security

How in infringement detected today?

Copyright owners detect copyright infringement in a variety of ways.

P2P

By its nature, a peer-to-peer network makes available the list of IP addresses which are participating in sharing the file. In court cases, the record industry has used a firm called MediaSentry to monitor P2P networks.[15] MediaSentry logs onto these networks and searches for a file known by their client to be

Are there

Where is it best to put this?

[15] http://blogs.law.harvard.edu/cyberone/files/2008/11/497-2.pdf

infringing content.[16] MediaSentry then receives the list of users who have parts of the file available from the P2P service's tracking server.[17] By seeing that the user has the file and is making it available to other users, MediaSentry can claim that the user is making the file available to others.

In other cases, MediaSentry attempts to actually download the file to verify that the content of the file is in fact copyrighted.[18]

As a result, some people use IP blocking software such as PeerGuardian, and its successor PeerBlock.[19] This software contains the list of IP addresses known to be used by Government, large businesses, and anti-P2P contractors such as MediaSentry. The software attempts to prevent those IP addresses from connecting to your computer to download part of the file from you.

Others use what are called "private trackers." These only allow pre-screened persons to participate in the download, including having access to the list of persons who have portions of the file available for download. Without being one of the people with access, MediaSentry and others firms would have no way of knowing who was participating in the download.

DPI

However, one organization that would know would be your ISP. Internet users purchase internet access from Internet Service Providers (ISPs). ISPs have access to all of your traffic as it flows across their network. Internet traffic is sent as a packet, which is like an envelope. On the outside of the envelope, the packet has the IP header which specifies where the packet is sent among other things. The inside of the packet contains the actual message. Normally, ISPs only look at the header of the packet in order to forward it onward. However, with modern equipment ISPs can also look at the contents of these packets, as long as they were not encrypted. This was always possible, but it is only recently that it is possible to do at the scale required.

Protocol encryption makes it more difficult for ISPs to identify BitTorrent traffic. However, it can only work if the tracker and the other clients also support encryption. In addition, it has been shown that many BitTorrent clients still put out a characteristic file flow that ISPs can identify if they so wish.[20] However, this only shows that the user is using BitTorrent, but not which file they are downloading. As the other section of the paper showed, BitTorrent can be used for non-infringing uses.

In 2007, Comcast was found to be using the "Fairshare" product from Sandvine which actively interfered with BitTorrent traffic.[21] Sandvine captures a copy of the list of peers returned from a tracker. When a user tries to contact these nodes, their technology sends fake TCP reset packets – the equivalent of a fake hang up signal on a telephone. The action was controversial, and received a fine from the FCC for unfairly blocking a particular protocol.[22]

Again interesting - but how does this relate?

[16] ibid
[17] ibid
[18] http://arstechnica.com/tech-policy/2009/01/mediasentry-may-be-gone-but-riaa-tactics-will-live-on/
[19] http://torrentfreak.com/peerblock-file-sharing-safety-tool-clocks-100000-downloads-091111/
[20] http://www.howtogeek.com/76801/how-to-anonymize-and-encrypt-your-bittorrent-traffic/
[21] https://www.eff.org/deeplinks/2007/10/comcast-also-jamming-gnutella-and-lotus-notes
[22] http://www.pcmag.com/article2/0,2817,2326980,00.asp

Think we are wasting this draft
which we had more...

Minimally necessary

4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services

Non-infringing Uses

Proposals should not add chilling effects on legitimate uses of copyright technology. For example, United States law permits fair use.

Not well described

Section 1201 Process

The Digital Millennium Copyright Act was widely panned[23] because it made few exceptions for Fair Use. There was a process set up by Section 1201 of the DMCA.

Every three years, the Library of Congress holds hearings in which citizens can ask for exemptions of the DMCA to make noninfringing use of protected works.[24] For example, in the most recent rulemaking, the Federal Registrar stated that:

> "The primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access control measures is diminishing the ability of individuals to use copyrighted works in ways that are not infringing and to designate any classes of works with respect to which users have been adversely affected in their ability to make such noninfringing uses."[25]

Specifically the Register and the Librarian look at:

(1) The availability for use of copyrighted works
(2) the availability for use of works for nonprofit archival, preservation, and educational purposes
(3) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research
(4) the effect of circumvention of technological measures on the market for or value of copyrighted works
(5) such other factors as the Librarian considers appropriate.[26]

agh nice detail – bad org

~~RealNetworks~~ However, the process is heavy in bureaucracy, taking about one year from initial notice to final rules published in the Federal Registrar.[27] Congress requires that the Register and the Librarian solicit input from a wide range of stakeholders in consideration of a "broad range of current or likely future adverse impacts."

(did any of the comments say this?)

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[23] http://arstechnica.com/tech-policy/2009/08/realdvd-barred-from-market-while-judge-opines-about-fair-use/
[24] See http://www.copyright.gov/1201/
[25] http://www.copyright.gov/fedreg/2012/77fr65260.pdf
[26] DMCA Section 1201
[27] http://www.copyright.gov/fedreg/2012/77fr65260.pdf

In addition, exemptions expire every 3 years.

Real DVD

Other services which broke encryption on DVDs for claimed fair use purposes were later found to be illegal. RealNetworks, a maker of media playing software, had tried to launch RealDVD back in 2008. RealNetworks is a legitimate company, who had a license to play back DVDs. The software was designed to allow users to rip DVDs and watch them on their computers.[28] Real then added an additional layer of copy protection to ensure that users could only play the movies on up to 5 DVDs.

The judge disagreed with RealNetwork's fair use assertion, writing "Fair use is not a defense to trafficking in products used to circumvent effective technological measures that prevent unauthorized access to, or unauthorized copying of, a copyrighted work." [29]

However, a later court case took a different turn.[30] MGE made equipment that calibrates hospital power back up systems. The system was designed so that it would not launch without the presence of a hardware USB key to prevent piracy.[31] PMI, a power servicing firm, initially bought MGE products, including the calibration software. After the software expired, a PMI employee received a copy of the software from an unauthorized source.[32] The court found that since the software was not encrypted, the dongle did nothing to prevent actual copyright violation.[33]

Beforehand/Afterhand

In addition, many of today's technologies do not account for fair use. For example, YouTube's Content ID system does not account for fair use before a work is removed.[34] It is only after a work is removed, that the uploader may go to YouTube and contest the removal of the work. One of these options is that the work falls under fair use protection. The uploader can then describe why they feel the work should receive fair use protection. A YouTube employee then reviews the rationale and decides whether or not to accept the rational. If the rational is accepted, the video remains as is. If the rational is rejected, the blocking remains.

Certainly fair use is finicky. The fair use guidelines include:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.[35]

The boundaries are not clear for fair use.

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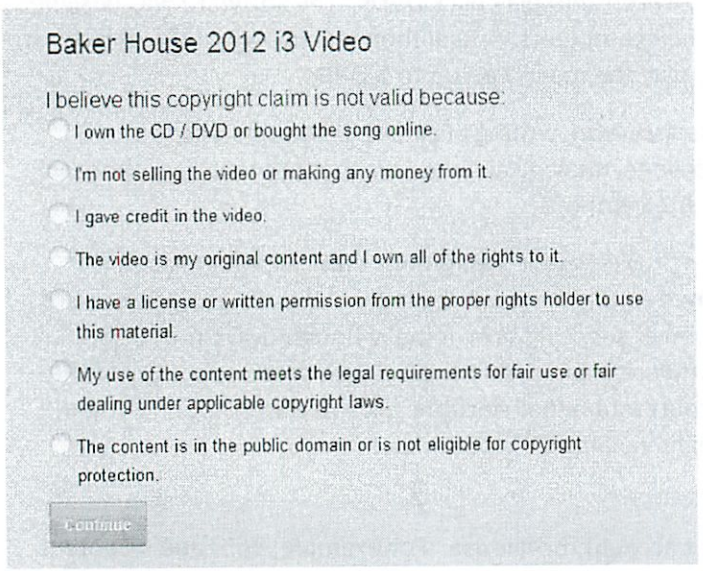
[28] http://arstechnica.com/uncategorized/2008/09/real-dvd-legit-dvd-copying-playback-but-is-it-too-late/
[29] http://arstechnica.com/tech-policy/2009/08/realdvd-barred-from-market-while-judge-opines-about-fair-use/
[30] http://arstechnica.com/information-technology/2010/07/court-breaking-drm-for-a-fair-use-is-legal/
[31] ibid
[32] http://www.ca5.uscourts.gov/opinions/pub/08/08-10521-CV0.wpd.pdf p3
[33] http://www.ca5.uscourts.gov/opinions/pub/08/08-10521-CV0.wpd.pdf pg 7
[34] https://www.eff.org/issues/intellectual-property/guide-to-youtube-removals and http://www.youtube.com/t/contentid
[35] 17 U.S.C. § 107

It is especially difficult for a computer to determine if these tests are met. This many services, such as Google's YouTube take down the content first.

Note that a YouTube content ID match does not necessarily mean that one's content is removed. Instead, the content may be blocked only in certain countries, may have ads shown next to it, or part or all of the audio may be muted.



Beneficial Services

Many services which make copyright infringement easy can also be used for non-infringing use.

The first significant example is the Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417 case. In this 1984 case, the Supreme Court of the United States found that Betamax machines have "significant non-infringing uses." Furthermore, the time shifting feature of the devices is allowed:

> one potential use of the Betamax plainly satisfies this standard, however it is understood: private, noncommercial time-shifting in the home. It does so both (A) because respondents have no right to prevent other copyright holders from authorizing it for their programs, and (B) because the District Court's factual findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use

Another example is BitTorrent. Although widely used to download copyright infringing materials, the protocol is also being used to quickly distribute large files without requiring much infrastructure. For example, game developers use BitTorrent to distribute updates to their games.[36] These updates can be quite large (over 500MB). Traditionally companies would buy or rent many racks of servers to provide this content. In addition, these servers would require a lot of bandwidth. As bandwidth grows scarcer, this is becoming a growing concern. Under a BitTorrent model, the company only has to *seed* a few updates to members of the community around the world from their own servers. Other players then download a copy of the update from other users. Not only does this save the game company from requiring extra bandwidth, it also makes the download for the user, especially in countries with limited

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[36] http://torrentfreak.com/bittorrent-to-speed-up-game-distribution-080915/

bandwidth. This is because the file is being downloaded from someone nearby. In addition, this decongests the Internet, requiring less bandwidth. It is win-win scenario.

One example of a case that is currently in progress is Megaupload. Megaupload was a direct-file hosting and download site. Users upload file to Megaupload and then receive a URL. Users could use the site to transmit files larger than email. They could send the URL they received to a friend or business colleague in an email message. Because the actual file was not attached to the email, the email is small enough to be sent on almost all systems. For example, a video production house might use Megaupload to distribute a preview copy of a video to a client. Persons could also use Megaupload as a backup service. They could upload a copy of their important files to Megaupload. If their computer were to crash, they could visit Megaupload again to download the file.

One such ongoing case is the case of Kyle Goodwin.[37] Mr. Goodwin is a videographer. He used Megaupload as a backup service. Shortly before the government's January raid, Mr. Goodwin's hard drive crashed. His only copies of his videos are the ones stored on Megaupload. However, the government is resisting restoring his files.

Stakeholders

No matter how effective, economically and technologically viable, or minimally necessary an anti-piracy mechanism might be, perhaps the most important factor to consider is the political feasibility of such a proposal. Even if a proposed mechanism is a good idea, it must also be acceptable to the various stakeholders involved, whether it be the general population, Hollywood, artists, the tech/internet industry, the international community, and other forms of potential political opposition.

Implementation

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

Costs of implementation

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

Possible Political Challenges

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs.

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[37] http://torrentfreak.com/u-s-accuses-megaupload-user-of-storing-pirated-music-121031

However, it is not illegal to make copies of CDs. Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

5. Will be acceptable to stakeholders (political/legal argument)
    a. Who will implement? Legal authority/precedents?
    b. Costs of implementation/enforcement
    c. Political views/possible challenges of stakeholders, e.g. industry, citizens, artists

Meta-analysis of Framework

strengths, weaknesses, possibilities for future improvement

Current Policy Debates

The possibility of a graduated response to copyright infringement started in mid-2007 in France.[38] Nicolas Sarkozy, the newly elected President of France appointed an independent review commission to review copyright infringement.[39] That commission was run by the pro-enforcement Denis Olivennes.[40] The commission found that P2P was killing France's culture and sought to do something about it. The commission modeled their approach on the "three strikes and you're out" feature of baseball.[41] After 2 warnings, a user could be disconnected from the internet.

I don't know why I put this here. I wanted to do an intro to graudated response, but it's really an intro to HADOPI

HADOPI (Stephen)

http://arstechnica.com/tech-policy/2008/06/frances-three-strikes-copyright-law-gets-cabinet-support/

6 Strikes vs Lawsuit – Plaz

In early July 2011, the RIAA and the MPAA signed a voluntary agreement with many of the country's largest Internet Service Providers (ISPs) to introduce a "6 Strikes" graduated response system to the United States.[42] The system is officially called the Copyright Alert System or CAS, but in the popular press, the name "6 Strikes" is often used.

Description

Under the system, copyright owners could make complaints against IP addresses to users.[43] ISPs will then forward those complaints on to users – without actually revealing information about the user to the copyright holder. [44]

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[38] http://arstechnica.com/tech-policy/2007/11/the-insanity-and-genius-of-frances-anti-file-sharing-plan/
[39] ibid
[40] ibid
[41] http://arstechnica.com/tech-policy/2008/01/frances-plan-to-turn-isps-into-copyright-cops-on-track/
[42] Link to agreement itself
[43] MOU Pg 8
[44] MOU Pg 8

The "6 Strikes" system establishes the Center for Copyright Information (CCI). The center is tasked with administering the CAS as well as educating the public on copyright issues.[45] The Center is governed by a 6 member advisory board, with 3 members appointed by the content industries and 3 members from Internet Service Providers.[46] There is also a four member advisory board, with members from the Center for Democracy and Technology, Public Knowledge, iKeepSafe, and the Future of Privacy Forum.[47] Reports indicate that these members are serious about a balanced approach and are independent from the other players.[48] However, these members are only advisory. The executive board has no requirement to listen to them. [49] The MOU also requires the executive committee to retain independent technical experts.[50] The MOU prohibits sending alerts from methods deemed to be "fundamentally unreliable."[51] However, the names of these experts is not public. In addition, the reports generated by the experts are not required to be public.

Under the CAS, Copyright owners provide ISPs with documented evidence of infringement.[52] However, there is no common standard format or implantation plan. Instead, each ISP is able to define their own implementation form and data format.[53] Each ISP is also able to define what each of the six strikes definitively means. However, the MOU lays out an outline of what each strike could be.

The first two alerts are purely educational.[54] They do not require any response or action form the user. The alerts will contain information that copyright infringement is illegal, that there are lawful ways to download content, and that further sanctions may follow. The third and fourth alerts also educate the user, albeit in stronger language.[55] They also require the user to take some affirmative action to close the alert.

Finally with the last two alerts, "mitigation measures" or "sanctions" can be taken. The MOU does not mention specific sanctions, but instead offers a menu from which ISPs can choose:

> Such measures include, but are not limited to, a temporary reduction in transmission speed, a temporary step-down in the subscriber's service tier, a temporary redirection to a landing page for completion of a program of copyright instruction, a temporary redirection to a landing page until the subscriber contacts a customer service representative, or a temporary suspension of access.[56]

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[45] MOU Pg 3
[46] MOU Pg 3-4
[47] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[48] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[49] MOU Pg 4
[50] MOU Pg 5
[51] MOU Pg 6
[52] MOU Pg 4
[53] MOU Pg 7
[54] MOU Pg 8
[55] MOU Pg 8
[56] MOU Pg 11

Unlike some media reports, ISPs are not required to suspend a user's internet access.[57] Instead the ISP may decide which sanctions to implement. Notices reset after 12 months without receiving an alert.[58] Seven days are allowed between each alert that counts towards the six.[59]

Appeal Process

After getting a fifth and sixth notice, a user has 14 days to file an appeal via an "Independent Review Program" before the mitigation measure is imposed.[60] The Independent Review Program is a non-judicial program set up by CCI with the American Arbitration Association (AAA).[61] The overhead of the program is paid by CCI, which is funded equally by content groups and by ISPs.

A user can also appeal their first through fourth notices upon receiving their fifth notice.[62] However, if a user does not appeal those earlier notices at that time, then they cannot again appeal those in the future.[63]

In order to file an appeal, a user fills out an online "Application to Commence Independent Review" or "ACIR" form.[64] In addition, a user must pay a $35 fee on appeal, however, such fee is refundable if a user prevails in their appeal.[65] The user may select from 6 possible defenses:

(1) account misidentification
(2) unauthorized use of account
(3) authorized use of content
(4) fair use
(5) misidentification of content
(6) work published before 1923[66]

The user must include a basis for each defense and possibly provide the corresponding backup material.[67] For example, if a user asserts authorized use, the user must provide specific, written authorization. If a user claims fair use, then they must provide (1) a copy of each file, and (2) an explanation of each use, and the basis for claiming fair use.

The ISP and the Copyright owner will also be able to submit information.

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[57] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 21
[58] MOU Pg 13
[59] MOU Pg 7
[60] MOU Pg 14
[61] MOU Pg 26
[62] MOU Pg 30
[63] MOU Pg 30
[64] MOU Pg 29
[65] MOU Pg 30
[66] MOU Pg 26-28
[67] MOU Pg 29

The review process is designed to be automated; in addition one reviewer per case is selected by the AAA.[68] Reviewers must be lawyers, but they are not required to have specific copyright experience.[69] However, they are required to have training from a CCI-Approved Copyright expert.[70]

Analysis

Is effective in reducing piracy?

We believe that this method will be effective in reducing piracy (look at Hadoopi).

Compared to the previous system where the content industries directly sued users the new system is much more scalable. Under the old system, companies had to file individual John Doe lawsuits in order to ask a court to unmask a user's identity.[71] The case could then go to a lengthy and expensive trial.[72] Although in many cases, the user settled by paying an average of $3,000.[73] This was not cost effective for the industry.[74] A TechDirt study of RIAA financial records found that the RIAA spent over 17.6 million dollars on lawyers in 2008.[75] As a result, the RIAA brought in $391,000 in settlements.[76] The industry did it because they believed it would be a disincentive for users to illegally download files.[77] The new system seems much more efficient in comparison.

Under the old system, two plaintiffs attempted to fight instead of settling. Joel Tenenbaum, a student at Boston University, was found to have willfully infringed by downloading 30 songs over KaZaA in 2003.[78] The jury awarded the music companies $675,000, or $22,500 per song, a substantial discount over the $150,000 statutory limit.[79] Jammie Thomas-Rasset, was found guilty of copyright infringement of 24 songs for statutory damages of $1.92 million dollars, or $80,000 per song.[80] This was later reduced to $54,000 or $2,250 per song, and then increased to $222,000.[81]

In trials, defendants have claimed that others performed the actual infringement, for example, though an unsecured WiFi network. When a plaintiff files a John Doe lawsuit with an ISP, they receive the name of the subscriber who is paying for the internet connection. Courts in Finland have found that this is insufficient to prove guilt, as it does not show that the person actually performed the infringement.[82] The EFF also argues that merely providing open WiFi does not make someone liable for copyright infringement.[83] In addition, the EFF argues that the DMCA provides a safe haven for service providers who offer "the transmission, routing, or providing of connections for digital online communications,

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[68] MOU Page 30 and 31
[69] MOU Pg 33
[70] MOU Pg 35
[71] http://www.pcworld.com/article/255061/judge_throws_out_mass_john_doe_porn_copyright_lawsuits.html
[72] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/
[73] http://arstechnica.com/tech-policy/2007/03/students-largely-ignore-riaa-instant-settlement-offers/
[74] http://www.techdirt.com/articles/20100713/17400810200.shtml
[75] ibid
[76] ibid
[77] http://arstechnica.com/tech-policy/2008/12/no-more-lawsuits-isps-to-work-with-riaa-cut-off-p2p-users/
[78] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/
[79] ibid
[80] https://mywebspace.wisc.edu/mwbourgeois/web/06-cv-1497/336-1.pdf
[81] http://arstechnica.com/tech-policy/2012/09/minnesota-file-sharer-loses-appeal-must-pay-222000/
[82] http://arstechnica.com/tech-policy/2012/05/finnish-court-rules-open-wifi-network-owner-not-liable-for-infringement/
[83] https://www.eff.org/deeplinks/2011/08/open-wifi-and-copyright-liability-setting-record

between or among points specified by a user, of material of the user's choosing, without modification to the content of the material as sent or received."[84] This was originally written for large ISPs, but the EFF argues it applies just as well to small providers of WiFi hotspots.

Again mandatory

Unfortunately this provides an open loophole in preventing piracy. Although legally there is no negligence defense for piracy, this allows persons to avoid liability, harming protection against piracy.[85] We feel there is some distinction between a business that regularly provides free wifi and an individual that keeps his WiFi open as a defense.

In addition, court cases have tried to distinguishing actual transmission of the file versus making available. MediaSentry has a hard time showing that the file was actually transmitted using the methods that they employ. If they were to actually download the material, that raises questions about whether it is an illegal act to transmit a copy of the work to an agent of the work.[86] Courts at first ruled in the Olan Mills, Inc. v. Linn Photo Co. that this was legal, however then made an exemption for investigators in RCA/Ariola Int'l, Inc. v. Thomas & Grayston Co., 845 F.2d 773, 781-82 (8th Cir. 1988). So the courts rejected such an argument in the Thomas case.[87]

At some point we should decide whether or not these defenses should be allowed. These should not be established behind closed doors by the Copyright and ISP industries. Instead, the process of what defenses should be allowed should occur in the public eye.

The Courts are generally where this case law has been established. However, this is a lengthy process. Though generally, only one person needs to go through this process to establish the case law in the first place. That is why this method of allowing motivated parties to sue and go through the long precedent setting process, while allowing others to quickly move through the process is a good one. After one party has established the rules, the others just need to follow them.

For example, should the use of open WiFi access points be allowed? Does making available constitute infringement, or must it actually be transmitted?

Another process that could work is the same one used by administrative agencies to issue new laws. Here agencies here from all parties and then try to craft the best solution from the information they have received. This is a good way to trade off the costs of a policy with its benefits.

Once this policy has been established, we should move to a scalable process that allows the law to rapidly be applied.

(the last 4 paragraphs need rearrangement)

(this is prob not the right place for all this content)

Does the policy make economic sense?

The proposal appears to cost very little. In particular, the system attempts to automate as much of the process as possible - it is built for scale. The cost would be mostly in the initial setup of the system.

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[84] ibid

[85] ibid

[86] "It is well-established that the lawful owner of a copyright cannot infringe its own copyright." Olan Mills, Inc. v. Linn Photo Co., 23 F.3d 1345, 1348 (8th Cir. 1994)

[87] http://beckermanlegal.com/Lawyer_Copyright_Internet_Law/virgin_thomas_080924Decision.pdf

By having a low cost, the system only needs to stop a little amount of piracy in order to be cost effective.

It is also much more fair to individual defendants. Even the minimum $750 per song is much too high. A controversial report by the Republican Study Group made the same assertion.[88] The initial settlement amounts of $3,000 for about 30 songs ($100 per song) looks very good compared to the amounts which could be lost in courts (minimum of $750 per song, not including legal fees).

On the other side, some lawyers does not actually try to seek lawsuits; instead seeking to settle with as many people as possible.[89] Some judges have sought to block this model, by requiring lawyers to file one-by-one, incurring a filing fee each time.[90] Other judges have become angry that these cases took up space on their docket and threw out the entire lawsuit.[91]

Both of these incentivize non-guilty parties to settle as much as guilty parties. That is not how the court system is supposed to work. This process is too heavy and burdensome for the courts.

Does it have minimal negative repercussions on the Internet?

rearrange

This depends on how the policy is implemented. In the past, some ISPs have intercepted pages and have added banners onto pages in midflight.[92] For example, in 2008 Rogers added a quota message to the top of the Google home page by inserting Javascript into the page using an active version of Deep Packet Inspection. This technology is sold by companies such as PerfTech.[93] Many (who) find the practice of modifying other sites' pages over the Internet to be abhorrent.[94] (expand)

put elsewhere

Meanwhile almost all wireless access points use some sort of redirection technique to bounce first time visitors to a log in page. For example, many services send back a false DNS response, directing the user to the log in page instead. Or a user's request is redirected by a HTTP redirect after a page is received. A user may also be redirected by IP address to the log in page. All of these techniques are not clean in regards to how the internet was designed. This can present problems. For example, my iPad tries to refresh my email and the WiFi router answers as the mail server. My mail server does present a security warning, but if the user clicks through, the access point could be trivially designed to intercept my mail credentials.

However a similar technique may pose problems for the internet. For example, a user may be uploading data in the background when their internet connection is redirected to this message – causing the update to break. Or perhaps a user is connecting to a computer via remote access when the redirection happens. If the redirection is not properly implemented, it could break the remote access connection.

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[88] http://arstechnica.com/tech-policy/2012/11/influential-gop-group-releases-shockingly-sensible-copyright-memo/

[89] http://arstechnica.com/tech-policy/2012/04/judge-rejects-copyright-trolls-bittorrent-conspiracy-theory/

[90] ibid

[91] http://arstechnica.com/tech-policy/2011/02/random-defendant-outlawyers-p2p-attorney-gets-lawsuit-tossed/

[92] http://lauren.vortex.com/archive/000337.html

[93] http://www.perftech.com/

[94] expand

For example, Comcast's Sandvine implementation ended up blocking some email transmissions sent with Lotus Notes, a less-popular email client made by IBM.[95] Sandvine did not intend to block Lotus Notes from sending email, but the technique Lotus was using to transfer large attachment must have been similar to the BitTorrent network technique. It appears that Sandvine had never tested sending attachments over 2MB with Lotus Notes before rolling out their product.

It would impossible for Sandvine to test every possible network configuration. That is why we have standards! Standards abstract away complicated implementation details. Messing with these standards ends up breaking things and makes them harder to test.

The right DPI technology needs to be implemented to be able to show a message without breaking the internet.

ISPs are not looking for infringement themselves

These techniques could also impact security if they are not done properly. For example, adding poorly written JavaScript to another page could allow user-generated content on a page to break out of the containment that the author of the page provided. We have seen before that copy protection code can have unintended consequences. For example, Sony BMG released CDs in 2005 that contained MediaMax copy protection.[96] This software was poorly written to hide all files on a user's system starting with "sys."[97] A virus could use this sys name to hide itself on all computers which had ever played CDs containing MediaMax.

Is it the minimal necessary? (we should rename this)

This technique still makes no attempt to filter out fair use requests ahead of time. Instead, a user must lend the AAA $35, fill out paperwork, and then wait for a response. The burden of proof of showing fair use is on the user.

It remains to be seen what technical measures are used to identify infringement. This will give us more information of whether it will alarm on the use of services that provide non-infringing use such as Megaupload. (didn't they say just P2P?) (they also can't use the same methods)

Is it acceptable to stakeholders?

Wait for Stephen's section

Other

6 Strikes takes down content first. Can appeal as fair use – but only afterwards

And only then on the 5th and 6th notices

Likely be effective againts main problem

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[95] http://arstechnica.com/uncategorized/2007/10/comcast-traffic-blocking-even-more-apps-groupware-clients-affected/

[96] http://www.npr.org/templates/story/story.php?storyId=4989260

[97] http://blogs.technet.com/b/markrussinovich/archive/2005/10/31/sony-rootkits-and-digital-rights-management-gone-too-far.aspx

Good to educate people

Good balance

Should be able to complain easily

Not so many long procedural hurdles

Penalities small next to $1000 settlements or hundred k judgements

Should be automated and streamlined

But if you have a problem, should be able to reach someone who has authority over the phone

The fact that the copyright expert needs to be CCI approved is troubling. Content industries have a long history of putting out biased, extreme, or just plain wrong information on copyright. (must cite/backup)

Selling in one country vs another

Damages larger than the entire past profits of the record industry

Upcoming policy debates

When evaluating future policies to protect against copyright infringement, policy writes should consider the framework we have outlined above.

Republican Study Group

Recent updates in implementation

Michael E Plasmeier

From: Matt Schruers (Google Drive) <mschruers@ccianet.org>
Sent: Wednesday, December 05, 2012 12:25 PM
To: Michael E Plasmeier
Cc: abdavidson@gmail.com; Stephen J Suen
Subject: MCS Comments on Policy Framework (theplaz@mit.edu)

Follow Up Flag: Follow up
Flag Status: Flagged

I've shared an item with you.

Gentlemen:

lol

I have attached my comments on the paper draft in the link below. As it turns out, I have difficulty processing .docx files due to its compatibility problems, so I could only open your file with Google Docs (which we use as our office software here). For that reason, I've saved it online and I am providing access here. It may be that I need to provide access to a Gmail account. If you have trouble getting into the file, let me know.

I make some marginal comments throughout, and then I add some general commentary at the end. If you have follow-up questions about my comments, feel free to let me know and I can go back and we can discuss further.

MCS Comments on Policy Framework

Google Drive: create, share, and keep all your stuff in one place.

MCS comments: 12/4

There is a lot of interesting substance here, but as I think you've indicated, you still have some organizational work to do. You have made a decent effort to construct a rigorous framework, but in your discussion I think you need to be more disciplined about adhering to the framework you establish. I also think you may want more rigor in how you *describe* the framework, vs. *apply* it.

There's a spectrum on this, ranging between: yes

(a) "Describe Framework Element [n]; apply Element [n]. Describe Element [n+1]; apply Element [n+1]...."

and absolutly

(b) "Describe Framework Element [n], [n+1], [n+2].... ; Apply Element [n], [n+1], [n+2]....

It isn't a binary choice. You don't have to do one or the other, and I can't offer an opinion on what would work better, but I suggest making a choice about this and sticking with it. what should I do?

With that being said, some additional comments on *describing* and *applying.*

(1) Description of the framework

You seem to have 4 general categories of items, which are discussed more specifically below. For each of the items, take care to define your terms. When you talk about costs, generally, clarify *whose* costs. For benefits, *whose* benefits? How do you assess the "minimum necessary"? What is your metric for feasibility? Providing some clarity as to what these terms connote will help create a more robust framework. L Yeah Stephen

A) Cost-benefit analysis

- costs of proposal [to gov't, to stakeholders]

- benefits of proposals [here, you want to consider benefits to rightsholders vs. benefits to society. Copyright -- at least in the U.S. -- is broadly construed as a utilitarian, meaning that the public, not rights-holders, are the subject of inquiry. But how do you quantify public benefit? Perhaps we just need to use Hollywood et al. revenues as a proxy.

B) Modifying your CBA with important non-cost factors

These things you value but can't really quantify. You list innovation, free expression (fair use); and cybersecurity, among others. An activist proponent of these issues, I would note, might object to this organizational method because it relegates their concerns to second-class status, but that's a matter you'll want to consider, since CBA valuation for these items is challenging. How do these plug into your framework? lol — yeah how to describe those?

C) Is it the least intrusive way to achieve this outcome?

You've got some good ideas on this, but they seem a bit spread out across the paper.

D) Is it politically feasible?

My only comment here is that if one only endorses solutions that appear politically feasible at the time of analysis, that really narrows the solution set, and usually, to some pretty uninspiring solutions.

I guess he don't support graduated response

(2) What do you **do with your framework? - The framework in action**

I'm not entirely familiar with the parameters of your assignment, but it seems that once you've established your framework, you want to take it out for a spin to demonstrate how it works. For that reason, I would suggest a section at the end, showing the framework in action.

You discuss both HADOPI and graduate response, but I don't think your application to HADOPI distinguishes much between the structural differences between the US voluntary graduated response and the French, mandatory, government-administered HADOPI. The costs of HADOPI, for example, were considerably greater. Since Stephan has not written it

I recommend being more deliberate in highlighting what the general costs are, the expected benefits that would have accrued, whether other non-cost considerations came into play, and how the stakeholders responded to it. I.e., having established the framework, you say, ok, now we are going to apply it. Part I tells us [x], Part II tells us [y], etc.

Based on that you could conclude, (a) this helps explain why France went for the whole HADOPI thing in the first place; or (b) this shows it was a bad idea, and, had they analyzed it with sufficient rigor, they could have saved themselves a lot of trouble.

I will note that if as do this, you'll want to be rigorous about to what extent individual sub-elements of your framework are discussed in the *description* of the framework, as opposed to the actual *application* of the framework.

The earlier problem

All I pretty much know

My problem: tie it together

Stephens Problem: Writing content!

11/30 Draft

"turned in"

STS.085 Project

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Contents

Exec Summary

TBD Currently proposal with minor edits

Our project aims to develop a framework for the cost-benefit analysis of anti-piracy mechanisms.

- Will the policy actually make a difference?
- Can the policy be implemented robustly?
- Can pirates easily avoid the mechanism?
- What are the costs and challenges of implementation?
- Does the policy violate the standards of the Internet?
- Will the policy prevent us from accomplishing other goals, such as tightening up cyber security?
- Will certain actors incur a cost, and if so, who will pay for it?

Based on these issues, the long-term goal for this evaluative framework will be to encompass a common set of values, standards, and metrics for the analysis and discussion of future proposed anti-piracy mechanisms. With this model, we hope to enable a more robust discussion of how to address the piracy problem without compromising the underlying structures of the open Internet and—by extension—the civil liberties guaranteed by those structures and the ecosystem for innovation that they have enabled. This analysis will also take into account pragmatic issues of economic costs, possible political challenges, and other barriers to comprehensive implementation. We will also be sure to examine copyright law pre- and post- Internet, to see how notions of intellectual property and proper enforcement of those exclusive rights have changed over time, in order to better contextualize the issue.

To illustrate the usefulness of such a framework, we will show it in action by running an analysis of recent graduated response policies proposed to combat online piracy—specifically, the HADOPI law in France and the "six strikes" Copyright Alert System being implemented here in the US as part of an agreement between the MPAA, the RIAA, and a number of major ISPs. To put this assessment into perspective, we will also use our framework to evaluate the effectiveness of the previous anti-piracy paradigm of filing lawsuits against individual users, using it as a benchmark for comparison. Through this analysis, we will be able to identify the merits and downsides of graduated response mechanisms, discuss them in relation to traditional copyright litigation strategies, and provide comprehensive policy suggestions.

Problem Statement/Intro

Piracy has been and continues to be a big problem for the creative content industries. While estimates on the scale of the problem vary, most people believe something should be done to reduce the availability of unauthorized copies of work.

Should something be done?

Estimate scale of the problem

For the last decade, the content industries have been trying to fight unauthorized sharing online. A number of methods have been tried, including having the industry sue individual downloaders. However, recent efforts have been coalescing around so called "graduated response" efforts. Under a graduated response system, a user is sent a number of warnings, before a penalty, which might include service termination. Such systems can be mandated by law, such as in France, or through a voluntary agreement with Internet Service Providers (ISPs) as in the United States.

Evaluative framework

We attempt to establish a framework to evaluate proposals to combat piracy.

1. Is effective in reducing piracy?
    a. Ease of circumvention
2. Does it make economic sense?
    a. Revenue in reclaimed sales
    b. Positive effects on employment
3. Has minimal negative repercussions on internet
    a. e.g. DNS
4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services
5. Will be acceptable to stakeholders (political/legal argument)
    a. Who will implement? Legal authority/precedents?
    b. Costs of implementation/enforcement
    c. Political views/possible challenges of stakeholders, e.g. industry, citizens, artists

Is if effective in reducing piracy?

1. Is effective in reducing piracy
    a. Ease of circumvention

The first question to ask about any policy is "is the policy effective in reducing piracy?" A policy that does not reduce piracy should not be considered further.

Ease of Circumvention

A policy does not need to be ironclad in order to reduce piracy. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs. (How is it legal to make a copy – only limited) Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

It is certainly possible to download a program from the internet to make copies of DVDs, but the very fact that it is not easy prevents vast amounts of Americans from even trying.

It is not even that hard to find out how to do it. Searching for "how to rip a DVD" yielded instructions on the first result. Now such instructions are somewhat complicated, with instructions to download a .dll to a certain programs folder location, but it still requires moderate tech skills.

Keeping material illegal makes it harder to find. Even though the industry has been unsuccessful in shutting down the Pirate Bay, it has prevented it from becoming a legitimate business. By keeping the business illegal and keeping it on the run, the industry has made the life of the Pirate Bay harder.

However there is still a core group of techies and dedicated other folks who have the knowledge to learn how to circumvent these measures and cover their tracks.

(move below elsewhere?)

This can hamper the effectiveness of certain proposals. For example, SOPA proposed altering DNS information to remove sites that infringed on copyright.[1] However, a user could just enter the IP address of a site instead. For example, thepiratebay.se is located at 194.71.107.15. Entering this into ones browser brings on to The Pirate Bay even if the DNS service is down.

URL	IP Address
thepiratebay.se	194.71.107.15

If the Pirate Bay ever has to change server hosts, then moving their IP address would be almost impossible, as these are assigned in blocks. For example, when the internet was first created large organizations such as MIT were given large blocks of IP addresses. For example, MIT has all of the IP addresses starting with 18. Servers then through Border Gateway Protocol (BGP) have rules to forward all traffic destined for IP addresses starting with 18 towards MIT since MIT is an "Autonomous System." The same applies to Internet Service Providers or Hosting Providers. If the Pirate Bay changed hosting providers, their IP address would change. Under DNS, the Pirate Bay can slowly phase in their new IP address transparently.

However, if their IP address was publically known, they would have to disseminate their new IP address, for example by posting it in Twitter or in a newspaper ad. There are even more subtle ways to do this on the Internet. Persons not in the United States could operate "darknet" DNSes. These DNSes would have addresses that the US had blocked. explain

The United States government would have to be super careful about how it distributes the blacklist. If it was just a simple list that was public, then some people would just feed this list into their DNS system to

[1] dyn.com/sopa-breaking-dns-parasite-stop-online-piracy/

allow users to continue to reach all of their old content. In addition, this list of copyright infringing sites would tell copyright thieves exactly where to look!

They could even be distributed, much in the way of BitTorrent itself is. For example, BitTorrent Distributed Hash Tables (DHT) work by giving each node a copy of the table or part of the table. A node then asks other nodes to share their tables. That way there is no one authoritative owner which would frustrate any attempt to take it down, because almost every node would need to be taken offline to bring it down.

(should these details be elsewhere?; really got into the weeds here; but where else would be best for this?)

This raises an interesting question: is it illegal to know the phone number of an illegal service? For example, say someone had the phone number of a drug operation. Is that in and of itself illegal? (research) No, it's only evidence that corroborates a story and could provide extra evidence against a person in court. By itself it is not illegal. Telling someone that phone number is not illegal.

Then how are knowing IP addresses any different? DNS is just a mapping of a name to a number. There are other ways to accomplish this same mapping. Are we ready to make this association illegal? (there is probably a better way to say this)

Banning by IP address is like banning the whole mall

Economic

2. Does it make economic sense
    a. Revenue in reclaimed sales
    b. Positive effects on employment

Costs

Next, one should look at the costs of a policy to evaluate whether the benefits of the policy outweigh the costs of the policy. In addition, who bears the costs? The content industry? The government? Internet service providers?

How much does the government spend on anti-piracy?

Find current costs spent on enforcement

http://arstechnica.com/tech-policy/2011/08/protect-ip-act-would-cost-taxpayers-47-million-private-sector-much-more/

For example, the Prioritizing Resources and Organization for Intellectual Property Act of 2008 (H.R. 4279) was estimated by the Congressional Budget Office to cost an additional $425 million dollars over 4 years by hiring a Intellectual Property Enforcement Representative in the Office of the President at $30 million per year, 10 intellectual property attachés to serve in United States embassies or other diplomatic missions for $21 million a year, and $64 million in additional funding for the FBI. [2] There are already 8 attachés in Brazil, China, Egypt, India, Russia, and Thailand.[3] The CBO budgets about $1 million dollars per agent for 4 years of service. Additionally the CBO predicts no substantial impact from

[2] http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/91xx/doc9197/hr4279.pdf
[3] ibid

increasing damages or asset forfeitures for the Crime Victims Fund or the Assets Forfeiture Fund. Additionally, the Title III would allow the Office of the United States Intellectual Property Enforcement Representative would be allowed to accept gifts, but the CBO does not predict much of an impact from this.[4]

Too much of the wrong type of detail

How much is lost by piracy?

Global recorded music sales have plunged from nearly $27 billion US dollars in 2000 to $15 billion in 2010.[5]

Cite RIAA/IFPI stats – be quantitative

However, we must separate those losses from general declines in the business of the industry.

Use http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1932518 here (not just what the paper says but what sources it uses)

Sky is Rising paper http://www.techdirt.com/skyisrising/ takes the contrarian view which we should include as well

http://www.ipi.org/ipi_issues/detail/the-true-cost-of-sound-recording-piracy-to-the-us-economy

http://www.oecd.org/sti/38707619.pdf

http://www.cato-at-liberty.org/how-copyright-industries-con-congress/

http://www.hollywoodreporter.com/news/piracy-costs-megaupload-kim-dotcom-318374

http://www.washingtonpost.com/blogs/ezra-klein/post/how-much-does-online-piracy-really-cost-the-economy/2012/01/05/gIQAXknNdP_blog.html

http://www.mpaa.org/resources/5a0a212e-c86b-4e9a-abf1-2734a15862cd.pdf

http://www.gao.gov/products/GAO-10-423

Review the studies and try to mediate an explanation; I've started outlining the various arguments below

How does piracy affect non-content industries (possibly include)

There can be other explanations besides just piracy which are causing a change. Some may be linked to technology. For example, the shift to people listening to music on iPods could have changed the way people listen to music (any studies). On iTunes people can just buy a single popular track instead of buying the entire album (any studies?). This naturally leads to less revenue.

Another effect in the motion picture industry is that rental sites such as Netflix and Redbox are decreasing the demand for DVDs. (I know this from my summer at Disney, but any public info?)

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[4] ibid

[5] IFPI 2010 study including both digital and physical sales of recorded music

On TV people are spending more of their entertainment time surfing the Internet than watching television (studies). This naturally leads to a drop in the amount of hours people watch television, leading to a drop in advertising rates. DVRs, such as Tivo, have also changed television watching by allowing users to time-shift their favorite shows and fast forward through commercials. Advertisers don't like this and exempt these viewers from viewership data (cite).

In some ways

What are the Costs of Piracy?

We must be careful about what the costs of piracy are. Many studies just cite the cost of piracy as the list price of the item being stolen.[6] However, there are multiple problems with that. First, as any economist will tell you, the number of people who demand a particular good is inversely proportional to the price. For example, standard economics tells us that less people will buy a CD priced at $20 than at $10. It follows then that many more will "buy" something if it is free. In fact, the difference between 1 cents and free is pretty substantial according to Dan Ariely in the New York Times bestseller Predictably Irrational.

Copyrighted content has no to very little marginal cost. This opens up an entirely new type of pricing model compared to traditional industrial goods. It also makes losses due to piracy more interesting.

Non rivalrous

But also a higher price may lead to more revenue, while also leading to higher "piracy" costs. Say for instance a TV show has 1 million users who watch for free. The TV network makes $1 off each user in advertising. Revenue is $1 million, while the piracy loss is 0. Then say the TV network switches to a paid model in which an episode costs $4. Say 300,000 take the deal, and 100,000 decide to switch to piracy. 550,000 stop watching all together. The network would make $1.2 million in revenue, which is more than before. They would also point to $400,000 in piracy "losses." Under the new strategy, they are making more money than before, but also are experiencing piracy.

The question then is if piracy was made harder, how many of these 100,000 pirates would switch to the paying $4. As was discussed earlier, it is very likely not all 100,000 would now pay. But how many would?

Ideally, the networks would like to segment each person out by their willingness to pay. Say half of these 100,000 would be willing to pay $1. The network would not want to simply lower the price to $1 because then they would have 350,000 each paying $1, for revenue of $350,000 which is even worse than the ad-supported model. But if they were able to get the original 300,000 to pay at the old price, plus the 50,000 at $1 then they would have $1.25 million in revenue, and piracy losses of $50,000. Revenue is up, and losses due to piracy are down.

Don's comment on non-rivalrous

Tracking Piracy

It is difficult to know exactly how much piracy is going on because it is hard to track the transfer of pirated materials online.

Expand

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[6] http://www.cato-at-liberty.org/hulu-pricing-strategies-and-the-costs-of-piracy/

?some studies on network traffic of BitTorrent – but then how much is pirated?

Artists

There is some disagreement on how much money actually goes to artists.

That book I have

Do we want to cut this?

Employment

How to measure

Another area for contention is how much profits at record labels actually lead to employment. The industry argues that additional profit allows them to invest more in the future, leading to more employment for artists. Cite/explain

Others claim that industry profits are unlikely to be redirected to _____.

For example, some look at the last 10 years of the industry. Profits are down XX%, but employment only XX%. Where did the lost value go to? How sustainable is that in the long run?

This has been controversial because some studies have cited a larger impact in jobs than the number of people who are actually employed by the music industry.

In addition, employment studies often try to include the "multiplier effect" of jobs. For example, person who works in the record industry spends money

Cite RIAA stats

Cite/explain

Money Redirected

Some argue that the money saved by consumers by not buying CDs is spent on other things. For example, rather than spending $10 on a CD, a consumer uses that same discretionary income to buy a sandwich instead. If the user would have spent the money on a CD, they would have not bought a sandwich. Thus the economic, including employment effect is merely transferred across industries, and does not actually hurt the economy.

Cite/explain

Technical

3. Has minimal negative repercussions on internet
    b. e.g. DNS

Internet Infrastructure

Any proposal should not weaken the underlying infrastructure of the internet. For example, the above described proposal would have big effects on the internet.

(research) – there is more further down we need to bring up here

SECURITY! Like DNS sec

Explain what DNS actually is

Why security of DNS is important

How in infringement detected today?
Copyright owners detect copyright infringement in a variety of ways.

Where is best to put this?

P2P

By its nature, a peer-to-peer network makes available the list of IP addresses which are participating in sharing the file. In court cases, the record industry has used a firm called MediaSentry to monitor P2P networks.[7] MediaSentry logs onto these networks and searches for a file known by their client to be infringing content.[8] MediaSentry then receives the list of users who have parts of the file available from the P2P service's tracking server.[9] By seeing that the user has the file and is making it available to other users, MediaSentry can claim that the user is making the file available to others.

In other cases, MediaSentry attempts to actually download the file to verify that the content of the file is in fact copyrighted.[10]

As a result, some people use IP blocking software such as PeerGuardian, and its successor PeerBlock.[11] This software contains the list of IP addresses known to be used by Government, large businesses, and anti-P2P contractors such as MediaSentry. The software attempts to prevent those IP addresses from connecting to your computer to download part of the file from you.

Others use what are called "private trackers." These only allow pre-screened persons to participate in the download, including having access to the list of persons who have portions of the file available for download. Without being one of the people with access, MediaSentry and others firms would have no way of knowing who was participating in the download.

DPI

However, one organization that would know would be your ISP. Internet users purchase internet access from Internet Service Providers (ISPs). ISPs have access to all of your traffic as it flows across their network. Internet traffic is sent as a packet, which is like an envelope. On the outside of the envelope, the packet has the IP header which specifies where the packet is sent among other things. The inside of the packet contains the actual message. Normally, ISPs only look at the header of the packet in order to forward it onward. However, with modern equipment ISPs can also look at the contents of these packets, as long as they were not encrypted. This was always possible, but it is only recently that it is possible to do at the scale required.

Protocol encryption makes it more difficult for ISPs to identify BitTorrent traffic. However, it can only work if the tracker and the other clients also support encryption. In addition, it has been shown that

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[7] http://blogs.law.harvard.edu/cyberone/files/2008/11/497-2.pdf
[8] ibid
[9] ibid
[10] http://arstechnica.com/tech-policy/2009/01/mediasentry-may-be-gone-but-riaa-tactics-will-live-on/
[11] http://torrentfreak.com/peerblock-file-sharing-safety-tool-clocks-100000-downloads-091111/

many BitTorrent clients still put out a characteristic file flow that ISPs can identify if they so wish.[12] However, this only shows that the user is using BitTorrent, but not which file they are downloading. As the other section of the paper showed, BitTorrent can be used for non-infringing uses.

In 2007, Comcast was found to be using the "Fairshare" product from Sandvine which actively interfered with BitTorrent traffic.[13] Sandvine captures a copy of the list of peers returned from a tracker. When a user tries to contact these nodes, their technology sends fake TCP reset packets – the equivalent of a fake hang up signal on a telephone. The action was controversial, and received a fine from the FCC for unfairly blocking a particular protocol.[14]

All this is interesting, but where is best to put it?

Minimally necessary

4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services

How do we define minimally necessary?

Non-infringing Uses

Proposals should not add chilling effects on legitimate uses of copyright technology. For example, United States law permits fair use.

Not well described

Section 1201 Process

The Digital Millennium Copyright Act was widely panned[15] because it made few exceptions for Fair Use. There was a process set up by Section 1201 of the DMCA.

Every three years, the Library of Congress holds hearings in which citizens can ask for exemptions of the DMCA to make noninfringing use of protected works.[16] For example, in the most recent rulemaking, the Federal Registrar stated that:

> "The primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access control measures is diminishing the ability of individuals to use copyrighted works in ways that are not infringing and to designate any classes of works with respect to which users have been adversely affected in their ability to make such noninfringing uses."[17]

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[12] http://www.howtogeek.com/76801/how-to-anonymize-and-encrypt-your-bittorrent-traffic/
[13] https://www.eff.org/deeplinks/2007/10/comcast-also-jamming-gnutella-and-lotus-notes
[14] http://www.pcmag.com/article2/0,2817,2326980,00.asp
[15] http://arstechnica.com/tech-policy/2009/08/realdvd-barred-from-market-while-judge-opines-about-fair-use/
[16] See http://www.copyright.gov/1201/
[17] http://www.copyright.gov/fedreg/2012/77fr65260.pdf

Specifically the Register and the Librarian look at:

(1) The availability for use of copyrighted works
(2) the availability for use of works for nonprofit archival, preservation, and educational purposes
(3) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research
(4) the effect of circumvention of technological measures on the market for or value of copyrighted works
(5) such other factors as the Librarian considers appropriate.[18]

However, the process is heavy in bureaucracy, taking about one year from initial notice to final rules published in the Federal Registrar.[19] Congress requires that the Register and the Librarian solicit input from a wide range of stakeholders in consideration of a "broad range of current or likely future adverse impacts."

In addition, exemptions expire every 3 years.

Real DVD

Other services which broke encryption on DVDs for claimed fair use purposes were later found to be illegal. RealNetworks, a maker of media playing software, had tried to launch RealDVD back in 2008. RealNetworks is a legitimate company, who had a license to play back DVDs. The software was designed to allow users to rip DVDs and watch them on their computers.[20] Real then added an additional layer of copy protection to ensure that users could only play the movies on up to 5 DVDs.

The judge disagreed with RealNetwork's fair use assertion, writing "Fair use is not a defense to trafficking in products used to circumvent effective technological measures that prevent unauthorized access to, or unauthorized copying of, a copyrighted work." [21]

However, a later court case took a different turn.[22] MGE made equipment that calibrates hospital power back up systems. The system was designed so that it would not launch without the presence of a hardware USB key to prevent piracy.[23] PMI, a power servicing firm, initially bought MGE products, including the calibration software. After the software expired, a PMI employee received a copy of the software from an unauthorized source.[24] The court found that since the software was not encrypted, the dongle did nothing to prevent actual copyright violation.[25]

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[18] DMCA Section 1201
[19] http://www.copyright.gov/fedreg/2012/77fr65260.pdf
[20] http://arstechnica.com/uncategorized/2008/09/real-dvd-legit-dvd-copying-playback-but-is-it-too-late/
[21] http://arstechnica.com/tech-policy/2009/08/realdvd-barred-from-market-while-judge-opines-about-fair-use/
[22] http://arstechnica.com/information-technology/2010/07/court-breaking-drm-for-a-fair-use-is-legal/
[23] ibid
[24] http://www.ca5.uscourts.gov/opinions/pub/08/08-10521-CV0.wpd.pdf p3
[25] http://www.ca5.uscourts.gov/opinions/pub/08/08-10521-CV0.wpd.pdf pg 7

Beforehand/Afterhand

In addition, many of today's technologies do not account for fair use. For example, YouTube's Content ID system does not account for fair use before a work is removed.[26] It is only after a work is removed, that the uploader may go to YouTube and contest the removal of the work. One of these options is that the work falls under fair use protection. The uploader can then describe why they feel the work should receive fair use protection. A YouTube employee then reviews the rationale and decides whether or not to accept the rational. If the rational is accepted, the video remains as is. If the rational is rejected, the blocking remains.

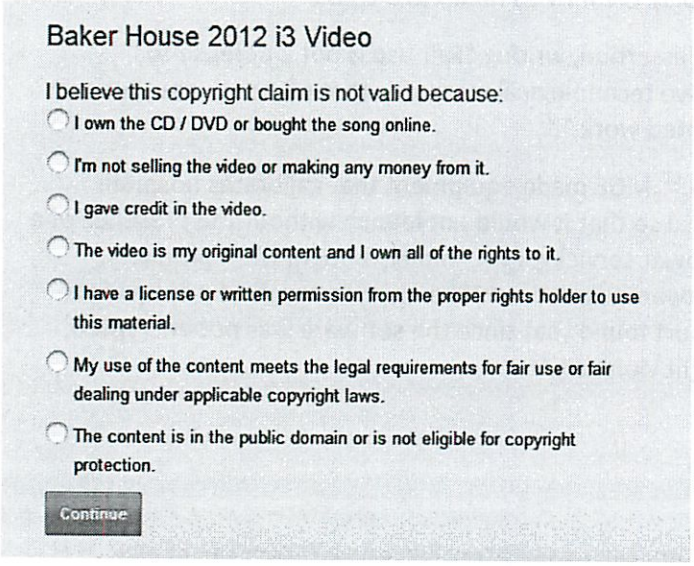
Certainly fair use is finicky. The fair use guidelines include:

(1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
(2) the nature of the copyrighted work;
(3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
(4) the effect of the use upon the potential market for or value of the copyrighted work.[27]

The boundaries are not clear for fair use.

It is especially difficult for a computer to determine if these tests are met. This many services, such as Google's YouTube take down the content first.

Note that a YouTube content ID match does not necessarily mean that one's content is removed. Instead, the content may be blocked only in certain countries, may have ads shown next to it, or part or all of the audio may be muted.



Beneficial Services

Many services which make copyright infringement easy can also be used for non-infringing use.

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[26] https://www.eff.org/issues/intellectual-property/guide-to-youtube-removals and http://www.youtube.com/t/contentid

[27] 17 U.S.C. § 107

Sony/BetaMax

The first significant example is the Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417 case. In this 1984 case, the Supreme Court of the United States found that Betamax machines have "significant non-infringing uses." Furthermore, the time shifting feature of the devices is allowed:

> one potential use of the Betamax plainly satisfies this standard, however it is understood: private, noncommercial time-shifting in the home. It does so both (A) because respondents have no right to prevent other copyright holders from authorizing it for their programs, and (B) because the District Court's factual findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use

BitTorrent

Another example is BitTorrent. Although widely used to download copyright infringing materials, the protocol is also being used to quickly distribute large files without requiring much infrastructure. For example, game developers use BitTorrent to distribute updates to their games.[28] These updates can be quite large (over 500MB). Traditionally companies would buy or rent many racks of servers to provide this content. In addition, these servers would require a lot of bandwidth. As bandwidth grows scarcer, this is becoming a growing concern. Under a BitTorrent model, the company only has to *seed* a few updates to members of the community around the world from their own servers. Other players then download a copy of the update from other users. Not only does this save the game company from requiring extra bandwidth, it also makes the download for the user, especially in countries with limited bandwidth. This is because the file is being downloaded from someone nearby. In addition, this decongests the Internet, requiring less bandwidth. It is win-win scenario.

Megaupload

One example of a case that is currently in progress is Megaupload. Megaupload was a direct-file hosting and download site. Users upload file to Megaupload and then receive a URL. Users could use the site to transmit files larger than email. They could send the URL they received to a friend or business colleague in an email message. Because the actual file was not attached to the email, the email is small enough to be sent on almost all systems. For example, a video production house might use Megaupload to distribute a preview copy of a video to a client. Persons could also use Megaupload as a backup service. They could upload a copy of their important files to Megaupload. If their computer were to crash, they could visit Megaupload again to download the file.

One such ongoing case is the case of Kyle Goodwin.[29] Explain/introduce better Mr. Goodwin is a videographer. He used Megaupload as a backup service. Shortly before the government's January raid, Mr. Goodwin's hard drive crashed. His only copies of his videos are the ones stored on Megaupload. However, the government is resisting restoring his files.

Stakeholders

No matter how effective, economically and technologically viable, or minimally necessary an anti-piracy mechanism might be, perhaps the most important factor of all to consider is its political feasibility. Even

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[28] http://torrentfreak.com/bittorrent-to-speed-up-game-distribution-080915/

[29] http://torrentfreak.com/u-s-accuses-megaupload-user-of-storing-pirated-music-121031

if a proposal is deemed to be a good idea, it must also be acceptable to the various stakeholders involved, whether it be the general public, Hollywood, artists, the tech/internet industry, the international community, and other potentially affected players. To ignore the multiplicity of opinions among the key players is to assume a perfect conveyance of policymakers' decision-making logic to their constituents; this is simply not the case. While such simplifications "make normative analysis possible and useful at the individual level [they] can become serious deficiencies in the study of public policies" (Majone, 1975).

Moreover, the inclusion of political feasibility assessment in technical policy analyses has been said to "enhance the probability that the technical analysis contained therein will be considered" (Webber, 1986). The neglect of technical factors in ongoing anti-piracy legislative debates is, after all, one of the central deficiencies we hope to remedy with our evaluative framework. As such, political factors play a significant role in our evaluative framework for anti-piracy measures.

This branch of our analysis will take place on two l--evels, examining the political details of the proposal itself as well as possible political reactions to it. First, we will look at the actors(s) assigned the responsibility of implementing the mechanism in question: do they have the proper authority to carry out the proposed operations, and who is to bear the resulting financial burdens? Second, the assessment will analyze the various key players to anticipate the level of political resistance a policy might encounter: what motivations, belief systems, and resources do each of the stakeholders have, and how might they react to the proposed mechanism? This two-pronged approach of political feasibility analysis will allow for a comprehensive assessment of whether a given policy will be likely to gain the support necessary for passage and, eventually, implementation.

Responsibility of Implementation

When assessing the effectiveness of an anti-piracy mechanism, one must not only look at the actual effects that the proposal might have. It is also imperative to ensure that the mechanism can be implemented with ease, can be sustained for a sufficient amount of time to have a lasting effect on online piracy, and is robust enough for future modification or extensibility to new conditions and scenarios. This is a matter of identifying potential opposition to a proposed measure both based on the current political climate as well as predicting future challenges that it may encounter down the line. Issues of efficacy are perhaps better addressed by the economic and technical portions of our evaluative framework. The analytics we will focus on in this section are based more on assessing the political legitimacy of a proposal—a notion that is largely encapsulated by how the responsibility of implementation is allocated among government and relevant stakeholders.

Proper Authority/Jurisdiction

In our political analysis, we'll first look at whether or not the actor(s) assigned the responsibility of implementation actually has the necessary authority to do so. This criterion embodies a number of questions about established powers, legal precedents, and political jurisdiction. In more concrete terms, our framework favors proposals whereby the implementation clearly falls within the scope of what the governmental agency or actor was intended to address. The goal here is to eliminate overbroad or overreaching policy measures, as they are more likely to be politically volatile. In particular, vague or ambiguous language is to be avoided; the details of a policy's implementation should be narrowly defined enough that it obviously falls within the purview of that office's political authority. Those

proposals that do not meet these criteria are far more likely to meet resistance from critics and will suffer from a loss in overall political feasibility.

As an example of an anti-piracy mechanism that would fare poorly on this metric of authority and jurisdiction, take something like the Anti-Counterfeiting Trade Agreement (ACTA), an international trade agreement that establishes global standards on intellectual property enforcement. Negotiated in secret, ACTA circumvented the need for congressional approval and public scrutiny, thanks to its status as a sole executive agreement, "concluded on the basis of the President's independent constitutional authority alone" (Katz & Hinze, 2009). In short, the White House used this transparency loophole to enter the ACTA agreement without consultation. Naturally, the constitutional authority of such an action has been contested; thus, we see how questions of due process may play a role in determining the political acceptability of a proposed anti-piracy mechanism.

Financial Burden

Yet another important consideration to take into account is the parties that are assuming the financial burden associated with the proposed mechanism.

Possible Political Resistance

Ultimately, the process of assessing political feasibility is one of comprehensive information gathering and synthesis. Using the model of analysis first laid out by Meltsner, we must consider the confluence of "(1) actors, (2) motivations, (3) beliefs, (4) resources, (5) sites, and (6) exchanges" to determine "which actors will be politically effective, which will exercise power... [and] the possible areas of policy consensus and conflict" (1972). This will allow us to develop a map of the political climate surrounding a specific policy proposal and identify potential pathways (if any exist) of moving forward with it. While the issue of online piracy spans multiple policy spaces and eludes a single generalized case, we can identify the most prominent or likely elements in each of these categories and still leave room for additional flexibility.

Actors, motivations, beliefs, resources, sites, exchanges specific to the anti-piracy debate

Synthesis

Once all the aforementioned factors have been determined and detailed, we may begin synthesizing all the information to assess the overall political feasibility of the proposed mechanism. There are a multitude of models for conflict resolution in decision-making. Majone suggests that the best public decisions are those that consider not only the technical, economic, and legal limitations of a proposal, but also a "distributional constraint" like Pareto admissibility (1975):

> A decision affecting a number of people is said to be Pareto admissible if there is no other feasible decision that is preferred by one or more persons, and if nobody regards it as inferior... A change from state S to state S^1 is Pareto admissible if, in the transition, either every person in the relevant group is made better off, or at least one person is made better off, and nobody is made worse off. Notice that the change from one state to another can be Pareto admissible even if the states themselves do not satisfy the Pareto criterion.

Example of applying Pareto admissibility criterion based on previous subsection

Meta-analysis of Framework

Strengths, weaknesses, possibilities for future improvement

Current Policy Debates

The possibility of a graduated response to copyright infringement started in mid-2007 in France.[30] Nicolas Sarkozy, the newly elected President of France appointed an independent review commission to review copyright infringement.[31] That commission was run by the pro-enforcement Denis Olivennes.[32] The commission found that P2P was killing France's culture and sought to do something about it. The commission modeled their approach on the "three strikes and you're out" feature of baseball.[33] After 2 warnings, a user could be disconnected from the internet.

I don't know why I put this here. I wanted to do an intro to graudated response, but it's really an intro to HADOPI

HADOPI (Stephen)

http://arstechnica.com/tech-policy/2008/06/frances-three-strikes-copyright-law-gets-cabinet-support/

Effects of HADOPI Law in France

One study conducted by researchers at Wellesley College and Carnegie Mellon University looked at the implementation of the Hadopi law in France and compared the sales of music on iTunes with other European countries who did not have a similar law.[34] The study found a 25.5% increase in track sales in the control group, but a 48% increase in France, indicating that sales were 22.5% higher in France then the rest of Europe, likely due to the Hadopi law.[35] There was a similar result for album sales.[36] Additionally this general trend was true for all labels, so it's unlikely that these effects were due to a particular artist being popular in France.[37] In addition, these results did not occur when other countries were isolated.

(also explore what sources it uses)

The study also looked particular genres of music. First the study looked at a survey taken by EMI which asked people how much they are likely to pirate each type of genre of music.[38] They then found the largest sales increase in genres which were reported to be heavily pirated.[39] For example, Rock and Pop were both the genres most pirated, and the genres which experienced the largest increase in sales after the HADOPI law than before the law.

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[30] http://arstechnica.com/tech-policy/2007/11/the-insanity-and-genius-of-frances-anti-file-sharing-plan/
[31] ibid
[32] ibid
[33] http://arstechnica.com/tech-policy/2008/01/frances-plan-to-turn-isps-into-copyright-cops-on-track/
[34] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1989240
[35] Ibid p 14
[36] Ibid p 14
[37] ibid p15
[38] Ibid p 16
[39] Ibid p16

This shows that it is unlikely that there is any other explanation for this phenomenon than the HADPOI law. For example, increased sales in France suggest that Apple could have just heavily started promoting iTunes in France. But this genre comparison suggests that it is an unlikely explanation. It is also interesting to note that the lines started diverging right as parliament started debating HADOPI, not when it came into force. In addition, when this study was written no one had yet received a third/disconnect notice.[40]

Bhattacharjee et al showed an awareness of copyright infringement lawsuits did cut the number of pirates, but found that the effect was short-lived.[41]

6 Strikes vs Lawsuit – Plaz

In early July 2011, the RIAA and the MPAA signed a voluntary agreement with many of the country's largest Internet Service Providers (ISPs) to introduce a "6 Strikes" graduated response system to the United States.[42] The system is officially called the Copyright Alert System or CAS, but in the popular press, the name "6 Strikes" is often used.

Description

Under the system, copyright owners could make complaints against IP addresses to users.[43] ISPs will then forward those complaints on to users – without actually revealing information about the user to the copyright holder. [44]

The "6 Strikes" system establishes the Center for Copyright Information (CCI). The center is tasked with administering the CAS as well as educating the public on copyright issues.[45] The Center is governed by a 6 member advisory board, with 3 members appointed by the content industries and 3 members from Internet Service Providers.[46] There is also a four member advisory board, with members from the Center for Democracy and Technology, Public Knowledge, iKeepSafe, and the Future of Privacy Forum.[47] Reports indicate that these members are serious about a balanced approach and are independent from the other players.[48] However, these members are only advisory. The executive board has no requirement to listen to them. [49] The MOU also requires the executive committee to retain independent technical experts.[50] The MOU prohibits sending alerts from methods deemed to be "fundamentally

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[40] Ibid p 20
[41] http://digitalcommons.calpoly.edu/mgmt_fac/7/
[42] Link to agreement itself
[43] MOU Pg 8
[44] MOU Pg 8
[45] MOU Pg 3
[46] MOU Pg 3-4
[47] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[48] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[49] MOU Pg 4
[50] MOU Pg 5

unreliable."[51] However, the names of these experts is not public. In addition, the reports generated by the experts are not required to be public.

Under the CAS, Copyright owners provide ISPs with documented evidence of infringement.[52] However, there is no common standard format or implantation plan. Instead, each ISP is able to define their own implementation form and data format.[53] Each ISP is also able to define what each of the six strikes definitively means. However, the MOU lays out an outline of what each strike could be.

The first two alerts are purely educational.[54] They do not require any response or action form the user. The alerts will contain information that copyright infringement is illegal, that there are lawful ways to download content, and that further sanctions may follow. The third and fourth alerts also educate the user, albeit in stronger language.[55] They also require the user to take some affirmative action to close the alert.

Finally with the last two alerts, "mitigation measures" or "sanctions" can be taken. The MOU does not mention specific sanctions, but instead offers a menu from which ISPs can choose:

> Such measures include, but are not limited to, a temporary reduction in transmission speed, a temporary step-down in the subscriber's service tier, a temporary redirection to a landing page for completion of a program of copyright instruction, a temporary redirection to a landing page until the subscriber contacts a customer service representative, or a temporary suspension of access.[56]

Unlike some media reports, ISPs are not required to suspend a user's internet access.[57] Instead the ISP may decide which sanctions to implement. Notices reset after 12 months without receiving an alert.[58] Seven days are allowed between each alert that counts towards the six.[59]

Appeal Process

After getting a fifth and sixth notice, a user has 14 days to file an appeal via an "Independent Review Program" before the mitigation measure is imposed.[60] The Independent Review Program is a non-judicial program set up by CCI with the American Arbitration Association (AAA).[61] The overhead of the program is paid by CCI, which is funded equally by content groups and by ISPs.

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[51] MOU Pg 6
[52] MOU Pg 4
[53] MOU Pg 7
[54] MOU Pg 8
[55] MOU Pg 8
[56] MOU Pg 11
[57] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 21
[58] MOU Pg 13
[59] MOU Pg 7
[60] MOU Pg 14
[61] MOU Pg 26

A user can also appeal their first through fourth notices upon receiving their fifth notice.[62] However, if a user does not appeal those earlier notices at that time, then they cannot again appeal those in the future.[63]

In order to file an appeal, a user fills out an online "Application to Commence Independent Review" or "ACIR" form.[64] In addition, a user must pay a $35 fee on appeal, however, such fee is refundable if a user prevails in their appeal.[65] The user may select from 6 possible defenses:

(1) account misidentification
(2) unauthorized use of account
(3) authorized use of content
(4) fair use
(5) misidentification of content
(6) work published before 1923[66]

The user must include a basis for each defense and possibly provide the corresponding backup material.[67] For example, if a user asserts authorized use, the user must provide specific, written authorization. If a user claims fair use, then they must provide (1) a copy of each file, and (2) an explanation of each use, and the basis for claiming fair use.

The ISP and the Copyright owner will also be able to submit information.

The review process is designed to be automated; in addition one reviewer per case is selected by the AAA.[68] Reviewers must be lawyers, but they are not required to have specific copyright experience.[69] However, they are required to have training from a CCI-Approved Copyright expert.[70]

Analysis

Is effective in reducing piracy?

We believe that this method will be effective in reducing piracy (look at Hadoopi).

Compared to the previous system where the content industries directly sued users the new system is much more scalable. Under the old system, companies had to file individual John Doe lawsuits in order to ask a court to unmask a user's identity.[71] The case could then go to a lengthy and expensive trial.[72] Although in many cases, the user settled by paying an average of $3,000.[73] This was not cost effective

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[62] MOU Pg 30
[63] MOU Pg 30
[64] MOU Pg 29
[65] MOU Pg 30
[66] MOU Pg 26-28
[67] MOU Pg 29
[68] MOU Page 30 and 31
[69] MOU Pg 33
[70] MOU Pg 35
[71] http://www.pcworld.com/article/255061/judge_throws_out_mass_john_doe_porn_copyright_lawsuits.html
[72] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/
[73] http://arstechnica.com/tech-policy/2007/03/students-largely-ignore-riaa-instant-settlement-offers/

for the industry.[74] A TechDirt study of RIAA financial records found that the RIAA spent over $17.6 million dollars on lawyers in 2008.[75] As a result, the RIAA brought in $391,000 in settlements.[76] The industry did it because they believed it would be a disincentive for users to illegally download files.[77] The new system seems much more efficient in comparison.

Under the old system, two plaintiffs attempted to fight instead of settling. Joel Tenenbaum, a student at Boston University, was found to have willfully infringed by downloading 30 songs over KaZaA in 2003.[78] The jury awarded the music companies $675,000, or $22,500 per song, a substantial discount over the $150,000 statutory limit.[79] Jammie Thomas-Rasset, was found guilty of copyright infringement of 24 songs for statutory damages of $1.92 million dollars, or $80,000 per song.[80] This was later reduced to $54,000 or $2,250 per song, and then increased to $222,000.[81]

In trials, defendants have claimed that others performed the actual infringement, for example, though an unsecured WiFi network. When a plaintiff files a John Doe lawsuit with an ISP, they receive the name of the subscriber who is paying for the internet connection. Courts in Finland have found that this is insufficient to prove guilt, as it does not show that the person actually performed the infringement.[82] The EFF also argues that merely providing open WiFi does not make someone liable for copyright infringement.[83] In addition, the EFF argues that the DMCA provides a safe haven for service providers who offer "the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user's choosing, without modification to the content of the material as sent or received."[84] This was originally written for large ISPs, but the EFF argues it applies just as well to small providers of WiFi hotspots.

Unfortunately this provides an open loophole in preventing piracy. Although legally there is no negligence defense for piracy, this allows persons to avoid liability, harming protection against piracy.[85] We feel there is some distinction between a business that regularly provides free wifi and an individual that keeps his WiFi open as a defense.

(wandering off topic; where is best for this?)

In addition, court cases have tried to distinguishing actual transmission of the file versus making available. MediaSentry has a hard time showing that the file was actually transmitted using the methods that they employ. If they were to actually download the material, that raises questions about whether it is an illegal act to transmit a copy of the work to an agent of the work.[86] Courts at first ruled

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[74] http://www.techdirt.com/articles/20100713/17400810200.shtml
[75] ibid
[76] ibid
[77] http://arstechnica.com/tech-policy/2008/12/no-more-lawsuits-isps-to-work-with-riaa-cut-off-p2p-users/
[78] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/
[79] ibid
[80] https://mywebspace.wisc.edu/mwbourgeois/web/06-cv-1497/336-1.pdf
[81] http://arstechnica.com/tech-policy/2012/09/minnesota-file-sharer-loses-appeal-must-pay-222000/
[82] http://arstechnica.com/tech-policy/2012/05/finnish-court-rules-open-wifi-network-owner-not-liable-for-infringement/
[83] https://www.eff.org/deeplinks/2011/08/open-wifi-and-copyright-liability-setting-record
[84] ibid
[85] ibid
[86] "It is well-established that the lawful owner of a copyright cannot infringe its own copyright." Olan Mills, Inc. v. Linn Photo Co., 23 F.3d 1345, 1348 (8th Cir. 1994)

in the Olan Mills, Inc. v. Linn Photo Co. that this was legal, however then made an exemption for investigators in RCA/Ariola Int'l, Inc. v. Thomas & Grayston Co., 845 F.2d 773, 781-82 (8th Cir. 1988). So the courts rejected such an argument in the Thomas case.[87]

At some point we should decide whether or not these defenses should be allowed. These should not be established behind closed doors by the Copyright and ISP industries. Instead, the process of what defenses should be allowed should occur in the public eye.

The Courts are generally where this case law has been established. However, this is a lengthy process. Though generally, only one person needs to go through this process to establish the case law in the first place. That is why this method of allowing motivated parties to sue and go through the long precedent setting process, while allowing others to quickly move through the process is a good one. After one party has established the rules, the others just need to follow them.

For example, should the use of open WiFi access points be allowed? Does making available constitute infringement, or must it actually be transmitted?

Another process that could work is the same one used by administrative agencies to issue new laws. Here agencies here from all parties and then try to craft the best solution from the information they have received. This is a good way to trade off the costs of a policy with its benefits.

Once this policy has been established, we should move to a scalable process that allows the law to rapidly be applied.

(the last 4 paragraphs need rearrangement)

(this is prob not the right place for all this content)

Does the policy make economic sense?

The proposal appears to cost very little. In particular, the system attempts to automate as much of the process as possible - it is built for scale. The cost would be mostly in the initial setup of the system.

By having a low cost, the system only needs to stop a little amount of piracy in order to be cost effective.

It is also much more fair to individual defendants. Even the minimum $750 per song is much too high. A controversial report by the Republican Study Group made the same assertion.[88] The initial settlement amounts of $3,000 for about 30 songs ($100 per song) looks very good compared to the amounts which could be lost in courts (minimum of $750 per song, not including legal fees).

On the other side, some lawyers does not actually try to seek lawsuits; instead seeking to settle with as many people as possible.[89] Some judges have sought to block this model, by requiring lawyers to file one-by-one, incurring a filing fee each time.[90] Other judges have become angry that these cases took up space on their docket and threw out the entire lawsuit.[91]

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[87] http://beckermanlegal.com/Lawyer_Copyright_Internet_Law/virgin_thomas_080924Decision.pdf

[88] http://arstechnica.com/tech-policy/2012/11/influential-gop-group-releases-shockingly-sensible-copyright-memo/

[89] http://arstechnica.com/tech-policy/2012/04/judge-rejects-copyright-trolls-bittorrent-conspiracy-theory/

[90] ibid

[91] http://arstechnica.com/tech-policy/2011/02/random-defendant-outlawyers-p2p-attorney-gets-lawsuit-tossed/

Both of these incentivize non-guilty parties to settle as much as guilty parties. That is not how the court system is supposed to work. This process is too heavy and burdensome for the courts.

Does it have minimal negative repercussions on the Internet?

rearrange

This depends on how the policy is implemented. In the past, some ISPs have intercepted pages and have added banners onto pages in midflight.[92] For example, in 2008 Rogers added a quota message to the top of the Google home page by inserting Javascript into the page using an active version of Deep Packet Inspection. This technology is sold by companies such as PerfTech.[93] Many (who) find the practice of modifying other sites' pages over the Internet to be abhorrent.[94] (expand)

Put elsewhere

Meanwhile almost all wireless access points use some sort of redirection technique to bounce first time visitors to a log in page. For example, many services send back a false DNS response, directing the user to the log in page instead. Or a user's request is redirected by a HTTP redirect after a page is received. A user may also be redirected by IP address to the log in page. All of these techniques are not clean in regards to how the internet was designed. This can present problems. For example, my iPad tries to refresh my email and the WiFi router answers as the mail server. My mail server does present a security warning, but if the user clicks through, the access point could be trivially designed to intercept my mail credentials.

However a similar technique may pose problems for the internet. For example, a user may be uploading data in the background when their internet connection is redirected to this message – causing the update to break. Or perhaps a user is connecting to a computer via remote access when the redirection happens. If the redirection is not properly implemented, it could break the remote access connection.

For example, Comcast's Sandvine implementation ended up blocking some email transmissions sent with Lotus Notes, a less-popular email client made by IBM.[95] Sandvine did not intend to block Lotus Notes from sending email, but the technique Lotus was using to transfer large attachment must have been similar to the BitTorrent network technique. It appears that Sandvine had never tested sending attachments over 2MB with Lotus Notes before rolling out their product.

It would impossible for Sandvine to test every possible network configuration. That is why we have standards! Standards abstract away complicated implementation details. Messing with these standards ends up breaking things and makes them harder to test.

The right DPI technology needs to be implemented to be able to show a message without breaking the internet.

ISPs are not looking for infringement themselves

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[92] http://lauren.vortex.com/archive/000337.html
[93] http://www.perftech.com/
[94] expand
[95] http://arstechnica.com/uncategorized/2007/10/comcast-traffic-blocking-even-more-apps-groupware-clients-affected/

These techniques could also impact security if they are not done properly. For example, adding poorly written JavaScript to another page could allow user-generated content on a page to break out of the containment that the author of the page provided. We have seen before that copy protection code can have unintended consequences. For example, Sony BMG released CDs in 2005 that contained MediaMax copy protection.[96] This software was poorly written to hide all files on a user's system starting with "sys."[97] A virus could use this sys name to hide itself on all computers which had ever played CDs containing MediaMax.

Is it the minimal necessary? (we should rename this)

This technique still makes no attempt to filter out fair use requests ahead of time. Instead, a user must lend the AAA $35, fill out paperwork, and then wait for a response. The burden of proof of showing fair use is on the user.

It remains to be seen what technical measures are used to identify infringement. This will give us more information of whether it will alarm on the use of services that provide non-infringing use such as Megaupload. (didn't they say just P2P?) (they also can't use the same methods)

Is it acceptable to stakeholders?

Wait for Stephen's section

Other/To-do

- 6 Strikes takes down content first. Can appeal as fair use – but only afterwards
- And only then on the 5th and 6th notices
- Likely be effective against main problem
- Good to educate people
- Good balance
- Should be able to complain easily
- Not so many long procedural hurdles
- Penalties small next to $1000 settlements or hundred k judgements
- Should be automated and streamlined
- But if you have a problem, should be able to reach someone who has authority over the phone
- The fact that the copyright expert needs to be CCI approved is troubling. Content industries have a long history of putting out biased, extreme, or just plain wrong information on copyright. (must cite/backup)
- Selling in one country vs another
- Damages larger than the entire past profits of the record industry
- Make more specific (Don Unger)
- Future/flux (Don Unger)

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[96] http://www.npr.org/templates/story/story.php?storyId=4989260

[97] http://blogs.technet.com/b/markrussinovich/archive/2005/10/31/sony-rootkits-and-digital-rights-management-gone-too-far.aspx

Upcoming policy debates

When evaluating future policies to protect against copyright infringement, policy writes should consider the framework we have outlined above.

Republican Study Group

Specific Policy Recommendation

TBD

Not just current policy, but what should be done

Should 6 Strikes be mandatory? (I'm thinking no)

Audience for proposal

Read about recent updates in 6 Strikes Implementation plan

Really need to write this section!

Share of work

Stephen wrote the proposal and stakeholders

Michael wrote everything else

Michael E Plasmeier

From: Jessie M Stickgold-Sarah
Sent: Monday, December 03, 2012 9:23 AM
To: Michael E Plasmeier; Stephen J Suen
Cc: Jessie M Stickgold-Sarah
Subject: 6.805 policy paper -- CI feedback

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Michael and Stephen,

I'm intrigued by your informative and ambitious paper! Below I've written some comments and suggestions that will help you really pull this together into a policy document. I'd also like to meet with you this week. I'm free on Wednesday and Friday after 1:30pm, on Thursday morning and before class (in the process of scheduling some meetings but that should be resolved soon), and if necessary I can make time on Tuesday. Let me know what your schedule is like and we'll set something up.

You have a ton of great questions and example data--this is your strength so far. What's missing is your own voice: recommendations, assertions, claims. You've organized most of your paper around your evaluative framework, which is structurally a smart idea. However, your sections tend a bit towards the info-dump (as you know, from your own comments in the paper about "is this the right place" and "does this info help?"). As I read, I realized I wasn't even sure whether your analysis was "here is an example of how we'd answer this question" or "let's figure out whether this is a good question to ask"!

Each section of your paper should have a function, and that function is basically "tell the reader something". As it stands, much of your paper asks questions instead of answering them. I strongly recommend that you go through the whole paper and ask yourself, for each section: "What should the reader learn from this section?"

For "Ease of Circumvention" the answer might look like "The reader should have a set of metrics against which to measure a proposal, to determine whether it is easy to circumvent." Those metrics might be "can commonly used software circumvent it through its normal use?" "what percentage of the population has the specific knowledge to circumvent it?" If I look at your "Ease of C" section using this framework, for instance, I notice that questions about "is it easy to circumvent" get mixed up with "is it practical to apply the constraint"--so you see it's a useful tool, and answers many of your questions about "should this go here?".

You have some great material in this document, but there's a long way to go before it's a policy paper. I'd like to meet with your team to talk through some more sections and get you on the path to writing a successful paper. I think you can really push this to the next level.

Best,
Jessie

Michael E Plasmeier

From: Matt Schruers <mschruers@ccianet.org>
Sent: Thursday, December 06, 2012 3:56 PM
To: Michael E Plasmeier
Cc: abdavidson@gmail.com; Stephen J Suen
Subject: Re: MCS Comments on Policy Framework (theplaz@mit.edu)

Follow Up Flag: Flag for follow up
Flag Status: Flagged

Gentlemen,

Regarding graduated response in general, it depends greatly upon the context. I think there are two separate questions here - desirability, and effectiveness.

Broadly speaking, I think there's an odd relationship: the more effective graduated response is, the more valid are concerns about desirability.

In my opinion, business should be entitled to do whatever it wants with respect to graduated response, particularly at the edge of the network where the user base can vote with its feet and discipline unreasonable policies. Some services want to be a "clean, well lit place", and so they kick people off at the slightest infraction. In competitive markets I think this is desirable -- since it allows markets to assess what kind of enforcement is acceptable. However, this also means that the policy will have limited effectiveness since pirates will migrate to the most permissive services (and indeed, we seen this).

At lower levels of the network, however, there tends to be very little competition, and thus users can't escape unreasonable policies. Here the policy is certainly more effective, but if there is no competition - and CCI looks slightly cartelized -- there's nothing to prevent network operators from selling out there users. Thus, it might be more effective, but it also requires greater supervision by governmental authorities lest it run off the rails as some sort of cartelized restriction on access to content.

The HADOPI approach of direct government intervention to deny communications services through an administrative process is the most extreme, in my opinion. It is extremely expensive, and by some accounts it has not been particularly effective.

But there's certainly a cultural difference at work here too. Back in the spring some colleagues and I met with the director of HADOPI (Marie-Francoise Marais), who was visiting the U.S. to tout their efforts. I explained the U.S. notice & takedown system under the DMCA, and the voluntary accord behind CCI as evidence that the issue can be addressed within the private sector, and Marais replied, "Oh, in France we would be very uncomfortable with businesses making such a decision." By contrast, if you look at *our* policy space, there's obviously a lot of discomfort with the *government* making such decisions - consider the controversy over domain name seizures, which are essentially a type of termination decisions. In light of this, it is worth considering how "portable" is any given approach that you might recommend.

All that being said, it is worthy to recall that the DMCA requires (practically speaking) that service providers implement a policy to terminate repeat infringers, but it gives them complete flexibility in how to shape that policy. 17 U.S.C. 512(i)(1)(A). This is a very reasonable requirement, which allows different companies to experiment with different models. (Google, Facebook, and eBay can probably construct elaborate systems, for example, whereas smaller services cannot afford to do so.) This policy is just one tool in the anti-piracy toolbox -- it doesn't purport to be a silver bullet, but it makes a contribution.

In my opinion, we require large number of small changes -- including getting more lawful services online. This is a sort of swarm-theory approach to the problem. The rightsholder community, on the other hand, has traditionally demanded sweeping solutions that they portray as a single, silver bullet to their problems. (There a political economy reason for this: there are high fixed costs to getting legislation passed of any sort. Since any bill takes a large effort, legislation proponents tend to think big, because you're paying full freight regardless.)

-Matt

On Thu, Dec 6, 2012 at 1:28 PM, Michael E Plasmeier <theplaz@mit.edu> wrote:

Matt,

Thank you very much for your comments.

We agree that we need to think a great deal more about how we want to organize the paper.

We also need to complete some sections, such as the economics section, and your comments will help us complete those sections.

You also raised a number of good points we hadn't thought about, such as comparing HADOPI costs to the US voluntary system cost.

What are your thoughts on graduated response in general?

Thanks again!

-Michael and Stephen

From: Matt Schruers (Google Drive) [mailto:mschruers@ccianet.org]
Sent: Wednesday, December 05, 2012 12:25 PM

Stephen's section from a while back

Stakeholders

idk if I would say that

No matter how effective, economically and technologically viable, or minimally necessary an anti-copyright infringement mechanism might be, perhaps the most important factor of all to consider is its political feasibility. Even if a proposal is deemed to be a good idea, it must also be acceptable to the various stakeholders involved, whether it be the general public, Hollywood, artists, the tech/internet industry, the international community, and other potentially affected players. To ignore the multiplicity of opinions among the key players is to assume a perfect conveyance of policymakers' decision-making logic to their constituents; this is simply not the case. While such simplifications "make normative analysis possible and useful at the individual level [they] can become serious deficiencies in the study of public policies" (Majone, 1975).

Footnotes! what

Moreover, the inclusion of political feasibility assessment in technical policy analyses has been said to "enhance the probability that the technical analysis contained therein will be considered" (Webber, 1986). The neglect of technical factors in ongoing anti-copyright infringement legislative debates is, after all, one of the central deficiencies we hope to remedy with our evaluative framework. As such, political factors play a significant role in our evaluative framework for anti-copyright infringement measures.

high level bs

This branch of our analysis will take place on two l--evels, examining the political details of the proposal itself as well as possible political reactions to it. First, we will look at the actors(s) assigned the responsibility of implementing the mechanism in question: do they have the proper authority to carry out the proposed operations, and who is to bear the resulting financial burdens? Second, the assessment will analyze the various key players to anticipate the level of political resistance a policy might encounter: what motivations, belief systems, and resources do each of the stakeholders have, and how might they react to the proposed mechanism? This two-pronged approach of political feasibility analysis will allow for a comprehensive assessment of whether a given policy will be likely to gain the support necessary for passage and, eventually, implementation.

his writing style is very diff from mine...

Responsibility of Implementation

When assessing the effectiveness of an anti-copyright infringement mechanism, one must not only look at the actual effects that the proposal might have. It is also imperative to ensure that the mechanism can be implemented with ease, can be sustained for a sufficient amount of time to have a lasting effect on online copyright infringement, and is robust enough for future modification or extensibility to new conditions and scenarios. This is a matter of identifying potential opposition to a proposed measure both based on the current political climate as well as predicting future challenges that it may encounter down the line. Issues of efficacy are perhaps better addressed by the economic and technical portions of our evaluative framework. The analytics we will focus on in this section are based more on assessing the political legitimacy of a proposal—a notion that is largely encapsulated by how the responsibility of implementation is allocated among government and relevant stakeholders.

our other stuff

what did that say?

Proper Authority/Jurisdiction

In our political analysis, we'll first look at whether or not the actor(s) assigned the responsibility of implementation actually has the necessary authority to do so. This criterion embodies a number of questions about established powers, legal precedents, and political jurisdiction. In more concrete terms, our framework favors proposals whereby the implementation clearly falls within the scope of what the governmental agency or actor was intended to address. The goal here is to eliminate overbroad or overreaching policy measures, as they are more likely to be politically volatile. In particular, vague or

This is not all right at all....

ambiguous language is to be avoided; the details of a policy's implementation should be narrowly defined enough that it obviously falls within the purview of that office's political authority. Those proposals that do not meet these criteria are far more likely to meet resistance from critics and will suffer from a loss in overall political feasibility. This does not fit ...

As an example of an anti-copyright infringement mechanism that would fare poorly on this metric of authority and jurisdiction, take something like the Anti-Counterfeiting Trade Agreement (ACTA), an international trade agreement that establishes global standards on intellectual property enforcement. Negotiated in secret, ACTA circumvented the need for congressional approval and public scrutiny, thanks to its status as a sole executive agreement, "concluded on the basis of the President's independent constitutional authority alone" (Katz & Hinze, 2009). In short, the White House used this transparency loophole to enter the ACTA agreement without consultation. Naturally, the constitutional authority of such an action has been contested; thus, we see how questions of due process may play a role in determining the political acceptability of a proposed anti-copyright infringement mechanism.

Financial Burden

Yet another important consideration to take into account is the parties that are assuming the financial burden associated with the proposed mechanism.

~~Wrong section~~ well need to approach right ...

Possible Political Resistance

Ultimately, the process of assessing political feasibility is one of comprehensive information gathering and synthesis. Using the model of analysis first laid out by Meltsner, we must consider the confluence of "(1) actors, (2) motivations, (3) beliefs, (4) resources, (5) sites, and (6) exchanges" to determine "which actors will be politically effective, which will exercise power... [and] the possible areas of policy consensus and conflict" (1972). This will allow us to develop a map of the political climate surrounding a specific policy proposal and identify potential pathways (if any exist) of moving forward with it. While the issue of online copyright infringement spans multiple policy spaces and eludes a single generalized case, we can identify the most prominent or likely elements in each of these categories and still leave room for additional flexibility.

Actors, motivations, beliefs, resources, sites, exchanges specific to the anti-copyright infringement debate

not fitting

Synthesis

Once all the aforementioned factors have been determined and detailed, we may begin synthesizing all the information to assess the overall political feasibility of the proposed mechanism. There are a multitude of models for conflict resolution in decision-making. Majone suggests that the best public decisions are those that consider not only the technical, economic, and legal limitations of a proposal, but also a "distributional constraint" like Pareto admissibility (1975):

> A decision affecting a number of people is said to be Pareto admissible if there is no other feasible decision that is preferred by one or more persons, and if nobody regards it as inferior... A change from state S to state S^1 is Pareto admissible if, in the transition, either every person in the relevant group is made better off, or at least one person is made better off, and nobody is made worse off. Notice that the change from one state to another can be Pareto admissible even if the states themselves do not satisfy the Pareto criterion.

Example of applying Pareto admissibility criterion based on previous subsection

diff b/w him and me
my prof-ue would never let me write this way!

Stephen

12/11

Working exclusively on this now

We have a diff writing style

He does 1st review of how stakeholders act

And then specifics of each stakeholder

How deal w/ writing styles...

he will inject style...

Draft 12/11 2A

STS.085 Project Better title

Michael E Plasmeier <theplaz@mit.edu>

Stephen J Suen <ssuen@mit.edu>

Contents

Exec Summary

TBD Currently proposal with minor edits

It is very useful to put a "bottom line up front" in any document of this nature. I note, however, that the bullets here do not fully map on to the ensuing discussion. Additionally, it occurs to me that an overview of this nature should probably identify what your metrics are for "make a difference"? It would seem that any metric for that would subsume the third bullet, 'can pirates easily avoid it'.

Our project aims to develop a framework for the cost-benefit analysis of anti-copyright infringement mechanisms.

redo

- Will the policy actually make a difference?
- Can the policy be implemented robustly?
- Can pirates easily avoid the mechanism?
- What are the costs and challenges of implementation?
- Does the policy violate the standards of the Internet?
- Will the policy prevent us from accomplishing other goals, such as tightening up cyber security?
- Will certain actors incur a cost, and if so, who will pay for it?

Based on these issues, the long-term goal for this evaluative framework will be to encompass a common set of values, standards, and metrics for the analysis and discussion of future proposed anti-copyright infringement mechanisms. With this model, we hope to enable a more robust discussion of how to address the copyright infringement problem without compromising the underlying structures of the open Internet and—by extension—the civil liberties guaranteed by those structures and the ecosystem for innovation that they have enabled. This analysis will also take into account pragmatic issues of economic costs, possible political challenges, and other barriers to comprehensive implementation. We will also be sure to examine copyright law pre- and post- Internet, to see how notions of intellectual property and proper enforcement of those exclusive rights have changed over time, in order to better contextualize the issue.

To illustrate the usefulness of such a framework, we will show it in action by running an analysis of recent graduated response policies proposed to combat online copyright infringement—specifically, the HADOPI law in France and the "six strikes" Copyright Alert System being implemented here in the US as part of an agreement between the MPAA, the RIAA, and a number of major ISPs. To put this assessment into perspective, we will also use our framework to evaluate the effectiveness of the previous anti-copyright infringement paradigm of filing lawsuits against individual users, using it as a benchmark for comparison. Through this analysis, we will be able to identify the merits and downsides of graduated response mechanisms, discuss them in relation to traditional copyright litigation strategies, and provide comprehensive policy suggestions.

Problem Statement/Intro

have and continue to

Copyright

Copyright is a legal concept in which the government grants the creator of an original work exclusive right to the work. It is a form of *intellectual property*, a category which includes patents, trademarks, and trade secrets, all of which are *intangible assets*. Governments want to encourage the creation of "works of the mind" by giving the original creators exclusive rights for a period of time. A copyright holder is granted certain *exclusive rights* to a work, such as the rights to reproduce, distribute, display, or perform the copyrighted work, or to make derivative works. In the United States since 1989, content is automatically copyrighted when it is reduced to tangible form (ie. written down).

Copyright Infringement

Copyright Infringement is the unauthorized use of works under copyright, for example, making a copy when one is not authorized to do so. For example, if one were to make a copy of the latest Taylor Swift CD one purchased at Walmart and give it to a friend, that would be copyright infringement. Copyright infringement is often referred to ~~*copyright infringement*~~ as piracy

Copyright infringement has been and continues to be a big problem for the creative content industries, as technology ~~that made copies~~, particularly digital technology, has become more accessible to consumers. The Internet has only exacerbated the problem, as the Internet allows one to send files across the globe with ~~varying degrees of~~ traceability.

copying

copying quickly and w/ few traces

The first question to ask is should something be done? Some assert that copyright is not economically efficient or raise other objections. This paper does not consider this question, and instead assumes that copyright infringement should be addressed.

to copyright

Estimates on the scale of the problem vary. Estimate scale of the problem from economic section

For the last decade, the content industries have been trying to fight unauthorized sharing over the Internet. A number of methods have been tried, including having the industry sue individual downloaders. However, recent efforts have been coalescing around so called "graduated response" efforts. Under a graduated response system, a user is sent a number of warnings, before a penalty, which might include service termination. Such systems can be mandated by law, such as in France, or through a voluntary agreement with Internet Service Providers (ISPs), as in the United States.

Evaluative framework

We attempt to establish a framework to evaluate proposals to combat copyright infringement.

1. Is effective in reducing copyright infringement?
    a. Ease of circumvention
2. Does it make economic sense?
    a. Revenue in reclaimed sales
    b. Positive effects on employment
3. Has minimal negative repercussions on internet
    a. e.g. DNS

This framework can be used to ~~think~~ establish the pros and cons of a proposal

4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services
5. Will be acceptable to stakeholders (political/legal argument)
    a. Who will implement? Legal authority/precedents?
    b. Costs of implementation/enforcement
    c. Political views/possible challenges of stakeholders, e.g. industry, citizens, artists

Is if effective in reducing copyright infringement?

1. Is effective in reducing copyright infringement
    a. Ease of circumvention

The first question to ask about any policy is "is the policy effective in reducing copyright infringement?" A policy that does not reduce copyright infringement should not be considered further.

explain better

Ease of Circumvention

A policy does not need to be ironclad in order to reduce copyright infringement. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures. Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs.[1] Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

This is a bit of copyright arcana, but it is best to differentiate this issue into two separate components: (1) the right in the work (copyright) and (2) the right to prevent circumvention, or 'lock-breaking,' A.k.a. paracopyright. They're two separate barriers of protection. As it turns out, on CDs, only one barrier is applied. But in the case of DVDs, while a copy for personal use (format-shifting, for example) might be broadly considered fair use, the fact that it is fair use isn't relevant to the second component- the circumvention. This is why burning your CDs onto your PCs would be non-infringing, but it is still (arguably) unlawful to do the same with DVD. Not because of the underlying copyright, but because of paracopyright.

I think we do explain this somewhere else...

It is certainly possible to download a program from the internet to make copies of DVDs, but the very fact that it is not easy prevents vast amounts of Americans from even trying.

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[1] The law says nothing explicitly about "space shifting" your collection, for example, ripping a CD you own to put on your iPod. However, there has never been an explicit case brought against someone for ripping. In addition, at attorney for MGM said that his clients, the record companies, have no problem with people ripping a CD for their own personal use.

Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd. (3/29/05), 04-480
http://www.supremecourt.gov/oral_arguments/argument_transcripts/04-480.pdf

It is not even that hard to find out how to do it. Searching for "how to rip a DVD" yielded instructions on the first result. ~~Now such~~ instructions ~~are somewhat complicated~~, with instructions to download a .dll to a ~~certain programs~~ folder location, but it still requires moderate tech skills.

Keeping material illegal makes it harder to find. Even though the industry has been unsuccessful in shutting down the Pirate Bay, it has prevented it from becoming a legitimate business. By keeping the business illegal and keeping it on the run, the industry has made the life of the Pirate Bay harder.

However there is still a core group of techies and dedicated other folks who have the knowledge to learn how to circumvent these measures and cover their tracks.

(move below elsewhere?)

DNS Filtering

This can hamper the effectiveness of certain proposals. For example, SOPA proposed altering DNS information to remove sites that infringed on copyright.[2] However, a user could just enter the IP address of a site instead.

DNS is a service of the Internet which maps friendly names such as "google.com" into IP addresses such as "74.125.224.35". Each server[3] on the internet has as IP address which is the way that other computers can route traffic to the server. DNS provides this mapping of IP. For example, thepiratebay.se is located at 194.71.107.15.

However, instead of entering the domain name into ones browser, one can enter the IP address of the server directly into one's browser. This would allow the users to connect to the server, while bypassing the DNS service.

Domain Name	IP Address
thepiratebay.se	194.71.107.15

If the Pirate Bay ever has to change server hosts, then moving their IP address would be almost impossible, as these are assigned in blocks. For example, when the internet was first created large organizations such as MIT were given large blocks of IP addresses. For example, MIT has all of the IP addresses starting with 18. Servers then through Border Gateway Protocol (BGP) have rules to forward all traffic destined for IP addresses starting with 18 towards MIT since MIT is an "Autonomous System." The same applies to Internet Service Providers or Hosting Providers. If the Pirate Bay changed hosting providers, their IP address would change. Under DNS, the Pirate Bay can slowly phase in their new IP address transparently.

This may be a significant factor. One study of spam messages showed that only XX% of messages contained an IP address instead of a domain name.[4]

However, if their IP address was publically known, they would have to disseminate their new IP address, for example by posting it in Twitter or in a newspaper ad. There are even more subtle ways to do this

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[2] dyn.com/sopa-breaking-dns-parasite-stop-online-copyright infringement/

[3] In normal operations

[4] http://css.csail.mit.edu/6.858/2012/readings/trajectories.pdf

on the Internet. Persons not in the United States could operate "darknet" DNSes. These DNSes would have addresses that the US had blocked[5].

The United States government would have to be super careful about how it distributes the blacklist. If it was just a simple list that was public, then some people would just feed this list into their DNS system to allow users to continue to reach all of their old content. In addition, this list of copyright infringing sites would tell copyright thieves exactly where to look!

Much of your discussion here is walking through a type of "slippery slope" argument. This is a valid species of argument, but from a rhetorical standpoint, you need to close the loop for it to be effective. I.e., at some point you need to turn from the technical details regarding how prohibitions can be defeated and articulate the ultimate point regarding the trade-off of efficacy vs. government intrusion. In this sense, the DVD example is very useful. Easily defeated for someone of reasonable intelligence... but to what extent do people actually do that, as opposed to, say, buy it on Amazon?

They could even be distributed, much in the way of BitTorrent itself is. For example, BitTorrent Distributed Hash Tables (DHT) work by giving each node a copy of the table or part of the table. A node then asks other nodes to share their tables. That way there is no one authoritative owner which would frustrate any attempt to take it down, because almost every node would need to be taken offline to bring it down.

(should these details be elsewhere?; really got into the weeds here; but where else would be best for this?)

This raises an interesting question: is it illegal to know the phone number of an illegal service? For example, say someone had the phone number of a drug operation. Is that in and of itself illegal?[6] No, it's only evidence that corroborates a story and could provide extra evidence against a person in court. By itself it is not illegal. Then how are knowing IP addresses any different? DNS is just a mapping of a name to a number. That should not in and of itself be illegal.

Multiple sites can live at the same IP address, through a technology called "vhosts." Each server has only one IP address, but it can host multiple sites running on multiple domain names. Low-grade shared hosting often is set up in this way. If one were to ban an entire IP address, one could ban sites other than the one that was planned. The other sites running on the same server could be run by completely

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[5] DNS normally works by contacting a hierarchy of name servers, starting from a central server. Normally people query this standard hierarchy. However, there is nothing which requires that they use this hierarchy. A darknet DNS is one where the user defines a different root DNS to look at, usually in addition to the normal DNS tree. If these servers were run entirely out of the US, they would be out of the reach of US law enforcement.

[6] The interesting possible exception to this occurs interestingly enough in copyright law. Under the DMCA (17 U.S.C Sec. 1201(a)(1))it is illegal to remove the encryption and produce tools or parts of tools that circumvent encryption. In one case Memorandum Order, in MPAA v. Reimerdes, Corley and Kazan (NY; Feb. 2, 2000) (https://w2.eff.org/IP/Video/MPAA_DVD_cases/?f=20000202_ny_memorandum_order.html the court claimed that the key in and of itself was a copyright circumvention device. A key, is at its base, just a very large number. In response, a number of people made an image with the colors of each section of the image being represented by the same digits as the encryption key. 46-dc-ea-d3-17-fe-45-d8-09-23-eb-97-e4-95-64-10-d4-cd-b2-c2 by Ben S, Yale Law Tech, 2011 Marchhttp://www.yalelawtech.org/trusted-computing-drm/46-dc-ea-d3-17-fe-45-d8-09-23-eb-97-e4-95-64-10-d4-cd-b2-c2/
In addition, all computer files are, at their core, a string of 1s and 0s. These strings form very long binary "numbers" which it is illegal to posess.

different entities who have no clue or control over the behavior of the other site. This is like shutting down the entire mall because one store is selling counterfeit handbags.

Digital Rights Management

To prevent misuse of copyrighted work, the content industries introduced *digital rights management*. DRM is used to prevent the copying or other unauthorized work of a digital work. DRM is controversial because it limits fair use rights and limits what legitimate customers can do with their purchases. DRM is often based on encryption.

However, at its core DRM faces a fundamental problem which limits its theoretical efficacy. A device must be able to play a particular work (for example a song) for the user to be able to listen to it. Society has developed encryption to protect two files from listeners in the middle as they cross a network. However, it is theoretically impossible to protect content which has to be decrypted and outputted on a device where the "advisory" (in cryptography terms) owns the hardware and has complete control over the hardware.

Thus DRM has been effective in limiting what honest and unsophisticated consumers can do with their work, but has done little to limit the availability of copying to sophisticated users. CDs are still sold without DRM, so it did little to matter that iTunes added DRM, except to only allow consumers to play their music on iPods. The illegally obtained material was not only free, but came without strings attached to it!

Economic

2. Does it make economic sense
    a. Revenue in reclaimed sales
    b. Positive effects on employment

Costs

Next, one should look at the costs of a policy to evaluate whether the benefits of the policy outweigh the costs of the policy. In addition, who bears the costs? The content industry? The government? Internet service providers?

How much does the government spend on anti-copyright infringement?

Find current costs spent on enforcement

http://arstechnica.com/tech-policy/2011/08/protect-ip-act-would-cost-taxpayers-47-million-private-sector-much-more/

For example, the Prioritizing Resources and Organization for Intellectual Property Act of 2008 (H.R. 4279) was estimated by the Congressional Budget Office to cost an additional $425 million dollars over 4 years by hiring a Intellectual Property Enforcement Representative in the Office of the President at $30 million per year, 10 intellectual property attachés to serve in United States embassies or other diplomatic missions for $21 million a year, and $64 million in additional funding for the FBI. [7] There are already 8 attachés in Brazil, China, Egypt, India, Russia, and Thailand.[8] The CBO budgets about $1 million

[7] http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/91xx/doc9197/hr4279.pdf
[8] ibid

dollars per agent for 4 years of service. Additionally the CBO predicts no substantial impact from increasing damages or asset forfeitures for the Crime Victims Fund or the Assets Forfeiture Fund. Additionally, the Title III would allow the Office of the United States Intellectual Property Enforcement Representative would be allowed to accept gifts, but the CBO does not predict much of an impact from this.[9]

Too much of the wrong type of detail

How much is lost by copyright infringement?

Global recorded music sales have plunged from nearly $27 billion US dollars in 2000 to $15 billion in 2010.[10]

Cite RIAA/IFPI stats – be quantitative

However, we must separate those losses from general declines in the business of the industry.

Use http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1932518 here (not just what the paper says but what sources it uses)

Sky is Rising paper http://www.techdirt.com/skyisrising/ takes the contrarian view which we should include as well

http://www.ipi.org/ipi_issues/detail/the-true-cost-of-sound-recording-copyright infringement-to-the-us-economy

http://www.oecd.org/sti/38707619.pdf

http://www.cato-at-liberty.org/how-copyright-industries-con-congress/

http://www.hollywoodreporter.com/news/copyright infringement-costs-megaupload-kim-dotcom-318374

http://www.washingtonpost.com/blogs/ezra-klein/post/how-much-does-online-copyright infringement-really-cost-the-economy/2012/01/05/gIQAXknNdP_blog.html

http://www.mpaa.org/resources/5a0a212e-c86b-4e9a-abf1-2734a15862cd.pdf

http://www.gao.gov/products/GAO-10-423

[redacted]

Review the studies and try to mediate an explanation; I've started outlining the various arguments below

How does copyright infringement affect non-content industries (possibly include)

---

[9] ibid

[10] IFPI 2010 study including both digital and physical sales of recorded music

There can be other explanations besides just copyright infringement which are causing a change. Some may be linked to technology. For example, the shift to people listening to music on iPods could have changed the way people listen to music (any studies). On iTunes people can just buy a single popular track instead of buying the entire album (any studies?). This naturally leads to less revenue.

Another effect in the motion picture industry is that rental sites such as Netflix and Redbox are decreasing the demand for DVDs. (I know this from my summer at Disney, but any public info?)

On TV people are spending more of their entertainment time surfing the Internet than watching television (studies). This naturally leads to a drop in the amount of hours people watch television, leading to a drop in advertising rates. DVRs, such as Tivo, have also changed television watching by allowing users to time-shift their favorite shows and fast forward through commercials. Advertisers don't like this and exempt these viewers from viewership data (cite).

In some ways

What are the Costs of Copyright Infringement?

We must be careful about what the costs of copyright infringement are. Many studies just cite the cost of copyright infringement as the list price of the item being stolen.[11] However, there are multiple problems with that. First, as any economist will tell you, the number of people who demand a particular good is inversely proportional to the price. For example, standard economics tells us that less people will buy a CD priced at $20 than at $10. It follows then that many more will "buy" something if it is free. In fact, the difference between 1 cents and free is pretty substantial according to Dan Ariely in the New York Times bestseller Predictably Irrational.

Marginal Price

Copyrighted content has no to very little marginal cost. This opens up an entirely new type of pricing model compared to traditional industrial goods. It also makes losses due to copyright infringement more interesting.

Electronic copies of information are considered by economists to be "non rivalrous."[12] This means that one person's enjoyment of a good is not diminished by another individual's enjoyment of that good. Infinite perfect copies can be made of electronic goods. Giving a copy of an MP3 file to a friend does not diminish your ability to still listen to an MP3 file. In addition, whereas stealing a copy of a music CD at Walmart prevents Walmart from selling that copy to someone else, downloading a song from BitTorrent does not prevent others from accessing that song.

One could also make an argument about the different in cost accounting between the two. In the Walmart case, Walmart has prepaid for some number of CDs from the distributor, say $6. It then sells the CD for $10. Thus stealing the CD has lost Walmart the $6 they paid wholesale and the $4 profit they would have made on the sale. In the online case, say iTunes sells an album for $10, with $6 going to the record company for each album sale. If one gets a CD from an illegal source, then one has deprived Apple $4 in lost revenue and the record label $6.

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[11] http://www.cato-at-liberty.org/hulu-pricing-strategies-and-the-costs-of-copyright infringement/

[12] Hess, C., E. Ostrom. 2006. Introduction. C. Hess, E. Ostrom, eds. Understanding Knowledge as a Commons: From Theory to Practice. The MIT Press, Cambridge, Massachusetts

Revenue

But also a higher price may lead to more revenue, while also leading to higher copyright infringement costs. Say for instance a TV show has 1 million users who watch for free. The TV network makes $1 off each user in advertising. Revenue is $1 million, while the copyright infringement loss is 0. Then say the TV network switches to a paid model in which an episode costs $4. Say 300,000 take the deal, and 100,000 decide to switch to copyright infringement. 550,000 stop watching all together. The network would make $1.2 million in revenue, which is more than before. They would also point to $400,000 in copyright infringement "losses." Under the new strategy, they are making more money than before, but also are experiencing copyright infringement.

The question then is if copyright infringement was made harder, how many of these 100,000 pirates would switch to the paying $4. As was discussed earlier, it is very likely not all 100,000 would now pay. But how many would?

Ideally, the networks would like to segment each person out by their willingness to pay. Say half of these 100,000 would be willing to pay $1. The network would not want to simply lower the price to $1 because then they would have 350,000 each paying $1, for revenue of $350,000 which is even worse than the ad-supported model. But if they were able to get the original 300,000 to pay at the old price, plus the 50,000 at $1 then they would have $1.25 million in revenue, and copyright infringement losses of $50,000. Revenue is up, and losses due to copyright infringement are down.

Tracking Copyright Infringement

It is difficult to know exactly how much copyright infringement is going on because it is hard to track the transfer of pirated materials online.

Expand

?some studies on network traffic of BitTorrent – but then how much is pirated?

Artists

There is some disagreement on how much money actually goes to artists.

That book I have

Do we want to cut this?

Employment

How to measure

Another area for contention is how much profits at record labels actually lead to employment. The industry argues that additional profit allows them to invest more in the future, leading to more employment for artists. Cite/explain

Others claim that industry profits are unlikely to be redirected to _____.

For example, some look at the last 10 years of the industry. Profits are down XX%, but employment only XX%. Where did the lost value go to? How sustainable is that in the long run?

This has been controversial because some studies have cited a larger impact in jobs than the number of people who are actually employed by the music industry.

In addition, employment studies often try to include the "multiplier effect" of jobs. For example, person who works in the record industry spends money

Cite RIAA stats

Cite/explain

Money Redirected

Some argue that the money saved by consumers by not buying CDs is spent on other things. For example, rather than spending $10 on a CD, a consumer uses that same discretionary income to buy a sandwich instead. If the user would have spent the money on a CD, they would have not bought a sandwich. Thus the economic, including employment effect is merely transferred across industries, and does not actually hurt the economy.

Cite/explain

Technical

3. Has minimal negative repercussions on internet
    b. e.g. DNS

Internet Infrastructure

Any proposal should not weaken the underlying infrastructure of the internet. For example, the above described proposal would have big effects on the internet.

DNSSEC

?move what DNS is and how easy it is to cirmcvment here? Don't think so, but draw a better distinction between the sections

The current DNS model, described above, is insecure. Results are returned without the use of cryptography. This means that an attacker could modify results before they are returned to a user. Unless the site uses SSL, one would not know that one was connected to the wrong site. The browser would still show the same URL, for example, google.com. The attacker could then ask for the user's log on information which the user might still provide because the site's visible URL is correct. The attacker could then use that information to steal the user's account on the real site. An attacker could also post a fake order page to collect credit card numbers.

Recently there has been a push to extend DNS to also use cryptography. This effort is called DNSSEC.[13] DNSSEC adds a chain of cryptographically signatures to responses.[14] DNSSEC is seen as critical to securing the US's Internet infrastructure, because it hardens the DNS system against fraud and other cyber-attacks. The White House released a memo in 2008 instructing all agencies to turn on DNSSEC.[15] In addition, the Department of Homeland Security Cybersecurity R&D department has a program to encourage the deployment of DNSSEC.[16]

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[13] http://usacm.acm.org/images/documents/DNSDNSSEC.pdf
[14] Ibid pg 3
[15] http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2008/m08-23.pdf
[16] http://www.cyber.st.dhs.gov/dnssec/

The DNSSEC system has been purposely designed so that only the owner of a domain can sign a domain query to prove that it is valid.[17] Thus only the author of the site can specify where the DNS service should resolve to. In addition, the system is set up so that if someone refuses to return a response, or submits an invalid response, the DNS service will continue to contact other DNS servers until it finds a valid response.[18] The DNS system was designed to be resilient to interference! In addition, it was described earlier how this entire system is easily subvertable by a user purposely seeking "darknet" responses. Because of this, organizations such as the Association of Computing Machinery have spoken out about the dangers that the DNS blocking specified in SOPA would harm the Internet.[19]

How in infringement detected today?

Copyright owners detect copyright infringement in a variety of ways.

Where is best to put this?

P2P

By its nature, a peer-to-peer network makes available the list of IP addresses which are participating in sharing the file. In court cases, the record industry has used a firm called MediaSentry to monitor P2P networks.[20] MediaSentry logs onto these networks and searches for a file known by their client to be infringing content.[21] MediaSentry then receives the list of users who have parts of the file available from the P2P service's tracking server.[22] By seeing that the user has the file and is making it available to other users, MediaSentry can claim that the user is making the file available to others.

In other cases, MediaSentry attempts to actually download the file to verify that the content of the file is in fact copyrighted.[23]

As a result, some people use IP blocking software such as PeerGuardian, and its successor PeerBlock.[24] This software contains the list of IP addresses known to be used by Government, large businesses, and anti-P2P contractors such as MediaSentry. The software attempts to prevent those IP addresses from connecting to your computer to download part of the file from you.

Others use what are called "private trackers." These only allow pre-screened persons to participate in the download, including having access to the list of persons who have portions of the file available for download. Without being one of the people with access, MediaSentry and others firms would have no way of knowing who was participating in the download.

DPI

However, one organization that would know would be your ISP. Internet users purchase internet access from Internet Service Providers (ISPs). ISPs have access to all of your traffic as it flows across their

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[17] Ibid pg 3
[18] Ibid pg 4
[19] Ibid pg 5
[20] http://blogs.law.harvard.edu/cyberone/files/2008/11/497-2.pdf
[21] ibid
[22] ibid
[23] http://arstechnica.com/tech-policy/2009/01/mediasentry-may-be-gone-but-riaa-tactics-will-live-on/
[24] http://torrentfreak.com/peerblock-file-sharing-safety-tool-clocks-100000-downloads-091111/

network. Internet traffic is sent as a packet, which is like an envelope. On the outside of the envelope, the packet has the IP header which specifies where the packet is sent among other things. The inside of the packet contains the actual message. Normally, ISPs only look at the header of the packet in order to forward it onward. However, with modern equipment ISPs can also look at the contents of these packets, as long as they were not encrypted. This was always possible, but it is only recently that it is possible to do at the scale required.

Protocol encryption makes it more difficult for ISPs to identify BitTorrent traffic. However, it can only work if the tracker and the other clients also support encryption. In addition, it has been shown that many BitTorrent clients still put out a characteristic file flow that ISPs can identify if they so wish.[25] However, this only shows that the user is using BitTorrent, but not which file they are downloading. As the other section of the paper showed, BitTorrent can be used for non-infringing uses.

In 2007, Comcast was found to be using the "Fairshare" product from Sandvine which actively interfered with BitTorrent traffic.[26] Sandvine captures a copy of the list of peers returned from a tracker. When a user tries to contact these nodes, their technology sends fake TCP reset packets – the equivalent of a fake hang up signal on a telephone. The action was controversial, and received a fine from the FCC for unfairly blocking a particular protocol.[27]

All this is interesting, but where is best to put it?

A number of these items are interesting but digress from your analysis. To the extent you want to maintain them, consider pushing them into footnotes, since they are, frankly, asides that illuminate the subject but don't actually carry your analysis forward.

Minimally necessary

4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)

A measure should be the minimum necessary to block copyright infringement, without impacting legitimate uses of a technology or service. It is often impossible to achieve a perfect separation between blocking infringing and non-infringing uses. Technology is technology. It does not care what the content is. A BitTorrent tracker can point to any file, either a political document or a copyrighted movie. In addition, there often with the same file certain uses are allowed, while others are not. For example, with a CD you can put a copy of a song on your iPod, but cannot give it to a friend. This further frustrates, often to the point of impossibility, the development of additional technology to prevent copyright infringements. In addition, some services have both infringing and non-infringing uses. For example, a file hosting site can hold a Hollywood movie or a home movie. Even determining what is copyrighted is often a challenge, because there is no one single repository.

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[25] http://www.howtogeek.com/76801/how-to-anonymize-and-encrypt-your-bittorrent-traffic/
[26] https://www.eff.org/deeplinks/2007/10/comcast-also-jamming-gnutella-and-lotus-notes
[27] http://www.pcmag.com/article2/0,2817,2326980,00.asp

Non-infringing use

Many services which make copyright infringement easy can also be used for non-infringing use.

Sony/BetaMax

The canonical example is the Sony Corp. of America v. Universal City Studios, Inc. case.[28] In this 1984 case, the Supreme Court of the United States found that Betamax machines have "significant non-infringing uses." First off, the Court found that the producers of the devices were not liable for the actions taken by the purchasers of the device:

> sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes

Even though some people may use it to infringement:

> the business of supplying the equipment that makes such copying feasible should not be stifled simply because the equipment is used by some individuals to make unauthorized reproductions of respondents' works

Furthermore, the time shifting feature of the devices is allowed:

> one potential use of the Betamax plainly satisfies this standard, however it is understood: private, noncommercial time-shifting in the home. It does so both (A) because respondents have no right to prevent other copyright holders from authorizing it for their programs, and (B) because the District Court's factual findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use

Thus the Betamax, and its close cousin the VCR were allowed to be sold as long as people could use the service for non-infringing use. In the end, the VCR launched a huge market in not just pre-recorded Hollywood movies, but also in VHS cameras. In 1984 JVC released the first consumer camcorder which allowed consumers to record directly to VHS tape, which they could play back on their VCRs.[29]

It also launched the home video market,

BitTorrent

Another example is BitTorrent. Although widely used to download copyright infringing materials, the protocol is also being used to quickly distribute large files without requiring much infrastructure. For example, game developers use BitTorrent to distribute updates to their games.[30] These updates can be quite large (over 500MB). Traditionally companies would buy or rent many racks of servers to provide this content. In addition, these servers would require a lot of bandwidth. As bandwidth grows scarcer, this is becoming a growing concern. Under a BitTorrent model, the company only has to *seed* a few updates to members of the community around the world from their own servers. Other players then download a copy of the update from other users. Not only does this save the game company from requiring extra bandwidth, it also makes the download for the user, especially in countries with limited

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[28] Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417

[29] http://www.totalrewind.org/cameras/C_GRC1.htm

[30] http://torrentfreak.com/bittorrent-to-speed-up-game-distribution-080915/

bandwidth. This is because the file is being downloaded from someone nearby. In addition, this decongests the Internet, requiring less bandwidth. It is win-win scenario.

Megaupload

One example of a case that is currently in progress is Megaupload. Megaupload was a direct-file hosting and download site. Users upload file to Megaupload and then receive a URL. Users could use the site to transmit files larger than email. They could send the URL they received to a friend or business colleague in an email message. Because the actual file was not attached to the email, the email is small enough to be sent on almost all systems. For example, a video production house might use Megaupload to distribute a preview copy of a video to a client. Persons could also use Megaupload as a backup service. They could upload a copy of their important files to Megaupload. If their computer were to crash, they could visit Megaupload again to download the file.

Kyle Goodwin was a MegaUpload user who lost his files when his hard drive crashed.[31] Mr. Goodwin is a videographer. He used Megaupload as a backup service for his videos. Shortly before the government's January raid, Mr. Goodwin's hard drive crashed. His only copies of his videos are the ones stored on Megaupload. However, the government is resisting restoring his files in court, claiming that some of the videos Mr. Goodwin produced had copyrighted songs as their soundtrack.[32] Furthermore, the government is arguing that people do not acquire an ownership interest by uploading songs to a service.[33]

DRM

DRM is a good example of technology that limits what honest consumers can do. Music sold on iTunes used to be protected with "FairPlay" DRM. That DRM restricted purchasers of the music to only being able to maintain listenable copies of that music on up to five computers.[34] However, the music could only be played on devices that supported FairPlay, namely iPods, iPhones, and computers with iTunes installed.[35] Other brands of devices were not supported as they did not have the capability to play FairPlay files and Apple refused to license it to others.[36]

Thus DRM served only to frustrate the purchasers of legitimately purchased music. As discussed above, illegally gotten tracks were not only free, but came without these strings attached. A proposal should not add this sort of incentive.

Fair Use

Proposals should not add chilling effects on legitimate uses of copyright technology. For example, United States law permits fair use.

17 U.S.C. § 107

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[31] http://torrentfreak.com/u-s-accuses-megaupload-user-of-storing-pirated-music-121031
[32] http://arstechnica.com/tech-policy/2012/10/government-innocent-megaupload-user-uploaded-pirated-music/
[33] ibid
[34] http://www.apple.com/support/itunes/store/authorization/ Retrieved 2008-09-13.
[35] ibid
[36] http://www.conseil-concurrence.fr/pdf/avis/04d54.pdf

> Notwithstanding the provisions of sections 17 U.S.C. § 106 and 17 U.S.C. § 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:
>
> 1. the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
> 2. the nature of the copyrighted work;
> 3. the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
> 4. the effect of the use upon the potential market for or value of the copyrighted work.
>
> The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

Fair use suffers from a few practical problems. First off, what is fair use and what is not are not laid out explicitly in the statue. As a result there have been a long string of cases which attempt to provide guidance on what is fair use and what is not.[37] For example, a work that parodies a second work is protected against infringement claims by that second work, but a work that parodies society in general by using a second work is not protected.[38]

Beforehand/Afterhand

As such it is almost impossible to determine if a particular use of a material qualifies as fair use.

Many of today's technologies do not account for fair use. It is especially difficult for a computer to determine if these tests are met. This many services, such as Google's YouTube take down the content first.

For example, YouTube's Content ID system does not account for fair use before a work is removed.[39] It is only after a work is removed, that the uploader may go to YouTube and contest the removal of the work. One of these options is that the work falls under fair use protection. The uploader can then describe why they feel the work should receive fair use protection. A YouTube employee then reviews the rationale and decides whether or not to accept the rational. If the rational is accepted, the video remains as is. If the rational is rejected, the blocking remains.

Note that a YouTube content ID match does not necessarily mean that one's content is removed. Instead, the content may be blocked only in certain countries, may have ads shown next to it, or part or all of the audio may be muted.

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[37] http://fairuse.stanford.edu/Copyright_and_Fair_Use_Overview/chapter9/9-c.html

[38] Mattel Inc v. Walking Mountain Productions, No. 01-56695 (9th Cir. Dec 29, 2003). http://archive.ca9.uscourts.gov/ca9/newopinions.nsf/6205C146C29519CC88256E0B005D8100/$file/0156695.pdf
^ Art ROGERS v. Jeff KOONS; Sonnabend Gallery, Inc., 960 F.2d 301 (2d Cir. Apr 2, 1992). http://bulk.resource.org/courts.gov/c/F2/960/960.F2d.301.91-7396.91-7540.91-7442.234.235.html

[39] https://www.eff.org/issues/intellectual-property/guide-to-youtube-removals and http://www.youtube.com/t/contentid

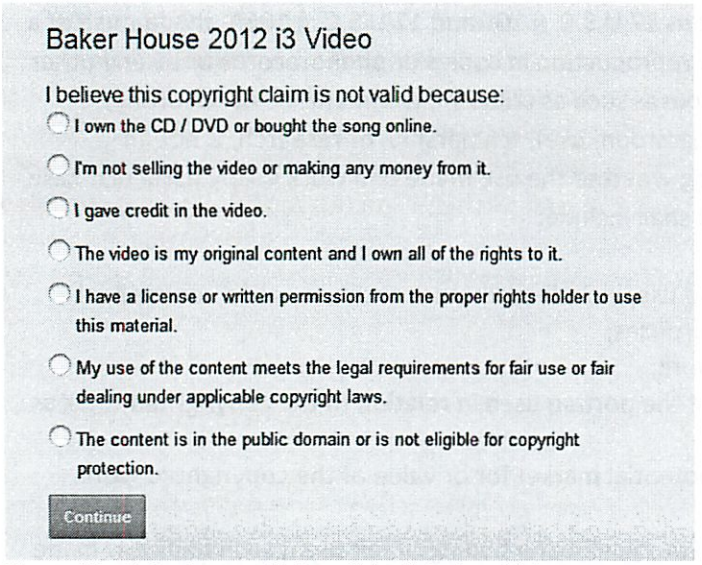

Figure 1 YouTube Content ID Copyright Claim Invalid Page

Fair Use and the DMCA

In addition, fair use does not overrule the DMCA. In Universal City Studios v. Reimerdes, the court stated that "[i]f Congress had meant the fair use defense to apply to such actions, it would have said so."[40] Thus one is not permitted to remove the encryption on media such as DVDs to make a copy under the normal provision of fair use.

Section 1201 Process

Instead, Congress does allow for encryption to be broken, but under a more limited set of criteria than fair use. This is spelled out in Section 1201 of the DMCA.

Section 1201 requires that every three years, the Library of Congress must hold hearings in which citizens can ask for exemptions of the DMCA to break encryption in certain specific cases.[41] For example, in the most recent rulemaking, the Federal Registrar stated that:

> "The primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access control measures is diminishing the ability of individuals to use copyrighted works in ways that are not infringing and to designate any classes of works with respect to which users have been adversely affected in their ability to make such noninfringing uses."[42]

Specifically the Register and the Librarian are to look at:

(1) The availability for use of copyrighted works
(2) the availability for use of works for nonprofit archival, preservation, and educational purposes

[40] Universal City Studios v. Reimerdes, 111 F. Supp. 2d 294, 322 (S.D.N.Y. 2000)
[41] See http://www.copyright.gov/1201/
[42] http://www.copyright.gov/fedreg/2012/77fr65260.pdf

(3) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research
(4) the effect of circumvention of technological measures on the market for or value of copyrighted works
(5) such other factors as the Librarian considers appropriate.[43]

However, the process is heavy in bureaucracy, taking about one year from initial notice to final rules published in the Federal Registrar.[44] Congress requires that the Register and the Librarian solicit input from a wide range of stakeholders in consideration of a "broad range of current or likely future adverse impacts."

In addition, exemptions expire every 3 years and thus must be reargued each time.

Real DVD

Other services which broke encryption on DVDs for claimed fair use purposes were later found to be illegal. RealNetworks, a maker of media playing software, had tried to launch RealDVD back in 2008.[45] RealNetworks is a legitimate company, who had a license to play back DVDs. The software was designed to allow users to rip DVDs and watch them on their computers.[46] Real then added an additional layer of copy protection to ensure that users could only play the movies on up to 5 devices.[47]

The judge disagreed with RealNetwork's fair use assertion, writing "Fair use is not a defense to trafficking in products used to circumvent effective technological measures that prevent unauthorized access to, or unauthorized copying of, a copyrighted work." [48]

Stakeholders

No matter how effective, economically and technologically viable, or minimally necessary an anti-copyright infringement mechanism might be, perhaps the most important factor of all to consider is its political feasibility. Even if a proposal is deemed to be a good idea, it must also be acceptable to the various stakeholders involved, whether it be the general public, Hollywood, artists, the tech/internet industry, the international community, and other potentially affected players. To ignore the multiplicity of opinions among the key players is to assume a perfect conveyance of policymakers' decision-making logic to their constituents; this is simply not the case. While such simplifications "make normative analysis possible and useful at the individual level [they] can become serious deficiencies in the study of public policies" (Majone, 1975).

Moreover, the inclusion of political feasibility assessment in technical policy analyses has been said to "enhance the probability that the technical analysis contained therein will be considered" (Webber, 1986). The neglect of technical factors in ongoing anti-copyright infringement legislative debates is, after

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[43] DMCA Section 1201
[44] http://www.copyright.gov/fedreg/2012/77fr65260.pdf
[45] http://www.realnetworks.com/press/releases/2008/090808_realdvd.aspx
[46] http://arstechnica.com/uncategorized/2008/09/real-dvd-legit-dvd-copying-playback-but-is-it-too-late/
[47] ibid
[48] http://arstechnica.com/tech-policy/2009/08/realdvd-barred-from-market-while-judge-opines-about-fair-use/

all, one of the central deficiencies we hope to remedy with our evaluative framework. As such, political factors play a significant role in our evaluative framework for anti-copyright infringement measures.

This branch of our analysis will take place on two l--evels, examining the political details of the proposal itself as well as possible political reactions to it. First, we will look at the actors(s) assigned the responsibility of implementing the mechanism in question: do they have the proper authority to carry out the proposed operations, and who is to bear the resulting financial burdens? Second, the assessment will analyze the various key players to anticipate the level of political resistance a policy might encounter: what motivations, belief systems, and resources do each of the stakeholders have, and how might they react to the proposed mechanism? This two-pronged approach of political feasibility analysis will allow for a comprehensive assessment of whether a given policy will be likely to gain the support necessary for passage and, eventually, implementation.

Responsibility of Implementation

When assessing the effectiveness of an anti-copyright infringement mechanism, one must not only look at the actual effects that the proposal might have. It is also imperative to ensure that the mechanism can be implemented with ease, can be sustained for a sufficient amount of time to have a lasting effect on online copyright infringement, and is robust enough for future modification or extensibility to new conditions and scenarios. This is a matter of identifying potential opposition to a proposed measure both based on the current political climate as well as predicting future challenges that it may encounter down the line. Issues of efficacy are perhaps better addressed by the economic and technical portions of our evaluative framework. The analytics we will focus on in this section are based more on assessing the political legitimacy of a proposal—a notion that is largely encapsulated by how the responsibility of implementation is allocated among government and relevant stakeholders.

Proper Authority/Jurisdiction

In our political analysis, we'll first look at whether or not the actor(s) assigned the responsibility of implementation actually has the necessary authority to do so. This criterion embodies a number of questions about established powers, legal precedents, and political jurisdiction. In more concrete terms, our framework favors proposals whereby the implementation clearly falls within the scope of what the governmental agency or actor was intended to address. The goal here is to eliminate overbroad or overreaching policy measures, as they are more likely to be politically volatile. In particular, vague or ambiguous language is to be avoided; the details of a policy's implementation should be narrowly defined enough that it obviously falls within the purview of that office's political authority. Those proposals that do not meet these criteria are far more likely to meet resistance from critics and will suffer from a loss in overall political feasibility.

As an example of an anti-copyright infringement mechanism that would fare poorly on this metric of authority and jurisdiction, take something like the Anti-Counterfeiting Trade Agreement (ACTA), an international trade agreement that establishes global standards on intellectual property enforcement. Negotiated in secret, ACTA circumvented the need for congressional approval and public scrutiny, thanks to its status as a sole executive agreement, "concluded on the basis of the President's independent constitutional authority alone" (Katz & Hinze, 2009). In short, the White House used this transparency loophole to enter the ACTA agreement without consultation. Naturally, the constitutional authority of such an action has been contested; thus, we see how questions of due process may play a role in determining the political acceptability of a proposed anti-copyright infringement mechanism.

Financial Burden

Yet another important consideration to take into account is the parties that are assuming the financial burden associated with the proposed mechanism.

Possible Political Resistance

Ultimately, the process of assessing political feasibility is one of comprehensive information gathering and synthesis. Using the model of analysis first laid out by Meltsner, we must consider the confluence of "(1) actors, (2) motivations, (3) beliefs, (4) resources, (5) sites, and (6) exchanges" to determine "which actors will be politically effective, which will exercise power... [and] the possible areas of policy consensus and conflict" (1972). This will allow us to develop a map of the political climate surrounding a specific policy proposal and identify potential pathways (if any exist) of moving forward with it. While the issue of online copyright infringement spans multiple policy spaces and eludes a single generalized case, we can identify the most prominent or likely elements in each of these categories and still leave room for additional flexibility.

Actors, motivations, beliefs, resources, sites, exchanges specific to the anti-copyright infringement debate

Synthesis

Once all the aforementioned factors have been determined and detailed, we may begin synthesizing all the information to assess the overall political feasibility of the proposed mechanism. There are a multitude of models for conflict resolution in decision-making. Majone suggests that the best public decisions are those that consider not only the technical, economic, and legal limitations of a proposal, but also a "distributional constraint" like Pareto admissibility (1975):

> A decision affecting a number of people is said to be Pareto admissible if there is no other feasible decision that is preferred by one or more persons, and if nobody regards it as inferior... A change from state S to state S^1 is Pareto admissible if, in the transition, either every person in the relevant group is made better off, or at least one person is made better off, and nobody is made worse off. Notice that the change from one state to another can be Pareto admissible even if the states themselves do not satisfy the Pareto criterion.

Example of applying Pareto admissibility criterion based on previous subsection

Meta-analysis of Framework

Strengths, weaknesses, possibilities for future improvement

Technological Change

Technological change impacts desirability of a particular solution. It is technological change that has created the technology which enables copyright infringement. A solution might work today, but would be inadequate in the future. For example, DVD players started out "play only," and then home DVD burners became available, allowing DVD copying software to become freely available on the web.

Current Policy Debates

The possibility of a graduated response to copyright infringement started in mid-2007 in France.[49] Nicolas Sarkozy, the newly elected President of France appointed an independent review commission to review copyright infringement.[50] That commission was run by the pro-enforcement Denis Olivennes.[51] The commission found that P2P was killing France's culture and sought to do something about it. The commission modeled their approach on the "three strikes and you're out" feature of baseball.[52] After 2 warnings, a user could be disconnected from the internet.

I don't know why I put this here. I wanted to do an intro to graudated response, but it's really an intro to HADOPI

HADOPI

http://arstechnica.com/tech-policy/2008/06/frances-three-strikes-copyright-law-gets-cabinet-support/

Is effective in reducing copyright infringement?

We believe that HADOPI reduced copyright infringement, due to two effects. First, the alerts might inform users that their behavior is illegal if those users are not aware. Second, users may fear the disconnection of their Internet service and proactively change their behavior.

HADOPI in two years has received 3 million notifications from copyright owners, sent 1.15 million "first strike" notices, 100,000 "second notices," and only 340 "third strike" notices.[53] From these numbers it is clear that users who receive a first strike do not wish to receive another. In addition, the system is actually often four strikes. In two years HADOPI has conducted 30 hearings and referred 14 cases to prosecutors for disconnection.[54] In addition, a good number of people who receive a notice talk with the agency: 6% after their first strike, 24% after their second, and 75% after their third.[55]

It is impossible to measure how much copyright infringement dropped precisely, because it often occurs under the radar. However, one study conducted by researchers at Wellesley College and Carnegie Mellon University looked at the implementation of the Hadopi law in France and compared the sales of music on iTunes with other European countries who did not have a similar law.[56] The study found a 25.5% increase in track sales in the control group, but a 48% increase in France, indicating that sales were 22.5% higher in France then the rest of Europe, likely due to the Hadopi law.[57] There was a similar result for album sales.[58] Additionally this general trend was true for all labels, so it's unlikely that these effects were due to a particular artist being popular in France.[59] In addition, these results did not occur when other countries were isolated.

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[49] http://arstechnica.com/tech-policy/2007/11/the-insanity-and-genius-of-frances-anti-file-sharing-plan/
[50] ibid
[51] ibid
[52] http://arstechnica.com/tech-policy/2008/01/frances-plan-to-turn-isps-into-copyright-cops-on-track/
[53] http://torrentfreak.com/anti-piracy-agency-sends-1-15-million-warnings-in-2-years-takes-0-0012-to-court-120906/
[54] ibid
[55] ibid
[56] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1989240
[57] Ibid p 14
[58] Ibid p 14
[59] ibid p15

The study also looked particular genres of music. First the study looked at a survey taken by EMI which asked people how much they are likely to pirate each type of genre of music.[60] They then found the largest sales increase in genres which were reported to be heavily pirated.[61] For example, Rock and Pop were both the genres most pirated, and the genres which experienced the largest increase in sales after the HADOPI law than before the law.

This shows that it is unlikely that there is any other explanation for this phenomenon than the HADPOI law. For example, increased sales in France suggest that Apple could have just heavily started promoting iTunes in France. But this genre comparison suggests that it is an unlikely explanation. It is also interesting to note that the lines started diverging right as parliament started debating HADOPI, not when it came into force. In addition, when this study was written no one had yet received a third/disconnect notice.[62]

In this study, the effect on iTunes sales was more noticeable while the French National Assembly was debating the bill, than when the law took effect and notices were started to be sent out. [63] Together with the statistics from the HADOPI agency suggests that infringement is cut by both general awareness of the law as well as specific notices of infringement.

Bhattacharjee et al showed an awareness of copyright infringement lawsuits did cut the number of pirates, but found that the effect was short-lived.[64] Expand

On the other hand http://www.techdirt.com/articles/20120330/18222718314/is-there-any-value-cracking-down-piracy-if-it-doesnt-increase-sales.shtml

Cost

http://torrentfreak.com/three-strikes-anti-piracy-budget-too-expensive-to-justify-says-minister-120603/

6 Strikes vs Lawsuit

In early July 2011, the RIAA and the MPAA signed a voluntary agreement with many of the country's largest Internet Service Providers (ISPs) to introduce a "6 Strikes" graduated response system to the United States.[65] The system is officially called the **Copyright Alert System** or **CAS**, but in the popular press, the name "6 Strikes" is often used.

Description

Under the system, copyright owners could make complaints against particular IP addresses to ISPs.[66] ISPs will then forward those complaints on to users – without actually revealing information about the user to the copyright holder. [67]

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[60] Ibid p 16
[61] Ibid p16
[62] Ibid p 20
[63] Ibid pg 13
[64] http://digitalcommons.calpoly.edu/mgmt_fac/7/
[65] Link to agreement itself
[66] MOU Pg 8
[67] MOU Pg 8

The "6 Strikes" system establishes the Center for Copyright Information (CCI) to coordinate the process. The center is tasked with administering the CAS as well as educating the public on copyright issues.[68] The Center is governed by a 6 member advisory board, with 3 members appointed by the content industries and 3 members from Internet Service Providers.[69] There is also a four member advisory board, with members from the Center for Democracy and Technology, Public Knowledge, iKeepSafe, and the Future of Privacy Forum.[70] Reports indicate that these members are serious about a balanced approach and are independent from the other players.[71] However, these members are only advisory. The executive board has no requirement to listen to them. [72] The MOU also requires the executive committee to retain independent technical experts.[73] The MOU prohibits sending alerts from methods deemed to be "fundamentally unreliable."[74] However, the names of these experts are not public. In addition, the reports generated by these experts are not required to be public.

Under the CAS, Copyright owners provide ISPs with documented evidence of infringement.[75] However, there is no common standard format or implantation plan. Instead, each ISP is able to define their own implementation form and data format.[76]

In addition, the response for each strike is not clearly defined. Each ISP is able to define this for itself. However, the MOU lays out an outline of what each strike could be. The first two alerts are purely educational.[77] They do not require any response or action form the user. The alerts will contain information that copyright infringement is illegal, that there are lawful ways to download content, and that further sanctions may follow. The third and fourth alerts also educate the user, albeit in stronger language.[78] They also require the user to take some affirmative action to close the alert.

Finally with the last two alerts, "mitigation measures" or "sanctions" can be taken. The MOU does not mention specific sanctions, but instead offers a menu from which ISPs can choose:

> Such measures include, but are not limited to, a temporary reduction in transmission speed, a temporary step-down in the subscriber's service tier, a temporary redirection to a landing page for completion of a program of copyright instruction, a temporary redirection to a landing page until the subscriber contacts a customer service representative, or a temporary suspension of access.[79]

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[68] MOU Pg 3
[69] MOU Pg 3-4
[70] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[71] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[72] MOU Pg 4
[73] MOU Pg 5
[74] MOU Pg 6
[75] MOU Pg 4
[76] MOU Pg 7
[77] MOU Pg 8
[78] MOU Pg 8
[79] MOU Pg 11

Unlike some media reports, ISPs are not required to suspend a user's internet access.[80] Instead the ISP may decide which sanctions to implement. Notices reset after 12 months without receiving an alert.[81] Seven days are allowed between each alert that counts towards the six.[82]

Appeal Process

After getting a fifth and sixth notice, a user has 14 days to file an appeal via an "Independent Review Program" before the mitigation measure is imposed.[83] The Independent Review Program is a non-judicial program set up by CCI with the American Arbitration Association (AAA).[84] The overhead of the program is paid by CCI, which is funded equally by content groups and by ISPs.

A user can also appeal their first through fourth notices upon receiving their fifth notice.[85] However, if a user does not appeal those earlier notices at that time, then they cannot again appeal those in the future.[86]

In order to file an appeal, a user fills out an online "Application to Commence Independent Review" or "ACIR" form.[87] In addition, a user must pay a $35 fee on appeal; however, such fee is refundable if a user prevails in their appeal.[88] The user may select from 6 possible defenses:

(1) account misidentification
(2) unauthorized use of account
(3) authorized use of content
(4) fair use
(5) misidentification of content
(6) work published before 1923[89]

The user must include a basis for each defense and possibly provide the corresponding backup material.[90] For example, if a user asserts authorized use, the user must provide specific, written authorization. If a user claims fair use, then they must provide (1) a copy of each file, and (2) an explanation of each use, and the basis for claiming fair use.

The ISP and the Copyright owner will also be able to submit information.

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[80] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 21
[81] MOU Pg 13
[82] MOU Pg 7
[83] MOU Pg 14
[84] MOU Pg 26
[85] MOU Pg 30
[86] MOU Pg 30
[87] MOU Pg 29
[88] MOU Pg 30
[89] MOU Pg 26-28
[90] MOU Pg 29

The review process is designed to be automated; in addition one reviewer per case is selected by the AAA.[91] Reviewers must be lawyers, but they are not required to have specific copyright experience.[92] However, they are required to have training from a CCI-Approved Copyright expert.[93]

ISP's Implementation

In November of 2012, Verizon and Time Warner described how their implementation of the 6 Strikes system would work.[94] Verizon announced that the first two strikes (the "notice" phase) would send notices to both the email account of the subscriber on record, as well as the telephone associated with that account.[95] The next two strikes (the "acknowledgement" phase) is through a pop-up window.[96] Verizon says this has been designed in order to target the actual infringer.[97] Verizon has announced that they would throttle internet speeds for two to three days as a mitigation measure on the fifth and sixth strikes.[98] Time Warner, will instead block popular websites.[99]

The system is set to be implemented starting in early 2013, having been delayed due to Hurricane Sandy.[100]

Analysis

It seems to me that this is the primary division between the framework being described and being applied. Perhaps you want a bit more of a sign-post here to guide the reader to that effect

Is effective in reducing copyright infringement?

We believe that this method will be effective in reducing copyright infringement, due to the results of the HADOPI system in France. However there are some differences to note. First, the US system was not imposed by law, so there may be reduced awareness of the system. Second there are more strikes/alerts sent out before mitigation starts. Even when mitigation starts, the measures are greatly reduced.

However, compared to the old US system of suing individual users, the system is much more scalable. Under the old system, companies had to file individual John Doe lawsuits in order to ask a court to unmask a user's identity.[101] The case could then go to a lengthy and expensive trial.[102] Although in many cases, the user settled by paying an average of $3,000.[103] This was not cost effective for the industry.[104] A TechDirt study of RIAA financial records found that the RIAA spent over $17.6 million

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[91] MOU Page 30 and 31
[92] MOU Pg 33
[93] MOU Pg 35
[94] http://arstechnica.com/tech-policy/2012/11/how-isps-will-do-six-strikes-throttled-speeds-blocked-sites/
[95] ibid
[96] ibid
[97] ibid
[98] ibid
[99] ibid
[100] http://arstechnica.com/tech-policy/2012/11/six-strikes-copyright-enforcement-postponed-until-2013/
[101] http://www.pcworld.com/article/255061/judge_throws_out_mass_john_doe_porn_copyright_lawsuits.html
[102] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/
[103] http://arstechnica.com/tech-policy/2007/03/students-largely-ignore-riaa-instant-settlement-offers/
[104] http://www.techdirt.com/articles/20100713/17400810200.shtml

dollars on lawyers in 2008.[105] As a result, the RIAA brought in $391,000 in settlements.[106] The industry did it because they believed it would be a disincentive for users to illegally download files.[107] The new system seems much more efficient in comparison.

Under the old system, two plaintiffs attempted to fight instead of settling. Joel Tenenbaum, a student at Boston University, was found to have willfully infringed by downloading 30 songs over KaZaA in 2003.[108] The jury awarded the music companies $675,000, or $22,500 per song, a substantial discount over the $150,000 statutory limit.[109] Jammie Thomas-Rasset, was found guilty of copyright infringement of 24 songs for statutory damages of $1.92 million dollars, or $80,000 per song.[110] This was later reduced to $54,000 or $2,250 per song, and then increased to $222,000.[111]

You don't want to imply that the graduated response system is an absolute replacement for copyright litigation. Certainly it is not in the United States – end-users can be sued (and still are) being sued for downloading. For that reason, you probably need to consider to what extend a graduated response system replaces or prevents suits. Even if it is 95%, that still means that 5% of the costs of the old system still persist.

In trials, defendants have claimed that others performed the actual infringement, for example, though an unsecured WiFi network. When a plaintiff files a John Doe lawsuit with an ISP, they receive the name of the subscriber who is paying for the internet connection. Courts in Finland have found that this is insufficient to prove guilt, as it does not show that the person actually performed the infringement.[112] The EFF also argues that merely providing open WiFi does not make someone liable for copyright infringement.[113] In addition, the EFF argues that the DMCA provides a safe haven for service providers who offer "the transmission, routing, or providing of connections for digital online communications, between or among points specified by a user, of material of the user's choosing, without modification to the content of the material as sent or received."[114] This was originally written for large ISPs, but the EFF argues it applies just as well to small providers of WiFi hotspots.

Unfortunately this provides an open loophole in preventing copyright infringement. Although legally there is no negligence defense for copyright infringement, this allows persons to avoid liability, harming protection against copyright infringement.[115] We feel there is some distinction between a business that regularly provides free wifi and an individual that keeps his WiFi open as a defense.

(wandering off topic; where is best for this?)

In addition, court cases have tried to distinguishing actual transmission of the file versus making available. MediaSentry has a hard time showing that the file was actually transmitted using the

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[105] ibid
[106] ibid
[107] http://arstechnica.com/tech-policy/2008/12/no-more-lawsuits-isps-to-work-with-riaa-cut-off-p2p-users/
[108] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/
[109] ibid
[110] https://mywebspace.wisc.edu/mwbourgeois/web/06-cv-1497/336-1.pdf
[111] http://arstechnica.com/tech-policy/2012/09/minnesota-file-sharer-loses-appeal-must-pay-222000/
[112] http://arstechnica.com/tech-policy/2012/05/finnish-court-rules-open-wifi-network-owner-not-liable-for-infringement/
[113] https://www.eff.org/deeplinks/2011/08/open-wifi-and-copyright-liability-setting-record
[114] ibid
[115] ibid

methods that they employ. If they were to actually download the material, that raises questions about whether it is an illegal act to transmit a copy of the work to an agent of the work.[116] Courts at first ruled in the Olan Mills, Inc. v. Linn Photo Co. that this was legal, however then made an exemption for investigators in RCA/Ariola Int'l, Inc. v. Thomas & Grayston Co., 845 F.2d 773, 781-82 (8th Cir. 1988). So the courts rejected such an argument in the Thomas case.[117]

At some point we should decide whether or not these defenses should be allowed. These should not be established behind closed doors by the Copyright and ISP industries. Instead, the process of what defenses should be allowed should occur in the public eye.

The Courts are generally where this case law has been established. However, this is a lengthy process. Though generally, only one person needs to go through this process to establish the case law in the first place. That is why this method of allowing motivated parties to sue and go through the long precedent setting process, while allowing others to quickly move through the process is a good one. After one party has established the rules, the others just need to follow them.

For example, should the use of open WiFi access points be allowed? Does making available constitute infringement, or must it actually be transmitted?

Another process that could work is the same one used by administrative agencies to issue new laws. Here agencies here from all parties and then try to craft the best solution from the information they have received. This is a good way to trade off the costs of a policy with its benefits.

Once this policy has been established, we should move to a scalable process that allows the law to rapidly be applied.

(the last 4 paragraphs need rearrangement)

(this is prob not the right place for all this content)

Does the policy make economic sense?

The proposal appears to cost very little. In particular, the system attempts to automate as much of the process as possible - it is built for scale. The cost would be mostly in the initial setup of the system.

By having a low cost, the system only needs to stop a little amount of copyright infringement in order to be cost effective.

Who pays the cost?

It is also much more fair to individual defendants. Even the minimum $750 per song is much too high. A controversial report by the Republican Study Group made the same assertion.[118] The initial settlement amounts of $3,000 for about 30 songs ($100 per song) looks very good compared to the amounts which could be lost in courts (minimum of $750 per song, not including legal fees).

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[116] "It is well-established that the lawful owner of a copyright cannot infringe its own copyright." Olan Mills, Inc. v. Linn Photo Co., 23 F.3d 1345, 1348 (8th Cir. 1994)

[117] http://beckermanlegal.com/Lawyer_Copyright_Internet_Law/virgin_thomas_080924Decision.pdf

[118] http://arstechnica.com/tech-policy/2012/11/influential-gop-group-releases-shockingly-sensible-copyright-memo/

On the other side, some lawyers does not actually try to seek lawsuits; instead seeking to settle with as many people as possible.[119] Some judges have sought to block this model, by requiring lawyers to file one-by-one, incurring a filing fee each time.[120] Other judges have become angry that these cases took up space on their docket and threw out the entire lawsuit.[121]

Both of these incentivize non-guilty parties to settle as much as guilty parties. That is not how the court system is supposed to work. This process is too heavy and burdensome for the courts.

Does it have minimal negative repercussions on the Internet?
rearrange

This depends on how the policy is implemented. In the past, some ISPs have intercepted pages and have added banners onto pages in midflight.[122] For example, in 2008 Rogers added a quota message to the top of the Google home page by inserting Javascript into the page using an active version of Deep Packet Inspection. This technology is sold by companies such as PerfTech.[123] Many (who) find the practice of modifying other sites' pages over the Internet to be abhorrent.[124] (expand)

Put elsewhere

Meanwhile almost all wireless access points use some sort of redirection technique to bounce first time visitors to a log in page. For example, many services send back a false DNS response, directing the user to the log in page instead. Or a user's request is redirected by a HTTP redirect after a page is received. A user may also be redirected by IP address to the log in page. All of these techniques are not clean in regards to how the internet was designed. This can present problems. For example, my iPad tries to refresh my email and the WiFi router answers as the mail server. My mail server does present a security warning, but if the user clicks through, the access point could be trivially designed to intercept my mail credentials.

However a similar technique may pose problems for the internet. For example, a user may be uploading data in the background when their internet connection is redirected to this message – causing the update to break. Or perhaps a user is connecting to a computer via remote access when the redirection happens. If the redirection is not properly implemented, it could break the remote access connection.

For example, Comcast's Sandvine implementation ended up blocking some email transmissions sent with Lotus Notes, a less-popular email client made by IBM.[125] Sandvine did not intend to block Lotus Notes from sending email, but the technique Lotus was using to transfer large attachment must have been similar to the BitTorrent network technique. It appears that Sandvine had never tested sending attachments over 2MB with Lotus Notes before rolling out their product.

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[119] http://arstechnica.com/tech-policy/2012/04/judge-rejects-copyright-trolls-bittorrent-conscopyright infringement-theory/
[120] ibid
[121] http://arstechnica.com/tech-policy/2011/02/random-defendant-outlawyers-p2p-attorney-gets-lawsuit-tossed/
[122] http://lauren.vortex.com/archive/000337.html
[123] http://www.perftech.com/
[124] expand
[125] http://arstechnica.com/uncategorized/2007/10/comcast-traffic-blocking-even-more-apps-groupware-clients-affected/

It would impossible for Sandvine to test every possible network configuration. That is why we have standards! Standards abstract away complicated implementation details. Messing with these standards ends up breaking things and makes them harder to test.

The right DPI technology needs to be implemented to be able to show a message without breaking the internet.

ISPs are not looking for infringement themselves

These techniques could also impact security if they are not done properly. For example, adding poorly written JavaScript to another page could allow user-generated content on a page to break out of the containment that the author of the page provided. We have seen before that copy protection code can have unintended consequences. For example, Sony BMG released CDs in 2005 that contained MediaMax copy protection.[126] This software was poorly written to hide all files on a user's system starting with "sys."[127] A virus could use this sys name to hide itself on all computers which had ever played CDs containing MediaMax.

Is it the minimal necessary?

This technique still makes no attempt to filter out fair use requests ahead of time. Instead, a user must lend the AAA $35, fill out paperwork, and then wait for a response. The burden of proof of showing fair use is on the user. In addition, a user cannot reach this step until the 5th and 6th notices. This allows uncontestable, invalid notices to accumulate on a user's account. The user may still be required to watch a video on copyright infringement even if they are well aware of their fair use rights.

It remains to be seen what technical measures are used to identify infringement. This will give us more information of whether it will alarm on the use of services that provide non-infringing use such as Megaupload. (didn't they say just P2P?) (they also can't use the same methods)

Jill Lesser, the head of the CCI, has said that the 6 Strikes system is not designed to stop dedicated "serial pirates," but instead to educate "the vast majority of the people for whom trading in copyrighted material has become a social norm, over many years."[128] We agree with this sentiment and believe that the industry is now focusing in the right place. Instead of trying to nail down every last hole using DRM, which was not effective, and is physically impossible to do so, the industry is trying to stop causal infringement.

Is it acceptable to stakeholders?

The system is appealing to a broad range of stakeholders. It represents a good balance of interests.

Copyright Industry

Since it was negotiated by the Content industries, by definition it meets their needs. It reduces copyright infringement in a much more scalable way than suing individual users. A similar system in France has shown to be effective.

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[126] http://www.npr.org/templates/story/story.php?storyId=4989260

[127] http://blogs.technet.com/b/markrussinovich/archive/2005/10/31/sony-rootkits-and-digital-rights-management-gone-too-far.aspx

[128] Ibid.

ISPs

The ISPs are parties to the agreement, so by definition it is in their interest. ISPs are often telephone or cable TV companies. Cable companies have been providing content from the same industry for decades and telephone companies are entering the television market, such as Verizon FiOS. In addition, some ISPs are acquiring content producers, for example, Comcast's purchase of NBC Universal. This is adding pressure to stay on good terms with the content providers.

Implementing this program will lead to some costs for ISPs. However, ISPs already face certain costs from dealing with existing subpoenas and investigations. ISPs must be viewing this as a cost of doing business.

Government

Since the agreement is voluntary, the government does not need to get involved. In addition, enforcement costs are transferred from the government to the ISPs and copyright holders.

However, in many areas, users only have roughly two choices for ISPs. This duopoly can restrict consumer choice if both providers behave the same way. Because of the level of concentration in the ISP industry, the government should ensure that the 6 Strikes system remains fair and does not provide poor service with no place to turn to.

Users

Users gain a softer system than getting hauled into Federal Court or asked to settle for $1000+ after possibly only one infringement. The system incorporates education for users who may not know that what they are doing is illegal.

However, the appeals system still leaves something to be desired, for the reasons mentioned earlier. In addition, users should be able to reach a representative who can explain the system to them and can easily correct minor mistakes in the system. It is unclear if the copyright experts appointed by the CCI will be fair and balanced. The MPAA has a history of putting out biased information on copyright; for example, they once suggested that teachers should record a video off the screen as an alternative to ripping a DVD[129]

~~Current policy debates~~ Same heading as above!

SOPA and PIPA

SOPA and PIPA were recent bills debated in Congress which attempted to reduce copyright infringement. The public, led by the Internet giants, mounted an impressive public outcry against SOPA and PIPA.[130] SOPA would have expanded existing criminal laws to make unauthorized streaming illegal, allow courts to ban ad networks from working with infringing sites, and require that search engines and ISPs block certain websites.[131]

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[129] http://arstechnica.com/tech-policy/2009/05/mpaa-teachers-should-video-record-tv-screens-not-rip-dvds/
[130] http://www.nytimes.com/2012/01/02/business/media/the-danger-of-an-attack-on-piracy-online.html
[131] http://thomas.loc.gov/cgi-bin/bdquery/z?d112:h.r.03261:

ACTA

ACTA is a multi-national treaty signed in 2011 by the United States.[132] ACTA is an attempt to require member countries to adopt intellectual property laws which prevent copyright and trademark infringement, including in a digital environment. The treaty was criticized for being debated in secret.[133]

Republican Study Group proposal

In November 2012, Derek Khanna, a 24-year old staffer in the Republican Study Group put out a 9 page policy memo on Copyright policy.[134] The memo was controversial; it was pulled almost immediately and the staffer was later fired.[135] In the memo Khanna wrote that copyright should be to promote the public interest, not to compensate creators; is not free-market capitalism; and that its repeated extension was not "for a limited time" as under the law.[136] Khanna wrote about how copyright retards the DJ/remix community, limits scientific inquiry, stifles the creation of a public library, discourages value-add industries that ride on top of copyrighted material, and penalize legitimate journalism.[137] As solutions Khanna proposes reducing statutory damages; expanding fair use; adding a punishment for false copyright claims; and limiting the term of copyright with extensions costing a "royalty" or fraction of the value of revenue from the exploitation of the work.[138]

The policy went over like lead balloon, but call to mind a more fundamental question than this paper attempts to answer: what is copyright? Why does it exist? Who benefits from it? What do we lose by such a system? Would we be better off with a weaker copyright system?

Specific Policy Recommendation

From the strong reaction against SOPA and PIPA it appears unlikely that anything unlike those bills will be attempted again. ACTA was never brought before the United States because President Obama claimed that it did not require approval by the Senate since it requires no change in US law.[139]

More fundamentally, it may be time to reevaluate the basic tenants which underlie the rationale behind our copyright system. Khanna's memo reawoke a conversation behind the rationale behind copyright. In 2011, Congress reevaluated the US patent system and passed a number of reforms designed to make the system more efficient.[140]

From the perspective of attempting to reduce copyright infringement, it appears that the 6 Strikes system strikes a happy medium. Results from France indicate that a graduated response system is effective in decreasing infringement through raising general awareness of copyright infringement,

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[132] http://www.csmonitor.com/World/Europe/2012/0211/Europe-s-Internet-revolt-protesters-see-threats-in-antipiracy-treaty
[133] http://www.eff.org/action/sunlight-acta
[134] http://marylandpirates.com/wp-content/uploads/rsc_policy_brief_--_three_myths_about_copyright_law_and_where_to_start_to_fix_it_--_november_16_2012.pdf
[135] http://www.theregister.co.uk/2012/12/07/republican_fired_copyright_reform/
[136] ibid
[137] ibid
[138] ibid
[139] http://arstechnica.com/tech-policy/2012/07/europe-declares-independence-from-hollywood-with-acta-vote/
[140] http://arstechnica.com/tech-policy/2011/09/mostly-pointless-patent-reform-bill-goes-to-obama-for-signature/

specific awareness through targeted alerts, and the disincentive of Internet disconnection. However, the American system is considerably more lenient than the French system. The policy is much more scalable than the old system of suing individual users. The monitoring generally uses traditional protocol features. The notification is done by ISPs though out-of-band methods such as phone calls, without violating a user's privacy. The service still is not perfect towards fair use, and we will need to see how the monitoring is implemented to see if it will issue false negatives on non-infringing uses. The system is also a non-government voluntary agreement.

However, there are still substantial problems with the appeals process and the transparency of the system. The technical methods used to detect infringement should be public, so they can be refuted. People should be able to appeal before the 5th Strike. The guidelines that are provided the arbitrators should be publically debated so that we can be certain that they are fair and balanced.

Therefore we propose that US policymakers take a wait and see approach before taking further action. The 6 Strikes graduated response strikes a good balance between the factors outlined in our framework.

Ultimately, the best way to reduce infringement is for the industry to offer more legitimate services. In the past, content has been restricted by DRM, which limits the number of devices the content can play on, while dedicated attackers can remove the encryption. In addition, services often have only a limited content selection. Content is subject to a myriad of legal agreements which makes licensing it problematic and slow.

Policy makers in other countries should note that what might culturally acceptable in the US might not be acceptable in other parts of the world. By some accounts the French prefer the government, not private businesses making termination decisions; whereas the preference is reversed in the United States.

No single proposal is a silver bullet to stop copyright infringement. Instead it is a collection of different approaches, which, taken together provide for a reduction in infringement.

Other

- Audience for proposal
- Make more specific (Don Unger)

Revising Paper

12/11
4p

Exec summary
- I need to write

Problem ~~statement~~
- I we have

~~Proposed sol~~ ✓
- ~~Argue why better~~ ✓

End w/ why rec is important

Citation: both ~~endnotes~~ and References
footnotes

- Steve does...

Due 12/12

(2)

Title: Copyright Infringement
Framework + Political Solutions
(not really solution)

Methods to mitigate Copy. In
reduce

Reducing Copyright Infringement: A Framework
And Proposed Response

and Proposal

Do ~~little~~ exec summary later

Structure
(not even fully aware of what we have...)
Think I will split off lawsuits to
Own section

Paper

12/12
6ap

Last day!

Stephens economic section
Somewhat better structured
not really...

Will make a stronger section in end
But still a total mess...

Content duplicated...

keep rearranging it...

I actually like how last part turned out...
War multiplier effect
Split up Sanlez blog post

(1)

Substitution Rate + Value of Fake good connected also the rev section

Some w/ multiplier + (distributional) ...

I want to think about multipliers/themes more but must keep moving!

Yeah this is supe interesting

So much economic theory!

---

he didn't at all start on employment or artists

Wish he had provided some structure!

Organize + categorize!

'We are very secondary research based

└ I think good for this type of paper ...

(3)

Then in the upper section
 cover anything not related to 1 of the 3
 like defining the category

* [describe item
 give examples
above [

below [evaluate

 if 1 of the 3 - lawsuit
 - FHADOPI
 - 6 strikes

---

ah but DNS Filtering gets complicated
 I feel like making it the solutions section
unless each item has an example that is
 an example of what fails it

(4)

Effective: DNS Filtering

Economic: ?

Technical: DNS SEC

How detection happens today ?:

P2P

DPI

(Mark suggests footnotes)

Minimally Ness.

Non infringing use

Sony. Betamax

BitTorrent

Mega Upload

DRM

Fair Use

Betac / Aereo

DMCA

Ex: Real DVD

Stakeholders

(5)

Perhaps all good except for how encryption is detected today

; Lawsuit section

Or in Tech explanation

; Unless frame as canter example

ie Comcast DPI not acceptable

Is lawsuit acceptable

Does this ____

But that breaks things up

Might be best ...

The whole Section 701 process totally non core

Why did I even include?

(6)

Unless its like a core deep study
↳ that can move to footnote
Real DVD as counter example

How to make it more measurable
↳ skip for now...

Edit, then keep reading...

(making changes)
Add footnotes

I like how this is turning out...

Yeah for DNS section I was not clear on my purpose.

I agree → we never close the loop...
That is why we are re-arging!

2

We are also shifting opinion from from tech padden to marginally helpful...

Unless want to draw the distinction...

Collateral damage

DPI to privacy

Non protocol specific

Make other note a foot note...

"Make protocol robustness"

Oh whole section down below!

This section is shaping up nicely :)

12/12
10:30P

Reducing Copyright Infringement:
A Framework and Proposed Response

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Stephen J Suen <ssuen@mit.edu>

December 12, 2012

STS.085 Fall 2012

Contents

Exec Summary

Copyright infringement continues to be a serious problem, as the technology which enables infringement becomes more broadly available. Industries which produce intellectual property, including the music, movies, and television industries face challenges as technology makes infringement easier, and as their business model change.

Our project aims to develop a framework for the cost-benefit analysis of anti-copyright infringement mechanisms. The long-term goal for this evaluative framework will be to encompass a common set of values, and standards for the analysis and discussion of current and future proposed anti-copyright infringement mechanisms. The factors we evaluate include:

- Is the policy effective in reducing copyright infringement?
- Does the policy make economic sense?
- Does the policy have minimal negative repercussions on the Internet?
- Is the policy the minimum necessary?
- Is the policy acceptable to stakeholders?

To illustrate the usefulness of such a framework, we will show it in action by analyzing current and proposed graduated response policies proposed to combat online copyright infringement—specifically, the HADOPI law in France and the "six strikes" Copyright Alert System being implemented here in the US as part of an agreement between the MPAA, the RIAA, and a number of major ISPs. To put this assessment into perspective, we will also use our framework to evaluate the effectiveness of the previous anti-copyright infringement paradigm of filing lawsuits against individual users, using it as a benchmark for comparison. Through this analysis, we will be able to identify the merits and downsides of graduated response mechanisms, discuss them in relation to traditional copyright litigation strategies, and provide comprehensive policy suggestions.

The audiences for this paper are the policy makers involved in setting policy, particularly in the United States, as well as all of the other stakeholders involved in proposed policies.

We find that the French HADOPI system has been successful in raising both general and specific awareness of copyright infringement in France. Based on these findings we believe that the "Six Strikes" system will be more effective at raising awareness about copyright infringement than the previous system of mass lawsuits against individual infringers. Thus we urge policy makers to embrace the "Six Strikes" system and withhold further action until after the Six Strikes system has been implemented. However, there still are substantial problems with the appeals system in Six Strikes.

Problem Statement/Intro

Copyright

Copyright is a legal concept in which the government grants the creator of an original work exclusive right to the work. It is a form of *intellectual property*, a category which includes patents, trademarks, and trade secrets, all of which are *intangible assets*. Governments have and continue to want to encourage the creation of "works of the mind" by giving the original creators exclusive rights for a period of time. A copyright holder is granted certain *exclusive rights* to a work, such as the rights to reproduce, distribute, display, or perform the copyrighted work, or to make derivative works. In the United States since 1989, content is automatically copyrighted when it is reduced to tangible form (ie. written down).

Copyright Infringement

Copyright Infringement is the unauthorized use of works under copyright, for example, making a copy when one is not authorized to do so. For example, if one were to make a copy of the latest Taylor Swift CD one purchased at Walmart and gave it to a friend, that would be copyright infringement. Copyright infringement is often referred to as *piracy*.

Copyright infringement has been and continues to be a big problem for the creative content industries, as copying technology, particularly digital copying technology, has become more accessible to consumers. The Internet has only exacerbated the problem, as the Internet allows one to send files across the globe quickly and with few traces.

The first question to ask is should something be done? Some assert that copyright is not economically efficient or that the industry is doing fine regardless. For example, consumer spending on entertainment as a percentage of income has continued to rise over the last decade.[1] This paper does not consider this question, and instead assumes that copyright infringement should be addressed.

Estimates on the scale of the problem vary. One industry funded study put the loss due to infringement at over $58 billion dollars in the US alone.[2] Other parties claim that this metric is overinflated because it makes a number of incorrect assumptions.

For the last decade, the content industries have been trying to fight unauthorized sharing over the Internet. A number of methods have been tried, including having the industry sue individual downloaders. However, recent efforts have been coalescing around so called "graduated response" efforts. Under a graduated response system, a user is sent a number of warnings, before a penalty, which might include service termination. Such systems can be mandated by law, such as in France, or through a voluntary agreement with Internet Service Providers (ISPs) as in the United States.

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[1] http://www.techdirt.com/skyisrising/ pg 3

[2] 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).

Evaluative Framework

We attempt to establish a framework to evaluate proposals to combat copyright infringement. This framework can be used to establish the pros and cons of a proposal.

1. Is effective in reducing copyright infringement?
    a. Measuring
    b. Ease of circumvention
2. Does it make economic sense?
    a. Revenue in reclaimed sales
    b. Positive effects on employment
3. Has minimal negative repercussions on internet
    a. e.g. DNS
4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)
    c. Beneficial services
5. Will be acceptable to stakeholders (political/legal argument)
    a. Who will implement? Legal authority/precedents?
    b. Costs of implementation/enforcement
    c. Political views/possible challenges of stakeholders, e.g. industry, citizens, artists

Is if effective in reducing copyright infringement?

1. Is effective in reducing copyright infringement
    a. Measuring
    b. Ease of circumvention

The first question to ask about any policy is "is the policy effective in reducing copyright infringement?" A policy that does not reduce copyright infringement should not be considered further.

Measuring Reduction in Infringement

It is difficult to measure the amount of infringement that is currently on going, and thus the reduction due to a certain policy. Because infringement is illegal, many users attempt to cover their tracks when downloading material illegally. One can survey internet users, but the risk here is that people lie on the survey, especially if they know their actions are illegal.[3] Thus raising awareness of the illegality of an action may only cause users to not admit to any action anymore, even though they continue to perform the action.

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[3] Lee Rainie, Mary Madden, et al., "The impact of recording industry suits against music file swappers," *Pew Internet & American Life Project*, January 2004.
http://www.pewinternet.org/pdfs/PIP_File_Swapping_Memo_0104.pdf

Transactions may occur offline. A 2006 poll by the Los Angeles Times showed that 69% of 12-17 year-olds felt that it was legal to copy a CD or DVD they owned and give it to a friend.[4] These types of transactions are almost impossible to track.

There are some proxy measures one could use. ISPs are often able to provide statistics on the amount of traffic being transmitted with a particular protocol.[5] However, as will be discussed later, many of the protocols also have substantial non-infringing uses.

Another possibility is to use the increase in sales of legitimate versions.[6] This is built on the assumption that users will buy a work if they are no longer able or willing to acquire an illegal version. However, as we discuss later, this is not always an assumption which can be made.

Ease of Circumvention

A policy does not need to be ironclad in order to reduce copyright infringement. As an example, one does not need to look further than Section 1201 of the Digital Millennium Copyright Act. This section prohibits the circumvention of access control measures.[7] Because of this section, it is illegal to make copies of DVDs. However, it is not illegal to make copies of CDs.[8] Because of this, legitimate programs such as iTunes and Windows Media Player offer users the ability to make copies of CDs, but not DVDs.

It is certainly possible to download a program from the internet to make copies of DVDs, but the very fact that it is not easy prevents vast amounts of Americans from even trying.

It is not even that hard to find out how to do it. Searching for "how to rip a DVD" yielded instructions on the first result. The instructions require some technical skill, as they require one to download a particular .dll to a certain programs folder location. However, just because ripping a DVD is not included "out the box" less people are able to copy DVDs.[9]

Keeping material illegal makes it harder to find. Even though the industry has been unsuccessful in shutting down the Pirate Bay, it has prevented it from becoming a legitimate business. By keeping the business illegal and keeping it on the run, the industry has made the life of the Pirate Bay harder.

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[4] Charles Duhigg, "Is Copying a Crime? Well...," Aug. 9, 2006. http://www.latimes.com/entertainment/news/la-fi-pollmusic9aug09,0,5791738,full.story?coll=la-home-headlines

[5] "P2P Volume Climbs Again in June, User Levels Near 9 Million," *Digital Music News Blog*, July 8, 2005. http://www.digitalmusicnews.com/yesterday/july2005#070805P2P

[6] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1989240

[7] To clarify, there are two separate issues in play here. (1) the right in the work (copyright) and (2) the right to prevent circumvention, or 'lock-breaking.' They're two separate protections. In the case of DVDs, while a copy for personal use (format-shifting, for example) might be broadly considered fair use, the fact that it is fair use isn't relevant to the second component, the circumvention. This is why burning your CDs onto your PCs is non-infringing, but it is still unlawful to do the same with DVD.

[8] The law says nothing explicitly about "space shifting" your collection, for example, ripping a CD you own to put on your iPod. However, there has never been an explicit case brought against someone for ripping. In addition, at attorney for MGM said that his clients, the record companies, have no problem with people ripping a CD for their own personal use.

Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd. (3/29/05), 04-480
http://www.supremecourt.gov/oral_arguments/argument_transcripts/04-480.pdf

[9] One could also argue that copying DVDs is also harder because often one must convert the content from a 9.8GB double layer DVD to a 4.6GB single layer DVD. In addition, one could also argue that DVDs

There are still a core group of techies and dedicated other folks who have the knowledge to learn how to circumvent these measures and cover their tracks. However, a policy need not prevent every infringement.

Digital Rights Management

To prevent misuse of copyrighted work, the content industries introduced *digital rights management*. DRM is used to prevent the copying or other unauthorized work of a digital work. DRM is controversial because it limits what legitimate customers can do with their purchases, including their fair use rights. DRM is often based on encryption.

However, at its core DRM faces a fundamental problem which limits its theoretical efficacy. A device must be able to play a particular work (for example a song) for the user to be able to listen to it. Society has developed encryption to protect two files from listeners in the middle as they cross a network. However, it is theoretically impossible to protect content which has to be decrypted and outputted on a device where the "advisory" (in cryptography terms) owns the hardware and has complete control over the hardware.

Thus DRM has been effective in limiting what honest and unsophisticated consumers can do with their work, but has done little to limit the availability of copying to sophisticated users. CDs are still sold without DRM, so it did little to matter that iTunes added DRM, except to only allow consumers to play their music on iPods. Not only is illegally obtained material free (no charge), but came without strings attached!

DRM is another example of a technology which is not perfectly effective. While it does prevent casual infringement, it also imposes deep restrictions on consumers, which we believe offsets its benefits.

DNS Filtering

DNS filtering is another example of an imperfect proposal. A provision to include DNS filtering was included in SOPA and PIPA.[10] However, this scheme is easily circumventable since a user can just enter the IP address of a site instead.

DNS is a service of the Internet which maps friendly names such as "google.com" into IP addresses such as "74.125.224.35". Each server on the internet has as IP address which is the way that other computers can route traffic to the server.[11] DNS provides this mapping of IP. For example, thepiratebay.se is located at 194.71.107.15. If DNS is blocked, a user could enter the IP address of the server directly into their browser. This would allow the users to connect to the server, without the need of the DNS service.

Domain Name	IP Address
thepiratebay.se	194.71.107.15

However, there are some limitations to exposing IP addresses directly to users. If the Pirate Bay ever has to change server hosts, then moving their IP address would be almost impossible, as these are assigned in blocks. For example, when the internet was first created large organizations such as MIT were given large blocks of IP addresses. For example, MIT has all of the IP addresses starting with 18.

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[10] dyn.com/sopa-breaking-dns-parasite-stop-online-copyright infringement/

[11] One IP address per physical server machine. One site can be run on multiple servers, or multiple sites can be run on one server.

Servers then through Border Gateway Protocol (BGP) have rules to forward all traffic destined for IP addresses starting with 18 towards MIT since MIT is an "Autonomous System." The same applies to Internet Service Providers or Hosting Providers. If the Pirate Bay changed hosting providers, their IP address would change. Under a normally operating DNS system, the Pirate Bay can slowly phase in their new IP address transparently. One study of spam messages showed that less than half a percent of messages contained a raw IP address, instead of a domain name.[12]

In addition, if the Pirate Bay had to change IP addresses, then they would have to disseminate their new IP address, for example by posting it in Twitter or in a newspaper ad. There are even more subtle ways to do this on the Internet. Persons not in the United States could operate "darknet" DNSes. These DNSes would have addresses that the US had blocked. DNS normally works by contacting a hierarchy of name servers, starting from a central server. However, there is nothing which requires users to use the standard hierarchy. A "darknet" DNS is one where the user defines a different DNS to query, outside of the traditional hierarchy. If these servers were run entirely out of the US, they would be out of the reach of US law enforcement.

In addition, this raises an interesting question: is it illegal to know the phone number of an illegal service? For example, say someone had the phone number of a drug operation. Is that in and of itself illegal?[13] No, it's only evidence that corroborates a story and could provide extra evidence against a person in court. By itself it is not illegal. Then how are knowing IP addresses any different? DNS is just a mapping of a name to a number.

These darknet DNS services could even be distributed, much in the way of BitTorrent itself is. For example, BitTorrent Distributed Hash Tables (DHT) function by giving each node a copy of the table or part of the table. A node then asks other nodes to share their tables. That way there is no one authoritative owner; frustrating greatly any attempt to take down the darknet DNS network, because almost every node would need to be taken offline to bring down the network.

The United States government would have to be super careful about how it distributes the blacklist. If it was just a simple list that was public, then some people would just feed this list into their DNS system to allow users to continue to reach all of their old content. In addition, this list of copyright infringing sites would tell copyright thieves exactly where to look!

Thus, DNS blocking would help to reduce copyright infringement. However, as we will discuss in the technical infrastructure section there is a considerable downside to forcing certain DNS servers to response differently, especially as DNSSEC is being rolled out.

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[12] http://css.csail.mit.edu/6.858/2012/readings/trajectories.pdf

[13] The interesting possible exception to this occurs interestingly enough in copyright law. Under the DMCA (17 U.S.C Sec. 1201(a)(1))it is illegal to remove the encryption and produce tools or parts of tools that circumvent encryption. In one case Memorandum Order, in MPAA v. Reimerdes, Corley and Kazan (NY; Feb. 2, 2000) (https://w2.eff.org/IP/Video/MPAA_DVD_cases/?f=20000202_ny_memorandum_order.html the court claimed that the key in and of itself was a copyright circumvention device. A key, is at its base, just a very large number. In response, a number of people made an image with the colors of each section of the image being represented by the same digits as the encryption key. 46-dc-ea-d3-17-fe-45-d8-09-23-eb-97-e4-95-64-10-d4-cd-b2-c2 by Ben S, Yale Law Tech, 2011 Marchhttp://www.yalelawtech.org/trusted-computing-drm/46-dc-ea-d3-17-fe-45-d8-09-23-eb-97-e4-95-64-10-d4-cd-b2-c2/
In addition, all computer files are, at their core, a string of 1s and 0s. These strings form very long binary "numbers" which it is illegal to posess.

In addition, blocking can have collateral damage. Multiple sites can live at the same IP address, through a technology called "vhosts." Each server has only one IP address, but it can host multiple sites running on multiple domain names. Low-grade shared hosting often is set up in this way. If one were to ban an entire IP address, one could ban sites other than the one that was planned. The other sites running on the same server could be run by completely different entities who have no clue or control over the behavior of the other site. This is like shutting down the entire mall because one store is selling counterfeit handbags.

Economic

2. Does it make economic sense
    a. Revenue in reclaimed sales
    b. Positive effects on employment

Costs

Next, one should look at the costs of a policy to evaluate whether the benefits of the policy outweigh the costs of the policy. In addition, who bears the costs? The content industry? The government? Internet service providers?

Government

The government incurs costs to protect copyright by employing staff who attempt to investigate cases of copyright and other intellectual property infringement. Costs for copyright are difficult to calculate, because the positions are also involved in investigating other instances of intellectual property theft, for example, looking for fake handbags, physical media, and prescription medication at the border.

Currently, there are 34 people in the Department of Justice who work on intellectual property enforcement.[14] In 2013, the Justice Department is asking Congress for $5 million to hire 14 new employees who would be focusing on intellectual property enforcement.

In addition, there have been recent efforts to increase government action on intellectual property enforcement.

A study on the PROTECT IP Act (PIPA) by the Congressional Budget Office put the cost of the act at $47 million over 5 years.[15] The almost $10 million dollars per year would go towards hiring new enforcement staff. However, the CBO did not have an estimate for private sector costs, due to "uncertainty about how often and against whom the Department of Justice or copyright holders would use the[ir] authority."[16]

In addition, the Prioritizing Resources and Organization for Intellectual Property Act of 2008 (H.R. 4279) was estimated by the Congressional Budget Office to cost an additional $425 million dollars over 4 years by hiring a Intellectual Property Enforcement Representative in the Office of the President at $30 million per year, 10 intellectual property attachés to serve in United States embassies or other diplomatic

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[14] http://www.insurancejournal.com/news/national/2012/02/17/236033.htm
[15] http://arstechnica.com/tech-policy/2011/08/protect-ip-act-would-cost-taxpayers-47-million-private-sector-much-more/
[16] ibid

missions for $21 million a year, and $64 million in additional funding for the FBI. [17] There are already 8 attachés in Brazil, China, Egypt, India, Russia, and Thailand.[18] The CBO budgets about $1 million dollars per agent for 4 years of service. Additionally the CBO predicts no substantial impact from increasing damages or asset forfeitures for the Crime Victims Fund or the Assets Forfeiture Fund. Additionally, Title III would allow the Office of the United States Intellectual Property Enforcement Representative would be allowed to accept gifts, but the CBO does not predict much of an impact from this.[19]

Spending by the government is controversial because it is funded by taxpayers, but benefits primarily the owners of copyrighted material. Some have argued that costs should be borne by the party they are benefiting, and not by the general public.

How much is lost by copyright infringement?

In order to gauge whether an anti-piracy mechanism is indeed worth its cost of implementation, we must first determine how much money is actually lost due to online copyright infringement. With so many lurking variables involved, it is difficult to pinpoint the exact amount that online filesharing practices cost the economy. The answer to this question is not so simple—naturally, it all depends on who you ask.

According to the IFPI (International Federation of the Phonographic Industry), the value of the global recorded music industry decreased by 31% from 2004 to 2010.[20] However there can be a number of other factors at play here. For example, the shift to digital downloads have moved consumers from buying albums which cost about $12 to buying individual songs.

While music may be the prototypical market for measuring the costs of online piracy, it is certainly not the only industry to be affected by it. Overall, the Institute for Policy Innovation estimates that "each year, copyright piracy from motion pictures, sound recordings, business and entertainment software and video games costs the U.S. economy $58.0 billion in total output, costs American workers 373,375 jobs and $16.3 billion in earnings, and costs federal, state, and local governments $2.6 billion in tax revenue."[21]

Where exactly did these numbers come from? What methodology was used to derive them? Any model that estimates industry losses due to piracy must be able to separate those losses from a general decline in sales. Ultimately, it's as the U.S. Government Accountability Office puts it, "Estimating the economic impact of IP infringements is extremely difficult and assumptions must be used due to the absence of data. Assumptions... can have enormous impacts on the resulting estimates and heighten the importance of transparency."

Marginal Price

Copyrighted content has no to very little marginal cost. This opens up an entirely new type of pricing model compared to traditional industrial goods. It also makes losses due to copyright infringement

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[17] http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/91xx/doc9197/hr4279.pdf
[18] ibid
[19] ibid
[20] NOT CITED
[21] NOT CITED

difficult to calculate because one needs to establish a rate of substitution and a price. The two key assumptions that can drastically shape the valuations of losses are the substitution rate—the rate "at which a consumer is willing to switch from purchasing a fake good to the genuine product"—and the value of the fake goods—whether it is based on the manufacturing cost, the domestic value, or the suggested retail price.[22] Without verifiable data to support these claims, they are merely assumptions that are chiefly informed by subjective opinions on the nature of online copyright infringement.

Substitution Rate and Value of Fake Goods

We must be careful in calculating the substitution rate and the value of stolen goods. The substitution rate is the number of people who would buy the item at full price, instead of stealing it. Industry studies often assume a one-to-one substitution rate at the full list price.

Standard economics tells us that the number of people who demand a particular good is inversely proportional to the price. For example, economics tells us that less people will buy a CD priced at $20 than at $10. It follows then that many more will "buy" something if it is free. In fact, the difference between 1 cents and free is pretty substantial according to Dan Ariely in the New York Times bestseller Predictably Irrational.

One study using a survey method found that downloading reduced purchases by 20%, since every five music downloads substitute one legal purchase.[23] In addition, respondents reported that they valued music they downloaded illegitimately one-third to one-half less.[24] This suggests that users who download music illegally also download music legally. Users download more when the item is free, then when they have to pay for it. In addition, users often download music illegally that they are unlikely to buy. This suggests that using a one-for-one metric to calculate lost revenues is not accurate.

This suggests that users who download music illegally also download music legally. In addition, users download music that they are unlikely to buy as an album. This suggests that using a one-for-one metric to calculate lost revenues is not accurate.

Revenue

Since varying the price changes how many people will buy, the price that leads to optimal revenue might not lead to minimum piracy. Thus the industry may be profit maximizing at a certain price with legal revenue, but is still able to ascribe the amount of downloads lost to illegal downloads as "losses."

A higher price may lead to more revenue, while also leading to higher copyright infringement losses. Say for instance a TV show has 1 million users who watch for free. The TV network makes $1 off each user in advertising. Revenue is $1 million, while the copyright infringement loss is 0. Then say the TV network switches to a paid model in which an episode costs $4. Say 300,000 take the deal, and 100,000 decide to switch to copyright infringement. 550,000 stop watching all together. The network would make $1.2 million in revenue, which is more than before. They would also be able claim $400,000 in copyright infringement "losses." (Notice how they have claimed a one-for-one loss at the full price)

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[22] http://www.gao.gov/new.items/d10423.pdf

[23] 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.

[24] ibid

Under the new strategy, they are making more revenue than before, and are able to point to copyright infringement as losses.

The question then is if copyright infringement was made more difficult, how many of these 100,000 pirates would switch to the paying $4. As was discussed earlier, it is very likely not all 100,000 would now pay. But how many would?

Ideally, the networks would like to segment each person out by their willingness to pay. Say half of these 100,000 would be willing to pay $1. The network would not want to simply lower the price to $1 because then they would have 350,000 each paying $1, for revenue of $350,000 which is even worse than the ad-supported model. But if they were able to get the original 300,000 to pay at the old price, plus the 50,000 at $1 then they would have $1.25 million in revenue, and copyright infringement losses of $50,000. Revenue is up, and claimed losses due to copyright infringement are down.

Actual Losses

Electronic copies of information are considered by economists to be "non rivalrous."[25] This means that one person's enjoyment of a good is not diminished by another individual's enjoyment of that good. Infinite perfect copies can be made of electronic goods. Giving a copy of an MP3 file to a friend does not diminish your ability to still listen to an MP3 file. In addition, whereas stealing a copy of a music CD at Wal-Mart prevents Wal-Mart from selling that copy to someone else, downloading a song from BitTorrent does not prevent others from accessing that song.

One could also make an argument about the different in cost accounting between the two. In the Wal-Mart case, Wal-Mart has prepaid for some number of CDs from the distributor, say $6. It then sells the CD for $10. Thus in stealing the CD, Wal-Mart has lost the $6 they paid wholesale and the $4 profit they would have made on the sale. In the online case, say iTunes sells an album for $10, with $6 going to the record company for each album sale. If one gets the music from an illegal source, then one has deprived Apple $4 in lost revenue and the record label $6. One could argue that depriving a firm of revenue is different from causing actual losses. We showed above how by pricing their TV show at $4, the industry could claim $400,000 in losses even though these viewers would not all be willing to pay $4 for the show.

Multiplier Effects

Additionally, many studies include "multiplier effects" or fail to consider the economic effects of purchases made in substitute.

While the aforementioned (industry-sponsored) IPI study puts forward an estimate of $58 billion per year, Julian Sanchez of the Cato Institute points out that this number was obtained through the inappropriate use of multiplier effects to double and triple count loss estimates.[26]

The multiplier effect assumes that the people who receive the revenue spend it elsewhere. Because they are employed, they will also buy services. For example, someone who is employed by Hollywood needs to buy lunch and have their dry cleaning done. However, the multiplier effect adds the revenue

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[25] Hess, C., E. Ostrom. 2006. Introduction. C. Hess, E. Ostrom, eds. Understanding Knowledge as a Commons: From Theory to Practice. The MIT Press, Cambridge, Massachusetts

[26] http://www.cato-at-liberty.org/how-copyright-industries-con-congress/

from each party.[27] For example, if Hollywood made $10 selling a DVD, and paid $7 to manufacture it and $2 to ship it, society has benefitted by $10+$7+$2=$19.[28]

Redistributioal

In the same blog post, Sanchez goes on to point out that the effects of piracy in the U.S. are mainly redistributions within the economy for other purposes, but that money just ends up being spent elsewhere.[29] In other words, "the harm is a dynamic loss in allocative efficiency... we want the market to be accurately signaling demand for the products people value, rather than whatever less-valued use that money gets spent on instead."[30]

For example, what happens with the money saved by consumers by not buying CDs? Sanchez argues that is spent on other things.[31] For example, rather than spending $10 on a CD, a consumer uses that same discretionary income to buy a sandwich instead. If the user would have spent the money on a CD, they would have not bought a sandwich. Thus the economic, including employment effect is merely transferred across industries, and does not actually hurt the economy overall.

In effect this is similar to the parable of the broken window from *Ce qu'on voit et ce qu'on ne voit pas.* In the story, the shopkeeper's boy breaks a store window. Because of this, the window glazer makes 6 francs. Should society pay the boy to go around and break windows? It sounds silly that society would be better off if we paid people to go around and needlessly break things! This is because those 6 francs come at the expense of other spending, for example on new shoes or a new book for his library. Society as a whole is no better off because of the broken window.

Court Case Damages

In court cases, statutory damages allow for up to $150,000 per track.[32] In the case of Limewire, that would amount to $72 trillion. That is larger than the entire output of the world, as well as "more money than the entire music recording industry has made since Edison's invention of the phonograph in 1877."[33]

Employment

Aside from the dollar amount of the economic impact, there is also contention about the effect of copyright infringement on employment. Again these arguments rest heavily on the assumptions that are made, including the assumptions discussed above.

In addition, questions are raised about a number of other assumptions. First, does revenue correlate with employment? If the industry's revenue were to increase, would it employ more people, particularly artists? The industry argues that additional profit allows them to invest more in the future, leading to more employment for artists.

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[27] http://techliberation.com/2006/10/01/texas-size-sophistry/
[28] ibid
[29] http://www.cato-at-liberty.org/how-copyright-industries-con-congress/
[30] ibid
[31] CITE
[32] http://concerttour.org/riaa-loses-its-mind-sues-limewire-for-astronomical-72-trillion.php
[33] ibid

Or are shifts to the industry causing employment declines in the firms currently in the industry, while giving rise to a new breed of people making money, outside the traditional structure of the industry, as well as possibly outside of the traditional structure of employment.

Others argue that employment losses are merely people transionening outside the traditional confines of the entertainment industry to being more independent.

The IPI paper asserts that as a result of sound recording piracy, the US economy has lost 71,060 jobs.[34] The study used its estimate of lost industry revenue (discussed above) and the current revenue/employment ratio to claim that the sound recording industry lost 26,860 direct jobs. This assumes that revenue and jobs are directly correlated. The other jobs were found by extending the same fiscal multiplier (discussed above) to reason about the number of jobs "lost" to piracy. Again, the report ignores the substitutive/allocative effects.

In fact many of the estimates being tossed around seem downright ungrounded in reality. In 2002, the US Customs and Border Patrol claimed that over 750,000 jobs were lost due to piracy.[35] However, CBP was unable to find the source of those estimates so they withdrew them. It should be noted that at the time 750,000 was almost 8% of the total unemployed population in the United States.[36]

In addition, the Bureau of Labor Statistics showed an almost 20% growth in employment in the entertainment sector from 1998 to 2008.[37] They also predict that this growth will continue into the next decade. In addition, most of the growth will be in the category of independent artists, a category that grew at an even faster 43%.[38] Furthermore these artists may be underrepresented in some statistics because rather than being employees, artists often work as independent contractors.

Industry Trends

It is difficult to separate out the effects due to piracy from the effects due to other industry changes over the last decade. There can be other explanations besides just copyright infringement which are causing a change. Some may be linked to technology. For example, the shift to people listening to music on iPods has changed the way people listen to music.[39] On iTunes, people can just buy a single popular track instead of buying the entire album.[40] This naturally leads to less revenue.

Another effect in the motion picture industry is that rental services such as Netflix and Redbox are decreasing the demand for DVDs.[41] Sales of packaged media fell from $2.6 billion to $2.1 billion in the United States according to the Digital Entertainment Group, which represents film studios and consumer electronics companies.

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[34] http://www.ipi.org/docLib/20120515_SoundRecordingPiracy.pdf pg 2
[35] http://arstechnica.com/tech-policy/2008/10/dodgy-digits-behind-the-war-on-piracy/
[36] ibid
[37] http://www.techdirt.com/skyisrising/ pg2
[38] Ibid pg 3
[39] http://mashable.com/2011/10/23/impact-of-ipod/
[40] http://www.roughlydrafted.com/RD/RDM.Tech.Q1.07/1C726ADF-0ED1-42D0-93D9-4FA4E698E94A.html
[41] http://www.ft.com/intl/cms/s/0/672f0a84-74f7-11e0-a4b7-00144feabdc0.html

In addition, the Internet has led to the rise of new forms of entertainment. People are spending more of their entertainment time surfing the Internet than watching television.[42] This naturally leads to a drop in the amount of hours people watch television, leading to a drop in advertising rates. DVRs, such as Tivo, have also changed television watching by allowing users to time-shift their favorite shows and fast forward through commercials. Advertisers don't like this and exempt these viewers from viewership data.[43]

Overall State

In some ways things are looking up for the overall entertainment industry, if not for the currently players. Studies such as Floor 64's "The Sky Is Rising" demonstrate that the internet is not killing the entertainment industry but actually expanding it. Over the last decade, consumer spending on entertainment has grown 15% from 4.9% to 5.62%.[44] The amount of content available has grown sharply. Much of this gain has been due to technology making it easy for almost anyone to produce and distribute a work. New online tools have simply made it easier for content creators to promote, distribute, and monetize their work without need for traditional middlemen (i.e. record labels, studios). Whereas before the large firms that this paper discusses controlled the industry, independent producers can now reach customers through new distribution channels.

The worldwide market for video has grown 25% from $25.5 billion worldwide in 2006 to $31.8 billion in 2010.[45] As DreamWorks Animation CEO Jeffery Katzenberg put it, "Both traditionally, as well as recently, we have seen that our product is, at worst, recession-resistant, and historically, has actually been recession resistant.[46]

Over the last decade sales of recorded music has fallen; however, when one considers the broader music industry, profits have grown nicely.[47] Indeed, it is the very distribution in this industry which is interesting. Historically record labels have made money from selling recorded music, and have only provided a small royalty to the artist. The artists, however, made money from selling concert tickets. Music was and continues to be given away, for free, on the radio to promote the song. Indeed, some times record companies were even caught paying radio stations to play a particular song, an illegal practice called *payola*.

Conclusion

At best, content industries may be perfectly healthy with piracy an unavoidable consequence of a profit maximizing price. Or much of the effect may be due to a changing industry or industry structure. The industry must change and adapt as industry structure changes.

Naturally, measuring the cost of online piracy is not an either-or situation. Trying to put an exact number on economic losses due to illegal downloading is a problematic task, but that's not to say that estimates of lost revenue are not important in this discussion. Instead, we urge policymakers to view the

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[42] http://mentalhealth.about.com/library/sci/1201/blnettv1201.htm
[43] http://seattletimes.com/html/businesstechnology/2003164119_interactiveads31.html
[44] http://www.techdirt.com/skyisrising/ pg 2
[45] Ibid pg9
[46] Ibid pg 9
[47] Ibid p25

ecosystem holistically and look beyond the reductive narrative of online piracy as theft. It is essential that we view data related to this issue through the lens of changing technologies, business models, and consumer norms. In order to move forward we should identify legislation that reduces the most harmful types of online piracy but also tries to align itself with these shifts in consumption behaviors.

Technical

3. Has minimal negative repercussions on internet
    a. Platform Robustness
    b. Platform Security: DNSSEC
    c. Privacy: DPI
    d. Protocol Independence: Sandvine

Platform Robustness

The proposal should not interfere with the basic functioning of Internet protocols. Some Internet protocols have existed for decades. Their code is installed in billions of devices, many of which are hard or impossible to change. Even making changes around the edges are difficult. Some systems have relied on particular quirks in how the protocol operates. Because of the sheer size of the install base, it is impossible to test for every possible configuration.

Intercepting Websites

In the past, some ISPs have intercepted pages and have added banners onto pages in midflight.[48] For example, in 2008 Rogers added a quota message to the top of the Google home page by inserting Javascript into the page using an active version of Deep Packet Inspection. This technology is sold by companies such as PerfTech.[49]

Almost all wireless access points use some sort of redirection technique to bounce first time visitors to a log in page. For example, many services send back a false DNS response, directing the user to the log in page instead. Or a user's request is redirected by a HTTP redirect after a page is received. A user may also be redirected by IP address to the log in page. All of these techniques are not clean in regards to how the internet was designed. This can present problems. For example, my iPad tries to refresh my email and the WiFi router answers as the mail server. My iPad does present a security warning, but if the user clicks through, the access point could be trivially designed to intercept my mail credentials.

However a similar technique may pose problems for the Internet if they happened at random. For example, a user may be uploading data in the background when their internet connection is redirected to this message – causing the update to break. Or perhaps a user is connecting to a computer via remote access when the redirection happens. If the redirection is not properly implemented, it could break the remote access connection. Especially with a remote access connection, the user might not be able to log in to clear the alert message until they return home!

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[48] http://lauren.vortex.com/archive/000337.html
[49] http://www.perftech.com/

Platform Security

Any proposal should not directly impact the security of the network. In addition, the proposal should not forestall the implementation of next generation Internet protocols, such as DNSSEC. The protocol should

DNSSEC

The current DNS model, described above, is insecure. Results are returned without the use of cryptography. This means that an attacker could modify results before they are returned to a user. Unless the site uses SSL, one would not know that one was connected to the wrong site. The browser would still show the same URL, for example, google.com. The attacker could then ask for the user's log on information which the user might still provide because the site's visible URL is correct. The attacker could then use that information to steal the user's account on the real site. An attacker could also post a fake order page to collect credit card numbers.

Recently there has been a push to extend DNS to also use cryptography. This effort is called DNSSEC.[50] DNSSEC adds a chain of cryptographically signatures to responses.[51] DNSSEC is seen as critical to securing the US's Internet infrastructure, because it hardens the DNS system against fraud and other cyber-attacks. The White House released a memo in 2008 instructing all agencies to turn on DNSSEC.[52] In addition, the Department of Homeland Security Cybersecurity R&D department has a program to encourage the deployment of DNSSEC.[53]

The DNSSEC system has been purposely designed so that only the owner of a domain can sign a domain query to prove that it is valid.[54] Thus only the author of the site can specify where the DNS service should resolve to. In addition, the system is set up so that if someone refuses to return a response, or submits an invalid response, the DNS service will continue to contact other DNS servers until it finds a valid response.[55] The DNS system was designed to be resilient to interference! In addition, it was described earlier how this entire system is easily subvertable by a user purposely seeking "darknet" responses. Because of this, organizations such as the Association of Computing Machinery have spoken out about the dangers that the DNS blocking that was specified in SOPA would harm the Internet.[56]

Rootkits

Copy protection or other software can be sloppily written in a way which allows malware to spread and hide on a machine.

In 2005, Sony BMG released CDs that contained MediaMax copy protection.[57] This software was poorly written. It ended up hiding all of the files on a user's system starting with "sys."[58] A virus could use this sys name to hide itself on all computers which had ever played CDs containing MediaMax.

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[50] http://usacm.acm.org/images/documents/DNSDNSSEC.pdf
[51] Ibid pg 3
[52] http://www.whitehouse.gov/sites/default/files/omb/memoranda/fy2008/m08-23.pdf
[53] http://www.cyber.st.dhs.gov/dnssec/
[54] Ibid pg 3
[55] Ibid pg 4
[56] Ibid pg 5
[57] http://www.npr.org/templates/story/story.php?storyId=4989260

This was a clear hole and Sony acted fast to recall the CDs and replace them with CDs which did not contain the copy protection.[59] However, it shows that copyright protection technology cannot just impede improvements in security, but it can also actively hinder security.

Privacy

In addition, policies should be designed to preserve user privacy.

DPI

A user's Internet Service Provider (ISP) is well positioned to monitor all traffic that the user is sending and receiving across the Internet. ISPs have access to all of your traffic as it flows across their network.

Internet traffic is sent as a packet, which is like an envelope. An envelope has both an outside and an inside. On the outside of the envelope, the packet has the IP header which specifies where the packet is sent, among other things. The inside of the packet contains the actual message. Normally, ISPs only look at the header of the packet in order to forward it onward. However, with modern equipment ISPs can also look at the contents of these packets, as long as they were not encrypted. This was always possible, but it is only recently that it is possible to do at the scale required.

This level of snooping on user traffic violates the user's expectation of privacy about what they download over the network.[60] Users do not expect that the post office opens every letter sent through the mail system. In fact, opening someone's physical mail is usually illegal.[61]

Phorm

In 2006, British Telecom started using technology provided by Phorm to serve behavioral advertisements on third party websites.[62] The service used deep packet inspection as well as HTTP 307 redirects to add HTTP cookies on the users machines.[63] Phorm then acts as a proxy and mirror to forward a user's request to the real website they are trying to visit.[64] Phrom tracks the entire web history of users and uses that information to insert advertisements on partner websites.[65]

There was a large outcry in the Internet community when the trial of Phorm was discovered.[66] The United Kingdom Information Commissioner's Office ruled that Phorm was illegal unless it was an opt-in

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[58] http://blogs.technet.com/b/markrussinovich/archive/2005/10/31/sony-rootkits-and-digital-rights-management-gone-too-far.aspx

[59] http://www.ft.com/cms/s/2/e9e41f72-56f4-11da-b98c-00000e25118c.html#axzz2EnYXGC5I

[60] Protocol encryption makes it more difficult for ISPs to identify BitTorrent traffic. However, it can only work if the tracker and the other clients also support encryption. In addition, it has been shown that many BitTorrent clients still put out a characteristic file flow that ISPs can identify if they so wish. (http://www.howtogeek.com/76801/how-to-anonymize-and-encrypt-your-bittorrent-traffic/) However, this only shows that the user is using BitTorrent, but not which file they are downloading. As the other section of the paper showed, BitTorrent can be used for non-infringing uses.

[61] http://www.wired.com/threatlevel/2008/03/post-office-app/

[62] http://www.theregister.co.uk/2008/09/16/phorm_eu_berr/

[63] http://www.lightbluetouchpaper.org/2008/04/04/the-phorm-webwise-system/

[64] Ibid.

[65] Ibid.

[66] http://news.bbc.co.uk/2/hi/technology/7299875.stm

system.[67] Ultimately, British Telecom decided to pull the plug on Phorm.[68] Phorm clearly violated the privacy expectation of users who were not always told that the system was in use.

Protocol Independence

Any measure should not unfairly burden a particular protocol. This provision comes from the FCC's Net Neutrality provisions. Since protocols can be used for used for both infringing and non-infringing uses, it is unfair to pejoratively block an entire protocol.

Comcast, Sandvine, and BitTorrent

In 2007, Comcast was found to be using the "Fairshare" product from Sandvine which actively interfered with BitTorrent traffic.[69] Sandvine captures a copy of the list of peers returned from a tracker. When a user tries to contact these nodes, their technology sends fake TCP reset packets – the equivalent of a fake hang up signal on a telephone. The action was controversial, and received a fine from the FCC for unfairly blocking a particular protocol.[70]

This had collateral damage. Comcast's Sandvine implementation ended up blocking some email transmissions sent with Lotus Notes, a less-popular email client made by IBM.[71] Sandvine did not intend to block Lotus Notes from sending email, but the technique Lotus was using to transfer large attachment must have been similar to the BitTorrent network technique. It appears that Sandvine had never tested sending attachments over 2MB with Lotus Notes before rolling out their product.

It would impossible for Sandvine to test every possible network configuration. That is why we have standards! Standards abstract away complicated implementation details. Messing with these standards ends up breaking things and makes them harder to test. This is another example of platform robustness being threatened.

Minimally necessary

4. Is it the minimum necessary?
    a. Non-infringing use of technology – effects on innovation (e.g. Megaupload, torrents)
    b. Fair use arguments (creative/cultural)

A measure should be the minimum necessary to block copyright infringement, without impacting legitimate uses of a technology or service. It is often impossible to achieve a perfect separation between blocking infringing and non-infringing uses. Technology is technology. It does not care what the content is. A BitTorrent tracker can point to any file, either a political document or a copyrighted movie. In addition, there often with the same file certain uses are allowed, while others are not. For example, with a CD you can put a copy of a song on your iPod, but cannot give it to a friend. This further

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[67] http://web.archive.org/web/20080412034139/http://www.ico.gov.uk/about_us/news_and_views/current_topics/phorm_webwise_and_oie.aspx

[68] http://online.wsj.com/article/SB124689052552600797.html

[69] https://www.eff.org/deeplinks/2007/10/comcast-also-jamming-gnutella-and-lotus-notes

[70] http://www.pcmag.com/article2/0,2817,2326980,00.asp

[71] http://arstechnica.com/uncategorized/2007/10/comcast-traffic-blocking-even-more-apps-groupware-clients-affected/

frustrates, often to the point of impossibility, the development of additional technology to prevent copyright infringements. In addition, some services have both infringing and non-infringing uses. For example, a file hosting site can hold a Hollywood movie or a home movie. Even determining what is copyrighted is often a challenge, because there is no one single repository.

Non-infringing use

Many services which make copyright infringement easy can also be used for non-infringing use.

Sony/BetaMax

The canonical example is the Sony Corp. of America v. Universal City Studios, Inc. case.[72] In this case, which started in 1976, the Supreme Court of the United States found that Betamax machines have "significant non-infringing uses." First off, the Court found that the producers of the devices were not liable for the actions taken by the purchasers of the device:

> sale of copying equipment, like the sale of other articles of commerce, does not constitute contributory infringement if the product is widely used for legitimate, unobjectionable purposes

Even though some people may use it to infringement:

> the business of supplying the equipment that makes such copying feasible should not be stifled simply because the equipment is used by some individuals to make unauthorized reproductions of respondents' works

Furthermore, the time shifting feature of the devices is allowed:

> one potential use of the Betamax plainly satisfies this standard, however it is understood: private, noncommercial time-shifting in the home. It does so both (A) because respondents have no right to prevent other copyright holders from authorizing it for their programs, and (B) because the District Court's factual findings reveal that even the unauthorized home time-shifting of respondents' programs is legitimate fair use

Thus the Betamax, and its close cousin the VCR were allowed to be sold as long as people could use the service for non-infringing use. In the end, the VCR launched a huge market in not just pre-recorded Hollywood movies, but also in VHS cameras. In 1984 JVC released the first consumer camcorder which allowed consumers to record directly to VHS tape, which they could play back on their VCRs.[73]

It also launched the home video market, a market which peaked at $21.8 billion dollars in revenue.[74] By 1985, one year after losing in the Supreme Court, the sales of prerecorded VHS tapes were about equal to box office revenue.[75] Revenues at theaters actually increased; by 1987, videotapes' popularity

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[72] Sony Corp. of America v. Universal City Studios, Inc., 464 U.S. 417

[73] http://www.totalrewind.org/cameras/C_GRC1.htm

[74] http://www.wga.org/content/default.aspx?id=4809

[75] Advokat, Stephen (1985-12-26). "Small screen begins to dominate Hollywood thinking". *St. Petersburg Evening Independent*. Knight-Ridder Newspapers: pp. 3B. Retrieved May 23, 2011. http://news.google.com/newspapers?id=EgIMAAAAIBAJ&sjid=XlkDAAAAIBAJ&pg=6921,2690566

encouraged consumers' interest in film, thus "sending viewers back to the theaters."[76] By 1995 more than half of Hollywood's American revenue came from home video compared to less than a quarter from movie theaters.[77]

BitTorrent

Another example is BitTorrent. Although widely used to download copyright infringing materials, the protocol is also being used to quickly distribute large files without requiring much infrastructure. For example, game developers use BitTorrent to distribute updates to their games.[78] These updates can be quite large (over 500MB). Traditionally companies would buy or rent many racks of servers to provide this content. In addition, these servers would require a lot of bandwidth. As bandwidth grows scarcer, this is becoming a growing concern. Under a BitTorrent model, the company only has to *seed* a few updates to members of the community around the world from their own servers. Other players then download a copy of the update from other users. Not only does this save the game company from requiring extra bandwidth, it also makes the download for the user, especially in countries with limited bandwidth. This is because the file is being downloaded from someone nearby. In addition, this decongests the Internet, requiring less bandwidth. It is win-win scenario.

Megaupload

One example of a case that is currently in progress is Megaupload. Megaupload was a direct-file hosting and download site. Users upload file to Megaupload and then receive a URL. Users could use the site to transmit files larger than email. They could send the URL they received to a friend or business colleague in an email message. Because the actual file was not attached to the email, the email is small enough to be sent on almost all systems. For example, a video production house might use Megaupload to distribute a preview copy of a video to a client. Persons could also use Megaupload as a backup service. They could upload a copy of their important files to Megaupload. If their computer were to crash, they could visit Megaupload again to download the file.

Kyle Goodwin was a MegaUpload user who lost his files when his hard drive crashed.[79] Mr. Goodwin is a videographer. He used Megaupload as a backup service for his videos. Shortly before the government's January raid, Mr. Goodwin's hard drive crashed. His only copies of his videos are the ones stored on Megaupload. However, the government is resisting restoring his files in court, claiming that some of the videos Mr. Goodwin produced had copyrighted songs as their soundtrack.[80] Furthermore, the government is arguing that people do not acquire an ownership interest by uploading songs to a service.[81]

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[76] Thompson, Anne (1987-05-10). "VCRs Sending People Back to Theaters / Video use is leading to record box-office boom". *San Francisco Chronicle*: pp. 29. Retrieved May 19, 2011. http://search.proquest.com/docview/302128658?accountid=35803

[77] Nichols, Peter M. (1996-07-12). "Where the VCR Rules". *The New York Times*. Retrieved March 31, 2012. http://www.nytimes.com/1996/07/12/movies/home-video-078344.html

[78] http://torrentfreak.com/bittorrent-to-speed-up-game-distribution-080915/

[79] http://torrentfreak.com/u-s-accuses-megaupload-user-of-storing-pirated-music-121031

[80] http://arstechnica.com/tech-policy/2012/10/government-innocent-megaupload-user-uploaded-pirated-music/

[81] ibid

DRM

DRM is a good example of technology that limits what honest consumers can do. Music sold on iTunes used to be protected with "FairPlay" DRM. That DRM restricted purchasers of the music to only being able to maintain listenable copies of that music on up to five computers.[82] However, the music could only be played on devices that supported FairPlay, namely iPods, iPhones, and computers with iTunes installed.[83] Other brands of devices were not supported as they did not have the capability to play FairPlay files and Apple refused to license it to others.[84]

Thus DRM served only to frustrate the purchasers of legitimately purchased music. As discussed above, illegally gotten tracks were not only free, but came without these strings attached. A proposal should not add this sort of incentive.

Fair Use

Proposals should not add chilling effects on legitimate uses of copyright technology. For example, United States law permits fair use.

> **17 U.S.C. § 107**
>
> Notwithstanding the provisions of sections 17 U.S.C. § 106 and 17 U.S.C. § 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include:
>
> 1. the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
> 2. the nature of the copyrighted work;
> 3. the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
> 4. the effect of the use upon the potential market for or value of the copyrighted work.
>
> The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors.

Fair use suffers from a few practical problems. First off, what is fair use and what is not are not laid out explicitly in the statue. As a result there have been a long string of cases which attempt to provide guidance on what is fair use and what is not.[85] For example, a work that parodies a second work is

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[82] http://www.apple.com/support/itunes/store/authorization/ Retrieved 2008-09-13.
[83] ibid
[84] http://www.conseil-concurrence.fr/pdf/avis/04d54.pdf
[85] http://fairuse.stanford.edu/Copyright_and_Fair_Use_Overview/chapter9/9-c.html

protected against infringement claims by that second work, but a work that parodies society in general by using a second work is not protected.[86]

Beforehand/Afterhand

As such it is almost impossible to determine if a particular use of a material qualifies as fair use.

Many of today's technologies do not account for fair use. It is especially difficult for a computer to determine if these tests are met. This many services, such as Google's YouTube take down the content first.

For example, YouTube's Content ID system does not account for fair use before a work is removed.[87] It is only after a work is removed, that the uploader may go to YouTube and contest the removal of the work. One of these options is that the work falls under fair use protection. The uploader can then describe why they feel the work should receive fair use protection. A YouTube employee then reviews the rationale and decides whether or not to accept the rational. If the rational is accepted, the video remains as is. If the rational is rejected, the blocking remains.

Note that a YouTube content ID match does not necessarily mean that one's content is removed. Instead, the content may be blocked only in certain countries, may have ads shown next to it, or part or all of the audio may be muted.

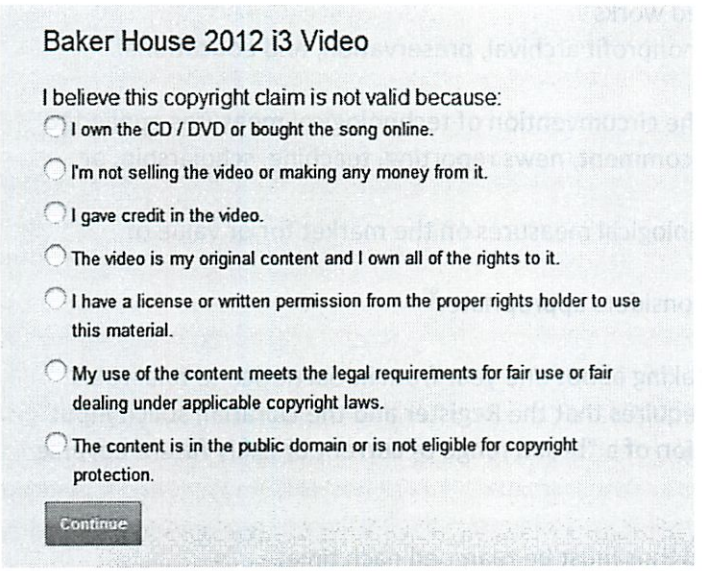

Figure 1 YouTube Content ID Copyright Claim Invalid Page

Fair Use and the DMCA

In addition, fair use does not overrule the DMCA. In Universal City Studios v. Reimerdes, the court stated that "[i]f Congress had meant the fair use defense to apply to such actions, it would have said

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[86] Mattel Inc v. Walking Mountain Productions, No. 01-56695 (9th Cir. Dec 29, 2003). http://archive.ca9.uscourts.gov/ca9/newopinions.nsf/6205C146C29519CC88256E0B005D8100/$file/0156695.pdf
^ Art ROGERS v. Jeff KOONS; Sonnabend Gallery, Inc., 960 F.2d 301 (2d Cir. Apr 2, 1992). http://bulk.resource.org/courts.gov/c/F2/960/960.F2d.301.91-7396.91-7540.91-7442.234.235.html

[87] https://www.eff.org/issues/intellectual-property/guide-to-youtube-removals and http://www.youtube.com/t/contentid

so."[88] Thus one is not permitted to remove the encryption on media such as DVDs to make a copy under the normal provision of fair use.

Section 1201 Process

Instead, Congress does allow for encryption to be broken, but under a more limited set of criteria than fair use. This is spelled out in Section 1201 of the DMCA.

Section 1201 requires that every three years, the Library of Congress must hold hearings in which citizens can ask for exemptions of the DMCA to break encryption in certain specific cases.[89] For example, in the most recent rulemaking, the Federal Registrar stated that:

> "The primary responsibility of the Register and the Librarian in this rulemaking proceeding is to assess whether the implementation of access control measures is diminishing the ability of individuals to use copyrighted works in ways that are not infringing and to designate any classes of works with respect to which users have been adversely affected in their ability to make such noninfringing uses."[90]

Specifically the Register and the Librarian are to look at:

(1) The availability for use of copyrighted works
(2) the availability for use of works for nonprofit archival, preservation, and educational purposes
(3) the impact that the prohibition on the circumvention of technological measures applied to copyrighted works has on criticism, comment, news reporting, teaching, scholarship, or research
(4) the effect of circumvention of technological measures on the market for or value of copyrighted works
(5) such other factors as the Librarian considers appropriate.[91]

However, the process is heavy in bureaucracy, taking about one year from initial notice to final rules published in the Federal Registrar.[92] Congress requires that the Register and the Librarian solicit input from a wide range of stakeholders in consideration of a "broad range of current or likely future adverse impacts."

In addition, exemptions expire every 3 years and thus must be reargued each time.

Real DVD

Other services which broke encryption on DVDs for claimed fair use purposes were later found to be illegal. RealNetworks, a maker of media playing software, had tried to launch RealDVD back in 2008.[93] RealNetworks is a legitimate company, who had a license to play back DVDs. The software was designed

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[88] Universal City Studios v. Reimerdes, 111 F. Supp. 2d 294, 322 (S.D.N.Y. 2000)
[89] See http://www.copyright.gov/1201/
[90] http://www.copyright.gov/fedreg/2012/77fr65260.pdf
[91] DMCA Section 1201
[92] http://www.copyright.gov/fedreg/2012/77fr65260.pdf
[93] http://www.realnetworks.com/press/releases/2008/090808_realdvd.aspx

to allow users to rip DVDs and watch them on their computers.[94] Real then added an additional layer of copy protection to ensure that users could only play the movies on up to 5 devices.[95]

The judge disagreed with RealNetwork's fair use assertion, writing "Fair use is not a defense to trafficking in products used to circumvent effective technological measures that prevent unauthorized access to, or unauthorized copying of, a copyrighted work." [96]

The copy protection, along with the anti-circumvention provisions of the DMCA, prevent consumers from exercising their rights to make a private backup copy; even if the software adds additional locks to protect the content.

Stakeholders

No matter how effective, economically and technologically viable, or minimally necessary an anti-copyright infringement mechanism might be, perhaps the most important factor of all to consider is its political feasibility. Even if a proposal is deemed to be a good idea, it must also be acceptable to the various stakeholders involved, whether it be the general public, Hollywood, artists, the tech/internet industry, the international community, and other potentially affected players. To ignore the multiplicity of opinions among the key players is to assume a perfect conveyance of policymakers' decision-making logic to their constituents; this is simply not the case. While such simplifications "make normative analysis possible and useful at the individual level [they] can become serious deficiencies in the study of public policies."[97]

Moreover, the inclusion of political feasibility assessment in technical policy analyses has been said to "enhance the probability that the technical analysis contained therein will be considered."[98] The neglect of technical factors in ongoing anti-copyright infringement legislative debates is, after all, one of the central deficiencies we hope to remedy with our evaluative framework. As such, political factors play a significant role in our evaluative framework for anti-copyright infringement measures.

This branch of our analysis will take place on two levels, examining the political details of the proposal itself as well as possible political reactions to it. First, we will look at the actors(s) assigned the responsibility of implementing the mechanism in question: do they have the proper authority to carry out the proposed operations? Second, the assessment will analyze the various key players to anticipate the level of political resistance a policy might encounter: what motivations, belief systems, and resources do each of the stakeholders have, and how might they react to the proposed mechanism? This two-pronged approach of political feasibility analysis will allow for a comprehensive assessment of whether a given policy will be likely to gain the support necessary for passage and, eventually, implementation.

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[94] http://arstechnica.com/uncategorized/2008/09/real-dvd-legit-dvd-copying-playback-but-is-it-too-late/
[95] ibid
[96] http://arstechnica.com/tech-policy/2009/08/realdvd-barred-from-market-while-judge-opines-about-fair-use/
[97] Majone, G. (1975). On the notion of political feasibility. *European Journal of Political Research*, 3(3), 259-274.
[98] Webber, D. J. (1986). Analyzing political feasibility: political scientists' unique contribution to policy analysis. *Policy Studies Journal*, 14(4), 545-553.

Responsibility of Implementation

When assessing the effectiveness of an anti-copyright infringement mechanism, one must not only look at the actual effects that the proposal might have. It is also imperative to ensure that the mechanism can be implemented with ease, can be sustained for a sufficient amount of time to have a lasting effect on online copyright infringement, and is robust enough for future modification or extensibility to new conditions and scenarios. This is a matter of identifying potential opposition to a proposed measure both based on the current political climate as well as predicting future challenges that it may encounter down the line. Issues of efficacy are perhaps better addressed by the economic and technical portions of our evaluative framework. The analytics we will focus on in this section are based more on assessing the political legitimacy of a proposal—a notion that is largely encapsulated by how the responsibility of implementation is allocated among government and relevant stakeholders.

In our political analysis, we'll first look at whether or not the actor(s) assigned the responsibility of implementation actually has the necessary authority to do so. This criterion embodies a number of questions about established powers, legal precedents, and political jurisdiction. In more concrete terms, our framework favors proposals whereby the implementation clearly falls within the scope of what the governmental agency or actor was intended to address. The goal here is to eliminate overbroad or overreaching policy measures, as they are more likely to be politically volatile. In particular, vague or ambiguous language is to be avoided; the details of a policy's implementation should be narrowly defined enough that it obviously falls within the purview of that office's political authority. Those proposals that do not meet these criteria are far more likely to meet resistance from critics and will suffer from a loss in overall political feasibility.

As an example of an anti-copyright infringement mechanism that would fare poorly on this metric of authority and jurisdiction, take something like the Anti-Counterfeiting Trade Agreement (ACTA), an international trade agreement that establishes global standards on intellectual property enforcement. Negotiated in secret, ACTA circumvented the need for congressional approval and public scrutiny, thanks to its status as a sole executive agreement, "concluded on the basis of the President's independent constitutional authority alone."[99] In short, the White House used this transparency loophole to enter the ACTA agreement without consultation. Naturally, the constitutional authority of such an action has been contested; thus, we see how questions of due process may play a role in determining the political acceptability of a proposed anti-copyright infringement mechanism.

Possible Political Resistance

Ultimately, the process of assessing political feasibility is one of comprehensive information gathering and synthesis. Using the model of analysis first laid out by Meltsner, we must consider the confluence of "(1) actors, (2) motivations, (3) beliefs, (4) resources, (5) sites, and (6) exchanges" to determine "which actors will be politically effective, which will exercise power... [and] the possible areas of policy consensus and conflict."[100] This will allow us to develop a map of the political climate surrounding a specific policy proposal and identify potential pathways (if any exist) of moving forward with

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[99] Katz, E. & Hinze, G. (2009). The Impact of the Anti-Counterfeiting Trade Agreement on the Knowledge Economy: The Accountability of the Office of the U.S. Trade Representative for the Creation of IP Enforcement Norms Through Executive Trade Agreements. *The Yale Journal of International Law Online*, 35(24), 24-35.

[100] Meltsner, A. J. (1972). Political Feasibility and Policy Analysis. *Public Administration Review*, 32(6), 859-867.

implementing it. By preemptively determining possible political resistance and potential methods of conflict resolution, we may able to get a better idea of the mechanism's overall political feasibility.

Key Actors

While the issue of online copyright infringement spans multiple policy spaces and eludes a single generalized case, we can identify the most prominent actors with a vested interest in the space. What follows is a sample list of actors that may be involved in the debate surrounding a proposed anti-piracy mechanism. For each actor, we can determine the motivations and beliefs they want to see achieved and the resources they can expend to do that.

Entertainment Industry

s

Creators

Audiences/Consumers

Advocacy Groups

Tech Companies

The tech sector generally advocates for maintaining an open and free internet, desiring a decentralized network with minimal government intervention. They are particularly wary of anti-piracy and copyright infringement legislation, particularly in their capacity as internet intermediaries. Liability is a key issue for companies like Facebook or Google, which host user-generated and uploaded content. In particular, new startups, lacking adequate capital for legal resources, may be put at risk by new laws. Ultimately, such proposals may stifle innovation in the marketplace; however, including safe-harbor provisions like those found in the DMCA would help allay such fears.

On a macro scale, legislation related to online piracy would also raise concerns about overbroad and vague language, one of the chief arguments against SOPA/PIPA. If a policy proposal involves the removal of content, what protections are in place to ensure that the legislation is not misused (i.e. as a form of censorship)? Will the passage of such a policy result in undesirable chilling effects? Free speech is one of the core principles underlying both the culture and system design of the internet, and tech companies can be expected to take a stance against any threats to it.

In terms of resources, the tech sector is definitely a force to be reckoned with, in terms of its financial resources, political clout, and ability to mobilize citizens. Increasingly, we are seeing tech companies dabble in legal and public policy spaces. The internet blackout of January 18, 2012 involving high-profile websites like Wikipedia, Reddit, and Mozilla—as well as other instances of online organizing—were instrumental in building the public awareness (and outcry) that ultimately led to the legislative defeat of SOPA/PIPA. In future, the Internet Defense League community that has been building up around tech-related policy issues will potentially play a huge role regarding future policy proposals.

Synthesis

Xx Once all the aforementioned factors have been determined and detailed, we may begin synthesizing all the information to assess the overall political feasibility of the proposed mechanism. There are a multitude of models for conflict resolution in decision-making. Majone suggests that the best public decisions are those that consider not only the technical, economic, and legal limitations of a proposal, but also a "distributional constraint" like Pareto admissibility:

> A decision affecting a number of people is said to be Pareto admissible if there is no other feasible decision that is preferred by one or more persons, and if nobody regards it as inferior... A change from state S to state S^1 is Pareto admissible if, in the transition, either every person in the relevant group is made better off, or at least one person is made better off, and nobody is made worse off. Notice that the change from one state to another can be Pareto admissible even if the states themselves do not satisfy the Pareto criterion.[101]

While it may be impossible to satisfy everyone given the complex configuration of motivations, beliefs, and resources involved

Meta-analysis of Framework

Strengths, weaknesses, possibilities for future improvement

Technological Change

Technological change impacts desirability of a particular solution. It is technological change that has created the technology which enables copyright infringement. A solution might work today, but would be inadequate in the future. For example, DVD players started out "play only," and then home DVD burners became available, allowing DVD copying software to become freely available on the web.

Current Policy Debates

Over the last two decades there have been a long strings of attempts to decrease copyright infringement. The **Digital Millennium Copyright Act** (DMCA) was a 1998 copyright law which added a number of provisions to copyright law. Recently, the **Stop Online Piracy Act** (SOPA) and the **Preventing Real Online Threats to Economic Creativity and Theft of Intellectual Property Act** (PROTECT IP or PIPA) were proposed in Congress. On the international side, the **Anti-Counterfeiting Trade Agreement** (ACTA) was recently negotiated and signed by the United States. Recently the **Republican Study Group** released and then quickly withdrew a memo which attempted to radically rethink US copyright law.

This paper focuses on three mitigation strategy and uses the framework we propose to evaluate those strategies. Those strategies include mass lawsuits against individual downloaders, the HADOPI graduated response law in France, and the voluntary "Six Strikes" graduated response agreement in the United States.

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[101] Majone, G. (1975). On the notion of political feasibility. *European Journal of Political Research*, 3(3), 259-274.

SOPA and PIPA

SOPA and PIPA were recent bills debated in Congress which attempted to reduce copyright infringement. The public, led by the Internet giants, mounted an impressive public outcry against SOPA and PIPA.[102] SOPA would have expanded existing criminal laws to make unauthorized streaming illegal, allow courts to ban ad networks from working with infringing sites, and require that search engines and ISPs block certain websites.[103]

ACTA

ACTA is a multi-national treaty signed in 2011 by the United States.[104] ACTA is an attempt to require member countries to adopt intellectual property laws which prevent copyright and trademark infringement, including in a digital environment. The treaty was criticized for being debated in secret.[105]

Republican Study Group proposal

In November 2012, Derek Khanna, a 24-year old staffer in the Republican Study Group put out a 9 page policy memo on Copyright policy.[106] The memo was controversial; it was pulled almost immediately and the staffer was later fired.[107] In the memo Khanna wrote that copyright should be to promote the public interest, not to compensate creators; is not free-market capitalism; and that its repeated extension was not "for a limited time" as under the law.[108] Khanna wrote about how copyright retards the DJ/remix community, limits scientific inquiry, stifles the creation of a public library, discourages value-add industries that ride on top of copyrighted material, and penalize legitimate journalism.[109] As solutions Khanna proposes reducing statutory damages; expanding fair use; adding a punishment for false copyright claims; and limiting the term of copyright with extensions costing a "royalty" or fraction of the value of revenue from the exploitation of the work.[110]

The policy went over like lead balloon, but call to mind a more fundamental question than this paper attempts to answer: what is copyright? Why does it exist? Who benefits from it? What do we lose by such a system? Would we be better off with a weaker copyright system?

Lawsuits

During much of the decade after the year 2000, the **Recording Industry Association of America** (RIAA) filed lawsuits against individual downloaders using file sharing systems. Typically the RIAA would collect information about infringement using MediaSentry (described below).[111] The RIAA would then file an

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[102] http://www.nytimes.com/2012/01/02/business/media/the-danger-of-an-attack-on-piracy-online.html
[103] http://thomas.loc.gov/cgi-bin/bdquery/z?d112:h.r.03261:
[104] http://www.csmonitor.com/World/Europe/2012/0211/Europe-s-Internet-revolt-protesters-see-threats-in-antipiracy-treaty
[105] http://www.eff.org/action/sunlight-acta
[106] http://marylandpirates.com/wp-content/uploads/rsc_policy_brief_--_three_myths_about_copyright_law_and_where_to_start_to_fix_it_--_november_16_2012.pdf
[107] http://www.theregister.co.uk/2012/12/07/republican_fired_copyright_reform/
[108] ibid
[109] ibid
[110] ibid
[111] https://www.eff.org/wp/riaa-v-people-five-years-later

individual John Doe lawsuit for each IP address they have identified.[112] They then subpoena the subscriber's name and address from the ISP to which the IP address is registered to.[113] The RIAA then offers to settle the lawsuit for about $3,000, though the exact amounts varied.[114]

If the users do not settle, then the case could then go to a lengthy and expensive trial.[115] Two plaintiffs have attempted to fight instead of settling and their cases are still working their way through the court system. Joel Tenenbaum, a student at Boston University, was found to have willfully infringed by downloading 30 songs over KaZaA in 2003.[116] The jury awarded the music companies $675,000, or $22,500 per song, a substantial discount over the $150,000 statutory limit.[117] Jammie Thomas-Rasset, was found guilty of copyright infringement of 24 songs for statutory damages of $1.92 million dollars, or $80,000 per song.[118] This was later reduced to $54,000 or $2,250 per song, and then increased to $222,000.[119]

In addition, court cases have tried to distinguishing actual transmission of the file versus making available. MediaSentry has a hard time showing that the file was actually transmitted using the methods that they employ. If they were to actually download the material, that raises questions about whether it is an illegal act to transmit a copy of the work to an agent of the work.[120] Courts at first ruled in the Olan Mills, Inc. v. Linn Photo Co. that this was legal, however then made an exemption for investigators in RCA/Ariola Int'l, Inc. v. Thomas & Grayston Co., 845 F.2d 773, 781-82 (8th Cir. 1988). The courts rejected such an argument in the Thomas case.[121]

Is effective in reducing copyright infringement?

There is little evidence that copyright lawsuits decreased copyright infringement. It is difficult to measure because the lawsuits were spread over a long run of time with no clear start and end point. However, most studies showed that P2P use grew during that time period.[122] The EFF reports that by six months after the RIAA lawsuits began, more than 20 million Americans continued to use P2P file sharing software—a number amounting to 1 in 6 Americans with Internet access, according to the Pew Internet and American Life Project.[123]

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[112] ibid

[113] http://www.pcworld.com/article/255061/judge_throws_out_mass_john_doe_porn_copyright_lawsuits.html

[114] http://arstechnica.com/tech-policy/2007/03/students-largely-ignore-riaa-instant-settlement-offers/

[115] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/

[116] http://arstechnica.com/tech-policy/2009/07/o-tenenbaum-riaa-wins-675000-or-22500-per-song/

[117] ibid

[118] https://mywebspace.wisc.edu/mwbourgeois/web/06-cv-1497/336-1.pdf

[119] http://arstechnica.com/tech-policy/2012/09/minnesota-file-sharer-loses-appeal-must-pay-222000/

[120] "It is well-established that the lawful owner of a copyright cannot infringe its own copyright." Olan Mills, Inc. v. Linn Photo Co., 23 F.3d 1345, 1348 (8th Cir. 1994)

[121] http://beckermanlegal.com/Lawyer_Copyright_Internet_Law/virgin_thomas_080924Decision.pdf

[122] "P2P Volume Climbs Again in June, User Levels Near 9 Million," *Digital Music News Blog*, July 8, 2005. http://www.digitalmusicnews.com/yesterday/july2005#070805P2P

[123] Lee Rainie, Mary Madden, et al., "The state of music downloading and file-sharing online," *Pew Internet & American Life Project*, April 2004. http://www.pewinternet.org/pdfs/PIP_File%20sharing_April_04.pdf

Circumvention

To avoid detection by MediaSentry, some people use IP blocking software such as PeerGuardian, and its successor PeerBlock.[124] This software contains the list of IP addresses known to be used by Government, large businesses, and anti-P2P contractors such as MediaSentry. The software attempts to prevent those IP addresses from connecting to your computer to download part of the file from you.

Others use what are called "private trackers." These only allow pre-screened persons to participate in the download, including having access to the list of persons who have portions of the file available for download. Without being one of the people with access, MediaSentry and others firms would have no way of knowing who was participating in the download.

Does the policy make economic sense?

This was not cost effective for the industry.[125] A TechDirt study of RIAA financial records found that the RIAA spent over $17.6 million dollars on lawyers in 2008.[126] As a result, the RIAA brought in $391,000 in settlements.[127] The industry did it because they believed it would be a disincentive for users to illegally download files.[128] One Sony executive called the anti-P2P litigation a "money pit."[129]

The system was very inefficient. The RIAA had to sue every individual user separately. The cost of settling was often a steep $3,000, which many college students didn't have sitting around. Once the case went to trial lawyers spent a long time arguing specific defenses. While this is necessary in order to establish case law, it is not a process that will scale.

Does it have minimal negative repercussions on the Internet?

By its nature, a peer-to-peer network makes available the list of IP addresses which are participating in sharing the file. In court cases, the record industry has used a firm called MediaSentry to monitor P2P networks.[130] MediaSentry logs onto these networks and searches for a file known by their client to be infringing content.[131] MediaSentry then receives the list of users who have parts of the file available from the P2P service's tracking server.[132] By seeing that the user has the file and is making it available to other users, MediaSentry can claim that the user is making the file available to others.

In other cases, MediaSentry attempts to actually download the file to verify that the content of the file is in fact copyrighted.[133]

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[124] http://torrentfreak.com/peerblock-file-sharing-safety-tool-clocks-100000-downloads-091111/
[125] http://www.techdirt.com/articles/20100713/17400810200.shtml
[126] ibid
[127] ibid
[128] http://arstechnica.com/tech-policy/2008/12/no-more-lawsuits-isps-to-work-with-riaa-cut-off-p2p-users/
[129] Eric Bangeman, "RIAA anti-P2P Campaign a Real Money Pit, According to Testimony," *Ars Technica*, October 2, 2007. http://arstechnica.com/news.ars/post/20071002-music-industry-exec-p2p-litigation-is-a-money-pit.html
[130] http://blogs.law.harvard.edu/cyberone/files/2008/11/497-2.pdf
[131] ibid
[132] ibid
[133] http://arstechnica.com/tech-policy/2009/01/mediasentry-may-be-gone-but-riaa-tactics-will-live-on/

Is it the minimal necessary?

Assuming MediaSentry was looking at the right files, the system was pretty targeted towards actual copyrighted files, as opposed to casting a shadow over an entire P2P system such as Kazaa. In addition, the lawsuits did not seem to affect the fair use rights of others. Fair use is commonly recognized to apply to material you already own, so there would be no need to download the material off a P2P sharing site.

Is it acceptable to stakeholders?

Copyright Industry

It appears that the copyright industry grew tired of the system. In 2008, the industry announced that it was ending its mass-scale litigation campaign.[134]

Users

The system accused many users who claimed not to have been aware of the copyright infringement. For example, the RIAA sued a deceased grandmother whose family claimed she never had a computer.[135] The RIAA also accused a sculptor who used a Mac from downloading songs via Kazaa, a Windows-only program.[136]

The users were hit with large penalties since the first notice that a user received was a settlement letter from the RIAA demanding $3,000. If a user decided to go to trial, the statue set the minimum penalty at $750 per song. [137] The initial settlement amounts of $3,000 for about 30 songs ($100 per song) looks very good compared to the amounts which could be lost in courts (minimum of $750 per song, not including legal fees). This incentivizes non-guilty parties to settle as much as guilty parties. That is not how the court system is supposed to work.

The system could also be abused. Some lawyers, for independent producers, do not actually try to seek lawsuits; instead they seek to settle with as many people as possible.[138] Some judges have sought to block this model, by requiring lawyers to file one-by-one, incurring a filing fee each time.[139] Other judges have become angry that these cases took up space on their docket and threw out the entire lawsuit.[140]

HADOPI

http://arstechnica.com/tech-policy/2008/06/frances-three-strikes-copyright-law-gets-cabinet-support/

http://www.serci.org/2009/bomsel.pdf

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[134] http://arstechnica.com/tech-policy/2008/12/no-more-lawsuits-isps-to-work-with-riaa-cut-off-p2p-users/
[135] http://arstechnica.com/uncategorized/2005/02/4587-2/
[136] http://www.boston.com/business/articles/2003/09/24/recording_industry_withdraws_suit/
[137] http://arstechnica.com/tech-policy/2012/11/influential-gop-group-releases-shockingly-sensible-copyright-memo/
[138] http://arstechnica.com/tech-policy/2012/04/judge-rejects-copyright-trolls-bittorrent-conscopyright infringement-theory/
[139] ibid
[140] http://arstechnica.com/tech-policy/2011/02/random-defendant-outlawyers-p2p-attorney-gets-lawsuit-tossed/

Is effective in reducing copyright infringement?

We believe that HADOPI reduced copyright infringement, due to two effects. First, the alerts might inform users that their behavior is illegal if those users are not aware. Second, users may fear the disconnection of their Internet service and proactively change their behavior.

HADOPI in two years has received 3 million notifications from copyright owners, sent 1.15 million "first strike" notices, 100,000 "second notices," and only 340 "third strike" notices.[141] From these numbers it is clear that users who receive a first strike do not wish to receive another. In addition, the system is actually often four strikes. In two years HADOPI has conducted 30 hearings and referred 14 cases to prosecutors for disconnection.[142] In addition, a good number of people who receive a notice talk with the agency: 6% after their first strike, 24% after their second, and 75% after their third.[143]

It is impossible to measure how much copyright infringement dropped precisely, because it often occurs under the radar. However, one study conducted by researchers at Wellesley College and Carnegie Mellon University looked at the implementation of the Hadopi law in France and compared the sales of music on iTunes with other European countries who did not have a similar law.[144] The study found a 25.5% increase in track sales in the control group, but a 48% increase in France, indicating that sales were 22.5% higher in France then the rest of Europe, likely due to the Hadopi law.[145] There was a similar result for album sales.[146] Additionally this general trend was true for all labels, so it's unlikely that these effects were due to a particular artist being popular in France.[147] In addition, these results did not occur when other countries were isolated.

The study also looked particular genres of music. First the study looked at a survey taken by EMI which asked people how much they are likely to pirate each type of genre of music.[148] They then found the largest sales increase in genres which were reported to be heavily pirated.[149] For example, Rock and Pop were both the genres most pirated, and the genres which experienced the largest increase in sales after the HADOPI law than before the law.

This shows that it is unlikely that there is any other explanation for this phenomenon than the HADPOI law. For example, increased sales in France suggest that Apple could have just heavily started promoting iTunes in France. But this genre comparison suggests that it is an unlikely explanation. It is also interesting to note that the lines started diverging right as parliament started debating HADOPI, not when it came into force. In addition, when this study was written no one had yet received a third/disconnect notice.[150]

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[141] http://torrentfreak.com/anti-piracy-agency-sends-1-15-million-warnings-in-2-years-takes-0-0012-to-court-120906/
[142] ibid
[143] ibid
[144] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1989240
[145] Ibid p 14
[146] Ibid p 14
[147] ibid p15
[148] Ibid p 16
[149] Ibid p16
[150] Ibid p 20

In this study, the effect on iTunes sales was more noticeable while the French National Assembly was debating the bill, than when the law took effect and notices were started to be sent out. [151] Together with the statistics from the HADOPI agency suggests that infringement is cut by both general awareness of the law as well as specific notices of infringement.

Bhattacharjee et al showed an awareness of copyright infringement lawsuits did cut the number of pirates, but found that the effect was short-lived.[152] Expand

On the other hand http://www.techdirt.com/articles/20120330/18222718314/is-there-any-value-cracking-down-piracy-if-it-doesnt-increase-sales.shtml

Does the policy make economic sense?

Cost
http://torrentfreak.com/three-strikes-anti-piracy-budget-too-expensive-to-justify-says-minister-120603/

Does it have minimal negative repercussions on the Internet?

Is it the minimal necessary?

Is it acceptable to stakeholders?

Copyright Industry

ISPs

Government

Users

Six Strikes

In early July 2011, the RIAA and the MPAA signed a voluntary agreement with many of the country's largest Internet Service Providers (ISPs) to introduce a "Six Strikes" graduated response system to the United States.[153] The system is officially called the **Copyright Alert System** or **CAS**, but in the popular press, the name "Six Strikes" is often used.

Description

Under the system, copyright owners could make complaints against particular IP addresses to ISPs.[154] ISPs will then forward those complaints on to users – without actually revealing information about the user to the copyright holder. [155]

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[151] Ibid pg 13
[152] http://digitalcommons.calpoly.edu/mgmt_fac/7/
[153] Link to agreement itself
[154] MOU Pg 8
[155] MOU Pg 8

The "Six Strikes" system establishes the Center for Copyright Information (CCI) to coordinate the process. The center is tasked with administering the CAS as well as educating the public on copyright issues.[156] The Center is governed by a 6 member advisory board, with 3 members appointed by the content industries and 3 members from Internet Service Providers.[157] There is also a four member advisory board, with members from the Center for Democracy and Technology, Public Knowledge, iKeepSafe, and the Future of Privacy Forum.[158] Reports indicate that these members are serious about a balanced approach and are independent from the other players.[159] However, these members are only advisory. The executive board has no requirement to listen to them. [160] The MOU also requires the executive committee to retain independent technical experts.[161] The MOU prohibits sending alerts from methods deemed to be "fundamentally unreliable."[162] However, the names of these experts are not public. In addition, the reports generated by these experts are not required to be public.

Under the CAS, Copyright owners provide ISPs with documented evidence of infringement.[163] However, there is no common standard format or implantation plan. Instead, each ISP is able to define their own implementation form and data format.[164]

In addition, the response for each strike is not clearly defined. Each ISP is able to define this for itself. However, the MOU lays out an outline of what each strike could be. The first two alerts are purely educational.[165] They do not require any response or action form the user. The alerts will contain information that copyright infringement is illegal, that there are lawful ways to download content, and that further sanctions may follow. The third and fourth alerts also educate the user, albeit in stronger language.[166] They also require the user to take some affirmative action to close the alert.

Finally with the last two alerts, "mitigation measures" or "sanctions" can be taken. The MOU does not mention specific sanctions, but instead offers a menu from which ISPs can choose:

> Such measures include, but are not limited to, a temporary reduction in transmission speed, a temporary step-down in the subscriber's service tier, a temporary redirection to a landing page for completion of a program of copyright instruction, a temporary redirection to a landing page until the subscriber contacts a customer service representative, or a temporary suspension of access.[167]

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[156] MOU Pg 3
[157] MOU Pg 3-4
[158] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[159] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 19
[160] MOU Pg 4
[161] MOU Pg 5
[162] MOU Pg 6
[163] MOU Pg 4
[164] MOU Pg 7
[165] MOU Pg 8
[166] MOU Pg 8
[167] MOU Pg 11

Unlike some media reports, ISPs are not required to suspend a user's internet access.[168] Instead the ISP may decide which sanctions to implement. Notices reset after 12 months without receiving an alert.[169] Seven days are allowed between each alert that counts towards the six.[170]

Appeal Process

After getting a fifth and sixth notice, a user has 14 days to file an appeal via an "Independent Review Program" before the mitigation measure is imposed.[171] The Independent Review Program is a non-judicial program set up by CCI with the American Arbitration Association (AAA).[172] The overhead of the program is paid by CCI, which is funded equally by content groups and by ISPs.

A user can also appeal their first through fourth notices upon receiving their fifth notice.[173] However, if a user does not appeal those earlier notices at that time, then they cannot again appeal those in the future.[174]

In order to file an appeal, a user fills out an online "Application to Commence Independent Review" or "ACIR" form.[175] In addition, a user must pay a $35 fee on appeal; however, such fee is refundable if a user prevails in their appeal.[176] The user may select from 6 possible defenses:

(1) account misidentification
(2) unauthorized use of account
(3) authorized use of content
(4) fair use
(5) misidentification of content
(6) work published before 1923[177]

The user must include a basis for each defense and possibly provide the corresponding backup material.[178] For example, if a user asserts authorized use, the user must provide specific, written authorization. If a user claims fair use, then they must provide (1) a copy of each file, and (2) an explanation of each use, and the basis for claiming fair use.

The ISP and the Copyright owner will also be able to submit information.

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[168] http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2145059 pg 21
[169] MOU Pg 13
[170] MOU Pg 7
[171] MOU Pg 14
[172] MOU Pg 26
[173] MOU Pg 30
[174] MOU Pg 30
[175] MOU Pg 29
[176] MOU Pg 30
[177] MOU Pg 26-28
[178] MOU Pg 29

The review process is designed to be automated; in addition one reviewer per case is selected by the AAA.[179] Reviewers must be lawyers, but they are not required to have specific copyright experience.[180] However, they are required to have training from a CCI-Approved Copyright expert.[181]

ISP's Implementation

In November of 2012, Verizon and Time Warner described how their implementation of the Six Strikes system would work.[182] Verizon announced that the first two strikes (the "notice" phase) would send notices to both the email account of the subscriber on record, as well as the telephone associated with that account.[183] The next two strikes (the "acknowledgement" phase) is through a pop-up window.[184] Verizon says this has been designed in order to target the actual infringer.[185] Verizon has announced that they would throttle internet speeds for two to three days as a mitigation measure on the fifth and sixth strikes.[186] Time Warner, will instead block popular websites.[187]

The system is set to be implemented starting in early 2013, having been delayed due to Hurricane Sandy.[188]

Is effective in reducing copyright infringement?

We believe that this method will be effective in reducing copyright infringement, due to the results of the HADOPI system in France. However there are some differences to note. First, the US system was not imposed by law, so there may be reduced awareness of the system. Second there are more strikes/alerts sent out before mitigation starts. This is important because although many people know that copyright infringement is illegal, they are unaware that their actions are being monitored. One April 2004 study found that 89% of college-bound high school students continued to download music even with knowing that it was against the law. [189] Even when mitigation starts, the measures are greatly reduced. This may reduce the incentive that gets people to not get another notice in France.

Compared to the old US system of suing individual users, the new system is much more scalable. Whereas the old system could only reach a few hundred people per year, the new system could reach hundreds of thousands of people.

Jill Lesser, the head of the CCI, has said that the Six Strikes system is not designed to stop dedicated "serial pirates," but instead to educate "the vast majority of the people for whom trading in copyrighted material has become a social norm, over many years."[190] We agree with this sentiment and believe that the industry is now focusing in the right place. Instead of trying to nail down every last hole using DRM,

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[179] MOU Page 30 and 31
[180] MOU Pg 33
[181] MOU Pg 35
[182] http://arstechnica.com/tech-policy/2012/11/how-isps-will-do-six-strikes-throttled-speeds-blocked-sites/
[183] ibid
[184] ibid
[185] ibid
[186] ibid
[187] ibid
[188] http://arstechnica.com/tech-policy/2012/11/six-strikes-copyright-enforcement-postponed-until-2013/
[189] "Higher Education's Problems with Illegal Student Downloading Have Just Begun," *News Release*, April 16, 2004. http://www.bentley.edu/news-events/pr_view.cfm?CFID=668768&CFTOKEN=74886326&id=1440
[190] Ibid.

which was not effective, and is physically impossible to do so, the industry is trying to stop causal infringement.

Does the policy make economic sense?

The proposal appears to cost much less per user than the old litigation system. In particular, the system attempts to automate as much of the process as possible - it is built for scale. The cost would be mostly in the initial setup of the system. A lower cost leads to a higher cost-benefit ratio, which might make the system more palpable to the industry.

It appears that ISPs will bear a large burden of the cost of the system. ISPs may pass these costs directly onto consumers, even those who do not engage in copyright infringement.

However, unlike other proposals it would not cost tax dollars.

Does it have minimal negative repercussions on the Internet?

The Six Strikes system will continue to use the MarkMonitor to look for infringement in the same way that the industry did to prepare for lawsuits. This system uses existing internet protocols.

It has not yet been shared how the ISPs will inject messages into the user's browser. However, hopefully this will be done in such a way that it does not impact the user's use of a system. It is impossible to conclusively test for every possible system that someone might be using.

Because the ISPs are not looking for infringement directly themselves with DPI, and because ISPs are not providing user data to the industry, user privacy is protected.

Is it the minimal necessary?

This technique still makes no attempt to filter out fair use requests ahead of time. Instead, a user must lend the AAA $35, fill out paperwork, and then wait for a response. The burden of proof of showing fair use is on the user. In addition, a user cannot reach this step until the 5th and 6th notices. This allows uncontestable, invalid notices to accumulate on a user's account. The user may still be required to watch a video on copyright infringement even if they are well aware of their fair use rights.

Is it acceptable to stakeholders?

The system is appealing to a broad range of stakeholders. It represents a good balance of interests.

Copyright Industry

Since it was negotiated by the Content industries, by definition it meets their needs. It reduces copyright infringement in a much more scalable way than suing individual users. A similar system in France has shown to be effective.

ISPs

The ISPs are parties to the agreement, so by definition it is in their interest. ISPs are often telephone or cable TV companies. Cable companies have been providing content from the same industry for decades and telephone companies are entering the television market, such as Verizon FiOS. In addition, some ISPs are acquiring content producers, for example, Comcast's purchase of NBC Universal. This is adding pressure to stay on good terms with the content providers.

Implementing this program will lead to some costs for ISPs. However, ISPs already face certain costs from dealing with existing subpoenas and investigations. ISPs must be viewing this as a cost of doing business.

Government

Since the agreement is voluntary, the government does not need to get involved. In addition, enforcement costs are transferred from the government to the ISPs and copyright holders.

However, in many areas, users only have roughly two choices for ISPs. This duopoly can restrict consumer choice if both providers behave the same way. Because of the level of concentration in the ISP industry, the government should ensure that the Six Strikes system remains fair and does not provide poor service with no place to turn to.

Users

Users gain a softer system than getting hauled into Federal Court or asked to settle for $1000+ after possibly only one infringement. The system incorporates education for users who may not know that what they are doing is illegal.

Appeals System

However, the appeals system still leaves something to be desired, for the reasons mentioned earlier. In addition, users should be able to reach a representative who can explain the system to them and can easily correct minor mistakes in the system. It is unclear if the copyright experts appointed by the CCI will be fair and balanced. The MPAA has a history of putting out biased information on copyright; for example, they once suggested that teachers should record a video off the screen as an alternative to ripping a DVD.[191]

At some point we should decide whether or not these defenses should be allowed. These should not be established behind closed doors by the Copyright and ISP industries. Instead, the process of what defenses should be allowed should occur in the public eye. Court cases are still needed to establish these rules.

The Courts are generally where this case law has been established. However, this is a lengthy process. Though generally, only one person needs to go through this process to establish the case law in the first place. That is why this method of allowing motivated parties to sue and go through the long precedent setting process, while allowing others to quickly move through the process is a good one. After one party has established the rules, the others just need to follow them. Once this policy has been established, we should move to a scalable process that allows the law to rapidly be applied.

Perhaps a multi-stakeholder process, similar to the one used by administrative agencies to issue new laws, could be helpful in setting exactly what should be allowed ahead of time. Under this system, all parties get a chance to speak and share their unique perspective. The agency can then try to craft the best solution from the information they have received. Though this process may be lengthy, it allows for a more comprehensive result.

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[191] http://arstechnica.com/tech-policy/2009/05/mpaa-teachers-should-video-record-tv-screens-not-rip-dvds/

Specific Policy Recommendation

From the strong reaction against SOPA and PIPA it appears unlikely that anything unlike those bills will be attempted again. ACTA was never brought before the United States because President Obama claimed that it did not require approval by the Senate since it requires no change in US law.[192] However, due to the challenges encountered by SOPA and PIPA, members of Congress will be more hesitant to raise the issue than they once have been.

More fundamentally, it may be time to reevaluate the basic tenants which underlie the rationale behind our copyright system. Khanna's memo reawoke a conversation behind the rationale behind copyright. In 2011, Congress reevaluated the US patent system and passed a number of reforms designed to make the system more efficient.[193]

From the perspective of attempting to reduce copyright infringement, it appears that the Six Strikes system strikes a happy medium. Results from France indicate that a graduated response system is effective in decreasing infringement through raising general awareness of copyright infringement, specific awareness through targeted alerts, and the disincentive of Internet disconnection. However, the American system is considerably more lenient than the French system. The policy is much more scalable than the old system of suing individual users. The monitoring generally uses traditional protocol features. The notification is done by ISPs though out-of-band methods such as phone calls, without violating a user's privacy. The service still is not perfect towards fair use, and we will need to see how the monitoring is implemented to see if it will issue false negatives on non-infringing uses. The system is also a non-government voluntary agreement.

However, there are still substantial problems with the appeals process and the transparency of the system. The technical methods used to detect infringement should be public, so they can be refuted. People should be able to appeal before the 5th Strike. The guidelines that are provided the arbitrators should be publically debated so that we can be certain that they are fair and balanced.

Therefore we propose that US policymakers take a wait and see approach before taking further action. The Six Strikes graduated response strikes a good balance between the factors outlined in our framework. One area that might require further mitigation in the future is streaming. Streaming is much harder to detect by third parties, such as MarkMonitor, than P2P downloading due to how the web's protocols work.

Ultimately, the best way to reduce infringement is for the industry to offer more legitimate services. In the past, content has been restricted by DRM, which limits the number of devices the content can play on, while dedicated attackers can remove the encryption. In addition, services often have only a limited content selection. Content is subject to a myriad of legal agreements which makes licensing it problematic and slow. The recent years have also caused a number of changes in industry business models which do not appear to have been caused by copyright infringement. For example, DVD sales have been falling as consumer trends change and services such as Redbox grow in popularity.[194]

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[192] http://arstechnica.com/tech-policy/2012/07/europe-declares-independence-from-hollywood-with-acta-vote/
[193] http://arstechnica.com/tech-policy/2011/09/mostly-pointless-patent-reform-bill-goes-to-obama-for-signature/
[194] http://business.time.com/2011/08/09/are-consumers-over-buying-dvds/

Policy makers in other countries should note that what might culturally acceptable in the US might not be acceptable in other parts of the world. By some accounts the French prefer the government, not private businesses making termination decisions; whereas the preference is reversed in the United States.

No single proposal is a silver bullet to stop copyright infringement. Instead it is a collection of different approaches, which, taken together provide for a reduction in infringement.

Other

- Make more specific (Don Unger)
- Fix citations
- Finish Stephen's sections