

Business Models and Program Content

David Waterman
Indiana University

Beginning in the mid-1990s, the Internet unleashed an extraordinary amount of experimentation with the delivery of broadband entertainment content to consumers. Much of that content has been Internet-original, notably short films and serials, and interactive program forms. At the other end of the spectrum have been feature films and TV programs already appearing in theaters or on other media. The suppliers of this content have experimented with just as wide a range of business models: advertising, sponsorship, bundling with other products, promotion of other products, instant online purchase of merchandise, pay-per-view or “rental,” sale of content (by consumer downloading), and hybrid forms.

Quite a few of the innovators have failed along the way, and for those who have survived the dot.com bust or who have entered the market since, ambitions have been tempered. Few observers, however, would discount the long-term possibilities for delivering broadband entertainment over the Internet. From that perspective, several big questions immediately come to mind. What kinds of business models will predominate when Internet television eventually develops? How will file sharing technologies affect these business models? And what types of content will these business models support: a wealth of new niches, or just more of the same?

Of course, no one can answer these questions with any certainty. Indeed, arriving at the answers is the market function of all the experimentation in the first place. The objective here is much more modest. By applying some economic principles, and considering the historical experi-

ence with established broadband media, this chapter provides a framework for thinking about the answers to these questions.

SCOPE

To begin, some subject matter boundaries. First, the focus is entirely on actual Internet protocol (IP) delivery of television programming. For example, “enhanced” television, using the computer (or a set-top box) to interactively play along with a standard television exhibition of a sports event or game show, does not count. Second, the discussion concentrates mainly on dramatic entertainment forms for consumers. There are many business-to-business (B2B) broadband applications (e.g., video-conferencing), business-to-consumer electronic commerce that is unaffiliated with entertainment programming, interactive computer games or gambling, pornography, and news programming—all of which have evident economic potential on the Internet, but are also outside the scope. Third, the concern is for the long-run future. Internet bandwidth capacity, as well as payment mechanisms and general usability of computers, will have to develop far more for Internet TV to reach its potential. There is an assumption that those developments will eventually happen, but no predictions on when are made. Another assumption is that in the long term, the computer and the television set will converge. That reflects the faith that if Internet TV entertainment technology develops in a potentially profitable way, then the computer will find its way into living rooms. Finally, the focus is primarily on developments in the United States.

The next section begins with a brief review of the academic literature preceding this study. Then an overview of Internet TV entertainment experiments is provided. After that, five basic economic characteristics of the Internet that are relevant to development of Internet TV business models and content are set out. Implications for future development of business models and broadband entertainment content are then given.

LITERATURE

Scholarly discussion of the economics of Internet television has been sparse, but several works provided a useful foundation for the present study.

Owen (1999) took a basically pessimistic view of the future of Internet television, arguing not only that adequate bandwidth appears to be far into the future, but that the architecture of the web is not well suited for broadcasting video. Tristram (2001) also discussed a number of current and future economic and technological limitations of broadband video. The Communications literature has also been concerned with Internet TV. Kiernan and Levy (1999) studied the content of broadcast related Web sites, for example, and a series of articles on the future of the Internet (no-

tably Shaner, 1998) have conceptualized the nature of web content on a broader level. Of more direct relevance to the present analysis, Picard (2000) offered a study of the historical development of business models for online content providers more generally, and suggested lessons in these experiences for the future. Konert (2000) analyzed a variety of financial and revenue generation models for Internet broadcasting from a European perspective, especially with regard to implications for European public broadcasting. Shapiro and Varian (1999) discussed economic characteristics of digital and networking technologies, including the Internet, from the standpoint of advising business people how to take advantage of these technologies and design better business models. Bakos and Brynjolfsson (1999) studied the economics of product bundling strategies on data networks. A recent National Research Council report, *The Digital Dilemma* (2000), discussed in detail the economics and technology of the Internet from the standpoint of copyright and other government policy questions. A number of law review and other policy-oriented papers, such as Samuelson (1999), Schlachter (1997), Einhorn (2000), and Jackson (2001), also discuss economic and technological characteristics of Internet entertainment delivery from those perspectives.

INTERNET TV EXPERIMENTATION

A number of commercial Web sites offering Internet TV entertainment in the past few years—some of them now defunct—illustrate the wide variety of business models and content that entrepreneurs have experimented with in the United States.

On the content side, film shorts and serials, or “webisodes” (also mostly very short), have been pioneered by sites such as ifilm.com, atomfilms.com, icebox.com, and entertaindom.com. Many of these programs have been originally produced for the Internet. The great majority of serials seem to be animation, though there have also been talk shows (e.g., Cyberlove on thesync.com). Other sites, such as sightsound.com, ifilm.com, and later cinemanow.com (along with file sharing sites such as kaza.com and grokster.com) have offered access to feature films. Most of these have been theatrical films, although one Internet-original feature distributed by sightsound.com in 2000, *The Quantum Project*, received a lot of publicity. The sightsound.com site later began offering recent full-length features from the Miramax studio (owned by Disney), and cinemanow.com followed with other Hollywood fare. A consortium of five major studios then began offering newer features via movielink.com, and other studios are following. Among other innovations, itsyourmovie.com experimented with an original serial program in which viewers could vote on the future plot direction. Sony’s site, screenblast.com, allowed users to interactively create their own mini-episodes of popular TV programs.

Many broadcast TV stations have been streaming their programming from Web sites for several years, and broadcast.com has retransmitted television stations worldwide. Many other sites, such as CBS.com and NBCi.com, have offered a wide variety of short video news clips, previous episodes of entertainment series programs, and of particular interest, outtakes of other original clips that supplement regular TV series (e.g., CBS's *Survivor*).

The range of business models employed by these Internet broadband sites has been great. Banner advertising and its increasingly proactive forms, other links to retail outlets, and on-site merchandising have become common components. Brief "pre-roll" commercials have become routine preamble to entertainment content. Users can often click on these commercials and get more product information. Some sites, such as BMWfilms.com and skyy.com, have offered high production quality short films that overtly promote their sponsors' products (namely, BMWs and Skyy Vodka) by integrating them into the stories. Instant online purchase of products modeled within an entertainment program was apparently first experimented with by Microsoft. Internet TV promos of programming available on other media, especially broadcast or cable programs and movies, have been very common fare on broadband sites, and seem to drive the economics of broadcast and other traditional media-based sites.

Led by sightsound.com, broadband entertainment sites have increasingly moved toward direct payment models. Growing numbers of older and especially recent feature films have been available for a 1- or 2-day pay-per-view license, usually for \$2 to \$4, or purchase typically for \$5 to \$15.

FIVE ECONOMIC CHARACTERISTICS OF THE INTERNET AFFECTING INTERNET TV BUSINESS MODELS AND CONTENT

The idea that the Internet is a revolutionary communications medium has become common currency in discourse about the media. This label is certainly justified in some contexts. From this chapter's perspective, the Internet is best viewed in comparison with established broadband media in terms of the economic *improvements* it can make to cost and efficiency features of those media.

The Internet's economic improvements on established media can be divided into five categories: lower delivery costs and reduced capacity constraints, more efficient interactivity, more efficient advertising and sponsorship, more efficient direct pricing and bundling, and lower costs of copying and sharing.

Lower Delivery Costs and Reduced Capacity Constraints

Media transmission system costs consist of several components: a capital infrastructure for transmission, home premises equipment, and variable costs of delivering the information. Parts of these infrastructures and home equipment have multiple uses, and costs often depend critically on usage rates. Cost comparisons among media are thus difficult. Some comparisons show that Internet transmission of television signals is currently far more expensive than cable and some other media (see Noam, 2000; Noll, 1997); Owen (1999) and Tristram (2001) argued that for mass distribution, broadband streaming over the Internet will not for the foreseeable future be as efficient as broadcast television, although IP costs continue to fall. In other respects, the Internet has major cost advantages. Internet TV is more-or-less free of geographic constraints, allowing essentially instantaneous worldwide transmission. A component of delivery costs is the ability of consumers to simply download content rather than to copy in real time off of a cable channel, for example, or take a trip to the video store to buy a product that has been manufactured, packaged, shipped, and maintained in an inventory. From the latter perspectives at least, Internet transmission of video is quickly becoming more cost efficient than existing media.

Because of its architecture, capacity or “carriage” constraints become very minor on the Internet. In the 1940s, increasing the number of available movies in a town meant building a whole new theater. Broadcast TV stations reduced these capacity costs, especially in larger markets. Cable TV and DBS have further reduced capacity constraints, and these costs continue to fall with digital compression technologies. Video stores have essentially the highest “capacity” of any established broadband media. All of these media, however, have significant carriage costs. Another channel on a cable system requires a major investment, even with digital compression technologies. Another video or DVD at retail stores requires total demand for a few thousand copies to make duplication and physical distribution worthwhile. The stores that carry each title must cover inventory costs for as long as consumers wish to rent or buy it. On the Internet, a variety of Web sites can offer a virtually unlimited number of products, and consumers can readily switch within and among different sites.

The implication of these cost and capacity advances is lower prices and, especially, greater product variety. That variety provides one ingredient for virtually “true” video-on-demand systems. Also, thinner and more marginal markets can now be served.

The latter potential is shown by the abundance of Internet-original short films and serials already available. One factor is probably just their suitability to a medium in which more lengthy viewing or downloading experiences are now too tedious. Many have earned critical praise, however, and their

often racier content is generally differentiated from other broadband content. Nevertheless, another economic reality underlies their prevalence on Internet TV: consumer demand for short subjects has in the past usually been too marginal for all but a few to even be made available in specialty video stores or on the most narrow appeal cable television channels.

Another example of relatively marginal content on the web is movie or program outtakes: footage about the making of a program, interviews with the creative people, and so on. Currently, such material is included as extras on some DVDs, but as some Web sites are already demonstrating, the Internet expands these possibilities almost without limit. The situation is similar for supplementary material about advertised products. Such ancillary video materials are important building blocks for both advertising and direct pricing business models.

More Efficient Interactivity

If the Internet has a forte among its many marvels, it is surely two-way interactivity. Interactivity has been physically possible since cable systems offered it in early years, notably on the QUBE system in Columbus, Ohio, in the 1970s. Also, a hybrid form of interactivity is now available with the integration of computers and standard TV transmissions to create enhanced TV. Viewers with a computer in the same room (or a set-top box) can simultaneously play along with game shows or sports events. Viewers can also buy products shown on standard television commercials more and more easily with the right home equipment. In some systems, viewers can now choose between several simultaneous feeds of standard broadcast content (e.g., different camera angles covering a sports event) to control the pictures that they actually view. Personal video recorders (PVRs) permit asynchronous control of programming starts and stops.

Cable, DBS, and other multichannel systems are rapidly developing interactive technology as well. But the development of Internet TV should permit most of these activities to be conducted more efficiently. Viewers can instantly and easily control a much wider variety of programming content via their responses. Home shoppers can simply click on a product shown in the middle of a televised movie to instantly buy it, or to get more information about it. They can do the same with an in-show TV commercial. More efficient interactivity offers another ingredient of true video-on-demand systems as well: a convenient process of ordering movies or other programs for on-screen viewing or for download.

With Internet technology, viewers can also neatly manipulate the sequencing of video images. Many question whether consumers in any significant numbers will (apart from the case of pornography) ever want to fiddle with the narrative form of entertainment programs. Still, a great amount of innovation is being invested in systems that will allow people to have that option.

More Efficient Advertising and Sponsorship

A perennial limitation of television advertising has always been waste circulation because of muddled demographic, product interest, or other segmentation. Cable and other multichannel systems have reduced this problem by making room for more sharply targeted programs. Internet television permits the chance to further advance this quest in two ways. First, the virtual removal of capacity constraints should allow still sharper segmentation in the same way that multichannel systems have improved the broadcast model. Second, the ability of advertisers to track the buying or Internet usage patterns of individual consumers permits different ads to be inserted within (or displayed alongside) the same program, depending on the viewer's revealed interests or estimated willingness to buy a particular product.

The click-through interactive system of Internet advertising is much like the per-inquiry (PI) ads often seen on cable TV networks, in which the network is paid not for exposures, but earns a percentage of each purchase made via a phone number displayed on screen. The Internet system is a more efficient PI system. Even without click-through purchasing opportunities, the ease of obtaining more information about products with a mouse-click is a significant advance in product information dissemination. Finally, the Internet offers the opportunity for full sponsorship of a Web site, or of an area within a site, that attracts consumers with entertainment programming. This sponsoring system might meld the branding of a dramatic format program and its characters with a consumer product in a better way than television program sponsorship, first developed in the late 1940s, has been able to do in the past.

Although Internet technology thus promises more efficient advertising-based business models to support broadband programming, history suggests formidable practical limits. First, although multichannel cable television has brought forth billions in total advertising, including many new advertisers, the "magazine model" of higher rates for sharper segmentation has not materialized. A few networks, such as MTV, have segmented very successfully, but cable network cost-per-thousand ad rates are on average still well below those of the major broadcast networks, apparently due mostly to the limited national audience reach of networks that rely on multichannel system delivery (Media Dynamics, 1999; Waterman & Yan, 1999). Second, whereas in-show commercials can be carried on Internet TV programs, the click-through potential on the Internet does not seem to offer a great advantage over what virtually ubiquitous broadcast television stations already do with in-show commercials, especially given the relative importance of product image advertising. Most products are not subject to impulse purchase or PI models of advertising. Third, as seen with VCRs and now

with PVRs, consumer control digital technologies like the Internet generally increase the ease with which viewers can zap ads or otherwise avoid them.

Overall, the success of advertising as support for Internet broadband entertainment seems to rely heavily on consumer initiative to investigate or make online purchases of advertised products—a plausible model, but one with a spotty historical record on other media. Furthermore, to the extent that Internet TV evolves into a “store and replay” rather than “live” transmission medium, as some believe will happen, advertising’s potential will also be limited (see Odlyzko, 2000).

Analysts’ initial expectations for the potential of Internet advertising models have greatly diminished (for the aforementioned and perhaps other reasons). Nevertheless, innovation is active, and at least some of the potential improvements to advertising efficiency on the Internet should materialize. For at least some products, the result should be more cost-effective advertising and product promotion, and thus an increase in the effectiveness with which advertising and sponsorship can support broadband entertainment content. More sharply focused programs should accompany these developments.

More Efficient Direct Pricing and Product Bundling

More efficient direct pricing means lower costs in making transactions, but especially the ability to more effectively price discriminate—that is, to extract the maximum amount that each consumer is willing to pay for a product. In several respects, Internet technology promotes these efficiencies.

First, direct payment-supported video-on-demand systems are likely to evolve to be at least as cheap and easy to manage by Web sites as they ever will be on cable or DBS. Micropayments, which allow very small amounts (perhaps only a few cents) to be automatically charged to a user via a credit card or similar means, are a prospective component of true video-on-demand systems, although they have recently encountered development problems.

Web sites can also engage in so-called dynamic pricing, by which consumers are charged different prices according to their perceived willingness to pay, based on prior purchasing habits on the web, Web site visiting habits, or other information. Basically, dynamic pricing permits more efficient price discrimination through better identification of high versus low value customers.

An important component of effective direct payment systems is efficient bundling of products, such as a package of three movies together, monthly subscriptions, or the sale of movies along with talent interviews, outtakes, and so on. A large literature in economics has explored many ways that

such packaging can extract consumer surplus via price discrimination (e.g., Adams & Yellin, 1976; Varian, 1989). Of course, video stores and cable- or satellite-based systems also offer bundles. But on the Internet, tailor-made packages can be offered to different consumers depending on buyer profile data, and interactivity allows choice among more complex menus or package variations than other media can efficiently offer.²

A variety of other price discrimination devices, such as reduction of prices over time for movies as they become older, or lower prices for repeat viewings, are also efficiently managed on the Internet. A plausible method of Internet TV price discrimination may involve consumer segmentation based on demands for different qualities of transmission. Consumers with higher speed connections, for example, are likely to have higher valuations for high technical quality.

As with advertising-based business models, these potential improvements in direct pricing have practical limits. There is a long history of apparent consumer resistance to paying at every turn (e.g., the failure of DiVX, the digital videodisc system promoted by Circuit City in the United States that allowed consumers to pay according to the number of times a program was watched). More generally, pay-per-view systems have not done very well on cable or satellite systems, although it is unclear how much the lack of consumer control over starts and stops, the limited selections, or other factors are responsible. Dynamic pricing may also have an uncertain legal future. Also, even though the Internet theoretically allows practically any kind of segmentation to take place, it may also prove difficult to price discriminate geographically with an inherently nationally and internationally distributed medium. Geographic discrimination is a natural process for video stores and cable systems.

Undoubtedly, some of the theoretical advantages of direct pricing on Internet TV will never happen. The Internet offers such potential in this area though, that at least some of its advantages, in terms of lower transactions costs and more efficient market segmentation, seem bound to become established. The result should be more viable VOD systems and greater revenue support for products with relatively high consumer demands.

Lower Costs of Copying and Sharing

Attracting more recent attention than any other attribute of the Internet is the remarkable ease with which content, including movies or other videos, can be duplicated and transferred from one consumer to another. The popularity of Napster and gnutella-like file sharing systems have been a testament to these efficiencies. The limited use with video content on

²Bakos and Brynjolfsson (1999) studied the economics of offering menus of very large bundles on the Internet.

these systems thus far is no doubt due largely to bandwidth constraints. Of course, copying and sharing of movies and other videos has been widely practiced since VCRs arrived along with copy-prone pay-TV movies and prerecorded cassettes that can be copied back-to-back. The consumer's task of copying and sharing simply becomes far less time consuming and awkward with the use of a computer.

As everyone has recognized, computer network technologies for copying and sharing pose a serious threat to copyright holders because paying customers can practically evaporate from the market. Even a single casual file transfer can have devastating cumulative effects as it is retransmitted from user to user virtually without cost.

Attracting increasing attention are the new opportunities for copyright owners created by efficient duplication and file sharing via the Internet through digital rights management (DRM). Already mentioned are the negligible costs of a consumer download—essentially equivalent to copying—compared to purchasing a DVD or videocassette, or of making a real-time copy off of standard television. With existing pay-per-view or home video systems, consumers who want to share a copied movie with someone else also have to physically deliver it to the recipient. Peer-to-peer computer transfer essentially eliminates that cost. Fundamentally, the lower consumer costs of copying and peer-to-peer transfer via the Internet create market value. If distributors can manage to appropriate some or all of that created market value, their revenues and profits will rise (Besen, 1986). Consider the “old” system in which consumers have made real-time back-to-back copies off of prerecorded videos or off pay-per-view channels to share with others. The copyright owner may be able to appropriate some fraction of the value of that physically shared copy to the recipient, but it is almost certainly lost revenue for the most part.³ If it is assumed for the moment that distributors are able to maintain strong copyright protection governing broadband Internet transmissions, then they may be able to appropriate all, or at least a larger part, of the value of an electronically shared copy. For example, an automatic electronic payment to the distributor could be activated by a peer-to-peer file transfer (e.g., via a gnutella or Napster-like system) of a copyrighted movie.⁴ Alternatively, such peer-to-peer file transfers could be forbidden by copyright owners, and all users simply induced to purchase directly from the owner. In these eventualities, the incentive for consum-

³Besen made the unrealistic assumption in his model that the distributor can appropriate all of this value. In fact, the most that the distributor can ordinarily appropriate is the value of the product to the buyer plus the value that buyer realizes from making and distributing copies. The latter component is likely to be less than the value of the copies to those who receive them. See Katz (1989) for a useful analysis of home copying issues from an economic perspective.

⁴One indication of this potential is that the movie site sightsound.com has experimented with using gnutella.com to deliver encrypted movie files to users, who in turn paid sightsound.com a fee for the key (Snell, 2001).

ers to engage in the cumbersome process of physical copying and sharing will also be reduced to the extent that prices for authorized electronic download or peer-to-peer file sharing are low enough to render the physical process a less desirable alternative.

Internet technology thus increases the distributors' potential revenues from movie or other product distribution. Possibly, these revenues can be enhanced by improved price discrimination as well. Those who take advantage of file sharing probably tend to have lower price demands, and thus may drop out of the market at the distributor's price for the "original" movie. If distributors can devise a method for charging lower prices for movies transferred from peer-to-peer file sharing sites, or from other sites that involve greater consumer search costs, than for direct downloads from the distributors' sites, they could also increase revenues.⁵

Of course, it is unrealistic to believe that e-mail or other unpaid peer-to-peer transfer of movies and other broadband entertainment could ever be eliminated, even if these practices were made illegal. Also, Internet distribution of movie data stripped from DVDs remains a dramatic threat. However, watermarking and other copyright protection technologies for authorized Internet distribution are rapidly developing, and the recent entry of Hollywood studios into Internet distribution of their movies suggests improved technologies of protection. If copyright interests continue to get favorable court interpretations of the 1999 Digital Millennium Copyright Act's prohibition on attempts to defeat encryption, and new legislation is enacted to account for newly developing problems, then copyright owners should be able to keep losses to a minimum.⁶

The historical experience with back-to-back video copying by consumers encourages that speculation. Surveys indicate that consumer sharing of back-to-back video copies accounts for only about 1% of legitimate market transactions, and the overwhelming proportion of consumers believe

⁵Before Napster's demise, its negotiations with Bertelsmann for Napster to price their music services to consumers were headed for just such a price discrimination system. According to press reports, a \$2.95 to \$4.95 monthly subscription price was reportedly being discussed for a fixed number of music file transfers on Napster. For \$5.95 to \$9.95, unlimited transfers could be made. Additional charges would be made for the right to record the music onto blank CDs. The technical quality of all these paid subscriber transfers or recordings, however, would only be "near-CD" quality. Thus, higher value consumers would be induced to pay progressively more to use the service, but restrictions on transmission quality would still serve to segment the higher value CD and lower value file-transfer market segments. (Clark, 2001). Of course, the well-publicized resistance of other record companies to Bertelsmann's proposals suggests that such a direct pricing system was too clumsy or impractical in the current environment.

⁶See Jackson (2001) for a concise discussion of the DMCA and its application to the Napster case.

that back-to-back copying is illegal, suggesting that relatively small minorities would try to defeat encrypted programming even if they could, or would make illegal peer-to-peer transfers.⁷ Those who do are likely to be low value consumers who would be disinclined to pay for the programs at the prevailing retail prices in any case.

In summary, Internet technology offers many ways by which program distributors can not only reduce costs of delivery and improve desirability of the programming packages they offer to consumers, but also improve the advertising, direct pricing, and other components of their business models. Web entrepreneurs are already combining components of business models in imaginative ways. Undoubtedly, some of these potential improvements will not work out. The law, the advance of technology, and uncertain demand could all inhibit them. But the potential of the Internet seems so great in these respects that it is hard to imagine that Internet TV will not—at least eventually—lead to some marked improvements in television distribution and the business models that support it.

IMPLICATIONS FOR BUSINESS MODEL AND CONTENT DEVELOPMENT

Advertiser Versus Direct Pricing Support

Internet television has been disproportionately reliant on advertising or e-commerce related business models although no one seems to claim profits to date with any model. The shift toward direct-payment models now underway is likely to continue for two reasons. One is that the intense competition among web distributors to establish themselves in the market during the Internet's growth stage surely inhibited many firms from charging directly. The second reason to expect more direct pricing is that higher bandwidth capacity will mean that products of greater consumer value (viz., feature-length movies and sporting events) can be attractively presented. Other than pornography, consumers have never been willing to pay directly for much audio/visual entertainment besides movies and some sports. Historically, advertising has mostly been used to support content watched by low value viewers who are unwilling to pay enough to outdo the few cents per viewer that advertisers will pay for an exposure. Although more efficient advertising and e-commerce related systems are likely to increase the value of Internet exposures to advertisers, it seems unlikely that these improvements will overcome the basic economic forces guiding high value viewers toward direct payment systems.

⁷The video copying percentage is derived from Office of Technology Assessment (1989) and Macrovision, Inc. (1996). The Macrovision study also reported that over 95% of survey respondents said they believed back-to-back copying of prerecorded videocassettes is illegal.

The Internet as a Component of Multimedia and International Syndication Models

As broadband media have proliferated in the past two or three decades, individual programs are more frequently distributed on several different media over a period of time. As countries throughout the world have privatized their media and relaxed trade barriers since the mid-1980s, international markets, especially for U.S. entertainment products, have also expanded.

As Internet TV develops, there will be tremendous economic pressures for the providers of its content to employ similar multimedia syndication models, as well as to supply products that have international appeal. In brief, higher revenues can be generated both because total potential audiences can be reached and because audiences can be more efficiently segmented. The result is greater potential revenues, which will support higher production investments, and in turn attract larger audiences. Another factor favoring multimedia syndication is marketing. A high expenditure ad campaign supporting a product release on one medium serves to increase demand in all the products' potential syndication markets, and thus realize economies of scale in the same way that high production investments can be spread over large potential audiences.

The best illustration of the compelling economic logic of multimedia syndication models is the current system of theatrical feature film distribution.

Movie Distribution and Internet TV. Everyone is generally familiar with the process by which movies are released over time in sequence to theaters, then to hotels and airlines, to videocassettes and DVD, to pay-per-view television, to monthly subscription pay TV, and finally to television broadcasting or basic cable networks. It is widely recognized that this release sequence is basically a method of price discrimination.

The key requirement for any price discrimination is the ability to segment high value from low value consumers. The movie release sequence appears to involve two main segmentation devices. The first is time separation between release to different media. High value consumers having intense demand for a particular movie (or movies in general) are induced to pay higher prices for a first-run theatrical exhibition, while other viewers wait for video, pay TV, or later exhibitions. The second segmentation device in movie distribution is product quality. In general, a theater offers a higher quality exhibition than does a TV exhibition. Similarly, the ability of a VCR or DVD player to stop and start a movie, the absence of commercials on PPV, and so on are quality attributes that attract higher value consumers. The end result is that effective prices paid by different consumers in the release sequence tend to drop over time.

According to some, the business models of movie distributors will have to change and adapt with the Internet, but Internet TV actually fits naturally into this ready-made model. If effective unbundled direct pricing models evolve, and piracy of the Internet distributions themselves does not prove overwhelming, then Internet movies will probably be exhibited in a similar window to that currently occupied by PPV or by video rentals and sales. Internet advertising models will probably be less valuable to movie distributors, but to the extent they do prove efficient, movies can be released on the Internet with advertiser or other commercial support, presumably at a later point in their business life. Precisely where the Internet fits into the movie distributors' business models depends on uncertain technological, legal, and demand developments, and will evolve from experimentation.

Wherever the Internet eventually fits, it is unlikely to replace other movie media in the sequence. All of them, from video stores to pay cable systems, have different quality attributes or different demographic appeals that further the distributors' objectives of segmenting markets in order to charge different prices for essentially the same product. DVD or videocassette retailers, for example, offer services that may never be effectively duplicated by the web. The physical search and human interaction in shopping for videos may have inherent advantages, as do the joys of physically owning a professionally packaged DVD or a tape. A related advantage of retailers is gift marketing, for which a well-packaged physical object is highly valued.

Theatrical film distribution also demonstrates the advantage of multimedia marketing. Advertising and publicity campaigns sometimes costing as much or more than the distributor grosses from theatrical exhibition are launched to support a theatrical release. Much of the benefits from this campaign are reaped as the film travels to video, pay TV, and other media in the subsequent months and years.

Syndication of Internet-Original and Other Products. The market segmentation/price discrimination opportunities for multimedia syndication are not confined to movies. Many programs, including broadcast network programs, made-for-pay (monthly subscription) movies and series, direct-to-video features, and made-for-(basic) cable programs, all depend heavily on syndication to other media, in domestic and foreign markets, and they maximize their revenues by similar means of market segmentation.

Along similar lines, there is certain to be a wealth of "Internet-original" programming that is exhibited later, or even simultaneously, on other media. The business model of atomfilms.com, for example, is already heavily dependent on multimedia syndication. In addition to its Web site-based advertising, atomfilms.com has distributed collections of its best short films to cable networks, airlines, and other media, and compiles them onto DVDs and videocassettes for rental and sale as well (Long, 2000). It

was estimated in late 2000 that atomfilms earned two thirds of its total revenues from these “offline” sources (Mathews, 2000).

Empirical Comparisons

Multimarket Syndication and Programming Budgets. The resulting economic advantage of program syndication over time is simply that larger program budgets, and thus programming with higher production values, can be supported. These more expensive programs attract larger and higher paying audiences. The contrasts in program investments of various entertainment products in the United States are illustrative. Although there can be wide variance, the average major Hollywood studio theatrical feature was reported to cost about \$48 million in 2001 (MPAA, 2002). Based on recent trade reports, HBO’s made-for-pay feature films average something over \$8 to \$10 million, made-for cable and made for broadcast features cost \$3.5 to \$5 million, 1-hour network dramatic series average \$1.5 to \$2 million per episode, a basic cable drama averages \$750,000 to \$1.2 million per episode.⁸ These programs depend heavily on aftermarket syndication to support their investments levels, and there is a general correspondence between these programs’ budget levels and their viability in aftermarkets.

By contrast, a report in *Variety* estimated budgets for 3- to 5-minute webisodes at approximately \$10,000 to \$20,000 (Graser, 2000). Some Internet-original long feature projects have been reported to cost in the \$80,000 to \$100,000 range. *Quantum Project* cost approximately \$3 million for about 36 minutes of entertainment, and its goal was clearly to gain publicity for sightsound.com (Chetwynd, 2000). Of course, these relatively low budgets partly reflect the currently low household penetration rates of broadband Internet capability. They emphasize the point, however, that although creativity and imagination can go a long way on a shoestring, and sometimes lead to extraordinary results, the most successful Internet television programs are likely to be those that can be successfully adapted and sold to other media.

The Videocassette and Cable Experience. The economic significance of syndication-based business models is illustrated by the experiences of pre-recorded videocassettes/DVD and cable television in the United States.

Video content, as described by the time usage patterns for home video in [Table 5.1](#), is dominated by feature films and children’s programs. As a visit to any video store shows, a vast number of obscure, narrow appeal movies, how-to, and other programs are also available on video, but the

⁸These data compiled from *Variety*, March 6–March 12, 2000, p. 58: TNT taps DeBitetto Originals Prexy; Schneider et al (1999), *The Green Behind the Screen*, *Electronic Media*, August 2.

TABLE 5.1
VIDEOCASSETTE/DVD CONTENT DATA

	<i>Time of Use by content (1997)</i>		<i>Box Office Market Shares (1998)</i>		<i>Video Shipments Market Shares (1998)</i>
Feature films	81%	7 major studios	87%	7 majors studios	83%
Sitcoms	1	Independents	13	Independents	17
Drama series	1				
Children's	12	Total	100%	Total	100%
Sports	3				
Other	2				
Total	100%				

Note: Data from (a) Media Dynamics; (b) and (c) Paul Kagan Associates.

overwhelming portion of revenues are generated by the theatrical feature films of major distributors. A small proportion of the feature films on video are direct-to-video movies, but these are often syndicated to cable or broadcast television. Most of the children's programs on video are also exhibited on cable or broadcast television. A very small proportion of video content relies solely on video rentals and sales for revenues.

Available data for cable television in the United States as reported in [Table 5.2](#) is badly out of date, but also suggests the economic importance of multimarket syndication. Theatrical features dominate pay cable networks, and among the minority of originally produced programming on pay cable networks, including made-for-pay feature films, a large percentage of that is no doubt later released on video, on broadcast or basic cable channels. For basic cable networks, the proportions of originally produced programming are much greater. Aftermarket feature films and off-network programs accounted for less than half of viewing in this study, but for dramatic programming formats, the overwhelming portion of viewing was directed to aftermarket programming. The percentages of original dramatic and other entertainment programming on basic cable may have increased since the mid-1980s, but again, a substantial percentage of that programming later ends up on broadcast channels. Because the same basic economic forces

TABLE 5.2
CABLE TELEVISION PROGRAM CONTENT BY SOURCE
1986

	<i>All programming</i>	<i>Dramatic only</i>
<i>Premium channels</i>		
Original	15%	8%
Off-network	2	2
Theatrical film	83	90
Foreign acquisition	—	—
Total	100%	100%
<i>Basic channels</i>		
Original	56%	3%
Off-network	30	63
Theatrical film	12	32
Foreign acquisition	2	2

Note: Data from Waterman and Grant (1991).

are at work, there seems good reason to expect multi-market syndication business models also to dominate Internet television.

CONCLUSIONS

The widely discussed opportunities for interactive and other new and innovative Internet entertainment, and for more narrowly focused and marginal programming in general, are backed by economic logic. Lower costs, virtually unlimited capacity, efficient interactivity, and more efficient business models will all contribute to making them possible. As the video and cable TV experiences suggest, however, there will also be powerful economic forces favoring relatively expensive, broad appeal programming (e.g., Hollywood movies) on Internet TV. By their nature, those are the types of programs that are most amenable to syndication on a variety of different media, as well as amenable to lucrative worldwide distribution.

A major challenge to the suppliers of Internet-original television programs will be to find lucrative aftermarkets for them, both in their domestic and foreign markets around the world. Inherently, these economic pressures also tend to encourage homogenization of content, as well as to limit the budgets of programs that have few alternative outlets. For example, interactive programming that depends on Internet architecture, or raunchier productions that do not adapt well to other media, will have major budget handicaps to overcome. It is a good guess that like basic cable TV, Internet TV programming will evolve into a dichotomous mix of niche-oriented, but relatively cheap Internet-original fare on the one side, and mass appeal, relatively expensive multimarket syndicated programming, on the other.

Few observers would claim that the diversity of entertainment programming, including much new and original, more sharply focused content, has not been greatly enriched by home video and cable television. But the results do seem to have fallen short of many of the hopes that visionaries' had for these media (spectacularly so in some cases, e.g., the grand hopes for "high culture" performing arts).

Historical experience suggests that these outcomes fell short of aspirations for three reasons. First, other things being equal, focusing program content on particular interests of small subsets of people seems to have stimulated demand (of both audiences and advertisers) less than was imagined. Second, visionaries underestimated the audience drawing power of high production values. By spending more on the best stars, locations, and special effects, and spreading those costs over a potentially very large multimedia audience, producers have been able to keep the lion's share of the viewers. Finally, many have underestimated the power of effective marketing. To support an opera in the United States certainly becomes more feasible with greater capacity (even if it can attract no more than 1% of the country's television homes), but an opera cannot compete with a blockbuster movie or a boxing match that can realize economies of scale in a national marketing campaign.

For some combination of all these reasons, it seems, the opera and other niche audiences have so far decided in the end to watch *Harry Potter*. So far, Internet-original entertainment programming shows great creative promise, but the economic challenges will not be easy to overcome.

ACKNOWLEDGMENTS

An earlier version was published as D. Waterman (2001), The Economics of Internet Television: New Niches vs. Mass Audiences, *Info: The Journal of Policy, Regulation and Strategy for Communications, Information, and the Media*, Vol. 3, No. 3. I am especially indebted to A. Michael Noll, Andrew

Odlyzko, Ben Compaine, Robert LaRose, and to other conference participants for their comments, but they share no blame for remaining errors.

REFERENCES

- Adams, W., & J. Yellin (1976). Commodity bundling and the burden of monopoly. *Quarterly Journal of Economics*, 90(3), 475–498.
- Bakos, Y., & Brynjolfsson, E. (1999, December). Bundling Information goods: Pricing, profits, and efficiency. *Management Science*, 45(12), 1613–1630.
- Besen, S. (1986). Private copying, reproduction costs, and the supply of intellectual property. *Information Economics and Policy*, 2(1), 5–22.
- Chetwynd, J. (2000, May 4). Hollywood experiments online with quantum leap to features. *USA Today*, p. 1D.
- Clark, D. (2001, February 21). Napster to offer yearly fee to cd labels. *Wall Street Journal*, p. B6.
- The Economist* (2000, October 7). A Survey of E-Entertainment.
- Einhorn, M. (2000, September 23–25). *Napster, copyright and markets*. Paper presented at the Telecommunications Policy Research Conference, Alexandria, VA.
- Graser, Marc (2000, September 4–10). Only top-tier talent taps the till. *Variety*, p. 1.
- Jackson, M. (2001, Spring). Using technology to circumvent the law: The DMCA's push to privatize copyright. *Hastings Communications and Entertainment Law Journal*, 607. Hastings College of the Law.
- Katz, M. (1989). Home copying and its economic effects: An approach for analyzing the home copying survey. Report to OTA.
- Kiernan, V., & Levy, M. (1999, Spring). Competition among broadcast-related Web sites. *Journal of Broadcasting and Electronic Media*, 43(2), pp. 271–279.
- Konert, B. (2000). Broadcasting via the Internet: New Models of business and financing. *Trends in Communication*, 7. Amsterdam: Boom Publishers.
- Long, Patrick (2000). Presentation at the “TV Over the Internet” conference, Columbia University, New York, November 10, 2000.
- Macrovision, Inc. (1996). *Home taping in america*. The Second National Survey of VCR owners. *Summary Report*.
- Mathews, A. W. (2000, December 18). Online providers of film, cartoons combine forces. *Wall Street Journal*, p. B1.
- Media Dynamics (1999). *TV Dimensions*.
- Motion Picture Association of American (2001). 2001 *Economic Review* (www.mppaa.org).
- National Research Council (2000). *The digital dilemma: Intellectual property in the information age*. Computer Science and Telecommunications Board, National Academy Press.

- Noam, E. (2000). *Will America be dominant?* Presentation at the "TV Over the Internet" conference, Columbia University, New York, November 10, 2000.
- Noll, A. M. (1997). Internet pricing vs. reality. *Communications of the ACM*, 40(8).
- Odlyzko, A. (2000). *From narrowband to broadband: Capacity requirements, architecture options and investment implications for the long distance network*. Presentation at the "TV Over the Internet" conference, Columbia University, New York, November 10, 2000.
- Office of Technology Assessment (1989). *Home Copying Survey*.
- Owen, Bruce M. (1999). *The Internet challenge to television*. Harvard University Press.
- Picard, R. (2000). Changing business models of online content providers. *International Journal on Media Management*, 2(2), 60–68.
- Samuelson, P. (1999). Intellectual property and the digital economy. *Berkeley Technology Law Journal*, 14.
- Schlachter, E. (1997). The intellectual renaissance in cyberspace: Why copyright law could be unimportant on the Internet. *Berkeley Technology Law Journal*, 12.
- Shaner, S. (1998). Relational flow and the World Wide Web: Conceptualizing the future of Web content. *Electronic Journal of Communication*, 8(2).
- Shapiro, C., & Varian, H. (1999). *Information Rules*, Watertown, MA: Harvard Business School Press.
- Snell, John (2001, April 30). Studios demand Internet services block access to pirated movie programs. *Knight-Ridder Tribune Business News*.
- Tristram, Claire (2001, June). Broadband's coming attractions. *Technology Review*.
- Varian, H. (1989). Price discrimination. In R. Schmalensee and R. Willig (Eds.), *Handbook of industrial organization*. New York: North Holland.
- Waterman, D., & Grant, A. (1991). Cable television as an aftermarket. *Journal of Broadcasting and Electronic Media*, 35(2), 197–188.
- Waterman, D., & Yan, Z. (1999, Fall). Cable advertising and the future of basic cable networking. *Journal of Broadcasting and Electronic Media*, 43(4), 645–658.