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This study details a web based survey of students in the School of Information and Library Science at UNC Chapel Hill. The survey was conducted to determine whether or not the participants' knowledge of the terms in the Digital Millennium Copyright Act has an impact on their conformance to the act. The responses on the survey were analyzed statistically to search for any correlation between any of the variables. Additionally, a review of the prose responses given by the participants reveals trends in their conformity to the act, regardless of their knowledge of it.

Headings:

Digital Millennium Copyright Act

Peer to Peer Networks

File Sharing

IMPACT OF THE DIGITAL MILLENNIUM COPYRIGHT ACT ON PIRACY

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Approved by

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Introduction

As a result of living in the heart of the information age, people are exposed to new technologies each and every day which impact their lives. The boom in digital media is a prime example, with books, music, and video all having digital formats for use on a personal computer. As a result, copyright infringement occurs on a daily basis, and to counter these practices, the United States Congress enacted the Digital Millennium Copyright Act (DMCA) in 1998, which severely limited the legal practices for computer users. The DMCA is being intensely debated by the public, while it is heavily favored by copyright holders. Perhaps the only question that the two sides can agree on is that its effectiveness is still uncertain. Scores of people have been prosecuted for violation of the DMCA, but can this small group be indicative of the practices of the general public? This question leads to the general focus of this proposal. Does a user's knowledge of the terms in the DMCA have an effect on their practices when using a personal computer connected to the Internet?

For this project, the operational definitions of each term are of the utmost importance and need clarification. Knowledge implies that a user will know what actions and uses the DMCA does and does not allow. The practices of a user refer not only to the general use of a computer, but copying, downloading, or sharing of copyrighted materials with a personal computer. To further clarify, a home computer is a personal computer which is privately owned by an individual and stored in their own home. A public computer is a personal computer located in a public space, such as a library or computer lab, to which multiple users have access. This project will proceed with the hope that

further study or new policies can be developed for the computing realm which will allow users to comply with the regulations mandated by the DMCA.

Literature Review

The DMCA was drafted by Congress for a variety of reasons, but mainly for the desire to comply with World Intellectual Property Organization (WIPO) copyright treaties and to bring U.S. copyright code into the digital age. As Neil Benchell notes, the DMCA can be summarized as having two distinct parts, with one pertaining to preserving the copyrights of digital works, and the other dealing with Internet Service Provider liability for copyright violations (3). While the latter poses many interesting questions for public computers in a library or computer lab, it can also be seen as a result of the practices of its patrons, which is why this study will focus on the first part of the Act.

Anti-circumvention is the cornerstone for preserving copyrights with the DMCA. To sum up the fundamental practices which the DMCA has made illegal, Dana Gilbert states that:

> these new provisions make it illegal to engage in an act of circumvention of a technical protection (17 USC §1201(a)(1)), to develop and provide tools to others which would allow them to access a technologically protected work (17 USC §1201(a)(2)) and to manufacture, import, provide or traffic in tools that would enable another to circumvent protection to copy a protected work (3).

In essence, it is explicitly illegal for anyone to breach any security means accompanying digital works to obtain free access to the works for oneself or other users. This broad range of activities includes cracking software registration codes, posting circumvention methods on the Internet, or making copyrighted songs or movies available for download. Due to the fact that these actions are being practiced on a daily basis by countless

numbers of people, the DMCA has set very harsh penalties as a deterrent. Gilbert warns the public that "the DMCA's anti-circumvention provisions have both civil and criminal penalties carrying a maximum of 5 years' imprisonment and/or a fine of up to $500,000. (4)"

Stringent punishments such as these, sadly, are not the only concern of opponents to the DMCA. Many see these anti-circumvention restrictions to be too harsh, limiting fair use and preventing the progress of the sciences. In addition, many users can be charged for violating these rules, simply because they did not know they were illegal, or because the DMCA has expanded so far as to engulf formerly legitimate practices. While the original intent of U.S. copyright law was to balance the power between the copyright holder and the public, many feel that the DMCA unfairly tips the scales in the wrong direction. In an article in the *Northwestern University Law Review*, Peter Moore opens up the debate by stating that:

> The real effect of the DMCA has been to turn copyright law from 'a system of protection designed and intended primarily to serve the public interest in the creation and dissemination of creative works' into nothing more than a 'guild monopoly,' serving only private interests (1).

Pete Singer has reaffirmed the fact that the anti-circumvention measures in the DMCA have managed "to shift the balance of intellectual property law too far in favor of copyright owners to the detriment of the public interest in dissemination of copyright information. (1)"

Singer also sheds some light on the only hope that individuals have in forming a defense in most copyright infringement cases: fair use. He states:

> Specifically, an application of the fair use doctrine to the overbroad strictures of the DMCA is needed to shield legitimate uses of circumvention technologies from criminal and civil liability. The difficulty

> with this proposition, however, is locating a fair use defense within the DMCA's strictures (2).

Thus, we see that there may be inherent flaws in the DMCA, which open the door to many problems for computer users. Should the rights of the public continue to dwindle, more and more users will be guilty of copyright infringement, whether doing it knowingly or not. Before new directions can be taken in this area, in the form of a revised or totally scrapped DMCA, more information must be gathered. The habits of an individual user must be determined, so appropriate action can be taken to avoid even further problems. In his paper, Benchell outlined the cases of Princeton Professor Ed Felten and Russian programmer Dmitry Skylarov, and the embarrassment they caused to the U.S. (1-2) as a result. With cases such as these, there clearly is a need for further exploration into this subject.

Objectives

The purpose of this research project is to discover if there is a relationship between a user's knowledge of the DMCA and their actions when they are using their computer. Ideally, the results of this project will promote further study to one day help even out the imbalance of rights when it comes to United States copyright law.

In other words:

- Does knowledge of the law impact a person's actions when it comes to the somewhat "faceless" crimes of piracy?

Experimental Methodology

To collect the data for this project, a general survey was prepared to be taken by all of the participants. Since this survey requires a technical background, the decision was made to make this a web based survey. The benefits of a web based survey are numerous, but most importantly, the hope was that people would have a general understanding of computer usage, since they were taking a survey via computer. The only concern was getting user participation, and to accommodate, a paper version was ready to be used in the event that the web based survey did not see a high turnout.

With a goal in sight, creating the survey was an important part of the overall process. Since the participants would be asked to admit if they had illegally downloaded copyrighted works, a high level of trust needed to be established. On the disclaimer, it clearly states that the survey is totally anonymous, and in exchange, the participant was asked to be honest with all answers. The survey asks for no identifying information, which should help the users feel comfortable in answering honestly. The first survey questions deal with general computer usage and end with very general biographical information such as gender, age, and level of education. In between, the users are queried on their everyday practices with computers, and are asked to answer some true or false questions pertaining to the law. While the survey was only 21 questions long, it was ordered in a manner that would keep the participant as honest as possible. Once the survey was completed, a page with the answers to the true/false questions was made available to the user, should they have an interest as to what the correct responses were. With an authored survey prepared, the next step was to make it accessible on the World Wide Web, and provide a way to store the responses in a database for later analysis.

The web based survey was authored using PHP, a common scripting language used to create dynamic web pages. With PHP, a programmer can maintain state from page to page, which in this case, means that the answers to the survey can be saved and entered into a database. No survey validation was used, since the best effort was made to establish a trust relationship with the user; I feared that forcing data validation would damage that trust. To store the results of the survey, a MySQL database was created, with the proper data types established to allow each field to be properly recorded, while keeping the database at an optimal size.

After fully testing the survey with test data sets, an email was sent out to the master's students in the School of Information and Library Science at UNC. The email had instructions and a link to the survey itself, which made it easily accessible. Fortunately, there was a significant turnout, and the paper based surveys were not needed. With all the results in place, a method was needed to extract the data so it could be analyzed. This was accomplished by authoring a Perl script which queried the database for each entry, parsed the data, and outputted it into a comma separated value (CSV) file. This file format is a relative standard for keeping data records separate, and is readable by many different software packages. After it was created, the file downloaded to my personal computer for later statistical analysis.

To analyze the data, I used the SPSS software suite, which allowed me to encode variable names and give descriptions, a feature which is great for labeling output such as graphs and charts. Once the variables were properly coded, I performed descriptive statistics on each variable, and tried to find correlation between the true false questions and the questions about downloading practices using simple correlation tests. The results

were outputted by SPSS into a data output file, which were labeled and formatted appropriately.

The last set of data which needed to be obtained was the open ended question that allowed the users to explain why they would continue to pirate copyrighted materials even after a fair warning of their wrongdoings. There is no way to statistically analyze data of this format, so I created another PHP page which selected the question from the database, removed any results that were blank, and outputted them to a webpage for viewing. This was an excellent tool which kept my data in one place in an easily readable form.

Results

The data collected in the survey presented some interesting results. To begin, the most disappointing result is that no statistical significance could be found at all between any variables. The main cause of this is the fact that the respondents answered in an overwhelmingly lop sided fashion, resulting in small counts in some cells, which were pitted against the bulk of the responses in the other cells. Considering these facts, no statistical significance could be established, even at the lowest accepted confidence levels.

Although no true statistics can be applied to these results, the data does hold many important indicators about people and their practices. The response rate for the survey was 34%, since there are 257 enrolled masters students in the School of Information and Library Science at UNC, and 87 of them took the survey. Demographically, this group had an average age of 28 years, and consisted of 75% females. Looking at the population as a whole, this was a very technically savvy group, with 93% of the respondents using a

computer on a daily basis (Table I). Additionally, 87% indicated that they access the Internet at least once a day (Table II), with 98% of all users connecting through a high speed connection (Table III). Considering these results came from a pool of students in an Information and Library Science setting, their "wired" status is not very surprising, especially on a campus like UNC.

Table I: How Often Do You Use a Computer?

	Frequency	Percent	Valid Percent	Cumulative Percent
Daily	81	93.1	93.1	93.1
5-6 times a week	5	5.7	5.7	98.9
3-4 times a week	1	1.1	1.1	100.0
Total	87	100.0	100.0	

Table II: How Often Do You Access the Internet?

	Frequency	Percent	Valid Percent	Cumulative Percent
Daily	76	87.4	87.4	87.4
5-6 times a week	10	11.5	11.5	98.9
< once a week	1	1.1	1.1	100.0
Total	87	100.0	100.0	

Table III: What Type of Internet Connection Do You Use?

	Frequency	Percent	Valid Percent	Cumulative Percent
Dialup	20	23.0	23.0	23.0
High Speed	66	75.9	75.9	98.9
Not Sure	1	1.1	1.1	100.0
Total	87	100.0	100.0	

When questioned about their downloading practices, exactly two thirds (Table IV) of the respondents admitted to previously downloading copyrighted materials. The rate at which they perform such activities was not as high as expected, with 90% (Table V), downloading for less than one session per week. There are several possible explanations for this very intermittent sharing trend. Presently, it is much more difficult for someone to find songs, which is a drastic change from the veritable buffet of songs originally

offered on Napster. Furthermore, UNC, like many other universities, has banned access to many file sharing programs through the campus network, making some currently available file sharing programs inaccessible to those users whose only high speed connection is on campus.

Table IV: Have You Downloaded Copyrighted Materials?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	58	66.7	66.7	66.7
No	29	33.3	33.3	100.0
Total	87	100.0	100.0	

Table V: File Sharing Frequency

	Frequency	Percent	Valid Percent	Cumulative Percent
5-6 times a week	1	1.1	1.1	1.1
3-4 times a week	3	3.4	3.4	4.6
1-2 times a week	5	5.7	5.7	10.3
< once a week	78	89.7	89.7	100.0
Total	87	100.0	100.0	

One of the most highly publicized events in the past year on this subject was when the Recording Industry Association of America (RIAA) started filing lawsuits against individual file sharers on the Internet. Subsequently, file sharing across the board seemed to slow down when compared to the pre-lawsuit file sharing statistics. To get a better feel for this situation, the respondents were asked if the lawsuits had made an impact on their behavior. Of those who had indicated that they do download copyrighted materials, 43% said that the lawsuits had caused them to stop downloading (Table VI), which is on par with a Nielsen survey released in late 2003. A more brazen group of respondents, 44% of the pool, said that they would continue to download even if someone had told them what they were doing was illegal (Table VII).

Table VI: Would You Continue to Download Even if Warned?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	41	47.1	47.1	47.1
No	46	52.9	52.9	100.0
Total	87	100.0	100.0	

Table VII: Have Lawsuits Deterred Downloading Habits?

		Frequency	Percent	Valid Percent	Cumulative Percent
	Yes	20	23.0	43.5	43.5
	No	26	29.9	56.5	100.0
	Total	46	52.9	100.0	
No Response		41	47.1		
Total		87	100.0		

The group of sharers who would continue to download regardless of what the law states begins to form the most important result of this survey. Simply put, these users understand the legality of their actions. The users who answered yes to the question regarding the lawsuits as a deterrent had the option of providing a short answer to explain why they answered that way. This question, in my opinion, holds the most significant insight into the minds of the general public, and should be the focus of future studies and legislation. In general, a large percentage stated that they knew they were breaking the law, but they did not care. In reality, it is very difficult to get caught, and several respondents used this as part of their explanation. For example, one person correctly noted that "if configured properly, no one can identify me." Another individual has figured out how to defeat the system, stating:

> "Because there is little personal consequence to illegally downloading stuff. Sure, they've been going after some people who download music, but those people download a large quantity of music, and I do it infrequently and not to that extent."

Other users feel that the law is too constricting on the general public, and benefits nobody other than giant conglomerates, which one user eloquently summed up by saying they're "Not worried about prosecution and hell, companies are rich enough already...right?" Not only do they feel the law is a burden, but some point out that the price structure is unfair, especially since they are blindly purchasing a product which they do not get to try first. These sentiments were commonplace, with one respondent feeling cheated:

> "Because I already invest a lot of my hard-earned money into buying CDs and DVDs and renting movies and such. I feel that these items are overpriced and yet I continue to buy them. I have no problem with bending the rules a little because I feel satisfied that I am paying more than my share of the costs already."

Obviously, the users know what they are doing, and it is unclear as to how hard the copyright holders would have to push to get these people to conform.

Some newer forms of file sharing for music have tried to bridge the gap between the two parties, and a handful of survey respondents seemed to agree. New sites like iTunes, run by the Apple Corporation, offer the ability to purchase one song at a time, for the low price of $.99 per song. One survey participant meshed a number of themes into one statement, saying: "I feel that the price demanded for the product is not balanced. I have started doing downloads/playing for songs one at a time. The 99 cents a song seems more reasonable." It seems that the iTunes movement is a step in the right direction. For cost concerns, it could end up being cheaper to download each song off of an album than to purchase it in the store. Also, it gives users something they want, the right to try before they buy, which is currently not an option for purchasers of music, videos, or software packages.

Finally, the true/false scenarios presented in the survey provided some mixed results. On the whole, the respondents did very well on the questions, with most of the questions seeing correct responses above 80%, but many were in the mid to high 90% range (Tables VIII-XI). These questions were the most obvious, but ironically, the most significant to the survey in terms of file sharing and downloading. It was with these questions that a correlation was hoped to be drawn from, but without more normally distributed data, this was impossible. Even though participants knew the answers to these questions, they did not reflect their knowledge when it came to their piracy practices. Note: for the remaining tables (VIII – XV), the correct answer to each question is marked by an asterisk (*).

Table VIII: T/F - It is legal to lend software to friends

		Frequency	Percent	Valid Percent	Cumulative Percent
	True	4	4.6	4.6	4.6
*	False	83	95.4	95.4	100.0
	Total	87	100.0	100.0	

Table IX: T/F - It is legal to share recordings of live performances

		Frequency	Percent	Valid Percent	Cumulative Percent
	True	5	5.7	5.7	5.7
*	False	82	94.3	94.3	100.0
	Total	87	100.0	100.0	

Table X: T/F - P2P has no legitimate uses

		Frequency	Percent	Valid Percent	Cumulative Percent
	True	8	9.2	9.2	9.2
*	False	79	90.8	90.8	100.0
	Total	87	100.0	100.0	

Table XI: T/F - Make and distribute digital copies of works

		Frequency	Percent	Valid Percent	Cumulative Percent
	True	6	6.9	6.9	6.9
*	False	81	93.1	93.1	100.0
	Total	87	100.0	100.0	

Table XII: T/F - Try to see if you want to buy

		Frequency	Percent	Valid Percent	Cumulative Percent
	True	14	16.1	16.1	16.1
*	False	73	83.9	83.9	100.0
	Total	87	100.0	100.0	

Unfortunately, two questions could be interpreted in different ways, which might have caused the responses to be more evenly spread out. One questions involved making a copy of a compact disc, where some users thought it was true since everyone is entitled to make a single backup copy of a legally purchased audio compact disc (Table XIII). The other question involved the resale of copyrighted materials. This is true for some things such as albums and movies, but illegal for some software licenses (Table XIV).

Table XIII: T/F - It is legal to burn music cds

		Frequency	Percent	Valid Percent	Cumulative Percent
*	True	53	60.9	60.9	60.9
	False	34	39.1	39.1	100.0
	Total	87	100.0	100.0	

Table XIV: T/F - Resale of legitimate copies

		Frequency	Percent	Valid Percent	Cumulative Percent
	True	45	51.7	51.7	51.7
*	False	42	48.3	48.3	100.0
	Total	87	100.0	100.0	

The only instance where a majority of the respondents got a question wrong dealt with replacing a damaged or unusable copy of a copyrighted work with one downloaded over the Internet. For this question, 51% of the respondents said it was legal, when in all cases it is illegal (Table XV). A possible explanation for the high number of wrong answers could be due to the fact that many of the respondents were library professional students. The U.S. Copyright code does make an exception for libraries, stating that libraries can digitally reproduce documents that are "reproduced in digital format is not otherwise distributed in that format and is not made available to the public in that format outside the premises of the library or archives. (17 USC §108(b) (2))"

Table XV: T/F - Download to replace bad copy

		Frequency	Percent	Valid Percent	Cumulative Percent
	True	44	50.6	50.6	50.6
*	False	43	49.4	49.4	100.0
	Total	87	100.0	100.0	

Discussion

Ideally, some significance could have been drawn between the lack of understanding of the DMCA and piracy. In this event, a new focus could be taken to educate the public as to what is right and wrong. Unfortunately, the results of this survey show that the vast majority of people know what they can and cannot do without breaking the law. It was surprising to see that so many people know exactly what the law states, and still continue to break it. Additionally, when considering the tools these users have access to, one must wonder why they are not pirating more frequently than the survey indicated.

Considering the sensitive nature of the survey, one must reflect on the validity of the results. It would be very easy to lie on this, or any, survey, and the results could be distorted in many different directions. For example, people who have never pirated anything in their lives could say they pirate on a daily basis. Conversely, rampant file sharers could deny having ever done it at all. The area in which the most skepticism lies is the frequency of file sharing or piracy. An overwhelming majority (90%) said they download copyrighted materials very rarely, or less than once per week. These numbers seem to be a bit skewed, and one would have expected a more normally distributed response, since the group as a whole spends a lot of time on the Internet. As proof, consider that twenty minutes after the students were emailed the link to the survey, almost 30 people had completed it, which was a truly outstanding result.

Although no statistical significance could be found in this survey, the open ended responses provide an extremely rich source of information. Allowing the respondents an opportunity to explain themselves produced the truest insight into their minds. Through these results, it is clear that the public is very unwilling to conform to the all or nothing stance that the copyright holders have taken in the past few years. The respondents made it clear that those who want to pirate music, videos, or software will continue to do so as long as they can. Most of the users feel that the law is not in their best interests, with one user summing up these sentiments quite succinctly, stating that “Copyright laws are out of date and support a corrupt system. Neither creators nor end users are served by these laws, only corporate middlemen.”

Keeping these thoughts in mind, could we be at a point where the laws need to be rewritten? Considering the inundation of anti DMCA articles written by law professors

and public advocates, there is strong evidence supporting the notion that the current law has overstepped its boundaries. Before we can proceed, more knowledge must be obtained which further supports this idea, as well as research to attempt to support the opposing side of the argument. Once both sides are studied in a scholarly manner, the lawmakers will have ample information to work the results into the laws themselves, and put this debate to rest.

Call for Further Research

This project attempted to find a relationship between knowledge of the DMCA and Internet based piracy. The lack of any significant correlations should not deter further study. Ideally, this sort of research will continue to produce more data which can aid in some sort of compromise between the conflicting parties. Future researchers may want to consider the following issues for their investigations.

- How can we explain the unwillingness of a significant portion of the population to purchase software, music, and videos in favor of pirating them over the Internet?
- Would a more diverse group lead to data which would produce significant results? More specifically, would leaving the university setting, which binds students to an Honor Code, provide an insight into what the real issue is?
- How would the results differ had multiple formats of the survey been available? For example, would interviewing people on the street, or mailing surveys to peoples homes provide a more accurate depiction of the population?
- Would an analysis of traffic on a data network provide more accurate results, compensating for the possibility that survey participants may not be totally honest in their responses? A simultaneous study which monitors the network and asks

the users on the network similar questions to those in this project would make for an interesting comparison of results.

Ideally, further research by academic scholars would present lawmakers with evidence which could help reform the DMCA in both its restrictions and penalties. Irrefutable findings that would arise from these studies would help put an end for an argument which has no end in sight.

Conclusion

This study showed that computer users will use the Internet to download copyrighted materials no matter what their level of understanding of the law is. In fact, most people who admitted to downloading in this survey knew that what they were doing was illegal. The reasons for their behavior should be further explored, but it seems that they are tired of overpaying for things that they cannot even test before they purchase them. In other areas of our society, it is difficult to find a parallel where a consumer is not afforded the right to try things before they buy them. An educated consumer tries on a pair of jeans, smells a bottle of cologne, even reads a few pages in a book before they make their purchase. This blind shopping for music, videos, and software is clearly not tolerated by the majority of Americans.

Another reason for the continued piracy is the fact that people feel above the law. As many respondents pointed out, the average person is safe from prosecution, simply because of the cumbersome process of identifying individuals on the Internet. The RIAA has subpoenaed many Internet Service Providers, demanding that they provide the names of their subscribers who have the IP addresses which they claim are incessant pirates to the works of their clients. To the dismay of the RIAA, the courts have determined that

these methods are illegal, keeping these individuals out of the reach of the long arm of the law.

Future technologies that provide copyright protection within the hardware of a computer would be next to impossible to breach without a degree in electrical engineering. Depending on how the laws read once this technology arrives, the general public will be at an even greater disadvantage. Since the purpose of copyright laws is to balance the power between copyright holders and the general public, the laws should be revised. It has gotten to the point where users are being sued for up to $150,000 per file shared on their computer. These lawsuits are also blind to age, as young children have even been sued for thousands of dollars. This is not to say that copyrights are useless. A middle ground must be settled upon so that the interests of both parties are upheld; if the copyright holders keep gaining an extra edge, even the public domain could be in jeopardy.

Bibliography

Ahrens, Frank. "Music Industry Sues Online Song Swappers." Washingtonpost.com 9 Sept. 2003. 20 Mar. 2004. <http://www.washingtonpost.com/ac2/wp-dyn/A45525-2003Sep8>

Benchell, Neil A. "The Digital Millennium Copyright Act: A Review of the Law and the Court's Interpretation." John Marshall Journal of Computer and Information Law (Fall 2002). 1-15.

Enders, Steve. "Court Strikes Down RIAA Subpoena Strategy." TechTV.com. 19 Dec. 2003. 20 Mar. 2004. <http://www.techtv.com/news/culture/story/0,24195,3589046,00.html>

Federal Copyright Act, Title 17 U.S.C. § 108. (1998). <http://www.copyright.gov/title17/92chap1.html#108>

Gilbert, Dana. "Dmitry and the Digital Millennium Copyright Act." UCLA Journal of Law & Technology (2002). 1-7.

Lawsuits Damp Down P2P Audience. Wired News. 30 Sept. 2003. 23 March 2004. <http://www.wired.com/news/business/0,1367,60654,00.html>

Moore, Peter. "Steal This Disk: Copy Protection, Consumers' Rights, and the Digital Millennium Copyright Act." Northwestern University Law Review (2003). 1-32.

Singer, Pete. "Mounting a Fair Use Defense to the Anti-Circumvention Provisions of the Digital Millennium Copyright Act." University of Dayton Law Review (Fall 2002). 1-30.

Appendix A – Survey

Part I:

1) How often do you use a computer?
Daily
5-6 times a week
3-4 times a week
1-2 times a week
less than once a week

2) How often do you access the internet?
Daily
5-6 times a week
3-4 times a week
1-2 times a week
less than once a week

3) How old is the computer you primarily use?
0-1 year
1-2 years
2-3 years
3 years
Not Sure

4) What kind of internet connection do you primarily use?
Dialup
Highspeed
Not Sure

5) Have you ever downloaded copyrighted materials (music, videos, computer programs) from the internet?
Yes
No

6) How often do you engage in file sharing of any sort?
Daily
5-6 times a week
3-4 times a week
1-2 times a week
less than once a week

7) What programs do you use for file sharing (you may select more than one)?
Kazaa
IRC

eMule
LimeWire
Morpheus
Grokster
Other (please specify):

8) If someone told you that your downloading activities were illegal, would you continue to download?
Yes
No

9) If you answered yes to the last question, please explain why:

10) If you do download from peer to peer services (like those in question 7), have the recent lawsuits against individual file sharers deterred you from continuing to download?
Yes
No

Part II:
Please answer the following true/false questions based on what you believe is true or not.

11) It is legal for a user to make “burned” copies of a cd they purchase in the store.
True
False

12) It is legal for a user to lend a copy of a legally purchased piece of computer software to a friend so they can install it on their computer.
True
False

13) It is legal to share digital audio files of live recordings of copyrighted materials by musicians without their consent.
True
False

14) Peer to peer file sharing has no legitimate (legal) uses.
True
False

15) It is legal for a user to make digital copies of a legally obtained copyrighted work and distribute them freely.

True
False

16) It is legal for someone to sell their own copy of a legally obtained copyrighted work for a reasonable price.
True
False

17) It is legal for a user to download copyrighted material for which they already own a copyright, but is either lost, damaged, or unusable.
True
False

18) It is legal to download a song to see “if you like it,” so you can decide whether to buy it later on.
True
False

Part III:
Quick Biographical Information

19) Please specify your gender:
Female
Male

20) Please specify your age:

21) What is your highest level of education completed?
High School
Some College
College
Some Graduate
Graduate or Higher

Appendix B – Statistical Analysis

Continue to DL with warnings? * T/F: Lend software to friends

Crosstab

Count

		T/F: Lend software to friends		
		True	False	Total
Continue to DL with warnings?	Yes		41	41
	No	4	42	46
Total		4	83	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.207	.053	-1.953	.054[c]
Ordinal by Ordinal	Spearman Correlation	-.207	.053	-1.953	.054[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Continue to DL with warnings? * T/F: Make burned copies

Crosstab

Count

		T/F: Make burned copies		
		True	False	Total
Continue to DL with warnings?	Yes	29	12	41
	No	24	22	46
Total		53	34	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.190	.104	1.783	.078[c]
Ordinal by Ordinal	Spearman Correlation	.190	.104	1.783	.078[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Continue to DL with warnings? * T/F: Share live performances

Crosstab

Count

		T/F: Share live performances		
		True	False	Total
Continue to DL with warnings?	Yes	3	38	41
	No	2	44	46
Total		5	82	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.064	.106	.588	.558[c]
Ordinal by Ordinal	Spearman Correlation	.064	.106	.588	.558[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Continue to DL with warnings? * T/F: P2P has no legit uses

Crosstab

Count

		T/F: P2P has no legit uses		
		True	False	Total
Continue to DL with warnings?	Yes	2	39	41
	No	6	40	46
Total		8	79	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.141	.097	-1.314	.193[c]
Ordinal by Ordinal	Spearman Correlation	-.141	.097	-1.314	.193[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Continue to DL with warnings? * T/F: Distribute digital copies

Crosstab

Count

		T/F: Distribute digital copies		
		True	False	Total
Continue to DL with warnings?	Yes	2	39	41
	No	4	42	46
Total		6	81	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.075	.103	-.695	.489[c]
Ordinal by Ordinal	Spearman Correlation	-.075	.103	-.695	.489[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Continue to DL with warnings? * T/F: Resale of legit copies

Crosstab

Count

		T/F: Resale of legit copies		
		True	False	Total
Continue to DL with warnings?	Yes	18	23	41
	No	27	19	46
Total		45	42	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.148	.106	-1.378	.172[c]
Ordinal by Ordinal	Spearman Correlation	-.148	.106	-1.378	.172[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Continue to DL with warnings? * T/F: Download to replace bad copy

Crosstab

Count

		T/F: Download to replace bad copy		
		True	False	Total
Continue to DL with warnings?	Yes	25	16	41
	No	19	27	46
Total		44	43	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.196	.105	1.847	.068[c]
Ordinal by Ordinal	Spearman Correlation	.196	.105	1.847	.068[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Continue to DL with warnings? * T/F: Try to see if you want to buy

Crosstab

Count

		T/F: Try to see if you want to buy		
		True	False	Total
Continue to DL with warnings?	Yes	4	37	41
	No	10	36	46
Total		14	73	87

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.163	.100	-1.521	.132[c]
Ordinal by Ordinal	Spearman Correlation	-.163	.100	-1.521	.132[c]
N of Valid Cases		87			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: Lend software to friends

Crosstab

Count

		T/F: Lend software to friends		
		True	False	Total
Have lawsuits deterred practices	Yes	3	17	20
	No		26	26
Total		3	43	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.301	.088	2.095	.042[c]
Ordinal by Ordinal	Spearman Correlation	.301	.088	2.095	.042[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: Make burned copies

Crosstab

Count

		T/F: Make burned copies		
		True	False	Total
Have lawsuits deterred practices	Yes	13	7	20
	No	19	7	26
Total		32	14	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.087	.148	-.579	.565[c]
Ordinal by Ordinal	Spearman Correlation	-.087	.148	-.579	.565[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: Share live performances

Crosstab

Count

		T/F: Share live performances		
		True	False	Total
Have lawsuits deterred practices	Yes	2	18	20
	No	2	24	26
Total		4	42	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.041	.149	.270	.789[c]
Ordinal by Ordinal	Spearman Correlation	.041	.149	.270	.789[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: P2P has no legit uses

Crosstab

Count

		T/F: P2P has no legit uses		
		True	False	Total
Have lawsuits deterred practices	Yes	1	19	20
	No	2	24	26
Total		3	43	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	-.054	.141	-.359	.721[c]
Ordinal by Ordinal	Spearman Correlation	-.054	.141	-.359	.721[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: Distribute digital copies

Crosstab

Count

		T/F: Distribute digital copies		
		True	False	Total
Have lawsuits deterred practices	Yes	3	17	20
	No	1	25	26
Total		4	42	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.196	.137	1.327	.191[c]
Ordinal by Ordinal	Spearman Correlation	.196	.137	1.327	.191[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: Resale of legit copies

Crosstab

Count

		T/F: Resale of legit copies		
		True	False	Total
Have lawsuits deterred practices	Yes	9	11	20
	No	10	16	26
Total		19	27	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.066	.148	.438	.664[c]
Ordinal by Ordinal	Spearman Correlation	.066	.148	.438	.664[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: Download to replace bad copy

Crosstab

Count

		T/F: Download to replace bad copy		
		True	False	Total
Have lawsuits deterred practices	Yes	14	6	20
	No	16	10	26
Total		30	16	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.088	.146	.586	.561[c]
Ordinal by Ordinal	Spearman Correlation	.088	.146	.586	.561[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.

Have lawsuits deterred practices * T/F: Try to see if you want to buy

Crosstab

Count

		T/F: Try to see if you want to buy		
		True	False	Total
Have lawsuits deterred practices	Yes	6	14	20
	No	1	25	26
Total		7	39	46

Symmetric Measures

		Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Interval by Interval	Pearson's R	.361	.123	2.567	.014[c]
Ordinal by Ordinal	Spearman Correlation	.361	.123	2.567	.014[c]
N of Valid Cases		46			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Based on normal approximation.