THE INTERNET AND THE COLLEGE CAMPUS: HOW THE ENTERTAINMENT INDUSTRY AND HIGHER EDUCATION ARE WORKING TO COMBAT ILLEGAL PIRACY

HEARING

BEFORE THE

SUBCOMMITTEE ON 21ST CENTURY COMPETITIVENESS

OF THE

COMMITTEE ON EDUCATION AND THE WORKFORCE

U.S. HOUSE OF REPRESENTATIVES

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CONTENTS

THE INTERNET AND THE COLLEGE CAMPUS: HOW THE ENTERTAINMENT INDUSTRY AND HIGHER EDUCATION ARE WORKING TO COMBAT ILLEGAL PIRACY

Tuesday, September 26, 2006
U.S. House of Representatives
Subcommittee on 21st Century Competitiveness
Committee on Education and the Workforce
Washington, DC

The subcommittee met, pursuant to call, at 11 a.m., in room 2175, Rayburn, Hon. Ric Keller [chairman of the subcommittee] presiding.

Present: Representatives Keller, Porter, McKeon, Petri, Inglis, Foxx, Kuhl, Kildee, Tierney, Van Hollen, Scott, and Davis.

Staff present: Kathryn Bruns, Legislative Assistant; Jessica Gross, Press Assistant; Richard Hoar, Professional Staff Member; Chad Miller, Coalitions Director for Education Policy; Deborah L. Emerson Samantar, Committee Clerk/Intern Coordinator; Brad Thomas, Professional Staff Member; Toyin Alli, Staff Assistant; Gabriella Gomez, Legislative Associate/Education; Lauren Gibbs, Legislative Associate/Education; Joe Novotny, Legislative Assistant/Education, Clerk; Rachel Racusen, Press Assistant; and Julie Radocchia, Legislative Associate/Education.

Chairman KELLER [presiding]. A quorum being present, the Subcommittee on 21st Century Competitiveness will come to order.

We are meeting today to hear testimony on the Internet and the college campus, and how the entertainment industry and higher education are working to combat illegal piracy.

Under committee rule 12(b), opening statements are limited to the chairman and ranking member of the subcommittee. Therefore, if other members have statements, they may be included in the hearing record.

With that, I ask unanimous consent for the hearing record to remain open 14 days to allow member statements and other extraneous material referenced during the hearing to be submitted. Without objection, so ordered.

Good morning. I am pleased to convene today's hearing to discuss illegal downloading and piracy of copyrighted material through college and university computer networks. The purpose of today's hearing is to talk more about illegal downloading, and to highlight

innovative ways in which some universities across the country are dealing with this problem.

The university environment creates a perfect storm for piracy. College students, who are computer and Internet savvy, use state-of-the-art computers and the fastest computer networks in America to find the music, movies and other entertainment products that they love.

The downside is some college students engage in illegal peer-to-peer file sharing, which can allow viruses to invade the networks and to take up valuable space on the college servers which should be used for legitimate educational purposes.

In addition, a recent survey determined that piracy by college students accounted for over $500 million in losses to America's film industry alone, which results in a significant loss of tax revenue to the Federal Government due to lost sales. So if you steal from Disney, you are also stealing from Uncle Sam. In other words, if you take Mickey's cheese, you are also taking the government cheese. As the chubby congressman from Disney World, I like my cheese. [Laughter.]

So let me begin by giving you a brief demonstration of how this illegal file sharing takes place. These Internet file-sharing applications are freely available and easy to download and install.

When you startup the application, in this case LimeWire, you are presented with this window to begin your search. What we will do is type in the search field a particular artist. We will type in Kenny Chesney, and that will search for all the works by this famous country music recording artist. As you can see, it brings up pages and pages of Kenny Chesney's songs, all of the various hits that he has had.

What we will do now is select one particular song. On the top there, we will select "Summertime," and you will be able to watch the progress of the download at the bottom of the window. Downloading is pretty fast, usually in a minute or 2, and multiple downloads can be done.

Here, we have searched one musician's works. We could search thousands of movies and different software titles and other copyrighted works.

Once the download is complete, and it is nearing it now, you will be able to select the file and then launch the built-in player to listen to that song right then and there. And you will see in just a second this song will pop up with the built-in player. As you can see, the download is now complete. The built-in player will kick in.

And there you have it. All right? So you just saw, from launch to search to download to listening, the entire process took less than 2 minutes. If an unsophisticated, technology-challenged, 42-year-old congressman can steal a song in less than 2 minutes right in front of your eyes, just imagine how easy it is for a sophisticated MIT computer major to steal music and movies.

Well, the good news is that while universities are in the center of this storm, they are also in the best position to confront the problem. To help them, in March of this year, the House passed H.R. 609, which reauthorized the Higher Education Act and included language at my request to allow universities to use Federal funds to combat this problem.

For example, the University of Florida has had great success with technology called CGRID to block illegal downloading on campus.

Piracy is not a new issue for Congress. I am a member of the Judiciary Committee's Intellectual Property Subcommittee, where my good friend Lamar Smith has held three hearings on this subject. In addition, Chairman Buck McKeon has wisely called for a renewed commitment to addressing the illegal downloading of copyrighted material on college campuses.

I hope that today's discussion encourages universities to take a fresh look at what is going on on their campuses and helps them to focus their efforts.

We have a very impressive group of witnesses this morning, and I look forward to hearing from them, as well as my esteemed colleagues, on this issue.

With that, I yield to my ranking member, Mr. Kildee, for any statement that he may have.

[The prepared statement of Chairman Keller follows:]

Prepared Statement of Hon. Ric Keller, Chairman, Subcommittee on 21st Century Competetiveness, Committee on Education and the Workforce

Good morning. I am pleased to convene today's hearing to discuss illegal downloading and piracy of copyrighted material through college and university computer networks.

The purpose of today's hearing is to talk more about illegal downloading, and to highlight innovative ways in which some universities across the country are dealing with this problem.

The university environment creates a perfect storm for piracy. College students, who are computer and internet savvy, use state-of-the-art computers and the fastest computer networks in America to find the music, movies and other entertainment products that they love.

The downside is some college students engage in illegal peer-to-peer file sharing, which can allow viruses to invade the networks, and to take up valuable space on the college servers which should be used for legitimate, educational purposes. In addition, a recent survey determined that piracy by college students accounted for over $500 million in losses to America's film industry alone.

Let me give you a brief demonstration of how this illegal file sharing takes place.

File-sharing applications allow millions of computer users around the world to connect and trade unauthorized copies of copyrighted works, including music, movies, and software. These file-sharing applications are freely available on the Internet and are easy to download and install.

When you start up the application—in this case, Limewire—you are presented with this window to begin your search.

You type a term in the search field—for example, typing in "Kenny Chesney" will search for all works by that artist.

You see that, immediately, you are presented with a number of results—in this case, pages of Kenny Chesney songs, free for downloading from users all over the world.

Selecting one song in the list will begin the download process. You can watch the progress of the download at the bottom of the window. Downloading time is very fast, usually a minute or less, and multiple downloads can be done at one time.

Here, we've searched for one musician's works but, again, it's just as easy to find thousands of movies, software titles, and other copyrighted works.

Once the download is complete, you can select the file, and launch the built-in player to listen to the song right then and there.

From launch, to search, to download, to listening—the entire process took less than 2 minutes.

These are the types of applications, without appropriate protection measures, that have caused great concern on the part of the entertainment and other content industries. These are also the types of applications that are prevalent on college campuses across the country, forming the basis of our discussion today.

The good news is that while universities are at the center of this storm, they are also in the best position to confront the problem. To help them, in March of this

year, the House passed H.R. 609, which reauthorized the Higher Education Act and included language, at my request, to allow universities to use federal funds to combat this problem.

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I hope that today's discussion encourages universities to take a fresh look at what's going on on their own campuses and helps them to focus their efforts.

We have a very impressive group of witnesses this morning, and I look forward to hearing from them, as well as my esteemed colleagues. I now yield to the Ranking Member Mr. Kildee for his opening comments.

Mr. KILDEE. Thank you, Mr. Chairman.

First of all, I want to especially welcome the panel, but especially Dan Glickman, my classmate in Congress. We came to Congress together, took the oath together on January 3, 1977. Mr. Glickman, like myself, is also an alumnus of the law school, although I studied Latin there at the University of Michigan.

We are happy to have you here, Dan. Good to see you again.

Thank you again, Mr. Chairman, for convening this hearing.

As I recall, during the floor debate on H.R. 609, the Higher Education Reauthorization bill, there was a potential amendment aimed at addressing the problem of illegal downloading on college campuses. We can all agree that this practice is illegal, and no one should condone students engaging in illegal downloading.

Steps should be taken to curb the practice, but the amendment was thought by some to be too heavy-handed of a response. The loss of Federal student aid funds would be too drastic an approach to a troublesome, but potentially solvable problem. I was pleased to see that the amendment was not offered in the end, and that the committee has been given this opportunity to examine the issue more thoroughly.

Illegal use of peer-to-peer file sharing on college campuses presents a complex set of problems, including copyright infringement, unclear placement of liability, and of course, costs to both the industry and to the colleges. I am pleased to learn that the Motion Picture Association of America and the Recording Industry Association of America have fostered positive partnerships with colleges in addressing this problem.

I am looking forward to your testimony to learn more about what you are doing on college campuses. I am also happy to see that Dr. William Fisher, director of the Berkman Center for Internet and Society at Harvard Law, has been able to join us. I am looking forward to hearing his thoughts on educational uses for peer-to-peer technology and his discussion of how we can and should promote legal forms of peer-to-peer file sharing.

Mr. Chairman, I want to thank you again for convening this hearing. I look forward to hearing our witnesses.

Chairman KELLER. Thank you, Congressman Kildee.

We have a panel of distinguished witnesses today. I am eager to hear their testimony. I would like to begin by introducing them.

Dr. William Kirwan is the chancellor of the University System of Maryland. Dr. Kirwan is currently the co-chair of the Joint Committee of the Higher Education and Entertainment Communities.

Mr. Dan Glickman is the chairman and CEO of the Motion Picture Association of America. The MPAA serves as the voice and advocate of the American motion picture, home video and television industries.

Mr. Cary Sherman is the president of the Recording Industry Association of America. The RIAA is a trade group comprised of companies that are responsible for the creation, manufacture or distribution of 90 percent of all legitimate sound recordings sold in the United States.

Ms. Cheryl Elzy joined the faculty of the Illinois State University-Normal Library in 1981 and has since served as an associate university librarian for personnel, associate dean of university libraries, and headed the education, psychology and Teaching Materials Center division.

Dr. William Fisher has taught at Harvard Law School since 1984. Dr. Fisher currently serves as the Hale and Dorr professor of intellectual property law and the director of the Berkman Center for Internet and Society.

Before the panel begins, I would like to remind the members that we will be asking questions of the witnesses after their testimony. In addition, committee rule 2 imposes a 5-minute limit on all of the questions.

Let me explain a little to the witnesses. You will have 5 minutes to give your testimony. We are going to try to stick to that, just because we want to make sure that the members have a chance to ask you questions, and you can give them your responses. You will see a green light when it is time for you to speak. A yellow light will come on when you have 1 minute left and then the red light when you need to wrap it up because time will be expired.

I would now like to begin by recognizing Dr. Kirwan for his testimony.

STATEMENT OF WILLIAM E. KIRWAN, CHANCELLOR, UNIVERITY SYSTEM OF MARYLAND

Mr. KIRWAN. Mr. Chairman, Congressman Kildee and members of the committee, thank you very much for this opportunity to come and speak about this very important issue.

I told the chairman that, with your permission, I need to leave at 12:15 p.m. because I will be participating in Secretary Spellings's announcement of this important report.

By way of background, I am chancellor of the University System of Maryland, with 11 degree-granting institutions in that system with about 125,000 students. The University System of Maryland has for some years collaborated with RIAA and MPAA, as well as AAU and Educause on this issue of file sharing. As the chairman noted, I have just joined the joint committee and will serve as its co-chair.

There are many compelling reasons why higher education must address this issue. First and foremost, if members of our community are using our resources to do something illegal, we have an obligation, a fundamental obligation to respond and address that matter. Also, intellectual property is one of the coins of the realm of higher education. We want to raise a new generation of people who have great respect for and value the sanctity of intellectual

property. So it is an obligation on our part to ensure that our students are educated properly in this way.

There are other reasons, more practical reasons that follow this very basic responsibility. This illegal file sharing taxes our systems. It introduces spam and viruses into our system. So there is a cost associated with this illegal use of our computer networks, and so that adds even more urgency to us to address this problem.

I want to say that I think many, if not most, of my colleagues in higher education and their institutions are taking this problem very seriously.

Let me just describe very briefly what we do within the University System of Maryland. We have what we call a four-part program. First of all, the system has an articulated policy that applies to all of our institutions, covering acceptable use of the Internet.

Second, our board of regents has imposed a core curriculum requirement. Every student must take a course where the ethical use of the Internet, including the issue of file-to-file sharing, is discussed. Moreover, every institution has technology that enables it to monitor the use of the Internet to understand and identify inappropriate traffic. Also, every campus has a legal alternative. We use services such as Cdigix and Ruckus so that students very inexpensively can legally download and purchase copyrighted materials.

I look forward to my work with the joint committee. I believe that it provides a forum and a mechanism for us to address this problem and to bring it under control. In our efforts, I do want to mention that we are seeing increasing legitimate use of peer-to-peer file sharing in higher education and elsewhere.

For example, the National Cancer Research Institute has a peer-to-peer file-sharing effort promoting some of its research. There is also the Ockham digital library project, which uses peer-to-peer file sharing to make legal access to library materials possible.

So as we approach this very important problem which we must solve, we also have to be mindful that we cannot throw the baby out with the bathwater. We have to get rid of the bathwater for sure, but we do need to be sensitive to what are very legitimate uses of peer-to-peer file sharing.

I know my time is running out. Let me just say, Mr. Chairman, I have submitted written testimony, and I am eager to begin my work with the joint committee and look forward to our efforts to solve this problem and bring it completely under control.

Thank you very much.

[The prepared statement of Mr. Kirwan follows:]

Prepared Statement of William E. "Brit" Kirwan, Chancellor, University System of Maryland

Mr. Chairman and members of the committee, I am pleased to have the opportunity to comment on the very important and troubling issue of illegal piracy of intellectual property through campus-based, peer-to-peer file sharing.

By way of background, the University System of Maryland (USM), where I serve as Chancellor, consists of 11 degree granting institutions as well as 2 specialized research centers. We enroll over 125,000 students (both full and part-time) with over 6,600 faculty members.

In recent years the USM has worked collaboratively with the Recording Industry Association of America (RIAA) and Motion Picture Association of America (MPAA) as well as with the Association of American Universities (AAU) and Educause,

whose very mission is to advance higher education by promoting the intelligent use of information technology, on the issues of file sharing and copyright infringement. I am also the newest member of the Joint Committee of the Higher Education and Entertainment Communities, a group formed three years ago to foster collaboration between the higher education and entertainment communities in addressing unauthorized campus peer-to-peer (P2P) file sharing. I will serve as co-chair beginning on November 1.

While I may be new to this Committee, I am certainly not new to the issue of peer-to-peer file sharing on our campuses. Colleges and universities have, to some degree, held center stage in the peer-to-peer discussions for some time now. As you all know, with faster computers and better programs, "big pipes", and a population of young people who are both technologically savvy and very vested in their music and entertainment, our institutions bring together several factors that drive file sharing. I might observe, however, that with the expansion of broadband to all businesses and to the home, higher education is no longer in the unique position regarding networking that it was a decade ago.

One of the most compelling reasons why we must have a clear and coherent approach to this issue is our obligation to not only abide by the existing copyright statutes, but also, and perhaps more importantly, to engender within our students a respect for intellectual property ownership and the law. If this were the only matter to be dealt with, it would, in and of itself, be sufficient reason to act. Our legal obligations to act are joined with our ethical responsibilities.

Of course, other issues come into play as well. For example, we all know how abuse of campus networks creates significant problems: It can saturate and overtax existing networks bandwidth; it costs institutions money in increased support costs; and it also introduces the potential of increased electronic security risks on campus through spyware, viruses, increased "spamming," and even identity-related issues.

I can state without hesitation that higher education is at the front of the line of people who want this unauthorized activity to stop. The money and time it takes to clean up after it is significant. In addition, plenty of students complain that the activity is clogging up the network to the point that they can't get their work done.

Given higher education's place in this discussion, it is clearly incumbent upon us in the higher education community to take aggressive, proactive steps to end illegal peer-to-peer file sharing. I am pleased to say that the University System of Maryland takes this obligation seriously and is acting accordingly.

First and foremost, as a systemwide operational procedure, every institution scrupulously adheres to our obligations under that the Digital Millennium Copyright Act (DMCA), responding to all inquires.

In addition, the USM has instituted a 4-point systemwide strategy: First, every institution must have an articulated policy covering acceptable use of network resources that clearly respects the network as a shared resource and particularly prohibits illegal activity. Each institution takes this policy seriously and enforces it accordingly. Second, every institution has programs to educate students, faculty and staff as to what is legal and illegal. Additionally, the University System Board of Regents has established a technology literacy requirement that follows recommendations of the National Research Council. In particular, there is an expectation that academic programs include discussions of the ethical and societal impact of technology. Each institution has responded to this requirement. Third, each institution employs technologies that monitor its network and in particular identify inappropriate traffic, watching for signatures and characteristics of illegal activity. I stress that we do NOT examine content and therefore maintain privacy rights. Fourth, every residential campus provides a legal alternative, such as Cdigix and Ruckus, which enable the legitimate purchase of copywrited material.

I also note that the Joint Committee of the Higher Education and Entertainment Communities is highly vigilant and effectively proactive in assisting campuses in identifying and eliminating illegal peer-to-peer activity. Over its first few years, this voluntary cooperative venture worked to educate campus communities on copyright law and its application to campus peer-to-peer file sharing, promoting campus policies and best practices to reduce file sharing, and technological mechanisms for controlling file sharing. More recently, the Joint Committee expended considerable effort to promote pilot projects between campuses and legitimate digital content delivery services. Going forward, the Committee will be taking additional steps: updating and broadly redistributing the 2003 white paper on the legal aspects of campus peer-to-peer file sharing; updating the campus policies and practices paper, augmented by current research on what approaches to reducing unauthorized file sharing are particularly effective; and convening a meeting with legitimate digital content delivery services with programs on our campuses, to explore what is working well and what obstacles remain.

I must point out, however, that in our effort to eliminate illegal use of file sharing we must also protect the ability of colleges and universities to conduct legitimate peer-to-peer activity. There has, in fact, been significant growth in this area, especially among scientists and researchers who deal with large datasets.

For example, in the field of bioinformatics, peer-to-peer networks can be used to run large programs designed to carry out tests to identify drug candidates. I know the National Foundation for Cancer Research is involved in such a cooperative effort. There is also the Ockham digital library project, a peer-to-peer system linking digital libraries funded by the National Science Foundation that makes content more accessible, especially to the millions served by the libraries of the nation's colleges and universities. In addition, there is a lot of campus-developed open-source software distributed via P2P, such as LionShare, a secure peer-to-peer file sharing application enabling legal file sharing at Penn State University.

Use of legitimate peer-to-peer is not unique to academia; Warner Brothers has formed a partnership with BitTorrent, one of the most widely used file-sharing clients, in an effort to convert users into customers.

I will conclude my brief testimony with the following observation: We in higher education recognize our responsibility to stop unauthorized activity. We take copyright law seriously, both as users and producers of copyrighted material. With the steps we have taken at USM, we have seen a significant drop in illegal peer-to-peer activity. Of course, as new peer-to-peer technologies are implemented, we sees spikes in illegal activity, which only serves to remind us that we must stay vigilant. Overall, however, our long-term trend in the area is moving in the right direction.

From my perspective, cooperation, collaboration, and active engagement are the keys to continued progress. We have experienced real and meaningful results in recent years because we have established cooperative relationships. I am convinced that if we build upon these relationships, through efforts such as the Joint Committee, we can address the problem of illegal peer-to-peer activity while maintaining the ability to conduct legitimate and important academic and research endeavors.

Once again, I appreciate the time and attention of this subcommittee and look forward to our continuing efforts to address this important matter. Thank you.

Chairman KELLER. Thank you very much for your testimony, Dr. Kirwan.

Now, Mr. Glickman, we would be pleased to hear from you.

STATEMENT OF HON. DAN GLICKMAN, CHIEF EXECUTIVE OFFICER, MOTION PICTURE ASSOCIATION OF AMERICA, FORMER MEMBER OF CONGRESS

Mr. GLICKMAN. Thank you, Chairman Keller, Mr. Kildee and members of this committee. It is a great honor to be back at the House. I look at the pictures of Chairmen Ford, Hawkins, Goodling and Boehner, who I all served with. They are looking younger each time I come back here, I would say. But it is a great honor to be back here.

Let me just start with the message that piracy is the greatest obstacle the film industry currently faces. We recently commissioned a study by the international consulting firm, LEK, that found that our industry lost $6.1 billion to piracy in 2005. That is the U.S. film industry.

We estimated, as you pointed out, that nearly half, 44 percent of our industry's domestic losses, over $500 million annually, are attributable to college students. The piracy loss calculation is based on the number of legitimate movies, movie tickets, DVDs and the like, that would have been purchased if pirated versions were not available.

As you know, this affects profitability. It affects investments. It affects tax revenue due to local, state and Federal Governments. And in addition to that, the problem of piracy also adds significant

costs to the universities' bottom line which is contained in my statement.

The bad news is that peer-to-peer piracy is still going on and many universities are not responding as quickly as we would like. The good news is that many universities are beginning to get the message, as Dr. Kirwan talked about, and that there are solutions available today and some best practices which can significantly reduce campus network abuse.

They are, one, technology. The most effective means to reduce campus piracy is through the use of innovative and effective technological tools right now. In the Grokster case, decided last year, the Supreme Court found that there is evidence of infringement on a gigantic scale on P2P systems.

These systems also show prevalence of pornography, identity theft, spyware viruses and other problem services, and therefore the court said it is appropriate to restrict illicit P2P access on these kinds of networks. We are talking today about university networks.

My statement talks about technological options such as CGRID, previously called Icarus, at the University of Florida. When that system was put on, it effectively stopped and reminded online through an educational message that such activity was against university policy. The school has received no infringement notices under the Digital Millennium Copyright Act since the inception of this technology.

There are other technologies out there, Audible Magic, Packeteer. Indeed, most universities have these bandwidth-shaping tools already in place and need only to calibrate them in such a way as to frustrate those who would use their bandwidth to upload and download copyrighted works. So we need to work much more aggressively in getting universities to adopt the technologies available to try to stop this problem.

The second issue has to do with legitimate services. The important thing is for our industry and the music industry, working with the universities, to offer services, and I have listed them in my testimony, so that the students can be offered a wide array of entertainment content in a reasonably priced, hassle-free, safe and legal way. In fact, we are doing so right now and more and more of these services are coming onboard.

The third area is education. It is critical that colleges and universities clearly and repeatedly inform students of the importance of respecting copyrighted works, campus policies and the law. As creators and owners of intellectual property themselves, colleges and universities would seem to have a large incentive to instill a sense of value for copyrighted works.

Before I came to this job, I spent 2 years as a director of the Institute of Politics at the Kennedy School at Harvard. One of the things we found is the orientation process can be an extremely effective way if universities give it priority to educate kids on a variety of messages. Whether it is in the form of illegal activities taking place, voting, all sorts of things, that if schools made education a higher priority, I think we would have a great deal of effectiveness in this area.

The final thing is enforcement. It is important to make clear the institutional commitment to its policies. Enforcement measures

must be consistent and meaningful. We have found that recidivism among students is low at schools with well-defined and applied enforcement policies. I think you have heard from the University of Maryland. I know that Illinois State University is going to be talking about these issues as well.

It is my hope that this subcommittee will continue to provide a forum for resolving this issue. Your continuing oversight is critical. I would ask that you consider requiring regular reporting from the higher education sector, detailing what real measures are being taken to halt the misuse of campus resources for the purposes of eroding the copyright industries through widespread piracy.

We want to work with you. We think there are great opportunities. We see that the glass is half full, but this will require a multiprong approach. With that approach, working collaboratively, I think we can really deter and hopefully end this problem.

Thank you very much, Mr. Chairman.

[The prepared statement of Mr. Glickman follows:]

Prepared Statement of Hon. Dan Glickman, Chairman and CEO, Motion Picture Association of America, Former Member of Congress

Chairman Keller, Congressman Kildee, members of the Subcommittee: On behalf of the member companies of the Motion Picture Association of America, I thank you for the opportunity to talk to you about the film industry's efforts to address peer-to-peer (P2P) piracy on college and university campuses. The livelihoods of nearly one million men and women in America are impacted by the film and television industry, which entertains millions of consumers every day.

Piracy is the greatest obstacle the film industry currently faces. A recently released study, conducted by the international consulting firm LEK, found that U.S. film industry lost $6.1 billion to piracy in 2005. That same study estimated that 44% of our industry's domestic losses, over $500 million annually, are attributable to college students. An earlier Deloitte and Touche study estimated that approximately 400,000 films are illegally downloaded every day. CacheLogic, an Internet monitoring group, has estimated that over 60 percent of all Internet traffic in the U.S. is attributable to peer-to-peer usage. Furthermore, well over 90 percent of all the content on P2P networks consists of unauthorized copyrighted files.

Further, it is important to understand that the film industry rests upon a fragile fiscal base. Each film is a massive upfront investment with absolutely no guarantee of return. The average film costs over $100 million to make and market. Only one in ten films recoups this investment through its theatrical release. Six in ten films never break even. To recoup the considerable investment required to make and market a movie, the film industry relies on foreign distribution and ancillary markets (home video/DVD, pay per view, premium cable, basic cable, free TV, etc.) to make a profit or break even. It is these ancillary markets, especially home video and foreign distribution—economic engines that are essential to this industry—that are most vulnerable to the corrosive effects of film piracy.

To address this issue, MPAA and our member studios have launched aggressive public campaigns to instill the fact that the illegal downloading of movies is in fact no different than shoplifting.

Because of the statistics I shared earlier, a major focus of our outreach and education efforts has been college and university campuses. While some students are certainly carrying out this activity from off-campus network computers, the fact is that today, college and university campuses harbor some of the swiftest computer networks in the country. While this state-of-the-art technology is critical to the success of our nation's higher education institutions, it has unfortunately led to a situation where there is a significant level of misuse and abuse of these networks in the form of around the clock piracy.

While this issue certainly presents significant challenges, the prospects for overcoming those challenges are buoyed when we can work cooperatively with the higher education community. Efforts such as the creation of the Joint Committee of the Higher Education and Entertainment Communities Technology Task Force, which was formed to develop collaborative solutions to address illegal file sharing on college campuses; the commitment by the American Council on Education to distribute orientation materials produced by the Recording Industry Association of America

(RIAA) to all of its member presidents and institutions; and a continuing dialogue between MPAA member studios and individual campus leaders are examples of cooperative action to combat the misuse and abuse of campus networks.

Strong action to reduce this abuse of campus resources makes sense not only from the perspective of the copyright community but to the higher education sector and the general population as well. I say this because when legitimate commerce is sabotaged by widespread theft of intellectual property there is a significant loss in tax revenue due to lost sales. In addition, increased costs are often associated with maintaining a network that allows illegal file-sharing. While government appropriations should of course be used to facilitate legitimate and legal activity on school computing systems, such funding should certainly not be used to facilitate illegal activity. As for the universities themselves, the following can add significant costs to their collective bottom lines:

- P2P file-sharing takes up valuable network bandwidth intended for educational purposes;
- P2P file-sharing threatens school networks and computers with malicious viruses, spyware, and other malware; and
- Handling of infringement notices from copyright holders and lawsuits brought against students can be a costly administrative burden.

I am grateful that Members of this Committee also recognize the severity of this issue, and the pivotal role the higher education community can play in curtailing the theft of movies and other copyrighted works online. This recognition is evident by the fact that you are holding this hearing today. This Committee has demonstrated leadership on this issue through its support of one possible solution for addressing it—by including legislative language in the House- passed Higher Education Act Reauthorization bill. We are hopeful this provision, which would help fund innovative efforts to combat piracy on campuses, will eventually become law. We continue to encourage the Senate Committee leadership to include this provision in their version of the HEA reauthorization bill, as well.

To further demonstrate our industry's recognition of and commitment to this issue, last year I established a new enterprise within the MPAA called External Affairs & Education. This new department is dedicated to working with educators, administrators and student leaders to affect behavior and policy.

Since the establishment of this new department within MPAA, we have spent a great deal of time traveling to campuses nationwide and convening face to face meetings with administrators and students. I have also personally traveled across the country as part of a speaking tour of college campuses where I have engaged with students and campus leaders about the effects and dangers of illegal file sharing.

The chief goal of this outreach has been to learn more about what campuses are currently doing to address this issue of piracy and to, in turn, share what we have learned with other institutions. This emerging set of what the MPAA would call "Best Practices" provides a roadmap for administrators to follow in order to meaningfully impact the problem of network abuse and illegal copyright theft.

Nearly two years into this effort, I am pleased to report that a number of schools have already taken significant measures to preserve the integrity of their networks by curtailing the abuse of those resources. The University of Connecticut, the University of Florida, Illinois State University, Vanderbilt University among others are making clear to their students that illegal activity will not be condoned and, whenever possible, will be prevented.

However, with a new academic year underway, the infringement rates at universities across the country continue at unacceptably high levels. I am hopeful that the attention of this committee will serve as a motivator for our colleagues in higher education to take real and effective measures to reduce the misuse of their campus computer networks.

I'd like to use the remainder of my time to share with this Committee what we have discovered and what we would recommend university administrators adopt to impede their students' illegal activity via campus networks.

Our suggestions focus on four areas that have proven effective for those schools that have taken action: (i) network filters and other technological measures, (ii) legitimate online services, (iii) education, and (iv) enforcement. Undoubtedly, education and enforcement continue to be important components in any program schools undertake to address piracy. However, experience has shown that the offering of a legitimate online service, coupled with an effective network technology that decreases or, preferably, eliminates illicit peer-to-peer ("P2P") file-sharing traffic, produces the best results for colleges and universities.

Technological Measures

As you are undoubtedly aware, a significant proportion of piracy on campus is occurring through illicit P2P services, which enable individuals to copy and distribute millions of unauthorized songs, movies, software applications and games. The P2P applications that enable this illegal activity, freely available as downloads over the Internet, are tremendously popular at colleges and universities where students have access to extremely fast computing networks.

In the much-publicized Grokster case, the U.S. Supreme Court recently stated that "there is evidence of infringement on a gigantic scale" on certain P2P systems, and it has been estimated that over 90 percent of the non-pornographic use on these systems is infringing. (Pornography, including child porn, and identity theft are also very prevalent on such systems.) With such a disproportionate amount of illegal traffic on certain P2P protocols (and given the threat to network security and individual computers from viruses and other malware), it seems entirely appropriate to restrict the use of these illicit P2P systems generally. While prohibiting the use of predominantly illegal P2P applications, universities can still protect and promote the emerging legitimate uses of other P2P applications for research and scholarship.

This approach has already been employed at certain universities to extraordinary effect. For example, the University of Florida developed Icarus (now called CGRID), a network-based system, that can selectively prohibit the transmission of any information bearing the signature of an unapproved P2P application, and manages adherence to University policies. The CGRID architecture supports other capabilities to address the full range of security management issues including: viral and worm attacks; spyware; and other outbound malicious behavior. Addressing these issues can have tremendous positive effects on the operation and cost efficiencies of the university network.

Some statistics on implementation of this technology at Florida tell the whole story. In the first year of operation, there were nearly two thousand students that attempted to use P2P systems. They were effectively stopped and reminded online through an educational message that such activity was against University policy. Only 20 percent tried a second time and only 2 percent a third time. As new classes of students were introduced in the next two academic years, these numbers were reduced by 50% and 80 percent respectively. Additionally, the school has received no DMCA infringement notices since the inception of the technology. In fact, the developers of CGRID were recognized by the Davis Productivity Awards for their work. The awards are part of a government improvement initiative in Florida and sponsored by Florida TaxWatch. The awards panel estimated that ICARUS saved the University of Florida nearly half a million dollars by reducing the flow of illicit P2P onto UF computer networks and automating the notification process when a violation of policy did occur. The University of Florida also estimated additional savings of $2 million over two years attributable to delaying the pace of network build out that had previously taken place to accommodate the appetite of those abusing the network for unauthorized file swapping. These are real savings to the institution and to taxpayers.

While exceptions can be made for appropriate use of such applications, it is not surprising that the school has received very few requests for permission to use illicit P2P systems. Indeed, it is questionable whether many of the larger P2P applications are at all necessary (or beneficial) in an academic environment. Faculty and students remain able to share and distribute academic material through such secure and reliable means as websites, FTP, and email. In addition, there are legitimate and licensed P2P networks emerging—such as Penn State's LionShare—which are dedicated to, and specially configured for, academic environments.

Should a university not find feasible the implementation of programs such as CGRID, MPAA suggests installing one of many available network filtering systems. Rather than prohibiting all P2P or other applications based on a particular protocol, these systems filter out infringing transmissions by matching them against a master database of copyrighted works that are not authorized for unrestricted transmission. This technology works the same way as the technology that most schools already employ to scan for viruses and other malware transmitted over their networks.

A third option is to effectively implement a bandwidth shaping tool such as Packeteer. Although limiting the resources available for infringement is always a positive step, the way such technology is being implemented at most schools too often renders the application ineffectual. There are schools that ratchet down bandwidth allowance during the peak hours of the day, and then provide increased bandwidth at night. While this process may reduce infringement to some extent, it unfortunately sends the wrong message that illegal file-sharing is acceptable—as long as it's done at certain times. This is a minor and short-term fix for a much larger and long-term problem. By sanctioning such "windows of infringement," schools do little

to discourage students from engaging in piracy (and, of course, fail to impart a sense of ethical behavior and appropriately prepare their students for life after college as moral and law-abiding citizens).

Effective technical measures are essential to combating internet piracy at universities because such measures can stop the vast majority of piracy before it takes place. This reduces the burden on the university of processing potentially thousands of infringement notices and directly targets the problem of student piracy on university networks.

By employing technologies that prohibit infringement-based P2P-networks on campus or otherwise prohibit the transmission of infringing content, schools can also lay the groundwork for the second component of a proven anti-piracy campaign: the successful implementation of legitimate online content distribution services on campus.

Legitimate Online Services

The digital generation of today is among the brightest and most innovative this nation has seen. This generation has made clear that they want to access their entertainment in a myriad of ways, be it an iPod, a PSP or a new device not yet imagined. To that end, our industry recognizes the demand for new ways to obtain digital entertainment online. This is one reason that we encourage the higher education community to not only work towards eliminating illegal internet piracy of copyrighted works but also to satisfy the appetite for online entertainment by making available to students one of the many legitimate services now in the marketplace.

Students' adoption rates for legitimate online music and movie services are typically highest after the school first takes steps to reduce illegal internet piracy on campus. Services and schools alike have reported particularly positive results from this staggered approach. (Experience has also shown that it may be unwise to implement both network filtering technology and a legitimate online service simultaneously, as students tend to blame the online service for the cutoff in illegal file-sharing.) Without first addressing the illicit P2P problem on campus, it is extremely difficult for legitimate services to take root. If students have unfettered access to enormous amounts of pirated content, no service—regardless of pricing or content offerings—will be successful in that environment.

Overall, the growth of legitimate online services at colleges and universities across the country has been exceptional. The number of schools partnering with a legitimate service has grown to more than 100. There are literally dozens of exciting, legal services offering movies and music to the online consumer. Services such as Cdigix, CinemaNow, iTunes, Movielink, MovieFlix, Napster, Peer Impact, Rhapsody, Ruckus, Starz and so many others offer a wide array of entertainment content in a reasonably priced, hassle free, safe, and legal way.

And MPAA member companies continue to do more to meet the clear consumer demand for more choice and flexibility in their filmed entertainment selections. We are heavily involved in ongoing efforts to create the next generation of secure, consumer-friendly digital delivery platforms to meet that demand. We recognize that the speeds of transfer so dazzling today will likely seem akin to a horse and buggy when new technologies such as Internet2 become the standard. To that end, MPAA has joined Internet2 as a corporate member. MPAA plans to collaborate with the Internet2 community to consider innovative content distribution and digital rights management technologies, and to study emerging trends on high-performance networks to enable future business models. We view secure, high speed Internet delivery of films as being integral to our industry's future, and we are excited by the possibilities this collaboration presents.

In addition, MPAA has established and funded "Movie Labs," a research and development venture that will develop copyright management and other technologies to reduce piracy. The future of film depends upon the development of innovative delivery technologies allowing new, user-friendly business models, and the film industry is diligently working to make these technologies a reality. So you can see that, while we continue our appeal for others to do their part in preventing the illegal abuse of copyrighted works, we are appropriately taking the lead in this regard.

Education

Obviously, education is an extremely important component of any anti-piracy campaign. Colleges and universities are in the best position to inform students of the importance of respecting copyright and valuing the creative effort invested in copyrighted works. Further, as creators, developers, and owners of intellectual property themselves, colleges and universities have a huge incentive (and responsibility) to instill in their students such respect and values. The following are some examples

of steps schools can take toward educating students about illegal file-sharing and copyright infringement generally:

• Institute Acceptable Use Policies that clearly outline the appropriate use of school resources. Such policies should illustrate unacceptable behavior, including illegal file-sharing, and provide details on penalties imposed for failure to abide by such regulations. A comprehensive policy, however, is only as useful as it is accessible and enforced. Administrations should ensure that students (and others) can easily find the policy, including on the school website. As discussed further below, administrations must also establish real consequences for internet piracy that escalate with repeated violations and must enforce the policy so students take it seriously.

• Include substantive educational information on copyright, piracy, and illegal file-sharing in orientation materials. Many students enter college with a fundamental misunderstanding of copyright law that colleges should take the opportunity to correct.

• Inform parents, through letters and at orientation, of the seriousness of copyright infringement and the penalties imposed, both legally and academically, for violations. Encourage them to discuss the risks with their children.

• Require students to pass a quiz about P2P and piracy before allowing access to the school's computing network to ensure they understand the school's policies.

• Engage students by incorporating discussion of illegal file-sharing on school websites and radio stations, and in papers and classrooms.

• Launch pervasive and visible anti-piracy campaigns using posters, brochures, banners, videos, fliers, etc.

• Send students periodic emails directly from the President/Provost/Dean to remind students that the school takes copyright infringement very seriously and to indicate the seriousness of any offense.

The first step in any educational campaign is to express concisely and unequivocally that copyright infringement, through physical or online piracy, is illegal and simply wrong. The U.S Supreme Court voiced a very clear message to users of the Internet: theft of intellectual property is wrong, whether it takes place by stealing a physical copy of a movie from a video store or by stealing a movie in cyberspace. As Justice Breyer said in his concurring opinion, "deliberate unlawful copying is no less an unlawful taking of property than garden-variety theft."

The MPAA is also working to engage college-aged students in a discussion of this topic in a positive and constructive way. This year we partnered with Students in Free Enterprise (SIFE) to develop, implement, and sponsor a Public Service Announcement contest. 51 schools participated by conducting anti-piracy campaigns and submitting PSAs. To date, 14.4 million people have been exposed to an anti-piracy message during the course of the students' campaigns. In addition, students and faculty advisors involved in SIFE on 900 campuses nationwide had access to the initial information and contest materials, raising general awareness of the anti-theft/responsible citizenship message.

Enforcement

As with any education campaign, it is necessary to ensure adherence to rules and regulations through consistent and meaningful enforcement measures. With internet piracy so rampant on campuses across the country, each individual student tends to feel that he or she is unlikely to be the one caught. The threat of disciplinary action by a student's own school, however, resonates more with students and can quickly diminish their sense of "safety in numbers."

We are not suggesting that enforcement is solely the responsibility of these institutions. Our industry has brought legal actions against numerous companies that promote and profit from copyright infringement, such as Grokster. MPAA member companies and RIAA have initiated many thousands of lawsuits against individuals, including students, pirating content over the internet to help educate the public about copyright theft. We have also pursued those using I2Hub, a pirate file trading network catering exclusively to university students.

While the majority of illegal copying and distribution of music and movies still occurs over the public Internet on peer-to-peer file-sharing systems, we have noticed an increasing trend for college and university students to use closed networks to illegally exchange copyrighted content.

For example, with I2Hub, this "darknet" system used the networks of numerous universities to facilitate a closed system of internet piracy. I2Hub's extraordinary steps to exclude individuals from outside of university networks in order to frustrate enforcement efforts by rights holders. These types of closed systems can inflict a great deal of damage. For example, we learned that on April 11 at 4:23 p.m. EST,

there were 7,070 users connected to I2hub sharing 99.21 Terabytes of content, enough space for 99,000 movies!

Additionally, students have been increasingly establishing closed, purely intra-campus networks to illegally exchange copyrighted works with their fellow students without accessing the internet. They use P2P programs like Direct Connect (DC++) and MyTunes to engage in such illegal activity on campus Local Area Networks (LANs) without using the broader public Internet. These networks are often confined to a single dorm and are impossible to detect by anyone outside of the campus network. The perceived security and privacy of these campus LANs give many students incentive to engage in activity they have otherwise learned is illegal and unacceptable.

The scale and scope of illegal activity within closed campus networks is significant and is typically out of the enforcement reach of copyright owners.

I would like to use this forum to appeal to university administrators to be particularly aware and vigilant about piracy occurring on your campus LANs. The spikes in bandwidth consumption by those using LANs to engage in piracy are easily detectable by campus network administrators. As with peer-to-peer, the LAN activity involving copyrighted works consumes large portions of the campus network and thus takes a real toll on network efficiency and integrity. I ask administrators to help combat this growing strain of network abuse.

I would like to add that school-wide Acceptable Use policies regarding online piracy and the appropriate use of school resources are not merely for the benefit of copyright owners. Such rules and regulations, just as with those regarding hacking and other violations, safeguard the security and integrity of the school's computing system. Illegal file-sharing applications and illicit P2P networks threaten such systems with increased bandwidth costs, as well as with malicious viruses, worms, Trojan horses, and spyware.

Students should understand that there are extreme repercussions for violation of these policies. Accordingly, schools must be diligent in learning of such violations and in carrying out appropriate punishment. Most schools take a tiered "three strikes" approach:

- First offense: Remove the offending user's computer from the network until the student complies with any obligations and understands the repercussions for further violations. Some schools require the student to talk to a University administrator before network access is restored.
- Second offense: Students lose network access for a certain period of time. Some schools are increasingly imposing monetary fines.
- Third offense: Students usually permanently lose all network access privileges and must report to the Dean of Students or Judicial Affairs for formal disciplinary proceedings. Some schools have suspended or even expelled students for third offenses.

Of course, enforcement measures vary widely from school to school. For example, Harvard University has stated that it will terminate a student's network access for one year upon a second offense. Students at UCLA will be summoned to the Dean of Students after their second offense. In any case, experience has shown that recidivism is rare at schools with well-defined and strongly-implemented policies.

We believe strongly that universities taking these measures will significantly reduce the level of illegal activity taking place via their networks by students under their charge.

A final word about campus piracy: imagine a physical structure located on a campus that did what many of the bad actor peer-to-peer services do. That is, providing an endless supply of stolen goods to students. Would a university administration take action to shut that site down? Would the members of this Committee expect university officials to do so in order to make sure that this illegal activity is halted? I suspect the answer to both of these questions is "absolutely." So I must ask, why are so many schools not taking advantage of technologies today to halt this activity when it takes place via their networks? There really is no difference. Students do not have the right to take copyrighted works without paying for them.

While I know today's session is devoted to a discussion of college campus piracy, *I think it is worth noting that the MPAA is also working diligently to reach and* educate students at the secondary school level as well as educating parents of school-aged children. We are working with well-respected Internet safety and educational organizations such as Weekly Reader, WiredKids and iSafe to raise awareness and understanding of this issue to the emerging generation of computer users so that, hopefully, when they do arrive on the campuses of this nation, they will be better equipped to understand and adhere to the rules of the university and the law of this land.

I thank the Chairman, the Ranking Member and all Members of this subcommittee for holding this hearing. I know that if I were to ask anyone in this room to name their favorite film, a lively conversation would begin. Such is the love of this uniquely American art form and all the more reason that we all have a stake in its continued health and survival as well as the health of all of the creative industries from music to books to software. The stakes are very high, not just for those who have the privilege of working within these industries but to the overall economy of this great nation.

Chairman KELLER. Thank you very much, Mr. Glickman.
Mr. Sherman, you are recognized.

STATEMENT OF CARY SHERMAN, PRESIDENT, RECORDING INDUSTRY ASSOCIATION OF AMERICA

Mr. SHERMAN. Thank you, Chairman Keller, Mr. Kildee and members of the subcommittee. Thanks for the opportunity to discuss illegal file sharing on college and university campuses.

This problem has cost the industry billions of dollars and thousands of people across the country their jobs, and for many creators, the opportunity to pursue a career in music. We devoted a great deal of time and energy to this problem over the last 4 years for a very simple reason: college students remain a very significant part of the illegal file-sharing problem.

Recent surveys indicate that more than half of the nation's college students frequently download music and movies illegally. Imagine the effect on our industry when one of our primary markets decides he would rather steal than pay for our products. Now, imagine what happens when those students graduate and carry this behavior into the real world.

We are sincerely grateful to the many schools that have worked with us to address this issue proactively and constructively. They have led the way, charting a course for others to follow. It was a pleasure to hear the remarks of Dr. Kirwan and the positive and helpful attitude it reflects. I am similarly looking forward to the testimony of Dr. Elzy.

But unfortunately, there are a far greater number of schools who do not understand or simply choose not to acknowledge that they share some of the responsibility to help solve the problem. We have heard the reasons for inaction: academic freedom, privacy, we are not the music industry's police. I have no doubt that these are real concerns, but to me at least they have begun to sound like excuses.

We believe in academic freedom, but academic freedom is not the freedom to steal. What university would teach its students that stealing is OK? But when a school fails to act, it is teaching, looking the other way when students engage in illegal activity on its networks. It sends a message and it is the wrong one.

The message we are asking of schools is to detect and control illegal file sharing already being used by many of them to combat viruses or other threats. The products and services available for detecting illegal file sharing are no more intrusive. We are not asking schools to spy on the contents of students' communications. We are simply asking them to use available technology to recognize and stop the transmission of infringing works.

Last week's Chronicle of Higher Education contained this pullout advertisement from Audible Magic, offering a technology that stops

infringing transmissions only, without interfering in any way with peer-to-peer transmissions of non-infringing content. The products are out there. Why are they being used so rarely?

An article in Friday's Washington Post highlighted a commercial service that checks students' work for plagiarism. The technology is being used in more than 6,000 academic institutions in 90 countries. Why shouldn't schools be just as proactive when it comes to stopping copyright infringement?

We do not expect schools to be the music industry's police. But when schools claim no obligation to help us, while simultaneously refusing anyone else the ability to enforce their rights themselves, where does that leave us?

This is particularly true for activity occurring with a school's internal local area network. If schools insisted that others deal with it, we will assume responsibility for looking for infringers. But schools shouldn't be washing their hands of the problem, yet refusing to help us address it ourselves.

The implicit message we are getting from many university administrators is, it is not our problem. I believe this view is misguided. It is their problem. Universities are among the most significant creators of intellectual capital in this country. It is vital to them, to their revenues, to their curriculum, to the culture of thought and discovery. If intellectual property is disrespected, what does that say about the value of the ideas so fundamental to higher education?

It is their bandwidth that is being abused. And it is their system that is being used to serve up content to illegal downloaders all over the world. It is their network that is being compromised by the introduction of viruses and spyware. It is their workforce and infrastructure that has to respond to infringement notices and engage in disciplinary proceedings. And it is their students who are exposed to viruses, compromised data, and yes, the threat of being sued.

Students at 132 schools have been sued since March 2004 and that number will increase under a new university enforcement program we will be announcing soon. A recent study found that 86 percent of managers consider illegal file-sharing attitudes and behaviors when making hiring decisions. And nearly one-third would reject a candidate who had lax attitudes toward illegal file sharing in the workplace.

Are schools doing their students a disservice when they fail to prepare them for this reality? We consider universities to be our partners on this issue. I want to thank again the many administrators that have taken serious steps to address the problem. We now ask the many others to join with us, too, to recognize that they have an important role to play here and to exercise moral leadership.

Let me also just take the opportunity to thank the committee for the provision aimed at reducing illegal downloading on college campuses in the Higher Education Act, and the subcommittee for its interest in this issue. I hope you will continue to encourage all of us to work together and to monitor the progress we are making. The attitudes and behaviors of future generations will be better for it.

Thank you.
[The prepared statement of Mr. Sherman follows:]

Prepared Statement of Cary H. Sherman, President, Recording Industry Association of America, Inc.

Chairman Keller, Ranking Member Kildee, and members of the Subcommittee, thank you for inviting me to speak today. As you know, the phenomenon of illegal peer-to-peer ("P2P") file-sharing on college and university campuses has received mainstream attention. We have worked hard the past few years to address this issue with schools and find solutions. This being the Education Committee, I thought I would give you a report card on how we're doing.

The breadth of the problem of illegal file-sharing is clear. The ability of millions of computer users around the world to find and trade copyrighted works with each other has cost the entertainment industry billions of dollars and threatened our ability to succeed in the evolving legitimate digital marketplace. Many thousands of people across the country have lost their jobs. While we have achieved real progress in converting pirate networks into legal services and in deterring a sizable number of would-be illegal downloaders, the problem of illegal file-sharing remains a serious one.

And college and university students remain a VERY significant part of that problem. Each year, millions of students arrive on campus with time, high-speed computing networks, and a new favorite word: "free." Recent surveys indicate that MORE THAN HALF of the nation's college students frequently download music and movies illegally. Imagine the effect on our industry when our primary market decides it would rather steal than pay for the product it gets. Now imagine what happens when those students graduate and carry this behavior into the real world.

We have engaged schools across the country to recognize this problem and address it effectively. To be sure, we have seen a number of positive developments, and we are grateful to the many schools that have worked with us to address this issue proactively and constructively.

But, unfortunately, there are a far greater number of schools who have done little or nothing at all. We have found that many of them resist taking action, or do as little as possible in order to brush off further responsibility. This reality is evident in the fact that more than half of the students in a recent survey said they weren't even sure whether illegal downloads were against their college or university's policies.

We have heard one reason after another to avoid action. "It infringes on academic freedom," "Technological measures to prevent piracy would violate privacy," "We aren't the music industry's police," "You need to change your business model." Maybe these are real concerns. But to me at least, they've begun to sound like excuses.

We believe in academic freedom. But academic freedom is not the freedom to steal. Allowing illegal file-sharing is antithetical to any educational institution's objective to instill in its students moral and legal clarity. Colleges and universities are in the education business, preparing young adults to succeed in the world. No administration would teach its students that stealing is okay. But when a school fails to act, it is teaching. Looking the other way when students engage in illegal activity on its system sends a message—and it's the wrong one.

Moreover, the same methods we are asking schools to use to detect and control illegal file-sharing are already being used by many of them. Administrators regularly check their networks for the existence of viruses and other threats. The products and services available for detecting illegal file-sharing are no more intrusive. Audible Magic, for example, offers a CopySense appliance that eliminates infringing transmissions only, without interfering in any way with non-infringing P2P transmissions. This product has been available for use for some time. Just last week, the Chronicle of Higher Education included a pull-out advertisement from Audible Magic explaining the benefits of its technology. We are not asking schools to spy on the contents of students' communications. We are simply asking them to use available technology to recognize and stop the transmission of infringing works. The products are out there; why are they being used so rarely?

We do not expect schools to be the music industry's police. But when schools claim no obligation to help us, while simultaneously refusing anyone else the ability to enforce their rights themselves, where does that leave us? This is particularly true for activity occurring within a school's internal network. Illegal file-sharing on Local Area Networks, or LANs, is nothing more than piracy rings on a school's home turf, and it is unclear why any administration would want that kind of activity clogging up its network. An April 2006 letter from RIAA and MPAA informed dozens of

schools of our awareness of such illegal LAN-based activity. We are also aware of "hacks" to otherwise licensed and legal applications, such as "myTunes" and "ourTunes," which allow users to acquire songs from others' iTunes collections without paying for them. If schools insist that others deal with it, we'll assume responsibility for looking for infringers. But schools can't have it both ways, washing their hands of the problem, yet refusing to help us address it ourselves.

The entertainment industry has worked hard to change its business model to embrace the Internet. Over a few short years, despite numerous obstacles, we have managed to establish a vibrant online marketplace where students can legitimately acquire the music they desire. But this marketplace is continuously challenged by the toleration of illegal file-sharing. The fundamental assumption that the availability—and, indeed, prevalence—of illegal file-sharing makes it acceptable, and that content owners must adapt to accommodate it, is bogus. Claiming that "everyone is doing it" doesn't fly for plagiarism. Why should it for illegal file-sharing?

The implicit message we get from university administrators is, "It's not our problem." Some have even said this explicitly. I believe this view is shortsighted and misguided. It IS their problem. Universities are among the most significant creators of intellectual capital in this country. Intellectual property is vital to them—to their revenues, to their curriculum, to their culture of thought and discovery. If intellectual property is disrespected, what does that say about the value of the ideas so fundamental to higher education?

It's their problem because it's their bandwidth that's being abused. It's their system that is being used to serve up content to illegal downloaders all over the world. It's their network that is being compromised through the introduction of viruses, spyware, and other online threats. It's their workforce and infrastructure that is being used to respond to infringement notices and engage in disciplinary proceedings. Tens of thousands of these notices were sent during the past two school years and this year we intend to ramp up the program considerably.

It's their problem because it's THEIR students who are exposed to viruses, compromised data, and, yes, the threat of being sued. Students at 132 schools have been sued since March 2004, and we recently informed hundreds of schools that we would soon be announcing a new university enforcement program that will focus on students who ignore warnings and continue to engage in illegal file-sharing.

And what about when students graduate and enter the work force? A recent study found that 86% of managers and supervisors consider illegal file-sharing attitudes and behaviors when making hiring decisions, and nearly a third would "probably or definitely" reject a candidate who had "lax attitudes toward illegal file-sharing in the workplace." Aren't schools doing their students a disservice when they fail to prepare them for this reality? Even students themselves recognize this missed opportunity. Just last week, an Ithaca College editorial complained that the college was merely addressing illegal downloading by giving warnings, and thus, "ignoring the root of the problem: that students must understand the legal and ethical problems intrinsic in downloading and be prepared for the consequences of file sharing beyond the world of judicial referrals."

It is time for schools to step up to acknowledge the problem and join us in addressing it properly. Of course, there are numerous ways in which to do so, which we outline below.

Education

Education on the value of intellectual property and the problems with illegal file-sharing is fundamental for any institution wanting to deal with piracy on its campus. Such educational content may appear in the form of brochures, flyers, websites, emails and letters from top school administrators, lectures, panels, and classes, among others. The material should be presented for students and parents at orientation, and throughout the student's enrollment. The following are some examples of steps schools can take toward educating students about illegal file-sharing and copyright infringement generally:

- Institute Acceptable Use Policies that clearly outline the appropriate use of school resources. Such policies should illustrate unacceptable behavior, including illegal file-sharing, and provide details on penalties imposed for failure to abide by such regulations. A comprehensive policy, however, is only as useful as it is accessible; administrations should conduct surveys or otherwise ensure that students (and others) are able to find them, including on the school website.
- Include information on copyright, piracy, and illegal file-sharing in orientation and other materials.
- Inform parents, through letters and at orientation, of the seriousness of copyright infringement and the penalties imposed, both legally and academically, for violations. Encourage them to discuss the risks with their children.

• Require students to pass a quiz about P2P and piracy before allowing access to the school's computing network. This educates the student and provides documentation negating any claim of lack of awareness.

• Engage students by incorporating discussion of illegal file-sharing on school websites and radio stations, and in papers and classrooms.

• Launch pervasive and visible anti-piracy campaigns using posters, brochures, banners, videos, fliers, etc.

• Send students periodic emails directly from the President/Provost/Dean to remind students that the school takes copyright infringement very seriously and to indicate the seriousness of any offense.

University administrators can also preview and order an informative video, designed to help teach students how to stay safe and legal when downloading music, by going to www.campusdownloading.com. Four focus groups were conducted to test concepts and tone with high school seniors prior to developing the materials, and the feedback so far from university administrators has been positive.

While it is indeed beneficial to offer an in-depth look at copyright, P2P, and illegal file-sharing, the first step in any educational campaign is to express concisely and unequivocally that copyright infringement, through physical or online piracy, is illegal and simply wrong. Of course, any message conveyed should be short, direct, easy to understand, and emphasized repeatedly.

It should be noted that we are aware that many students arrive at college with a firm grasp of how to engage in illegal file-sharing and a less-developed understanding of why they shouldn't do it. With this in mind, the entertainment community has embarked on several initiatives to engage primary and secondary school students and prepare them for participation as a responsible adult. For example:

• Music Rules! is a free educational program, developed by Learning Works, that informs students in grades 3 through 8 about the laws of copyright and the risks of on-line file-sharing, while promoting musical and artistic creativity.

• i-SAFE has created a nationwide assembly program on intellectual property that includes four cutting-edge videos and on-line lesson plans. The assemblies and lesson plans are designed to foster a greater appreciation for the creative process behind the music, teach students how to stay safe and legal when downloading music, and highlight the consequences of illegal downloading.

• The Close Up Foundation has developed a supplemental textbook to help teachers create a classroom dialogue on issues related to the growth of on-line activity, copyright laws, fair use, and the impact of piracy and legal alternatives.

Enforcement

As with any education campaign, it is necessary to ensure adherence to rules and regulations through consistent and meaningful enforcement measures. The administration should remind students that entertainment and other content industries have sought to enforce their copyrights through lawsuits against students and other individuals. Students clearly are not immune to legal action, yet, there undoubtedly remains a feeling by some of "safety in numbers" inherent in a nationwide campaign. The threat of disciplinary action by schools, however, resonates locally and quickly diminishes any sense of security (and anonymity) mistakenly felt by students.

School administrations should understand that school-wide Acceptable Use policies regarding online piracy and the appropriate use of school resources are not merely for the benefit of copyright owners. Such rules and regulations, just as with those regarding hacking and other violations, safeguard the security and integrity of the school's computing system. The unauthorized use of file-sharing applications and P2P networks threaten such systems with increased bandwidth costs, as well as with malicious viruses, worms, Trojan horses, and spyware.

While setting out and implementing a strict enforcement program is important, effective technical measures can stop the vast majority of piracy before it takes place. This reduces the burden of processing potentially dozens of DMCA notices and directly targets the problem of student piracy on university networks.

Technological Measures

In the much-publicized Grokster case last year, the U.S. Supreme Court itself stated that "there is evidence of infringement on a gigantic scale" on P2P systems, and it has been estimated that over 90% of the use on these systems is infringing. With such a disproportionate amount of P2P use going toward illegal purposes (and given the threat to network security and individual PCs from viruses and other malware), it seems entirely appropriate to restrict the illicit use of P2P systems, and to allow use of such applications only in justified circumstances.

Certain universities have chosen to prohibit the use on their networks of P2P applications known to be used overwhelmingly for illicit purposes. For example, the University of Florida developed cGrid (originally called Icarus), a network-based system that is flexible enough to provide the whole continuum of remediation options, whether through education, selective or complete blocking, track by track restriction, etc. The application, which is being commercially marketed under the company name Red Lambda, may be fully customized to manage adherence to a university's own policies. The cGrid architecture supports other capabilities to address the full range of security management issues including: viral and worm attacks, spam relays, spyware, botnets, and other outbound malicious behavior. All of these can have huge effects on the operation and cost efficiencies of the university network.

While exceptions can be made for appropriate use of such applications, it is not surprising that the University of Florida has received very few requests for permission to use these P2P systems. Indeed, it is questionable whether such P2P applications are at all necessary (or beneficial) in an academic environment. Faculty and students remain able to share and distribute academic material through such secure and reliable means as websites, FTP, and email. In addition, there are legitimate and licensed P2P networks emerging-such as Penn State's LionShare-which are dedicated to, and specially configured for, academic environments.

Some statistics tell the whole story. The University of Florida reports that before implementation of cGrid, nearly 90% of the school's outbound bandwidth was being used for P2P. After deployment, the school experienced an immediate 90% drop in illicit P2P users and has since estimated a network and workforce savings of hundreds of thousands of dollars.

Blocking unauthorized P2P applications on campus is the easiest and surest way to reduce online piracy on school systems. For those schools that do not find the implementation of programs such as cGrid appropriate, however, another option is to install a network filtering system. Rather than prohibiting all P2P or other applications based on a particular protocol, these systems, such as Audible Magic's CopySense, filter out just the infringing transmissions, by matching them against a master database of copyrighted works. CopySense has been implemented at over 60 schools, including such schools as Texas A&M—Kingsville, Tulane, and Bentley. The technology uses an audio fingerprinting technique, providing the university network with the ability to identify, filter, and/or block any registered copyrighted file, and can find a match over 99% of the time with no false positives. While CopySense and similar applications are content-based filters, this technology is in fact no more intrusive than technologies most schools are already employing to scan for viruses and other malware. As a Coppin State IT administrator notes, "The CopySense Applicance acts in a surgical manner, taking copyright infringement out of the picture and doing it without interfering with privacy or academic freedom."

Many schools use a bandwidth shaping tool such as Packeteer. The schools that have implemented this approach ratchet down bandwidth allowance during the peak hours of the day, then provide increased bandwidth at night. While this process may indeed reduce infringement to some extent, it unfortunately also can send the message that illegal file-sharing is acceptable as long as it's done at night. By sanctioning such "windows of infringement," schools do little to discourage students from engaging in piracy (and, of course, fail to impart a sense of ethical behavior and appropriately prepare their students for life after college as moral and law-abiding citizens). In addition, given the relative small size of music files, most limitations on bandwidth use may still enable the trading of hundreds and thousands of copyrighted songs, affording but a limited deterrent against illegal file-sharing.

Of course, the costs associated with implementing any one of these technological measures depends on a school's network architecture. However, as mentioned above, administrations should keep in mind that the cost savings from implementing a technological measure may very likely outweigh the expense incurred in implementing them. These expenses include reductions in bandwidth utilization, IT infrastructure, and responding to DMCA notices.

I also note here that implementation of a network technology may likewise assist in the reduction of infringement on a school's intranet, including through illegal file-sharing over LANs and through hacks such as myTunes or ourTunes.

By employing technologies that prohibit unauthorized P2P use on campus or, at least, make it harder for students to infringe on such systems, schools are laying the groundwork for one more component of a proven anti-piracy campaign: the successful implementation of a legitimate online service on campus.

Legitimate Online Services

In a few short years, the number of schools partnering with a legitimate service has grown to more than 140. Services such as Cdigix, Napster, RealNetworks's

Rhapsody, Ruckus, and Yahoo! offer students a wide array of entertainment content in a fun, safe, and legal way, and help to build a sense of community on campus. Again, any cost savings resulting from the partnership may very well outweigh the costs associated with failing to provide students an alternative to abusing school resources in search of illicit content. While we applaud any action that provides students an alternative to illegal file-sharing, we note that adoption and sign up rates of legitimate online music and movie services by students is often highest when the school has first reduced the availability of illegal file-sharing, thus developing the thirst for legal content. Services and schools alike have reported particularly positive results from this staggered approach. (Experience has also shown that it may be unwise to implement both network filtering technology and a legitimate online service simultaneously, as students tend to blame the online service for the cutoff in illegal file-sharing.) Without first addressing the illicit use of P2P systems on campus, it is extremely difficult for legitimate services to take root. If students have unfettered access to enormous amounts of pirated content, no service-regardless of pricing or content offerings-will be successful in that environment.

These and other measures have been highlighted by organizations such as the Joint Committee of the Higher Education and Entertainment Communities. The Joint Committee was formed in December 2002 to discuss and address matters of mutual concern between higher education institutions and the content community, including the growth of P2P network use on college campuses. Over the past four years, the Joint Committee has succeeded in raising awareness about illegal file-sharing and has assisted colleges and universities in finding solutions that work for them. It issued a report on "University Policies & Practices," as well as a white paper on student liability for illegal file-sharing on campus.

The issue of illegal file-sharing has also been taken up by both state and federal legislatures. Governor Schwarzenegger in California issued an Executive Order in 2004 requiring the State Chief Information Officer to develop a statewide policy prohibiting illegal P2P use on government computers. The Order requested the University of California and the California State University System to comply with the policy. Similar Executive Orders have been signed by Texas Governor Rick Perry and Illinois Governor Rod Blagojevich, requiring a statewide policy for use by each state agency, department, board, and commission which prohibits unauthorized or illegal use of P2P software programs. The Orders require the appropriate Department to assess the availability and cost effectiveness of technologies that can prevent the deleterious effects of such P2P applications.

Reflecting this trend on the national front, the U.S. Senate passed a resolution in May 2006, recognizing that "institutions of higher education should adopt policies and educational programs on their campuses to help deter and eliminate illicit copyright infringement occurring on, and encourage educational uses of, their computer systems and networks."

We still consider schools to be partners on this issue, and thank the number of administrations that have sincerely addressed the problem. We now ask the many others to step up to the plate, to recognize that they have an important role to play here, and to exercise moral leadership. To quote Penn State University President Graham Spanier from a Philadelphia Inquirer op-ed piece on file-sharing, "Stealing is not among our values." Schools may not subscribe to that paper, but they certainly subscribe to that view. Now is the time to show it.

Thank you.

Chairman KELLER. Thank you for your testimony, Mr. Sherman. Ms. Elzy, you are recognized.

STATEMENT OF CHERYL ELZY, DEAN OF UNIVERSITY LIBRARIES, ILLINOIS STATE UNIVERSITY

Ms. ELZY. Good morning, Chairman Keller, Congressman Kildee, members of the committee. I am Cheryl Elzy, Illinois State University's dean of libraries and DMCA agent.

Thank you for your invitation to appear today to share with you our plans to combat illegal piracy on our campus. I will briefly describe our Digital Citizen project, outline for you why we feel our approach the illegal downloading issue has been unique, and share how we feel this committee can help us.

Illinois State University is a comprehensive institution of about 20,000 students and 700 faculty, offering a small-school feeling with the opportunities of a large university. Located in the great corn desert of middle America, we are a typical campus, with great students, great faculty, never enough money or space or time.

Like every other campus across the country, our students, faculty and staff are not bad people, but dozens of studies in recent years have shown that people on college campuses everywhere share digital materials of all kinds. Unfortunately, a good deal of it without copyright permission.

As the DMCA agent, I sometimes get 20 to 30 complaints a day. In 2005, I received nearly 500. When we notified students of complaints against them, responses ranged from threats to tears. A pivotal moment for me personally came when we received four subpoenas for information on some of our students who were going to be sued for copyright infringements. I think I felt the situation more deeply because I myself have a son attending Illinois State.

What would I think or how would I react if this was my child? The truth is, I would be raising hell with the university for not protecting my son. Why did they let him do this? Why wasn't someone watching? We knew we needed to stop just reacting, but what could we do to protect our students and police ourselves, while still complying with the law?

A rather simple solution to us seemed to be, why don't we just go ask them what they want us to do. Them, in this case, was RIAA. So we did. Later, MPAA joined the conversations, adding even more scope, depth and encouragement to the discussions. The association suggested the metaphor of a three-legged stool, with a program of policing and enforcement, of a legal online media service, and of education.

What ultimately emerged at Illinois State after 18 months of discussions and hard work is more of a six-legged bench, as we added three more legs to give the program more foundation and strength. Education expanded and actually rose to the top of the list, and enforcement evolved. The idea of one legal media service grew to incorporating five legal sources of media covering all portable player platforms.

Beyond that, Illinois State University's Digital Citizen project includes components tackling easier and more definitive guidance on educational fair use in classrooms, coupled with easier avenues to copyright permissions, development of teachable moments on copyright, and legal use of media for the K-12 audience. Knowing that a carrot is nearly always more effective than a stick in getting attention, we are exploring a system of rewards for those who participate.

We are envisioning a program of legal downloading services that we are calling Bird Trax, a name derived from Illinois State's athletics team name, the Redbirds. Participants and nonparticipants alike will be subject to the self-monitoring and enforcement of copyright protections as we continually work to eliminate all known avenues for illegal downloads.

We won't be able to capture every incident, but we hope to identify most and by offering an opt-in program, if the network user is not someone who downloads, he or she doesn't have to participate.

However, if the user tries to download a signatured electronic file, the activity will be stopped.

Managing copyright complaints is costing college campuses tens of thousands of dollars each year, perhaps more in staff costs and infrastructure. But Bird Trax won't be financed by tuition or student fees, nor will it be free. In today's market economy, we feel users need to be conditioned to pay for what they use, so there will be charges attached to joining the program. Digital Citizen's revenue stream will come from modest participation charges.

Our hope is that Illinois State is to serve as a kind of Consumers Report on the digital media scene, testing, reviewing and implementing new services as they emerge in the market, while serving as a resource to colleges and universities on the education side of the equation. We absolutely know we very well may prove what does not work, as much as what does.

We are working productively and positively with so many agencies, associations and vendors who are engaged in this sometimes contentious area, something we have learned is unique to ISU. In addition to our RIAA and MPAA, we are working with Educause and the American Council on Education, and with some of the leading vendors in this field, such as Audible Magic, Red Lambda, Ruckus, Cdigix, Pass Along Networks, XM Satellite+Napster, and Apple. We have been both embraced and ignored by some of the best and biggest in the industry.

In conclusion, as we prepare for the full launch of our Digital Citizen project later this fall, we know we have far to go. Illegal downloading of music, videos, movies and games is a symptom. It is not the problem, nor is technology the answer. The problem is changing behavior, almost changing a culture.

To that end, Illinois State can have a significant impact on peer-to-peer behaviors in another more important way. Our teacher education grads number in the top five in the nation. Almost 1,000 new teachers walk out our door each year, and each teacher will influence the lives of at least 20 to 30 students each year. If our graduates can learn good digital behaviors while on campus, they will imprint that ethical and legal perspective on perhaps 20,000 children annually.

ISU's Digital Citizen program can be the pedal in the pond, with its impact having a dramatic ripple effect in classrooms around the state and the nation. That is not to say that Illinois State has all the answers. We certainly do not. We know that there is no one-size-fits-all solution for colleges and universities.

The long-term goal of ISU's Digital Citizen project is to create a nationally recognized program that is cost effective, based on comparison and research of the products available, and replicable on other college campuses. If a central place for education, conversation, trial and admittedly error can get a foothold, then everyone benefits.

Chairman KELLER. Ms. Elzy, let me get you to wrap up there because we are a couple of minutes overtime. OK?

Ms. ELZY. Your committee can help us in at least four ways. Your assistance in providing for funding for the kind of practical research and open-book results we suggest can be dramatic. Your

help is essential in emphasizing development of even more practical materials for the K-12 classrooms.

Your support is crucial in insisting that the entertainment industry and higher education associations join us in a national conversation on and understanding of practical fair use and copyright permissions for libraries and classrooms. And finally, your programmatic and financial support for comprehensive efforts like the Digital Citizen program will be invaluable.

Thank you very much.

[The prepared statement of Ms. Elzy follows:]

Prepared Statement of Prof. Cheryl Asper Elzy, Dean of University Libraries and Federal Copyright Agent, Illinois State University

Chairman Keller, Congressman Kildee, and Members of the Committee: Good morning. I am Cheryl Elzy, Illinois State University's Dean of University Libraries and our designated agent for notification of claims of infringement under Section 512(c) of the Copyright Act. In other words, I am the DMCA agent on campus. Thank you for the invitation to appear today to share with you Illinois State University's plans to address peer-to-peer downloading on our campus network by students, faculty, and staff. The overall project has come to be known in our discussions with various groups and internally as the Digital Citizen Project. I'm using this opportunity to testify today to tell you Illinois State's story of how this program evolved and what it involves.

After listening to the introductions of my illustrious and powerful colleagues here at the table today and then inevitably comparing my somewhat different set of credentials with theirs, you may inevitably be asking yourself why I am here. I have asked myself that very question many times over the last several days, actually. But why a librarian? Why not a Chief Information Officer or some other technology expert? Why is a librarian the campus DMCA agent? To us at Illinois State University the answers to all those questions make perfect sense. The four project leaders for Illinois State's Digital Citizen Project represent diverse perspectives. We have an academic CIO, a student technology director, a library dean, and a nationally known technology consultant. My operation interprets literally dozens of copyright questions almost daily. Copyright expertise on my campus, and on a lot of campuses across the country, is most intensively developed in the library. While copyright protects intellectual property, it is my library's job to put that property, that information, into the hands of the students, teachers, researchers, and casual readers who need it. Technology is only a means to an end in a whole lot of ways. Illegal peer-to-peer downloading is NOT a technology problem. It doesn't have a "technology" solution. It is about legal access to materials or information resources. It is connecting users with the right tools. It is education and changing behaviors. How we do that is what we have been exploring for the past eighteen months and will describe for you today.

Illinois State University as an Institution

Illinois State University is an institution of 20,261 students with 17,842 of those being undergraduates. The first public university in Illinois, Illinois State University was founded in 1857 as a teacher education institution, a tradition still very much in evidence today as Illinois State is among the top five producers of classrooms teachers in the nation and has more alumni teaching in classrooms today than any other university in the country. Our institution is a comprehensive University offering more than 160 major/minor options in six colleges delivered by around 700 outstanding faculty.

We embrace as our core values individualized attention to the unique educational needs and potential of each student placing the learner at the center of our teaching and research; public opportunity for an accessible, affordable education through high-quality programs, faculty, facilities, and technology; active pursuit of learning inside and outside the classroom; diversity underpinning a sense of community and an informed respect for differences among our faculty, students, and staff; and creative response to change through innovation in curriculum, pedagogy, research, creative activities, and public service. Students benefit from "the small-school feeling they get from this large university, and the incredible opportunities they encounter." (Yale Daily News Insider's Guide to Colleges, 2000)

Located in central Illinois about 100 miles south of Chicago, we attract first-generation college students; urban students who want to get away from home, but not

too far; and downstate learners from large and small communities. As you might expect in the heart of farm country, the farm boys from the ag fraternity empty out on fall harvest weekends to help in the fields. Statewide and Chicago loyalties dictate that the halls across campus are bare when the Bears are on TV. Our football team is currently ranked Number 6 nationally in I-AA, and our student scholars are winning national awards for physics, actuarial science, civic engagement, and much more. We enjoy the highest retention rate in our history, along with the highest incoming GPA's and ACT scores. There is a lot of construction going on across campus that we both celebrate and suffer through. The campus has been selected as one of just eight universities nationwide to implement a student-centered political engagement initiative under the American Democracy Project sponsored by the American Association of State Colleges and Universities. Despite continuing and severe budget problems, times are good at Illinois State University. We are proud that Illinois State's fortunes and reputation are on the rise with ambitious goals and accomplishments at the state, national, and international level.

Getting at the Problem

The point I want to make here is that we are a typical campus: great students, great faculty, never enough money or space or time. That's just exactly what virtually every other representative of every other campus would tell you. Our faculty teach, research, innovate, and share experiences. Our students like to do typical things: interact with professors they admire, volunteer for a lot of service projects, try to avoid studying whenever possible, once in a while maybe party a little too much, and, of course, listen to music and watch movies and videos. All in all, we have a terrific faculty, staff, and students.

Which brings us to the point of why you've asked me here today. Like every other campus across the country, our students, our faculty and staff, are not certainly bad. They don't carry off armloads of CD's from the local music store. They aren't ripping through Blockbuster with dozens of movies under their jackets. But dozens of studies in recent years have shown time and again that college students everywhere share music, a good deal of it without copyright permission. Add to that movies, videos, and television programs. And games. And software. There are some teachers on campuses everywhere bootlegging home copies of media to use in classrooms. Yes, I'm making some sweeping generalizations here, but you understand my point. Why would good people do such a thing? What leads them to think this is okay when it's not? Ethically, financially, legally or morally.

My own simple answer, in part, is that the technology today makes it easy. But perhaps a more accurate answer is that, for the most part, they don't really know any better or don't care. All their friends and colleagues do it. They think it's not hurting anyone really. It's anonymous, quick, direct, and easy. To put this very, very simplistically, "it's just once, just one copy." And then another and another. But there is no one easy solution, no shrink-wrap fix that will make this problem or the DMCA complaints go away. The solution to this overwhelming and all-pervasive problem lies in education coupled with enforcement of existing laws and direct avenues to legal ways of getting the tunes, the tracks, the games, and the videos that are an integral part of today's student and faculty lives.

We all know, or at least suspect, the scope of the problem. It's national. It's worldwide. It's bigger than we'd first imagined and a significant problem, we think, for higher education. Frankly it's a problem at all levels of education, including K-12. You've been provided lots of numbers from lots of sources and from practically every perspective. You don't need me to add to your information overload. You know there is a problem with students, and in some respects, faculty and staff, downloading media for which they have not paid. My purpose here today is not to talk about the global landscape or the national picture. I'm here to share what one university in the great corn desert of Middle America is trying to do to address not just the problem of illegal downloading, but its comprehensive root cause.

That is not to say that Illinois State has all the answers. We certainly do not. We don't know what works because, after eighteen months of difficult and time-consuming work, we are only just publicly launching the Digital Citizen Project. We don't have a lot of results to report yet because we're just gearing up. But working with the associations represented here today [the Recording Industry Association of America and the Motion Picture Association of America], consulting with leading professional associations like EDUCAUSE and the American Council on Education, and finally collaborating with the nation's principal network monitoring developers as well as legal music and video source corporations [Audible Magic, Red Lambda, Apple, Cdigix, Ruckus, Pass Along Networks, and XM Satellite Radio+Napster], we have designed what we feel is a comprehensive program to address downloading issues. We've even gone beyond our own campus to invite an academic colleague,

Dr. Samuel C. McQuade III from the Rochester Institute of Technology and a nationally recognized expert on cyber crime, to join our research and investigative team later this fall to explore the social and psychological aspects of illegal downloading and compare results from our two institutions.

More about the Digital Citizen Project in a bit, though. Let's back up to how we started eighteen months ago.

The Background of Illinois State's Digital Citzen Project

As the University's DMCA agent, I'm the one who formally receives any copyright complaints filed by individuals, associations, or corporations. Like any good administrator, I delegate. I have a group of exceptional colleagues who do the actual work of managing the complaints: network engineers, appropriate use coordinators, paralegals in the student judicial office, copyright experts within the library. But it's my name out in front.

As the DMCA agent and as a librarian whose core mission is to provide access to information and materials my university community needs, I became increasingly dismayed a couple of years ago as the number of copyright complaints began increasing dramatically. In 2001, 2002, and 2003 we received a few scattered complaints throughout the year, but nothing particularly overwhelming. By 2004 Illinois State was seeing a little more DMCA activity, but in 2005 everything just seemed to explode across our screens. Sometimes there were days when we were getting 20 or 30 notices a day, several days a week, primarily from entertainment industry associations. In the fiscal year ending in June 2005, Illinois State University had received 477 formal DMCA complaints from the Business Software Alliance, the Entertainment Software Association, Sony, Fox, NBC, HBO, MPAA, and RIAA. The problems on campus were stemming from activity in the residence halls, Greek houses, other places on campus, and dial-up access. We even had the dubious distinction of managing complaints against our university's Office of Advancement, the Rec Center, and even some of our own technology operations that were hijacked by outside programs due to some worm-infected machines. Staff time to manage these increased exponentially. Our student judicial office saw much heavier traffic referred to them for discipline. Follow-ups and tracking seemed to take forever.

When we followed DMCA procedures and contacted users about their illegal files, responses from students ranged from tears to threats. Most students complied quickly when contacted. A few had complaints filed on materials that they actually owned legally. A few more shot back that "you can't look at my stuff", demonstrating a quaint naiveté about what can and can't be tracked on the Internet. "My brother's a lawyer, and he'll sue you" was another memorable response. A common come-back, and a somewhat concerning one frankly, was "I didn't know I had anything like this on my machine, honest." Did they really not know? The tears and fears about how to clean up their computers really hit us hard. It was frustrating that we could not respond to the students who begged us to "scan my machine to make sure I'm okay." Since we did not know how the complainants' search engines navigated our user files, we couldn't replicate that kind of search. We couldn't help our own users. Literally.

Naturally we began asking questions among those working in the appropriate use areas on campus. Why the sudden rise in numbers? Were our students doing more illegal downloading or were they just getting caught? Were we somehow targets of new enforcement campaigns? Why the rise at universities when the problem is so much more widespread? What was all this costing us? How much costly technological bandwidth was this taking besides the obvious investment in staff? How could we possibly be satisfied with simply reacting, instead of being proactive on the part of our students?

The pivotal moment for me personally came when we received four subpoenas for information on some of our Illinois State University students who were going to be sued in federal courts for copyright infringements. At that moment my campus was faced with decisions with no options particularly attractive. Do we comply (as other campuses had) or do we fight release of the information (as still other campuses had)? Do we warn the students about the subpoenas or do we stand aside? I think I felt this whole situation more deeply because I myself have a son attending Illinois State. What would I think or how would I react if this was my child? The truth is I'd be raising hell with the University for not protecting my son! Why did they let him do this? Why did they make it possible for him to get into this mess? Why didn't they block this kind of thing? Why wasn't someone watching?

The university complied with the subpoenas and provided the information. Then we stepped back to think and to plan. David Greenfield, who directs ISU's Student Technology Support Services and is the University's appropriate use coordinator, and I sat down with our technology consultant, Warren Arbogast of Boulder Man-

agement Group, to talk about how we could make this problem stop. What could we do to protect our students while still complying with the law? How could we educate and direct our students? What could we do to police ourselves?

The rather simple solution seemed to be, literally and in the exact words I used back in February a year ago, "Why don't we go ask them what they want us to do?" "Them" in this case was the Recording Industry Association of America. So we did.

Our consultant, who is based here in Washington, DC, went to the RIAA offices on DuPont Circle to pose our question. The fascinating thing looking back is that, initially, he was met with momentary silence. It certainly was not that RIAA didn't have any answers. It was just that no one had asked them the question out of the blue before. Indeed no institution had come directly to them unsolicited before. The great news is, though, that RIAA was willing to talk. A terrific and productive dialogue began almost immediately. That was the beginning of a great collaboration 18 months ago.

In the beginning phases of what came to be this Digital Citizen project, being trained scholars and researchers, we scanned the literature and technology landscape for what other institutions were doing to combat illegal downloading and reduce DMCA complaints. As complex and diverse as our institutions of higher education are across the country today, we expected that the approaches to the peer-to-peer file-sharing issues would be, and continue to be, equally complex and diverse. We were right. Today more and more colleges and universities are taking significant steps to tackle the illegal downloading issues. But judging by what we could find in the professional literature eighteen months ago, the answer appeared to be: not much. We knew anecdotally that some institutions were actually throwing the complaints away. A number of institutions were delivering educational or public service campaigns, often with a unique local twist. There were a few that were putting up a single legal music or movie service and hoping students, in particular, would be attracted to it. Recently, Drexel University put up two legal music services rather than just one, offering both iTunes and Napster to their campus community. A few other universities simply shut down all bandwidth available for peer-to-peer activities of any kind, legal or not. Some reported limiting the amount of bandwidth available to peer-to-peer applications. All of these programs reported little or varying degrees of success. From our perspective, most universities and colleges seemed to be waiting for someone to prove to them that the problem was real and needed attention. Others were waiting for "the" solution.

Illinois State University's Digital Citizen Program

Back to the "what do they want us to do" question, though. Our colleagues at RIAA did ultimately provide us an answer. Their ideal program to address downloading was described as a "three-legged stool". Each leg requires the other to be successful, to be balanced. Those three legs were policing and enforcement of the network, providing legal options for digital media, and education. That's actually a very easy concept to grasp when described that way. But as our conversations continued over the ensuing months, with the Illinois State Digital Citizen Project leaders coming to Washington, DC for extensive meetings hosted by RIAA, and with several members of the RIAA executive staff coming to Illinois State's campus for day-long meetings with a variety of campus constituents serving on an advisory team, the three-legged stool evolved into something more closely resembling a six-legged bench.

This new concept incorporated the education, enforcement, and legal services aspects from early discussions, but subtle changes were emerging. Education was now first, not last. That was important to us as educators. Added to the mix were some unusual new features, some additional "legs". Near and dear to me as a librarian first and above all was a more clear definition of fair use of media in the classroom along with easier paths for copyright clearance of media we needed to use. We felt that faculty needed to model appropriate, legal behavior for their students, so we needed to make legal fair use as easy as possible. Further, all of us working on the Digital Citizen Project knew absolutely that downloading behaviors start much earlier than when a student arrives on a college campus. Their behaviors are learned in high school or before, at home, at school, and at play. K-12 education needed to be addressed. Finally, to entice students to a comprehensive program of legal, ethical online behavior it would be extremely desirable to be able to offer some sort of rewards for those who participated. So we ended up with our six-legged bench: education/public relations, institutional self monitoring and enforcement, an array of downloading services that are legal rather than only one, a curriculum of K-12 teachable moments at point of need, establishing legal/fair use in the classroom and beyond, and possible rewards for students participating as good digital citizens.

Overall, the long-term goal of ISU's Digital Citizen Project is to create a nationally recognized program that could be cost-effective, that is based on comparison and research of the products currently available, and that is replicable on other college campuses. We are far from there, but we're laying a solid foundation. And we absolutely know that there is no one-size-fits-all institutional solution. Not at all. But if a central place for education, conversation, trial, and admittedly error can get a foothold, then all of higher education benefits.

The education "leg" of the bench: In tackling the "leg" on education and public relations, we worked to build on some programs we already had in place. Illinois State has always offered technology orientation and educational programs for students, especially those new to campus. In the past few years, more time and attention has been placed on the ethics and practices of downloading. In Fall 2005, we supplemented campus-developed material with videos supplied by RIAA of "named" artists speaking on the subject. For Fall 2006, we utilized the new *www.campusdownloading.com* material including a segment of the video along with live student testimonies, as well as online and clicker-based surveys and educational modules. For a different perspective, our technology staff also used the new video material with technology student workers in a focus group setting. Future educational efforts will include spreading the message through library information literacy instruction and will be reinforced in the university's Tech Passport program. We will explore ads and public service announcements in student-targeted publications, web sites, campus TV and radio stations, and beyond. Eventually point-of-use software with educational modules on the ethics of Internet behavior will be utilized.

The self-monitoring and enforcement "leg" of the bench: Illinois State's network engineers are in the last phases of testing newly developed commercial monitoring and enforcement software that will be managed and operated by campus personnel for our campus community. This monitoring software tracks the content of peer-to-peer file transfers as it enters or leaves the campus network from the Internet. The monitoring software is designed to stop downloading of copyrighted material while educating the user. This reinforces institutional policies that prohibit all types of illegal behaviors on our campus network, including illegal downloads. The software will scan network traffic automatically for the electronic signatures of copyrighted material and interrupt a network user's online transaction if it is suspected that the activity is illegal. It is very important to note that the software only scans against databases of known copyrighted materials. Those databases are very small right now, relatively speaking. Very, very early indications are that only about half of Illinois State's peer-to-peer traffic even has an electronic signature right now. Back to the user, though. He or she will be directed to legal avenues of downloading the desired item. The monitoring software also provides a bit of education and the promise of penalties if the user attempts further illegal downloads. The activity does not involve "reading" a user's email. It is simply a scan of network traffic that blocks files identified as copyrighted, just as we scan and block network traffic identified as containing viruses.

The legal downloading services "leg" of the bench: ISU's Digital Citizen Program will offer a menu of legal downloading services offering music, movies, and other media at reduced costs covering the spectrum of portable devices options rather than supporting just one make, model, or manufacture. This provides the research opportunity to compare and contrast services, provide feedback to vendors on desired or needed improvements in what they offer, and track how users are attracted to various services through the purest form of evaluation: their business. Providing more than one platform also eliminates the excuse that a user's MP3 player doesn't work with whatever service is offered.

We're envisioning a program of legal downloading services that we are calling "Bird Trax", a name derived from our Illinois State athletic teams' name, the Redbirds. Students, faculty and staff may elect to opt into this legal option for downloading. It's important to remember that all participants and non-participants will be subject to the monitoring and enforcement of copyright protections. There won't be an avenue on the Illinois State network for illegal downloads. We may not be able to capture every incident, but we should identify most. By offering an opt-in program, if the network user is not someone who downloads, they don't have to participate. However, if a user tries to download a signatured electronic file, the activity will be stopped.

Bird Trax won't be financed by tuition or student fees. It won't be free, either. In today's market economy we feel users need to be conditioned to pay for what they use, so there will be charges attached to participation. The program's revenue stream will come from modest participation charges. We're modeling this on our school's athletic participation card program where students purchase a card to enter

any number and types of athletic events. Students participating in the Bird Trax program will have access to the legal downloading services we're providing if they choose.

The K-12 education "leg" of the bench: Education, as said earlier, must start before students get to a college campus. However, asking any K-12 teacher to "teach" yet another course in their already full days won't work in our opinions. As an alternative, Illinois State University would like to capitalize on its nationally recognized College of Education and its K-12 lab schools on site to develop and test a K-12 curriculum with perhaps 50 or so "teachable moments" or learning modules to be utilized at the point of use. These might start the educational process on cyber ethics as early as 3rd or 4th grade. A teacher could incorporate a teaching moment or module on legal downloads of images, for example, when instructing young people on how to create Power Point presentations or slides.

The fair use "leg" of the bench: Similarly, teachers and professors need to model appropriate legal and ethical behavior. Current guidelines on educational fair use for media are unclear and hard to apply. While some in the higher education community like the vagueness and benefit from it because it leaves room for interpretation, others of us who work on the front lines really want some more specific guidance. Copyright permissions are very difficult to acquire. A classic concrete example emerged in the course of this project. Illinois State wanted to use some music video footage in one of its orientation programs in Fall 2005. We asked for a little help from our colleagues at RIAA, beginning the permission process in early April. We still could not secure permissions in August five months later, even with help from the very association that promotes legal use of media. If they can't get permissions in a timely fashion, then who can?

We have to make copyright permissions for in-class and academic use of pre-recorded music, movies, and television programs easier and faster. Ironically, this very issue came up here in the House Judiciary Committee last week as reported in CQ Today (September 20, 2006, page 15). There is or was a bill pending that would make copyright permissions easier to acquire for the digital music services. The bill (HR 6052) would "simplify the complex royalty system for the licensing of digital music, including music delivered over the Internet and via satellite radio." Can we not find a way to extend that simplification to libraries and educational institutions?

The rewards "leg" of the bench: To reward participants and encourage more participation in the program, Bird Trax hopes to offer incentives, rewards, carrots versus sticks, or whatever will work to keep them legal. While the dream might be to provide incentives such as free concerts, major movie premieres, workshops with noted artists, actors, and performers, or similar high-visibility events for those participants who have stayed legal through the year or the life of the program, more realistically we should at least be able to offer some free downloads, reduced subscriptions, or an array of vendor-related give-aways.

The Early Data

It is important to remember that we are only just beginning the research side of the Digital Citizen Project.

Downloading is a complex issue. Universities are complex operations. Deciphering technology is an extraordinary undertaking. Research is a complex task. To be effective, the Digital Citizen Project must be comprehensive. So the entire spectrum of what we're looking becomes exponentially complex.

In August 2005 we were able to test some monitoring systems that were just beginning to appear on the market. Using new monitoring hardware and software from Audible Magic for a short trial, we benchmarked a 17-day period in mid-August 2005 capturing a revealing snapshot of activity on our network. While this may seem like an odd time to collect data since the fall term was just starting, it was the point at which our partner company provided the program to capture the snapshot. Of the 13,000 computers on our network, only 26% used a peer-to-peer application, legal or illegal. That is a little less than 3,400 machines, a figure that is lower than any of us had expected. Of that figure, 97% of the traffic originated in the residence halls, indicating that we may be able to concentrate our educational efforts on those groups.

In April and August 2006 we performed studies similar to those of August 2005. In addition to trend information on network activity, bandwidth usage, electronic signatures, and content, these studies have also begun to yield some new data about darknets, which are peer-to-peer networks whose traffic remains on campus.

We also took the opportunity this summer to survey high school seniors who were coming to campus to register for classes at ISU. Notice, please, I'm not calling them college freshmen, but rather high school seniors. Their attitudes and behaviors had been established before any exposure to our campus. We probed their use of digital

media and what kind of mobile players they used. Of the 217 responding students, 89% reported they had a portable music player. 67% of those devices are Apple iPods with the rest scattered among 26 different kinds of players. 93% played music and 51% watched movies/TV/videos from their computers. When asked how these incoming students acquired their music and movies, the responses demonstrated an extreme range of sources from actually buying CDs to commercial services like iTunes. Various P2P networks such as Limewire, Bearshare, and Bit Torrent were mentioned by 39% of the seniors. While not testing the legal vs. illegal use of these networks, the naiveté we've seen elsewhere shown through as we found comments such as "Not legally", "pirate from XXXX" or "illegally downloaded". To us, this absolutely shows that our new students come with habits entrenched in a digital lifestyle. That is why the K-12 component of our program is so essential to any effort that seriously, and effectively, addresses illegal downloading activities in America's higher education community.

We quite honestly have mountains of data to analyze before we even formally start the Digital Citizen Project. We anticipate sharing some of our early findings at the upcoming EDUCAUSE national conference in Dallas on October 10. We would very much like to have had the data available and ready for today's hearing, but our time grew too short for an accurate, understandable review of the results. And it is obvious that we will accumulate far more hard data. We hope to soon hire research assistants to help us analyze the massive amounts of information we have if we can secure some outside funding. But, because our discs full of data promise to grow significantly with each passing day, analysis and management becomes part of the problem of running this project, which means finding enough staff time and personnel dollars to correctly run and research our results.

What's Unusual About ISU's Digital Citizen Project?

The multi-faceted, comprehensive approach that Illinois State University is taking to address illegal peer-to-peer sets it apart from most, if not all the campus programs that we're aware of. Because Illinois State is a national leader in the education field, it is natural and appropriate that we tackle the difficult and far-ranging challenges presented by K-12 cyber education. We know many agencies and institutions are creating programs of many kinds for the K-12 classroom. Illinois State would like to review, test, and compare all of those in our lab schools and professional development schools, offering advice and expertise to those interested in implementing such programs. Pursuing the point-of-need teachable moments is a different and appealing approach that we also want to develop.

Beyond the program itself, though, is the truly unique fact that we are working productively and positively with so many agencies, associations, and vendors who are engaged in this sometimes contentious area. To work closely with RIAA, seen by many campuses as almost the "enemy", has been a surprising and welcome endeavor. Adding the voice of MPAA to the Digital Citizen Project has provided still more encouragement, expertise, and direction.

Long-range, our hope at Illinois State is that we really will serve as a kind of "consumer's reports" on the digital media scene, testing, reviewing, and implementing new services as they emerge in the market while serving as a resource to higher education on the education side of this equation. We absolutely know that we very well may provide evidence of what DOES NOT work as much as what does. Illegal downloading may need far more effort and much broader approaches than we can bring to bear on the problem as a single institution, a single university.

Working with vendors to secure participation in our "consumer's report" approach to the downloading arena has had its challenges and successes. Convincing most of the vendors that they won't be the ONLY service or software at Illinois State University has been challenging, but it was something we needed to do for the integrity of the Digital Citizen Project and its research goals. At one extreme, our project and our expertise has been so valued that we are working in complete partnership to develop new modules and releases of one service. At the other end of the spectrum, we have been completely ignored in our repeated attempts to bring one of the leaders in the downloading field into our project. Some vendors who really want to be a part of ISU's Digital Citizen Project and Bird Trax just aren't ready for complete implementation and roll-out yet, so we hope to include those in Phase II of the research and offerings.

Conclusion

As we prepare for full launch of our Digital Citizen Project and Bird Trax later this fall, we know we've come a long way and have far to go. We have the attention of the major entertainment associations, many vendors, satellite radio, the higher education professional associations, and even some studios. The entertainment in-

dustry is very supportive of the monitoring and enforcement side as well as our trials of service providers. The educational and public relations aspects are not quite as attractive to them yet, nor is the need for effective K-12 teaching resources. But perhaps with your help and encouragement, we will get there.

Downloading music, movies, and games is a symptom, an outcome. It is not THE problem. The problem is changing behavior, almost changing a culture. The media industry needs to change its business model because peer-to-peer isn't going to go away. Higher education, and education in general, needs to adapt to this all-pervasive change in student desires for mobile music, movies, and entertainment. It's a part of their lives. That will take time, education, and constant reinforcement for years to come. Getting teachers to use all intellectual properties legally is an important signal. Getting young people, not to mention their older fringe hippie wannabee counterparts, to use music and movies legally is the core goal.

Illinois State University can have a significant impact on peer-to-peer behaviors in another, more subtle way. As was said very early in this paper, Illinois State's teacher education graduates number in the top five in the nation. 800 new teachers walk out our doors each year, and each teacher will influence the lives of 20-30 children each year. If Illinois State's graduates can learn good Digital Citizen behaviors while on campus, they will imprint that legal and ethical perspective on perhaps 20,000 children annually. ISU's program can be the pebble in the pond with its impact having a dramatic ripple effect in classrooms around the state and nation.

Your help is essential to directing the conversations toward education starting with the nation's very young, and your support for a national conversation on practical fair use and copyright permissions, can point the way to creating great role models. Your support for comprehensive efforts like our Digital Citizen Project, with funding and with using us as a resource for higher education in general, will be invaluable.

For more information visit *www.digitalcitizen.ilstu.edu.*

Chairman KELLER. Thank you, Ms. Elzy.

Dr. Fisher, you are recognized.

STATEMENT OF WILLIAM W. FISHER, DIRECTOR, THE BERKMAN CENTER FOR INTERNET AND SOCIETY, HARVARD LAW SCHOOL

Mr. FISHER. I would like first to thank Representative Keller and Representative Kildee for holding this hearing and for providing me the opportunity to appear. The problem of unauthorized file sharing on university campuses is important and difficult, and I am grateful for the chance to participate in your deliberations.

Everyone here agrees that the downloading of copyrighted audio and video recordings by college students is common and that it contributes to the current crisis in the recording industry and to the potential for a crisis in the film industry. The question before you is what colleges and universities can and should do about this problem.

It is not a new issue. Universities have been struggling for several years to determine the best way to deal with this behavior. Deciding upon the optimal response is difficult because it requires the universities to balance several competing considerations. On the one hand, the large majority of the ways in which students employ most peer-to-peer systems is illegal. Downloading copyrighted recordings violate section 106(1) of the Copyright Act, and sending recordings to others in the system violates section 106(3).

Universities have a responsibility to curtail those activities, just as they have a responsibility to curtail other illegal conduct like illegal drug usage by their students. That interest is reinforced by the fact that the frequent use by students of peer-to-peer systems

to obtain music and films places heavy loads on the universities' networks, loads that the schools would like to reduce.

On the other hand, when deciding how best to curb this activity, the schools are legitimately concerned about some potential adverse side effects. First, a small but growing percentage of the material that students and faculty obtain on peer-to-peer services consist of recordings that are either no longer covered by copyright or have been placed on those services voluntarily by the copyright owners. Downloading such material is lawful.

Next, some unauthorized use of peer-to-peer services are also lawful, typically because they constitute fair uses within the meaning of section 107 of the Copyright Act. An example would be a film studies professor or student obtaining a copy of a film in order to include excerpts from it in a lecture or an assignment. At present, the percentage of peer-to-peer traffic that is educational and transformative in this sense is very small, but it is growing.

Next, peer-to-peer systems are being employed for entirely legitimate purposes increasingly often by universities themselves and by other businesses and government agencies. Examples include the LionShare project developed at Penn State; the Jury System used by the Department of Homeland Security; the IRIS system funded by the NSF; and the ad hoc communication networks increasingly employed by the Defense Department.

All use peer-to-peer architecture. Plainly, peer-to-peer technology is not inherently pernicious. It has both good and bad uses. Schools therefore want to be careful not to organize their network policies in ways that prevent students from learning about that architecture.

Finally, most universities wish to respect the privacy of their students and are thus reluctant to scrutinize what they are watching or listening to.

In trying to balance these competing considerations, colleges have a variety of tools: education, penalties for violating university policies, bandwidth limits, filtering, and legal alternatives. In my written testimony, I review the contents of this tool kit in some detail, but you have already heard here about many of these tools from the other witnesses, so I won't repeat what they have helpfully added to the discussion.

I would only add an important general point: none of the tools are perfect. Generally speaking, currently, the more effective they are, the more serious are their adverse side effects. In that sense, they are a bit like cancer treatments. For example, the most effective of all, as some of the other witnesses have suggested, is filtering. But the existing filtering systems either block a good deal of legitimate activity or create serious risks of privacy invasions. They are getting better, but they are not yet perfect.

The most promising of the devices in the long run are legal alternatives. Again, previous witnesses have described a growing number of services of this sort. In my written testimony, I also describe a new voluntary system that, with funding from the MacArthur Foundation, the Berkman Center, the institute I direct, is currently building in Canada and China a system that we believe will work well there.

Indeed, we recently negotiated an agreement that will provide the service to all of the 20 million university students in China. If adapted to the very different legal and economic climate in the United States, it could work well here as well, to wean students from illegal activity and provide copyright owners much larger sources of revenue.

Already, more students in the United States use legal services than engage in unlawful downloading, and the number is rising. The best thing about the legal alternatives is that they escape the whack-a-mole problem that for years has beset this field. You beat down one form of illegal conduct, and a different version just springs up in its place. The increasing deployment and usage of legal options promises to break that cycle.

The central point for your purposes her is that the universities have to balance competing goals and they have to pursue their goals with blunt instruments. The goals and the instruments are changing. In this environment, it is crucial that the schools have the flexibility to decide how best to proceed.

It is not as though they are sitting on their hands. The large majority of institutions, as we have heard, have already instituted policies vis-a-vis file sharing. It would be a serious mistake for the Federal Government to force them into a common mold.

Thank you very much.

[The prepared statement of Mr. Fisher follows:]

Prepared Statement of William W. Fisher III, Hale and Dorr Professor of Intellectual Property Law, Harvard University; Director, Berkman Center for Internet and Society

The problem we are discussing today is serious. Since 1999, large numbers of students at most American colleges and universities have been using peer-to-peer (P2P) file-sharing services to exchange, without authorization, digital copies of copyrighted works. Successful lawsuits brought by the copyright owners against some of the early services (e.g., Napster, Scour, Aimster, and Grokster), plus over 15,000 lawsuits brought against individual students, have curbed this activity to some degree. But new P2P systems (e.g., eDonkey, BitTorrent, myTunes, Direct Connect) continue to appear, and, by most accounts, their use by students remains common.[1]

Colleges and universities have been struggling for several years to determine the best way to deal with this behavior. Deciding upon the optimal response is difficult because it requires the universities to balance six competing considerations:

First, at present, the large majority of the ways in which students employ most P2P systems are illegal. Most of the material distributed through those systems consists of audio and video recordings, the copyrights in which are owned by organizations that object to their circulation. When a student uses a P2P network to "download" a copy of such a recording to his or her computer, he or she violates section 106(1) of the Copyright statute; when a student "uploads" a copy of such a recording to the system—i.e., sends a copy to another user—her or she violates section 106(3) of the statute.[2] On occasion, for reasons discussed more fully below, such a violation is excused by other provisions in the statute, but those excuses are inapplicable to the large majority of acts of downloading and uploading. In short, most of the students' activities are unlawful, and universities have an interest in curtailing those activities, just as they have an interest in curtailing underage drinking or illegal drug usage by their students.

Second, the frequent use by students of P2P systems to obtain music and films places heavy loads on universities' information-technology networks. Strengthening the networks so that they can bear those loads and still provide students, faculty, and staff the research and communication services for which they were originally built is expensive. For obvious reasons, the universities would like to reduce those costs. The most direct way to do so is to curb students' use of the systems to gain access to entertainment.

Third, a small but growing percentage of the material that students and faculty obtain on P2P services consists of recordings that either are no longer covered by

copyright or have been placed on those services voluntarily by copyright owners. Downloading such materials is lawful. Here are some examples:

a) A growing group of artists—among them, Wilco, Janis Ian, Pearl Jam, Dave Matthews, and John Mayer—have licensed the distribution of some of their recordings through P2P networks.[3]

b) Project Gutenberg, a large online library of digital copies of books that are in the public domain (typically because copyrights in them have expired) encourages the distribution of its holdings through P2P networks.[4]

c) The owners of the copyrights in many more recently created books and sound recordings have released them to the public under "Creative Commons" licenses and encourage consumers to share them through P2P systems. A partial list of such works may be found on the website, "Legal Torrents."[5]

d) Many open-source computer programs are distributed with permission through BitTorrent, one of the more popular and efficient P2P systems.[6]

e) Warner Bros. recently announced a plan to "make hundreds of movies and television shows available for purchase over the Internet using BitTorrent software."[7]

f) The Digital Bicycle system, soon to be released to the public, will enable the creators of programming for local-access television stations to distribute their works both among themselves and to wider audiences via BitTorrent.[8]

Fourth, some uses of P2P services, although they involve unauthorized sharing of copyrighted material, are nevertheless lawful—typically because they constitute "fair uses" within the meaning of section 107 of the Copyright statute.[9] For example, teachers of film-studies courses and their students, when preparing lectures or doing assignments, frequently must use unencrypted digital copies of movies. If they are unable to obtain them by removing the CSS coding that protects DVDs containing the movies (a practice that violates the Digital Millennium Copyright Act), they sometimes get them through P2P systems. That practice, because it is noncommercial, "transformative," and educational in character, most likely qualifies as a lawful "fair use."[10] The percentage of P2P traffic that currently consists of privileged behavior of this sort is very small. But, as more and more educational activities come to depend upon transformative uses of digital media, the percentage will grow.[11]

Fifth, P2P systems are being employed for entirely legitimate purposes increasingly often by the universities themselves and by businesses and government agencies outside the universities. For example, the LionShare project, developed at Pennsylvania State University, uses P2P technology to enable "faculty, researchers, and students to trade photos, research, class materials, and other types of information that may be not be easily accessible through current technology."[12] The Coral Project, developed at New York University, likewise uses P2P technology to enable website operators inexpensively "to run a web site that offers high performance and meets huge demand."[13] The Department of Homeland Security uses the JRIES ("Joint Regional Information Exchange System") P2P file-sharing system to communicate sensitive but unclassified information among its regional offices and other government entities.[14] The IRIS ("Infrastructure for Resilient Internet Systems") Project, sponsored by the National Science Foundation, uses P2P architecture to support large distributed computing applications that are resilient to "denial of service" attacks.[15] Even the Department of Defense is relying upon P2P technology when developing "large-scale, highly distributed, mobile networks-of-networks that are increasingly wireless, deal with time-critical problems, and face potential attackers who are extremely dedicated and sophisticated."[16] Of course, none of the ventures mentioned in this paragraph is employed by students to exchange commercial audio and video recordings, and no one is suggesting that the universities should block access to these projects. Nevertheless, students argue that, when they graduate, they will be better prepared to work with and contribute to the proliferating enterprises of this general sort if they are already familiar with parallel technologies developed primarily for the exchange of entertainment. This argument is flimsy as applied to simple services like the original Napster, which taught their users little. But it gains force as applied to the more complex and flexible modern services.

Sixth, most universities wish to respect the privacy of their students. Monitoring what they read or the content of their conversations would plainly be inappropriate—and in some instances would be illegal. For similar reasons, most universities are justifiably loathe to scrutinize what their students are watching or listening to in the form of entertainment.

The first two of these factors, it should be apparent, provide universities good reasons to curtail file-sharing or to block it altogether. The other four factors, however, set limits on their ability or willingness to do so.

In the past few years, American universities have developed and deployed a wide variety of tools to aid them in their efforts optimally to balance these competing considerations. Here are the primary ones:

a) Education. The large majority of American colleges and universities now provide their students information concerning the illegality of unauthorized P2P file sharing of copyrighted materials.[17] The methods by which they inform their students vary. Most have adopted and have posted on their websites university policies on the subject. Large numbers incorporate presentations on the subject in their freshman-orientation programs. Many distribute videos and posters.[18] At least one (the University of Virginia) requires students to take a quiz, which includes questions about file-sharing, before they are granted network access.[19] Most use a combination of these methods.[20]

b) Enforcement. Many schools back up their policies against illegal file-sharing with serious sanctions. One commonly used system is the so-called "three strikes" approach. A student caught violating the policy for the first time receives a formal warning. If caught for a second time, his network privileges are temporarily suspended. If caught for a third time, his privileges are suspended indefinitely.[21] Other schools permit students only two "strikes."[22] UCLA employs a "quarantine" system, under which students caught file-sharing illegally are disconnected from the school's network until they sign an electronic statement verifying that they have removed the infringing files.[23] A few schools have gone so far as to raid the dorm rooms of students who engage in illegal file-sharing.[24]

c) Network access limitations. Some universities limit the amount of bandwidth their students may use in an effort to curtail the downloading of large media files. Students who exceed the limit receive warnings and may have their network privileges revoked. Schools that have employed this strategy include the University of California at Berkeley, Pennsylvania State University, Vanderbilt, Central Michigan University, and the University of Texas at Austin.[25] At least one college outside the United States—Churchill College of Cambridge University—has adopted the same approach.[26] Though helpful in reducing loads on the universities' networks, this strategy has the disadvantage of curtailing students' access to large files lawfully available through P2P systems (or elsewhere on the Internet).

d) Filtering. A small group of universities use software to try to prevent their students from downloading material they shouldn't. Two technologies are now available to schools that want to go this route. "Icarus," developed at the University of Florida, is a network-based system that blocks the transmission of any information bearing the signature of a P2P application.[27] "CopySense" is a network filter that scans song files, hunts for digital fingerprints of copyrighted recordings, and stops file transfers when it finds matches.[28] Both have advantages and disadvantages. Icarus has virtually eliminated P2P traffic at the University of Florida.[29] Unfortunately, a side effect has been to block all lawful downloads (of the sorts discussed above) from the forbidden services. CopySense is more precise but also more intrusive. Roughly 40 schools now employ it, but they have been criticized by their students and others on the ground that the system invades students' privacy.[30] The University of Wyoming, swayed by this criticism, discontinued use of the system.[31]

e) Legal Alternatives. A rapidly growing group of schools are attempting to wean students from illegal file-sharing by offering them inexpensive, legal ways to download copyrighted recordings. Pennsylvania State University pioneered this strategy, striking a deal in 2003 with the reformed version of Napster to provide its students free access to Napster's catalogue of recordings. Other companies that have struck analogous deals with other schools include Cdigix, Ruckus, MusicRebellion, and Apple.[32] Over 70 universities—among them, the University of Southern California, the University of Miami, George Washington University, Cornell University, Middlebury College, Wright State University, Yale University, Duke University, Wake Forest University, the University of Colorado at Boulder, Ohio University, DePauw University, and Northern Illinois University—now offer their students legal options of this sort.[33] One of the advantages of this approach is that, by relying on carrots rather than sticks, it avoids the frustration—often likened to a "Whack-a-Mole" game—experienced by copyright owners and their representatives when stamping out unlawful P2P services, only to see new services spring up in their place.

At the same time as the universities have been experimenting with strategies of these various sorts, the legal and economic background has been changing. The high-profile lawsuits brought by the entertainment companies both against individual file-sharers and against P2P services (including the decision of the Supreme Court in Grokster) have increased sharply public awareness of the illegality of the activity. Simultaneously, a rapidly growing group of companies have begun offering consumers convenient, inexpensive ways to download music and films lawfully.

Some of these companies (e.g. the Apple iTunes Store) charge for each download.[34] Others (e.g., Rhapsody; some of the variants of MTV's new service, URGE; and Starz' new movie distribution site, Vongo) allow subscribers to download or stream large numbers of files for a flat monthly fee.[35] Still others (e.g., YouTube and the new NBC Broadband service) are "free" to consumers, but rely on advertising revenue to compensate creators.[36] Students have been taking advantage of these opportunities in growing numbers. A survey conducted recently by the Intellectual Property Institute of the University of Richmond revealed that the percentage of American college students who download recordings from the authorized, for-fee services (39%) is now larger than the number who download recordings from the unauthorized free services (34%).[37]

As should be apparent from the foregoing analysis, at least four dimensions of the problem of campus P2P traffic are in flux: First, the nature of the unauthorized P2P services that students employ is constantly changing. As some are shut down, others, employing different architectures, emerge. Second, the set of lawful uses of those services continues to increase, thus raising the costs associated with blocking access to them altogether. Third, the technologies available to universities that enable them to limit their students' access to these services—or to employ them in improper ways—are changing rapidly. Icarus and CopySense are quite new applications. Each, as we have seen, has important drawbacks. Others, more subtle and precise, are likely to emerge in the near future. Fourth and finally, companies that enable students to obtain digital audio and video recordings lawfully are proliferating, and students are using them increasingly often. The problem of illegal file-sharing is far from over, but it may be abating.

In this environment of complex, competing considerations and rapidly changing technologies, it is crucial that each university remain free to select the combination of tools that it considers best, and to modify its approach when it sees fit. There is not—and cannot be—a single set of "best practices." Instead, as the Education Task Force of the Joint Committee of the Higher Education and Entertainment Communities wisely observed, "[e]ach institution must decide on the combination of educational, technological, and disciplinary approaches that best meet its pedagogical, legal, and ethical needs and objectives."[38]

I would like to close my testimony by briefly describing a system that the Berkman Center, with generous funding from the MacArthur Foundation, is currently building that, in our judgment, could go a long distance toward solving this problem. The gist of the system is that it would legally provide consumers unlimited online access to copyrighted recordings, unencumbered by encryption, while ensuring that the owners of the copyrights in those recordings were fully and fairly compensated. Here is how such a seemingly improbable outcome could be achieved:

In each country in which the system were instituted, copyright owners (record companies, music publishers, film studios, etc.) would license a nonprofit private enterprise to distribute digital copies of their works. (The name of the enterprise would vary by country, but the name we have selected for Canada is Noank Media.) Noank Media would, in turn, enter into contracts with major access providers: Internet service providers (like Comcast or Verizon); mobile phone providers (like T-Mobile); and, last but not least, universities. Those contracts would oblige Noank Media to provide the customers, employees, and students served by the access providers unlimited downloading and streaming services. In return, each access provider would agree to pay Noank Media a certain amount each year for each of its customers, employees, or students.

To gain access to the Noank Media catalogue, each customer, employee, or student would download to his computer a simple software program, which in turn would connect him to a constantly updated index of all of the recordings within the system and provide him various ways (e.g., downloading from a central server, downloading through a P2P network, or streaming) of obtaining those recordings. In addition, the software program would count the number of times that each consumer listened to or watched each of the recordings he obtained (either on his computer or on portable devices dependent on that computer) and would periodically relay that information to Noank Media (much the way that TiVo machines regularly communicate with the TiVo company). That data would be be aggregated without revealing the identities of individual users, thus respecting consumers' privacy rights.

The money collected from the access providers would be distributed as follows: 15% would be paid to a for-profit operating company, in return for developing and maintaining the technology, for negotiating the contracts, for marketing the service, and for running a dispute-resolution system that would fairly resolve any disputes over ownership of the copyrights on the works within the system. (This 15% is smaller than the percentage of revenues withheld for administrative purposes by any other collecting society in the world.) The remaining 85% would be distributed

to the copyright owners in proportion to the relative frequency with which their works had been consumed during the preceding reporting period. (A chart showing how these various revenue streams and contracts interact is appended to this testimony.)

Notice that this system is entirely voluntary. Copyright owners would contribute their works to the system only if they decided that it was in their best economic interests. And their ability to withhold their works would give them considerable clout, collectively, when the rates that the access providers must pay are set and periodically adjusted.

That, in brief, is the essence of the plan. I would be happy to provide additional details if the Committee would find them useful.

The system is rapidly taking shape—not in the United States, where resistance to this approach has thus far been strong, but in other countries, most notably in Canada and China. In China, for example, we recently entered into an agreement with Tsinghua University (the leading technology university in the country, analogous to the Massachusetts Institute of Technology or the California Institute of Technology in the United States). Among many other things, Tsinghua oversees the development and management of the CERNET network, which provides Internet access to the roughly 20 million university students in China. Under the terms of our agreement, Tsinghua will not only help design and implement the independent Chinese version of Noank Media (called "Fei Liu"), but also will make the service available to all of the universities in CERNET network in return for the payment by each university of per-student annual fees. Once the system is fully operational, the revenue stream reaped by copyright owners from this one source alone could be quite large. Lining up access providers, like Tsinghua, is of course important, but equally important is ensuring that the system will contain a generous catalogue of recordings. So far, Shanghai Media Group, Radio Television Hong Kong, and Jingwen Records, each with very large holdings of audio and video recordings, have tentatively agreed to license to Fei Liu much or all of their catalogues for a trial of the system. We are actively pursuing other leads in this area.

To work, a system of this sort requires voluntary participation from all of the major sectors of the entertainment industry: copyright owners; artists; access providers; and consumers. Cooperation of this sort will be difficult to achieve. But if all sectors can be persuaded to join, they will all benefit. Consumers will gain unlimited access to recordings that they can play on any equipment and can freely share, while paying less, on average, than they currently do for much more limited material. Copyright owners and the artists whose interests they ultimately serve will make more money than they currently do. (The benefits to copyright owners are obvious in a jurisdiction like China, where "piracy" rates are currently very high. But, if the per-customer fees are set properly, copyright owners will also enjoy a substantial net benefit in jurisdictions like Canada or the United States, where "piracy" rates are not so extreme.) Finally, we will all benefit from elimination of the legal strife that has wracked the entertainment industry in recent years.

The purpose of the foregoing summary is not to persuade you that American universities should immediately adopt the Noank Media model. For various reasons, it will be harder and more time-consuming to implement the system in this country than in most other jurisdictions. Rather, my objective is to emphasize the rapid pace of innovation in this field. New potential solutions to the P2P crisis are emerging monthly. Universities must remain free to adopt the system (or combination of systems) that best matches their individual needs—and to change approaches when those needs or the possible ways of addressing them shift.

In drafting this testimony, I have been assisted by Elizabeth Barchas, Michael Kaiser, Dan Kahn, Sean Kass, Christina Mulligan, and Eric Rice.

ENDNOTES

[1] For indications of the scale of the problem, see Paul Devinsky and Robert H. Rotstein, "The End of Peer-to-Peer File Sharing," Mondaq Business Briefing, 2006 WLNR 9316103 (May 31, 2006); Sarmad Ali, "Becoming Part of the Solution," Wall St. J. Abstracts, 2006 WLNR 5837206 (April 6, 2006).

[2] 17 U.S.C. sections 106(1) and 106(3) grant "the owner of copyright under this title * * * the exclusive rights to do and to authorize any of the following: (1) to reproduce the copyrighted work in copies or phonorecords; [and] * * * (3) to distribute copies or phonorecords of the copyrighted work to the public by sale or other transfer of ownership, or by rental, lease, or lending." It is now well settled that downloading and uploading copyrighted recordings using P2P services violates these provisions. See, e.g., A&M Records v. Napster, Inc., 239 F.3d 1004, 1014 (9th Cir. 2001).

[3] See MGM Studios, Inc. v. Grokster, Ltd., 125 S.Ct. 2764, 2789 (2005) (Breyer, J., concurring).

[4] The catalogue of books made available, lawfully, to the public by Project Gutenberg is available at *http://www.gutenberg.org/catalog/*. The project's endorsement of P2P distribution of its materials is set forth on: *http://www.gutenberg.org/wiki/Gutenberg:File—Sharing—How-To.*

[5] See *http://www.legaltorrents.com/index.htm.* Other sites where copyrighted material that has been licensed for distribution through P2P systems may be found include *http://www.jamendo.com/en/; http://www.cactusesmovie.com/; http://orange.blender.org/*. An example of a popular film circulated with permission in this fashion is "Outfoxed." See *http://creativecommons.org/press-releases/entry/4401.*

[6] See *http://linux.mybookmarkmanager.com/.*

[7] Julie Bosman and Tom Zeller, Jr., "Warner Bros. to Sell Movies Using the Software of Pirates," New York Times, May 9, 2006, Section C; Column 1; Business/Financial Desk; Pg. 3. Under the plan, users "will be prevented from copying and distributing files they purchase through two mechanisms: one that requires them to enter a password before watching a file, and another that allows the file to be viewed only on the computer to which it was downloaded."

[8] See *http://digitalbicycle.org/.*

[9] For a general discussion of the application of the fair-use doctrine to educational uses of digital recordings, see "The Digital Learning Challenge: Obstacles to Educational Uses of Copyrighted Material in the Digital Age" (2006), available at *http://cyber.law.harvard.edu/media/files/copyrightandeducation.html,* section 3.2.

[10] See Universal City Studios, Inc. v. Reimerdes, 111 F.Supp.2d 294, 322 (SDNY 2000), aff'd sub nom. Universal City Studios, Inc. v. Corley, 273 F.3d 429 (2d Cir. 2001) (describing "the preparation by a film studies professor of a single CD-ROM or tape containing two scenes from different movies in order to illustrate a point in a lecture on cinematography" as a use "that might qualify as 'fair' for purposes of copyright infringement"). For discussion of the increasing frequency and educational importance of this practice, see William Fisher and Jacqueline Harlow, "Film and Media Studies and the Law of the DVD," Cinema Journal 45:3 (Spring 2006).

[11] The BBC Creative Archive has both fostered and documented many creative, educational uses of digital media. A film shown by Paul Gerhardt, Joint Director of the Archive, at a recent conference on "Open Content and Public Broadcasting," contained some extraordinary examples. Such activities are bound to increase in the near future.

[12] See Genaro C. Armas, "Researchers Develop More Efficient File-Sharing Tech," TechWebNews, (September 21, 2005), available at 2005 WLNR 14923554; *http://lionshare.its.psu.edu/main/info/docspresentation/LSFinalWhitePaper.pdf.*

[13] See *http://www.coralcdn.org.*

[14] See *http://www.dhs.gov/dhspublic/display?content=3350.*

[15] See *http://project-iris.net/*; David Cohen, "New P2P Network Funded by US Government," NewScientist.com, October 1, 2002, available at *http://www.newscientist.com/article.ns?id=dn2861.*

[16] Statement of Dr. Tony Tether, Director of the Defense Advanced Research Projects Agency, Submitted to the Committee on Science, United States House of Representatives, May 14 2003, available at *http://www.house.gov/science/hearings/full03/may14/tether.htm.*

[17] See Reducing Peer-to-Peer (P2P) Piracy on University Campuses: A Progress Update Before the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary, 109th Cong. (2005) [hereinafter "Reducing Peer-to-Peer Piracy on University Campuses"] (testimony of Norbert W. Dunkel, Director of Housing and Residence and Education at the University of Florida), available at *http://commdocs.house.gov/committees/judiciary/hju23572.000/hju23572—0.HTM* (finding that 92 percent of institutions with high-speed connections had taken steps to educate their students).

[18] A video on the subject, developed at the University of Virginia and now also being used at other schools, is available at *http://www.itc.virginia.edu/pubs/docs/RespComp/videos/home.html.*

[19] See Andrea L. Foster, "U. of Virginia Turns to Parody to Warn Students About Misusing Computers," The Chronicle of Higher Education (Aug. 30, 2001), available at *http://chronicle.com/free/2001/08/2001083001t.htm.*

[20] Examples of schools using multifaceted educational programs include: the University of Wisconsin-Madison (published policy, videos, radio spots, posters—see *http://www.doit.wisc.edu/security/policies/rules.asp);* Emory University (poster campaign, newsletter, advertisements in the school newspaper, e-mail to students discussing illegal file sharing—see Brock Read, "Downloading to a Lawful Beat," The Chronicle of Higher Education, at 43, Oct. 22, 2004); Princeton (detailed public policy, presentations at residential colleges—see Education Task Force of the Joint Committee of the Higher Education and Entertainment Communities, University Policies and Practices Addressing Improper Peer-to-Peer File Sharing (2004), at 4, available at *http://www.acenet.edu/AM/Template.cfm?Section=Legal—Issues—and—Policy—Briefs2&TEMPLATE=/CM/ContentDisplay.cfm&CONTENTID=8503);* Purdue (students required to agree to an Acceptable Use Policy before using computer resources, student-government forum on unauthorized file sharing—see id. at 3); and the University of Miami (public policy, orientation flyers highlighting the policy and outlining enforcement procedures—see *http://www6.miami.edu/security/ITSecStudentOrientationBrochure.pdf).*

[21] See Jason Putter, "Copyright Infringement v. Academic Freedom on the Internet: Dealing with Infringing Use of Peer-to-Peer Technology on Campus Networks," 14 J.L. & Pol'y 419, 466—67 (2006).

[22] See Education Task Force of the Joint Committee of the Higher Education and Entertainment Communities, supra note 21, at 5.

[23] See Charlotte Hsu, "UCLA Uses Its Own Creation to Fight Illegal File-Sharing," Daily Bruin, Oct. 5, 2004, available at *http://www.dailybruin.ucla.edu/news/articles.asp?id=30169.*

[24] See Jane Black, "Music Pirates at the Naval Academy?," Business Week Online, Nov. 27, 2002, available at *http://www.businessweek.com/technology/content/nov2002/tc20021127—2314.htm;* Brandon Worth, "File-Sharing Hub Hums Away at OU, Despite Controversy," The

Athens News, May 18, 2003, available at *http://www.athensnews.com/issue/article.php3?story—id=12618.*

[25] See Progress During the Past Academic Year Addressing Illegal File Sharing on College Campuses: A Report to the Subcomm. on Courts, the Internet, and Intellectual Property of the H. Comm. on the Judiciary, 108th Cong. (2004) (report by the Joint Committee of the Higher Education and Entertainment Communities), available at *http://commdocs.house.gov/committees/judiciary/hju96286.000/hju96286—0.HTM;* Reducing Peer-to-Peer Piracy on University Campuses, supra note 17 (testimony of Daniel A. Updegrove, Vice President for Information Technology at the University of Texas at Austin).

[26] See *http://www.chu.cam.ac.uk/members/computing/internet—usage.php.*

[27] See Reducing Peer-to-Peer Piracy on University Campuses, supra note 17.

[28] See Jeffrey R. Young, "Two Universities Test Controversial Filter to Fight Online Piracy," The Chronicle of Higher Education, April 16, 2004, at 31.

[29] See See David Joachim, "The Enforcers—The University of Florida's Icarus P2P-Blocking Software Has Clipped Students' File-Sharing Wings. Do Its Policy-Enforcing Capabilities Go Too Far?," Network Computing, Feb. 19, 2004, available at *http://cyber.law.harvard.edu/home/uploads/331/6/Icarus—at—UF.pdf#search=%22Joachim%20the%20enforcers%22.*

[30] See Hsu, supra note 23.

[31] See Young, supra note 28.

[32] See Jeffrey R. Young, "Napster and 6 Colleges Sign Deals to Provide Online Music to Students," The Chronicle of Higher Education, July 30, 2004, at 1.

[33] See id.; Reducing Peer-to-Peer Piracy on University Campuses, supra note 17 (report from the Joint Committee of the Higher Education and Entertainment Communities).

[34] See "Disney CEO touts new iTunes movie downloads," Reuters News, September 19, 2006.

[35] See *http://www.rhapsody.com/-unlimited; www.urge.com;* "FACTBOX—Online download firms compete for DVD market," Reuters News, July 19, 2006.

[36] See Kevin J. Delaney and Ethan Smith, "YouTube Model Is Compromise Over Copyrights," Wall St. J., September 19, 2006, at B1; "NBC to offer new shows on Web to build audiences," Reuters News, September 14, 2006.

[37] The survey is described at *http://law.richmond.edu/news/view.php?item=187.* The relevant questions and the responses to them can be found at *http://law.richmond.edu/ipi/pdf/SurveyResults.pdf.*

[38] See *http://www.acenet.edu/AM/Template.cfm?Section=Search&section=Legal—Issues—and—Policy—Briefs1&template=/CM/ContentDisplay.cfm&ContentFileID=721.*

Chairman KELLER. Thank you, Dr. Fisher.

Now, I am pleased to recognize for questioning or comments the chairman of the full committee, Buck McKeon.

Mr. MCKEON. Thank you, Mr. Chairman.

First of all, I would like to congratulate you and your wife Deedee on your new baby daughter, the new addition to your family. That is a great way to start a new year for that baby.

Second, I would like to thank you for holding this hearing. This is something that I know we have grappled with. I know I have talked to several of you about this issue. I know when I went to China last year, we took a codel to China, and this was on the agenda with any meeting we had with government leaders, with industry leaders, with education leaders over there, because it is such a problem over there.

At the same time as I was talking to them, though, I felt a little twinge because I knew we had the problem right here at home and we couldn't totally expect them to clean up their problem, if we didn't clean up our own.

I come from the retail industry, and we used to have shoplifting, both from our employees and from customers. But it was something that I think everybody when they took a pair of socks or when they took a pair of boots or when they took something, they knew they were breaking the law. I am concerned that sometimes when people steal copyrights, they don't understand that that is also stealing, just the same as if they stole a physical thing, a garment of clothing out of a store.

With the education that people have, and they know they are stealing something out of a store that is of a tangible nature, it is much less percentage-wise, much smaller because of the education

part. So it seems to me that we have to do a lot more. The tools that were mentioned by most of you, we have to do a lot more of that.

Education really has to be at the forefront, and I think it has to start with, if not in the home, at least at kindergarten, because young children when they learn this, most of them the rest of their life will never have a problem with it. That leaves us with the small percentage of people that will knowingly break the law, and that has to be taken care of in other ways.

What I am hopeful of is that it can be worked out between the industry and between the schools, that we don't have to take legislative remedies, because, as has been mentioned once, we pass a law. It becomes intrusive. Unintended consequences always set in. You know, I have seen enough times when we pass a law and the regulations are written, and what you start out to do and what you end up with is not something we want to see.

So I am really hopeful that we can have good collaborative work on this and solve this issue. We will do all we can with the bully pulpit or whatever we can do to encourage people. We can get the department engaged in things that don't necessarily take passage of a law. But it is important.

This hearing today will be important in the coverage that will come from it, and then your desires to work together to solve the problem. I want to commend you and thank you, and encourage the subcommittee chair to keep heavily involved in this through his committee because it is something we all have to work to solve.

Thank you very much.

Chairman KELLER. Thank you, Mr. Chairman.

I now yield 5 minutes to Mr. Kildee.

Mr. KILDEE. Thank you very much, Mr. Chairman.

From the time of the code of Hammurabi, and it was a code, stealing was always considered wrong. And that is really what we are basically down to here. It is how we control this stealing and how we let people realize that there is theft involved here, but to do that without placing an unreasonable burden upon the colleges, but also to recognize that there is stealing.

As a matter of fact, all of us, if I may, take an oath of office here, and Dan, you and I did it on January 3, 1977, we take an oath to support the Constitution. And the Constitution embodied that, too. Article I, Section 8, the Congress shall have power to promote the progress of science and useful arts, securing for limited times to authors and inventors, the exclusive right to their respective writings and discoveries.

So the founding fathers recognized that this was a property. This was something that Congress had the right to protect that property. We are sitting here in that capacity, really, upholding that Constitution.

In preparing for this hearing, I was very interested to learn that peer-to-peer technology is becoming an integral part of our global economy. In fact, in legal forms, many corporations and even the Department of Defense has been using it on a large scale.

I would like to submit, without objection, Mr. Chairman, for the record an excerpt from Dr. Tony Tether, the director of Defense Advanced Research Projects Agency, DARPA, at the Department of

Defense who testified before the Committee on Science in 2003 discussing peer-to-peer networks in the context of our national security.

Chairman KELLER. Without objection, so ordered.

[The excerpt follows:]

Excerpt From a Statement by Dr. Tony Tether, Director, Defense Advanced Research Projects Agency, Submitted to the Committee on Science, U.S. House of Representatives, May 14, 2003

Much of what we have done, particularly for wired systems, has proved useful in both commercial and military systems. But, our focus is the specific problems DoD needs solved for network centric warfare.

The military-specific problems that we are working on go beyond those faced by the commercial world today. Military networks, more than commercial networks, involve large-scale, highly distributed, mobile networks-of-networks that are increasingly wireless, deal with time-critical problems, and face potential attackers who are extremely dedicated and sophisticated. Failure in military networks has extreme consequences.

Moreover, network centric warfare involves networks that must assemble and reassemble on-the-fly on an ad hoc basis without having a fixed or set infrastructure in-place. In effect, we must achieve what has been called, "critical infrastructure protection" without infrastructure.

In the most advanced cases, these are peer-to-peer or "infrastructure less" networks. There is no fixed, in-place network equipment—the whole network architecture is fluid and reassembles dynamically. It could be that, in the long term, commercial networks will acquire some of these features, but, for now the Department of Defense is in the lead in facing these problems. (Emphasis added.)

Mr. KILDEE. I think that it is necessary to crack down on all illegal uses. I would like to hear from all our witnesses briefly, starting with Dr. Fisher, about your thoughts on the need to proactively develop positive alternatives for students and consumers to use for educational and entertainment purposes the network.

Mr. FISHER. Suppressing illegal activity of this sort will never be fully effective unless good alternatives are available. Already, students defeated by the shutdown of the major peer-to-peer services like Napster and Grokster, are turning to much harder to detect local networks within their own dormitories to exchange files. So suppression by itself will not ever be the long-term solution. We have to build proactively better alternatives.

Now, for better or worse, students have proven reluctant to opt into the legal alternatives. So those services that give them a choice have not worked anywhere near as well as services made available to them automatically as students. So if the universities adopt a policy, we are going to impose upon you a fee, a certain amount of money, just as they impose on student fees for athletic services and student entertainment and so forth without choice, and use that money to compensate copyright owners, those systems have, not surprisingly, proved much more popular among students than those they have to opt into.

So that, in my view, is the direction that we have to continue to innovate. We have to build mechanisms that will appeal to the copyright owners and induce them voluntarily to contribute their materials to a catalogue that we can then make available to students automatically, and use the revenues collected from them without consent, to pay the copyright owners.

That, in my view, is the best long-term solution, and it is that insight that we have been pursuing in constructing a system of this

sort with aid from the MacArthur Foundation. So far, it looks pretty promising.

Mr. KILDEE. Mr. Glickman, do you feel that would help address the problem?

Mr. GLICKMAN. First of all, I do agree that the pursuit of legal alternatives, what I call hassle-free reasonable cost alternatives, are important. But I also would point out that legal services have difficulty taking root where illicit peer-to-peer activity goes unchecked.

So if it is there, it is ubiquitous, and it is available for everybody, it is pretty darn hard to get a creative mind, which most students are, and clever, and much more technologically proficient than I am, to go to the road that costs them a little bit of money, when in fact they can get it for free, particularly when they haven't been trained on the fact that it is illegal.

So yes, I think legal options are extremely important, and both the record and film industries are offering these in kind of a revolutionary manner, in fact using peer-to-peer technologies legally because, as Professor Fisher said, peer-to-peer is not inherently illegal if you have legal material being circulated on it. But I don't think that this will just automatically happen if the illicit peer-to-peer is there and it is unchallenged, and if students aren't educated into believing that it is wrong, or that they can be penalized for doing that.

So I think it was John Maynard Keynes who once said, for every complicated problem, there is a simple and a wrong solution. I think this area is no different. This is a complicated problem in terms of the transfer of information through modern communication networks. It just takes a multifaceted approach, and one of the answers is offering legal alternatives.

Chairman KELLER. We are out of time, but let me just give the other witnesses a chance. Do you have any thoughts? Can you give us a short statement on your response to Mr. Kildee's question?

Mr. KIRWAN. I would just like to mention that I think the combination of education through programs at orientation of students, through course requirements, coupled with the kind of suggestion that Dr. Fisher made could go a long way to solving this problem. Universities are used to charging fees to students who may not use that service.

Most institutions have an athletics fee. Not everybody goes to athletic contests. Most institutions have a recreation fee. Not every student takes advantage of those. So I think having a fee along the lines Dr. Fisher suggested is a very practical way to address this problem.

Mr. SHERMAN. If I could just echo Mr. Glickman's comments. We have actually had the opportunity to study the opt-in rate for legitimate services at universities that either do or do not employ technical measures to inhibit illegal fire sharing. What we find is that the opt-in rate is much lower where the illegal mechanisms are still readily available, and the opt-in rates soar when getting the illegal material is far more difficult.

So using some technical measures to inhibit illegal fire sharing has made the most difference in terms of the success of legitimate alternatives on campus.

Ms. ELZY. I believe everything that has been said at the table confirms the multidimensional approach that we are trying at ISU, that both monitoring and legal services and education, as well as some of the other side issues, need to be addressed.

I would point out, though, that I don't think universities are going to be as successful if they only present one legal option for these, because for example, if you pick Cdigix or Ruckus, you are ignoring two-thirds of the market that had I-pod platforms, and those don't work with each other.

Chairman KELLER. I thank the witnesses.

I will now recognize myself for 5 minutes of questions.

Mr. Glickman, let me start with you. You pointed out in your testimony that education is an important part of any anti-piracy campaign, and you cite the very well-publicized Supreme Court case of Grokster, talking about how it is wrong to legally download and that there is infringement on a gigantic scale.

I agree with you 100 percent, but I think we have our work cut out for us on the education front. I would point to a very recent survey that showed three-quarters of the American public can correctly identify two of Snow White's seven dwarfs, but only one-quarter can name two Supreme Court justices. Strangely, I think Justice Souder was on both of those lists.

[Laughter.]

Since we are talking about stealing, I stole that line from Letterman, in the interests of straight talk. But it points out that a lot of folks are not going to be aware of the Grokster decision like you or Mr. Sherman are.

I want to go beyond that, though. I think we can all understand your testimony about how Internet piracy affects movie studios and how it negatively affects the Federal Government because we are getting less tax revenues. Can you talk about the impact on those individuals who earn a living in the less glamorous, behind the scenes roles that a lot of us don't see who go to movies?

Mr. GLICKMAN. Perhaps the best story is told by the several hundred thousand, or about 95 percent of people who work in the movie industry, in the crafts, in the trades, and the members of trade unions and the like, from the grips to the camera operators to everybody else that form the heart of this business. Often, their jobs are not terribly predictable. These are working men and women who work based on the fact that a movie is being produced or not.

That is just not in Los Angeles or New York, but movies now are made in virtually every state in the country, and states are offering all sorts of incentives to bring movies there. So in each one of your states now, film and television is a growing part of your local economy, and it is dependent on predictability. Without predictability, capital will not flow in to make the product, particularly the smaller and independent films that need that kind of predictability.

We can give you some studies. In fact, there will be a study that is coming out. The Institute for Policy Innovation is coming out with studies at the end of this week which will amplify our piracy studies, which shows the economic impact on collateral industries, working people nationwide to demonstrate the impact that piracy

will continue to have on the bulk of the film and television industry. I think it shows that this is a comprehensive problem.

One other point I would make. You know, entertainment is one of the few industries in this country that we still have a significant economic position in terms of the rest of the world. I am not saying that they don't produce good movies and good music elsewhere in the world, but the heart of this business is in America, and we need to do what we can to preserve and strengthen this key industry.

Chairman KELLER. Let me follow that up. I am going to ask you a question about the cooperation between the entertainment community and the higher education community. If I had a magic wand and was the president of MPAA for a day, I am guessing what I would want to do is sit down with university presidents and say, on the carrot side, we would like you to purchase technology like CGRID that the University of Florida uses, or some other similar technology that will effectively block the illegal downloading. Now, there is maybe money available from the Federal Government to help you.

And then on the enforcement side, I would like you to have some sort of three-strikes policy that you give people a warning when they do it illegally, and maybe step it up after that with some sort of temporary revocation of their network privileges.

Are you having those conversations with the university presidents? And how are they responding to what you are talking with them about?

Mr. GLICKMAN. We are absolutely having them. I think Mr. Sherman can talk about this as well because his interest predated mine. But Dr. Kirwan is now co-chair of basically a committee composed of university and entertainment people to try to find comprehensive solutions to this problem. As Mr. Sherman talked about, frankly, some schools have really stepped up to the plate, and some haven't. They have resisted.

That is why we have to have a comprehensive approach. The technology can be a big part of the solution, and I think that is where you all may be able to come in to provide some resources for these new technologies. But I also notice that in terms of orientation material, not a lot of schools spend a lot of time orienting students and parents about the dangers of peer-to-peer piracy.

So there are a myriad of things we can do, and the positive thing about this hearing is you have brought us together, and I think that will continue to facilitate these discussions.

Chairman KELLER. I am about out of time. Mr. Sherman, since your name was brought up, do you have any thoughts on that last question, briefly?

Mr. SHERMAN. Well, certainly the work with the joint committee has been exceptionally collaborative in terms of how to address this problem constructively. We have helped to get out information to all of the universities about what the law is, about what the practices are that are being used by other universities so that every university doesn't have to reinvent the wheel.

We have actually brought together technology vendors with university people. We have brought together legitimate services with university people. So there has been a great deal of very helpful

work. When we have a problem with specific universities, where they are getting an enormous number of notices and so on, we actually go and ask for a meeting with the president. We talk with the president.

Very often we find the president was unaware of the problem. The president has a lot of other things going on. This is completely understandable. We get a very good reaction about trying to do something to solve it. But sometimes we get, sorry, we have other problems, solve it yourself.

Chairman KELLER. Thank you, Mr. Sherman.

I now recognize Mr. Scott for 5 minutes.

Mr. SCOTT. Thank you, Mr. Chairman.

Mr. Glickman, it is good to see you. I sat right in front of you in the Judiciary Committee a couple of years ago. It is good to see you again.

Is there any question, Mr. Glickman, whether or not stealing copyrighted material constitutes a crime? This is a crime, isn't it?

Mr. GLICKMAN. It certainly is a crime in most jurisdictions. It obviously depends on the scope, the dollar amount, all those kinds of things; whether it is a felony or misdemeanor, that kind of thing, and whether it is intentional or willful, or whether it is accidental, if there is such a thing.

Mr. SCOTT. So if you go up on the Web and find songs or things like that, and just download them, file share, download them, is that a crime?

Mr. SHERMAN. The Department of Justice has begun bringing criminal actions against some P2P file sharers, so obviously they agree that it is a crime.

Mr. SCOTT. Well, whether they enforce it or not is a second question, but there is no question that it is a crime. Then the next question is, is it enforced?

Mr. GLICKMAN. It tends not to be highly enforced, unless it is part of a larger conspiracy or syndicate or that kind of thing.

Mr. SHERMAN. There is one particular action that the Department of Justice brought against somebody who was part of a piracy ring, where they specialized in putting pre-release movies and music on Web sites for downloading to illegal peer-to-peer networks. He was arrested. He had a plea bargain and he has now been featured in some videos that we put out talking about the risk to students when they engage in this behavior.

Mr. GLICKMAN. Mr. Scott, also last year, Congress passed the Family Entertainment Copyright Act which does create additional criminal penalties for copying pre-release material, pirating that. And there have been some cases brought under that statute.

Mr. SCOTT. If you share without a profit, if you share for free, is that a crime?

Mr. SHERMAN. It doesn't matter.

Mr. SCOTT. It doesn't matter. Then what would it take to actually enforce the law?

Mr. SHERMAN. It would require more resources by the Department of Justice to go after this kind of activity. Those resources have been increased in recent years as intellectual property has become a more significant component of the economy, and the recognition that intellectual property crime is a significant economic

crime in the country. Therefore more units have been created for this type of computer crime, but more prosecutions would be valuable.

Mr. GLICKMAN. I would say the states have also engaged in a whole litany of new statutes, criminal, some misdemeanor, some felony, on illegal camcording of movies and related activities.

Mr. SCOTT. Well, if you are not enforcing the law, then an educational program wouldn't be very effective, it would seem to me, because you would just be educating people to the fact that it could be done and you are not going to be caught.

Mr. SHERMAN. That is why the record companies have taken it upon themselves to enforce their rights civilly. We think that education is very important, but we found, as you just said, that it wasn't enough, that we needed to reinforce that by creating a risk of consequences when one didn't listen to the educational message. We have brought a great number of lawsuits. It has had an extraordinary impact in terms of educating people that this is illegal.

Mr. SCOTT. Now, there are some legal downloading where you pay a fee and can download legally, having paid for it. Do these screening mechanisms stop you from doing that? These screening programs?

Mr. SHERMAN. No, they would not interfere with legal downloading services in any way.

Mr. SCOTT. How would the program differentiate a legal download from an illegal download?

Mr. GLICKMAN. There might be a filter. There might be a watermark. There are technological ways to permit the copyrighted material to go through that the non-copyrighted material wouldn't have on them. There are other kinds of technological ways.

Mr. SCOTT. So there is copyrighted material that you paid for.

Mr. GLICKMAN. That's correct.

Mr. SHERMAN. For example, when you buy an iTunes song, it is encrypted when it comes down. So a filter would not filter it out because it would just pass through as unrecognizable.

Mr. GLICKMAN. Mr. Scott, if I might just mention, the Justice Department has created and upgraded their intellectual property, both civil and criminal units fighting intellectual property crimes, not only with respect to movies and music, but also with respect to pharmaceuticals, business software and the like. So there has been a fairly significant upgrade in attention at the Justice Department level in the last few years.

Chairman KELLER. Thank you.

I have just been notified we are going to have votes in a couple of minutes, so I want to try to make sure we all get our member questions in. So I recognize Mr. Van Hollen for 5 minutes.

Mr. VAN HOLLEN. Thank you, Mr. Chairman. I thank you and the ranking member for holding this hearing.

And thank you to all the witnesses.

Like Mr. Keller and Mr. Scott, I also serve on the Judiciary Committee. Obviously, we spend a lot of time there focusing on intellectual property issues. I think all of us are aware on both committees of the tremendous losses to the creative community as a result of copyright violations and other intellectual property violations.

As all of you have said, the higher education community is one of the creative engines in our country, and they obviously have a stake in protecting copyrights and intellectual property specifically.

I am very pleased to have Mr. Kirwan here, Bill Kirwan testifying. We are very proud of him in Maryland, as chancellor of our university system. As many of you know, he previously headed the University of Maryland at College Park. We lost him for a little while to Ohio, but we are always pleased to have him back.

And thank you for your service in trying to bring the higher education community together in partnership with others to address this issue in a way that reduces the abuses, but also, as you have all said, preserves the legitimate services and uses of peer-to-peer technology.

If I could, Mr. Kirwan, just ask you to talk a little bit more about the role of the joint committee of the higher education and entertainment communities, exactly where you see that process going, and to what extent you are getting the full cooperation from the membership. The testimony here has been that the response from the higher education community has been mixed, that some people have been responsive and some have not.

To what extent is this joint committee a good vehicle that you can use to expand cooperation through the full higher education community? I would be interested in any ideas we have from other members of the panel of how we might make this vehicle an even better tool, as one of the tools in the tool kit that Dr. Fisher mentioned, and what kind of approach it can recommend to everybody in the higher ed community.

Mr. KIRWAN. Thank you, Congressman Van Hollen. Let me say as a citizen of the state of Maryland how pleased and proud I am to see you sitting on this committee.

I am just now joining this joint committee, so my experience with it so far has been in communications I have received from it. But my sense from that experience, and in my orientation to the work of the committee, I think it is an excellent vehicle to help higher education address this problem.

You know, one of the unfortunate facts about higher education is things don't always move as quickly as the people outside higher education would like to see. What I am observing is that there is a growing awareness of this problem within higher education, and an increasing participation on the part of institutions, I think largely because of the communication efforts of this joint committee and the work of it.

I know that we are going to be convening groups, circulating new material, getting on association annual meetings, making this a topic of discussion. As has been pointed out, new technologies, new ideas are coming out. So as an optimist, I believe we can get our hands around this problem and get this issue resolved.

Chairman KELLER. Thank you, Mr. Van Hollen.

Ms. Davis, we will yield to you as much time as you are willing to consume, under 5 minutes, I hope.

Mrs. DAVIS OF CALIFORNIA. Thank you. I will be brief. I am sorry I missed some of the testimony.

I wanted to just raise the issue, sort of this balance. Do we have, certainly artists and musicians out there who really are seeking to

have their music out there in the public, essentially, and among the students? I don't know whether you have a sense of whether they are fighting this, or how do we balance that? Because in some ways, we know that there are individuals who feel that short of this, they are really not able to access the public citizenry.

Mr. SHERMAN. Those artists should have the opportunity to have their music on a peer-to-peer system if they want it to be. The beauty of some of the technologies available now is that their music can be on and pass freely to whomever wants it, while other artists who choose not to have their music on it will be filtered out, and those illegal transmissions will be stopped. It isn't an all-or-nothing situation. The technology has advanced to the point where an artist who wants his or her work to be freely available can do so, while other artists don't have to be forced to make that same decision.

Mr. GLICKMAN. I would also point out, Congresswoman, that during the Grokster case, as the case went through all the way to the United States Supreme Court, where the court basically ruled, without being too precise, if you encourage people to put the illegal stuff on a peer-to-peer network, that would be wrong.

Well, the overwhelming number of artists of all sizes, from film to music, were in support of that Grokster decision. So I think you can accomplish what Mr. Sherman said within that Grokster case, and do it legally.

Mrs. DAVIS OF CALIFORNIA. So you think that that issue is really not substantive anymore? That we really can do that and that shouldn't be an issue? Is that in the public domain in terms of education?

Mr. SHERMAN. Well, it isn't technically in the public domain as a matter of copyright law, but it is basically licensed use that is authorized by an artist. When this problem started, these technologies didn't exist. The Audible Magic technology is so sensitive now that it can distinguish between a live and a studio version of a song by the same group. It has really become phenomenally useful in terms of being able to distinguish the infringing use from the non-infringing use.

Mrs. DAVIS OF CALIFORNIA. Thank you. I appreciate that.

Ms. Elzy, you mentioned the Digital Citizens project. Just what does that cost students to be part of that? Anything?

Ms. ELZY. Since we are still in the formative stages of the program, we are finalizing that right now. We are talking in figures of about perhaps $20 for the year, $20 to $40, but we will be deciding that in the next month.

Mrs. DAVIS OF CALIFORNIA. And your response from students?

Ms. ELZY. It has been surprising. One of the early meetings we had with student leadership was almost non-interest. The chair of the group said, we trust you to do what is right for us and to protect us, so if you say this is what we need to do, this is what we will do. Now, that was one student group out of 20,000 students, I admit, but we are hopeful that while we know we will have some blowback, that in general once they understand the full scope of the program, the students will take to it.

Mr. GLICKMAN. May I just make one comment? In light of Illinois State, which is doing such a great job, I would point out the GAO is trying to ascertain, get data about what universities are doing

in this area. There is some reluctance on universities, which has been reported in the education press. So anything this committee could do to try to get universities to comply with what the GAO is getting would be greatly appreciated.

Mrs. DAVIS OF CALIFORNIA. Great. Thank you very much.

Thank you, Mr. Chairman.

Chairman KELLER. Thank you, Ms. Davis.

I wish to thank the witnesses for their valuable time and testimony, and the members for their participation.

If there is no further business, the subcommittee stands adjourned.

[Whereupon, at 12:11 p.m., the subcommittee was adjourned.]

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