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Five Scenarios for Digital Media in a Post-Napster World

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0. Introduction

This document—a joint effort between GartnerG2 and the Berkman Center for Internet & Society—presents five possible scenarios for copyright law applicable to digital media in the United States.

Descriptions of each scenario were developed by Professors William Fisher and John Palfrey of the Berkman Center at Harvard Law School. The outcomes of each scenario were developed by GartnerG2 as "first takes" on the implications that changes in copyright law will have on future business models and markets.

The intent of this paper is to spark reasoned discussion and debate that can assist in the development of new business models for the entertainment industry, artists and technology companies, while enabling consumers to legitimately acquire and manipulate copyrighted digital media.

These scenarios will be the basis for several working sessions at the upcoming conference sponsored by the Berkman Center and GartnerG2, to be held 18 September 2003 at the Harvard Law School in Cambridge, Massachusetts. Feedback from those work sessions will be compiled and posted on both the GartnerG2 and Berkman Web sites.

This document is a supplement to "Copyright and Digital Media in a Post-Napster World," available on GartnerG2.com, and also at cyber.law.harvard.edu/home.

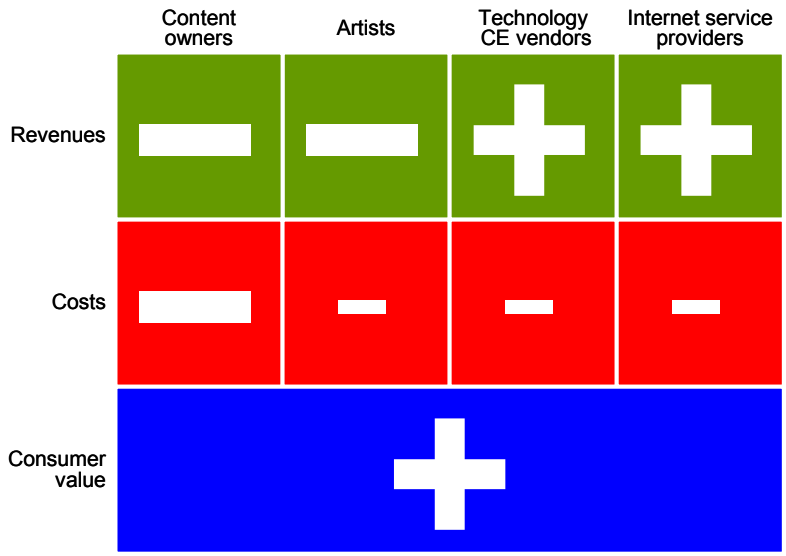
1. The No-Change Scenario

This scenario is based on the assumption that in the next five years, U.S. copyright law governing digital media will remain the same. That is, the Digital Millennium Copyright Act—known as DMCA—is still enforced, though irregularly, and confusion over central doctrines like fair use remain unresolved.

In this scenario, we presume that:

- The pace of the technology evolution echoes the trajectory of the past five years: quick and nimble, and still sparking legal and technological arms races.
- Enforcement efforts by copyright holders and government entities achieve minimal results.
- The prevailing opinion among individuals engaged in retail, rather than wholesale, piracy is that they stand little chance of being caught.
- Widespread file-sharing via peer-to-peer (P2P) sites continues as improved technology and bandwidth facilitate greater levels of piracy. Legal alternatives gain some traction, but not enough to stop online file-sharing of copyrighted digital media. Consumers still think that digital media may be obtained online for free.

Figure 1: No-change scenario



Source: GartnerG2, September 2003

Revenues

Content owners and artists: In this scenario, revenues will keep shrinking as piracy thrives and copyrighted materials are traded largely unfettered via P2P file-sharing services. Artists' losses will be less substantial than those of the music labels because more of their revenue is derived from performances. Live performances should grow in this scenario, driven by the Internet's promotional and transactional capabilities. Attempts to curtail piracy via legal and regulatory means continue to flounder with cases being decided both for and against entertainment industry organizations, with no clear mandate. The regulatory bodies will continue to debate the merits of various legislative solutions, but no significant bills will emerge.

Technology and consumer electronics companies: Revenues should grow moderately as digital distribution of media properties proliferates. Digital media is still perceived to be free by a portion of the U.S. population, so large numbers of individuals will accumulate large collections of digital media including television, movies and music. Consumers want flexibility in using these media files and expect multiple playback devices. Consumers will need more storage for their media files and new devices to facilitate digital media playback.

Internet service providers (ISPs): Revenues should grow as more digital media is made available and attracts new subscribers. Also, the desire for richer media content such as movies and TV programming will drive the desire for higher bandwidth connections. However, these gains will probably be offset by increasing legal costs as ISPs deal with on-again, off-again enforcement efforts by copyright holders.

Costs

Content owners: Costs will rise as content owners attempt to protect their digital assets through educational, legal and lobbying efforts. Research and development costs will rise as media companies—either singly or in partnerships—work on technology that protects digital assets. The resulting products will prove ineffective as increasing numbers of hackers will crack protection schemes, rendering industry efforts useless.

Artists: Costs will rise as artists spend more time on promotions and tours to make up for lost revenues from product sales. Some artists will also incur costs associated with protection of their intellectual property while others will see piracy as promotion for their performances.

Technology and consumer electronics companies: Research and development costs will rise slightly in response to the demand for new digital media playback devices. Marketing costs will also rise as they promote these new products to consumers. However, the increased costs should be offset by new product revenues.

ISPs: Costs will rise slightly as ISPs will be forced to bear a small portion of the costs associated with monitoring piracy. The increased revenues from service upgrades and new subscribers should offset these costs.

Consumer value: Consumers will see some value in the no-change scenario since large quantities of digital media content will be available for free or relatively inexpensive as companies offer low-cost alternatives to illegally available media—in an attempt to recapture at least a portion of lost revenues. However, there is a significant risk of market shrinkage over time as copyright holders/creators put fewer products into a market still fraught with piracy, etc.

Conclusion

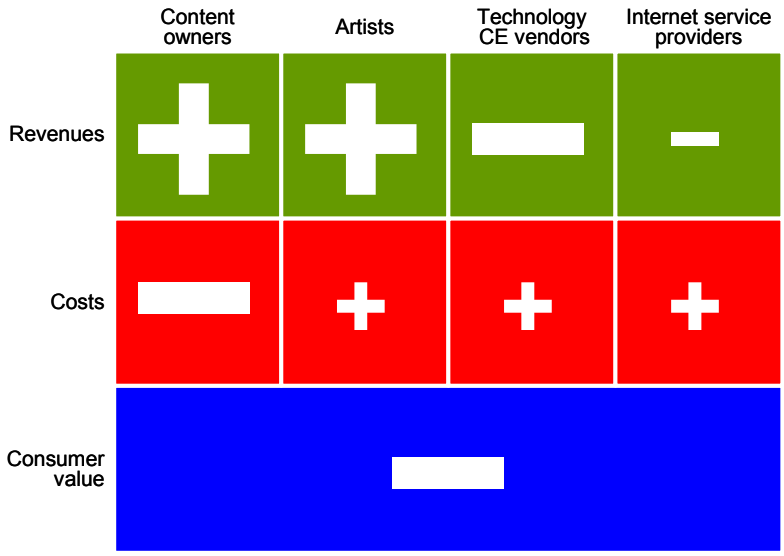
This scenario is the least likely to play out, as the entertainment industries are not likely to sit still and see their business models slowly destroyed. Media companies have already attempted to address piracy via legal, regulatory and technology solutions. They will continue to pursue solutions to what they perceive as an attack on their traditional business models. However, it is likely that the no-change scenario will prevail in the immediate future as efforts so far have yielded minimal results and piracy is still widespread. We look for elements of the no-change scenario to be present for some time into the future.

2. The Taking Property Rights Seriously Scenario

The second scenario forecasts what may happen if owners of digital content are more successful than they have been to date in their efforts to protect against unauthorized use and copying. This scenario follows one of the rhetorical strains of advocates of intellectual property rights—that intellectual property rights should align more closely to other property rights. Implicit in this rhetoric is that a copyright is a property right, and so infringement of a copyright is equivalent to the seizure, destruction or invasion of a piece of property, either personal or real. Such a revised view of intellectual property rights would change the digital media debate substantially.

This second scenario involves legal reform and is linked conceptually to the third scenario, which involves technological change. The two ideas are joined by the notion that in both instances, holders of intellectual property rights in digital media will have a stronger grip on their intellectual property. The two ideas diverge in terms of how those rights are established and enforced. As such, the two ideas are conceptually severable.

Figure 2: Taking property rights seriously scenario



Source: GartnerG2, September 2003

Revenues

Content owners: As the financial threat of piracy decreases, we expect revenues from the sale of physical products (CDs and DVDs) to increase. Additionally, the migration to electronic distribution of content can be slowed or curtailed, depending on

the needs of media companies and copyright holders, not markets.

Artists: Artist royalties will increase as sales of physical products recover from the losses to piracy. However, performance revenues may decline, partially offsetting the gain in royalty revenues. Once the Web is included as a distribution channel in the agreements between authors and publishers, we would expect the "authors' share" to increase.

Technology and consumer electronics companies: Revenues would decline for this group, as the new digital playback devices would likely lose a portion of their appeal if they are perceived as being overly restrictive.

ISPs: Revenues would likely drop moderately as those individuals who accessed the Internet primarily for pirated content cancel their subscriptions. ISPs should see little, if any, relief on the media distribution revenue side—companies will be slow to distribute media content via electronic subscriptions.

Costs

Content owners: For the most part, this market will be unchanged. Manufacturing and distribution may get cheaper, but the benefits will be counteracted by increases in royalty cases as piracy's effects are minimized. Overhead costs associated with investigating and prosecuting violators will increase to some degree, but expect the industry to ameliorate some of these costs by pooling resources.

Artists: Marketing costs should go up slightly, as artists will have to spend more money to promote their performances.

Technology and consumer electronics companies: Manufacturing costs will rise somewhat if the copyright enforcement regime mandates that copy control capabilities be included in all hardware and software products.

ISPs: Marketing costs will rise as ISPs seek to recover losses on subscription cancellations. Incremental increases in overhead costs are to be expected as ISPs will have to direct some resources toward complying with an increase in subpoenas and search warrants as a result of increased law enforcement campaigns.

Consumer value: Very low to nonexistent. A unified enforcement response will be impossible. Without incredibly synchronized and integrated international enforcement, media companies dependent on enforcement would find their market advantages short-lived, if they ever materialize at all. Consumers who purchase music online and value its portability—the ability to move it to other devices, to share it with family members—may find the new enforcement regime so onerous that they look to alternative markets for music, both gray and black markets. Consumers who have not switched to highly portable digital

music—and who have no interest in online distribution—will probably have no problem with the new enforcement regime.

However, broader consumer displeasure could come if others in the system—such as ISPs and network providers—are forced to increase their fees as a result of added costs to comply with media companies/content providers and law enforcement requests.

Conclusion

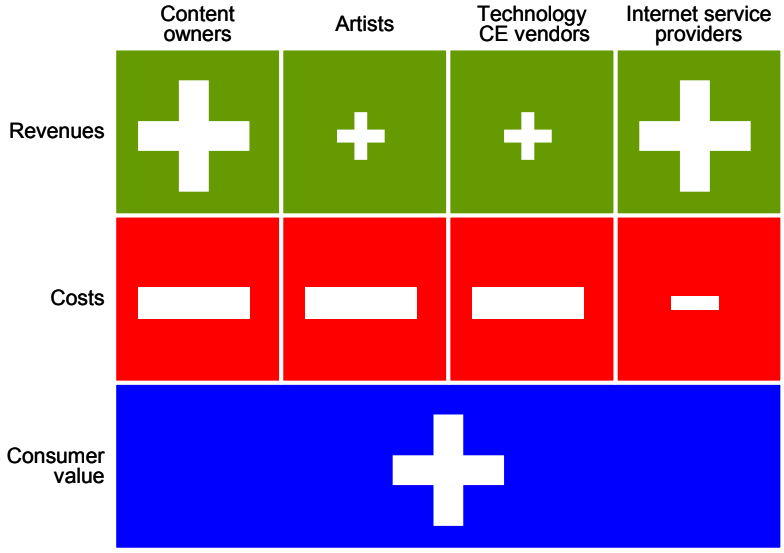
This scenario certainly plays to the interests of those in the media industry and copyright holders who would seek to maintain existing business models based on complete control of the content. However, it is probably the one scenario that best illustrates the chasm separating content owners/media companies from large segments of the consumer population. It is also the scenario that, if realized, would most emphatically underscore the regional differences in intellectual property laws and enforcement.

3. The Effective Technology Defense Scenario

In this scenario, CDs and DVDs are encrypted with a copy-protection code that secures the majority of content, and the music industry has focused on physical distribution as well as digital distribution.

The assumption made in this scenario is that both physical and digital distribution of CDs and DVDs are heavily copy-protected, and consumers' needs are still being met after two years of experimentation. Copy-protection includes portability of content, such as two-session CDs or CDs that allow secured burning. Copy-protection assumes that the schemes will be broken, reviewed, improved, updated and then broken again. This is an ongoing cycle.

Figure 3: Effective technology defense scenario



Source: GartnerG2, September 2003

Revenues

Content owners: With all CDs, DVDs and other physical media copy-protected but playable, CD sales drop in the early days of this scenario because many consumers don't want to buy only copy-protected CDs. Consumer acceptance increases as content producers and technology providers deliver consistent physical media products based on industry standards. The sale of physical copy-protected CDs complements the online copy-protected digital downloads from legitimate services.

Artists: Revenues increase moderately after the industry ships consistent copy-protection schemes, reducing rampant piracy.

Performance revenues should rise as Web distribution of artists' properties increases exposure and audience demand.

Technology and consumer electronics companies: Consumer confusion and displeasure with copy-protection should result in decreased revenues in the short-term. Hardware and software companies providing copy-protection solutions may see some increase in revenues, but those could be offset by a constant cycle of research and product development.

ISPs: Electronic distribution revenues will rise from today's almost nonexistent level, and ISPs will try to secure a portion of these revenues for distribution of the protected content. These revenues will rise commensurate with the increases in distribution of digital content.

Costs

Content owners: Manufacturing costs for physical product will increase as licensing fees for copy-protection are paid and more research and development costs are shared around the industry in search of interoperable copy-protection standards.

Artists: Expect to see an increase in marketing and promotion costs as music labels carefully dole out resources in an environment that essentially mirrors the music industry circa 2000.

Technology and consumer electronics companies: Manufacturing costs for physical product will increase as copy-protection technologies are incorporated. Marketing costs should rise for consumer electronics manufacturers to educate consumers on the new copy-protection in their devices.

ISPs: Marketing costs should rise slightly as ISPs try to convince consumers that their service is the most reliable for distribution of digital content. Expect cost increases associated with monitoring piracy activities, electronic distribution and additional marketing activities.

Consumer value: Very low, initially, as the lack of standards for copy-protection hinders consistent delivery and usage of digital media, and frustrates many consumers. As standards are reached, it is likely that consumers will adapt.

Conclusion

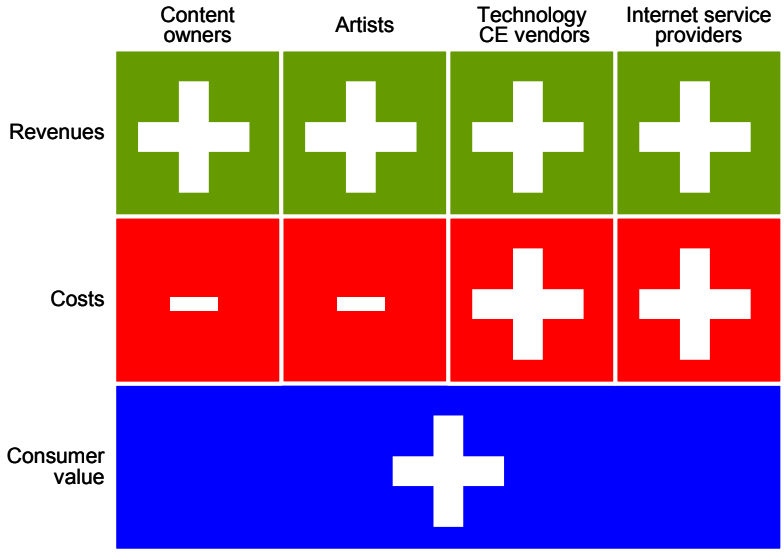
This scenario can be described as "technology rescues the content industries from wanton copyright piracy." However, the technological challenges are compounded by the numbers of increasingly tech-savvy consumers around the world. There is very little margin for error and the transition to universal copy-protection must be relatively quick. Otherwise, media companies and artists may find that large numbers of consumers are seeking digital content from sources other than traditional music labels, movie studios and publishers.

4. The Utility Model Scenario

What would happen if digital content were treated as a public utility? Such a model is suggested by the similarity of the structure of today's vertically integrated and highly concentrated media industry to other regulated oligopolistic industries, such as telephone companies and power companies.

In this fourth scenario, the rights of intellectual property holders would be abridged in one or more ways. For instance, digital content holders might be required to limit the amount or the pricing of sales of digital content. Such a limitation might curb the ability to price-discriminate. Other types of limitations might resemble restraints on vertical integration, analogous to the traditional Federal Communications Commission rules barring certain forms of media consolidation. These types of regulations would likely be enforced by a federal regulatory body.

Figure 4: Utility model scenario



Source: GartnerG2, September 2003

Revenues

Content owners: Revenue based on physical product sales would plummet—for movies, music and possibly books—as a significant portion of consumers switch to electronic distribution services. However, licensing revenue and other sources would increase dramatically given the massive exposure possible on the Internet.

Artists: Revenue should increase with a frictionless distribution system that literally extends worldwide. Artists would have a nearly clear path to consumers, and their success over the short- and long-term would be easy to track.

Technology and consumer electronics companies: Consumer electronics manufacturers would see significantly enhanced revenues as new devices designed to playback this electronic media would proliferate.

ISPs: Revenues would increase as ISPs would attract new subscribers and secure a portion of the revenue for electronic distribution of media. This revenue will be derived by either metered consumption of media from the consumer or a sampling methodology that applies a flat rate to all subscribers to the digital media services.

Costs

Content owners: Operating costs, such as manufacturing and tracking of content distribution, would decrease as content shifts from physical to digital. Costs may increase in the short-term as the business operations transition, but these increases will be quickly amortized by the absolute lower costs of distributing digital content versus physical products.

Artists: The potential increase in volume—via increased channels and exposure—will drive up marketing and advertising costs as established and new artists have to step-up their promotional efforts in order to rise above the crowd.

Technology and consumer electronics companies: Consumer electronics manufacturing costs should rise commensurate with the sales of new products introduced to accommodate the increased consumption of media. Marketing costs for consumer electronics manufacturers should rise moderately as new form factors and devices proliferate for media consumption.

ISPs: Marketing costs should drop, as they will have the benefit of the obvious value of media content to offer. Overhead and distribution costs should increase in the short-term, as they will likely see a strong increase in both subscribers and usage, requiring investments in their infrastructure.

Consumer value: Potentially very high. Consumers would be able to access a panoply of content—music, movies, printed material, etc.—conceivably paying for it in a single monthly bill. Content control and copy-protection issues would be substituted for pay-per-use agreements that specify how the content is to be used. The only difficulty would be confronting the issue of whether or not consumers would accept the notion of their content being tracked.

Conclusion

Of all five scenarios presented here, this one countenances major legal, business and consumer behavior changes. From a technology perspective, it is less complicated than might be considered. At least one technology provider currently has an offering that could track content distribution to the end user in much the same way power companies use meter-reading systems. However, music and movie producers and their businesses—not to mention conventional retail distribution entities—will be violently opposed. Music and movie producers would see their revenue models altered greatly, with the costs associated with distributing content and usage eliminated.

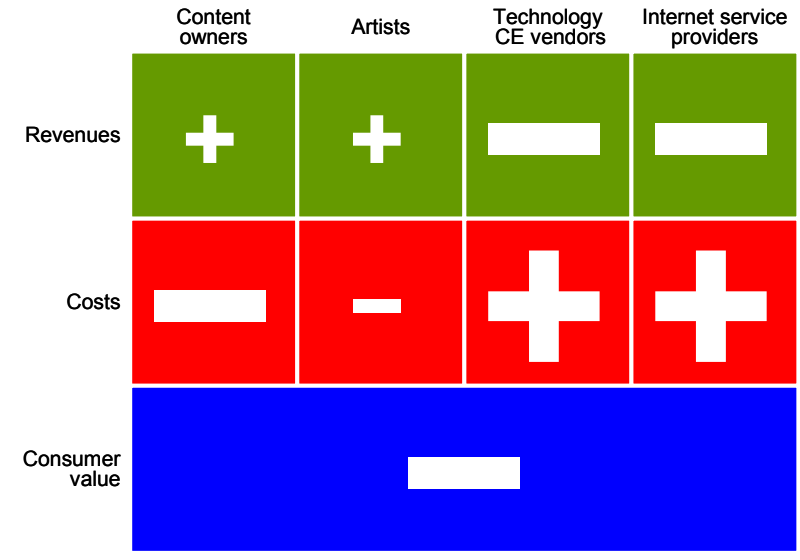
5. The Compulsory License Scenario

This scenario supposes that the copyright system now used to stimulate and reward the development of digital content would be replaced by a system in which the creators and producers of such content were compensated by the government in proportion to the frequency with which their products were consumed. The revenue necessary to fund such a system would be raised through taxes on consumer electronic devices and Internet access.

In this scenario, the creator of a recording would register it with the U.S. Copyright Office or its counterpart in another country and then receive a unique file name, which would be used to track transmissions of the work on the Internet. The government would tax devices and services used to gain access to digital entertainment. The primary target of such a tax would be ISP access. Secondary targets would include CD-burners, blank CDs, MP3 players, etc. Using techniques pioneered by American and European performing-rights organizations, a government agency would estimate the frequency with which each song was accessed by consumers. Tax revenue collected would be distributed to creators proportionate to access rates on their songs.

Once this alternative compensation mechanism was in place, the old one would be dismantled. In other words, copyright law would be reformed to eliminate the current prohibitions on the reproduction, distribution, public performance, adaptation and encryption circumvention of published music recordings.

Figure 5: Compulsory license scenario



Source: GartnerG2, September 2003

Revenues

Content owners: Revenues may not drop precipitously, in the beginning. If one assumes that the creators and media companies focus on their most valuable skills—producing content that is interesting to people and being able to promote it heavily—then there would be no substantial drop-off in what they "gross" from the buying public. We would expect that in this environment, the movement to create label/artist contracts that include a percentage of live performance revenue going the labels (historically, tour/live performance revenue belonged to the artist alone) would accelerate.

Artists: Revenues increase moderately as creators are rewarded directly based on frequency of consumer access to their material. Performance revenues should increase as the audience expands due to increased exposure via Internet distribution of the artists' properties.

Technology and consumer electronics companies: Minor cost increases would take effect initially, to ensure devices can track content usage. However, given the nearly frictionless nature of purchase transactions and the possible decrease in piracy, device manufacturers and software developers will preserve the opportunity to grow revenues based on the quality of products, not their ability to prevent piracy.

ISPs: Electronic distribution revenues will rise from the current almost nonexistent level, and ISPs will try to secure a portion of these revenues for distribution of the protected content. These revenues will rise commensurate with the increases in distribution of digital content.

Costs

Content owners: Most likely, overall costs will decrease. In such an environment, digital distribution is favored over physical, so as the requirements for shipping physical product decreases, so too will costs. There are likely to be some offsetting increases as content owners will have to create infrastructures to link in with a government entity that will be tracking usage.

Artists: Expect to see an increase in marketing and promotion costs as artists spend more to articulate the value of their product, rather than rely on the mammoth marketing powers of their music labels.

Technology and consumer electronic companies: Revenues would stay relatively constant. Given that the burden for "tracking" usage and preventing illegal copying have been pushed onto a government entity and eliminated, costs should remain.

ISPs: Marketing costs should go up slightly due to the challenge of convincing consumers that their Internet service is the most reliable method for distribution of digital content. Expect increases in costs associated with monitoring piracy activities, electronic distribution and additional marketing activities.

Consumer value: Potentially very high. A reasonable alternative to free—a government-run service that only bills them for what they use, along with a relatively minor tax levy on blank recording media. As standards are reached, it is likely consumers will adapt. An implicit assumption is that consumers will not mind a fairly transparent registry—to a government agency—of the content they purchase and own.

Conclusion

While this scenario has its own risks—giving a government entity significant discretionary power and assuring the virtual annihilation of the physical retail market—the potential for reducing litigation, lowering the costs of enforcement and eliminating the incentive for an ongoing encryption “arms race” make it very attractive.

