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Devil's Advocate — Killing the Goose that Laid the Golden Egg

by **Robert Molyneux** (Assistant Professor, University of South Carolina, School of Library & Information Science) <drdata@molyneux.com> www.molyneux.com/atg/

The information revolution centers around conversion of the human record to digital formats and the flexibility of those formats for manipulation and generation of new information products. Most of the readers of *ATG* are a part of this revolution and are familiar with the ongoing changes in our information world. The Internet is a part of the revolution but the part of the revolution most obvious to the general public. However, a revolution has winners and losers and a revolution's losers are often those who controlled the old order and they do not like that. The information revolution has losers who will, if they can, strangle this baby in its crib or who would change it so fundamentally as to suck the life out of it. It may be that most people are better off in this new information environment but not everyone is.

The readers of this publication are familiar with the basics of copyright and its development. But to provide a context, is a brief summary of the development of the law surrounding intellectual property. This short review will focus on a few of its key aspects to provide a framework for the discussion which follows about public attempts to undercut the spirit of the Constitution's provisions as well as the stealth attempts which are discussed in the technical networking literature but rarely elsewhere.

The US Constitution is the organic law of the US. Article 1, Section 8 grants to Congress the ability to give a monopoly to "Authors and Inventors" of their "Writings and Discoveries" for "Limited Times." The purpose of this power is to "promote the Progress of Science and Useful Arts." That is, as an incentive to the producers of inventions and writings.

The "Limited Times" started out at 14 years after which time, the work would enter the public domain and be freely usable by anyone without having to pay the "Author" or "Inventor." This period was a compromise made between the two parties who were involved: the public which would benefit from progress and the owners of works who produced them.

The incentive is not much good unless people can use the inventions and writings and there has been a tension between owners and users of what has come to be called "Intellectual Property." The tension was over the middle ground between the two parties and how to protect the rights of the

producers to income thus ensuring they had enough incentives to make progress and the rights of society to the fruits of the progress.

When technology changed, there would be squabbling over the middle ground. The notions of "fair use" and "first sale" are about a compromise over this middle ground and based on a technology that is growing obsolete.

Another aspect that may be growing obsolete is the open development of standards and techniques. The Internet was built on open standards that could be freely implemented by anyone. Competing network standards that were proprietary — and had intellectual property rights associated with them — could not compete. **IBM's Systems Network Architecture (SNA)** was such a proprietary system but it was not SNA that became the platform for universal access to digital information, it was the open Internet networking protocols. Now that we have achieved so much with an open system, commercial entities are attempting to create proprietary fiefdoms within it.

The last squabble over the middle ground between users and owners of information was resulted from the **Xerox** machine. Digitizing records is a challenge to the order that arose out of the compromise arrived last time and presents new problems. Digital copies of works can be reproduced for essentially zero cost and each copy can be as good as the original. Owners of intellectual property faced the prospect of selling one or two copies and seeing the works posted on the Internet or sent everywhere via email. The incentives for production would be lost. It is true that the Internet has seen much free content generated but we got the second **Harry Potter** book because the **J.K. Rowling** got paid for the first. It is always a question of balance.

The last few years have seen the producers of intellectual property and the corporations that now own the works—often those works produced by others—seek to take over the middle ground completely. I think we all know about the extension of the term of copyright protection to extend beyond the life of the writer and how the public domain may be something reserved only for works that have that status now because it may well be that nothing else will ever make it to the public domain again. Clearly this probability will affect the development of digital libraries.

Much of this assault on the middle ground is public: the **Digital Millennium Copyright Act (DMCA)** is there for all to see and the **Uniform Computer Information Transaction Act (UCITA)**¹ is well enough known that a resistance movement has formed. This resistance has become political because, I believe, of its onerous provisions. If you do not know about UCITA, you likely are not going to believe it when you read about it (see this issue *ATG*, p.81 ff.).

UCITA, though, is a part of the push to move from purchase to licensing information products and whether UCITA is enforced or not—it is one thing to come up with a scheme, it is another to get it implemented—corporations are pushing the same idea in other ways, for example **Microsoft** with **Windows XP** was rumored to be coming out with a licensing plan where users would pay a monthly fee and network access would be required. In the end, published accounts intimated that Microsoft did not feel it was quite time. Much better for them to never sell you the product but sell you the right to use it.

Let's look at a selection of other recent bits of news from the technical literature. Citations are provided but the fact that the authors of these articles make claims does not make them true. It is also useful to remember that the technical community is increasingly at odds with the corporate community that is pushing for more restrictive Intellectual Property laws.

DMCA Enforcement

DMCA makes defeating **Copyright Management Information (CMI)** illegal. Given that digital files are readily copied and distributed, there are now various forms of rights management code inserted into digital streams. It is illegal to defeat the rights management purpose of these bits of code. But, code is code, and anything someone can put in a digital stream can be taken out by another. Here are a few developments:

Using DMCA to suppress academic studies.

Princeton professor **Edward Felton** in response to a challenge to crack a pro-

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posed code of the **Secure Digital Music Initiative**² found a way to crack it and bowing to "legal threats" first chose not to publish their research. Felten and others sued to be able to present their research and eventually did.³

The DeCSS affair.

Nothing has caused more discussion in the technical community than the decoding of the **Content Scrambling System (CSS)** the digital rights management algorithm used to encode DVD to prevent copying. DeCSS was discovered by a Norwegian schoolboy who had a legally purchased DVD and wanted to play it on his Linux computer but was unable to because there were no Linux DVD players. After discovering the algorithm, he posted it on the Internet. He and his father were arrested (see *ATG* p. 14) and he has just been recently indicted. 2600's Website posted links to the algorithm and was sued to take them down. Recently, the Electronic Frontier Foundation's argument that both Felten and 2600's First Amendment rights were violated lost in court but appeals continue.⁴ Note that there are circumstances where links may end up being illegal.

David Touretzky, a professor at **Carnegie Mellon**, has been involved in a similar discussion and has received letters from various

lawyers about his Website on DeCSS. He makes the case that programming is speech and, hence, protected and, given that one area of his research is encryption, his research is affected. His site on DeCSS is amusing but here we have two opposed forces: intellectual property rights' legislation and intellectual freedom, the right to inquire and investigate freely. If you want to see the DeCSS algorithm, check out his site where you can see the letters, the code, and see the code rendered in a number of ways, including haiku. The DeCSS algorithm is freely available, even on a Tshirt which itself may be illegal.⁵ Imagine how far this business has gotten: a Tshirt with computer code on it might be illegal.

Patent

Patent law has been used in novel ways. **British Telecom** now claims to own a patent to hyperlinks⁶ and has sued Prodigy to protect its patent. **Amazon** sued **Barnes and Noble** over the "one-click" check out system it had developed. A furor developed in the technical community, including a boycott of Amazon. The claim was made that the system was obvious and if every development that made the Internet better were patented, the whole system would be compromised as openness would be replaced by lawsuits.⁷ **Graham Lea** analyzed the situation and concluded that there were several reasons for this outbreak of patents after software patents were made

legal, not the least of which is the inability of patent offices to determine what was new, corporations searching through their patents to apply them in novel ways, or to take them out to use defensively.⁸ Many feel that software patents can get in the way of software development and innovation.⁹

Standards

UCITA began its life as an attempt to change the Uniform Commercial Code and it appears that the parties involved understand the value of standards as a way to control content. A curious set of stories about a new standard for hard drives that would require something called **Content Protection for Recordable Media (CPRM)** be included in the hard drive standard. CPRM would not allow you to copy materials on your own harddrive without first checking a central database to see if you have permission. If you wrote the great American novel, you might not be able to copy it from one computer to another or to copy files you paid for and own legally.

You can imagine the costs this would occasion in your library. Would you be able to save configuration image files? What if your harddrive is failing and you need to get files off quickly? And whose machine is it, anyway? After the first murky press releases, everyone acted like CPRM was dead.¹⁰

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New Legislation

The latest round in legislation is the **Security Systems Standards and Certification Act (SSSCA)** which was introduced in the US Senate by **Senator Hollings (D-SC)** on September 7, 2001. It would make it illegal to import or sell any computer that "does not include and utilize certified security technologies."¹¹ The speculation is that those who would benefit most are the members of the entertainment industry, particularly movie producers, but dark speculation leads some to the conclusion that this is a dagger aimed at the heart of **Linux** the last practical alternative to **Microsoft's Windows**.¹²

South Carolina, of course, is not a center of the entertainment industry so why would a South Carolina senator sponsor such a bill? **Opensecrets.com** reports that between 1997-2002, Senator Hollings got \$256,000 from the entertainment industry, second only to the \$1.2 million from "Lawyers/Law Firm," and above the \$177,000 contributed by lobbyists. Doubtless, some of those law and lobbyist firms are in the entertainment industry, too, so figuring out the actual sums would be difficult but the published sum seems likely to be low. "What about libraries?" You ask? We might be called "Education" which is 18th at \$60,000 and I do not see "Libraries" as a category.¹³ This bill is pending.

Another cute stealth bill that was submitted but caught was the **Recording Industry Association of America's** attempt to get into post September 11 anti-terrorism legislation protection for copyright holders from damages their hacking into computers might cause. When the story came out, there was general outrage and they withdrew it. It was all a mistake and misunderstanding, of course. But, one wonders, what was that about? They release a virus to attack mp3 files and it destroys your **Quicken** files and you cannot sue?¹⁴ Maybe you can have your cake and eat it, too, if you have a friendly senator.

Others

This has been just a brief survey. There are more such actions by the pro-enforcement crowd and other major headings to group these actions under, but space is short. Suffice it to say that the attack on the middle ground between users and owners of intellectual property is being lost.

Conclusions

Now, just because people scheme and plan and come up with ideas does not mean that these ideas will show up in the law or marketplace. The courts have to rule and then, just maybe, the people will speak. However, those folks who wish to enforce intellectual property laws rigorously, and to expand them in novel ways have shown admirable singleness of purpose. Each public defeat brings a new initiative from this Hydra.

Products with copy protection are out and will be an increasing part of our lives. Copy protection will get technically better as will tools to crack them. Products will be more expensive and will greatly decrease the flexibility of our computers and networks. The open standards that the Internet's development were a part of are slipping into history. Open standard PCs are going with them.¹⁵

There will be things which are legal but technically impossible because there will be no machinery to do these legal things.¹⁶ As **Gilmore** points out, one result of the current economic reality is that "competing products are driven off the market."

The PC as a configurable tool for work will decline. I think there is a real danger of a computer monoculture where all machines have similar copy protection schemes built in and one operating system and these facts will be exploitable by hackers. Given **Microsoft's** record on security, this should be an amusing time in the history of computing as viruses

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Endnotes

1. UCITA. Three Web sites are worth looking at if you have never heard of UCITA. The Americans for Fair Electronic Commerce run an information anti-UCITA site at: <http://www.ucita.com/>. James S. Huggins's Refrigerator Door is a worst case scenario and a fun read at: <http://www.jamesshuggins.com/h/tek1/ucita.htm>. UCITA Online is a pro-UCITA site maintained by Carol A. Kunze. <http://www.ucitaonline.com/>.
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3. Declan McCullagh "Code-Breakers Go to Court" *Wired News*, June 6, 2001. Available at: <http://www.wired.com/news/mp3/0,1285,44344,00.html>. Declan McCullagh "SDMI Code-Breaker Speaks Freely" *Wired News*, Aug. 16, 2001. Available at: <http://www.wired.com/news/politics/0,1283,46097,00.html>.
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7. Graham Lea "US Patent Mess Will Get Worse Before it Gets Better," *The Register*, March 31, 2000. Available at: <http://www.theregister.co.uk/content/archive/10119.html>.
8. Chris Oakes "Another Amazon Patent Furor" *Wired News*, March 2, 2000. Available at: <http://www.wired.com/news/business/0,1367,34670,00.html>.
9. John C. Dvorak, "Free OS/2" *PC Magazine*, November 20, 2001. Available at: <http://www.pcmag.com/article/0,2997,s%253D1500%2526a%253D18493,00.asp>.
10. Andrew Orlowski "Stealth plan puts copy protection into every hard drive" *The Register*, December 20, 2000. <http://www.theregister.co.uk/content/2/15620.html>.
- Andrew Orlowski "Everything you ever wanted to know about CPRM, but ZDNet wouldn't tell you..." *The Register*, December 29, 2000. <http://www.theregister.co.uk/content/2/15718.html>.
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17. Lawrence Lessig "The Internet Under Siege" *Foreign Policy*, November-December, 2001. Available at: http://www.foreignpolicy.com/issue_novdec_2001/lessig.html.

This article appears to be based at least in part on his new book, *The Future of Ideas: The Fate of the Commons in the Connected World* (New York: Random House, 2001) which I have not yet read. Essays by Lessig are available on his Web page: <http://www.lessig.org/>.

And They Were There — Reports of Meetings

China Society of Library Science's 2001 Annual Conference

Column Editor: **Sever Bordeianu** (University of New Mexico) <sbordeia@unm.edu>

China Society of Library Science's (CSLS) 2001 Annual Conference

September 25-29, 2001, Chengdu, China

Report by **Hu Ming Rong** and **Yuan Haiwang**

China Society of Library Science's 2001 Annual Conference was Focused on Library Digitization. From September 25 through 29, 2001, *China Society of Library Science (CSLS)* held its 2001 annual conference in Chengdu, a renowned cultural city in Southwest China. 700 librarians from all over the country, as well as from the United States and Japan attended the conference.

At the opening ceremony presided over by the CSLS's secretary-general **Ms. Sun Peixin**, representatives of the American and Japanese participants extended their congratulations to the conference. They were followed by **Mr. Zhou Heping**, Deputy Minister of the Cultural Department of the Chinese Government. With a brief review of the past year's achievements that Chinese libraries had made, **Mr. Zhou** unfolded future plans for expanding libraries and their services. **Professor Yuan Zhengguang**, a keynote speaker from the Chinese Science and Technology Lecturing Team, shared his insights on China's entry into the **World Trade Organization (WTO)**. He pointed out, "WTO is a legal system where every member is playing by its rules. It is oriented towards regulations rather than special interests. Therefore, the entry of WTO calls for changes of the Chinese mind-set." **Professor Yuan's** remarks were an eye-opener to the Chinese attendees amazed at his outspokenness.

The conference had five tracks on such topics as (1) roles that

libraries may play in the strategic development of China's western regions; (2) sharing of library resources; (3) stud-

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do? It might be time to buy a typewriter.

More serious, though, is the danger to our records and the progress that the notion of intellectual property is to foster. These records will be less accessible and less preservable and research in areas will be abridged. Already, reviews of software are constrained by the producers who can choose to deny permission to review software. Satirical works have been suppressed as has history. The ability to comment on books, doubtless will follow. Without free inquiry, progress—the point of this whole business—will be stunted. I commend to your attention **Lawrence Lessig's** essay, "The Internet Under Siege" for a fuller account of many of these issues.¹⁷

In the new digital reality almost everyone will be worse off—but not everyone. It will be interesting to see if those attempting to control the middle ground can pull these plans off or whether computer users will rise up and fetch the tumbrels for them.

ies, development, and construction of digital libraries; (4) library management and reform; (5) theoretical research of librarianship in the age of knowledge.

Presenters in the first track emphasized the change of paradigms and the establishment of necessary mechanisms such as assumption of responsibility for library projects, prioritization of resources, acquisition of funding, and competition for talents. The consensus was: only by engaging in digitization and networking could libraries in the nation's western regions jump on the nation's bandwagon of "Developing the West" campaign to achieve rapid improvements. Some presenters were convinced that collaboration between libraries in the relatively developed eastern regions and the western backyard could bring information services into full play in the strategic campaign of developing the western regions.

In the second track, librarians discussed library resource sharing in light of the age of knowledge economy. Information technology marked by computer networking and the Internet gave rise to new trends in the area of document delivery and sharing. They include the tremendous expansion of information coverage, and the emergence of interlibrary document sharing models enabling users to access information at the comfort of their homes. Nevertheless, the librarians did not lose sight of the difficulties lying ahead on the long road of resource sharing—the copyright legal hurdles, believing that it took time and hard work to find solutions.

The issues of studying, developing, and constructing digital libraries were at the center of the conference's focus. Many presenters in the third track addressed themselves to the roles and positions of digital libraries in the age of knowledge economy from different perspectives. They all agreed that China needed to construct digital libraries to meet the challenges of the new age. Digital libraries would cause information resources to be utilized and shared more efficiently, would further spur the development of the nation's information technology, offer brand new means of knowledge dissemination, and create virtual classrooms for citizens to acquire life-long learning. Some presenters believed that in the age of knowledge economy, information, knowledge and creativity had become decisive factors in economic development. In that regard, digital libraries would play an increasingly important role in the new economy, thus facilitating people's work, studies, and daily life.

Apart from a track, the entire closing session of the Conference was also devoted to the discussion of digital libraries. Keynote speakers included **Mr. Zhang Fan**, CEO of **Wanfang Data**, a database service company; and **Zhou Bo**, Senior Engineer from the **Peking University Founder Group Corp.**, an eBook company; both were key players in the digitization industries of China. As **Mr. Zhang** detailed his company's solution to digital libraries' database issues, **Mr. Zhou** tackled the questions of copyright and high volume investment that digital libraries were facing. Invited to address the plenary was also **Mr. Niu Zhendong**, post doctorate of the College of Computer Science of **Carnegie Mellon University** and senior advisor to the **China Digital Library Inc.** **Mr. Niu** shared the experience of his involvement in the **Digital Library Initiative Phase 2 (DLI2)** projects in the United States.

Library management and reform was another hot topic. In the fourth track, presenters discussed initiatives in creating new service models, transitions from information management to knowledge management, future development of libraries in the age of knowledge economy, etc. Of all the speakers, **Mr. Wang Shiwei**, Associate

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