

Competing with Free Music and Movie Downloads: The Digital Rights Management Myth

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The media is abuzz with reports of illegal music and movie downloading, peer-to-peer file sharing and the related legal and legislative battles being played out in courts and in Congress. Many of these discussions perpetuate a myth that existing, or soon-to-be developed, digital rights management (DRM) technologies are the key to solving the entertainment industry's piracy woes. As support for this notion, many people cite Apple's successful iTunes music download service. The conventional wisdom is that since iTunes uses DRM and iTunes is successful, then DRM must have been instrumental in that success. The truth is that Apple's DRM technology, called FairPlay, was indeed instrumental in Apple's success, but not because FairPlay prevents piracy.

For preventing piracy, FairPlay is not only totally ineffective, it was built that way on purpose. The iTunes client software enables consumers to burn the songs that they purchase to audio CDs. Once on CD, songs are unencrypted, unprotected and completely beyond the control of FairPlay. You can copy the song to a file share; make a million duplicate CDs; or re-encode the song in another format by using legitimate tools like Windows Media Player. So, since the notion that FairPlay prevents piracy is simply not factual, why did Apple bother to include it in iTunes?

There are two very logical reasons for Apple to use FairPlay. One has nothing to do with the effectiveness of its anti-piracy features and everything to do with marketing. That is, having a DRM-based copy protection illusion made it much easier for Apple to convince record labels to distribute their music through iTunes. Another reason for FairPlay's existence has nothing to do with protecting rights holders from piracy and everything to do with protecting Apple from competition. Apple's iPod player and iTunes service were designed to work together. FairPlay is used to keep out interlopers. Any would-be iTunes or iPod clone maker would almost certainly have to reverse engineer FairPlay, which makes the task of creating a decent clone much more difficult and gives Apple both technical and legal counterattack options. Apple showed its cards when RealNetworks announced Harmony, a technology it developed to enable iPod users to buy songs from Real's on-line music store. Apple responded by threatening that future software upgrades will probably break Harmony's compatibility. Apple also suggested that Real's actions may have been a violation of the law because the Digital Millennium Copyright Act (DMCA) makes circumventing copy protection illegal. While the validity of Apple's legal argument is far from certain, one thing is clear: Apple intends to use its DRM to protect its own commercial interests, which have absolutely nothing to do with protecting rights holders from piracy.

Hackers have found technical ways around FairPlay. Digital content pirates, however, do not have to crack FairPlay; they can simply take advantage of a gaping, built-in hole. But even if we disregard all past experience with copy protection and assume that FairPlay could be made foolproof, it would still

provide little or no protection from piracy to rights holders. Copies of digital content are exact copies. They do not degrade no matter how many times you duplicate them. Consequently, even just one unprotected copy of a digital work can be perfectly duplicated millions and millions of times while being distributed by using file sharing technologies. Since many of the latest file sharing technologies, which include the wildly-popular Bittorrent, are freely available in source code form to anyone, the tactic of litigating against proprietary P2P software and service companies is becoming much less effective. The entertainment industry has started going after the operators of Bittorrent servers, but as soon as one is taken down, more spring up. Technical measures for thwarting file-sharing have also been attempted, but countermeasures are created almost as fast. The inescapable conclusion is that, short of a complete government-enforced lock-down of the Internet, entertainment businesses will increasingly have to face the challenge of competing with free.

Another challenge for DRM is its negative value proposition for consumers. In the real world, a significant number of microwave oven clocks blink 12:00 for years on end because consumers are either unable to learn how to set their clocks, or they are just unwilling to bother. Yet some in the entertainment industry continue to flirt with the idea that consumers will not only tolerate, but also pay for, complex DRM-based solutions that are terrible for preventing piracy, but pretty good at inconveniencing the very consumers upon whom commercial success depends. This notion that DRM can protect rights holders and help them to compete with free is perpetuated by the purveyors of multiple incompatible DRM solutions. These vendors find an eager audience with some executives who are so desperate to insulate their business models from change that they are willing to believe that DRM snake oil is the answer.

In order to create a service that consumers would use, Apple had to provide burning capability in the initial implementation of iTunes. One cannot be certain, however, that such a feature will always be available. At some future point, Apple could decide that it is in Apple's best interest to remove the CD burning feature. If that happens, the only way for customers to get Fairplay-encrypted music out of iTunes will be to circumvent Apple's DRM, which is illegal due to the DMCA anti-circumvention provision and similar laws in other jurisdictions. It is also important to note that burning capability is notably absent for iTunes video downloads. With the growth in popularity of Apple's iPod, there has been a corresponding growth in Apple's market power. You can expect Apple to do everything possible to increase that power and erect barriers to competition. With laws like the DMCA on the books, a critical barrier to competition has the full backing of the government's taxpayer-funded law enforcement resources.

Apple's iTunes has demonstrated that you can indeed compete with free. But as this document has shown, the actual effectiveness of Apple's DRM in thwarting piracy played no part in that success. It is important to note, however, that iTunes could not be successful solely by using proprietary encryption to lock out competitors and by promoting its DRM to rights holders as an elixir to piracy. The other half of the iTunes formula for success is completely dependent on peoples' behavior: if consumers did not recognize value in iTunes, they would simply not use it. Moreover, virtually every song legitimately purchased through iTunes can be acquired for free via illegal means. Apple's iTunes service, in combination with the iPod player, offers consumers a complete and integrated solution that is easy to use, flexible (e.g. you can burn songs to CD) and stylish. iTunes is attractive to consumers, not because FairPlay DRM is restrictive, but in large part because it is not.

Vendors and pundits are doing a profound disservice to the entertainment industry by perpetuating the DRM myth and holding up iTunes as an example. With iTunes, Apple has demonstrated the value of DRM for neither consumers nor rights holders. Apple has shown, however, that you can successfully compete with free, and get consumers to open their wallets, if you offer them something better. The entertainment industry should take heed from the real iTunes example: create something that provides convenience and value, not costly complexity, and you just might take away the incentive to acquire works illegally. That would make digital piracy obsolete.