

BEYOND COPYRIGHT: THE BRAVE NEW WORLD
OF DIGITAL RIGHTS MANAGEMENT

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As more intellectual property (text, music, and images) becomes available in digital formats, there is increasing concern about protection of the material against unauthorized use and the sometimes-conflicting rights of the originators and users of the material. For example, intellectual property (IP) arguments about the use of MP3, the Secure Digital Music Initiative (SDMI), and the DVD Content Scrambling System (CSS) are currently receiving substantial coverage in the technical, business and popular press. Computer graphics professionals are discovering that they must be concerned with not only technical capabilities, but also policy and legal issues.

This panel addresses the following questions:

- Have new national laws (for example, the Digital Millennium Copyright Act) and international treaties (for example, the World Intellectual Property Organization) significantly altered the rights of IP owners and IP users?
- Will the use of digital copy protection systems such as CSS help or hinder acceptance of these devices by consumers?
- Is there a need for digital copy protection in broadcast and distribution of digital video?
- How does the traditional concept of fair use apply to digital forms of IP?
- How do peer-to-peer file-sharing systems such as Napster affect IP rights and fair use?
- Because much intellectual property is created by teams of people rather than a single author, what forms of IP ownership are appropriate?

Robert Ellis

We have been hearing a lot recently in the technical and popular media about digital rights problems. Unfortunately, we have heard the most from interested parties such as the Motion Picture Association of America (MPAA), the Recording Industry Association of America (RIAA), and the Home Recording Rights Coalition (HRRC). In addition, most of the rhetoric has addressed what can and should be done about accessing and copying digital material, and little has been said about the overall technical and legal issues. I believe it is time to hear from the people who are actually involved with producing and using digital works, academic experts, and practicing attorneys who can take a step back from the heated discussions and offer some practical comments on the problems.

Robert Ellis retired in 1993 as Sun Microsystems' representative on the Technology Policy Committee of the Computer Systems Policy Project (CSPP) and co-manager of Sun's university research program. Previously, he held computer graphics software development and management positions with Sun, GE-Calma, Atari, Boeing, and Washington University, where he received BS and MS degrees in electrical engineering and computer science. He

currently serves as the chair of the Public Policy Program of ACM SIGGRAPH and is a member of ACM's U.S. Technology Policy Committee (USACM). He served as co-chair of SIGGRAPH 80, and he was a member of the SIGGRAPH Executive Committee from 1977 to 1983.

Dan L. Burk

Over the past decade, courts in the United States have firmly established that standard copyright doctrines such as those regarding fair use or joint authorship apply to digital media. However, the recently enacted anti-circumvention provisions of the Digital Millennium Copyright Act (DMCA) create a new right to control access to copyrighted works, separate from the exclusive rights under copyright. Such rights effectively endow copyright holders with a sweeping new ability to impose terms of access on content users. Consumers who access content without accepting the content owner's terms would be in violation. Even where a particular use would be permissible under copyright law, content owners may be able to exclude or license the use as a condition of access. Moreover, content that Congress is constitutionally forbidden from protecting as intellectual property is swept up into the scope of the DMCA provisions. The breadth of content control granted under these provisions not only far exceeds any treaty obligations that the DMCA was purported to fulfill, but also violates the constitutionally mandated limits on Congressional power to grant intellectual property rights.

Dan L. Burk joined the University of Minnesota faculty in the fall of 2000 as the Vance K. Opperman Research Scholar. He teaches in the areas of copyright, patent, and biotechnology law. His expertise is in the legal and societal impact of new technologies, including scientific misconduct, regulation of biotechnology, and the intellectual property implications of global computer networks. He holds appointments in both the Law School and the Center for Bioethics and currently serves as associate director of the new Joint Degree Program in Law, Health, and the Life Sciences. He has also been closely involved in the development of the new Internet Studies Center. Previously, he taught at Seton Hall University, George Mason University, Cardozo Law School, the Ohio State University Program at Oxford, and Stanford University Law School. He holds a BS in microbiology (1985) from Brigham Young University, an MS in molecular biology and biochemistry (1987) from Northwestern University, a JD cum laude (1990) from Arizona State University, and a JSM (1994) from Stanford University.

Deborah Neville

Digital rights management of the arts is rising to the forefront with lawsuits such as the Motion Picture Association of America (MPAA) versus Scour. It is instructive to look to the music industry, which is embroiled in high-profile disputes over the right of consumers to share their music over the Internet, for a preview of things to come for visual art creators, tool developers, and various other rights holders. Given the inevitability of online

distribution, the music industry leaders' boycott of grass-roots efforts such as the Future of Music Coalition creates doubt as to the strategy of current rights holders who are ignoring the political voices of creators and technology developers. Provisions in copyright law that criminalize attempts to break through copyright control are viewed as threats to fair use. Will the economics be different in the areas of graphics works, visual arts, and tools? Will the economics encourage content lock-ups? How can creators best position themselves to create freely and derive their constitutionally created rights in the digital era? What will the economics of enforcement really be? Visual artists need to be aware and engaged to keep their freedoms from being eroded piecemeal by a patchwork of ill-conceived so-called protection measures predicated on misrepresented technological capabilities.

Deborah Neville's practice focuses on established and emerging high technology businesses and related intellectual property and business matters. She is senior counsel in the Palo Alto office of Manatt, Phelps and Phillips. Previously, she served as corporate counsel for both Hewlett-Packard Company and Agilent Technologies, Inc. While at HP, she headed the Entertainment Industry Strategic Initiative, creating business opportunities between the company and the media and entertainment industries. Most recently, she was vice president for legal affairs at Applied Science Fiction, a digital imaging company based in Austin. She received her JD from the University of California's Hastings College of Law and her BA in physics and biology from the Catholic University of America.

Barbara Simons

With the development of the World Wide Web, futurists predicted that vast libraries and entertainment resources such as movies, music, and games would be accessible from home computers. But much of the technology that makes it possible to access the Library of Congress from your living room also makes it possible to copy and distribute protected information for little or no cost. This fact was not lost on Hollywood and the record industry. Instead of a dream come true, they were experiencing a nightmare. The result of these fears was enactment of the DMCA. Not only does the DMCA threaten user rights of fair use and first sale, but also it does so by criminalizing technologies and technological devices instead of actual infringing behavior. Had such legislation been passed some years earlier, we might have found ourselves with no photocopying machines and no VCRs. In addition to the threat to future technologies posed by the DMCA, the anti-circumvention provisions, if they are taken literally, make many standard computer security techniques illegal. While no one intended to jeopardize our information infrastructure by passing such legislation, this is only one of some very serious potential side effects of the DMCA.

Barbara Simons was ACM President from July 1998 until June 2000. Earlier, she founded and chaired ACM's U.S. Technology Policy Committee (USACM) and chaired the ACM Committee for Scientific Freedom and Human Rights. She was elected Secretary of the Council of Scientific Society Presidents (CSSP) in 1999, and she has been on the CSSP Board from 1998-2000. She is a fellow of

ACM and of the American Association for the Advancement of Science. She earned her PhD in computer science from the University of California, Berkeley, where her dissertation solved a major open problem in scheduling theory. Later, she became a research staff member at IBM's San Jose Research Center (now Almaden), where she did research on scheduling theory, compiler optimization, and fault-tolerant distributed computing.

Sarah Stein

Although for educators the notion of "edutainment" evokes an objectionable dumbing down of teaching and learning, there is a useful parallel to be drawn between the entertainment world and higher education. Producing motion pictures and developing computer-based curricula both rely on collaborative interactions between creative and technical teams. The media industry, which encompasses both film and television, has had to create models in which large numbers of personnel, at very different levels of creative input, can be compensated for their work. Thus the motion picture industry's template for compensation (both money and recognition) can provide higher education with a useful model. A more inclusive approach to intellectual property rights, responsive to the integral role of instructional technologists and designers, could benefit creative technical professionals in private industry as well as higher education.

Sarah Stein is assistant professor in the Department of Communication at North Carolina State University and a documentary filmmaker. At North Carolina State, she teaches courses in film, video, and digital production. She has also taught film editing at New York University's Tisch School of the Arts and presented visiting artist lectures at Sarah Lawrence College, Women in Film, Clark University, Hunter College/CUNY, AFI Film Seminars, and Villanova University. Her film work covers topics from social issues to music and art, with productions ranging from Bill Moyers and CBS to public television and independent documentaries. Among her many filmmaking awards are two Academy Awards for documentary editing, the Columbia-DuPont Journalism Award, several Emmy Awards and nominations, and numerous national and international film-festival awards. She has a PhD in media studies from the University of Iowa.