

**Statement of K. James Yager
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**On behalf of the National Association of Broadcasters and
the Association for Maximum Service Television, Inc.**

**Hearing before the House Committee on Energy and Commerce
Subcommittee on Telecommunications and the Internet**

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Good morning Chairman Markey, Ranking Member Upton, and Subcommittee Members, my name is K. James Yager. I am the Chief Executive Officer of Barrington Broadcasting, which owns and operates 23 television stations in medium and small markets across the country. I am also a member of the Board of Directors of the National Association of Broadcasters (NAB) and of the Association for Maximum Service Television, Inc. (MSTV), on whose behalf I am testifying today. NAB is a trade association that advocates on behalf of more than 8,300 free, local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the Courts. MSTV is a trade association of local broadcast television stations committed to achieving and maintaining the highest technical quality of the local broadcast system.

I'd like to talk about three things today: the purpose of the transition to digital television or DTV; the progress so far in bringing about this transition; and what still needs to be done to complete the transition and minimize disruption to viewers and to others. These past efforts and future responsibilities cut across industries and government bodies including Congress, the Federal Communications Commission (FCC), and the National

Telecommunications and Information Administration (NTIA). The broadcast industry is committed to continuing its cooperation with all stakeholders as we move towards February 17, 2009 and beyond. Broadcasters are committed to a successful digital television transition, and we are doing all we can to make it as seamless as possible for all consumers. Our primary goal is not to let any analog over-the-air television go dark on February 17, 2009.

I. PURPOSES OF THE DTV TRANSITION

The digital transition has been a monumental undertaking involving the government and various industries, the intention of which was and is to make efficient use of our valuable spectrum and enable free, over-the-air local television stations to provide the highest quality service to American consumers. Over the past twenty-five years it has become clear that all communications services and all media are moving to digital technologies, and the public's free television service has to do the same.

Congress, which held its first hearing on high definition in 1981, the FCC and the industry have agreed that the transition is in the public interest. Digital technology offers service of far higher quality -- much better pictures, better sound and screen dimensions far better suited to the human eye. The new technology also offers the prospect of additional programming services all within the same 6MHz bandwidth that each television station had always operated on. As digital technology has continued to advance, the high definition service it offers not only improves quality and reliability, but also the opportunity for beneficial multicast programming.

Perhaps most significantly, because the digital technologies are more robust than the analog technology they are replacing, stations can be packed closer together without causing destructive interference to the public's over-the-air service. This makes it possible after the transition to reduce the amount of spectrum needed for over-the-air television stations. Some of

the left-over or returned spectrum will be used for public safety needs -- needs we have all become acutely aware of in light of the events of September 11, 2001. Some of the freed spectrum will be auctioned for other innovative uses at substantial benefit to the U.S. Treasury.

II. IMPLEMENTATION OF THE DTV TRANSITION TO DATE

As you all know, this is an effort that cuts across the government and industry -- several industries in fact -- and it requires ingenuity, cooperation and very large investments of time and money. The interest of American consumers must remain paramount in all the various stages of this effort.

The transmission standard

A first step was to devise, test and adopt a new transmission technology. At one point there were 24 candidate systems. The industry -- NAB, MSTV, the networks, the Consumer Electronics Association (CEA), PBS and eventually Cable Labs -- built and operated a testing lab that evaluated the various competing transmission technologies using the most sophisticated and rigorous testing facilities and procedures ever applied to television service. The industry testing organization worked closely with the Advisory Committee on Advanced Television Systems, established by the FCC under the Federal Advisory Committee Act. That Committee represented the broadest possible set of constituencies. Out of that process emerged the digital transmission standards that the FCC eventually adopted and that accommodated 18 different digital formats for maximum flexibility.

Even this massive undertaking could not develop a technology incorporating high definition service over the then current analog facilities at either the transmission end or the reception end of the distribution chain. Instead, it became clear that in order to implement the

transition, a new digital transmission system had to be built and then operated in parallel with the analog transmission system already in place. This meant a second set of towers, antennas, transmitters, etc. for each television station, and new television sets for each consumer. It meant also that programming would have to be created in high definition, leading to replacement of production facilities and equipment eventually across the board.

The DTV channel allotment challenge

From the start, the broadcast industry worked hand-in-hand with the FCC to find a way to assign digital television channels to all existing television stations -- effectively doubling the number of stations while utilizing no more spectrum than what existed in the then current analog television band. The goal was at least to replicate stations' analog service areas and in a substantial number of cases to expand their service areas, while protecting the public's existing television service from interference. This was a complex but essential step to bringing the benefits of DTV to the American public. About a decade ago, after a long period of highly sophisticated engineering work and broadcast industry consensus building, MSTV, NAB and other broadcast organizations submitted a proposed DTV Table of Allotments to the FCC that would accommodate all existing broadcasters during the transition. In April 1997, the FCC adopted its initial DTV Table with only limited adjustments. Even though spectrum congestion meant that many broadcasters would suffer some interference on either their current analog or DTV channels, the industry stood behind that Table because it was fair, principled and critical to moving forward with the DTV transition. Indeed, out of the 1600 broadcast stations impacted by the new DTV Table, only one party challenged it, and did so unsuccessfully.

That was the table of allotments for side-by-side digital and analog operations on separate channels. The next step was to devise a table reflecting the completion of the transition,

when analog channels had been given back to the Commission, the amount of broadcast TV spectrum had been shrunk and only digital channels would be operating. To respond to that challenge, in May 2004 after more than a year of work, MSTV submitted to the FCC an industry consensus plan, this time for assigning final DTV channels to all full power television stations and clearing 18 television channels from 52-69 for public safety and other commercial uses that were to be auctioned.

This industry proposal was designed to ensure an orderly, logical and principled channel election process that would promote maximum digital service to the public, preserve and enhance viewers' existing television service in the digital age, and fulfill the promise of DTV that so many have heavily invested in. The industry worked closely with the FCC to refine this channel election process, and it proceeded smoothly and successfully, resulting in the proposed final DTV Table now under consideration by the FCC. Because of this partnership between the broadcast industry and the FCC, the table is set to successfully migrate our full power television service to digital -- while at the same time returning 30 percent of the existing analog television band, worth billions of dollars, for other uses, particularly for public safety.

Though the basic allotment framework is sound and huge strides have been made in implementing it, much remains to be done with respect to moving to the new digital channels and turning off the old analog channels in a manner that will avoid viewer disruptions.

Construction of stations' DTV facilities

Beginning in the late 1990s, stations began to construct and turn on their DTV facilities. For stations, this was a lonely and expensive experience. Very few viewers had HDTV television sets that would enable them to receive the stations' HDTV service. In fact, in the Washington area there was a small network of viewers who had each others' telephone

numbers and would exchange information about digital television. There was also very little high definition programming available to transmit.

The Advisory Committee on Advanced Televisions Systems had estimated that it would cost each station approximately \$10 million to make the full facilities transition -- a cost that is similar in large markets and small. The tragedy of 9/11 severely delayed the build-out in New York, and a protracted zoning battle in Denver had a similar consequence. International coordination issues slowed the build-out in areas near the Canadian and Mexican borders. In numerous other markets, other local issues had to be overcome.

Despite these obstacles, almost all stations have constructed and are operating their digital facilities. As of February 28th, 1,599 out of 1732 FCC-licensed full-power television stations were providing programming in digital. Broadcasters have spent nearly \$5 billion upgrading their transmissions systems for digital broadcasts. Of those left, many have specific technical hurdles – for example, the delay on the construction of the Freedom Tower in New York City. Hundreds of television stations have already begun to use their digital multicast channels to provide news and local programming, weather, sports, and foreign language programming, and all of the major television broadcast networks now provide high-definition programming.¹

The costs to stations of the digital transition continue today. Broadcasters have constructed and put on the air their digital transmission facilities, but a second wave of costs to convert local programming and all other station equipment to digital is just beginning. In

¹ Twelfth Annual Report, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming*, MB Dkt. No. 05-255 (rel. March 3, 2006), at para. 17.

addition, over the last ten years, stations have been incurring a double set of operating costs due to transmitting in both analog and digital, while no additional revenue has been generated. The following chart shows that, at most, digital television revenues in 2005 constituted 0.2 percent of a broadcast station's entire revenues:

Digital Broadcast Operations Revenue²

Includes affiliated stations: ABC, CBS, FOX, NBC

Market Size	2005 Average Dollar Amount	% of Net Revenue ³
All Affiliate Stations	\$6,455	0.0%
1-25	\$2,891	0.0%
26-50	\$8,982	0.0%
51-75	\$13,265	0.1%
76-100	\$869	0.0%
101-125	\$13,675	0.2%
126-150	\$3,171	0.1%
151-175	\$1,158	0.0%

The costs of the DTV transition, however, are not only on broadcasters.

Consumers too must purchase digital televisions or converter boxes for their current analog television sets in order to receive the clearer pictures and other benefits that digital offers. NAB

² Data derived from the 2006 NAB/BCFM Television Financial Survey database. Digital Broadcast Operations Revenue is defined as any revenue derived from digital broadcast operations. Any multicast advertising revenues are included.

³ Net Revenues is defined as a total of gross advertising revenues, plus network compensation, plus trade-outs and barter, plus digital broadcast operations revenue, plus other broadcast-related revenues minus agency and rep commissions.

and MSTV have been particularly concerned that consumers should have a cost effective means of receiving digital signals. To this end, in June 2005 MSTV and NAB sought proposals from electronics manufacturers to develop a prototype digital converter box that would achieve high quality, low cost and enhanced ease of use. These goals were quantified in detail in the Request For Quote issued by NAB and MSTV in mid 2005. After a thorough evaluation process, NAB and MSTV awarded contracts to LG Electronics/Zenith and Thomson/RCA in the fall of 2005. These companies' completed converter boxes underwent laboratory and real-world testing during 2006.

The results of the MSTV/NAB converter box project demonstrate several points. First, the minimum technical specifications proposed by NAB/MSTV/CEA and now adopted by NTIA are clearly achievable in practical products designed to be amenable to production in mass manufacturing quantities. Further, the project results provide tangible evidence that the minimum performance recommendations are a practical performance floor but not a technical ceiling -- a high-quality, low-cost converter box can be built with measured performance that significantly exceeds those recommended levels and the levels specified in the ATSC A/74 Recommended Practice on Receiver Performance. The range of measured performance results for the prototype converter boxes developed by Thomson and LG, compared with A/74 levels, are available on the MSTV website at:

<http://www.mstv.org/docs/MSTVNAB%20prototypes%20performance.pdf>.

The importance of this effort to develop practical converter boxes became ever clearer in early 2006, when Congress passed the Digital Television Transition and Public Safety Act of 2005 (P.L. 109-171) that imposed a February 17, 2009, cut-off date for analog television transmissions and established a converter box program to address the needs of owners of analog

sets not connected to cable or satellite. Congress charged NTIA with administering the converter box program, through which consumers could obtain coupons to offset the costs of purchasing converter boxes. An initial sum of \$990 million was allocated, with an additional \$510 million available if the initial funding is insufficient. Congress specified that not more than \$5 million of the funds is to be spent on consumer education about the digital transition and the converter box program.

III. ACHIEVING A SUCCESSFUL DTV TRANSITION

Broadcasters have supported the hard give-back date for analog channels, and we are taking steps to ensure that the transition runs smoothly. A great deal needs to be done by the FCC, NTIA and the industry between now and February 2009 to facilitate a consumer-friendly transition. Let me address a few of those things.

First, significant technical and logistical challenges remain in getting every station to its final digital channel.

Of the 1600 DTV stations on the air today, some 600 must move to a new channel as part of the process that will free up 108 MHz of spectrum for critical public safety communications needs and for commercial uses to be auctioned. But in many of those 600 cases, the station's final DTV channel is presently occupied by another station's analog or transitional DTV station, creating a game of "musical chairs" in many parts of the country. Some states, such as Michigan, Texas, California, and Florida, have a particularly high number of stations facing these engineering and logistical challenges.

If Station X has to move to a particular DTV channel and it is currently occupied by a station that has to move to another channel, also currently occupied, and so on, one can

readily see the domino effect of potential problems. All it will take is a handful of stations that are unable to achieve their digital moves in a timely fashion, and, as a consequence, scores of station moves could be stalled, to the ultimate detriment of a smooth and timely transition. Changing to a new digital channel is not merely a matter of a station turning a switch. Antennas have to be installed or realigned and tower crews, in short supply, have to be appropriately deployed. And the FCC will have to issue construction permits, conforming license modifications and special temporary authorizations to enable these logistics to be worked out. If we are to meet the deadline, this work must start months and months ahead of February 17, 2009.

NAB and MSTV have urged that, as soon as possible, the FCC issue an Order adopting its Final DTV Table of Allotments, which should also include procedures to expedite the issuance of final DTV construction permits for those stations relocating to new channels. Such prompt action will provide the regulatory certainty essential to implementing the final channel relocation process.

The broadcast industry -- both commercial and public stations -- must do its part as well. To that end, MSTV has organized a "Rubber Meets the Road" campaign in coordination with state broadcaster associations. Through a series of in-person meetings across the country, the campaign seeks to educate and assist local broadcasters in developing transition plans that take into account in-market relocations and those of stations in adjacent markets. Stations are also encouraged to make early plans for the necessary equipment and tower crews and to coordinate channel changes with cable and satellite providers. The funding of public station channel moves may also be particularly problematic with those delays affecting other stations whose channel moves are dependent on theirs.

The process of transitioning to digital-only operation on stations' final DTV channels will be complex, requiring careful and prompt planning and coordination by both the industry and the FCC. The industry has pledged to work collaboratively with the FCC on these and other initiatives, which will pave the way for a timely and efficient relocation of stations to the final DTV allotment table.

Second, consumers should not be left with television sets that don't work after the digital transition.

Today, 19.6 million households, or approximately 17 percent of households, receive only free, over-the-air television on analog sets in their homes. A total of 34.5 million households receive some over-the-air programming on analog sets, with other sets in their homes connected to cable or satellite. This means that approximately 69 million television sets will potentially be impacted by the digital transition. It is no small task to assure that these viewers are not disenfranchised by the February 17, 2009 cut-off date.

The answer to the consumer transition lies in the converter box program Congress mandated in the Digital Television Transition and Public Safety Act of 2005. As you are aware, on March 13, 2007, NTIA published Final Rules to implement the Congressional coupon program for digital converter boxes to enable continued reception of television signals by analog sets after February 17, 2009. The Coupon-Eligible Converter Box (CECB) was the name chosen by NTIA for this unit.

The NTIA adopted the technical performance parameters for the converter boxes recommended jointly by NAB, MSTV and CEA during the comment phase of the NTIA proceeding. See attached Comments of MSTV/CEA/NAB submitted to NTIA, Sept. 25, 2006. These include specifications in critical areas such as RF sensitivity, dynamic range, phase noise,

interference rejection, echo handling, PSIP processing and display, video and audio decoding, input/output requirements and energy consumption. In addition, the NTIA standard includes additional features in a permit-but-not-require category that can add important features such as “smart antenna” technology. However, NTIA’s criteria will not qualify boxes that go beyond the basic intended function of the converter boxes, such as digital or high definition outputs, integrated video displays, DVD playback and so forth.

It is significant that within days of the NTIA announcement of their Final Rules on digital converter boxes, both LG/Zenith and Thomson/RCA announced their intention to offer converter boxes for sale to the public in the early 2008 time frame.⁴ As well, Samsung Electronics, a major manufacturer currently offering HDTV set top box products, recently announced their intention to introduce converter boxes.⁵ Thus, a competitive marketplace for high quality digital converter boxes meeting the range of needs of consumers is reasonably assured. But, that step only assures that a high quality, consumer-product solution will be available.

Despite broadcasters’ support for many of the technical elements adopted by NTIA, NAB continues to have concerns with the eligibility rules under the coupon program. Under NTIA’s proposal, starting January 1, 2008, all U.S. households will be eligible to request up to two \$40 coupons to be used toward the purchase of up to two digital-to-analog converter

⁴ See John Eggerton, “NTIA Gathers Input on Converter Box Program,” *Broadcasting & Cable* (March 19, 2007); Deborah D. McAdams, “NTIA Seeks Converter Comments,” *TV Technology.com* (August 23, 2006), available online at http://www.tvtechnology.com/features/news/2006.08.23-n_NTIA.shtml.

⁵ Press Release, “Samsung Supports U.S. Commerce Department’s Final Rules for NTIA Digital-to-Analog Television Converter Coupon Program,” (March 14, 2007).

boxes. The program is divided into two phases. Under the first phase, the initial \$990 million is available for all households with over-the-air analog television sets.

If the initial \$990 million is used, NTIA decided to limit the eligibility of the remaining \$510 million exclusively to over-the-air-only television households. Broadcasters maintain that the goal of the transition should be to prevent any and all over-the-air analog television sets from going dark after February 17, 2009, and unfortunately this proposal does not achieve that objective.

Broadcasters believe that all consumers who have analog sets that rely on an over-the-air signal should have access to these coupons. This is particularly important because many of those who have over-the-air analog sets tend to belong to underserved communities. Low socioeconomic brackets, minorities, those living in rural areas, and seniors will all be disproportionately impacted by the transition. The NTIA coupon program, in particular, needs to be successful for these most affected groups.

Broadcasters are also concerned that there will not be enough money to adequately fund coupons for every analog over-the-air television. If there are approximately 69 million over-the-air televisions, it is clear that \$1.5 billion may not be sufficient to provide a coupon for each of these sets. NAB research shows that when asked, 25 percent of primary over-the-air consumers would opt for a coupon – but this number jumps to 33 percent once consumers learn something about the DTV transition. After a significant public awareness campaign, the percentage could go higher. As broadcasters and others begin to ramp up the public education effort, it is vitally important that the government be prepared to meet the consumer demand so no television goes dark.

Third, consumers must be informed that this transition is happening and must be educated about what steps to take.

Members of the public need to know what steps they must take so that their television sets don't "go dark" after the analog television cut-off, and they need and deserve other information about the transition as well. Unfortunately, many members of the public are inadequately informed or not informed at all as to what the DTV transition is and what it means for them. A recent NAB survey shows that a majority (56 percent) of over-the-air television viewers have never seen, read, or heard anything about digital television and the transition.⁶ With fewer than 700 days to go, only 10 percent of the respondents were able to guess the right year when analog television transmissions would end.⁷ Indeed, at this point, only 1 percent to 3 percent have any idea that the transition will be complete by February 2009. In other words, we have a lot of educating to do – and broadcasters will do our part.

Congress provided \$5 million to NTIA for the purpose of consumer education in the Digital Television Transition and Public Safety Act of 2005.⁸ NAB is concerned that it will take more than the current level of funding to adequately ensure that the American public is aware of the impending transition and of what steps consumers need to take to navigate the transition. Without adequate consumer education, there is a serious risk that millions of

⁶ See Press Release, "Countdown to February 2009: Digital Television Transition (DTV) Coalition Pledges to Alert Consumers About Transition From Analog to Digital TV" (Feb. 28, 2007). See also Patrick Seitz, "End Is Near for Over-the-Air Analog TV, Group Warns; Poll: Many Viewers Unaware; As Digital Transition Looms, Industry Coalition Launches Consumer Education Push," *Investor's Business Daily* (March 1, 2007).

⁷*Id.*

⁸ Paul Gluckman, "Coupon Distribution to Start April 2008, NTIA's RFP Says," *Communications Daily* (Mar. 15, 2007). The FCC also has a consumer website available at <http://www.dtv.gov>.

households will be caught off guard -- and without access to over-the-air television -- when the transition occurs. For this reason, broadcasters and its Coalition partners are undertaking a broad and far-reaching education campaign in the hopes of not allowing any television to go dark.

NAB and MSTV, along with CEA, the Association of Public Television Stations, the Consumer Electronic Retailers Coalition and others, have formed a joint campaign to raise consumer awareness of the digital transition. It's called the Digital Television Transition Coalition, and it was formed because the responsibility for informing the public about what's happening and why cuts across industries. (See www.dtvtransition.org.) The Coalition currently has 25 member organizations, and we expect this number to grow.⁹ The Coalition, which intends to work closely with NTIA and the FCC, will launch marketing and public education efforts (including paid and earned media placements) to convey accurate, consistent and needed information to the public.

In addition, NAB has formed a Digital Television Transition Team to spearhead the industry's efforts and to work with Congress, the FCC, the NTIA, and other industry and

⁹ Coalition members currently include: American Association of People with Disabilities (AAPD), Affinity Marketing, American Cable Association, American Legislative Exchange Council (ALEC), Association for Maximum Service Television, Inc. (MSTV), Association of Public Television Stations (APTS), Cisco Systems, Inc., Consumer Electronic Retailers Coalition (CERC), Consumer Electronics Association (CEA), High Tech DTV Coalition, Home Theater Specialists of America (HTSA), Information Technology Industry Council (ITIC), Leadership Conference on Civil Rights (LCCR), LG Electronics, National Alliance of State Broadcast Associations (NASBA), National Association of Broadcasters (NAB), National Association of Counties (NACo), National Cable & Telecommunications Association (NCTA), National Coalition of Black Civic Participation, National Grocers Association (NGA), Public Broadcasting Service (PBS), Samsung Electronics, Satellite Broadcasting and Communications Association (SBCA), TitanTV Media, Washington Urban League.

consumer groups to provide information about digital transition issues.¹⁰ Managed by a new Vice President of Digital Television Transition, with a full time media relations director, two directors of outreach, and a multimillion-dollar budget, this team will coordinate a national public affairs and consumer education campaign with the goal of ensuring that no consumer is left unprepared, by lack of information, for the end of analog broadcasting in February 2009. This new team will help coordinate the DTV Transition Coalition, described above, as well as manage NAB's own consumer outreach campaign.

Specifically, the NAB consumer education campaign has and will continue to utilize both survey research and focus groups to identify and market to those impacted by the transition. The campaign's media relations director will be making sure DTV has a presence in local, as well as national, publications and programming. With the help of local affiliates, NAB will spearhead a national speaker's bureau aiming for thousands of local speaking engagements nationwide on the transition. NAB will produce and distribute high-quality public service announcements for play on networks and local stations. Attached is a detailed draft of NAB's DTV consumer education campaign plan, which NAB expects to continue to evolve.

Fourth, viewers must be assured that they will receive from cable and satellite the quality of broadcast services that their sets are capable of receiving.

The guiding principle should be that, post-transition, all viewers with HDTV sets will receive HDTV service and all viewers with analog sets will receive analog service. This goal will be achieved in over-the-air homes because those consumers will have bought HDTV

¹⁰ Press Release, "NAB Announces Formation of Digital Television Transition Team" (Jan. 8, 2007).

sets or will have access to digital-to-analog converter boxes, if the NTIA's eligibility restrictions are liberalized.

Cable subscribers with HDTV sets should similarly have undegraded access to broadcasters' HDTV programming -- downconversion to a lesser format would squarely violate the statutory nondegradation requirement and unfairly deprive viewers of the full benefits of HDTV, after they have spent \$1000 to \$5000 for those sets in order to receive HDTV service. At the same time, cable operators must ensure -- consistent with the requirement in the FCC's rules that broadcast signals "shall be viewable via cable on all" subscriber sets -- that their subscribers with analog equipment do not lose access to their local stations as a result of the transition. The FCC has the authority and the obligation to make clear that cable and satellite must provide analog service to the analog sets owned by their subscribers. A cable system would have the flexibility to comply with this requirement by (a) sending two signals from its head-end -- a pass-through in HDTV of the digital signal and a digital signal downconverted to analog -- or (b) by installing downconversion equipment in individual subscriber homes. Congress should encourage the FCC to make this clear.

Fifth, the FCC should prohibit another form of cable degradation of broadcast signals, namely cable's stripping of broadcasters' multicast services.

From the beginning, Congress was aware of the capacity of digital technology to enable broadcasters to offer multicast services of potentially great benefit to the public. That potential has been shown to be even greater than first expected. About 800 television stations now offer multicast programming free to the public. These multicast services contribute to localism, provide news and information, cover local sports, provide network services otherwise unavailable in the market, make available outlets for local government and local educational

institutions, contribute to diversity and offer opportunities to minorities and for other niche programming. Clearly, the public – even those who only view television through cable – would be served by access to these new program streams. So far, however, many broadcasters have encountered resistance from cable operators who have denied carriage, delayed it, tried to add anticompetitive restrictions on carriage or used it as a bargaining chip in broader negotiations.

Stripping out these services violates at least two statutory provisions -- the prohibition against cable systems' degrading broadcast signals and the prohibition against cable systems' cherry-picking programs from a local broadcaster's program schedule -- and threatens the health and vitality of broadcast services for all viewers.

In the early days, some in Congress were concerned that broadcasters might provide multicast services *instead of* HDTV, but advances in compression technology make both possible and have resolved that concern. Congress has repeatedly directed the FCC to decide the issue of cable-stripping. Congress would not have given these directions if it believed that the FCC lacked the power to require multicast carriage.¹¹ Accordingly, the FCC should proceed promptly to prohibit cable and satellite from stripping multicast services from broadcasters' digital transmissions.¹²

¹¹ See Supplemental Submission by CBS and NBC Affiliate Associations, *Carriage of Digital Television Broadcast Signals: Amendments to Part 76 of the Commission's Rules*, CS Dkt. No. 98-120 (filed June 8, 2006).

¹² Satellite carriage should be subject to the same requirements, with the FCC empowered to implement different timing for their imposition based on satellite's more limited but growing spectrum capacity.

Sixth, the spectrum used to deliver the public's digital television service must not be compromised by the introduction of untested, interfering technologies.

With all the public and private resources invested over the past two decades in the digital transition, it must not be sacrificed, compromised or jeopardized by introducing into the television band unlicensed technologies that are untested and promise speculative benefits. NAB and MSTV, accordingly, commend the FCC for putting America's digital transition first by precluding the introduction of such devices until after the end of the transition. Even then, however, any new devices allowed in the band must not interfere with the public's free, local and universal television service.

NAB and MSTV understand and support the need to provide the opportunity for additional wireless broadband opportunities, especially in rural areas. We agree this goal can be accomplished without endangering millions of TV viewers and consumers, including through the careful introduction of fixed wireless services (*e.g.*, WISPs) in such areas. But use of the television spectrum for interfering mobile products could unfairly deprive consumers of the benefits of digital television.

IV. CONCLUSION

The promise of over-the-air digital television is being realized. Its benefits for the public are even greater than were anticipated. To make these benefits a reality, we must deal with the risks of consumer disenfranchisement and confusion. To address these risks:

- (1) industry and the FCC must press ahead with the complex and time-consuming task of completing the change-over to digital channels;

- (2) the government must create a converter box program so that all sets can receive broadcast service after the transition;
- (3) the government and the industry must intensify their efforts to educate the public about the transition;
- (4) after the transition, the FCC must prevent cable and satellite from degrading HDTV broadcast services to HDTV homes and must assure that analog sets in subscriber homes continue to receive analog-quality service;
- (5) the FCC must apply the statutory requirements against cable degradation and cherry picking of broadcasters' programming to prevent cable from stripping broadcasters' multicast services, and
- (6) the FCC should protect the digital transition and the public's post-transition digital service from the interference that unlicensed devices could cause.

Chairman Markey, Ranking Member Upton, and Members of the Subcommittee, thank you for inviting me to participate in this hearing, and I am happy to answer any questions.