

Jan 7, 2009

To Whom it May Concern:

The following are points I would like to see discussed at your Town Hall Meeting concerning Digital Rights Management. These are the many fundamental flaws in DRM that have caused it to be a thorn in the side of the consumer for years.

This is taken, in part, from my article "[DRM: A TeleRead Primer](#)" (with some modifications).

Although this primarily covers e-books, the main points are applicable to DRM in all its forms.

Sincerely,

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<http://www.teleread.org/blog/>

### **What's Wrong With DRM?**

Under US copyright law, there are exceptions to copyright called "[fair use.](#)" Among other things, fair use means that you are allowed to make copies of media that you own, for personal uses such as "space shifting," even if the producer of the media does not want you to. If you bought a Metallica CD and want to listen to the music on your iPod, you are legally permitted to copy the music from the CD to your computer, then to copy it again into your iPod—and there is nothing Metallica can do to stop you.

But DRM prevents any sort of copying at all, except the copying that the producer allows (if any). If you buy an e-book in Secure Mobipocket format, you can only open it in official Mobipocket-branded readers (that you specified when you bought the book). If you want to read the e-book on a computer that does not have an official Mobipocket-branded reader available, you are out of luck.

And it gets worse.

### **The DMCA and You**

In 1998, the United States Congress passed a law called the [Digital Millennium Copyright Act](#). This law criminalized breaking encryption on any media—even media that you have purchased. In conjunction with the restrictions on copying put in place by most DRM, this means that are legally prevented from making fair use of e-books you purchase.

Although this law is limited to the United States, a number of other countries have similar laws. (Some do not. If you are concerned, you should find out what the relevant laws are in your area.)

In some cases, this is not necessarily a major handicap. Some DRM, such as that in Fictionwise's eReader format, is fairly permissive. But if you find even the permissive DRM too onerous, you are still legally restricted from removing it.

Of course, for most people who choose to remove encryption, this legal restriction will only ever be theoretical in nature; if you *do* remove encryption in the privacy of your own home, it is not likely that anybody will ever know about it unless you then distribute the unencrypted file, or brag about it in a public forum.

### **DRM Does Not Work**

Aside from its restrictions to fair use, DRM has another critical flaw: it does not work. It entirely fails to meet the publishers' requirement of preventing any illicit copying of books. There are two reasons for this failure:

#### **1. DRM Cannot Cover Ink and Paper**

Any book that is published as ink printed on paper is already beyond protection. If it can be read by human eyes, it can also be read by a scanner or digital camera coupled with optical character recognition software. J.K. Rowling refused to release the *Harry Potter* novels as e-books citing piracy concerns, but each of the later books in the series was [circulating complete on the Internet](#) within hours of its publication.

#### **2. DRM is Easily Cracked**

Every extant DRM system for e-books is vulnerable to cracking. In fact, most of them already have been cracked. Microsoft Reader, Mobipocket, and eReader all have cracks circulating on the Internet that can easily be found with search engines. There is no method of DRM—for e-books, DVDs, computer games, or anything—that will not be cracked sooner or later. You cannot keep an encryption method secure when you provide the user with both the encrypted content and the encryption key—as you must if you are going to allow them to make use of the content.

Although they require some technical expertise to use, in the hands of those who know how these DRM cracks render DRM entirely ineffective. The DMCA is not a deterrent to those who know they will never be caught, and it only takes one cracked copy of a book for a perfect copy of the book to circulate on peer-to-peer networks.

With computer games, DRM is even more pointless, as hackers are able to find the part of executable files that check the DRM and then simply disable it, completely bypassing DRM altogether. They can then distribute these cracked versions days or weeks before the legitimate version of the software is released—thus, the only ones DRM inconveniences are the paying customers; the freeloaders have their crack before the buyers ever get their legitimate copies.

Faced with these facts, sometimes DRM providers will fall back to the position that DRM is not supposed to prevent *all* copying, but is meant to [“keep honest people honest.”](#) Security researcher Ed Felten’s [response to these claims](#) is instructive—an honest person is honest already, by definition; you can no more “keep” him honest than you can “keep a tall person tall.” Others add that DRM forces honest people to be *dishonest* in that they must break the law (by removing the DRM or downloading an illicit copy from peer-to-peer) to make full use of the media they have already paid for.

### 3. DRM is Vulnerable to Business Failure

Another problem with DRM is that continued access to DRM-restricted materials often relies on the continued existence of the business that sold the DRM-restricted goods. This is most true for music and movie providers whose players have to “phone in” to servers before playing a given music or movie track (Google, Microsoft, and Yahoo have all been forced to keep DRM servers running or refund customers after planning to shut down DRMed music or movie sales divisions), but can affect e-books as well, to a lesser extent.

Case in point: Emibiid, a small e-book publisher who sold electronic versions of books published by Meisha Merlin, [went out of business](#) in 2006. People who had bought e-books from them were advised to download and back up the books they had purchased and reader software before the server closed down. After that, they would no longer be able to download these materials.

To be fair, none of the current major e-book DRM scheme backers (Microsoft, Adobe, Amazon/Mobipocket, and Fictionwise/eReader) seems likely to go out of business right away—but then again, neither did Bear Stearns until it happened.

### 4. DRM is Unnecessary

As a number of businesses that sell e-books with no DRM have shown, leaving DRM off does not appear to cause any decrease in sales. Most notably, Baen Books has achieved great success with its [Free Library](#), [Webscriptions](#) sales, and [bind-in CDROM giveaways](#) without appearing to be in any danger from lost sales to illicit copying. In fact, there seem to be fewer instances of unauthorized Baen e-book trading than of other publishers who are more restrictive.

Likewise, Fictionwise sells a number of books in unencrypted “multiformat” versions. And iTunes has only just announced that they are going entirely DRM-free, getting rid of DRM from all future purchases. The e-book industry, and other content industries, should follow their example!

### 5. DRM Limits Consumer Choice

Mobipocket is an e-book vendor and software provider owned by Amazon.com. To this point, they have refused to release a version of their Mobipocket e-book reader, the only software allowed to open DRM-protected Mobipocket documents, for the iPhone platform. (There is some speculation that Amazon.com is preventing them from doing so, wishing to suppress competition to their Kindle device.)

iPhone owners who have purchased or who would like to purchase DRM-protected Mobipocket books will be unable to read them on their iPhones unless they break the law by removing the encryption.

### 6. DRM is Expensive

DRM is not added to books for free. There are costs associated with developing and implementing DRM that are, in turn, passed on to consumers in the form of price increases on the books. This unwanted and unnecessary “protection” costs at a minimum thousands of dollars and more likely tens or hundreds of thousands of dollars or more every year in money that could be better spent in other sectors of the economy.

## **7. DRM Causes Technical Faults**

Some media, such as some selected DVDs, are manufactured with intentional defects as a form of protection. These DVDs are made in such a way as to have errors that most DVD players can detect and compensate for, but some—such as those inside computers—choke on. Even if they do not have such errors, they represent an additional point of failure in the chain connecting the reader to the content—one more thing that can go wrong.