

Walking a Thin Line: Is There a Safety.Net* for Internet Retransmitters of Off-Air Radio?

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There's much more to radio than meets the ear. It's radio waves zapping your leftovers back to edibility every time you pop them in the microwave. It's radio astronomy eating up over 3 billion dollars of U.S. government research money. It's radio satellites ensuring that American children spend as much time listening to Muzak as to their parents. And it's radio-controlled implants making it possible to neutralize a rabid animal at the press of a button. Even your body has a biological radio set, which can be triggered by a seizure of the temporal lobe. *Radio knows no boundaries: its signal is as unavoidable as it is unstoppable.*¹

INTRODUCTION

In this age of converging technologies, the traditional demarcation lines separating communication media (television, radio, newspaper, telephone) are becoming increasingly blurred. With the onslaught of multimedia technologies, the temptation to remedy the legal obfuscation that is brought about by these new technologies by reapplying existing regulations to new challenges is great.² However, if these new communication tools are not examined individually as they become available, we risk suffocating the great possibilities of tomorrow under the outdated regulations of yesterday.

This paper examines the new communication technology of computer network-based radio broadcasting. For the purposes of brevity and practicality, it specifically

* Popular jargon often refers to computer network-oriented concepts as net.concept (i.e. net.freedom, net.issues), taken from computer file naming standards. This is not a typo, simply a play on words.

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1. Neil Strauss, Radiotext(e) 9 (1993) (emphasis added).

2. Robert D. Sprague, Multimedia: The Convergence of New Technologies and Traditional Copyright Issues, 71 Denv. U. L. Rev 635 (1994).

focuses on the issues involved in the retransmission of off-air radio stations over the Internet.³ By outlining a brief history of radio broadcast regulation, discussing current and proposed laws governing retransmission, and offering theories regarding the future of computer network-based radio broadcasting and regulation, it examines the legal and technical differences and similarities between network-based and “off-air” broadcasting.

BACKGROUND

Radio regulation in the United States began with the Radio Act of 1912, an attempt by Congress to allocate radio frequencies, mandate licensing of radio stations, and adopt anti-interference measures.⁴ However, with the phenomenal growth of the radio industry in the 1920s came a greater demand for broadcast licenses.⁵ By 1926, the airwaves were completely chaotic, with individual stations giving little regard to the interference caused by conflicting hours, frequencies, and power levels.⁶ Congress' next attempt to regulate radio frequencies came with the Radio Act of 1927,⁷ which, given previous regulatory failures, was intended to regulate more than just technical issues. The overriding features were the Act's assertion that ownership of the radio spectrum rests with the public and the creation of a Federal Radio Commission (FRC). Even though this Act proved to be relatively successful in its goals, Congress later reorganized and consolidated federal communications regulations into the Communications Act of 1934,

³. Begun in 1968 as a research project of the Defense Advanced Research Projects Agency (DARPA), the Internet has grown to become the world's largest computer network. Since the maintenance of the Internet was taken over in 1986 by the National Science Foundation, it has experienced phenomenal growth and is quickly becoming the primary means of personal, business, academic, and governmental electronic communication. For an introduction to the history and uses of the Internet, see Bernard Aboba, *The Online User's Encyclopedia: Bulletin Boards and Beyond* 103 (1993).

⁴. Radio Act of 1912, ch. 287, 37 U.S.C. 302 (1912), *repealed by* Radio Act of 1927, ch. 169, 44 Stat. 1162 (1927).

⁵. Between 1921 and 1925, the number of stations jumped from two to more than 500. E. Foster, *Understanding Broadcasting* 67-68 (2d ed. 1982).

⁶. For a more detailed analysis, *see* S. Head & C. Sterling, *Broadcasting in America*, 139-40 (4th ed. 1982) and Laurence H. Winer, *The Signal Cable Sends - Part I: Why Can't Cable Be More Like Broadcasting?* 46 Md. L. Rev. 215-16 (1987).

⁷. Radio Act of 1927, ch. 169, 44 U.S.C. 1162 (1927), *repealed by* Communications Act of 1934, ch. 652, 48 U.S.C. 1064, 1102 (1934).

replacing the FRC with the Federal Communications Commission (FCC) and incorporating into the Act "common carriers" such as the telephone industry.⁸

Despite tremendous advances in communication technology over the past 70 years, the basic structure of regulations governing radio transmissions has, for the most part, remained unchanged since 1927. The rationale for the continued regulation of both the technical operations and program content of broadcast stations has been the concept of off-air bandwidth scarcity. Early on, the FRC asserted that "the paucity of channels," "the limited facilities for broadcasting," and the fact that "the number of persons desiring to broadcast is far greater than can be accommodated" were solid foundations for the heavy regulation of the airwaves.⁹

Frustrated with these regulations, many innovators have been searching for alternative means of signal distribution. SunSITE, a research group at the University of North Carolina responsible for maintaining one of the most heavily accessed computer servers on the Internet, has recently discovered a method for digitally rebroadcasting¹⁰ the signal of WXYC, the University's student-run radio station, in real-time¹¹ over the Internet. Digital radio, unlike amplitude and frequency modulated (AM and FM) "off-air" radio, has the potential to deliver "CD-quality"¹² sound to anyone with a connection to the Internet, thus greatly increasing the potential broadcast range of a station. The current implementation of the real-time digital rebroadcast system sacrifices the full frequency range that is usually associated with "CD-quality" audio due to the bandwidth limitations imposed by the current hardwiring of the Internet's infrastructure and the speed of the

⁸. See Winer, *supra* note 6, at 215-16.

⁹. Statement by the Commission Relative to Public Interest, Convenience or Necessity, 2 FRC Ann. Rep. 166 (1928).

¹⁰. The enabling software, CU-SeeMe, is a free, publicly available videoconferencing tool developed at Cornell University <<ftp://gated.cornell.edu/pub/video/>>.

¹¹. Real-time refers to the delivery of a digital stream of information in such a manner that the receiver hears the broadcast at approximately the same the broadcaster transmits it, as opposed to pre-recorded audio signals to be played back at a later date.

¹². "CD-quality" is typically used to describe audio reproduction media that can reproduce all audible frequencies within the spectrum of human hearing (typically 20Hz to 20kHz).

computers involved in the information transaction.¹³ However, when fiber-optic wires become the standard information transmission medium over the network and computer hardware becomes faster and more efficient, available bandwidth and the sound quality of the transmission will increase dramatically.

Surprisingly, the FCC has had very little to say about communications over the Internet. Perhaps this is because network-based transmissions do not face the same problematic issues as those associated with bandwidth scarcity.¹⁴ However, digital audio has recently encountered a different blockade of governmental legislation, copyright law.

CURRENT AND PROPOSED REGULATIONS

In the same way that, as it has been suggested, Congress overreacted to the proliferation of new radio technology with the Radio Act of 1927,¹⁵ it has chosen to heavily regulate the evolution of new digital audio technologies. In response to a class-action law suit brought by a broad-based group calling itself the Copyright Coalition¹⁶ against Sony Corporation and its subsidiaries,¹⁷ the Senate Subcommittee on Patents, Copyrights, and Trademarks attempted to "alleviate the tension between copyright law and the rapid proliferation of innovative technologies."¹⁸ The claim was that Sony

¹³. The Internet's interconnections consist mainly of coax ("cable") and twisted-pair ("telephone") wiring. As with any transmission medium, these wires impose limits as to how much information can be sent over them. Limiting the frequency range of the transmitted signal simply reduces the necessary bandwidth and computer resources needed to broadcast and receive real-time audio signals over the network.

¹⁴. See Winer, *supra* note 6, at 240-41.

¹⁵. "Moreover, in many respects, the scheme of public ownership of the airways, with private use thereof simply a privilege to be granted by the government conditioned upon compliance with government regulation, may have been the fundamental mistake that adversely affected the entire subsequent development of broadcast regulation." Winer, *supra* note 6, at 217

¹⁶. The Copyright Coalition was represented by the National Music Publishers Association (NMPA), the industry association of American music publishers.

¹⁷. *Cahn v. Sony Corp.*, No. 90 Civ. 4537 (S.D.N.Y. July 11, 1991). The suit was styled as a class action "on behalf of all owners of copyrights in musical compositions, and all transferees of the exclusive rights to authorize the making of sound recordings and the distribution of phonorecords, who are entitled to receive mechanical royalties from record companies licensed by The Harry Fox Agency, Inc." Complaint 10, *Cahn* (No. 90 Civ. 4537).

¹⁸. "Essentially, that tension revolves around the competing goals of copyright: encouraging access to and dissemination of intellectual expression on one hand, and ensuring an abundant supply of such expression by protecting the incentive (i.e., remuneration) for authorship on the other. The end that both

Corp.'s production of digital audio tape equipment would contributorily infringe upon the exclusive rights of the copyright owners of musical compositions. Now known as the Audio Home Recording Act hearings of 1991, the meetings produced legal definitions of "digital audio interface device,"¹⁹ "digital audio recording device,"²⁰ and "digital audio recording medium"²¹ for the sake of regulation. Furthermore, particularly significant to the topic of digital broadcasting,²² the provided definition of "digital audio copied recording"²³ includes reproductions made indirectly from transmissions.

goals serve is the public's benefit. The question concerning technology is whether its promotion of one goal, dissemination, will cripple another goal, authorship. Modern duplication technologies, from photocopiers to tape recorders and recordable compact discs, challenge copyright law by placing the power of manufacturing reproductions beyond the control of copyright owners, and into the public domain. Ironically, while these technologies are contributing to a tremendous increase in the overall dissemination of information, they have simultaneously rendered the copyright owners' exclusive rights to reproduce and distribute their works - reserved under the 1976 Copyright Act - practically meaningless." Gary S. Lutzker, *DAT's All Folks: Cahn v. Sony and the Audio Home Recording Act of 1991 - Merrie Melodies of Looney Tunes?* 11 Cardozo Arts & Ent. L.J. 145 (1992).

¹⁹. 17 U.S.C.A. § 1001 (2) (1994).

"A 'digital audio interface device' is any machine or device that is designed specifically to communicate digital audio information and related interface data to a digital audio recording device through a nonprofessional interface."

²⁰. 17 U.S.C.A. § 1001(3) (1994).

"A 'digital audio recording device' is any machine or device of a type commonly distributed to individuals for use by individuals, whether or not included with or as part of some other machine or device, the digital recording function of which is designed or marketed for the primary purpose of, and that is capable of, making a digital audio copied recording for private use, except for--

(A) professional model products, and

(B) dictation machines, answering machines, and other audio recording equipment that is designed and marketed primarily for the creation of sound recordings resulting from the fixation of nonmusical sounds."

²¹. 17 U.S.C.A. § 1001(4) (1994).

"(A) A 'digital audio recording medium' is any material object in a form commonly distributed for use by individuals, that is primarily marketed or most commonly used by consumers for the purpose of making digital audio copied recordings by use of a digital audio recording device.

(B) Such term does not include any material object

(i) that embodies a sound recording at the time it is first distributed by the importer or manufacturer; or

(ii) that is primarily marketed and most commonly used by consumers either for the purpose of making copies of motion pictures or other audiovisual works or for the purpose of making copies of nonmusical literary works, including computer programs or data bases."

²². "For example, when a computer user simply "browses" a document resident on another computer, the image on the user's screen exists -- under contemporary technology -- only by virtue of the copy that has been reproduced in the user's computer memory. It has long been clear under U.S. law that the placement of a work into a computer's memory amounts to a reproduction of that work (because the work may be, in the law's terms, 'perceived, reproduced, or...communicated...with the aid of a machine or device')." Working Group, *intra* note 31 at 35.

²³. 17 U.S.C.A. § 1001(1), (1994).

"A 'digital audio copied recording' is a reproduction in a digital recording format of a digital music recording, whether that reproduction is made directly from another digital musical recording or indirectly from a transmission."

The Subcommittee, in a move that may prove to be a trend in hardware regulation,²⁴ went so far as to mandate the implementation of the Serial Copy Management System (SCMS), intending to prohibit the use of digital audio equipment for duplication purposes by consumers.²⁵ The result of the hearings was the addition of the Digital Audio Recording Devices and Media amendments to the 1976 Copyright Act.²⁶

The digital audio definitions, argued one witness at the hearings,²⁷ are overly broad and may affect computer manufacturers that are not in the audio business. As digital audio distribution over computer networks and multimedia uses of computers become more commonplace, these amendments will begin to affect a much broader range of products than the digital audio tape devices they were originally intended to regulate. If mandatory fees²⁸ and design requirements²⁹ are imposed on computer manufacturers that equip their machines with digital audio hardware, this issue will surely become a strong point of contention between the music and computer industries.

Apart from these amendments to the Copyright Act that grew out of the Home Recording Act of 1992, there are very specific copyright regulations pertaining to

²⁴. See Pamela Samuelson, *Legally Speaking: The NII Intellectual Property Report*, Communication of the ACM (forthcoming December, 1994), available on the World Wide Web, <<http://www.eff.org/papers/samuelson.html>>.

²⁵. 17 U.S.C.A. § 1002 (1994). The Serial Copy Management System is designed to keep "non-professional" digital audio recording hardware from making more than one copy generation. The hardware encodes information onto the digital audio storage medium pertaining to the copyright and generational status of the source material. It is interesting to note that the SCMS prevents mass duplication of all materials, not just copyrighted works.

²⁶. 17 U.S.C.A. §§ 1001 - 1010 (1994).

²⁷. "Care must be taken to write legislation that will not penalize computer manufacturers and owners who are not in the audio business at all but use the same technology." *The Audio Home Recording Act of 1991: Hearing on H.R. 3204 Before the Subcommittee on Intellectual Property and Judicial Administration of the House Committee on the Judiciary*, 102d Cong., 2d Sess. (1992) (statement of Dr. Irwin L. Lebow, Private Communications Consultant, at 6).

²⁸. 17 U.S.C.A. § 1004 (1994) The amendments require that 2 percent of the transfer price of every "digital audio recording devices" and 3 percent of "digital audio recording media" imported and distributed in the United States go to funds defined by 17 U.S.C.A. § 1006, which are in turn distributed among record companies, publishers, and musicians.

²⁹. If the above definitions are taken literally, computer hardware manufacturers that distribute peripherals capable of digital audio recording are required to include special encoding equipment within the hardware. This is no small demand, since literally millions of computers and add-on boards have been sold with such capabilities, none of which comply to the SCMS.

secondary transmissions.³⁰ According to these regulations, the rebroadcast is legal if both SunSITE and WXYC are non-profit entities, there are no charges imposed on the receivers of the rebroadcast signal by SunSITE, SunSITE has no direct or indirect control over the content or selection of WXYC's signal or the recipients of the rebroadcast signal, and SunSITE's activities consist solely of providing the hardware to make the retransmission possible.

PROPOSED LEGISLATION

The recommendations of a green paper recently issued by the Clinton Administration's Information Infrastructure Task Force may soon place extremely stringent controls on computer network-based information transactions. Titled "Intellectual Property and the Nation Information Infrastructure: A Preliminary Draft of the Report of the Working Group on Intellectual Property Rights,"³¹ the draft covers numerous issues involved in the reconsideration of copyright legislation in a digital age, concluding "that with no more than minor clarification and amendment, the Copyright Act, like the Patent Act, will provide the necessary protection of rights -- and limitations to those rights -- to promote the progress of science and the useful arts."³²

³⁰ 17 U.S.C.A. § 111 (a)(3)-(5)(1994).

"(3) The secondary transmission is made by any carrier who has no direct or indirect control over the content or selection of the primary transmission or over the particular recipients of the secondary transmission, and whose activities with respect to the secondary transmission consist solely of providing wires, cables, or other communications channels for the use of others: *Provided*, That the provisions of this clause extend only to the activities of said carrier with respect to the secondary transmissions and do not exempt from liability the activities of others with respect to their own primary or secondary transmissions; or

(5) the secondary transmission is not made by a cable system but is made by a governmental body, or other nonprofit organization, without any purpose of direct or indirect commercial advantage, and without charge to the recipients of the secondary transmission other than assessments necessary to defray the actual and reasonable cost of maintaining and operating the secondary transmission service."

³¹ Working Group on Intellectual Property Rights, Information Infrastructure Task Force, Green Paper: Intellectual Property and the National Information Infrastructure (Preliminary Draft, July 1994), *available on the World Wide Web*, <<http://www.eff.org/papers/ipwg.html>>. The "National Information Infrastructure" (NII) is the term used by the Clinton Administration to refer to the expanding digital, interactive services now available as well those contemplated for the future (more commonly referred to as the "Information Superhighway").

³² *Id.*

The draft focuses on the considerable complications that arise when a work can be transmitted via digital means with no physical medium permanently embodying the work. For example, the Copyright Act's granting of the exclusive right of a copyright owner to distribute copies or phonorecords of a copyrighted work³³ was originally intended to refer to material objects in which the work is fixed, such as a compact disc. As one author summarized the dilemma, "Current copyright law offers legal protections to the bottle; not the wine. Digitization makes it possible to replace all previous information storage forms with on metabottle: complex and highly liquid patterns of ones and zeroes."³⁴

In its discussion of the nature of digital communications, the draft suggests that it is no longer possible to simply "browse" a document since it must be "reproduced"³⁵ in the user's computer memory.³⁶ This view is supported by proponents of the idea that digital media "fixed" in the random access memory (RAM) of computers constitute infringement upon the reproduction right. However, due to the volatile nature of RAM (it is erased when a computer is turned off), there is much debate on this topic since Congress intended to limit the scope of reproduction right to somewhat permanent media. The proponents of RAM as reproduction infringement claim that, since a computer can be left on indefinitely, it should be viewed as a permanent storage medium. It has been suggested that, by this logic, "holding a mirror up to a book would be infringement because the book's image could be perceived there for more than a transitory duration, i.e., however long one has the patience to hold the mirror."³⁷

Instead of explicitly recommending that all uses of a copyrighted work be considered acts of infringement, the draft focuses on this inherent property of digital transmission to imply that current copyright law already grants copyright owners the right

³³. 17 U.S.C.A. § 106 (3) (1994).

³⁴. John Perry Barlow, *The Economy of Ideas: A Framework for Rethinking Patents and Copyrights in a Digital Age*, *Wired*, March 1994, at 86.

³⁵. 17 U.S.C.A. § 106 (1) (1994). This section grants copyright owners the exclusive right "to reproduce the copyrighted work in copies or phonorecords."

³⁶. *Supra* note 22.

³⁷. Samuelson, *supra* note 24.

to control every digital transaction involving the work. If accepted by Congress, the view that all computer transactions be legally considered "reproductions" will seriously limit the ability of users to access information. It is not currently a violation of copyright law to turn on the radio and listen to music or go to the library and read a book. However, under the draft's recommendations, every computer user who reads text, views pictures, or listens to music online would be required to obtain specific permission from the copyright owner before "browsing" the material or risk infringing copyright law.

The draft goes on to suggest that the present copyright statute that grants copyright owners an exclusive right to "distribute copies to the public by sale or other transfer of ownership, or by rental, lease, or lending"³⁸ be amended to include "or by transmission."³⁹ Given the unique nature of digital transactions discussed above, this recommendation may seem reasonable. However, current copyright law does not grant copyright owners the right to control all performances and displays of their works, only public performances and displays.⁴⁰ Instead of directly suggesting the replacement of public performance and display rights with exclusive rights to control all performances and displays, a move that would surely bring considerable controversy, the draft suggests this "transmission" amendment in order to dramatically increase the protection rights afforded copyright holders.

The draft also addresses the concept of "fair use"⁴¹ in a digital environment. Similar to its approach to the "browsing" issue, the draft attempts to limit users' rights by acting as if the restricting of certain rights has already occurred, when in fact no such restriction has taken place. For example, it definitively states that fair use is an affirmative defense, meaning that the defendant must prove its fairness. It fails to

³⁸. 17 U.S.C.A. § 106 (3) (1992).

³⁹. Working Group, *supra* note 31 at 120.

⁴⁰. *See* 17 U.S.C.A. § 101 (1992).

⁴¹. Working Group, *supra* note 31 at 133.

mention that the U.S. Supreme Court has ruled the opposite to be true in some cases,⁴² instructing lower courts to presume that private noncommercial copying is fair use if no meaningful likelihood of future economic harm could be proven. By overwhelmingly conveying the attitudes of publishers (in direct opposition to the general public's view that private, limited noncommercial copying should be allowed) and treating the hotly debated topic of private, noncommercial use of copyrighted works as if it has already been settled, the Draft fails to fairly or adequately address one of the most important issues facing modern copyright law, leaving the impression that virtually all fair use exemptions should be abolished.

Regarding audio transmissions, the draft focuses on the exemption of sound recordings from the public performance exclusive right⁴³ granted by the Copyright Act of 1976. It specifically refers to the Working Group's support of two bills currently before Congress⁴⁴ that would "add to the exclusive rights of a copyright owner in a sound recording the right to perform or authorize the performance of the sound recording by 'digital transmission.'"⁴⁵ The rights granted in the bill would only apply to digital transmissions, not to analog transmissions or public performances.

Are we to understand that simply because a transmission is distributed in the form of pulses (binary code) instead of waves (amplitude and frequency modulation) that it is subject to much stronger regulation? If passed, this legislation would require that digital radio stations be governed by a completely different, considerably stronger set of

⁴². *Sony Corporation of America v. Universal City Studios*, 464 U.S. 451 (1984). In deciding whether home videotaping of broadcast television signals constituted copyright violation, the Court modified the standard for noncommercial uses by placing the burden of proof on the plaintiff to show that there is some meaningful likelihood of future harm. The court failed to address the issue of "librarying" taped material for personal use, opting to view personal videotaping as a means of "timeshifting" so that the program could be viewed at a later time.

⁴³. 17 U.S.C.A. § 101 (1994). "To 'perform' a work means to recite, render, play, dance, or act it, either directly or by means of any device or process or, in the case of a motion picture or other audiovisual work, to show its images in any sequence or to make the sounds accompanying it audible."

⁴⁴. H.R. 2576 and S. 1421. These would grant a limited performance right to sound recordings.

⁴⁵. Working Group, *supra* note 31 at 131.

restrictions than analog stations. This type of bias against digital media is telling of current legislators' fear and misunderstanding of new technologies.

CONCLUSION

Under current copyright law pertaining to retransmission, it is well within the legal boundaries for SunSITE to digitally rebroadcast the off-air analog radio signal of WXYC. However, if the proposals set forth by the Working Group on Intellectual Property Rights are passed into law, the retransmission effort could face serious legal challenges.

In order to effectively "promote the progress of science and the useful arts"⁴⁶ and "create the most efficient and productive balance between protection (incentive) and dissemination of information, to promote learning, culture and development,"⁴⁷ we must examine exactly who benefits from current copyright law. Under the digital audio amendments to the Copyright Act, over half of the funds collected from taxes imposed on digital audio tape equipment go to record companies and music publishers, and individuals who cannot afford "professional" digital audio recording equipment cannot mass-produce their work.⁴⁸ What is the role of the music industry in a world where the individuals actually involved in the creative process are finally given the ability to distribute their own works quickly and effectively via computer networks? Will we choose to so severely limit individuals' access to high-quality computer hardware and software that we solely reserve the ability to mass produce and transmit media to "professional" outlets? Will we decide to transform every act of viewing, listening, or experiencing an artistic or scientific work into a possible act of copyright infringement?

⁴⁶. U.S. Const. art. I, § 8 cl. 8.

⁴⁷. *Whelan Assocs. v. Jaslow Dental Lab.*, 797 F.2d 1222, 1235 (3d Cir. 1986), *cert. denied*, 479 U.S. 1031 (1987).

⁴⁸. *Supra* note 25.

The Working Group addresses the concept of the National Information Infrastructure as if it were some ominous digital stranger looming over the horizon, anxious to rob us of our ideas and disseminate them the world over. Its proposed solution of throwing more legislation at the complex issues that are created with new digital technologies is not only foolhardy, but downright dangerous. The NII draft fails to examine the Internet and similar computer networks over which computer users are currently sharing ideas and expression in new and exciting ways. Through the facilitation of new technologies, these networks have enhanced the free exchange of ideas and information of the sort that copyright was designed to promote. If modern copyright law becomes too skewed in favor of the copyright owner, much of the general public may find itself incapable of discovering the great joys of interactive digital communication currently enjoyed by users of existing computer networks.

In the draft, the Working Group cites Thomas Jefferson, who, as Secretary of State, was the first head of the U.S. Patents Office:

I am not an advocate for frequent changes in laws and constitutions. But laws and institutions must go hand and hand with the progress of the human mind. As that becomes more developed, more enlightened, as new discoveries are made, new truths discovered and manners of opinions change, with the change of circumstances, institutions must advance also to keep pace with the times. We might as well require a man to wear still the coat which fitted him as a boy.⁴⁹

Government must take care not to make the coat so large that it suffocates the man. History has shown that strict governmental controls over information distribution are by no means successful.⁵⁰ However, now that we are free of the limitations of "bandwidth scarcity," the NII draft implies that we are now suffering from "intellectual scarcity." We

⁴⁹. See Inscription at the Jefferson Memorial.

⁵⁰. The Statute of Anne, enacted in 1710 in response to the printers' monopoly in Britain, divested copyright from Crown-licensed printers in favor of individual authors' rights. See Alan Latman et al., *Copyright for the Nineties* 1 (3d ed. 1989).

should take every precaution to make sure that the fear of intellectual piracy does not suppress the great potentials of digital interactive communication over an evolving global information network before they are fully realized.

The fundamental problem facing the developers of copyright law consists of balancing the protective rights (incentive) of copyright owners and the right of access among society as a whole. If we examine the example of the Internet, there seems to be no better creative incentive than the existence of a thriving intellectual environment in which the free exchange of ideas is not overshadowed by protectionist, burdensome intellectual property laws. Instead of promoting intellectual exchange and development, the proposals offered by the NII draft, in their current form, will tear down the currently existing thriving global network that millions of individuals have put immeasurable effort into creating and nurturing, replacing it with the empty shell of a pay-per-view information piggy bank. If low budget, decentralized media outlets like WXYC find themselves incapable of flourishing in the brave new world of digital communications due to governmental over-regulation, we will surely have failed the copyright challenges set forth by the Constitution.