Analysis of TV/Cable Industry in 2009

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Issues

Changing Landscape for Networks/Studios

The last 20 years have been a time of rapid change for the TV broadcast networks, television stations, and production studios. Beginning in the 1980's, the FCC and Congress have changed a number of laws and rules governing media ownership, which has significantly altered the structure of the TV industry. In general, these changes came in the form of deregulation, effectively leading to successive waves of consolidation and increased vertical integration.

Before 1984, a single entity was allowed to own no more than 7 local television stations. Since then, the FCC has revised its rules a number of times to allow the ownership of more stations. Currently, there is no limit on the number of TV stations a company can own, but they are subject to a cap of reaching no more than 39% of the national viewing audience. This has led to a situation where many local television stations are owned by a small number of companies.

In the early 1990's, the FCC repealed the Financial Interest and Syndication Rules, also known as Fin-Syn. These rules banned the broadcast networks from owning a financial stake in the shows they broadcast and distribute through syndication. The FCC imposed these rules in 1970 to combat the dominance of the Big 3 broadcast networks, which controlled 90% of the prime time viewing audience. They wanted to ensure that the networks did not control both the content and the means of distribution. However, by the 1990's, the broadcast networks convinced the FCC that they faced significant competition from new sources and Fin-Syn was repealed. This led the broadcast networks to ramp up their in-house production of shows, and led to a number of mergers and acquisitions between broadcast networks, content providers, and independent syndication companies. (Wei-Skillern, Marciano, p. 21)

The rationale of the FCC in revising these media ownership rules is that changing technology rendered the old rules obsolete, or excessively restrictive. They believe that relaxed regulation will ultimately benefit consumers by allowing for a more innovative and dynamic market. As a result of these rule changes, the current U.S. media market is highly consolidated and vertically integrated. The four largest media companies are AOL Time Warner, Disney, News Corp, and Viacom. Each of these companies owns production studios, broadcast networks, cable networks, syndication units, and local TV stations. (Wei-Skillern, Marciano, p. 15-17)

Opponents of deregulation believe that revised media ownership rules are detrimental to the FCC's core goals of promoting competition and a diversity of viewpoints. In particular, critics point to the massive vertical integration within the industry to argue that even though consumers have a large number of sources from which to get their information, most of these sources are owned by the same small number of media conglomerates. They also contend that many of these rules were changed due to pressure being exerted on lawmakers from high-paid corporate lobbyists. (Turner, p. 226-228)

Deregulation opponents also believe the trend has had several other negative impacts. First, the current environment has made it difficult for independent entrepreneurs to enter the market and thus stifles innovation. Secondly, they believe the new rules have led to a loss of quality as a result of the constant pressure for publicly traded companies to post earnings growth. This has led to the elimination of programs that are expensive and receive low ratings (ex: investigative journalism) in favor of programs that are cheap to produce (ex: reality television). Third, critics of deregulation lament the loss of focus on local news coverage, due to its high costs and mediocre profits. Lastly, critics point to the loss of democratic debate as a major issue. They believe that when a small number of media conglomerates control television news, this results in suppression of stories that are harmful to those corporations, an unwillingness to distribute potentially controversial information, and a reduction of news staff whose mission is to hold elected leader accountable. (Turner, p. 229-232)

Changing Landscape for Cable/Satellite

The last two decades have also seen rapid changes in the paid TV business. Cable companies have historically been monopolies within a given geographic region. This is due to the huge infrastructure investment required to build and maintain a cable system. To prevent the exploitation of consumers, the FCC regulates the rates that cable companies can charge for basic service. Also, until now, each company has been restricted to reaching a maximum of 30% of TV subscribers. (Wei-Skillern, Marciano, p. 21)

Despite this, there has been significant consolidation in the cable industry and it is currently highly concentrated. The largest cable operators (Comcast, Time Warner Cable, Cox, and Cablevision) control an overwhelming percentage of cable TV subscribers. The increasing size of these cable operators provides them with several key advantages. First, acquiring several cable systems in neighboring geographical regions allows them to obtain more subscribers while incurring a relatively small increase in marketing costs, operational expenses, and infrastructure investment. Also, larger scale increases the cable operators' leverage with content providers, since cable operators with more subscribers typically pay lower fees to program suppliers for their shows. (Wei-Skillern, Marciano, p. 21)

The cable companies have argued that the FCC-imposed 30% subscriber limit should be lifted because they face major new competition in the form of Direct Broadcast Satellite (DBS) providers, most notably DirecTV and Dish Network. They also face new competition from telecommunications companies such as AT&T and Verizon, which have introduced new paid TV services in recent years. However, critics have argued against cable industry deregulation, pointing to the fact that subscriber fees have increased rapidly over the past two decades.

One method that consumer advocates and lawmakers have proposed to address the issue of rising subscription fees is requiring the cable companies to offer "a la carte" selection of channels. Currently, most cable operators offer service in tiered pricing levels, and they use this price structure to coerce customers into premium packages. Consumer advocates believe an a la carte approach would allow consumers to pick only the channels they want and thus save money. However, the cable industry is strongly opposed to this approach. They insist that bundled service packages give them more leverage with content providers, thus resulting lower fees overall for the end-user.

Another major change for the cable operators is their expansion into other lines of service beyond traditional TV. Nearly every cable operator has leveraged the advantage of their existing cable infrastructure and the advance of digital technology to offer a variety of new services, including broadband internet and telephone service. These new service offerings have allowed the cable operators to gain significant new revenue streams. Due to the rising costs of programming from cable networks and content providers (such as the NFL), core television service now has the lowest profit margin of all the services offered by cable companies. In contrast, the operating cost of providing broadband service is very low. In their recent quarterly financial results, Time Warner Cable and Comcast reported that the direct costs of providing high-speed data service were only between 3% and 6% of data revenue. (Hansell, 2009)

Audience Fragmentation

Another major change that has swept the television industry is fragmentation of the viewing audience. Consumers now have more entertainment options than ever before and this has led to a major shift in TV viewing patterns.

One of the largest drivers of audience fragmentation is the significant increase in the number of TV channels available to the average household. According to a June 2008 Nielson Media report, the average number of channels received by U.S. homes is now 118.6. (Nielson, 2008) This is compared to an average of just 41 channels in 1996. Channel proliferation is largely due to advances in cable technology, including infrastructure upgrades and the use of digital compression.

The increasing number of channels has had a number of noteworthy impacts on the industry. First, it has created more demand for talent because there was more programming capacity to fill. For a number of reasons, this has resulted in higher fees for more proven stars, while having little effect on less established entities. Channel proliferation has also provided the opportunity and the motivation for content providers to launch additional cable channels (ex. Discovery Kids, Discovery Health, Discovery Familia) or acquire existing properties. This has resulted in potential new revenue streams for cable networks and the possibility of acquiring more market power relative to distributors. The acquisition of additional channels has also helped networks counteract the trends of lower fees for ad spots and lower ratings for individual channels, both resulting from increased supply. (Wei-Skillern, Marciano, p. 17-19)

The results of channel proliferation on television viewing habits have been especially noticeable. In 1980, the Big 3 broadcast networks commanded over 90% of the prime-time viewing audience. By 2005, the prime-time audience share of the Big 3 had fallen to just 32%. (Hindman, Wiegand, 2008) Similarly, the TV event with the largest number of American audience in history was the final episode of *M*A*S*H* in 1983, with nearly 106 million viewers. Even with the huge U.S. population growth, no other program has matched that number to date. There is no doubt that the large number of channels available on cable helped drive this trend. As a result, cable has also gained an increasing share of advertising dollars. Advertising on cable is significantly more affordable than on broadcast networks and it allows advertisers to reach a more targeted audience. Despite these factors, the broadcast networks will likely continue to be the best way for advertisers to reach a national, mass audience. (Wei-Skillern, Marciano, p. 19-20)

Another source of audience splintering has been the rapid increase in non-television entertainment options available to consumers. For example, video games, the internet, and films on DVD or Blu-ray have all taken an increasing share of consumers' entertainment time and money. The larger cultural ramifications of the trend toward audience fragmentation are hard to miss. In earlier decades, broadcast TV was the primary mass medium. Thanks to that dominance, many people shared a common set of cultural references and touchstones. At present, our cultural landscape more closely resembles Chris Anderson's concept of the Long Tail, with people gravitating toward niche entertainment options and dividing into ever-smaller subgroups. This has likely had a number of other effects, including the growth of online social networks and internet-based memes.

Net Neutrality

An important legal and ethical issue facing the cable industry at present is that of Net Neutrality. This is the concept that a broadband network should be free of restrictions on content, on the devices that may be used to access it, and on the forms of communication allowed. Perhaps the most salient aspect of net neutrality is that networks should treat all data that passes through them equally, without degradations in quality or speed for certain forms of communication. Net neutrality advocates are currently pushing for the passage of a law or regulation that would require all U.S. broadband providers to adhere to these principles.

The cable operators' traditional, core business of delivering television is clearly unaffected by the debate over net neutrality. However, as noted above, most cable operators now offer broadband Internet as a service option. In fact, reports have consistently shown that the majority of U.S. broadband subscribers obtain their service through a cable connection. Therefore, cable companies such as Comcast, Time Warner Cable, and Cox are now among the country's largest broadband Internet Service Providers (ISP). As a result, the cable operators are now at the forefront of the debate over net neutrality. The view of the cable companies is that Congress and the FCC should refrain from passing a law that restricts their behavior in this manner. They believe they should have the freedom to experiment with different business models in their broadband operations. (National Cable and Telecommunications Association, 2009)

Net neutrality proponents claim that the cable operators wish to charge access fees to Internet firms for different tiers of data delivery service. For example, many cable customers are watching online video on YouTube, and this is responsible for a large amount of bandwidth use on broadband networks. Neutrality advocates believe that cable companies would like to charge Google a fee to guarantee that the data from YouTube is delivered to customers at a certain speed. In the worst case scenario, this could result in the ISP's using this technique to remove competition from the marketplace or favor their own competing services. Returning to the previous example, the cable operators may view online video as a threat to their traditional TV business, and therefore take steps to artificially limit the availability of YouTube so that customers choose to watch cable TV instead. Also, the cable operators may choose to limit the bandwidth available for VoIP services, thus making customers more likely to choose their own telephone service offerings.

In addition to being anti-competitive, net neutrality advocates also believe that a tiered pricing scheme could have other negative impacts. In particular, they believe that such a system would favor the established internet firms like Google, Yahoo, and Amazon. These companies could likely afford to pay fees for a higher tier of data speed. On the other hand, startup companies, small businesses, and individuals with blogs would less able to afford such fees. Therefore, they would be at a competitive disadvantage compared to the larger firms. Also, neutrality proponents believe that a tiered system would harm consumers by favoring certain types of network activity over others. They point to the fact that certain ISP's (such as Comcast) have already slowed down some forms of data on their networks, such as peer-to-peer (P2P) communications and online games. In a broader philosophical sense, neutrality proponents believe a tiered system would violate the open, egalitarian spirit that has made the internet such a successful and innovative medium.

Cable operators and other ISP's respond to these charges by saying that throttling certain forms of data (such as P2P) was merely done to ensure sufficient bandwidth for other forms of data. They believe that a tiny fraction of customers is using an inordinate amount of bandwidth, thus harming the broadband experience of the vast majority of their customers. The ISP's also explain that they have invested large amounts of capital in their network infrastructures and continue to invest in upgrades and maintenance. They foresee the possibility that broadband usage will increase significantly in the years to come and they want to ensure that they have sufficient revenues to continue to provide the best experience for their customers. Lastly, they believe that rules requiring net neutrality would merely benefit established internet companies like Google, Yahoo, and Amazon, by locking into place the current status quo.

DTV Transition

Another major change that has recently occurred in the television industry is the transition to digital television (DTV). Since June 12, 2009, all TV broadcast signals have been available exclusively in digital format. This represents the most significant shift in the technology of broadcast TV since the transition to color over 50 years ago.

The transition to DTV was mandated by U.S. federal government for a number of reasons. First, the government wanted to free up certain portions of the broadcast spectrum for public safety and emergency communications (police, fire departments, and rescue squads). This need was especially apparent after the terrorist attacks of September 11, 2001, when many rescue workers were unable to effectively communicate due to incompatible radio equipment. Another reason for the switchover is that the federal government wanted to auction off portions of the freed up broadcast spectrum to telecommunications companies, so that they may provide consumers with next-generation wireless services (such as wireless broadband). Third, the government and TV industry believed that DTV would provide consumers with improved picture and sound quality, and give broadcast networks the ability to multicast several channels where they could previously only offer a single channel. Finally, DTV provides the option for interactive video and other data services that were previously unavailable. (DTV, 2009)

The federal government originally mandated that the DTV switchover occur several years earlier. However, the date was pushed back a number of times to allow the industry and consumers more time to prepare for the transition. When it finally occurred, the transition was relatively smooth. This was largely due to a massive public awareness campaign launched by the government and broadcasters to ensure that TV viewers fully understood the situation. Individuals with analog television sets were given the opportunity to secure vouchers to help them purchase DTV converter boxes. Many took advantage of this offer, as the program even ran out of funds at one point, and additional funds had to be allocated.

Despite the largely smooth transition, a few issues arose from the DTV switchover. First, many cable companies took advantage of consumer confusion about the nature of broadcast DTV versus digital cable and effectively convinced many people to sign up for cable when they did not actually need it. Also, the cable companies also took advantage of these same circumstances to convert many existing subscribers from analog cable service to digital cable service, even though it was significantly more expensive and unnecessary. In addition, many lower income households or elderly people lacked the resources or skills to successfully make the transition. The converter box voucher program and community groups definitely helped this situation. However, many consumers found that they had to purchase a new antenna, or mount an antenna on their roof in order to get a clear digital signal. This expense was a major burden for some low-income households. Lastly, even though most viewers experienced improved reception from DTV, some viewers experienced the so-called "cliff effect", where stations that they previously received with some static are now completely gone. This typically occurs for viewers at the very edge of the broadcast area.

Regulation of Obscenity, Indecency and Profanity

One issue that has continued to pose legal and ethical dilemmas to the television industry is the FCC's enforcement of rules related to obscenity, indecency, and profanity. According to the FCC.gov website:

> It is a violation of federal law to air obscene programming at any time. It is also a violation of federal law to broadcast indecent or profane programming during certain hours. Congress has given the Federal Communications Commission (FCC) the responsibility for administratively enforcing the law that governs these types of broadcasts. The FCC has authority to issue civil monetary penalties, revoke a license or deny a renewal application. In addition, violators of the law, if convicted in a federal district court, are subject to criminal fines and/or imprisonment for not more than two years. (FCC, 2009)

Since the FCC is only given authority to regulate over-the-air broadcasts, these rules currently only apply to broadcast television (and of course radio). This has led to a situation where broadcast networks claim to be at a competitive disadvantage compared to cable networks, since they are more restricted in their programming content. Also, to many critics, the FCC's rules appear anachronistic, since the vast majority of U.S. households subscribe to cable and view all the channels (the broadcast and cable networks) in basically the same manner. However, the FCC and lawmakers have often felt pressure from public interest groups and social conservatives to continue to enforce the indecency rules as strictly as possible under current law.

There have been several noteworthy incidents over the years related to the FCC indecency regulations. In 1972, the stand-up comedian George Carlin released an album containing a monologue titled “Seven Dirty Words You Can Never Say on Television”. While the FCC has never maintained an actual list of restricted words, Carlin developed this routine based on most people’s assumption of the words the FCC considered indecent. Carlin followed up with another album in 1973, in which he performed a similar routine titled “Filthy Words”. This recording was broadcast by Pacifica radio station WBAI-FM in New York City, on the afternoon of October 30, 1973. A man named John Douglas lodged a complaint with the FCC that the material was inappropriate for the time of day, claiming that he was driving in the car with his son at the time. The FCC issued a citation to Pacifica for broadcasting obscene material. After an extended court battle, the U.S. Supreme Court upheld the FCC’s action, ruling that the FCC had the authority to prohibit indecent broadcasts during the hours when children were likely to be listening. This court decision firmly established indecency regulations for U.S. broadcasts. (Answer.com)

Since the Pacifica decision, the Supreme Court has issued several follow-up rulings that establish the “safe harbor” concept. This refers to the fact that broadcasters may air indecent and/or profane material between the hours of 10 p.m. and 6 a.m. However, obscene material may not be broadcast at any time. (FCC, 2009) The next major development in FCC obscenity rules came in 2006 when the Broadcast Decency Enforcement Act was signed into law. This bill increased the maximum fine the FCC could levy against broadcaster to $325,000, approximately ten time the previous limit. This bill came about largely in response to the incident during the halftime of the 2004 Super Bowl, in which Janet Jackson unintentionally exposed her right breast. Social conservative groups had advocated an increased fine for years, claiming that some media companies had come to see the FCC fines as a minor issue, or even simply “the cost of doing business”. Meanwhile, broadcasters, artists, and First Amendment advocates believe the increased fines have had a chilling effect on creativity and expression, especially because it’s unclear where the FCC draws the line on indecent or profane material. (Ahrens, 2006)

Shifting Consumer and Network Technology

In addition to the many changes occurring within the television and cable industries, there are also a large number new options for how consumers can view and experience TV. Many of these new options and technologies have come from outside the traditional television industry, and instead have originated with consumer electronics companies, internet firms, and software developers.

One of the major new developments is the increased availability of devices for “time shifting” or “place shifting” television. The concept of time shifting was first introduced by TiVo in 1999. The company produced Digital Video Recorder (DVR) devices that allowed consumers to record and play back TV from a hard drive. The TiVo DVR’s were user-friendly, easily programmable, and could store many hours of recorded television. Therefore, they effectively freed the consumer from watching TV according to a strict broadcast schedule. At this point, DVR devices are becoming ubiquitous. Many of the cable and satellite boxes that are automatically included with a subscription have this functionality built in. Also, Microsoft now includes the Media Center feature in most versions of Windows, which allows consumers to record TV to their home PC through a compatible device such as Xbox 360. A similar technology, known as place shifting, allows the consumer to transmit a live broadcast from their home television to another location, such as a mobile phone or laptop. The most well known example of this technology is the Slingbox, originally released as a consumer product in 2005.

Another consumer technology shift is the move toward High Definition TV (HDTV). Over the last 50 years, many electronics companies and broadcasters have experimented with different forms of HDTV, but none were adopted on a mass scale. In the last decade, electronics manufacturers and broadcasters have coalesced around a set of consistent standards for HDTV. At this point, the term HDTV indicates a digital signal, a wide aspect ratio of 16:9, and a higher resolution (typically 1920x1080 or 1280x720). Consumer adoption of HDTV has increased dramatically in recent years due to several trends. First, the price of HDTV sets has been steadily dropping for the last decade, bringing them within the price range of more consumers. Secondly, the amount of HD content available has steadily increased, including certain cable channels, Blu-ray discs, and video game systems such as Xbox 360 and Playstation 3. According to a Nielsen study from December 2008, HDTV adoption in the U.S. has doubled since 2007. The report indicates that 23.3% of households now own an HDTV. The demand for

HDTV programming has put pressure on content producers, networks, and cable operators to provide material in this format. (Chartier, 2008)

The final major technology shift for consumers in terms of television has been the widespread availability and adoption of internet video. Video has been available on the internet for many years, but it has gained much wider acceptance in recent years due to several factors. First, the increasing penetration of broadband internet has allowed consumers to have a much more seamless experience when watching video online. Where it once might have taken several hours to download a short video, that same video can now be viewed almost instantly. Secondly, the launch of websites that aggregate a large number of videos and provide a simple interface has improved the user experience. The biggest and most successful of these websites is YouTube, which was launched in February 2005 and acquired by Google in November 2006 for $1.65 billion. Third, the development of new video compression codecs has given internet firms and individuals the ability to stream relatively high quality video over the internet while using a modest amount of bandwidth.

The adoption of internet video has had a number of impacts on the television industry. Most importantly, it has provided established TV companies with a new form of competition. Many enterprising individuals and small companies have attempted to establish a viable business model through purely online video, effectively circumventing the usual industry gatekeepers. As consumers spend more of their entertainment time on the internet, TV networks, distributors, and content producers have become increasingly concerned about the potential loss of ad dollars to the internet. Television companies are also paying close attention to the proliferation of pirated TV shows and illegal downloads through P2P networks such as BitTorrent. These firms are determined to avoid the situation that record companies currently find themselves in.

These developments have led many television companies to experiment with distributing TV content online in several different forms. First, many shows are now available to purchase and download through services such as iTunes, Amazon, and Netflix. Also, the websites of many TV networks have clips or entire episodes of shows available for streaming, with advertisements placed in the video stream and/or on the accompanying web page. Some shows have experimented with creating supplemental material that is specifically geared toward online distribution. One example of this are the Saturday Night Live Digital Shorts, which are clearly designed to appeal to the online audience, which often prefers short videos to long-form content.

Meanwhile, the website Hulu was recently established as a joint venture between NBC Universal, Fox, and ABC. Hulu makes available full length streams of many popular TV shows from a number of participating media companies and networks. In an attempt to monetize this content, Hulu includes ads both within the video streams and on the accompanying web pages.

Ethical Issues

As the dominant form of mass media for the past 60 years, television has had a massive impact on the cultural and social landscape of the U.S. During that time, it has no doubt had many positive effects on society. However, it is inevitable that any medium that plays such a significant role will also be associated with many negative cultural effects and ethical issues.

One of the primary and recurring issues raised regarding television is the negative impacts it can have on children. Activist groups across the political spectrum have raised concerns about the quantity of sex and violence on TV, and questioned what effects this may have on children. Every school shooting or shocking act of violence by children is accompanied by questions about what role entertainment media may have played in the incident. Similarly, the high rate of teen pregnancy leads many to question whether the depiction of sex on television may play a role in this trend. Another aspect of TV that is troubling to many educators and psychologists is the negative effects it may have on very young children. Many studies have indicated that allowing children below the age of 4 to watch many hours of TV may lead to increased incidence of developmental issues, including ADHD, lack of gross motor skills, and lack of socialization. The television industry has attempted to combat these various concerns by scheduling certain programs at times when children are less likely to be watching. They are also increasingly offering parental controls in cable boxes and TV sets that can be used to prevent access to programs according to the parents' wishes.

Another major ethical issue surrounding television is the role of the TV news media. Television news has always inhabited a unique role that serves to both entertain viewers and inform the public. Many TV journalists have managed to successfully straddle this divide and fulfill both functions simultaneously. However, many media critics complain that TV journalism is currently on a trend toward lower quality, more hollow entertainment, and less substantive reporting. This trend is often driven by a desire on the part of TV networks to increase ratings and decrease costs. Another issue related to TV news is that of media bias. Traditionally, journalism has attempted to maintain a non-biased perspective on controversial political issues. However, the rise of cable news stations like Fox News and MSNBC has recently pushed TV news toward being more opinion-based, more biased, and less factual. This shift threatens to undermine the public's trust in journalism as a whole, and lower the overall quality of American democratic debate.

Finally, there are a number of miscellaneous social and ethical issues confronting the television industry. First, there are many concerns among public health officials that TV has contributed to a more sedentary lifestyle and therefore exacerbated many endemic health issues, such as obesity and heart disease. Secondly, psychologists consistently express concern about how TV has led to a loss of community. Rather than structuring our lives around social relationships, people often spend much of their free time engaged in solitary media entertainment activities, such as watching TV or playing video games. Also, social critics lament that television has led to a general "dumbing down" of the populace, due to the lack of intellectually stimulating content on TV and the loss of time spent reading or engaged in more "productive" activities. Lastly, many critics have expressed concern about the fact that many TV shows exploit their participants, in particular reality TV and talk shows. Many of the individuals who appear on these shows experience psychological harm and severe negative consequences in their personal lives.

References

Ahrens, F. (2006, June 8). The Price for On-Air Indecency Goes Up [Newsgroup message]. Retrieved from http://www.washingtonpost.com/wp-dyn/content/article/2006/06/07/AR2006060700287.html

Chartier, D. (2008, December 12). Nielsen says HDTV adoption in US doubled since July 2007 [Newsgroup message]. Retrieved from http://arstechnica.com/old/content/2008/12/neilsen-says-hdtv-adoption-in-us-doubled-this-past-year.ars

FCC. (n.d.). *Obscenity, Indecency & Profanity - Frequently Asked Questions* [Federal Communications Commission frequently asked questions]. Retrieved from http://www.fcc.gov/eb/oip/FAQ.html

Hansell, S. (2009, May 1). The Problem With Cable Is Television [Newsgroup message]. Retrieved from http://bits.blogs.nytimes.com/2009/05/01/the-problem-with-cable-is-television/

Hindman, D. B., & Wiegand, K. (2008, March 1). The big three's prime-time decline: a technological and social context [Newsgroup message]. Retrieved from http://findarticles.com/p/articles/mi_m6836/is_1_52/ai_n25130645/

Turner, T. (2005, March 4). My Beef With Big Media: How government protects big media—and shuts out upstarts like me. *FEDERAL COMMUNICATIONS LAW JOURNAL*, *57*, 226-232.

What is DTV? [Digital TV Transition]. (n.d.). Retrieved from http://www.dtv.gov/whatisdtv.html

Wei-Skillern, J., & Marciano, S. (2008, October). Primer on the U.S. Televsion Industry (Rep. No. 9-308-128). Harvard Business School.