



ENGINE HOUSE BOOKS

BOOK BITS #10

DRM (1)

DRM — Digital Rights Management, or Digital Restrictions Management — is a contentious issue in the publishing industry (and, indeed, in other industries concerned with the digital distribution of copyrightable works). In this edition of *Book Bits*, we begin an examination of this controversial issue.

First, let's define what we're talking about. There are several defensible extant expansions of the term “DRM”, but there is little ambiguity about the function it performs: DRM limits the actions that can be performed on or with a digital file. In general, in the context of publishing, the file is a digital representation of some or all of a book (or some similar good, such as a newspaper or periodical; in future we will not distinguish amongst these different types of goods) which historically has been distributed in printed form. So DRM concerns itself with limiting what a customer can do with a book that is in digital form.

It is important to recognize that a digital book (colloquially, an “e-book”) is in fact simply a computer file, fundamentally no different from any other such file. Since general-purpose computers are generally designed to allow users to do anything they wish with their files (in particular, to move

them, copy them, and edit them), then special means must be used to deny users the ability to exercise these capabilities on particular files — at least if the files are ever present on a general-purpose computer.

But why would an entity such as a publisher or an author be interested in limiting users in this way?

The problem (from the publishers' standpoint — or, more generally, from the standpoint of the entity that owns the rights to the material in question) is twofold:

the widespread availability of personal computers means that the marginal cost of producing a copy of a digital file is essentially zero;

the advent of the Internet means that the difficulty of distributing digital files is negligible.

Consequently, publishers and other rights holders find themselves in an unprecedented situation in which the cost of generating the initial instantiation of a good (a book, for example) is high, but the marginal cost for *anyone* creating and distributing subsequent instantiations is practically zero.

This leads to an obvious problem: all the people involved in the initial production of the good need to be paid for their work: the author, editor(s), illustrator, indexer, typesetter, managers, *etc.* But it is obviously impossible to recoup those expenses by selling just one copy of the book. And yet, at least in theory, there is no technical reason for anyone other than the initial purchaser of the original good ever to purchase the item, since that purchaser can then make and distribute an unlimited number of copies at no cost.

The legal system handles this situation exactly as it did before the days of personal computers and the Internet: by the concept of copyright. In the United States, copyright law (loosely speaking) forbids anyone except the rights holder from making or distributing copies. Copyright law explicitly includes a loose concept of “fair use”, which is widely interpreted by society (although not necessarily by the courts) to mean that individuals can make a reasonable number of copies of works *for their own use*.

The problem with copyright is that it is a legal concept, and thus can, as a practical matter, be invoked only in somewhat exceptional cases. With digital media, it is easy as a technical matter for individuals to make copies of works *not* for their own use, but there is little or chance that they will be prosecuted for doing so (if for no other reason that it's generally not regarded as a good business practice to sue one's own customers).

So an obvious dichotomy results: the publisher (or, more generally, the owner of the right to the good) needs to sell many copies of the good in order to have any chance of recouping costs; but the purchaser of the good may well want to make copies of the good, and even to distribute it (for example, to multiple devices that he owns). The core of the problem is that while the purchaser has the right to make “fair use copies”, there is no way for a technical copying and/or distribution system to distinguish that a

fair use right is being exercised. Publishers generally recognize individuals' fair-use rights; the problem is that there is no good way (as yet) to easily allow fair-use copying without simultaneously allowing unlimited copying and distribution.

So publishers face essentially two possibilities from which they can choose: allow unlimited copying; or try to impose technical restrictions that forbid any copying or distribution. Such technical restrictions are what is commonly called “DRM”.

There are two huge problems with DRM:

- (1) it is unpopular (since it generally interferes with fair-use copying, or, more generally, with what purchasers perceive as their right — which actually they do not possess — to do whatever they like with purchased goods);
- (2) it doesn't work.

Regarding the latter, the problem is that whatever barriers may be imposed by DRM can be circumvented. It is not hard to create various schemes that, for all practical purposes, forbid ordinary non-technical members of the public from copying and/or distributing purchased digital goods. But it is not unskilled people who have to be stopped from making copies and distributing them; if DRM is to be effective, it is skilled people who have to be stopped, since one such person can supply copies to anyone else who wants them.

We are now out of space, so we will have to continue this discussion in a future issue of *Book Bits*.

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