Testimony of

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before the

SUBCOMMITTEE ON COURTS, THE INTERNET,
AND INTELLECTUAL PROPERTY,
COMMITTEE ON THE JUDICIARY
UNITED STATES HOUSE OF REPRESENTATIVES

Digital Rights Management in Electronic Books: Preventing Piracy While Preserving Consumer Use Rights

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Good afternoon, Mr. Chairman, Ranking Member Berman, Members of the Subcommittee. My name is James Alexander, and I am Director of eBooks at Adobe Systems Incorporated. I appreciate very much your leadership, Mr. Chairman, in convening this hearing and your gracious invitation to provide testimony on digital rights management technologies.

Founded in 1982, Adobe Systems builds award-winning software solutions for network publishing, including Web, print, video, wireless, and broadband applications. Adobe is headquartered in San Jose, California and employs more that 3,000 worldwide. It is one of the world's largest personal computer software companies, with annual revenues exceeding one billion dollars.

eBooks Explained

For those unfamiliar with the term, an "eBook" is shorthand for an electronic book. Like its printed counterpart, an eBook can be of any length, subject matter, and may or may not be protected by copyright. Unlike traditional print books, eBooks can be purchased online and then downloaded to be read on a variety of electronic devices, from desktop computers to laptops to palm-size organizers to advanced mobile phones. eBooks very often also incorporate security measures to protect their content from piracy, and, in the case of Adobe PDF eBooks, additional publisher-enabled features, such as the ability to print, search and copy text, or loan to others. eBooks are available now from such online vendors as Barnes and Noble.com and Amazon.com.

Most industry observers do not expect eBooks to make the printed book obsolete any time soon. eBook technology is nascent and is strongest in markets such as those for out-of-print or small-circulation titles, academic texts, journals, or publishing where speed is of the essence. eBooks also have great potential with travelers and mobile professionals, who can use them to carry a large virtual library in a very small space. Despite the early nature of the market, we estimate that more than one million eBooks will be sold in 2002.

Strong IP Protection and Usability Are Not *At Odds*

I would like to begin with an observation. If press accounts are to be believed, a growing number of wary consumers regard the word "management" in "digital rights management" as a euphemism for "confiscation" or a "roll back." Or, to put this view in another way, some seem to believe that there is an inevitable trade off between strong protections for intellectual property (IP) and the ability of consumers to exercise their traditional use rights when they purchase or license creative content.

Based on Adobe's experience in the electronic book market, I believe this is a false dichotomy, and that it is not only possible but also absolutely necessary to deliver both intellectual property protection for authors and use rights for consumers. Only by delivering strong "cyber-armor" will authors and publishers feel confident making their works available electronically using Adobe's technologies. And only if we deliver a quality reader experience, including many of the uses consumers have legitimately grown to expect from books in the physical world, will consumers embrace the ability to read content on a screen as opposed to on a printed page.

The Piracy Threat

Let me address the piracy issue first. As a member of the leadership team of a software company, no one is more aware of the dangers of piracy—that is to say the theft of intellectual property—than I. Indeed, if one applies the worldwide piracy rate to my company's annual sales, software piracy costs Adobe more than $600 million annually.[1] I am grateful that this Subcommittee already fully understands the broader macroeconomic effects of piracy: the sectoral U.S. trade surplus in IP is diminished, U.S. jobs are lost, and government misses out on tax revenue. Perhaps most insidiously, piracy directly affects the ability of software companies to invest in research and development, something Adobe did to the tune of more than $200 million last year.[2] This investment in R&D helps us innovate by building better products, which, in turn, enables our customers to be more productive. And productivity drives the U.S. economy. Break a link in the chain—for example, if we are forced to scale back R&D because of software piracy on the Internet—and the entire innovation ecosystem collapses, with injury to our customers and the economy as a whole.

A survey released just last week by the Business Software Alliance illustrates the depth of the piracy problem. Of more than 1,000 Internet users polled, 57% of those who have downloaded software either seldom or never pay for it. Only a scant 18% say they would never intentionally engage in piracy.[3]

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[1] A study released on May 21, 2001 by the Business Software Alliance placed the average worldwide piracy rate for business software at 37%.
[2] Per Adobe's FY 2001 Form 10-K, FY 2001 research and development expenses totaled $224.1 million.
[3] Study by Ipsos Public Affairs for the Business Software Alliance, May 29, 2002.

Publishers and authors are aware of this massive software piracy problem, not to mention the experiences of the recording and motion picture companies with peer-to-peer piracy. Book publishers are, therefore, united in their demand that Adobe be vigilant about the security of eBooks. This is not to say that print publishers are not excited about the possibility of reaching new audiences with new kinds of works on the Internet—they are. However, the livelihoods of thousands of authors and others employed in publishing are on the line, so good security is a ***sine qua non*** for eBooks.

eBooks and Fair Use

I would like now to turn to the eBook reader experience, including the ability of consumers to exercise fair use. I will be candid: our industry's first efforts with electronic books fell well short of the mark. Indeed, in April of last year (before I came to Adobe), I wrote an article highly critical of the first generation of eBooks.[4] At that time, I posited, no one in the industry was addressing what the consumer actually wanted, or was living up to the publisher's responsibility as the historical defender of the reader's experience to ensure that downloaded books were as easy to use as their paper-based counterparts. I believe ease of use, in eBooks terms, boils down to:

- Interoperability (accessing eBooks via different formats and/or devices);
- Durability (the promise that eBooks will always be readable in the future);
- Portability (allowing access to a digital library anytime, anywhere); and

[4] "Why eBooks Suck," James Alexander, *Seybold Report on Internet Publishing Bulletin*, April 2001.

- Transferability (the ability to permanently or temporarily transfer digital rights to another person).

When Adobe entered the eBook market in earnest more than a year ago with the acquisition of the Boston-based eBook company, Glassbook, we set out to design an eBook system that would address the shortcomings I identified in my article.

First, we decided that our eBooks should be based on Adobe's ISO/ANSI-standard PDF technology. Adobe PDF promises to allow users access to their digital libraries on different computer platforms and, as portable devices gain larger screens and more powerful processors, on non-computer devices as well. Second, we built capabilities into our eBooks that not only mimic the use characteristics readers have come to expect from physical books but, in some cases, add additional capability.

For example, our current eBooks reader on the Windows platform enables lending of an eBook to another person, either permanently or for a limited time. The next release of Adobe Content Server, the back-end to Adobe PDF eBooks, will enable libraries to lend eBooks much as they can physical books, although at lower operational cost and with far greater efficiency. Publishers can also choose to give users the right to copy text from an eBook. And since our eBooks are based on Adobe PDF, publishers can allow end users to print their eBooks with the look and feel of the printed version maintained with high fidelity. Retailers of Adobe PDF eBooks, now numbering 300, can create digital libraries for their customers so they can download a purchased title to as many as four different devices. Adobe PDF eBooks are unique in the industry for including so many customer-oriented use features.

Adobe is proud to work with the leading international trade and standards organization for the eBook Industry, the Open eBook Forum. We believe that this and similar industry groups are best placed to develop and promulgate digital rights management (DRM) standards in ways that are flexible, secure, and responsive to the needs of the marketplace.

The DMCA As Foundation For The eBooks Market

Before I close, I would like to say a brief word about the Digital Millennium Copyright Act (DMCA), a statute that seems to be even more relevant today than it was when enacted five years ago. There were in 1998 and certainly are today important issues at stake on all sides of the copyright debate. That said, Adobe believes that Congress struck the right balance in the DMCA. By granting a legal shield to technical measures that protect copyrighted works, Congress has encouraged technological innovation and the development of a brand new market—eBooks—that would not exist without the protections granted by the DMCA. An eBook is a kind of vault for digital content, and Congress wisely chose to outlaw the digital "lock picks" that have would otherwise have enabled piracy on a mass scale.

The DMCA makes a wise and specific exception to protect the rights of computer scientists doing legitimate security research. We at Adobe do not believe the law in any way restricts, or was ever intended to restrict, the ability of researchers to do their work and present their results. Academic research of that kind is clearly different from trafficking in a lock-picking program, something that provides no information of a research nature. In short, the DMCA makes a perfectly clear distinction between free speech and the sale of burglar tools.

In addition, and except in one narrow instance, Congress did not mandate specific technologies in the DMCA. It wisely left technological developments to the commercial marketplace, but promised the shield of Federal law over whatever safeguarding technology IP owners adopted. This approach has been the right one for the eBooks marketplace.

The Elcomsoft case highlights both my points about the DMCA. First, the effectiveness of the government's prosecution in deterring other eBook piracy shows why the DMCA is so crucial if digital content is to be made widely available online. Second, the fact that Adobe has been able to quickly update its eBooks security also shows off the DMCA's flexibility in allowing private industry to change DRM technologies as frequently as necessary in order to stay one step ahead of pirates. If government were to mandate a particular DRM scheme and bureaucrats had to approve its every revision, companies like Adobe would be far less nimble in responding to future hackers.

Conclusion: Trust the Marketplace

Ultimately the marketplace will determine if eBooks will thrive. If publishers do not trust Adobe, they will not make their content available. And, equally important, if readers think our technology is clumsy, or if the price is too high for the use features provided, consumers will not buy eBooks. Surely, in a market economy we must trust that the consumer is the best person to say whether we finally have gotten the eBooks formula—including IP protections, use features, and pricing—right.