

Video Use and Higher Education: Options for the Future

This report is based on the findings of a study designed and funded by Copyright Clearance Center and conducted by Intelligent Television with the cooperation of New York University.



1 Executive Summary

In interviews with 57 faculty and librarians from 20 institutions and across 18 academic departments and schools, the Video and Higher Education Project found data to support the following:

- ◆ The educational use of video on campus is accelerating rapidly in departments across all disciplines—from arts, humanities, and sciences to professional and vocational curricula.
- ◆ Faculty, librarians, and administrators expect their use of video in education to grow significantly over the next five years.
- ◆ Technology, legal, and other barriers continue to thwart faculty finding and accessing the segments of video they want for teaching and lectures.
- ◆ University libraries contain significant video repositories but the majority of the content is in analog (VHS) format and/or is not networkable.
- ◆ The majority of video usage today is still confined to audiovisual viewing equipment in classrooms or at the library.
- ◆ Faculty and administrators expect the sources of their video to shift from offline analog storage to online delivery.
- ◆ The demand for educationally-targeted video archives and services is high.

2 Introduction

Media, and video in particular, are in a period of profound transition, rivaling any we have ever seen.¹ Causes are various, but three stand out. First, technology has rendered many of the processes of media creation, distribution, and consumption faster and less costly than ever before.² Second, public expectations about the availability of media have grown to the point that many people consume and freely exchange media property—including private, copyrighted property—each day in the course of their personal and professional lives. Third, new companies, enterprises, and initiatives regularly exert game-changing influence in film and electronic media. YouTube, by posting 13 hours of video every minute, is one such player; Wikipedia, about to make video available in its entries online via the open-source codec Ogg³, will be another. As a result, the economic calculations behind media production and consumption, whether at an independent film production company or at the publicly-traded New York Times, shift with the transience of the desert sand—and the balance of expenses for and income from online content in any medium now seem to sway violently in the wind.⁴

While a number of studies—those of the Pew Charitable Trusts Internet and American Life Project foremost among them⁵—have pioneered progress in the field of understanding the use of the Internet and web resources in education and everyday life, the time is right to take a careful look specifically at video use in higher education and take stock of trends in teaching and learning at the university level. For this reason, Copyright Clearance Center (CCC), Intelligent Television, and New York University Libraries embarked on a study to investigate video use across university departments and disciplines. The Video and Higher Education Project interviewed 45 faculty in more than 18 disciplines and departments across 20 institutions including Boston University, Columbia University, Duke University, Duquesne University, George Mason University, Indiana University, Massachusetts Institute of Technology, Middlebury College, New York University (where we devoted a special amount of time and resources), University of California, University of Delaware, University of Illinois, University of Maryland, University of Massachusetts, University of Minnesota, University of Southern California, University

of Virginia, University of Washington and Williams College about the ways they use video now; where their video use is heading; and discussed how best to develop potential new video service offerings. The project also interviewed 12 librarians and university administrators who in many respects are the gatekeepers for media rights bought by universities and help to orchestrate campus policies regarding display and distribution.

In this paper, Intelligent Television presents

the results of this nine-month project. In the paper, we attempt to accomplish three objectives. First, we review video use trends generally, providing some statistics and context for the data that follows. Second, we present the results of our findings about video use in higher education, extrapolating data from our questionnaires and survey results to describe trends we believe we have identified. Finally, we describe possible solutions to the needs we have identified in our research and identify areas that we believe warrant further research.

3 Video Use Trends

Certain trends are clear. Video production and consumption rates are exploding. Internet users watched 12.7 billion online videos in November 2008—up by 34 percent from November 2007, and 136 million people watched professional video content online in January 2009—up 16 percent from January 2008. Every minute, approximately thirteen hours of video are uploaded to YouTube⁶. Capture, editing, and archiving resources are now in the hands of millions, and the discussion has shifted from terms describing media literacy to “media fluency,” in that people are newly conversant and becoming fluent in the vocabulary, philosophy, and technology of television, movies, and music.⁷ Age is not a critical factor; everybody is partaking, but especially Americans of college age. Critical faculties—what some in the academy call the ability to closely read a text, or postmodern audiovisual sensibilities—are

becoming better developed. In many of the disciplines we are surveying, the technological sophistication of the student outstrips that of the teacher—and the faculty know it.

At the same time, the portability of media assets—the mobility of access to the resources we are describing and to their distribution channels—is accelerating exponentially. Soon, more people will access the Internet through mobile devices than through desktop computers. Storage costs are dropping such that thousands of hours of video soon will be portable on individual iPod devices. Google scientists predict that in 10 years people will be able to carry around all the media ever created in the world on an iPod or a device its size.⁸ Cisco’s futurologists, looking at the spate of media production generally, have predicted that in 2010 all the information on the Internet

will double every 11 hours; and in 2018 it will double every 11 seconds. Internet video will represent 30 percent of total data transfers on the Internet in 2009 and 50 percent by 2012.⁹ Conversations about this media now take place everywhere—on YouTube, Facebook, MySpace, Hulu and beyond. On Wikipedia, every single episode of a television show and almost every frame of a movie will be scrutinized to the nth degree, and on YouTube text and video discussion rolls and now annotations of videos about the economy, politics, and culture unfurl seemingly endlessly.¹⁰ Collectively, large numbers of people are tagging and describing and responding to video assets—in some cases with their own video—on all of these platforms.

The conversations and the public interactions with this media are such in part because every new feature film, television show, piece of music, and almost every classic or legacy audiovisual piece is or will soon be going online on file-sharing and peer-to-peer networks. The bulk of Internet traffic worldwide—almost half in the United States, and a much higher percentage globally—is comprised of audiovisual files being shared on these networks and through these protocols. According to stud-

ies of the field, the contents of every music CD that gets released is on a peer-to-peer site within eight minutes of that release in a store or online; and every feature film goes online within weeks if not days of its premiere on a screen. “If peer production continues to evolve at the current rate,” one Dutch analyst tells us, “it will be impossible to uphold regulation-based exclusive access to content according to copyright by the year 2010.”¹¹

Wired Magazine founder Kevin Kelly and Creative Commons founder and Stanford law professor Lawrence Lessig describe our cultural shift today as one from book literacy to screen fluency where video is the new vernacular—a “world beyond words,” where television, movies, and all audiovisual work will, like books, find themselves with tables of contents, indexes and abstracts, rendering them searchable to the minute if not the second and have rights provenance clearly and transparently defined for both legacy and new elements.¹² We have described the trends noticeable today as ones that are as remarkable as the shift from the scroll to the codex over 2,000 years ago.

This music stops at the university gate. The

4 Video and Higher Education

state of play today in higher education is such that the “screen literacy,” “visuality,” and fluency that students bring to the classroom and to their work from their worlds outside the university are barely being serviced inside of

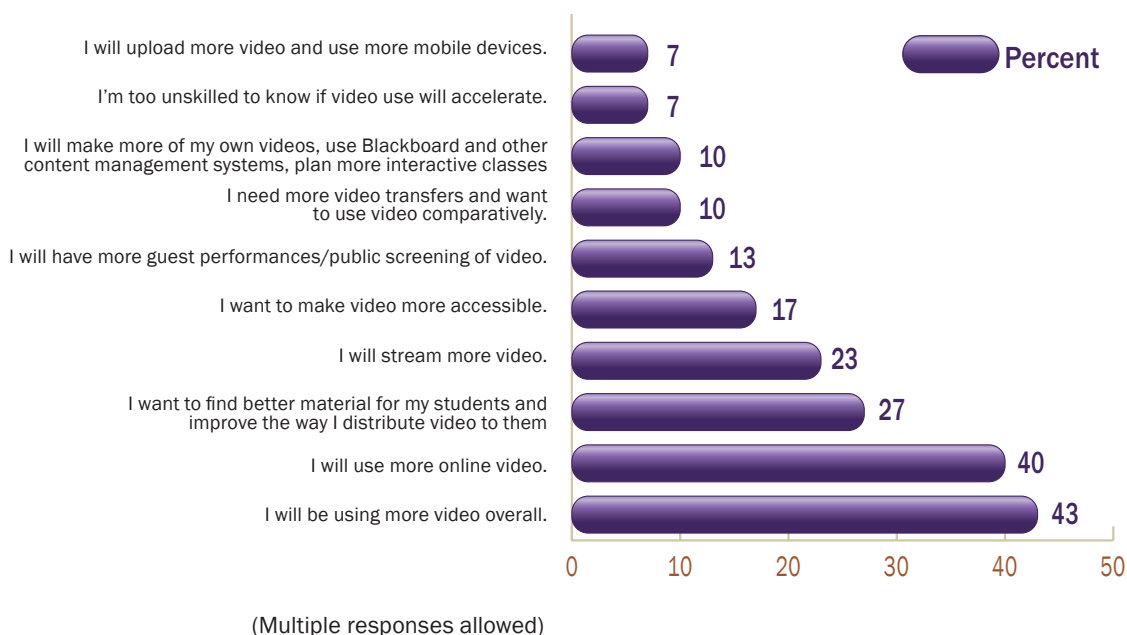
it. The ways in which students use, create and distribute entertainment media differ drastically from the ways in which they use digital media inside the classroom. The demand—not only on the part of students, but from teachers

as well—for video resources exceeds what is available in every institution we visited. Even in places where faculty blaze trails to put screen assets in front of students, and the resources are significant to support them, video assets are far from integrated systematically into pedagogy.

While a number of nascent services—Alexander Street Press, the digital initiatives of Films for the Humanities, the Tribeca Institute’s Project Reframe—offer titles and collections of online video for sale to institutions, higher education has yet to see the proliferation of resources like Discovery’s and NBC’s servicing the K-12 market, and both taken together are but a drop in the bucket compared to what could be provided and faculty and librarians report that faculty are seeking.¹³

Despite the lack of video resources/services currently available for higher education, nearly half of the faculty we interviewed anticipate that their video use will accelerate. New content access and delivery options are unknown or underutilized by faculty, and their consumption patterns are marked by a lack of know-how, time, and tools to expand use. In the future, faculty expect to have more video available in digital form for streaming and download. Video use is “heading skyward,” according to one faculty member we spoke with. Many want to show, clip, and edit video clips easily, as well as access online content libraries, satisfy students with on-demand streaming/downloads, provide close readings of video as text, and collaborate with other faculty and departments (Table 1).

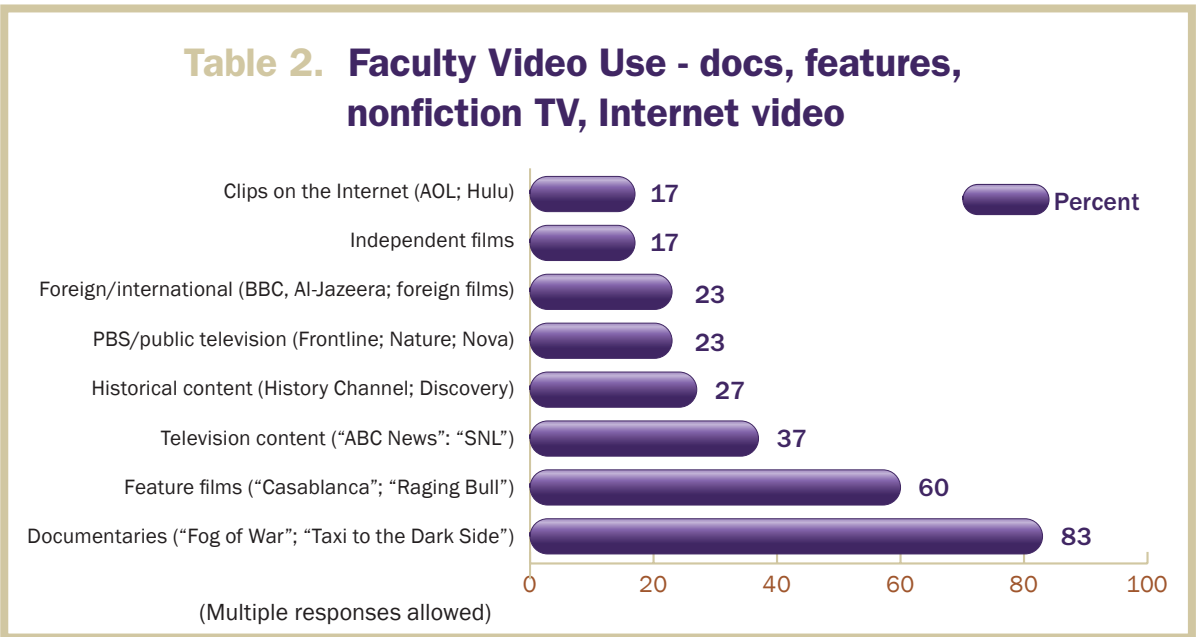
Table 1. Faculty Video Anticipated Use



The types of video that faculty deploy range across the gamut of filmic content, with documentaries and feature films ranking high but

television news and entertainment programming are also significant (Table 2).

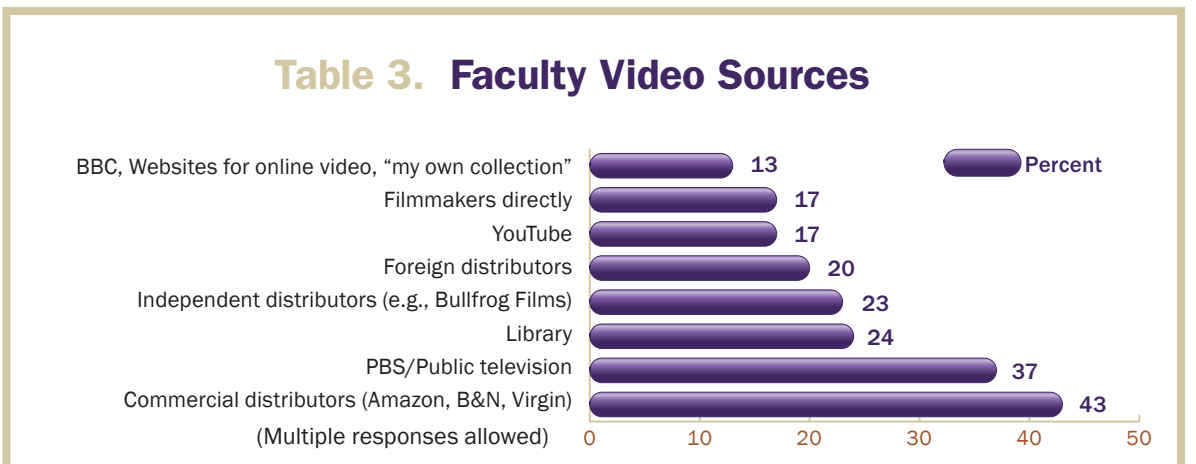
Table 2. Faculty Video Use - docs, features, nonfiction TV, Internet video



Faculty find their moving image resources in various ways (Table 3)—from online and brick and mortar (especially in New York City) commercial stores to libraries to YouTube and

personal collections—but expressed concern with wait time, formats, and procedures for ordering, among other issues.

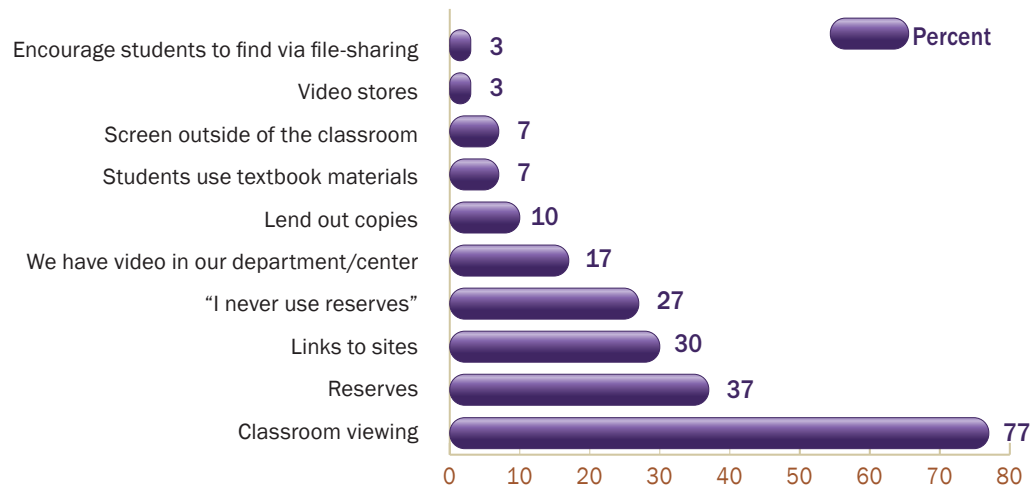
Table 3. Faculty Video Sources



According to our research, faculty use a variety of methods to make material available for student use (Table 4)—however, these methods are likely to shift. Systems that favor classroom and library viewing and systems that are marred by difficulties transferring, duplicating, and “checking out” are likely to morph into

systems that favor uploading video to class and personal web pages. In addition, personalized video libraries—complete with annotation and editing tools—will likely be the norm, as will video applications featuring mobile and on-demand video and access to user-created files.

Table 4. Faculty make video accessible through . . .

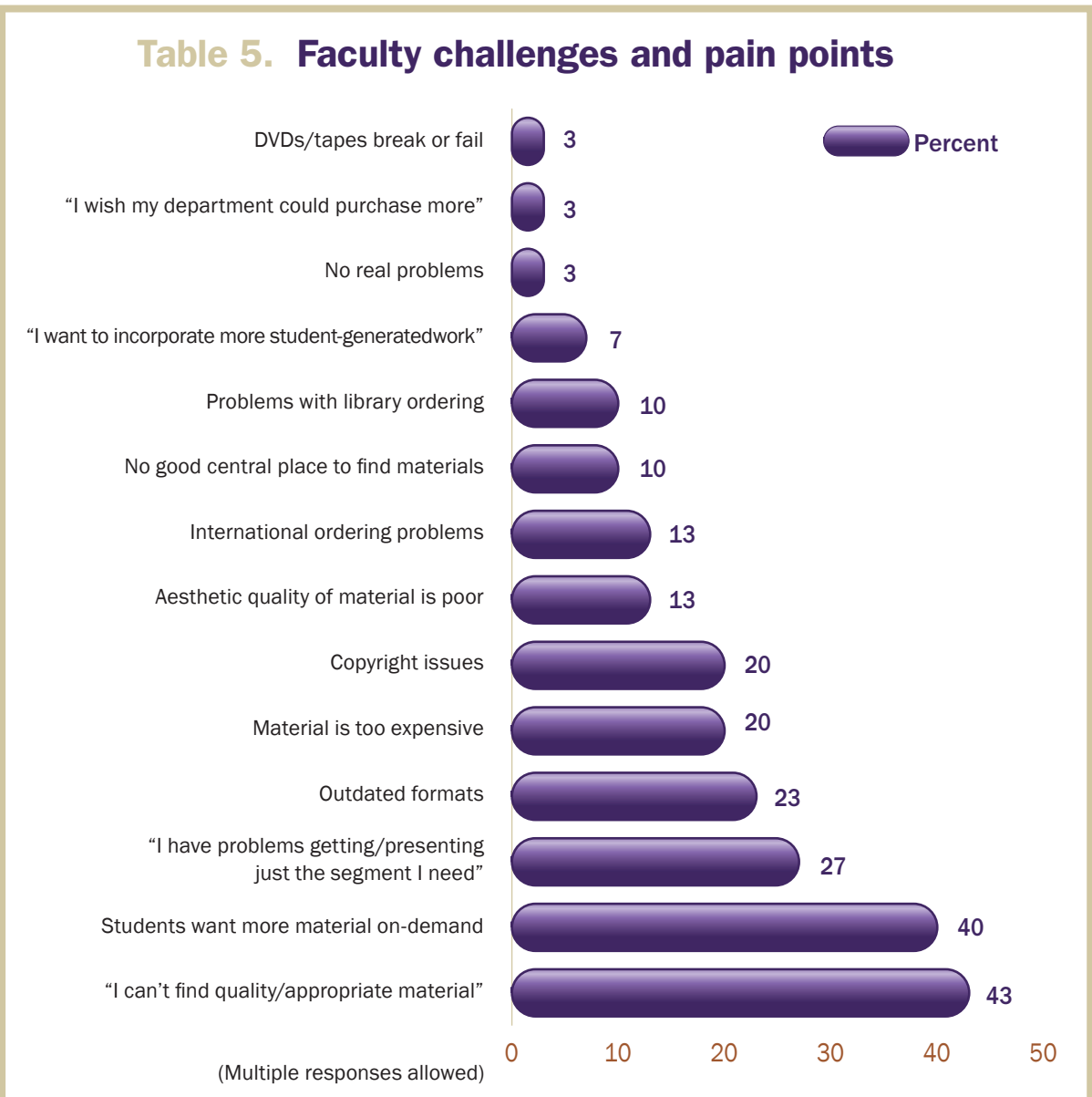


(Multiple responses allowed)

Obstacles to video use that faculty identified include not having enough library copies (23%); not having enough screening rooms (17%); not having the option to stream and upload (13%); not having enough foreign format PAL players (10%); not having conversion equipment (10%); poor library catalogs (7%); and inadequate information about library acquisitions (10%). Additional “pain points” that

faculty noted—and some emphasized repeatedly (Table 5)—include troubles searching for and finding high-quality libraries of content; the dearth of easy and effective tools for editing videos, making copies, and uploading videos for students; difficulties converting legacy and foreign formats; and course-management system short-comings as they relate to video support.

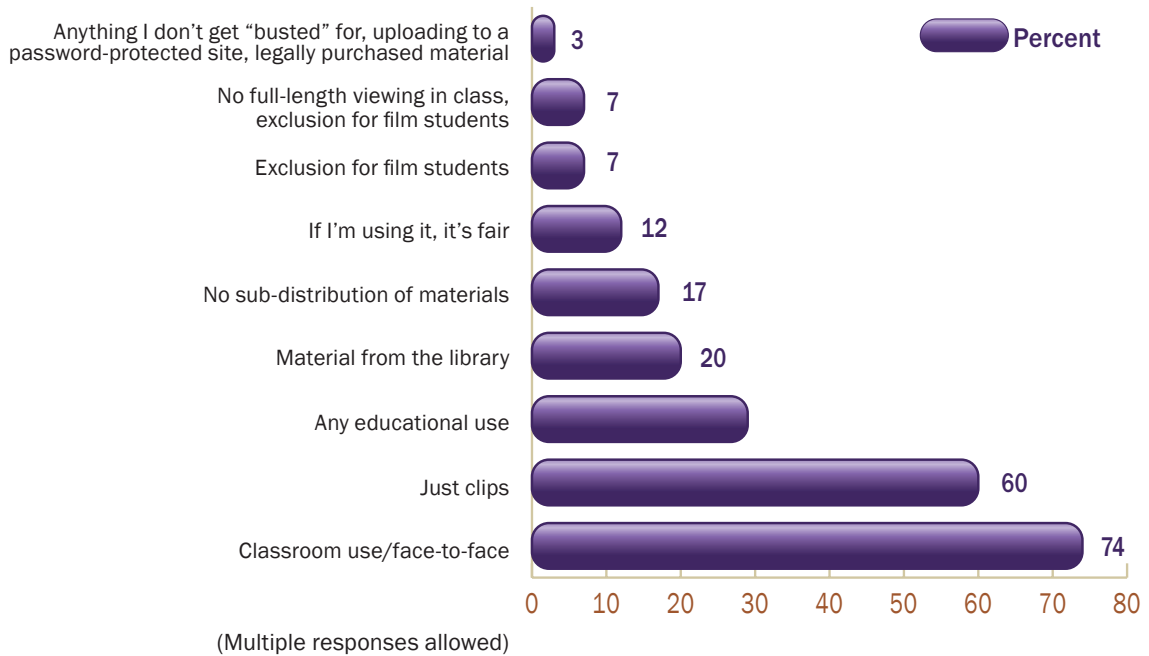
Table 5. Faculty challenges and pain points



Throughout our discussions, it was clear that faculty and librarians as groups possessed definitively different attitudes toward rights and responsibilities associated with the intellectual property embodied in a/v material. Only a small number of faculty (7%) described rights issues as being an obstacle to ease-of-use, even though rights restrictions are among the key factors keeping libraries of audiovisual work from being digitized and made available in

streamlined fashion on campus. Few faculty purchase expanded use rights or even concern themselves with its purchase; and views on what types of use constitute fair use (Table 6) range the gamut. Faculty do not believe (or realize) rights barriers are preventing expanded use. Rather, they point to the lack of identifiable, high-quality content libraries and simple, reliable tools for customizing the video to their curricula.

Table 6. What types of use are covered by fair use and other educational exclusions?



Librarians, with major roles in purchasing, distribution, and digitization, generally approach rights regimes aware of what rights packages their purchases come with. While any discussion of possible repositories and service offer-

ings must feature faculty input, it is clear that librarian involvement in scenario planning and the practical dimensions of licensing will be essential for any innovation to take place.

5 Solutions and conclusions

In our discussions, we reminded faculty and administrators of deep text and image repositories such as JSTOR (<http://www.jstor.org/>, with over 500 journal publishers and 5,000 institutional customers) and ARTstor (<http://www.artstor.org/index.shtml>, with its 900,000 images and over 1,000 institutional customers) and asked them to imagine the utilities of a video equivalent.¹⁴

The demand was clear for online repositories of video that faculty and library staff could tap into, on-demand, to search for, find, and use video clips they need for their classes. Were a service like this offered to higher education, its use would be immediate. However, faculty told us they would want to have a central role in determining and ideally customizing the content in their libraries. Specific functionality that faculty said they would want incorporated into any new service include the ability to clip/edit, stream and make copies, followed by facilities enabling faculty and students to upload video.

Today, a range of high-quality, high-value audiovisual material is being digitized and made available online by cultural and educational institutions. Sources range from the National Archives and Library of Congress to projects

based at universities—for example, ethnomusicology assets at the EVIA Digital Archive at the University of Indiana and the University of Michigan (<http://www.indiana.edu/~eviada/>); Holocaust survivor testimonies at the USC Shoah Foundation Institute for Visual History and Education (<http://college.usc.edu/vhi/instituteatagance.php>; and NYU's own Hemispheric Institute of Performance and Politics (<http://www.hemisphericinstitute.org/eng/index.html>). The opportunity that presents itself is to further develop and expand these assets, combining additional content and expertise from academia and the commercial media world, to provide a comprehensive solution for use in higher education.

Through our discussions, we learned that faculty and librarians are eager to collaborate in the creation of faculty-friendly video resources in a variety of subject areas, from a range of sources (professional, archival, amateur), accessible across formats and platforms, searchable through keywords and metadata, rights-cleared and cataloged, and tested regularly in the classroom with faculty and students. Whether such services should be free and supported by foundations, corporate donations, and government grants, free and advertiser-supported (perhaps the most effective new model for online

video¹⁵), offered via paid subscription, or made available through some hybrid business model is still to be determined. What uses rightsholders will be willing to license and enable and many more specific details will also need to be discovered. What is clear today, however,

is that through new work that defines this demand more precisely and develops academic solutions at the nexus between content, technology, and rights, the accelerating demand for video resources in higher education needs to find support and supply.

6 About the authors

Peter B. Kaufman is president and executive producer of Intelligent Television in New York. Intelligent Television (<http://www.intelligenttelevision.com>) produces films, television programs, and video projects in close association with educational and cultural institutions, and its research projects explore how to make educational and cultural material more widely accessible worldwide. Mr. Kaufman serves as an expert advisor on access issues to the Library of Congress's Division of Motion Pictures, Broadcasting and Recorded Sound (<http://www.loc.gov/avconservation/>), co-chairman of the U.K. government's JISC Film and Sound Think Tank, based in London, and co-chair of the Copyright Interest Group of the Association of Moving Image Archivists. In 2007 he completed a one-year appointment as associate director of the Center for New Media Teaching and Learning at Columbia University (<http://ccnmtl.columbia.edu>), where he studied how to render educational video assets

across the country more openly available. Educated at Cornell and Columbia Universities, he is the author of "Video, Education, and Open Content: Toward a New Research and Action Agenda" (http://www.firstmonday.org/issues/issue12_4/kaufman/index.html); "Marketing Culture in the Digital Age: A Report on New Business Collaborations between Libraries, Museums, Archives, and Commercial Companies" (<http://www.intelligenttelevision.com/MarketingCultureinDigitalAge.pdf>); with Jen Mohan, "The Economics of Independent Film and Video Distribution in the Digital Age" (<http://www.tribecafilminstitute.org/home/about/26250304.html>); and, with Jeff Ubois, "Good Terms: Toward Improving the Equity of Commercial-Noncommercial Partnerships in the Digitization of Cultural Heritage Materials" (<http://www.dlib.org/dlib/november07/kaufman/11kaufman.html>).

Jen Mohan is a Senior Project Manager with Intelligent Television. Ms. Mohan recently completed a project for the Digital Library Federation (<http://www.diglib.org/>) investigating the current condition of moving image collections across the United States. Among her research interests are moving image archiving and preservation, copyright law and media distribution, digital distribution of moving images, new technology, Internet culture and new media sharing and creation. Ms. Mohan graduated from Emerson College in 2000 with a B.A. in Film, concentrating on film history, theory and genre. She received her M.A. from

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7 Footnotes

- ¹ Starr, Paul. *The Creation of the Media: Political Origins of Mass Communications* (New York: Basic Books, 2004), at <http://books.google.com/books?id=KO30kMoLKKkC>; and Musser, Charles. *The Emergence of Cinema: The American Screen to 1907* (Berkeley: University of California Press, 2000).
- ² Benkler, Yochai. *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006), at: http://cyber.law.harvard.edu/wealth_of_networks/Main_Page; and Bossewitsch, Jonah. *Possibility Spaces: Architecture and the Builders of Information Societies* (December 10, 2008), online at <http://alchemicalmusings.org/>.
- ³ <http://www.washingtonpost.com/wp-dyn/content/story/2008/07/03/ST2008070304015.html>; and <http://blog.wikimedia.org/2009/01/26/mozilla-and-wikimedia-join-forces-to-support-open-video/>
- ⁴ <http://www.newyorker.com/online/blogs/stevecoll/2009/01/nonprofit-newsp.html>
- ⁵ <http://www.pewinternet.org/reports.asp>

- ⁶ Musil, Steven. Online Video Viewing Jumps 34 percent, *CNET News*, January 5, 2009, http://news.cnet.com/8301-1023_3-10132086-93.html; <http://www.comscore.com/press/release.asp?press=2660>; Schechne-Sam and Kumar, Vishesh. Cable Firms Look to Offer TV Programs Online, *Wall Street Journal*, February 20, 2009. People 18-24 spent five hours watching Internet video each month in early 2009. See also: Holmes, Elizabeth Mobile, DVR Video Log Fastest Growth, *Wall Street Journal*, February 23, 2009; and Nielsen Media Research, A2/M2 Three Screen Report – 4th Quarter 2008, online at: http://blog.nielsen.com/nielsenwire/wp-content/uploads/2009/02/3_screens_4q08_final.pdf.
- ⁷ We owe the use of the term media fluency to Josh Greenberg of the New York Public Library.
- ⁸ http://www.firstmonday.org/issues/issue12_4/kaufman/index.html
- ⁹ http://www.ft.com/cms/s/0/5807b454-82c7-11dd-a019-000077b07658.dwp_uuid=67511904-5e15-11dd-b354-000077b07658.html
- ¹⁰ For example, http://en.wikipedia.org/wiki/Family_Guy; http://en.wikipedia.org/wiki/List_of_Family_Guy_episodes and <http://www.youtube.com/watch?v=51SxmcaKJIw>.
- ¹¹ <http://www.tribler.org/trac/wiki/PiratesSamaritans>. See also: http://waxy.org/2009/01/pirating_the_2009_oscars/. Industry analysts believe as many as 90 percent of the Internet users in China (the world's largest national population of Internet users) download unlicensed music online every day. Chao, Loretta. Google Starts Free Music-Search Service in China, *Wall Street Journal*, August 6, 2008, online at: http://online.wsj.com/article/SB121796068065814023.html?mod=googlenews_wsj.
- ¹² Kelly, Kevin. Becoming Screen Literate, *New York Times Magazine*, November 21, 2008 online at: <http://www.nytimes.com/2008/11/23/magazine/23wwln-future-t.html?ref=magazine>; and Lessig, Lawrence. *Remix: Making Art and Commerce Thrive in the Hybrid Economy* (New York: Penguin Press, 2008). Lessig predicts that television and movies will be “bookified.” Television, movies, and audiovisual works will soon have tables of contents, indexes, abstracts to accompany them, they will become searchable to the minute if not the second or the frame, and have—in the holiest of holy grails—information about rights provenance defined and embedded for both legacy and new work.
- ¹³ <http://alexanderstreet.com/>; <http://ffh.films.com/>; <http://reframecollection.org/>; <http://www.icue.com>; <http://www.discoveryeducation.com>; and <http://www.cosmeo.com>
- ¹⁴ The Mellon Foundation and other philanthropies helped to establish these nonprofit initiatives as service to higher education, but did so at a time when sustainability planning was focused on institutional-subscription models. Rights to JSTOR and ARTstor materials are far more restricted than rights to materials in the visual cultures that Lessig and Kelly describe—a world where users want to do more with video than passively watch it: they want to remix content, annotate, edit, make compilations, and link video to other sites.
- ¹⁵ Online Video: Hulu Who? *The Economist*, February 5, 2009, online at: http://www.economist.com/business/displaystory.cfm?story_id=13059735



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