

Economics of the Digital TV Transition
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**REGULATING THE DIGITAL TV TRANSITION IN NORTH AMERICA:
A COMPARISON OF THE CANADIAN, U.S., AND MEXICAN EXPERIENCES**

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While I was in law school I wrote a paper that was published in the Spring 2008 edition of Media Law & Policy titled, “Regulating the Digital Television Transition in North America: A Comparison of the Canadian, U.S., and Mexican Experiences.” Why would I take on such an esoteric topic? Before attending law school I worked for many years as a television producer and writer, on shows including Charlie Rose, Late Show with David Letterman and Bob Costas’s interview program on HBO. It was natural, that as soon as I had finished the required first year law school curriculum, I gravitated toward a course that dealt with the regulations of television broadcasting. A course called Federal Regulations of the Electronic Media – taught by two law professors, that some of you might know, Michael Botein and Peter Johnson. While I had heard about the DTV transition prior to taking the course, I certainly hadn’t studied it or looked into it with any depth. What first got me particularly interested in exploring the ramifications of the DTV transition was this notion that Professor Botein put forth in a class in August 2006. He said that because of the transition, broadcasting had the potential to be competitive with cable. And that notion was really interesting to me. I’ll talk about that idea a little bit more in a couple of minutes.

In Spring 2007 I continued my studies with Professor Botein, taking his Media Law Seminar course. I knew I wanted my paper for the course to focus on an area of broadcast regulation – and Professor Botein suggested looking into what had been published in regard

to comparing the regulations of the digital television transition within North America. There had been quite a few law review articles published that looked at transitions in other nations, European nations in particular --- but none that looked at North America’s regulations as a whole. And this was particularly interesting because, of course, spectrum does not adhere to international borders and some North American cities would be affected by, not just what the U. S. was doing, but what Mexico and Canada were going to do as well. It turned out that not much had been written on this topic so I took it on.

I began my article by laying out some basics, some of which has been covered here today. Please note that in the edited copy of my article that was distributed, my introduction has a subtitle, the original subtitle was a play on the title of a short story by Raymond Carver, “What We Talk About When We Talk About Love.” I had titled the introduction, “What We Talk About When We Talk About Digital Television,” but I was trying to be a little too clever and the reference may have been lost on my editor, regardless, the subtitle was shortened to “What We Talk About In Digital Television.”

For the vast majority of us who watch television, the transition will have no noticeable effect at all – in the U.S. 98% of the population has access to a free over-the-air signal,¹ —but more than 86%² of all households with a TV subscribe to a cable or satellite service provider, to put it another way 86% of us have at least one television³ that receives a

¹ *Id.* See also http://www.ce.org/Research/Sales_Stats/1216.asp

² Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 21 F.C.C.R. 2503, (2006).

³ *Id.* (many households that subscribe to an MVPD also rely on over-the-air signals to receive broadcast programming on some of their television sets).

retransmitted broadcast television signal⁴ and those TVs will not be affected by the DTV transition. And, with the continued growth of cable and satellite subscription”⁵ fewer and fewer households – despite having the capability – actually receive the free over-the-air signal.

Only those who receive their television signal free and over-the-air, are the people in the room who need to do something by February 17th⁶ in order to still watch television.

An interesting note about the February 17 date – (1) It’s a Tuesday (2) Why the 17th? Why not January 1st? Well, not only does it come after the swearing in of both a new President and Congress,⁷ and a new FCC Chairman, but it was also picked because it comes after the single most watched TV event of any year, the Super Bowl scheduled this NFL Season for Sunday, February 1st.

For a long time it has been recognized that there could be a better television broadcasting standard. In the ‘80s there was a push to get “the FCC to set aside spectrum for this new standard.”⁸ In ‘96, the FCC adopted digital television (or DTV) as the future standard.⁹

⁴ See Carriage of Digital Television Broadcast Signals, CS Docket No. 98-120, Release-Number FCC 07-71, 2007 FCC LEXIS 3651 (FCC May 4, 2007) (proposing that cable operators must ensure that cable subscribers with analog television sets are able to continue to view all must-carry stations after the end of the DTV transition).

⁵ Michael McEwen, Canadian Radio-Television And Telecommunications Commission, A Report To The Canadian Radio-Television And Telecommunications Commission On Digital Transition Strategies In A Number Of Different Countries (2006), available at <http://www.crtc.gc.ca/eng/publications/reports/radio/mcewen.htm>

⁶ See Deficit Reduction Act of 2005, Pub. L. No. 109-171 (2006) (among other things, Title III of that legislation, entitled the Digital Television Transition and Public Safety Act of 2005, established a hard deadline of Feb. 17, 2009 for the end of analog transmissions by full power television stations).

⁷ *The Communicators: John Kneuer, Assistant Commerce Secretary for Communications & Information* (C-SPAN television broadcast Feb. 3, 2007).

⁸ *Id.*

When we talk about digital television or DTV we're talking about the type of transmission – not the picture quality – though, with over the air digital television you will have better picture quality,¹⁰ sharper images, better sound, and more viewing options.”¹¹ Today, right now, all of the stations affiliated with the top-four networks in the top markets¹² are broadcasting digitally in addition to their analog broadcast.

The approach that Canada and Mexico have taken to regulating their transitions can be illustrated by the Life cereal commercial from the '70s, three children sitting in front of a new product, two of the kids don't want to try it, but eventually, one of the three has to try it. So the others just watch his response to determine how to proceed.¹³ It has been like that with the digital television transition in North America. Canada and Mexico cautiously letting the U.S. try it first. Canada, in particular, has closely monitored the U.S.'s progress and attempted to adjust accordingly.

However, since the transition here has actually been quite slow, Canada and Mexico haven't really had to do all that much. The FCC initiated regulations for the transition in 1987, (that's the year the FCC rescinded the Fairness Doctrine, that's the year Reagan gave his tear down this wall speech, Bart and Homer Simpson first appeared, Phil Simms was the Super Bowl MVP and Guns N' Roses released their first album, Appetite for Destruction) but the regulations were amended and modified and the Telecommunications Act was passed

⁹ Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, 11 F.C.C.R. 17771 (1996).

¹⁰ Benjamin, *supra* note 8, at 347.

¹¹ DTV.gov, Digital Television FAQs, Consumer Corner, <http://www.dtv.gov/consumercorner.html#canisee>

¹² Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 21 F.C.C.R. 2503, (2006).

¹³ The commercial, of course, spawned the famous catch phrase, "He likes it! Hey Mikey!" available at <http://youtube.com/watch?v=vYEXzx-TINc> (last visited Aug. 20, 2007).

and the Balanced Budget Act was passed.”¹⁴ So, not until 2002 (when it looked like the U.S. might actually go through with this whole digital transition thing,) did Canada come out with their regulations (through the CRTC, the Canadian version of the FCC)¹⁵ and it wasn’t until 2005 that Mexico published a plan.¹⁶

The reason for the delay was never the technology. That has always been there, there was concern – as there still is – that those viewers who rely on the free over the air broadcast won’t have television monitors that could receive digital signals.¹⁷

The U.S. determined that the best way to facilitate the transition was to set a hard date. Once that date is reached, broadcasters will no longer broadcast an analog signal; only a digital signal. [Note: When we talk about the transition date, what we’re really talking about is, not a transition date, but a shut-off date. A person can transition in their home right now to a free digital over the air signal.] But the difficult thing was determining what the hard date for the analog shut-off should be because the Balanced Budget Act of 1997 allowed the date to be extended if 15 percent of households in a market were not equipped to receive digital television.

In Canada it was not until May of last year that they decided to mandate a date specific deadline; until that time Canada was using a market-driven transition model.¹⁸ This

¹⁴ Andrew D. Cotlar, *The Road to Analog Switch-Off: How the United States Can Turn Off Analog Television without Significant Service Disruption*, 13 CommLaw Conspectus 271, 271 (2005) (citations omitted).

¹⁵ Broadcasting Public Notice CRTC 2002-31, *A licensing policy to oversee the transition from analog to digital, over-the-air television broadcasting*, available at <http://www.crtc.gc.ca/archive/ENG/Notices/2002/pb2002-31.htm>

¹⁶ McEwen, *supra* note 4.

¹⁷ Benjamin, *supra* note 8, at 378 (“The rollout and usage of digital services has been much more impressive with respect to cable and satellite. Cable and satellite companies moved aggressively to offer digital video, video-on-demand, digital video recorders, and high-definition television.”).

meant there would be no hard date for broadcasters in Canada to stop transmitting an analog television signal. The CRTC said that ‘the pace and degree of market acceptance in larger markets would determine when the DTV rollout can be extended to smaller markets.’ But, the Canadians wanted to have a two-year lag behind the U.S. because it would save early adoption cost for broadcast and consumer equipment.¹⁹ By 2006, with the U.S. date a reality (there was always the notion that the U.S. might push back the date again) the Canadians realized their plan wasn’t going to work, that without setting a hard date, the two-year lag would be four years, maybe more.²⁰ Canadian Broadcasters simply didn’t want to spend the money, they didn’t see the value of building out digital transmission facilities and going through the expense of simultaneous carriage of analog and digital systems, particularly when most of the markets are delivered by cable.²¹ So, the CRTC set a firm analog shut-down date and, to stay close to that optimal two year lag time,²² their date is August 31, 2011.²³

Mexico has a long transition strategy subject to regular review, moving city by city – according to population and – targeting locations along the border – the analog signal can’t be turned off in a given region until, their FCC equivalent, COFETEL determines that there

¹⁸ Broadcasting Public Notice CRTC 2002-31, *A licensing policy to oversee the transition from analog to digital over-the-air television broadcasting*, available at <http://www.crtc.gc.ca/archive/ENG/Notices/2002/pb2002-31.htm>

¹⁹ *Id.*

²⁰ *Id.*

²¹ *Id.*

²² Broadcasting Public Notice CRTC 2007-53, *Determinations regarding certain aspects of the regulatory framework for over-the-air television*, <http://www.crtc.gc.ca/archive/ENG/Notices/2007/pb2007-53.htm>

²³ *Id.*

is a high enough presence of TVs that can receive the digital signal --- but they would like to complete their transition by 2021.²⁴

In order to have a digital transition additional spectrum had to be made available for broadcasters to use, beyond what they already had for their analog broadcasts. In the U.S., broadcasters were given additional spectrum so that they could, for the short term, broadcast their daily programming in both analog and digital. Each U.S. television station was given an additional 6 MHz of spectrum and permitted to acquire an additional DTV license.²⁵

In Canada the CRTC authorized broadcasters to license additional spectrum, but the Canadians required each broadcaster to *apply* for a new, transitional digital television license.²⁶ And, while in the U.S. only current broadcasters were able to acquire digital licenses, the Canadians added that they “might be willing to consider applications by prospective new entrants, should incumbent broadcasters fail to take advantage of the available spectrum allotments”²⁷

In Mexico, a law was passed in March 2006 that gave additional spectrum away to the two largest Mexican broadcasters but required others to bid on additional spectrum.”²⁸ However, in June 2007, Mexico’s Supreme Court struck down the provision in the law that created that exemption and lawmakers acknowledged that they voted for the law out of fear

²⁴ McEwen, *supra* note 4.

²⁵ Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, 6 F.C.C.R. 7024 (1991).

²⁶ Broadcasting Public Notice CRTC 2002-31, *A licensing policy to oversee the transition from analog to digital, over-the-air television broadcasting*, <http://www.crtc.gc.ca/archive/ENG/Notices/2002/pb2002-31.htm>

²⁷ *Id.*

²⁸ *Senate Approves Controversial Broadcast Law*, ECONOMIC NEWS & ANALYSIS ON MEXICO, April 5, 2006.

of negative television coverage during an election campaign.²⁹ The last I had heard on this was that the law was to go back to the Mexican legislators to be rewritten.³⁰

In the U.S. the hard date means that the spectrum used for analog broadcast television can be put to new uses.³¹ Some of it will go to public safety, but much of the recovered spectrum is going to go to the highest bidder.³² The licenses are in particularly high demand because the analog spectrum could be used to expand a variety of wireless and broadband services.³³ About one third of the auctioned spectrum will have “open access” rules that provide that a network using that spectrum will have to allow customers to use any phone and software they want; which represents a shift in approach to future wireless networks.³⁴ Ultimately, in the U.S., the return of the spectrum will provide \$15 billion or more to the U.S. Treasury and contribute an even greater amount, estimated to be between \$30-60 billion annually, to the U.S. economy by spurring economic development.³⁵

Canada has not placed the same priority on recovering spectrum used for analog broadcast because there simply is “not the same need for additional spectrum for other

²⁹ Elisabeth Malkin, *Mexican Court’s Media Ruling Shows Support for Competition*, N.Y. TIMES, Jun. 6, 2007, at C2.

³⁰ Elisabeth Malkin, *Mexico’s Court Limits Reach Of Big Media*, N.Y. TIMES, Jun. 8, 2007, at C2.

³¹ Benjamin, *supra* note 8, at 379.

³² Benjamin, *supra* note 8, at 379.

³³ Andrew L. Shapiro, *Aiding the Final Push of the Digital Transition*, 5 Cardozo Pub. L. Pol’y & Ethics Journal 339, 365 (2006) (citations omitted).

³⁴ See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, WT Docket No. 06-150, Release-Number FCC 07-132, 2007 FCC LEXIS 5959 (FCC Aug. 10, 2007); see also John Markoff & Matt Richtel, *F.C.C. Hands Google a Partial Victory*, N.Y. TIMES, Aug. 1, 2007, at C3.

³⁵ Cotlar, *supra* note 14, at 272; see also John Markoff & Matt Richtel, *F.C.C. Hands Google a Partial Victory*, N.Y. TIMES, Aug. 1, 2007, at C3.

services.”³⁶ And Mexico has not addressed the issue of what to do with their spectrum when it is recovered.³⁷

There is, of course, great concern that just over two months from now those households with only the ability to receive analog over-the-air broadcasts will be unable to receive TV signals.

U.S. law allocated for \$990 million to \$1.5 billion, to a program to provide up to two \$40 coupons per households for the purchase of converter boxes.³⁸

There had been concern about that \$40 amount and how much of the converter box cost that coupon would cover. In 2005 converter boxes were about \$350. But the cost has dropped considerably,³⁹ you can find a basic converter box for about \$50 today.⁴⁰

I found a converter box on the Internet that, after using the coupon, I spent about \$7 on. I had been using that particular TV with cable, so I no longer had an antenna and I had to go out and buy an antenna. So, in my case, it cost me about \$16 to receive a free over the air digital television broadcast in my home.

Some have argued that the biggest challenge would be educating consumers.⁴¹ The FCC adopted labeling requirements in April of last year; “sellers of televisions without a

³⁶ CRTC, *The Future Environment Facing The Canadian Broadcasting System: A Report Prepared Pursuant To Section 15 Of The Broadcasting Act (2006)*, available at <http://www.crtc.gc.ca/eng/publications/reports/broadcast/rep061214.htm>

³⁷ McEwen, *supra* note 4.

³⁸ *See* Digital Television Transition and Public Safety Act of 2005, S. 1932, 109th Cong. § 3005 (2005) (explaining the digital-to-analog converter box program).

³⁹ Cotlar, *supra* note 14, at 302; *compare* Eric A. Taub, *A Cheaper Converter Box for Digital Broadcasts*, N.Y. TIMES, May 2, 2002, at G4 (announcing that converter boxes would be sold in the Salt Lake City area for \$199 beginning in the Fall of 2002).

⁴⁰ *Id.*

⁴¹ Feira, *supra* note 61, at 7.

digital tuner must disclose that the devices will require a converter box after February 17, 2009.”⁴² Additionally, there have been on-air consumer education efforts by television broadcast licensees.⁴³ Still, consumer groups have criticized the plan arguing that some families will have neither the means to buy the converters nor the awareness to successfully obtain the vouchers, and will be surprised when they find that their television sets no longer work in a couple of months.⁴⁴

Until May of last year, the CRTC, in Canada, would only consider applications to discontinue the carriage of analog signals when 85% of Canadian households had the ability to receive digital signals.⁴⁵ Again, the Canadians following the U.S. law which allowed the “hard date” deadline to be extended unless 85% of households were able to receive a digital signal.⁴⁶ Now, however, after the adoption of Canada’s August 2011 analog shut down date, Canadian viewers “will be forced to upgrade, at some cost to them, in order to continue to receive the services they currently enjoy.”⁴⁷ In regard to the effect on consumers in Canada, the CRTC has simply noted that “many of the issues raised by the digital transition fall

⁴² Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion To Digital Television, MB Docket No. 03-15, Release-Number FCC 07-69, 2007 FCC LEXIS 3621, (FCC May 3, 2007).

⁴³ DTV Consumer Education Initiative, MB Docket No. 07-148, 2007 FCC LEXIS 5586, (FCC July 30, 2007).

⁴⁴ Jacques Steinberg, *Converters Signal a New Era for TVs*, N.Y. TIMES, June 7, 2007, at C3; *see also* Shapiro, *supra* note 54, at 362 (citation omitted).

⁴⁵ Broadcasting Public Notice CRTC 2003-61, *The regulatory framework for the distribution of digital television signals*, available at <http://www.crtc.gc.ca/archive/ENG/Notices/2003/pb2003-61.htm>

⁴⁶ Benjamin, *supra* note 8, at 378.

⁴⁷ Broadcasting Public Notice CRTC 2007-53, *Determinations regarding certain aspects of the regulatory framework for over-the-air television*, available at <http://www.crtc.gc.ca/archive/ENG/Notices/2007/pb2007-53.htm>

outside the Commission's jurisdiction.⁴⁸ But the CRTC did stipulate that: [T]here may be some communities where analog transmitters could be maintained, because spectrum just isn't in short supply in those markets. In such markets, the analog transmitters could operate until such time as they reach the end of their useful life, or viewers have switched to another form of distribution technology.⁴⁹

In Mexico the assumption being made is that, by the time of any analog shut-off, the Mexican consumer will be able to purchase affordable TVs with digital tuners. So, there is no plan in Mexico for converter boxes or a mass marketing campaign to move the market to digital.⁵⁰

How will the broadcasters use the spectrum that is allotted for DTV? Well, obviously they're going to use it to broadcast the same programming that they were broadcasting before, but it turns out that the 6 megahertz given to broadcasters was more than enough for that same programming and broadcasters have enough room to do more with the DTV spectrum that they have been given. A single channel of analog programming can fit into a much smaller amount of spectrum when it is broadcast digitally, so the additional spectrum that is left over that can be used to air other channels of programming.⁵¹ In 1997 the FCC said that they "recognize the benefit of permitting broadcasters the opportunity to develop additional revenue streams from innovative digital services. This will help broadcast television to remain a strong presence in the video programming market that will, in turn, help support a free programming service. So the FCC gave broadcasters flexibility to

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ McEwen, *supra* note 4.

⁵¹ *Id.*

providing supplementary services in addition to the free, over-the-air program service. These services could include, but are not limited to, subscription television programming, computer software distribution, data transmissions, interactive services, audio signals, and any other services that do not interfere with the required free service.⁵²

So, going back to what I said earlier about broadcasting being able to compete with cable – if, for example, you are addicted to sports television, you love ESPN. And the only reason you have cable is to get ESPN, Disney could potentially make ESPN available for say, \$3/month on one of the extra, over the air digital ABC channels – and the consumer could then buy ESPN from the broadcaster and cut out the middle man, drop cable altogether and have ESPN coming into your house, just as clearly as it does now. Now, that probably isn't going to happen, but the potential is there.

So, what is currently on the air on the additional digital channels? Well, in NY if you have a TV that receives the over the air digital broadcast, what you are getting from the largest broadcasters is a single channel from CBS, three channels from NBC, three channels from ABC and two channels from FOX. NBC is giving you their normal broadcast day, weather, and repeats of the Olympics. ABC has their broadcast day, weather and infomercials. And the channels appear as, for example, 4-1, 4-2, 4-3.

Canada, however, has put a higher priority on using additional spectrum for High Definition programming, and restricts broadcasters use of new spectrum for anything other than HD programming. After an initial replication of the analog broadcast day in HD, Canadian broadcasters are permitted to broadcast only 14 additional non-replicated hours of programming. All of the non-replicated hours must be in HD and 50% of those hours must

⁵² Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, 12 F.C.C.R. 12809 (1997).

be Canadian content.⁵³ The CRTC determined that multicast (what we have in the U.S), will be considered on a case-by-case basis and licensed separately from the main DTV service⁵⁴ and it may not take precedence over the broadcast of the HDTV version of a program whenever such a version is available.”⁵⁵

The Mexican policy is also to emphasize HD programming and multi-channel TV is not a contemplated strategy.⁵⁶

The major differences in the North American regulations of the DTV transition are:

(1) The U.S.’s hard deadline of February 17, 2009, Canada’s hard deadline of August 31, 2011 and the region by region approach in Mexico that is to conclude by 2021.

(2) The U.S allowance of multi-casting with the DTV spectrum vs. the emphasis on DTV spectrum being used for high definition programming in Canada and Mexico; and

(3) The prioritization in the U.S. of the benefits that the return of the analog TV spectrum will provide – namely public safety, an expansion of wireless and broadband services, and money from the auction of the spectrum for the U.S. Treasury.

The U.S. is ahead of its neighbors in making the digital transition. Without the U.S.’s hard deadline approach the pace towards transition in North America would be much slower, but the benefits of the transition are more urgently needed in the U.S. Had the U.S. not taken

⁵³ The producer is Canadian; key creative personnel are Canadian; 75% of service costs and post-production lab costs are paid to Canadians, available at http://www.crtc.gc.ca/eng/INFO_SHT/G11.HTM

⁵⁴ *Id.*

⁵⁵ *Id.*

⁵⁶ McEwen, *supra* note 4.

the lead in North America its neighbors would not have begun their transitions, instead the U.S. created a ripple effect of North American digital transition regulations.

What remains to be seen is how effective the efforts will be to ensure that U.S. consumers, who rely on over-the-air signals, are prepared for the analog shut-off and, once the U.S. has actually made the transition, just how far behind Canada and Mexico actually are in their efforts. There is greater urgency in Canada, Mexican households rely on free over-the-air television and are not equipped to receive digital signals in large enough numbers, but for Canada, where only about 1 in 10 rely on rabbit ears to receive television signals⁵⁷, decisions regarding the digital transition will have a lasting effect on the viability of Canada's conventional broadcast system.⁵⁸

⁵⁷ Canadian Media Research Inc., CRTC, HOW MANY CANADIANS SUBSCRIBE TO CABLE TV OR SATELLITE TV? (2006), <http://www.crtc.gc.ca/eng/publications/reports/radio/cmri.htm>

⁵⁸ McEwen, *supra* note 4.