

# WIRELESS FUTURE PROGRAM

Policy Brief

May 2005

## Broadcast to Broadband

### SPEEDING THE DTV TRANSITION: FACTS & POLICY OPTIONS

#### The DTV Transition is Happening – Just not Over the Air

- In the Telecommunications Act of 1996, Congress loaned broadcasters a second six-megahertz (6 MHz) channel of spectrum at no charge in the expectation that the nation would make an over-the-air conversion to digital HDTV. In April 1997, the FCC set the deadline for returning this loaned spectrum at December 31, 2006.
- In reality, the DTV transition for broadcast programming is taking place almost entirely via cable and satellite subscription services.

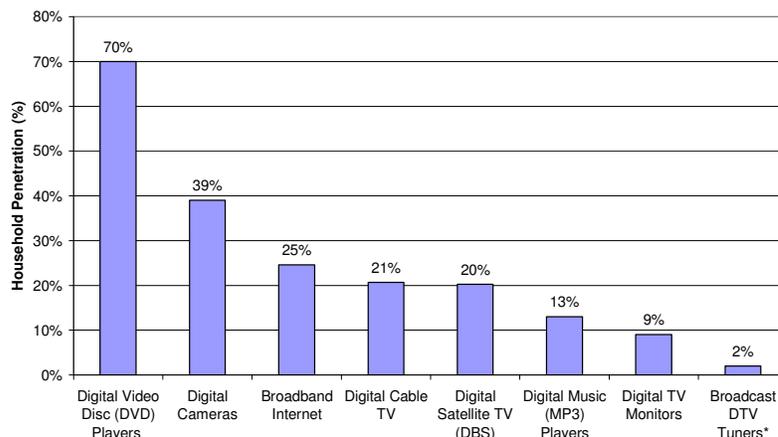
**Table 1: How U.S. TV Households Receive Television: 1994 vs. 2004<sup>1</sup>**

TV Households in the United States	Dec. 1994 (Millions)	Dec. 1994 (Share of All TV Households)	June 2004 (Millions)	June 2004 (Share of all TV Households)	Change (%)
<b>Over the Air Only</b>	<b>31.5</b>	<b>33%</b>	<b>16.1</b>	<b>15%</b>	<b>-48.9%</b>
<b>Total MVPD Subscribers*</b>	<b>63.9</b>	<b>67%</b>	<b>92.3</b>	<b>85%</b>	<b>44.4%</b>
<i>Cable</i>	59.7		66.1		
<i>DBS</i>	0.6		23.2		
<i>Other</i>	3.6		3.0		

\*MVPD = Multichannel Video Programming Distributors are Cable, DBS, and other services

- The percentage of American homes relying on analog over-the-air (OTA) reception for their primary TV service is low and steadily shrinking.
- The FCC estimates that 16.5 million households (15% of all television households) are OTA-only – although estimates based on industry surveys range from 13% (Consumer Electronics Association) to 19% (NAB/MSTV).

**Chart 1: Adoption of Major Consumer Digital Technologies: Household Penetration (June 2004)**

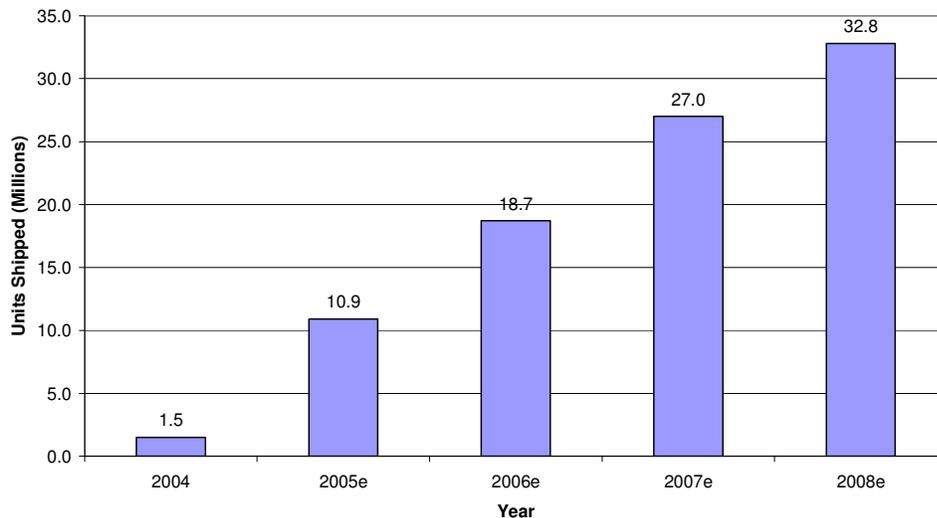


\* As of January 2005  
Sources: CEA, GAO, CTAM, Leichtman Research Group

<sup>1</sup> 2004 Data: FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Eleventh Annual Report," January 14, 2005. Available at: [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-05-13A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-13A1.pdf); 1994 Data: FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Second Annual Report," December 11, 1995. Available at: <http://www.fcc.gov/Bureaus/Cable/Reports/>

- When consumers are given the choice, they are voting against digital OTA television. From 1998 through 2003, more than 90% of DTV sales were monitors without an OTA tuner.
- Only 1.2 million digital OTA tuners were sold in 2004 – less than 4% of total TV set and monitor sales.
- Sales of DTVs with OTA tuners are projected to climb dramatically this year – but mostly because the FCC’s broadcast DTV tuner mandate forces the nearly 90% of non-OTA households to purchase OTA capability involuntarily – a \$10 billion “tax” according to CEA estimates.

**Chart 2: U.S. Integrated DTV Shipments (Millions of Units)**



Notes: 1) Estimates assume the FCC will act quickly to eliminate the 50% tuner schedule and accelerate the 100% schedule to March 2006; 2) e = estimate

Source: CEA, Letter from President Gary Shapiro to the Honorable Joe Barton, May 6, 2005

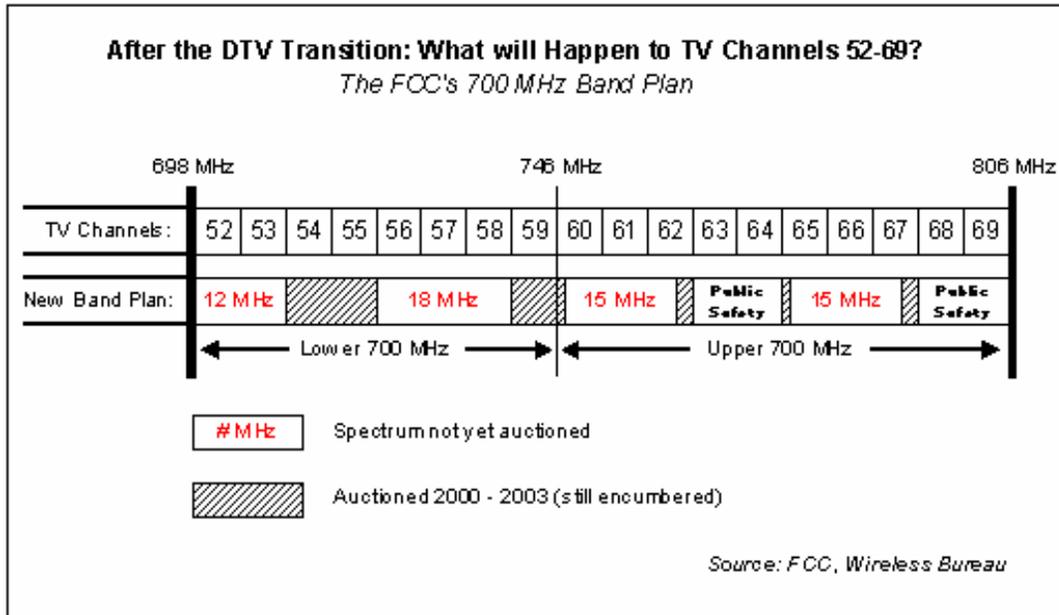
### ***The DTV Transition Will Drag on Indefinitely – Unless Congress Sets a “Hard” Deadline***

- In the Balanced Budget Act of 1997, Congress added a loophole to the December 31, 2006 deadline for stations to return the second channel: at least 85% of TV households in a market must be capable of viewing digital broadcast channels.
  - This multi-billion dollar loophole was inserted into the bill without any public debate or roll call vote.
- Because most cable households have chosen not to purchase DTV sets – and rely on less costly analog sets – the transition will go on indefinitely unless Congress sets a “hard” deadline.

### ***A ‘Hard Deadline’ Will Ensure Auction Revenue from \$10 billion to \$20 billion, Based on Recent Private Spectrum Transactions***

Previous auctions in the 700 MHz band brought very low returns for one primary reason: the channels would remain encumbered by politically-powerful TV stations indefinitely (See Table 2). But a credible hard deadline for channel clearance – particularly one reinforced by a consumer subsidy program – spins straw into gold.

- Among the 18 channels (52-69) to be returned, four are allocated for public safety, while the FCC has allocated 10 channels (60 MHz of spectrum) to be auctioned for exclusive licensing to wireless providers.



- An average of recent private transactions and public bids – for cellular spectrum with far less valuable propagation characteristics – is approximately \$5 billion (\$1.65 MHz/pop) for 10 MHz of spectrum covering the entire U.S. population. This price establishes a minimum value for the 700 MHz spectrum, so long as it is unencumbered.
  - The FCC’s 2004 valuation of the Nextel “spectrum swap” at \$1.65 per MHz/pop confirms this minimum expected price for spectrum in the 700 MHz band. The FCC valuation is conservative, as it valued 10 MHz of spectrum at \$4.8 billion, even though Verizon went on record that it would start bidding for the same spectrum at \$5 billion.
  - A recent market analysis by the Brattle Group also confirms this minimum price: the Brattle Group concludes that the 700 MHz auction will yield \$1.65 per MHz/pop, so long as the spectrum is unencumbered.<sup>2</sup>
- Frequencies at 700 MHz are far more valuable for both portable and last-mile consumer wireless services; high-penetration propagation characteristics below 1 GHz reduce the cost of infrastructure deployment for comparable service by a factor of three.
  - The reduced infrastructure cost of deploying wireless services in the 700 MHz band has been valued at \$0.43 per MHz/pop<sup>3</sup>
- **Thus, at half of recent market valuations, even 40 MHz is likely to generate at least \$10 billion, assuming 20 MHz is designated for unlicensed wireless services.**

<sup>2</sup> Letter from William P. Zarakas and Dorothy Robyn, Principals, Brattle Group, to the Honorable Joe Barton, May 18, 2005

<sup>3</sup> Ibid

**Table 2: Projected Auction Revenue based on recent private license sales and valuations...**

Date	Auction / Sale / Valuation	Avg. Price (MHz/Pop)	Markets	Projected Revenue at this Price from 42 MHz
April 2005	NextWave sale to Verizon	\$2.80	23 Markets covering 73 million	\$34.1 billion
July 2004	NextWave sale to Verizon	\$4.63	New York	\$56.4 billion
Feb 2005	Metro PCS sale to Verizon	\$3.00	San Francisco	\$36.5 billion
Nov 2004	NextWave sale to Verizon	\$2.85	NY, LA, Philadelphia, Detroit	\$34.7 billion
July 2004	Nextel Spectrum Swap	\$1.65	Nationwide	\$20.1 billion
Feb 2005	FCC PCS Auction	\$1.08	Various, excluding New York	\$13.2 billion

**... and the throwaway price of TV Band licenses if the spectrum remains encumbered**

2000 - 2003	FCC Auctions in the TV Band	\$0.28	134 markets with pop 1 million+	\$3.4 billion
2000 - 2003	FCC Auctions in the TV Band	\$0.08	All Markets	\$1.0 billion
2002 - 2003	FCC Auctions in the TV Band	\$0.03	Markets with 40-50 million people	\$0.4 billion

Source: FCC, Wireless Bureau, available at: [http://wireless.fcc.gov/auctions/default.htm?job=auctions\\_home](http://wireless.fcc.gov/auctions/default.htm?job=auctions_home); Legg-Mason, "Spectrum Catalogue Spring 2005," March 16, 2005

- In addition to cellular firms, many new wireless service providers are expected to bid on high-penetration 700 MHz band licenses, including:<sup>4</sup>
  - Major cable companies (such as Comcast, Cox, or Time Warner) that need spectrum for a wireless product to bundle with telephone and video offerings
  - Major entertainment companies (such as Sony, Disney, or Time Warner) for implementing mobile video services in the US to match the early success in Europe and South Korea
  - Major satellite entertainment companies (EchoStar and DirecTV) that require more spectrum for high-speed return paths, and other satellite entertainment companies (XM and Sirius) that could use 700 MHz band spectrum to deliver their products on mobile handheld devices
  - Venture Capital-backed wireless companies (such as NextWave, MetroPCS and Aloha Partners) for building IP-based networks
  - Mobile Computing Companies (such as Microsoft, Intel and Cisco) that are rapidly deploying WIMAX technology
- Not all companies seeking more spectrum will bid at auction. Companies such as Nextel, Clearwire, and Paxon have based their business plans on buying licenses to heavily encumbered spectrum, and then lobbying the FCC for "spectrum flexibility" (i.e., additional free rights to the public airwaves).

***A Relatively Small Share of Auction Revenue Can Ensure OTA-only Households are Held Harmless***

- **The "Last Granny Rule"**: Even if the FCC or Congress sets a hard deadline, it will be subject to delay (or defeat) if a substantial share of voters relying on analog OTA view the government as making their TVs useless without the purchase of a converter box (or new DTV).
- The 18-month transition in Berlin, Germany relied on a means-tested subsidy – but more affluent households also immediately received a far greater number of digital OTA channel selections in return for purchasing a converter or DTV.
- Manufacturers, including LG/Zenith and Zoran, now estimate that in mass production, a digital-to-analog converter would sell for \$50.<sup>5</sup>

<sup>4</sup> Ibid, pp. 5-6

**Table 3: The Cost of Four Options for a DTV Transition Consumer Subsidy<sup>6</sup>**

Household Eligibility based on reliance on over-the-air (OTA) TV	Number of Households Eligible	Subsidy / Converter	Assumed Take-up Rate	Total Cost (100% Subsidy)	Cost as % of Likely Auction Value of Unencumbered Spectrum <sup>7</sup>
<b>Option #1</b> Only low-income OTA exclusives; Limit one set / household	7.09 m (44% of OTA-only households)	\$50	7.09 m (100 %)	\$355 million	1.8%
<b>Option #2</b> All exclusive OTA households; Limit one set / household	16.1 m (15% of 108.4 m TV households)	\$50	16.1 m (100%)	\$805 million	4.0%
<b>Option #3</b> All TV households; Limit one set / household	108.4 m (16.1 m OTA + 92.3 m non-OTA)	\$50	43.8 m (100% of OTA + 30% of non-OTA) <sup>8</sup>	\$2.2 billion	11.0%
<b>Option #4 (NAB Scenario)<sup>9</sup></b> All OTA sets in all households	108.4 m (16.1 m OTA + 92.3 m non-OTA)	\$50	73 m (45m sets in OTA + 28m sets in non-OTA hh's)	\$3.6 billion	18.0%

***Cable and Satellite Households have Relatively Low Reliance on Secondary, OTA-only Sets***

- At most 30% of cable/DBS homes would possibly need a converter, and this would be for non-primary sets.<sup>10</sup>
- Households with cable or DBS subscriptions with secondary OTA-only TVs typically use such sets for watching videos, DVDs or playing video games; in a study by CEA, 75% of these households indicated that they reserve their OTA-only TV solely for these purposes.
- Moreover, as most cable companies no longer have a monthly charge for connecting additional TVs, cable households with OTA-only sets are unlikely to rely on analog OTA sets to view local stations.

<sup>5</sup> Leading manufacturers project a range of \$50 (LG/Zenith, Zoran) to \$67 (Motorola), assuming industry-wide demand on the order of 10 million units. See "Tech Company Touts Solution to Quick DTV Transition," *Communications Daily*, May 2, 2005, and FCC MB Docket No. 04-210, *Media Bureau Staff Report Concerning Over-the-Air Broadcast Viewers*.

<sup>6</sup> The FCC's *Report Concerning Over-the-Air Broadcast Television Viewers* notes that 14.98% of U.S. TV households rely exclusively on OTA, citing the 2005 MVPD Report. See: FCC, "Media Bureau Staff Report Concerning Over-the-Air Broadcast Viewers," February 28, 2005, and FCC, "Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Eleventh Annual Report," January 14, 2005. Available at: [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-05-13A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-13A1.pdf)

<sup>7</sup> Market Value of unencumbered spectrum is at least \$20 billion at \$1.65 per MHz/pop, based on the FCC's valuation of the Nextel spectrum swap, and recent private cellular license sales, as above.

<sup>8</sup> NAB/MSTV data indicates 28 million unwired sets are in use in the nation's 92.3 cable/DSL households. Approximately 30% of subscription TV households would thus have any use for a converter subsidy. See NAB/MSTV, Comments, *In the Matter of Over-the-Air Broadcast Viewers*, August 11, 2004, MB Docket 04-210

<sup>9</sup> Option #4 is the solution most called for by the NAB, which assumes that a converter subsidy be made available for every analog TV set in all households that rely on OTA (i.e., all sets not connected to cable, DBS, or another subscriber service.) For NAB's data, see: NAB/MSTV, Comments, *In the matter of Over-the-air Broadcast Viewers*, August 11, 2004, MB Docket 04-210.

<sup>10</sup> Only 28 million unwired (OTA) sets are operating in the nation's 92.3 million households subscribing to cable or DBS, according to NAB/MSTV data. See NAB/MSTV, Comments, *supra* note 8.

## ***Options for Making Consumer Subsidy Generally Available***

### **1. A consumer mail-in rebate**

- Advantages: Rebate forms can be used to limit eligibility – or limit the number of subsidies per household –by tracking consumer information.
- Disadvantages: Consumers must pay up-front before getting a refund, which disproportionately impacts low-income households; perception that the paperwork required for a rebate is “red tape:” difficult to limit to low-income households without increasing administrative costs.

### **2. A qualified retailer rebate**

- Advantages: Consumers are not required to pay anything up-front; “free” converter eliminates “red tape” for the customer, reduces administrative costs and enhances satisfaction with process
- Disadvantages: More difficult to limit the eligibility, or number of converter subsidies, by household (individuals acquiring converters from multiple stores).

### **3. A refundable tax credit (refund occurs whether there is a tax liability or not)**

- Advantages: Easier to confer a means-tested subsidy; reduces fraud by linking to consumer information; administratively efficient if done during a single tax year.
- Disadvantages: Lower take-up rate possible among low-income households who lack easy access to tax information, or do not file taxes at all; substantial time-delay between purchase and the tax refund.

## ***Cable and DBS Subscribers Viewing on Analog TVs will not Lose Access to Local Channels– Down-conversion Maintains the Status Quo***

- Congress should allow cable companies to down-convert digital broadcast signals to analog, so that viewers watching today on analog TVs will not be disrupted by the broadcasters' DTV transition. This simply maintains the status quo.
- As long as cable and DBS operators ensure their customers access to all local broadcast stations, whether the format is digital or analog is best decided by the consumer marketplace, rather than by government.
- Forcing cable companies to transport two copies of the same programming – one in analog and one in digital format ("dual must-carry") – is hugely wasteful of valuable cable capacity that could be used to offer enhanced broadband Internet services and alternative programming sources.
  - The cable capacity used to transport a single analog channel can be used to carry 20 or more digital standard definition channels.<sup>11</sup>
  - The cable capacity used to transport all analog channels in a market could instead greatly increase the speed of cable broadband Internet service, helping the U.S. to catch up and surpass broadband rates achieved in South Korea, Japan, and other countries.
- Imposing a "carry one station, carry all" requirement on cable down-conversion to analog forces cable companies to choose between carrying both analog and digital signals or providing customers with a set-top box capable of converting digital to analog.
  - For a *short* period of time, "carry one, carry all" may be a reasonable compromise between protecting cable TV viewers with analog TV sets and minimizing the waste from devoting a huge amount of cable broadband capacity to carrying dual streams of the same programming.

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<sup>11</sup> This estimate is likely to be conservative because it assumes no technological progress. For example, it relies on old digital video compression technology (MPEG2) versus much more efficient newer technologies, such as Apple's H.264 (a variation of MPEG4 used in Quicktime 7), and Microsoft's VC-1 (used in Windows Media Player 9). For a previous technical analysis of cable operators' ability to carry broadcast signals, see NAB et al., Reply Comments in FCC Docket No. 98-120, In the Matter of Carriage of Digital Television Broadcast Signals, August 17, 2001.

## The Importance of Reallocating Airwaves from Broadcast to Broadband

- The U.S. has fallen from 3<sup>rd</sup> to 16<sup>th</sup> in broadband adoption.
- ITU and OECD officials attribute the U.S. slide to the lack of competition in the broadband marketplace and the absence of public policy that promotes broadband.
- Industry studies show that TV band frequencies (700 MHz band) propagate through obstacles in a manner that can reduce the deployment costs for wireless networks by a factor of three or more compared to cellular bands above 2 GHz.
- Far more homes and small businesses now rely on wireless Internet services delivered over *unlicensed* spectrum, while very few last-mile broadband connections (and zero municipal wireless hot zones) have been deployed on licensed bands.
- Thousands of mostly rural commercial internet service providers (WISPs), and dozens of municipalities and non-profit community networks, already use the crowded 2.4 GHz *unlicensed* band to deploy wireless connections to hundreds of thousands of businesses and consumers.
- The WiFi band (2.4 GHz) is small, uneconomical and shared with 200 million consumer devices, from microwave ovens to cordless phones. Opening returned (and unassigned) TV band spectrum for WISP and community access on an unlicensed basis will greatly stimulate broadband deployment, rural access and growth in America's high-tech sector.
- One economic study estimates the increase in consumer welfare from wireless services associated with a 60 MHz increase in spectrum will be \$20-to-24 billion per year, a gain to society far greater than the auction value to government.<sup>13</sup>

**Table 4: International Broadband Adoption: Selected Rankings<sup>12</sup>**

Rank	Country	Broadband subscribers per 100 inhabitants
1	South Korea	24.9
2	Hong Kong	20.9
3	The Netherlands	19.4
4	Denmark	19.3
5	Canada	17.6
16	United States	11.4

**Table 5: Vast Wasteland: High Power Broadcast Spectrum Utilization Rate As a Share of 210 U.S. TV Markets**

Channel	(%) Allocation	(%) Viewing Households
52	11.0	28.7
53	11.9	28.1
54	9.1	19.0
55	11.9	20.6
56	12.9	32.6
57	12.9	25.0
58	11.9	20.0
59	9.1	20.6
60	3.3	15.6
61	6.2	24.0
62	5.2	20.5
63	1.9	3.7
64	3.8	7.5
65	3.3	12.7
66	5.2	18.6
67	4.3	15.3
68	4.8	21.1
69	1.9	5.1
<b>Average</b>	<b>7.3</b>	<b>18.8</b>

### *Two ways the DTV Transition can stimulate unlicensed wireless broadband deployment, particularly in rural areas:*

- First, from the 60 MHz (10 channels) in the 700 MHz band now designated for auction and exclusive licensing, the FCC should be directed to reallocate 20 MHz for unlicensed use under Part 15 rules.
  - In the low-frequency, high-penetration frequencies below 2 GHz ("beachfront spectrum), 26 MHz is currently allocated for unlicensed devices versus roughly 290 MHz for licensed cellular services.<sup>14</sup>
- Second, the bill should direct the FCC to complete its rulemaking (04-186) by January 2006, and open unassigned TV channels for unlicensed public access, subject to rules designed to avoid risk of harmful interference to the dwindling number of over-the-air DTV consumers.

<sup>12</sup> International Telecommunications Union, cited in *National Journal*, available at: <http://www.njtelecomupdate.com/lenya/telco/live/tb-QGBX1114459808856.html>

<sup>13</sup> Thomas W. Hazlett and Roberto E. Muñoz, "A Welfare Analysis of Spectrum Allocation Policies," (New York: Manhattan Institute for Policy Research, June 10, 2004), p. 17. Cited in Coleman Bazelon, "Analysis of an Accelerated Digital Television Transition," (Washington, DC: Analysis Group, May 31, 2005), p. 11.

<sup>14</sup> In the nearby but less valuable 2-3GHz band, the ratio of licensed cellular to unlicensed spectrum is less than the ratio below 2GHz, but still more than two to one. The unlicensed WiFi band at 2.4GHz has 83.5MHz of spectrum, but the licensed cellular bands, mostly at 2.5GHz, occupy more than 200 MHz of spectrum.

## ***Options for a ‘Fade to Black’ Switch-Over to Digital-Only Broadcasting***

A rapid transition is possible with consumer subsidies and intensive consumer education. In Berlin, Germany, the total time from enactment of legislation to the end of analog transmission was 18 months. If a simultaneous, nationwide end to analog broadcasting would delay the reallocation of channels 52-69 frequencies beyond 2007, the following options could be used to phase in the transition more rapidly:<sup>15</sup>

1. **Rolling Transition by Band: 60s Channels first, then 52-59, then the remainder below 52**
  - Channels 52-69 are sparsely populated, with each channel used in only 7% of the nation’s 210 TV markets (on average)
    - There are 94 analog and 19 digital stations operating on channels 60-69
    - There are 98 analog and 141 digital stations on channels 52-59
  - Benefit: 700 MHz spectrum is reclaimed earlier for vital public safety and broadband services
  - Disadvantage: Likely early loss of some popular (network) analog stations if they cannot be relocated temporarily below channel 52
    - There are 7 analog top-4 network stations on channels 60-69 and 18 on channels 52-69
2. **Rolling Transition by Market: Beginning with New York City, and continuing with markets with below average OTA reliance first**
  - According to the Television Bureau of Advertising, 30 markets have less than 10 percent or fewer households that rely on over-the-air reception.
  - Some of the most populous markets such as Atlanta, New York City, Philadelphia and San Diego only have about 10% of households with exclusive OTA televisions<sup>16</sup>
    - After 9/11, New York City lost most analog broadcast TV service. Even today, it has not been fully restored
  - Benefit: Only markets with low OTA reliance are affected early on, while early experience helps educate and reassure consumers.
  - Disadvantage: 700 MHz spectrum remains encumbered, especially in some populous markets such as Dallas, Minneapolis, and Salt Lake City

## ***Consumer Education, Outreach and Analog TV Warning Labels Are Critical to a Smooth, Rapid Transition***

Consumers need time to be educated about the need to acquire a converter box or new DTV set – just as manufacturers will need time to ramp up to meet the high-volume/low-cost demand for converters. Ideally, a one-year education period should precede a one-year transition period during which consumers will be eligible for converter subsidies. Although this would be longer than the Berlin transition, a similar consumer education effort should include:

- Mandatory warning labels on all analog sets sold after the onset of the transition period;
  - Another option is to require manufacturers selling analog TV sets after the enactment of DTV legislation to include digital-to-analog converter functionality within the set. This option is being considered for the Senate draft of DTV legislation by Commerce Committee Chairman Stevens (R-AK).<sup>17</sup>
- An FCC outreach campaign, including a letter to every household with contact information for a consumer website and telephone hotline;
- Mandatory carriage of Public Service Announcements by broadcasters (both TV and radio).

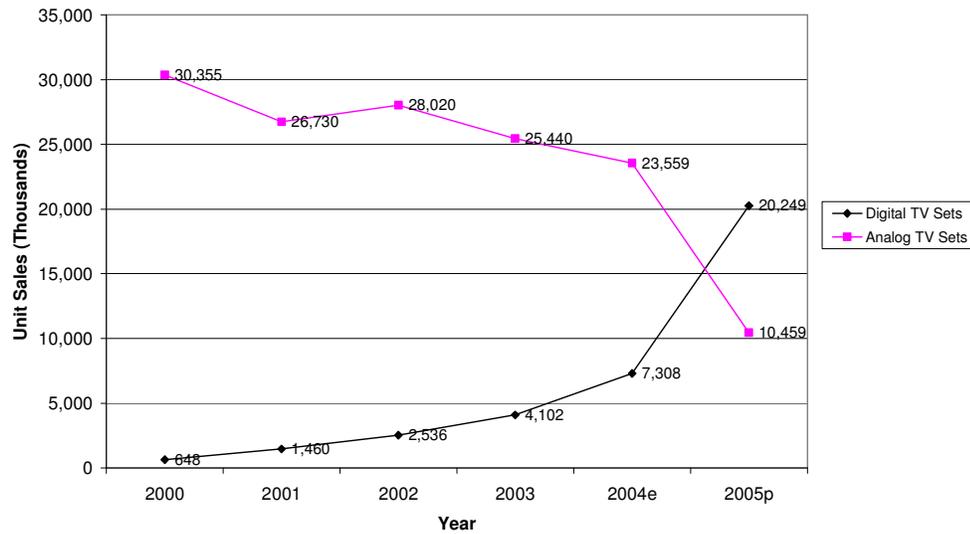
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<sup>15</sup> For a discussion of options as to the nature of the switch-over, see FCC MB Docket No. 04-210, *Media Bureau Staff Report Concerning Over-the-Air Broadcast Viewers*, pp. 14-22

<sup>16</sup> APTS cited in *Ibid*, p. 6

<sup>17</sup> See Ted Hearn, “Stevens: Bundle Set-Tops with Analog TVs,” *Multichannel News*, May 25, 2005.

**Chart 3: Unit Sales of Analog and Digital Television Sets: 2000-2005**



Source: CEA Market Research Report 2005

***Even if Broadcasters Return their Second Channel, the DTV Transition has already given them a Windfall***

- Broadcasters have already received a very valuable expansion of their license rights at no cost.
  - Broadcasters’ analog licenses permit the right to transmit a single stream of free OTA programming – with no excess capacity or flexibility.
  - A DTV license is far more valuable: it allows broadcasters to multi-cast from six to as many as 20 program streams (in the future) within a 6 MHz TV “channel.” DTV license holders also have the flexibility to lease out, or use for non-broadcast purposes, 85% of their channel capacity, which they have received for free.
  
- The DTV transition has also given broadcasters greatly expanded service areas, as broadcasters used the DTV transition to expand their contour lines.
  - Using FCC data, NAF has demonstrated that the DTV transition has allowed broadcasters to greatly expand both their geographic and population coverage areas – occupying additional adjacent guard band spectrum with an estimated market value of \$6 billion.<sup>18</sup>
  
- Broadcaster benefits from the FCC’s DTV industrial policy also include:
  - Not being required to broadcast in high-definition, even if broadcasters provide a high-definition signal for cable/satellite retransmission
  - Mandatory broadcast DTV tuners in all new TV sets, even though most cable subscribers have no intention of viewing OTA – a mandate CEA has called a “multi-billion dollar TV tax on American consumers.”<sup>19</sup>
  - Mandatory broadcast flag detecting equipment in all consumer electronics hardware that might store or retransmit broadcast DTV content
  - State sales tax exemptions on DTV production equipment
  - U.S. government funds to promote the ATSC DTV standard in foreign countries.

<sup>18</sup> See NAF, et al., Economic and Legal Reply Comments in FCC Docket No. 04-186, In the Matter of Unlicensed Operation in the TV Broadcast Bands, January 31, 2005.

<sup>19</sup> Cited in Lennard G. Kruger, “Digital Television: An Overview,” (Washington, DC: Congressional Research Service, October 7, 2004), p. 13

## *Multi-Channel Must-Carry would be an Additional Subsidy Unrelated to the Success of the DTV Transition*<sup>20</sup>

- The U.S. stands apart from the developed world in giving commercial broadcasters free must-carry rights *and* the option to negotiate payments from cable and DBS systems (retransmission consent).<sup>21</sup>
- While broadcasters lobby for multicast must-carry rights, they oppose any expansion of their public interest programming obligations.
- In exchange for their far more valuable DTV licenses, Congress could require broadcasters to air a minimum of three hours per week of local civic or electoral affairs programming.<sup>22</sup> Studies have shown the many ways in which broadcasters fail to deliver meaningful coverage of local civic and electoral affairs:
  - Local public affairs shows account for less than one half of one percent of all programming on local television stations, according to a 2003 study.<sup>23</sup>
    - A study released this month showed that only 0.3% of digital broadcast programming focused on local public affairs – compared with 8.8% for reality shows, 6.9% for paid programming and 2.5% for celebrity news shows.<sup>24</sup>
  - Elections below the presidential level receive meager coverage. During several weeks leading up to the 2002 midterm elections, most newscasts on local TV stations contained virtually no election coverage at all.<sup>25</sup>
  - While cutting campaign coverage, broadcasters are airing more – and making more money from – paid political advertising than ever before. In the 2004 elections, candidates, parties and independent groups spent \$1.6 billion on TV ads in the nation's 100 largest media markets—more than double the \$771 million spent in 2000.<sup>26</sup>
- Alternatively, commercial broadcasters could pay an annual spectrum user fee to finance a trust fund for the digital future of public broadcasting and educational content more broadly.<sup>27</sup>
  - A more detailed trust fund proposal funded from earmarked spectrum revenue – the Digital Opportunity Investment Trust (DOIT) Act – was just introduced in Congress.
    - The **DOIT Act** calls for the creation of a trust to finance, among other things, the digitization of materials stored in museums and libraries, as well as research and development to improve digital educational content, media and methods.

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<sup>20</sup> See: J. H. Snider, “Should DTV Must-Carry Be Expanded, Sunset, Or Preserved As-Is?” (Washington, DC: New America Foundation, May 2005).

<sup>21</sup> Ibid, Appendix A: A Comparison of European Union and U.S. Must-Carry Regulations  
Senate Commerce Committee Chairman Ted Stevens (R-AK) recently announced he would hold hearings on retransmission consent. “None of the big-four networks are carried by cable through must-carry,” he told the American Cable Association this month. See Drew Clark, “Stevens Pledges Hearings on Retransmission Consent,” *National Journal’s Tech Daily*, May 18, 2005.

<sup>22</sup> The Public Interest, Public Airwaves Coalition (PIPAC), of which the New America Foundation is a member, has proposed to the FCC a quantifiable and verifiable public interest test. For more information, visit the Campaign Legal Center’s PIPA Coalition website at: <http://www.ourairwaves.org/fcc/>.

<sup>23</sup> See “Broadcasters ‘Black Out’ Public Affairs Programming, New Study Finds,” Alliance for Better Campaigns Press Release, October 22, 2003. Available at: <http://www.bettercampaigns.org/press/release.php?ReleaseID=50>

<sup>24</sup> See “Broken Promises: How Digital Broadcasters are Failing to Serve the Public Interest,” (Washington, DC: Media Policy Program of the Campaign Legal Center, May 23, 2005).

<sup>25</sup> See “Most Local TV Newscasts Are Ignoring the 2002 Mid-Term Elections,” Alliance for Better Campaigns Press Release, October 16, 2002. Available at: <http://www.bettercampaigns.org/press/release.php?ReleaseID=37>

<sup>26</sup> See “Political Ad Spending on Television Sets New Record: \$1.6 Billion,” Alliance for Better Campaigns Press Release, November 24, 2004. Available at: <http://www.bettercampaigns.org/press/release.php?ReleaseID=65>

<sup>27</sup> Former FCC General Counsel Henry Geller proposed this in a paper published by the New America Foundation. See Henry Geller and Tim Watts, “The Five Percent Solution: A Spectrum Fee to Replace the ‘Public Interest Obligations’ of Broadcasters,” (Washington DC: New America Foundation, May 2002).

- The DOIT Act includes an annual 21% set-aside to public broadcasting entities for digital educational content development.<sup>28</sup>
- In the long-term, once Internet television takes off, Congress should sunset industry-specific must-carry and replace it with a policy of must-carry for all, or what is conventionally called “open access.”<sup>29</sup>

***The Broadcast Flag not only would not Speed the DTV Transition, but is Extremely Cumbersome and Inefficient***

- In 2003, the FCC adopted a rule requiring certain consumer electronics equipment to support “broadcast flag” technology<sup>30</sup> This technology, embedded in DTV broadcast signals, prevents the copying and distribution of recorded broadcast content over the Internet, and thus drastically curtails the recording and later viewing of free TV without the broadcasters’ permission.
- The broadcast flag has been widely criticized, and the FCC’s rules were recently struck down by the U.S. Court of Appeals as exceeding the regulator’s rulemaking authority.<sup>31</sup>
- The broadcast flag would require the creation of a huge new FCC bureaucracy to approve almost every consumer electronics hardware and software product sold.
- A far more elegant solution is direct encryption of the broadcast signal, but that would undermine both America’s 50-year old policy of free TV and the huge subsidies, including free spectrum, that have been justified as supporting free TV.

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***For additional free background on spectrum policy:***

[www.spectrumpolicy.org](http://www.spectrumpolicy.org)

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<sup>28</sup> See the Digital Opportunity Investment Trust Act, introduced in the Senate (as S.1023) on May 12, 2005 by Senators Dodd (D-CT), Snowe (R-ME), Durbin (D-IL), and Burns (R-MT), and in the House (as HR.2512) on May 19, 2005 by Representatives Regula (R-OH), Markey (D-MA), and Gillmor (R-OH).

<sup>29</sup> See Snider, *supra* note 20.

<sup>30</sup> FCC Report and Order and Further Notice of Proposed Rulemaking in the Matter of Digital Broadcast Content Protection, November 4, 2003.

<sup>31</sup> Opinion of the U.S. Court of Appeals, District of Columbia Circuit, in *American Library Association v. FCC*, Docket No.04-1037, May 6, 2005.