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**Regulating The Transition From Analog To Digital Television  
Broadcasting In North America: A Comparison Of The Canadian,  
U.S., And Mexican Experiences**

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***REGULATING THE TRANSITION FROM ANALOG TO DIGITAL  
TELEVISION BROADCASTING IN NORTH AMERICA:  
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*by*

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**INTRODUCTION:  
WHAT WE TALK ABOUT IN DIGITAL TELEVISION**

What does the impending digital transition mean? And, more importantly, what will be the effect? For the vast majority of us, when the U.S. finally transitions from a free over-the-air analog television broadcast to a free over-the-air digital television broadcast, there will be no noticeable effect at all. Only about 14% of all U.S. households do not subscribe to a Multichannel Video Programming Distributor such as a cable or satellite service provider.<sup>51</sup> The remainder have at least one television per household that receives a retransmitted broadcast television signal (whether analog or digital) from a wire plugged into the back of a television set.<sup>52</sup> In fact, “with continued steady growth of cable subscription and the tremendous growth of digital satellite over the last decade” fewer and fewer households receive an over-the-air signal “despite the fact that 98% of the population has access to an [over-the-air] signal.”<sup>53</sup> For the U.S.’s ever-shrinking percentage of the population that receives their television signal over-the-air, February 17, 2009 will be the fateful day when the analog signal is shut-off and the transition to digital over-the-air broadcast is complete.<sup>54</sup> But what about our neighbors to the North and South? In the U.S., little is known about Canadian and

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<sup>51</sup> Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 21 F.C.C.R. 2503 (2006).

<sup>52</sup> See Carriage of Digital Television Broadcast Signals, 22 F.C.C.R. 8803 (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).

<sup>53</sup> MICHAEL MCEWAN, 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), <http://www.crtc.gc.ca/eng/publications/reports/radio/mcewen.pdf>.

<sup>54</sup> See Digital Television Transition and Public Safety Act of 2005, Pub. L. No. 109-171, §3002, 120 Stat. 24, 3 (2006).

Mexican electronic media systems.<sup>55</sup> This paper will compare how the U.S., Canada and Mexico are regulating their transitions from analog to digital over-the-air, or terrestrial, television broadcasts.

A. What is Digital Television?

Since 1940, there has been a common standard for broadcasting known as the National Television Systems Committee (NTSC) – named for the group that created the standard.<sup>56</sup> In the 1980s, there was a push to force the FCC to set aside spectrum for a new broadcasting standard that would provide a better picture.<sup>57</sup> In 1996, the FCC adopted digital television (DTV) as the future standard for terrestrial television broadcasting.<sup>58</sup> A distinction should be made between High Definition Television (HDTV) and [standard definition] Digital Television (DTV). HDTV has a higher picture quality and is transmitted in either analog or digital. DTV, on the other hand, can be either high or standard definition, but is only transmitted digitally.<sup>59</sup> Ultimately, the change will have a positive effect for consumers because DTV provides better sound, sharper images, and more viewing options than have ever been available over the air.<sup>60</sup> Today, in the U.S., more than 1,537 stations nationwide are on the air with DTV operations, including all 119 stations affiliated with the top-four network affiliates (ABC, CBS, Fox and NBC) in the top thirty television markets.<sup>61</sup>

B. The Agencies

In the United States, the Federal Communications Commission (FCC) is the federal agency that regulates the use of the broadcast spectrum; in Canada, it is the Canadian Radio-television and Telecommunications Commission (CRTC); and in Mexico, the Comisión Federal de Telecomunicaciones (COFETEL).

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<sup>55</sup> Donald G. Godfrey, *Editor's Note: Broadcast Research in the Americas*, 50 J. BROADCAST. ELECTRON. MEDIA 365, 365 (2006).

<sup>56</sup> STEWART MINOR BENJAMIN ET AL., TELECOMMUNICATIONS LAW AND POLICY 347 (Carolina Academic Press 2d ed. 2006) (2006).

<sup>57</sup> *Id.*

<sup>58</sup> Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, 11 F.C.C.R. 17771(1996), modified, 12 F.C.C.R. 3388 (1997).

<sup>59</sup> Benjamin, *supra* note 6, at 347.

<sup>60</sup> Digital Television FAQs, Consumer Corner, <http://www.dtv.gov/consumercorner.html#canisee> (last visited Feb. 28, 2008).

<sup>61</sup> Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 21 F.C.C.R. 2503 (2006).

C. Digital Transition Regulations

In the U.S., regulations for the transition from analog to digital over-the-air broadcast were initiated by the Federal Communications Commission and amended and modified by the Telecommunications Act of 1996 and the Balanced Budget Act of 1997.<sup>62</sup> In 2002, the CRTC released Canada's framework in a notice to the public.<sup>63</sup> Mexico published its digital transition plan in 2005 entitled the *Politica de Transicion a la Television Digital Terrestre en Mexico*.<sup>64</sup>

**I  
FRAMEWORK BY COUNTRY**

In the 1970s, a television commercial helped popularize a new breakfast cereal called "Life." The commercial featured three boys, two of whom did not want to try the new product. Eventually, one of the three boys decided to try it. The others watched his response and gauged how to proceed.<sup>65</sup> Similarly, with the digital transition in North America, it has been a game of "wait and see." Canada and Mexico have been cautious, letting the U.S. try it first. Canada, in particular, has monitored U.S. progress and attempted to adjust its policy accordingly. However, the digital transition in the U.S. has been a slow one because households have been slow to buy television monitors that could receive broadcast digital signals, and even slower to actually watch digital signals via broadcast.<sup>66</sup> Since 1998, only about 17 million DTV sets have been sold to consumers in a nation of 109.6 million TV households.<sup>67</sup>

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<sup>62</sup> 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).

<sup>63</sup> 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> (last visited Feb. 28, 2008).

<sup>64</sup> McEwen, *supra* note 3.

<sup>65</sup> The commercial spawned the famous catch phrase, "He likes it! Hey Mikey!" available at <http://youtube.com/watch?v=vYEXzx-TINc> (last visited Feb. 28, 2008).

<sup>66</sup> Benjamin, *supra* note 6, 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.").

<sup>67</sup> Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 21 F.C.C.R. 2503 (2006).

A. Deadline-Oriented

The U.S. determined that the best way to facilitate the transition to over-the-air digital broadcasting was to set a hard date. Once the date is reached, broadcasters will no longer broadcast an analog signal; they will only transmit a digital signal. However, the transition date has been pushed back. The Balanced Budget Act of 1997 allowed the date to be extended because 15 percent of households in a given market were not equipped to receive DTV. The current deadline is February 17, 2009.<sup>68</sup> The date was chosen over January 1 because it is shortly after the Superbowl<sup>69</sup> and is during the month following the swearing in of both a new President and Congress.<sup>70</sup>

B. Shift from Market-Driven

The CRTC did not mandate a transition deadline until May 17, 2007; instead Canada was to use a market-driven transition model.<sup>71</sup> This meant that there would be no hard date for broadcasters in Canada to stop transmitting an analog television signal.

The Canadian Association of Broadcasters (“CAB”) emphasized that ‘the DTV rollout should take place in stages, moving from the largest primary markets to secondary markets over a period of years.’ It added that, ‘the pace and degree of market acceptance in larger markets will determine when the DTV rollout can be extended to smaller markets.’ The Canadian Cable Television Association (“CCTA”) agreed with the CAB’s view that the market-driven model proposed by the CRTC would be the most appropriate approach, and would be far preferable to ‘...earlier approaches in North America that assumed the abandonment of the analog spectrum.’<sup>72</sup>

However, in December of 2006, the CRTC published findings about Canada’s digital transition and the ineffectiveness of the market-driven

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<sup>68</sup> See Digital Television Transition and Public Safety Act of 2005, Pub. L. No. 109-171, §3002, 120 Stat. 24, 3 (2006).

<sup>69</sup> Benjamin, *supra* note 6, at 379.

<sup>70</sup> John Kneuer, Assistant Commerce Secretary for Communications & Information, Interview on *The Communicators* (C-SPAN television broadcast Feb. 3, 2007).

<sup>71</sup> Broadcasting Public Notice CRTC 2002-31, *supra* note 13.

<sup>72</sup> *Id.*

approach.<sup>73</sup> The study reported that a two-year delay behind the U.S. debut would “save a great deal in the early adoption cost for broadcast, production and consumer equipment.”<sup>74</sup> However, the study also reported that Canada has “fallen further and further behind the U.S. and the two-year lag has turned into at least four years and maybe more.”<sup>75</sup> One reason for Canada’s increasing lag is the expense to broadcasters: “[B]roadcasters have said repeatedly, they do not see the value of building out digital transmission facilities across the country and going through the expense of simultaneous carriage of analog and digital systems, particularly when most of the markets are delivered by cable and to a lesser extent satellite.”<sup>76</sup> Thus far, “Canada only has transmitted limited digital [over-the-air] services in Toronto, Montreal and Vancouver.”<sup>77</sup> Another reason is that “Canada’s production community is now beginning to embrace digital HD production, but the production of HD programs only represents between 5 to 7% of all produced programming. Canada has missed an opportunity to create shelf life for product produced over the last 7 or 8 years.”<sup>78</sup>

In response, the CRTC adopted a new policy in May of 2007:

[A] firm analog shut-down date will enable broadcasters to plan future capital needs and put in place the necessary facilities for their post-transition operations....[And] from the perspective of efficient and effective management of the radio spectrum, the date for the shut down of OTA analog television broadcasting should be closely aligned within a North American market time frame. Spectrum coordination would be very difficult if the U.S. has converted to all-digital transmission and Canada continues with a mix of analog and digital OTA television transmission. Therefore, the Commission considers that a near-term date for the termination of analog transmitters, approximately two years after the U.S.

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<sup>73</sup> CRTC, THE FUTURE ENVIRONMENT FACING THE CANADIAN BROADCASTING SYSTEM: A REPORT PREPARED PURSUANT TO SECTION 15 OF THE BROADCASTING ACT (2006), <http://www.crtc.gc.ca/eng/publications/reports/broadcast/rep061214.htm> (last visited Feb. 28 2008).

<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> *Id.*

<sup>77</sup> McEwen, *supra* note 3.

<sup>78</sup> *Id.*

shut down, would best advance the digital transition.<sup>79</sup>

Accordingly the CRTC adopted a shut down date for analog television transmission of August 31, 2011.<sup>80</sup>

### C. Caution in Mexico

Mexico has a long transition strategy that began in 2006 and is scheduled to end in 2021.<sup>81</sup> It is “subject to review and action as part of the regular two-year reviews.”<sup>82</sup> A CRTC study called Mexico’s policy “cautious,” recognizing “the realities of the economic and social needs of Mexicans,” but acknowledging “that the industry cannot fall behind their North American counterparts in distribution and production of HD programming.”<sup>83</sup> The scheduled launch date for various cities has been determined according to the population and location and was scheduled to begin with 9 cities – Mexico, Guadalajara, Monterrey and 6 located along the border – by the end of 2006.”<sup>84</sup>

## II SPECTRUM FOR DIGITAL BROADCAST

In 1991, the FCC set aside an additional 6 MHz of spectrum for each authorized U.S. television station. The FCC also permitted each station to acquire an additional DTV license.<sup>85</sup> Because the stated objective was “to effect a major technological improvement in television transmission...and not to launch a new and separate video service”<sup>86</sup> eligibility was restricted to existing broadcasters. It was believed that this would “serve the public interest by hastening and smoothing the transition.”<sup>87</sup>

It was not until over ten years after the U.S. policy was in place that

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<sup>79</sup> 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> (last visited Feb. 28, 2008).

<sup>80</sup> *Id.*

<sup>81</sup> McEwen, *supra* note 3.

<sup>82</sup> *Id.*

<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, 6 F.C.C.R. 7024 (1991).

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

Canada authorized broadcasters to license additional spectrum for their digital transition. In 2002, the CRTC released a public notice that allowed broadcasters to develop over-the-air digital broadcasts, but required each broadcaster to apply for a new, transitional digital television license.<sup>88</sup> The CRTC added, "While it would encourage existing broadcasters to apply for transitional DTV licenses, it might be willing to consider applications by prospective new entrants, should incumbent broadcasters fail to take advantage of the available spectrum allotments, or should channel capacity exceed that allotted to existing broadcasters."<sup>89</sup>

Not until March of 2006 did Mexico authorize use of additional spectrum for broadcasters to develop over-the-air digital television broadcasts. The decision was controversial though, giving spectrum only to the two largest Mexican broadcast companies Televisa and TV Azteca (the nation's broadcasting duopoly which control about 90% of the industry). These companies "would automatically receive a large share of digital spectrum, while potential newcomers to the market would have to pay for additional spectrum that is put out for bids."<sup>90</sup> There were accusations that the new proposal gave an unfair benefit to "Televisa and TV Azteca by giving them the right to offer new channels in the spectrum freed up by the transition from analog to digital terrestrial broadcasts without a government concession."<sup>91</sup> The law allowed "Televisa, just by submitting a simple application, to double its number of channels to eight without tendering or bidding against other parties...Televisa's aggressive lobbying during a presidential campaign was seen by some analysts as the main reason the bill was finally approved."<sup>92</sup> However, in June of 2007, Mexico's Supreme Court struck down the provision that would have allowed Televisa and TV Azteca to use "huge swaths of digital bandwidth in perpetuity...free of charge [and] exempting them from [the] bidding process and regulations."<sup>93</sup> Televisa officials defended the law as an attempt to modernize Mexico's digital broadcasting transition regulations, using U.S. regulations as a model.<sup>94</sup> But lawmakers acknowledged that they voted for the law out of fear of negative television

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<sup>88</sup> Broadcasting Public Notice CRTC 2002-31, *supra* note 13.

<sup>89</sup> *Id.*

<sup>90</sup> *Senate Approves Controversial Broadcast Law*, ECONOMIC NEWS & ANALYSIS ON MEXICO, April 5, 2006.

<sup>91</sup> Jose-Carlos Lozano, *Public Policies and Research on Cultural Diversity and Television in Mexico*, 50 JOURNAL OF BROADCASTING & ELECTRONIC MEDIA, September 1, 2006, at 467 (citations omitted).

<sup>92</sup> *Id.*

<sup>93</sup> John Lyons, *Mexico Ruling Could Shake TV Duopoly, Open Door to Competition*, WALL ST. J., June 2, 2007, at A3.

<sup>94</sup> *Id.*



coverage from Televisa and TV Azteca during an election campaign.<sup>95</sup> Now the law will go back to Congress to be rewritten. “[L]egislators agreed that the existing 47-year-old television law needs to be changed, [but] no one has stepped forward with a proposal.”<sup>96</sup>

### III ANALOG SHUT-OFF IMPLICATIONS

#### A. Returned Spectrum

In the U.S., “the hard date means that broadcast television spectrum can be put to new uses.”<sup>97</sup> “108 MHz will be returned in the 700 MHz band that, because of its excellent radio propagation characteristics, is referred to as ‘beachfront property.’”<sup>98</sup> 62 MHz was auctioned off in early 2008 for commercial services (30 megahertz in the Lower 700 MHz Band and 32 megahertz in the Upper 700 MHz Band).<sup>99</sup> 24 MHz had previously been auctioned off and 24 MHz will go to public safety. “[C]alls for [public safety] spectrum have increased in the wake of...tragic communications breakdowns, such as that which occurred after the 9/11 attacks.”<sup>100</sup> “Various companies have been seeking the spectrum licenses that the broadcasters must return to the government when the transition is completed. The licenses are in particularly high demand because the analog spectrum could be used to expand a variety of wireless and broadband services.”<sup>101</sup> Much of the

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<sup>95</sup> Elisabeth Malkin, *Mexican Court’s Media Ruling Shows Support for Competition*, N.Y. TIMES, Jun. 6, 2007, at C2.

<sup>96</sup> Elisabeth Malkin, *Mexico’s Court Limits Reach Of Big Media*, N.Y. TIMES, Jun. 8, 2007, at C2.

<sup>97</sup> Benjamin, *supra* note 6, at 379.

<sup>98</sup> *Id.*

<sup>99</sup> See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, 22 F.C.C.R. 15289 (2007) (increasing the amount of spectrum in the 700 MHz Band to be auctioned for commercial services, from 60 megahertz to 62 megahertz, by eliminating 2 megahertz of the Guard Band B Block).

<sup>100</sup> Benjamin, *supra* note 6, at 380; see also Dr. Alan Pearce, *An Analysis of the Public Safety & Homeland Security Benefits of an Interoperable Nationwide Emergency Communications Network at 700 MHz Built by a Public-Private Partnership*, 16 Media L. & Pol’y 41 (2006) (arguing that assigning an additional 30 MHz of spectrum to public safety is much wiser and a unique opportunity to address today’s public safety and homeland security threats).

<sup>101</sup> Andrew L. Shapiro, *Aiding the Final Push of the Digital Transition*, 5 Cardozo Pub. L. Pol’y & Ethics J. 339, 365 (2006) (citing Steve Labaton, *Senate Passes Bill to Convert to Digital TV*, N.Y. Times, Dec. 22, 2005, at C9).

recovered spectrum will go to the highest bidder.<sup>102</sup> About one third of the auctioned spectrum will have “open access” rules which provide that a network established using the spectrum will have to allow customers to use any phone and software they want – a shift in approach to future wireless networks.<sup>103</sup> Ultimately, in the U.S., the return of analog spectrum will potentially enhance public safety, encourage the deployment of innovative wireless services to the American public, provide an estimated \$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.<sup>104</sup>

In contrast, Canada has not placed the same priority on recovering spectrum used for analog broadcast. In Canada there is “not the same kind of spectrum challenge...or the same pressing need for analog broadcast spectrum for other services.”<sup>105</sup> However, once the spectrum used for analog television broadcasts is recovered, the “freed-up spectrum will be re-assigned to non-broadcast users for purposes such as land mobile and public safety.”<sup>106</sup>

The newer Mexican policy has hardly addressed the issue and “has not made the harvesting and subsequent auction or reallocation of analog spectrum a key plank of the transition plan.” However, spectrum recovery is one of the “eventual results of the plan and has been noted for future reference.”<sup>107</sup>

## B. Receiving the Digital Signal Over-the-Air

In an annual assessment, released in March of 2006, the FCC estimated that 14% of TV households in the U.S., or 15.4 million households, were over-the-air dependent.<sup>108</sup> According to the National Association of Broadcasters, there are no more than 80 million of the 285 million television sets in the United States, receiving analog over-the-air broadcasts.<sup>109</sup> There is,

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<sup>102</sup> Benjamin, *supra* note 6, at 379.

<sup>103</sup> See Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, 22 F.C.C.R. 15289 (2007); see also John Markoff & Matt Richtel, *F.C.C. Hands Google a Partial Victory*, N.Y. TIMES, Aug. 1, 2007, at C3.

<sup>104</sup> Cotlar, *supra* note 12, at 272; see also John Markoff & Matt Richtel, *F.C.C. Hands Google a Partial Victory*, N.Y. TIMES, Aug. 1, 2007, at C3.

<sup>105</sup> CRTC, *supra* note 23.

<sup>106</sup> *Id.*

<sup>107</sup> McEwen, *supra* note 3.

<sup>108</sup> Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, 21 F.C.C.R. 2503 (2006).

<sup>109</sup> Scott Feira, *With DTV Conversion, Devil's in the Details*, Television Week, Feb. 20, 2006, at 7.

of course, great concern that on February 17, 2009 those households with only the ability to receive analog over-the-air broadcasts will be unable to receive TV signals. U.S. law allocates \$990 million, which can be increased to \$1.5 billion, to a program to provide up to two \$40 coupons to households for the purchase of digital-to-analog basic functionality, or “no-frills,” converter boxes.<sup>110</sup> There has been concern that \$40 may not be enough to cover the cost of the converter box. In 2005, “converter boxes cost anywhere from \$300 to \$400, although the relevant price is what such [basic functionality] equipment would cost on the date that analog television broadcasts cease. With mass production in a market the size of the United States, the cost of converter equipment could drop considerably.”<sup>111</sup> One manufacturer estimates a drop in price to \$50 per unit by 2008.<sup>112</sup> Some have argued that “[t]he biggest challenge may be educating consumers about the DTV transition. Consumers first will need to understand whether their television sets will be affected.”<sup>113</sup> The FCC adopted labeling requirements in April of 2007: “sellers of television receiving equipment that does not include a digital tuner [must] disclose at the point-of-sale that such devices include only an analog tuner and therefore will require a converter box to receive over-the-air broadcast television after February 17, 2009.”<sup>114</sup> Additionally, in July of 2007, the FCC proposed “to require television broadcast licensees to conduct on-air consumer education efforts.”<sup>115</sup> Consumer groups have sharply criticized the plans, arguing that the programs will not be sufficient, that some families will have neither the means to buy the converters nor the awareness to successfully obtain the vouchers, and that many viewers will be surprised when they find that their television sets no longer work on February 17, 2009.<sup>116</sup>

Until May of 2007, the CRTC would only consider applications to discontinue the carriage of analog signals when 85% of Canadian households

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<sup>110</sup> See Digital Television Transition and Public Safety Act of 2005, Pub. L. No. 109-171, § 3005, 120 Stat. 21 (2005) (explaining the digital-to-analog converter box program).

<sup>111</sup> Cotlar, *supra* note 12, 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).

<sup>112</sup> Cotlar, *supra* note 12, at 302.

<sup>113</sup> Feira, *supra* note 59, at 7.

<sup>114</sup> Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion To Digital Television, 22 F.C.C.R. 8776 (2007).

<sup>115</sup> DTV Consumer Education Initiative, 22 F.C.C.R. 14091 (2007).

<sup>116</sup> 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.

had the ability to receive digital signals.<sup>117</sup> Canada appeared to be following the U.S. Balanced Budget Act of 1997, which allowed the “hard date” deadline to be extended unless 85% of households were able to receive a digital signal.<sup>118</sup> Now, however, after the adoption of Canada’s August 31, 2011 analog shut down date, the CRTC faces the same problem as the U.S. Many viewers “will be forced to upgrade their television sets at some cost in order to continue to receive the services they currently enjoy.”<sup>119</sup> The CRTC noted that “[since] many of the issues raised by the digital transition fall outside the Commission’s jurisdiction, it intends to consult with Industry Canada and with the Department of Canadian Heritage. These consultations will address, in particular...the impact of the transition on Canadian consumers.”<sup>120</sup> Further, the CRTC stipulated:

[T]here may be northern and remote communities where analog transmitters could be maintained. Spectrum is not in short supply in these markets and, although frequency changes may be necessary, alternative channels in the new broadcast band should be readily available. 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.<sup>121</sup>

Mexico does not have a mandatory date to cease analog television broadcast:

Since the transition plan is over a long period of time the assumption being made is that Mexican consumers will be able to purchase affordable wide screen HD sets with the built in digital tuner.

There is no plan, at this stage, to push set top boxes or to have a mass marketing promotion or campaign to move the market to digital. This will evolve as the plan unfolds.<sup>122</sup>

Further, “[g]iven the social and economic realities of the country, [over-the-

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<sup>117</sup> Broadcasting Public Notice CRTC 2003-61, *The Regulatory Framework for the Distribution of Digital Television Signals*, <http://www.crtc.gc.ca/archive/ENG/Notices/2003/pb2003-61.htm> (last visited Feb. 28, 2008).

<sup>118</sup> Benjamin, *supra* note 6, at 378.

<sup>119</sup> Broadcasting Public Notice CRTC 2007-53, *supra* note 29.

<sup>120</sup> *Id.*

<sup>121</sup> *Id.*

<sup>122</sup> McEwen, *supra* note 3.

air] television is the most efficient and effective means to deliver services to viewers.”<sup>123</sup>

#### IV POTENTIAL USES OF SPECTRUM ALLOCATED FOR DTV BEYOND FREE OVER-THE-AIR BROADCASTING

In the U.S., “a system that once started out as [an additional] 6 megahertz for [broadcasters to develop] HDTV (either digital or analog) has become 6 megahertz for a number of services, one of which will be DTV - but perhaps not ‘high definition’ television.”<sup>124</sup> While in the U.S. there has been an emphasis on HDTV, the FCC backed away from requiring that broadcasters use the additional 6 MHz for only HDTV in 1997:

[W]e 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. Thus, we will allow broadcasters flexibility to respond to the demands of their audience by providing ancillary and supplementary services that do not derogate the mandated free, over-the-air program service. [These] could include, but are not limited to, subscription television programming, computer software distribution, data transmissions, teletext, interactive services, audio signals, and any other services that do not interfere with the required free service.<sup>125</sup>

In March of 2007, FCC Chairman Kevin Martin said that DTV spectrum could potentially be leased to encourage new and different voices in the television industry:

Conversion to digital operations enables broadcasters to fit a single channel of analog programming into a smaller amount of spectrum. Often, there is additional spectrum left over that can be used to air other channels of programming. Small and independently owned businesses could take advantage of this

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<sup>123</sup> *Id.*

<sup>124</sup> Benjamin, *supra* note 6, at 376.

<sup>125</sup> Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, 12 F.C.C.R. 12809, 12820-21 (1997).

capacity and use it to air their own programming.<sup>126</sup>

Canada, however, has put a higher priority on using additional spectrum for HD 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 14 additional non-replicated hours of programming. All of the non-replicated hours must be in HD and 50% of those hours must be Canadian content. While the CRTC, like the FCC, recognized that "the use of DTV capacity for the delivery of multicast programming and data transmission services could be of potential benefit to consumers and to the broadcasting system as a whole," the CRTC's regulations are out of a concern that the "[u]se of DTV technology to deliver multicast services, potentially in preference to the broadcast of HDTV programming, might also have the effect of discouraging the introduction of HDTV."<sup>127</sup> Thus, the CRTC determined that "[m]ulticast services will be considered on a case-by-case basis and will be licensed separately from the main DTV service."<sup>128</sup> Finally, "[t]he delivery of a multicast service may not take precedence over the broadcast of the HDTV version of a program whenever such a version is available."<sup>129</sup>

As in Canada, the newer Mexican policy emphasizes HD programming rather than the less restrictive U.S. policy:

The Mexican transition plan is designed to supply HD service as the principal benefit. The target is 80% of the broadcast day in HD. This is very ambitious and probably initially means a lot of up converted standard video. But clearly HD is the goal. At this point multi-channel TV is not a contemplated strategy.<sup>130</sup>

## V

### RAMIFICATIONS FOR CABLE PROVIDERS

Giving broadcasters additional spectrum to transmit digital signals gave rise to a new issue; what would the ramifications be for cable and satellite providers? Would cable providers be required to carry both analog

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<sup>126</sup> Kevin J. Martin, Chairman, FCC, Remarks at the 2007 AWRT Annual Leadership Summit Business Conference (Mar. 9, 2007); *see also* FCC Spectrum Licensing Rule, 47 C.F.R. 1.9003 (2007) (current regulations regarding leasing licensed spectrum to a third-party).

<sup>127</sup> Broadcasting Public Notice CRTC 2002-31, *supra* note 13.

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*

<sup>130</sup> McEwen, *supra* note 3.

and digital signals? Would cable providers have to carry any broadcaster's additional programming beyond the replication of the broadcast day? Each North American country had expressed concern that not requiring carriage of the digital over-the-air signal would have a slowing effect on the digital transition.

In the U.S., the FCC concluded that before February 17, 2009:

[B]roadcasters operating digital-only television stations are entitled to mandatory carriage....In an effort to support the ultimate conversion of digital broadcast signals and facilitate the return of the analog spectrum, the Commission also decided to permit a digital-only station, on an interim basis, to 'demand that one of its HDTV [high-definition television] or SDTV [standard-definition television] signals be carried on the cable system for delivery to subscribers in an analog format.'<sup>131</sup>

The FCC has proposed that after the transition:

[C]able operators must...ensure that cable subscribers with analog television sets are able to continue to view all must-carry stations by either: (1) carrying the digital signal in analog format, or (2) carrying the signal only in digital format, provided that all subscribers have the necessary equipment to view the broadcast content<sup>132</sup>...In the absence of such a requirement, analog cable subscribers (currently about 50% of all cable subscribers, or approximately 32 million households) would no longer be able to view ... stations after February 17, 2009. . . . [S]uch an outcome would adversely impact the DTV transition and would unduly burden millions of consumers.<sup>133</sup>

As we move closer to the hard date, the FCC must decide what changes to make in light of "the ability of television broadcasters to generate many different program feeds within a conventional six megahertz channel."<sup>134</sup> Recently some in the cable industry have pushed for an interface that would let set-top boxes receive digital broadcast signals off the air. This

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<sup>131</sup> Carriage of Digital Television Broadcast Signals, 22 F.C.C.R. 8803 (2007) (citations omitted).

<sup>132</sup> *Id.* at 8826.

<sup>133</sup> *Id.* at 8804.

<sup>134</sup> Rob Frieden, *Analog and Digital Must-Carry Obligations of Cable and Satellite Television Operators in the United States*, 15 Media L. & Pol'y 230, 237 (2006).

technology would allow households to see broadcast TV signals alongside cable programming as an integrated viewing experience. Cable operators could then offer local TV programming for free, “that is, without having to pipe the digital signals over their networks. That could eventually let an operator reclaim valuable spectrum for other uses, such as high-speed data or HD programming.”<sup>135</sup>

Canada also requires cable systems to carry digital over-the-air broadcasts because “without mandatory cable carriage of digital television services and its impetus in promoting the sale of digital television receivers, the business challenges facing broadcasters would become more difficult. . . . [T]he Commission concludes that it is reasonable to require [broadcasting distribution undertakings] to distribute the primary digital signal of a licensed over-the-air television service in accordance with the priorities that currently apply to the distribution of the analog version of the services.”<sup>136</sup>

In Mexico, cable and satellite penetration is at about 20%, much lower than in the U.S. and Canada where over three quarters of the audiences subscribe to cable or satellite TV.<sup>137</sup> Thus, the ramifications of DTV on the cable industry are not the same for Mexico as “[c]able and satellite do not play a major role in the Mexican market.”<sup>138</sup> “[B]roadcast television continues to dominate mass audiences much more than in many other world areas.”<sup>139</sup>

## VI BORDER TOWNS

“Canada has always been more than sensitive to the impact that U.S. television could have north of the 49<sup>th</sup> parallel . . . U.S. television [is] readily and reliably accessible [over-the-air] in most towns and cities . . . [and] Canadian broadcasting policy has been focused on dealing with U.S. penetration of Canada's airwaves.”<sup>140</sup> At this point, “broadcasters have only just recently launched limited digital transmission services in Toronto, Montréal and Vancouver. For those living along the border, certain U.S.

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<sup>135</sup> Todd Spangler, *Trying to Beat Broadcast Over the Ears; CableLabs' Off-Air Receiver Project Could Pull In TV Signals, Reclaim Bandwidth, Sidestep Retrans Fees*, Multichannel News, March 12, 2007.

<sup>136</sup> Broadcasting Public Notice CRTC 2003-61, *supra* note 67.

<sup>137</sup> David R. Spencer & Joseph D. Straubhaar, *Broadcast Research in the Americas: Revisiting the Past and Looking to the Future*, 50 J. OF BROAD. & ELEC. MEDIA 368 (September 1, 2006).

<sup>138</sup> McEwen, *supra* note 3.

<sup>139</sup> Spencer, *supra* note 91.

<sup>140</sup> Spencer, *supra* note 91 (citations omitted).



[over-the-air] digital signals are available”<sup>141</sup> as long as consumers are equipped to receive them. In Mexico, one reason for rushing the digital transition laws through Congress was to quickly provide broadcasters with additional spectrum in response to the U.S. digital transition. The Mexican digital transition was to begin “in the 6 large border communities by the end of 2006.”<sup>142</sup>

## VII CONCLUSION

The major differences in the North American regulations of the digital over-the-air television broadcast transition are: 1) the U.S.’s hard deadline of February 17, 2009, Canada’s hard deadline of August 31, 2011 and the lack of a deadline in Mexico; 2) the emphasis on DTV spectrum usage for HDTV programming by Canada and Mexico; and 3) the U.S.’s prioritization of the benefits that the return of the analog TV spectrum will provide.

The U.S. is well ahead of its neighbors in making the digital transition. However, without the hard deadline approach first instituted in the U.S. the pace towards transition in North America would be much slower. The benefits that will come from the transition, in particular for public safety, are more urgently needed in the U.S. and the deadline approach is the best way to ensure the realization of those benefits. Had the U.S. not taken the lead in North America, its neighbors likely would have waited even longer to begin regulating their digital transitions. Thus, while Canada only recently adopted a hard deadline approach and Mexico still has not adopted a hard deadline, it was the U.S. transition plan that created a ripple effect of North American digital transition regulations.

What remains to be seen is how effective efforts will be to ensure that U.S. consumers, who rely on over-the-air signals, are prepared for the analog shut-off. Once the U.S. has actually made the transition, we will also see just how far behind Canada and Mexico will be in their efforts. There is greater urgency in Canada. Whereas Mexican households rely on over-the-air television and are not equipped to receive digital signals in large enough numbers, in Canada, where “only about 1 in 10 rely on rabbit ears or antenna to receive TV,”<sup>143</sup> decisions regarding the digital transition “will have a lasting effect on the business viability and cultural mandate of Canada’s

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<sup>141</sup> CRTC, *supra* note 23.

<sup>142</sup> McEwen, *supra* note 3.

<sup>143</sup> Canadian Media Research Inc., How Many Canadians Subscribe to Cable TV or Satellite TV? (2006), available at <http://www.crtc.gc.ca/eng/publications/reports/radio/cmri.pdf>.

conventional broadcast system.”<sup>144</sup> By adopting a hard deadline for an analog signal shut-off, Canada has taken the first step in ensuring a transition that does not put it too far behind.

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<sup>144</sup> McEwen, *supra* note 3.