



Copyright Law and Technology

Editor's note:

This article is intended as a general introduction to copyright concepts and not as specific legal advice.

Consumers are inundated with sound and images. A child today may see more images in a week than an individual in the 19th century viewed in a lifetime. These images were presented in a read-only format throughout the 20th century. A child watching television was a passive observer. The inclusion of authoring programs such as iMovie and Movie Maker in the Apple and Windows operating systems allows a transition from a read-only medium to a read-write medium in the 21st century.

The current generation of students is the first to have widespread access to these tools. This capability, discussed in previous columns on digital storytelling, allows students to shift from the role of passive observer to active creator of digital media. A student can use Google

to locate and transfer an image from the Internet, employ Photoshop to manipulate it, drop it into iMovie, add an MP3 version of a popular song as a soundtrack, and create a multimedia presentation.

The student's creative work in this example is based on using sounds and images created by others. Development of derivative works through sampling is now embedded in popular culture. The concept of authorship is increasingly tangled. As a result, although new technologies offer unprecedented educational opportunities, they also present unprecedented challenges for schools.

A work does not have to include a copyright symbol to be protected by copyright law. Almost any original work captured in some tangible form of expression, from print to film to the Web, is copyrighted automatically upon its creation. Technology has created new gray areas, and the advance of technology often requires new interpretation of unforeseen circumstances. Copyright is not a fixed entity; in reality it is malleable and constantly changing, due to the influence of interested parties. In recent years, technology has been the catalyst for revision of copyright laws and the introduction of new legislation.

Copyright Basics

Copyright offers protection for the expression of ideas. The underpinnings of both copyrights and patents, which offer similar protec-

tion for inventions, are grounded in the premise that such protection encourages human ingenuity and creativity. Thomas Jefferson, who founded the U.S. Patent Office, supported this encouragement, but also believed that all monopolies should have limits.

Jefferson believed these limits to be so important that he advocated their inclusion in the U.S. Bill of Rights. He suggested that such terms of protection be limited to 19 years, at that time the accepted length of a generation. In 1789, in a letter to James Madison, he wrote "I set out on this ground, which I suppose to be self-evident, that the earth belongs to the living."

Because the limits on copyrights are not explicitly defined in the U.S. Constitution as Jefferson desired, these limits are established through legislation. The manner in which this legislation is implemented, in turn, is often subject to the interpretation of the courts.

One of the first modern interpretations related to electronic media emerged in the context of the videotape recorder. As videotape recorders first became available to consumers, many of the movie studios attempted to ban or limit their use. The U.S. Supreme Court, in what is commonly called the Betamax case, rejected what

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the majority opinion termed an “unprecedented attempt to impose copyright liability upon distributors of copying equipment” — but only by a 5–4 decision. The Court reasoned that there are many legitimate uses of the technology that do not involve copyright infringement, and prohibition or restrictions of the entire class of technologies could not be justified.

Two important lessons may be drawn from this case:

1. Copyright laws are subject to ongoing interpretation. Uses deemed legitimate often hang narrowly in the balance. The shift of a single opinion in this instance would have changed the outcome.
2. Congress can change copyright rules at any time and has done so frequently in recent years.

Corporate producers of media and content have significant input into the way these laws are rewritten, while the voices of individual consumers are not always as well represented. These new laws, in turn, are subject to subsequent challenges and interpretation by the courts.

Copyright in the Classroom

Teachers and school leaders may be pardoned for justifiable perplexity about the shifting order. However, it is equally important to both respect the rights of copyright holders and to take advantage of new opportunities for learning offered by a world in which students can produce as well as consume media.

Teachers and students can use copyrighted material legally without the author’s permission if it falls under fair use in education. Section 107 of the 1976 Copyright Act deals with the question of fair use, and reads as follows: “the fair

use of a copyrighted work, including such use by reproduction ... for purposes such as criticism, comment, news reporting, teaching ... , scholarship, or research, is not an infringement of copyright.”

To qualify for fair use, four factors must be weighed:

1. purpose of use
2. nature of the work
3. amount used
4. effect on the market

(Editor’s note: For more on the four-factor test, see Fair Use Defined in Kate A. Thompson’s article, pp. 11–12.)

To use copyrighted material without permission, the four-factor test must be employed. For example, if a student wanted to include a cartoon character obtained from the Web in a multimedia presentation, each factor would be considered to determine whether fair use was applicable. In this instance, the purpose (scholarly) and effect on the market (none) would be weighed against the nature of the work (creative) and amount of use (using an image is generally considered using the whole work). Only two factors are strongly in favor in this example, but it might be reasoned that as long as the project is only being shown in the classroom or at home, the absence of commercial repercussions could tip the balance in favor of fair use.

The U.S. Copyright Office provides guidelines on educational use of print materials published under the title “Reproduction of Copyrighted Works by Educators and Librarians” (*Editor’s note:* For this pamphlet and other resources, see Copyright Resources on p. 22). This document was developed to assist in interpretation of fair use related to the 1976 copyright law and may be helpful to educators. There is no formula, but the docu-

ment suggests, for example, that no more than five images by any one artist and no more than 10 percent of a published collective work may be employed under fair use guidelines.

As the 1998 Digital Millennium Act was developed, a consortium of nearly 100 organizations representing publishers, libraries, educational associations, and government organizations attempted to develop updated guidelines for digital media through the Conference on Fair Use (CONFU). After two years of deliberations, the delegates to CONFU failed to achieve consensus on guidelines for fair use in education. However, the proposed guidelines are published in a final report posted on the U.S. Patent Office Web site.

Despite the lack of consensus on fair use of multimedia materials in education, there are still clear areas that fall outside the bounds of fair use, as well as areas for which fair use is clearly applicable. The four-factor test may still provide educators with the best guidance regarding these boundaries. It is always possible, of course, to em-



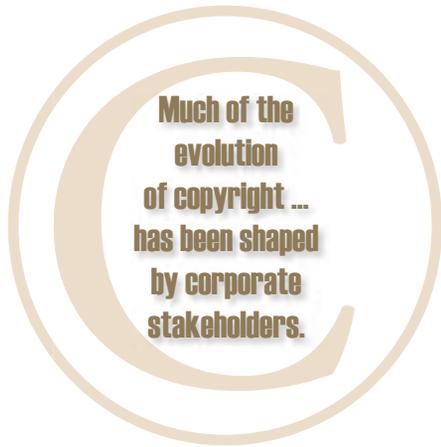
Almost any original work captured in some tangible form of expression ... is copyrighted automatically upon its creation.

By Elizabeth Langran, Robert Langran, and Glen Bull

Subject: Intellectual property rights

Grades: K–12 (Ages 5–18)

Standards: NETS•S 2; NETS•T IV; NETS•A IV (<http://www.iste.org/nets/>)



ploy materials for which permission for educational use has been explicitly granted. The Creative Commons is an interesting initiative that was established to encourage such use.

Creative Commons and Copyright

Much of the evolution of copyright, from the crafting of original legislation to subsequent interpretation in the courts, has been shaped by corporate stakeholders. Individual consumers frequently lack the resources of time and funding to provide input into the process. Both perspectives are important, but the debate is frequently polarized reflecting either a world of total control of media and materials with all rights reserved, or the anarchy of peer sharing networks with no safeguards for copyrighted materials.

The Creative Commons was established by Lawrence Lessig to offer a middle ground, involving a vision of copyright licenses consisting of some rights reserved. The intent recognizes and protects the rights of creators while simultaneously allowing certain uses in education.

For example, Magnatune is a music label featured on the Creative Commons site that offers downloadable music tracks. Individual users are asked to purchase downloaded tracks, but the license also permits and encourages educational use without charge. Similarly, the Open Photo site provides images offered under a

Creative Commons Attribution License that states that the photographs may be used by others provided that proper attribution is provided.

The Creative Commons search engine is another useful tool constructed to facilitate educational uses of content on the Web. The Creative Commons search engine helps identify materials such as images, music, and text whose authors permit reuse for noncommercial purposes.

Works in the Public Domain

Works in the public domain are available for public use, of course. However, the term of copyright has been steadily increasing. In 1790, the term of copyright in the United States was established as 14 years with the option of a one-time renewal. By 1998, the Digital Millennium Act extended this to the life of the author plus 70 years.

1790	14 years plus one 14 year renewal
1976	life of author plus 50 years
1998	life of author plus 70 years

The Cornell Copyright Center provides a useful chart that outlines the current copyright terms for various types of work. In the digital age, much of the material that falls in the public domain has been accumulated in online centers such as the Electronic Text Center at the University of Virginia. Centers such as this make available works that are in the public domain in a convenient, readily downloaded site.

The Art Museum Image Consortium (AMICO, <http://www.amico.org>) offers convenient access to images that still fall under copyright. The goal of this consortium of art museums is to make a common pool of images available to schools for educational use through a common license. When a school subscribes to AMICO, all of the images contributed by its members can be secured.

Permission and Attribution

Beyond the legal requirements mandated by law, permission and attribution are two important practices that should be in the repertoire of every teacher. The Web has resulted in an unprecedented deluge of self-published materials. Often the individuals who publish online are willing to grant permission for educational use. Attribution of others' work should be made whether material is copyrighted or in the public domain. Often students are not aware that attribution of materials copied from Web sites is required.

Summary

Today we live in a paradoxical age in which copyright terms and controls are increasingly restrictive while it is physically easier than any other time in history to obtain content. This can present a challenge to educators. However, at a time when studies indicate that more students now use the Web than the physical library for research and study, it is more important than ever for educators to understand copyright and to present this information to students in a meaningful context. Although the paradox of the current era presents challenges, there is a middle ground that respects the rights of copyright holders while taking advantage of the learning opportunities presented by new media.



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