Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
	)	
Second Periodic Review of the	)	MB Docket No. 03-15
Commission's Rules and Policies	)	
Affecting the Conversion	)	RM 9832
To Digital Television	)	
	)	
	)	

REPORT AND ORDER

Adopted: August 4, 2004 **Released: September 7, 2004**

By the Commission: Chairman Powell and Commissioners Copps, Martin, and Adelstein issuing separate statements.

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I. INTRODUCTION

1. With this Report and Order in our second periodic review, we resolve several issues important to the rapid conversion of the nation's broadcast television system from analog to digital television ("DTV"). The Commission conducts these periodic reviews of the progress of the digital conversion to make any adjustments necessary to our rules and policies to "ensure that the introduction of digital television and the recovery of spectrum at the end of the transition fully serves the public interest."[1] In our first DTV periodic review, begun in March 2000, we addressed a number of issues important to the transition.[2] In the *Notice of Proposed Rulemaking* in this second periodic review, we revisited several issues addressed in the first periodic review and sought comment on additional issues that we consider necessary to resolve in order to ensure continued progress on the digital transition.[3] We

[1] *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, 12 FCC Rcd 12809, 12856 (1997) ("*Fifth Report and Order*"), *on recon.*, 13 FCC Rcd 6860 ("*Service Reconsideration Order*"), *on further recon*., 14 FCC Rcd 1348 (1998) ("*Second MO&O on Recon. of the Fifth and Sixth R&Os" or "DTV Second MO&O"*), *recon. dismissed*, *Order*, 14 FCC Rcd 11572 (1999), *recon. dismissed*, *Order*, 15 FCC Rcd 4760 (2000).

[2] *Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, 16 FCC Rcd 5946 (2001) ("*First DTV Periodic Report and Order*"), *on recon*., 16 FCC Rcd 20594 (2001) ("*First DTV Periodic MO&O*"), *Second Report and Order and Second Memorandum Opinion and Order*, 17 FCC Rcd 15978 (2002) ("*DTV Tuner Order*") (addressing DTV receiver standards and labeling requirements), *Third Memorandum Opinion and Order on Reconsideration*, 17 FCC Rcd 18571 (2002) (denying a Petition for Reconsideration of the determination in the MO&O that DTV area expansion applications must protect certain earlier-filed NTSC applications).

[3] *Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television*, 18 FCC Rcd 1279 (2003) ("NPRM" or "*Second DTV Periodic NPRM*").

received numerous comments in response to our *NPRM*.[4]

2. In this Report and Order, we adopt a multi-step channel election and repacking process through which broadcast licensees and permittees ("licensees") will select their ultimate DTV channel inside the core (*i.e.,* channels 2-51). The process will start in November 2004 with licensees filing certain pre-election certifications. In December 2004, licensees currently with an in-core channel (whether one or two) will make their channel elections in the first round of elections. Licensees currently with only out-of-core channels (*i.e.*, channels 52-69), as well as licensees electing to be treated like them, will file elections in the second round, expected in July 2005. Licensees without confirmed elections from the previous two rounds will file elections in the third round, expected in January 2006. In a Public Notice released August 3, 2004, the Media Bureau implemented a freeze on the filing of certain TV and DTV requests for allotment or service area changes to facilitate the channel election and repacking process.[5] The freeze is described in section IV. A., *infra*.

3. We adopt the following replication and maximization protection deadlines:

- **July 1, 2005** – Use-it-or-lose-it deadline for DTV licensees affiliated with the top-four networks (*i.e.*, ABC, CBS, Fox and NBC) in markets 1-100. Those licensees that receive a tentative DTV channel designation in the channel election process on their current digital channel must construct full, authorized facilities. Those licensees that receive a tentative DTV channel designation on a channel that is not their current DTV channel must serve at least 100 percent of the number of viewers served by the 1997 facility on which their replication coverage was based.
- **July 1, 2006** – Use-it-or-lose-it deadline for all other commercial DTV licensees as well as noncommercial DTV licensees. Those licensees that receive a tentative DTV channel designation in the channel election process on their current digital channel must construct full, authorized DTV facilities. Those licensees that receive a tentative DTV channel designation on a channel that is not their current DTV channel must serve at least 80 percent of the number of viewers served by the 1997 facility on which their replication coverage was based.

4. In evaluating service areas we will consider the population served within the geographic area reached by a station's service area as defined under Section 73.622(d) less any portions of that area that receive interference from other stations. Stations failing to meet the replication/maximization requirements on their allotted DTV channels by our deadlines will lose interference protection to the unserved portions of their current DTV service areas, as well as to the equivalent unserved portion of their NTSC Grade B contours for stations using those channels for DTV service after the transition occurs. Those stations wishing to maximize their service area must meet the above requirements in order to "carry over" their maximized service area to their in-core assignment with a priority over Class A stations.[6] We adopt limited exceptions for certain stations with out-of-core DTV allotments and satellite stations, both of which may turn in their DTV allotments and "flash cut" to digital by the end of the transition without losing their replication/maximization rights. We do not adopt an intermediate signal

[4] A list of commenters is attached at **Appendix A**.

[5] The freeze includes applications to swap channels, but will not apply to proposals for negotiated channel election arrangements submitted as part of the channel election process, set forth in section IV.A., *infra*.

[6] *Establishment of a Class A Television Service*, 15 FCC Rcd 6355, 6379, ¶ 58 (2000) ("*Class A Order*"), *on recon*., 16 FCC Rcd 8244, 8269, ¶ 67 (2001) ("*Class A Recon*").

requirement, but retain the 7 dB increase in the principal community signal coverage required by December 31, 2004, for commercial stations and December 31, 2005, for noncommercial stations.

5. In this Report and Order, we also eliminate, for the time being, the requirement that broadcasters air on their digital channel the programming aired on their analog channel ("simulcasting"). We retain, however, the minimum digital operating hours requirement currently tied to the simulcast rule. We permit satellite stations to surrender their paired DTV channels and flash cut to DTV by the end of the transition. We are also reviewing the issues raised in the comments concerning the need for point-of-sale labeling for digital and analog televisions. We are monitoring retailer and manufacturer efforts to improve information provided to consumers and will address this issue in a future item. We adopt Program and System Information Protocol ("PSIP") and mandate its use by broadcasters.[7] We also adopt new rules and clarify existing rules to support the functioning of closed captioning and v-chip on digital televisions. We approve in principle the use of distributed transmission system ("DTS") technologies and defer to a separate "fast track" proceeding the development of rules for DTS operation and the examination of several policy issues related to its use.

6. Finally, we sought comment in the *NPRM* on how we should interpret certain portions of Section 309(j)(14) of the Communications Act, which requires the Commission to reclaim the 6 MHz each broadcaster uses for transmission of analog television service by December 31, 2006, unless an extension is granted pursuant to the criteria established in Section 309(j)(14)(B). Commenters made a number of suggestions regarding the interpretation of various aspects of Section 309(j)(14)(B). We are continuing to review these comments and to consider the issues raised in the *NPRM* regarding Section 309(j)(14) and plan to address these issues in the near future.

II. BACKGROUND

7. In January 2001, we released the *First DTV Periodic Report and Order* in which we made a number of determinations to further the transition. Among other things, we established channel election and interference protection deadlines. We also imposed a principal community coverage requirement that is stronger than the DTV service contour requirement adopted as an initial obligation in the *Fifth Report and Order*. This new principal community coverage requirement, which becomes effective December 31, 2004, for commercial stations and December 31, 2005, for noncommercial stations, was intended to improve the availability of service in the community of license and to prevent undue migration of stations from their communities of license.

8. In the *First DTV Periodic MO&O*, we revised a number of the determinations made in the *First DTV Periodic Report and Order.* To address broadcasters' concerns that they could not meet certain requirements in the *First DTV Periodic Report and Order*, we decided to allow stations to construct initial DTV facilities designed to serve at least their communities of license, while still retaining for the time being DTV interference protection to provide full replication at a later date.[8] We also

[7] *See* "Program and System Information Protocol for Broadcast and Cable," Advanced Television Systems Committee, Doc. A/65B, Rev. B to PSIP for Terrestrial Broadcast and Cable ("ATSC A/65B" or "PSIP") (Mar. 18, 2003).

[8] We did not, however, alter our decision to require stations to increase their signal strengths within their communities of license beyond those adopted as an initial requirement in the *Fifth Report and Order*. This principal community coverage requirement will become effective December 31, 2004, for commercial stations and December 31, 2005, for noncommercial stations.

determined that we would continue to provide DTV interference protection to the maximized service area specified in outstanding DTV construction permits for facilities in excess of those specified in the DTV Table of Allotments.[9] We temporarily deferred the replication protection and channel election deadlines established in the *First DTV Periodic Report and Order*. We stated, however, that in the second DTV periodic review we would establish a firm date by which broadcasters must either replicate their NTSC coverage or lose DTV service protection of the unreplicated areas, and by which broadcasters with authorizations for maximized digital facilities must either provide service to the coverage area specified in their maximization authorizations or lose DTV service protection to the uncovered portions of those areas. We also stated that we would establish a deadline by which broadcasters with two in-core allotments must elect which channel they prefer to use at the end of the transition. We stated that these replication, maximization, and channel election deadlines may be earlier than, but will in no event be later than, the latest of either the end of 2006 or the date by which 85 percent of the television households in a licensee's market are capable of receiving the signals of digital broadcast stations.

9. The reduced build-out requirements adopted in the *First DTV Periodic MO&O* allowed broadcasters to save both on construction and operating costs. In addition, we allowed DTV stations subject to the May 1, 2002, or May 1, 2003, construction deadlines to operate initially at a reduced schedule by providing, at a minimum, a digital signal during prime time hours, consistent with their simulcast obligations.[10] For broadcasters unable to complete even the minimum permitted facilities by the applicable deadline, however, we revised our rules to permit applicants to seek an extension of time to construct a digital television station based on financial hardship.[11] By permitting stations to elect a more graduated approach to providing DTV service, we allowed stations to focus their energies initially on providing digital service to their core communities, with the expectation that they would increase operating hours and expand their coverage area as the transition progresses.

10. On January 27, 2003, we began this Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television.[12] Among other things, we sought comment on

[9] Television broadcast licensees may seek to expand or shift (also referred to as "maximize") their DTV allotments by filing applications to increase power or change the site or height of their antenna in such a way that it increases their DTV service area in one or more directions beyond the area resulting from the station's DTV allotment parameters. The term maximization can be confusing in that it does not necessarily entail enlarging the station's service area. Rather, it might more accurately be characterized as alteration of a station's previously allotted contour. Given that the term maximization is commonly used, however, we will continue to use it here.

[10] *See* 47 C.F.R. § 73.624(b). Commencing April 1, 2003, DTV licensees and permittees were required to simulcast 50 percent of the video programming of the analog channel on the DTV channel. NCE stations were granted a six-month waiver of the simulcasting requirement, but not the minimum hours of operation requirement, as discussed in section IV.H., *infra*. This requirement stepped up to a 75 percent simulcast requirement in April 2004, and was to increase to a 100 percent requirement in April 2005. 47 C.F.R. § 73.624(f). Stations that were subject to the earlier construction deadlines (top four network affiliates in the top 30 markets) remained subject to the previous rule – *i.e.*, they must operate their DTV station at any time that the analog station is operating.

[11] To qualify for an extension of time to construct a digital television facility under the financial hardship standard, the applicant must demonstrate that the cost of meeting the minimum build-out requirements exceeds the station's financial resources. The applicant must provide an itemized estimate of the costs of construction and a detailed explanation of why its financial condition precludes such expenditures. *First DTV Periodic Review MO&O*, 16 FCC Rcd at 20611, ¶ 46.

[12] *Second DTV Periodic NPRM*, 18 FCC Rcd 1279 (2003).

new channel election, replication, and maximization deadlines for broadcast television service. We also sought comment on a number of other issues concerning the protection that must be provided to incumbent analog and digital broadcasters in channels 52-69 (698-806 MHz, also referred to as the "700 MHz band") during the transition. The *Second DTV Periodic NPRM* raised a number of other issues, including: (1) whether the Commission should retain, revise, or remove the requirement that licensees simulcast a certain percentage of their analog channel programming on their DTV channel; (2) whether the Commission needs to take steps to assist noncommercial television stations in the transition; (3) whether labeling requirements for TV-related consumer equipment would assist the transition and protect consumers; (4) whether and how the Commission should license multiple lower-powered transmitters, similar to cellular telephone systems, called distributed transmission systems; (5) whether broadcasters should be required to include Program System and Information Protocol ("PSIP") information within their digital signals to ensure the availability of certain functions; (6) whether the Commission should adopt digital V-chip and closed captioning requirements; and (7) what station identification requirements should apply to digital stations. In the *Second DTV Periodic NPRM*, we also invited commenters to update the records in the *DTV Public Interest Form NPRM* (MM Docket No. 00-168),[13] *Children's DTV Public Interest NPRM* (MM Docket No. 00-167),[14] and the public interest *NOI* (MM Docket No. 99-360),[15] and directed that such comments be filed in those proceedings. We will address any comments on public interest issues filed in response to the *Second DTV Periodic NPRM* when we finalize the public interest proceedings in the near future.

III. PROGRESS REPORT

11. The transition to digital television is a massive and complex undertaking, affecting virtually every segment of the television industry and every American who watches television. The spectrum that will be recovered at the end of the transition will bring tremendous benefits to consumers and the United States economy. Twenty-four megahertz of spectrum currently used for television broadcast channels 63, 64, 68, and 69 will be returned and used for first responders and other critically important public safety needs. The remaining 84 MHz in the 700 MHz band (currently television broadcast channels 59-62 and 65-66) have been or will be auctioned for use by new wireless services. The Commission has been continuously involved in the migration to digital television by, among other things, adopting a standard for digital broadcasting, creating a DTV Table of Allotments, awarding DTV licenses, establishing operating rules for the new service, and overseeing the physical build-out of digital broadcast stations.

A. Build-Out Status

12. In 1997, the Commission set dates for construction and operation of broadcasters' allotted digital broadcast facilities. Pursuant to the construction schedule set forth in section 73.624(d) of the Commission's rules, affiliates of the top four networks in the top ten television markets were required to complete construction of their digital facilities by May 1, 1999; top four network affiliates in markets 11-

[13] *Standardized and Enhanced Disclosure Requirements for Television Broadcast Licensee Public Interest Obligations*, 15 FCC Rcd 19816 (2000) ("*DTV Public Interest Form NPRM*").

[14] *Children's Television Obligations of Digital Television Broadcasters*, 15 FCC Rcd 22946 (2000) ("*Children's DTV Public Interest NPRM*").

[15] *Public Interest Obligations of TV Broadcast Licensees*, 14 FCC Rcd 21633 (1999) ("*Broadcast Public Interest NOI*").

30 by November 1, 1999; all remaining commercial television stations by May 1, 2002; and all noncommercial television stations by May 1, 2003.[16]

13. As of July 28, 2004, 1,658 television stations in all markets (representing approximately 96 percent of all stations) have been granted a DTV construction permit ("CP") or license. A total of 1,423 stations are now broadcasting a digital signal, 634 with licensed facilities or program test authority and 789 operating pursuant to special temporary authority ("STA") or experimental DTV authority.[17]

14. In the top 30 television markets, all 119 network-affiliated television stations are on the air in digital, 110 with licensed DTV facilities or program test authority and nine with STAs. In markets 1-10, of the 40 network affiliates due to be on the air by May 1, 1999, all are providing digital service, 38 with licensed DTV facilities and two with STAs.[18] In markets 11-30, all 79 network affiliate stations required to be on the air by November 1, 1999 are providing digital service. Seventy-two have constructed their licensed DTV facilities and seven are on the air with STAs.

15. Approximately 1,230 commercial television stations were due to commence digital broadcasts by May 1, 2002. As of July 28, 2004, 1,018 of these stations (83 percent) are broadcasting a digital signal. In addition, approximately 373 noncommercial educational television stations were required to commence digital operations by May 1, 2003. As of July 28, 2004, 286 (77 percent) of these stations are broadcasting a digital signal.

B. DTV Equipment Availability

16. In the *NPRM*, we asked several questions about the types and availability of DTV equipment on the market.[19] We invited commenters to provide us with up-to-date information about the pace of DTV receiver sales and the price of such units as well as trends in consumer demand for digital equipment.

17. The Consumer Electronics Association ("CEA") reports that manufacturers offer more than 400 models of HDTV monitors and integrated sets, which is three times the number from 2000.[20] It reports an 11 percent drop in HDTV monitor prices from March 2002 to March 2003, with a larger drop expected over the duration of 2003.[21] The consumer electronics industry invested $15 billion in DTV products from 1998 through 2003. In addition, CEA reports that DTV products represented more than 10 percent of all television sales in 2002. In the first quarter of 2003, according to CEA, 766,000 DTV product units were sold, which was up 86 percent over the first quarter unit sales of 2002. CEA projected

[16] *See Fifth Report and Order*, 12 FCC Rcd at 12840-41, ¶ 76 (1997); 47 C.F.R. § 73.624(d).

[17] Attached as **Appendix D** is a chart and further information regarding DTV construction progress.

[18] Two stations that were licensed and on the air prior to September 11, 2001, went off the air due to the attack on the World Trade Center. WABC-DT and WNBC-DT are now back and operating at STA facilities, thereby completing the list of stations once on the air that have returned to operations.

[19] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1287, ¶ 22.

[20] CEA Comments at 1.

[21] *Id.*

that manufacturers would sell 3.8 million DTV sets and displays in 2003.[22]

18. According to the CEA's website, 4.1 million DTV products were sold in 2003 for about $6.1 billion, a 44 percent increase in dollar sales and a 56 percent increase in unit sales from 2002.[23] More than 640,000 digital television sets were sold in December 2003 alone. CEA predicts that 5.8 million digital sets will be sold in 2004, 8.3 million in 2005, 11.9 million in 2006 and 16.1 million in 2007.[24]

C. Ongoing Commission Efforts to Encourage the DTV Transition

19. Since the *First DTV Periodic Report and Order,* we have taken a number of important steps to encourage the consumer adoption of digital television. On August 8, 2002, the Commission adopted the *DTV Tuner Order* requiring that all TV receivers manufactured or shipped in the U.S. with screen sizes 13 inches and above be capable of receiving DTV signals over the air no later than July 1, 2007.[25] This requirement will be phased in beginning with the largest sets in 2004 to minimize the cost impact on consumers.[26] The DTV tuner requirement was designed to facilitate the transition to digital television by promoting the availability of reception equipment, as well as to protect consumers by ensuring that their television sets go on working in the digital world just as they do today.[27]

20. In addition to the *Order* mandating DTV tuners, in October 2003, the Commission released a *Second Report and Order and Second Further Notice of Proposed Rulemaking* regarding Commercial Availability of Navigation Devices and Compatibility Between Cable Systems and Consumer Electronics Equipment.[28] This *Plug and Play Order* was another step forward in the transition to digital television. Under the specifications developed by the cable and consumer electronics industries and adopted in the *Plug and Play Order*, consumers will be able to plug their cable directly into their digital TV set without

[22] *Id.* at 2.

[23] See 2004 Sales of Consumer Electronics to Set a New Record, Surpassing $100 Billion Mark, Says CEA, Press Release (Jan. 5, 2004) < http://www.ce.org/press_room/press_release_detail.asp?id=10384>: 2003 a Banner Year for DTV; Unit Sales Top Four Million, Press Release (Jan. 12, 2004) <http://www.ce.org/press_room/press_release_detail.asp?id=10396>. Website last visited Feb. 02, 2004.

[24] *Id.* CEA defines DTV products as integrated sets and monitors displaying active vertical scanning lines of at least 480p and, in the case of integrated sets, receiving and decoding ATSC terrestrial digital transmissions.

[25] *DTV Tuner Order*, 17 FCC Rcd at 15996, ¶ 40.

[26] Receivers with screen sizes 36 inches and above – 50 percent of a responsible party's units must include DTV tuners effective July 1, 2004; 100 percent of such units must include DTV tuners effective July 1, 2005. Receivers with screen sizes 25 to 35 inches – 50 percent of a responsible party's units must include DTV tuners effective July 1, 2005; 100 percent of such units must include DTV tuners effective July 1, 2006. Receivers with screen sizes 13 to 24 inches – 100 percent of all such units must include DTV tuners effective July 1, 2007. TV Interface Devices, VCRs, and DVD players/recorders, etc. that receive broadcast television signals – 100 percent of all such units must include DTV tuners effective July 1, 2007. *Id.*

[27] *See generally*, *DTV Tuner Order*, 17 FCC Rcd 15978 (2002).

[28] *Implementation of Section 304 of the Telecommunications Act of 1996; Commercial Availability of Navigation Devices and Compatibility Between Cable Systems and Consumer Electronics Equipment*, 18 FCC Rcd 20885 (2003) ("*Plug & Play Order*").

the need of a set-top box. The new rules will ease the transition to digital TV by promoting competition, convenience, and simplicity for consumers.

21. In addition, we adopted a redistribution control system, also known as the "broadcast flag," for digital broadcast television.[29] The goal of the *Broadcast Flag Order* is to prevent the mass indiscriminate redistribution of digital broadcast television in order to foster the transition to digital TV and forestall potential harm to the viability of free, over-the-air broadcasting in the digital age. We found that the current lack of digital broadcast content protection could be a key impediment to the DTV transition's progress.[30] Specifically, we found that the absence of such content protection could lead to reduced availability of high value content on broadcast television and thereby harm the viability of free over-the-air television and slow the DTV transition. Given our progress on this front, we expect that such programming will not be unreasonably withheld from over-the-air television.

IV. ISSUE ANALYSIS

A. Channel Election

22. In the DTV *Sixth Memorandum Opinion and Order*,[31] we determined that, after the transition, DTV service would be limited to a "core spectrum" consisting of current television channels 2 through 51 (54-698 MHz). Although some licensees received DTV transition channels out of the core, and a few have both their NTSC and DTV channels outside the core, there will be sufficient spectrum to accommodate all DTV stations at the end of the transition. At this stage in the transition it is important for licensees with two in-core channels to indicate which one of their channels they prefer to use for digital broadcasting after the transition. In addition, we will require licensees with one in-core channel to make a decision about their in-core channel, and will require licensees involved in negotiated channel election arrangements with other licensees to inform us of these arrangements. This step is critical in determining what channels will be available for stations with two out-of-core channels and in clearing the out-of-core spectrum.

23. In the *First DTV Periodic Report and Order*, we established December 31, 2003, as the channel election deadline for commercial stations.[32] Largely due to reports of difficulties some stations were facing in meeting our construction deadlines, we later decided that this date might be too early for some stations and suspended the channel election deadline, announcing that we would use this second periodic review to re-establish the date.[33] We also stated in the *First DTV Periodic Report and Order* that we would resolve in a future DTV periodic review whether and when licensees with one or both of their channels out of the core will have the opportunity to make a channel election as well as the details and procedures for the election process.[34] We stated that in all cases, including licensees with both channels

[29] *Digital Broadcast Content Protection*, 18 FCC Rcd 23550 (2003) ("*Broadcast Flag Order*").

[30] *Broadcast Flag Order*, 18 FCC Rcd at 23552, ¶ 4.

[31] *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, 13 FCC Rcd 7418 (1998) ("*Memorandum Opinion and Order on Reconsideration of the Sixth Report and Order*").

[32] *First DTV Periodic Report and Order*, 16 FCC Rcd at 5952, ¶14.

[33] *First DTV Periodic MO&O*, 16 FCC Rcd at 20601, ¶18.

[34] *First DTV Periodic Report and Order*, 16 FCC Rcd at 5952-53, ¶16.

in-core, we reserve the right to select the final channel of operation in order to minimize interference and maximize the efficiency of broadcast allotments in the public interest.[35] In the *Second DTV Periodic NPRM*, we stated that our goal was to establish a channel election deadline that gives broadcasters with two in-core channels enough time to make an informed decision about which of their two core channels they preferred to use for digital broadcasting, while at the same time providing licensees with two out-of-core assignments the time to plan their moves to in-core channels before the end of the transition. We proposed that commercial and noncommercial broadcast licensees with two in-core assigned channels make their final channel election by May 1, 2005. As an alternative, we sought comment on whether establishing the same deadline(s) for channel election as for replication and maximization protection and allowing broadcasters more time to increase to full power before they determine which channel is preferable for digital broadcasting would be more effective in speeding the transition.[36]

24. In this Report and Order, we are establishing firm deadlines for channel elections and a procedure and time frame for evaluating, processing and confirming the elections. These decisions are consistent with the majority of the comments received from a wide range of participants in this proceeding. Most of the commenters that address channel election support establishing a firm deadline for channel election. CEA argues that deferring the election date until after the adoption of repacking and channel election procedures will add significant new delay.[37] CEA points out that broadcasters with out-of-core channels, Class A and low power licensees, as well as translator and repeater licensees all must wait to select their in-core channels until broadcasters with in-core channels have made their selections.[38] CEA adds that it "strains credulity" to believe that broadcasters will now formulate a channel election and repacking "plan" that has not been possible to formulate in the years since the in-core/out-of-core plan was established.[39] CEA asserts that there is no difficult engineering issue, as the final in-core digital channels are for use after analog has shut down and that the Commission should use existing interference criteria in the channel election process.[40]

25. Parties representing the interests of television stations without a paired DTV channel or with out-of-core assignments urge the Commission to adopt an early channel election date that would be no later than May 1, 2005.[41] According to KM Companies, with the first DTV stations going on the air more than five years ago, the industry has had enough time to evaluate technical aspects of DTV operations in a

[35] *Id.*

[36] We discuss replication and maximization interference protection in section IV.B, *infra*.

[37] Reply of Consumer Electronics Association ("CEA Reply") at 8.

[38] CEA Reply at 12.

[39] CEA Reply at 8-9.

[40] CEA Reply at 9.

[41] *See* Eastern Television Corporation Comments ("ETC") at 1. *See also* KM Communications, Inc. and other commonly-owned companies comments ("KM Companies") at 2 (requesting an election deadline of Dec. 31, 2004, if not earlier.). In addition, Davis Television Wausau, LLC ("Davis Television") informs the Commission that stations with single out-of-core assignments face the same time constraints and pressures as those with two, and requests that the Commission address the issue of assignment priority now – stating that the next periodic review will be too late. Davis Television Comments at 2.

variety of operating conditions.[42] Other commenters, particularly those wishing to operate new ventures in the 700 MHz band, also argue that in order to ensure that the transition and attendant recovery of spectrum in the 700 MHz band proceeds in as short a time as possible, the Commission must establish and strictly enforce early channel election deadlines.[43] These commenters oppose any extension of the channel election deadline beyond May 1, 2005, and specifically oppose aligning channel election with replication and maximization interference protection deadlines.[44]

26. The Association of Public Television Stations, the Corporation for Public Broadcasting and the Public Broadcasting Service, filing joint comments ("Public Television"), agree that all TV broadcasters – commercial and noncommercial – with two in-core channels should elect their channel by May 1, 2005, but request deadline extensions when the station has obtained a construction extension.[45] According to Public Television, this will give stations sufficient time to consider propagation patterns, costs and other factors associated with each channel so that they may make their channel election before replication or maximization requirements take effect.[46] Many other commenters agreed with the proposed May 1, 2005, deadline, and request that the Commission make the procedures for channel election known.[47] For example, Belo states that it operates an NTSC channel 8 and a DTV channel 9, and because of potential for interference with a nearby DTV channel 9, knowing whether its fully-maximized DTV channel can be carried over to its analog channel on an interference protected basis will be an important factor in its channel election decision.[48] In their joint comments, MSTV/NAB assert the need for resolution of certain procedural and practical issues, such as: methods of avoiding interference; the order and priorities of elections; opportunities and timing for those with one out-of-core assignment; identifying the purpose of any repacking process; equities to be considered when elections conflict; accounting for pending rulemakings; and unique interference issues faced by broadcasters on channels 2-6 and 51.[49] Several commenters assert that if the channel election process is not coordinated properly, it could lead to excessive interference, resulting in sub-optimal DTV service.[50] The procedures outlined below respond to

[42] KM Companies Comments at 2. It also states that early election will benefit those with out-of-core assignments as well as Class A and LPTV stations.

[43] Motorola Comments at 6; Access Spectrum Comments at 4-5; DataCom Wireless, LLC Comments ("DataCom") at 3; Rural 700 MHz Band Licensees Comments ("700 MHz Licensees") at 5.

[44] *See* Access Spectrum Comments at 5; DataCom Comments at 3.

[45] Association of Public Television Stations, the Corporation for Public Broadcasting, and the Public Broadcasting Service Comments ("Public Television") at 25-26.

[46] *See Id.*

[47] Association for Maximum Service Television, Inc. and National Association of Broadcasters ("MSTV/NAB") Comments at 5-6. *See also* Belo Corp. ("Belo") Comments at 8; Capitol Broadcasting Company, Inc ("CBC") Comments at 11; Cox Broadcasting ("COX") Comments at 2-3; Tribune Broadcasting Company ("Tribune") Reply at 2-3.

[48] Belo Comments at 8.

[49] MSTV/NAB Comments at 5-6.

[50] MSTV/NAB Comments at 5; Belo Comments at 8; CBC Comments at 11-12; Cox Comments at 2; Tribune Reply at 2-3.

each of these concerns.

27. On May 6, 2004, MSTV filed an *ex parte* proposal for a multi-step DTV channel election and repacking process.[51] Under the detailed proposal, the Commission would conduct the channel election process in five steps: (1) Step 1 would be an initial phase to clean up the Commission's DTV database to ensure that stations can make their elections based on accurate and complete information, and would also require all licensees to file certifications about whether they intend to replicate or maximize facilities, as authorized; (2) Step 2 would hold a first round of elections for stations with two in-core channels, followed by elections by stations with two out-of-core channels indicating a preference for three possible channels that they ultimately could use in their market; (3) Step 3 would have the Commission issue "provisional authorizations" where possible, based on the first round of channel elections; (4) Step 4 would hold a second round of elections for remaining licensees, including licensees with two out-of-core channels whose preferences were not accommodated during the first round of elections; and (5) Step 5 would be the finalization of the DTV Table, taking into account general criteria and individual circumstances to resolve conflicts in channel elections.[52] MSTV's proposed plan would span more than two years, beginning immediately with database cleanup, followed by the first round of elections in June, 2005, and ending sometime after 2006.

28. MSTV asserts that its channel election and repacking plan reflects several values critical to an efficient and effective process that the broadcast industry supports. First, the plan enables stations to make an informed choice about their ultimate DTV channel. Second, it provides clarity in the order of election, thereby permitting a smooth election process. Third, it addresses potential problems posed by DTV operations on low VHF channels. Finally, the plan honors industry expectations for digital operations and respects investments that have already been made.[53]

29. We initially established December 31, 2003, as the channel election deadline for commercial stations, but suspended the date pending a date to be established in this Order.[54] We now agree with the commenters, such as CEA and KM Companies, which state that the industry has had enough time to evaluate DTV operations. Circumstances are significantly different from the time we suspended the channel election deadline. At the time, less than 400 of the 1,688 full-power stations with paired DTV channels commenced DTV operations; now more than 1,400 stations have done so. Stations that chose to begin service at lower power have had an opportunity to operate DTV facilities and to test for interference or other service problems. DTV stations have had significant on-air time to conduct the necessary tests and evaluate available data in order to make reasoned channel election decisions.[55]

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[51] *See* Special Submission of the Association of Maximum Service Television, Inc. on the DTV Channel Election and Repacking Process, MB Docket No. 03-15, dated May 6, 2004 ("*MSTV Ex Parte*").

[52] *Id.* at 4.

[53] *Id.* at 4-5, 11.

[54] *First DTV Periodic Report and Order*, 16 FCC Rcd at 5952, ¶ 14; *First DTV Periodic MO&O*, 16 FCC Rcd at 20601, ¶ 18.

[55] 47 C.F.R. 73.624(d) required construction to be completed more than two years ago for most commercial broadcasters, fourteen months ago for noncommercial broadcasters, and more than four years ago for top-four network affiliated broadcasters in the top markets.

30. We therefore conclude that stations are likely to understand the performance characteristics of the DTV transmission standard and to know which channel they prefer to operate on after the transition, and reject the option that the channel election deadline be tied to replication requirements or DTV tuner penetration rates. As discussed more fully below in section IV.J.2., *infra*, we are adopting the ATSC A/65B ("PSIP") standard and mandating its use by DTV stations. As part of PSIP, a broadcaster's "major channel number" is its NTSC channel number.[56] This major channel number is the station's channel identity during and after the transition. Therefore, a station's channel election decision will have no effect on the assignment of its NTSC channel number as its "major channel number" in PSIP. Consequently, channel election decisions need not be based on considering stations' historic "branding" to consumers, but instead may be based more on the operating characteristics of a particular frequency and the service populations the stations would project for each channel.

31. We find that the multi-step approach offered by MSTV has merit, and we adopt its proposal with modifications. We agree with many of the goals set forth by MSTV.[57] First, the channel election process should provide the best possible DTV service to the public. Second, the plan should move the DTV transition along without undue delay. Third, we seek to create an orderly channel election process that produces as much clarity and transparency as possible. Fourth, licensees should be afforded the best opportunity for informed choice when making their channel election decisions. Fifth, we seek to provide every eligible station with a channel for operation after the end of the transition. Sixth, we seek to recognize industry expectations by protecting existing service and respecting investments already made, to the extent feasible. Finally, the channel election process should take into account overall spectrum efficiency, even as we seek to ensure to the extent possible that the final channel allotments accommodate replicated and maximized service areas for those stations certifying their intent to serve such areas.

32. To enable us to complete the reallocations necessary to accommodate all stations with a channel in the core, we need to know each in-core licensee's channel preference as soon as possible. Therefore, we adopt December 2004, as the starting date for channel elections, by which time commercial and noncommercial broadcast licensees with an in-core channel must state their channel preference. As of this date, commercial and noncommercial broadcasters will have had ample time after their applicable digital construction deadlines to make their channel decisions. A December 2004, channel election deadline for in-core licensees will also provide out-of-core licensees time to plan for their move into the core. We recognize that this date is earlier than the election date proposed in the *Second DTV Periodic NPRM*. Given, however, our adoption of a multi-step channel election process as proposed by MSTV and other necessary election procedures, this deadline is necessary to arrive at a final election for all stations in a timely manner. The choice of this election deadline strikes an appropriate balance between the need for stations to have a sufficient amount of time in which to gain experience in DTV operation and allowing stations that will have to move —particularly from out-of-core to in-core — to plan for the DTV channel conversion.

1. Channel Election and Repacking Process / New Allotment Process

33. We adopt a multi-step channel election plan based in considerable part on the MSTV proposal, but which also incorporates certain modifications and refinements. Specifically, we adopt a

[56] *See* ATSC A/65B, Annex B, Assignment of Major Channel Numbers for Terrestrial Broadcast in the U.S. (March 18, 2003).

[57] *See MSTV Ex Parte* at 4, 11-20.

seven-step channel election and repacking process as follows: (1) Step 1 addresses any preliminary matters to the channel election and repacking process, which includes requiring all licensees to certify their intent to replicate their allotted facilities or maximize their already-authorized facilities; (2) Step 2 is the first round of elections in which in-core licensees (*i.e.*, those with at least one in-core channel) will file their channel election forms; (3) Step 3 analyzes the interference conflicts arising out of the first round and gives licensees an opportunity to resolve them; (4) Step 4 is the second round of elections, at which point the remaining licensees – out-of-core only licensees who have not yet filed channel election forms and those now being treated like them – will make their elections; (5) Step 5 analyzes the interference conflicts arising out of the second round elections, at which time staff will seek to place as many licensees as possible on their election preferences; (6) Step 6 is the third and final round of elections, at which point licensees not yet placed will file a final election preference; and (7) Step 7 is a Notice of Proposed Rulemaking to propose a new DTV Table of Allotments.

a. Step 1: Pre-channel election matters

34. *Database clean up.* We agree with MSTV that it is important for our database to provide a consistent starting point. To that end, we ask that licensees review the accuracy of their database technical information and contact staff as quickly as possible with any submitted corrections.[58] So that we may consider any proposed corrections to our database, licensees should contact staff by October 1 2004, with any concerns.[59] To ensure that licensees timely review their database information, we will require them to certify that they have reviewed their database information on file with the Commission and that it is accurate to the best of their knowledge. Licensees will make this certification using the Pre-Election Certification Form, which must be filed by November 2004.[60] While MSTV proposes a one-year period devoted to "database clean up," we do not believe such an extended period is necessary. Moreover, we do not believe that there is a need for a formal process to invite licensees to submit information to "clean up the database" because we expect that licensees have informed us of any discrepancies as they arose.[61] We remind licensees that they have an ongoing obligation to ensure the accuracy of their database information and to apprise us of any discrepancies between their authorized facilities and their operations.

35. *Filing freeze*. On August 3, 2004, the Media Bureau imposed a freeze on the filing of certain TV and DTV requests for allotment or service area changes to facilitate the channel election and

[58] Any proposed corrections to database information must be consistent with station authorizations, as reflected in the Commission's records.

[59] We note that it may not be possible to process and consider any proposed corrections to database information offered after this date. Database errors that are discovered after this date may be corrected at the discretion of Commission staff.

[60] The Pre-Election Certification Form will also include licensees' certifications of their intent to replicate or maximize.

[61] We note that MSTV has notified its members about the need to make sure their database information is accurate, and invited them to contact the Commission and MSTV concerning questions about database inaccuracies or discrepancies. MSTV also asked its members to share this notice with other stations. As a result of this letter dated June 1, 2004, the Commission has received three letters from licensees.

repacking process.[62] Included in the freeze are: (i) petitions for rulemaking to change DTV channels within the DTV Table of Allotments, (ii) petitions for rulemaking to establish a new DTV channel allotment, (iii) petitions for rulemaking to swap in-core DTV and NTSC channels; [63] (iv) applications to change DTV channel allotments among two or more licensees; (v) petitions for rulemaking by licensees/permittees to change NTSC channels or communities of license; (vi) applications to maximize DTV or analog TV facilities; and (vii) certain Class A station applications. Notwithstanding this freeze, licensees are not prevented from filing modification applications that would resolve international coordination issues[64] or when a broadcast station seeks a new tower site due to the events of September 11, 2001. In addition, the Media Bureau will consider requests for waiver of the freeze on a case-by-case basis. Such a filing freeze is necessary to provide a stable baseline for developing a final DTV Table of Allotments.[65] The freeze is discussed more fully in section IV.A.2., *infra*.

36. *Table of station assignment and service information*. As a preliminary matter to the channel election process, the Media Bureau will issue a table of station assignment and service information ("table of station information") for use by TV station licensees and other interested parties so they may determine and evaluate the DTV service populations to be used by the Commission to process stations' channel elections and create the new DTV table of allotments. In developing the table of station information, the Commission will generally use the DTV and NTSC station locations and facilities authorized by license or construction permit (CP)[66] as of October 1, 2004, a month before TV station licensees will be asked to file their Pre-Election Certification Forms.[67] We will issue this table of station information prior to the filing of the Pre-Election Certification Forms. (We note that the Media Bureau imposed a freeze on the filing of certain TV and DTV requests for allotment or service area changes in anticipation of generating this table of station information.[68]) The data provided in the table of station information will be based on the technical information on file in the Commission database.[69] We will update the table of station information to reflect service areas based on certifications to build to replication or maximization facilities and any other changes to station facilities prior to the first round election date.

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[62] *See* Public Notice, "Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes," DA 04-2446 (MB rel. Aug. 3, 2004) ("*August 2004 Filing Freeze PN*").

[63] Notwithstanding the freeze, negotiated channel election arrangements may be sought during the election process. *See infra* at ¶ 45.

[64] We do this to alleviate a burden on those licensees who are actively working to resolve their international coordination issues. *See, e.g.* Mt. Mansfield Television Inc., *Ex Parte* dated June 28, 2004.

[65] Our freeze is consistent with MSTV's proposal that the Commission impose a freeze on the filing of DTV channel changes, new DTV allotment requests, and DTV maximization proposals. *MSTV Ex Parte* at 5.

[66] Where station records include both a construction permit and license, we will use the construction permit given that the changes permitted in the construction permit reflect the station's facilities for the future.

[67] The Pre-Election Certification Form will require all broadcast licensees and permittees to certify to (1) the accuracy of their database information on file with the Commission, which will be reflected by the table; and (2) their intent to replicate or maximize pursuant to their existing authority, as will be defined by the table.

[68] *August 2004 Filing Freeze PN*, DA 04-2446 (MB rel. Aug. 3, 2004).

[69] Licensees should review the table of station information before making their pre-election certifications.

37. *Station service evaluations based on currently authorized operations.* As noted above, we will use current authorized station operations to determine and evaluate the DTV service populations in processing channel elections and creating the new DTV table of allotments. We believe that basing station service evaluations on current authorized station operations will more accurately reflect the current viewer access to station services than the parameters specified for the initial DTV Table of Allotments in 1997, and will at the same time preserve the service areas of those stations that constructed and are operating in accordance with the DTV buildout schedules.[70] Consistent with MSTV *ex parte* submissions and discussions,[71] we will define new interference as interference beyond that caused by NTSC and DTV operations, as described by the table of station information, in evaluating new interference to post-transition TV operations.

38. On this basis, stations that operate, or plan to operate as authorized by a CP, in accordance with the facilities specified in the initial DTV Table of Allotments will have the same service as that contemplated in the *DTV Second MO&O*, less any changes in interference received from new stations or from stations that changed their operations. Stations that have departed from their initial DTV allotment facilities (including location and/or channel changes) or maximized (or in a few cases reduced) their operations through such modifications and new stations, will have service as authorized in those changes or new authorizations, again less interference from other stations.[72] In the case of stations whose applications for maximization of DTV facilities are delayed in processing due to international negotiations, we will consider the service that would be provided based on those applications pending the resolution of those coordination issues and authorizations of specific facilities. All analyses of service and reduction of service due to interference will be based on population only. We will use population data from the year 2000 census in determining the populations served by stations and the impact of interference on stations' service. In this regard, the more up-to-date population data from the year 2000 census will provide a more accurate indication of the station service and impacts of interference on that service than the older year 1990 population data used in computing the service data for the initial DTV Table of Allotments.

39. *Border coordination*. We agree with commenters that it is important to resolve international coordination issues as quickly as possible. To that end, we have reduced the number of coordination conflicts from several hundred to fewer than 50. We note that some commenters, such as MSTV, have called on the Commission to intensify its efforts to resolve outstanding cases of Canadian and Mexican coordination and interference issues.[73] MSTV and other commenters argue that the Commission should resolve Canadian and Mexican coordination issues before channel elections begin.[74] We cannot,

[70] The initial DTV Table of Allotments was set forth in the *Second MO&O on Recon. of the Fifth and Sixth R&Os*, 14 FCC 1348 Appendix B (1998).

[71] *See MSTV Ex Parte*.

[72] Stations granted a DTV channel change are generally authorized facilities that they requested if such operations do not cause new interference to other stations that exceed the *de minimis* interference standards of section 73.623(c)(2) of the rules, 47 C.F.R. 73.623(c)(2). In some cases the new channel allotment facilities cover more area than the stations were authorized on their initial DTV channel allotment, while in other cases the stations cover less area.

[73] *MSTV Ex Parte* at 5-6.

[74] *Id.* at 6. *See also Mt. Mansfield Ex Parte* at 2.

however, delay the implementation of our channel election and repacking process pending resolution of every outstanding case of Canadian or Mexican coordination. Parties with pending applications that are being delayed due to coordination issues are advised that while we will make every effort in negotiating on their behalf, we can provide no assurance that such issues will be resolved favorably. In nearly all of the remaining cases, the licensee can build a checklist facility.[75] In some cases, additional coordination actions will be needed to provide in-core channel assignments. If an election would require international coordination, then that channel may be elected at authorized replicated and maximized facilities, subject to the outcome of the international coordination.[76] We encourage stations in markets or regions that require coordination to work together to identify in-core channels that are feasible.[77] The Commission will continue to work with licensees to resolve remaining international coordination issues as part of the process of developing new DTV allotments and will consider a station's border coordination efforts when prioritizing channel assignments. Border coordination issues are discussed more fully below in section IV.A.3., *infra*.

40. We are aware of some stations with a DTV channel outside of the core and an analog channel inside the core for which, according to the stations, the analog channel is not available for digital transmission because of international coordination issues with Canada.[78] These stations should indicate this fact on their channel election form and attach a brief explanation of why their in-core channel is not available for digital use under the U.S.–Canada Letter of Understanding, which governs modifications of the initial DTV table of allotments within 400 km of the U.S./Canadian border.[79] Stations with an out-of-core DTV channel and an in-core analog channel that is not available for digital transmission because of international coordination issues will be treated like stations with two out-of-core channels.

41. *Certifications for replication and maximization*. We adopt a requirement, as MSTV has proposed,[80] that stations that intend to fully replicate or maximize certify this commitment to the Commission by November 2004, subject to sanctions if the station fails to meet its commitment.[81]

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[75] Only a few stations cannot build checklist facilities because of border coordination issues. This list includes: WPXJ-DT, Batavia, NY (allotted DTV 53); WNYO-DT, Buffalo, NY (allotted DTV 34); and KAJB-DT, Calipatria, CA (allotted DTV 50).

[76] We recognize that maximization may cause coordination issues and that successful coordination may require reduction to replication facilities.

[77] Such arrangements among stations will be accepted as part of the channel election process and will be accorded great weight in determining final assignments.

[78] *See* Vermont ETV, Inc. and Mt. Mansfield Television, Inc. *ex parte* (dated March 8, 2004); Letter from John R. Feore, Jr. to W. Kenneth Feree, Chief, Media Bureau, dated May 13, 2004 (citing the problems experienced by three Paxson Communications Corporation stations with Canadian coordination).

[79] *See* U.S. and Canada Reach Agreement on Implementing Digital Television Service Along the U.S./Canada Border, Press Release (rel. Sept. 29, 2000) ("LOU"). It is available on the FCC web site at: http://www.fcc.gov/ib/sand/agree/files/can-bc/can-dtv.pdf .

[80] *MSTV Ex Parte* at 6.

[81] In the Pre-Election Certification Form, licensees will certify their intent to build-out their allotted "replication" facilities or already-authorized "maximization" facilities. Licensees are reminded that false certifications may result in fines and loss of license. Moreover, where stations do not build-out to their certified facilities, we will (continued….)

Licensees will be required to replicate and maximize by the replication/maximization deadline (*i.e.*, July 1, 2005, for affiliates of the top-four networks in markets 1-100; and July 1, 2006, for all other stations).[82] Further, licensees may only certify to maximize pursuant to their existing authority to do so. Channel elections will be evaluated at this stage based on the coverage that is predicted from the certified authorized maximization or certified replication facilities.[83] Such certifications must be filed with the Commission in advance of the channel election date so that all licensees will be able to consider the commitments of other licensees in their channel elections. To provide sufficient time for this information to be useful, we will require that such certifications be filed in November 2004.[84] Stations that do not submit certification forms by this date will be presumed not to intend to replicate or maximize, and such decision will be taken into account in determining final channel assignments. More specifically, in establishing the authorized facilities and service area for a station not certifying to fully replicate or maximize, we will provide for the station to serve the same geographic area served by its existing DTV facilities, operating as of the certification date. Certifications must be filed electronically and will be made accessible to the public.

42. *Election Forms*. All broadcast licensees participating in the channel election process are required to file a pre-election certification form and a channel election form. Stations that do not timely submit a pre-election certification form will be presumed both (i) to agree that their database technical information on file with the Commission is accurate and complete, and (ii) not to intend to replicate or maximize, and such decision will be taken into account in determining final channel assignments. Stations that do not timely submit a channel election form will be assigned a post-transition DTV channel by the Commission prior to the end of the channel election process. Appendices E and F to this Report and Order illustrate the forms to be used in the channel election and repacking process. We have developed the following six forms: (1) Pre-Election Certification Form; (2) First Round Election Form; (3) First Round Conflict Decision Form; (4) Second Round Election Form; (5) Second Round Conflict Decision Form; and (6) Third Round Election Form. These forms, which are adopted by this Report and Order, must be filed electronically and will be made accessible to the public on the Commission's database.

b. Step 2: First round of elections; Election Forms filed

43. We set December 2004 as the date for the first round of channel elections. Although we proposed in the NPRM an election date of May 1, 2005, we believe that the broadcasters making first round elections are able to make an informed statement of their final channel preference at this time.

(Continued from previous page)

limit their station's interference protection to the service population within the noise-limited contour predicted from the station's operating facilities, as of the certification date. (In other words, a licensee's failure to replicate or maximize to the extent it certified will result in the loss of interference protection to those service areas not replicated or maximized.)

[82] *See* section IV.B., *infra* (for our discussion about the replication/maximization deadline).

[83] We anticipate that many licensees will have an opportunity to enlarge their final DTV allotment coverage after the final table has been adopted, pursuant to the rules for changes and applications established then. In developing rules for resolving or avoiding conflicts between stations requesting such coverage enlargements, we will consider giving priority to stations that can demonstrate that they had built-out their full authorized DTV facilities and had been unable to maximize on their transition DTV channel.

[84] *See* notes 67 and 81, *supra*.

Moreover, given that we will be adopting a multi-step and multi-round approach that will occur over the course of several months, we find that we must begin the process as soon as possible in order to effectuate a timely transition.

44. In this first round, licensees with in-core channels (*i.e.*, licensees with two in-core channels and licensees with one in-core channel) will make their channel elections by filing a First Round Election Form.[85] Licensees in this round may not elect a channel that is not assigned to them, unless rights to that channel are being sought through a proposed negotiated channel election arrangement.[86] Upon completion of the first round and subsequent interference conflict analysis, each licensee electing an in-core channel will receive an informal tentative channel designation, to the extent possible. Licensees with two in-core channels (including those with two low VHF channels (*i.e.*, channels 2-6)[87]) will make the first channel elections,[88] choosing between their two in-core channels. Licensees with only one in-core channel will be required to elect whether to keep their in-core channel, or turn it in and be treated like a licensee with two out-of-core channels.[89] This will further increase the number of channels available for future selection. Moreover, we are including in this one in-core licensee category those licensees with only one channel (*i.e.*, in-core singletons).

45. *Negotiated Channel Election Arrangements*. As an alternative to the channel election process, licensees may negotiate channel election arrangements with other stations. Such negotiated arrangements are subject to Commission approval, including particular consideration of the effect on the channel election rights of, and interference impact on, any licensee not a party to the negotiated channel election agreement. "Channel swapping" is an existing practice with beneficial results for the marketplace and consumers, and these channel election arrangements are similar in nature to them.[90] We do not anticipate that channel election arrangements are likely to have anti-competitive effects. We will,

[85] The First Round Election Form will provide up to three options for in-core licensees: (1) elect one of its currently assigned in-core channels; (2) elect a negotiated channel pursuant to an agreement with another licensee(s); or, (3) if (i) a one-in-core licensee, or (ii) a two-in-core licensee with two low VHF channels (*i.e.*, channels 2-6), then such a licensee may choose to make no election in the first round and instead elect to participate in the second round of elections.

[86] Licensees that have negotiated channel election arrangements with other licensees must obtain Commission approval for the proposed channel changes in the arrangement in order for their election of a negotiated channel to be considered valid.

[87] We will permit two in-core low VHF licensees to release both of their channels in the first round and agree to be treated as two out-of-core licensees and participate in the second round of elections. *See* note 129, *infra*. Licensees that choose to elect, and which receive a tentative channel designation for, their in-core low VHF channel will have an opportunity to make an alternate election in the third round. *See* section IV.A.1.f., *infra*.

[88] This follows the MSTV plan, which proposes a first round of elections (for June 2005) in which licensees with two in-core channels would notify the Commission whether they want to stay on their DTV channel or revert to their NTSC channel. *MSTV Ex Parte* at 7.

[89] We believe that, by this time, one in-core licensees should know whether they intend to keep their in-core channel.

[90] *See Sixth Report and Order in the Matter of Advanced Television Systems and their Impact Upon the Existing Television Broadcast Service*, 12 FCC Rcd 14588, 14655 (1997). *See also* 47 C.F.R. § 73.623(g).

however, review them for such effects. All licensees involved in a negotiated channel election arrangement must file a channel election form[91] to select the channel they would use for digital operations after the transition if the negotiated channel election arrangement is approved, as well as the channel they would elect if the negotiated arrangement is not approved.[92] Evidence of a signed negotiated channel election arrangement and technical engineering information demonstrating compliance with Section 73.623(g) must be submitted to the Commission to enable us to consider negotiated channel election arrangement requests.[93] We will review all agreements to assure compliance with the public interest and will not approve agreements proposing the acceptance of significant levels of interference or loss of service.

46. *Election of DTV in-core channel*. We conclude, as MSTV has proposed,[94] that if a two in-core licensee elects its DTV channel, then its NTSC channel will be released.[95] The DTV channel will be "locked in"[96] (*i.e.*, channel will be protected[97] to the extent certified against future elections, except

[91] Licensees will be asked to indicate their negotiated channel elections on their channel election forms.

[92] Stations involved in the negotiated channel election arrangement must satisfy our DTV interference rules with regard to their relationship to other stations not involved in the negotiated arrangement.

[93] *See* 47 C.F.R. § 73.623(g). In order to demonstrate the validity of their negotiated channel election arrangements, licensees will be required to provide the name(s) and call sign(s) of the other licensees involved in the arrangement. Licensees may, upon request, be required to provide a copy of the negotiated channel election agreement and/or engineering information to the Commission. The Commission may contact proponents of these arrangements, as may be necessary.

[94] *See MSTV Ex Parte* at 7 (licensees electing their DTV channel would relinquish post-transition rights to their NTSC channel).

[95] By "release," we mean that the licensee relinquishes its post-transition rights to this channel and that the channel now becomes available for future selection by another licensee.

[96] By "locked in," we mean that the channel assignment is confirmed. However, the amount of interference the station is subjected to may increase to some extent in the Final Table in an effort to provide all licensees with an in-core DTV channel that replicates their analog service, to the extent the station has certified intent to so replicate. In other words, even though channels may be "locked in," licensees may be required at the end of the allotment process to accept interference resulting from establishment of DTV stations at full replication facilities to accommodate all stations with a channel in the DTV core spectrum. This system of "locking in" channels can be viewed as making an informal tentative channel designation to that licensee. While informal tentative channel designations in themselves cannot confer legal rights to licensees, they do come with a heavy presumption that these informal designations will be the channel assignments proposed in the new DTV Table of Allotments.

[97] By "protected," we mean that a subsequent election may not cause an interference conflict to a "locked in" channel to the extent the "locked in" station's coverage is certified, except against interference that may result from establishment of DTV stations at the end of the allotment process at full replication facilities to accommodate all stations with a channel in the DTV core spectrum. An interference conflict would occur where interference exists any greater than existing interference plus no more than 0.1 percent additional reduction in service population. For purposes of this process, we will use this 0.1 percent interference protection standard proposed by MSTV. We agree with MSTV that "protect" in this context should mean that a subsequent election may not cause interference any greater than existing interference plus no more than 0.1 percent additional reduction in service population. *See MSTV Ex Parte* at 6, n.7.

against interference that may result from establishment of DTV stations at full replication facilities to accommodate all stations currently allotted an out-of-core DTV channel with a channel in the DTV core spectrum). We recognize that a station that ends up keeping its in-core DTV channel as its final allotment might not have to incur any additional construction expenses. In contrast, a station that ends up operating in digital on its analog allotment would need to incur expenses to change its DTV operation to another channel. To allow stations to minimize the cost of this phase of the DTV transition whenever possible, we will afford the highest priority in the allotment process to maintaining existing DTV allotments selected on the channel election forms.

47. *Election of NTSC in-core channel*. If a two in-core licensee elects its NTSC channel, then Commission staff will determine whether and to what extent DTV operations on this channel would cause new interference to the service populations of other DTV stations. For purposes of this analysis, DTV service populations will be those resulting from the allotted "replication" facilities or authorized "maximization" facilities, as certified. This interference conflict analysis will take place in Step 3, when we intend to resolve, to the extent possible, the interference conflicts resulting from the first round of elections.[98]

48. We do not expect there to be widespread difficulties in fitting replicated DTV service into paired NTSC channels, as paired DTV channels were initially designed to be the best approximation of the NTSC Grade B contours. However, the interference relationships between DTV to DTV and NTSC to DTV operations are such that a DTV station would have a 1 dB greater interference impact on another co-channel DTV station than a NTSC station and an 8 dB greater impact on adjacent channel DTV station than an NTSC station, assuming the same coverage and locations for all stations. Thus, it is likely that in some cases DTV operation on an associated NTSC channel could result in new interference.[99] For those stations electing their NTSC channel for their eventual in-core DTV channel, we will attempt to accommodate the broadcasters' authorized maximized facilities into the NTSC "destination" channels.[100] However, if a broadcaster's maximized DTV service area cannot be carried over to an NTSC channel or another DTV channel as part of a channel swap arrangement or it is not otherwise willing to reduce its operations, we may find it necessary to base its use of the new channel on its replication facilities or to assign the broadcaster another channel in the market that can accommodate its maximized facilities as part of the process of generating a new Table.

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[98] *See* section IV.A.1.c., *infra*.

[99] In such cases, it may be possible to resolve the new interference by reducing the DTV station's operating facilities. We would allow stations to make such adjustments to address such conflicts.

[100] As discussed in section IV.B., *infra*, except for stations with out-of-core DTV channel allotments, stations failing to serve their authorized maximized service area by our replication/maximization deadlines will lose interference protection to any unserved areas. In addition, the Community Broadcast Protection Act of 1999 provides an interference protection priority to Class A TV stations with respect to certain maximized DTV facilities. Specifically, Class A stations are entitled to a protection priority with respect to those maximized DTV facilities, including technically necessary adjustments to those facilities, for which an applicant had not filed an application for maximization nor a notice of its intent to seek such maximization by December 31, 1999, or, if a notice of intent was timely filed, did not also file a bona fide application for maximization by May 1, 2000. 47 U.S.C. § 336(f)(1)(D). *See also*, 47 C.F.R. § 73.623(c)(5). Thus, DTV broadcasters that did not meet these statutory filing deadlines are not entitled to carry over to their NTSC channels maximized DTV facilities that would conflict with a Class A TV station. *See Class A Order*, 15 FCC Rcd at 6379, ¶ 60.

49. *Elections by one in-core licensees*. Licensees with only one in-core channel (including singletons[101]), including those with low VHF channels (2-6), must elect to either (1) keep their in-core channel or (2) release their in-core channel in favor of being treated like a licensee with two out-of-core channels. MSTV proposed that we assume that such stations would decide to remain on their in-core channels; however, we find that it is more efficient to determine which in-core channels are unacceptable to these stations so that those channels can become available for future elections and to ensure that those stations are given an opportunity to identify a workable channel.

50. We expect that in most cases stations with only one in-core channel, where the channel is a DTV channel, will choose to remain on that channel. In such cases, that channel will be "locked-in," as defined above. If the one in-core licensee chooses not to elect its in-core DTV channel, then that channel will be released, and the licensee will be treated as a two out-of-core licensee.[102] Licensees with only one in-core channel (including singletons), where the in-core channel is the NTSC channel, must elect to either (1) keep their in-core NTSC channel or (2) release their in-core NTSC channel in favor of being treated like a two out-of-core licensee. If a one in-core licensee elects its NTSC, then Commission staff will determine (in Step 3's "interference conflict analysis") whether and to what extent this NTSC channel would cause new interference to the service populations of DTV stations. In light of their status, in-core NTSC channels of one in-core licensees will be afforded a high priority in permitting their conversion to a DTV channel.[103]

51. *Later opportunity to change elections of low VHF channels and channels subject to international coordination*. Licensees electing, and receiving a tentative channel designation for, a low VHF channel or a channel subject to a pending international coordination issue will be permitted to seek an alternate tentative channel designation in the third round of elections. *See* discussion in section IV.A.1.f., *infra*.

52. *No first round election for two out-of-core licensees*. Licensees with two out-of-core channels will not make an election in the first round. Requiring two out-of-core licensees to elect at this time would be premature and unnecessarily limit the channel choices available to these licensees. We disagree with MSTV that it would be beneficial for two out-of-core licensees to make elections in the first round a month after the two in-core licensees have elected.[104] We note, for example, that under MSTV's

[101] "Singletons" or "single-channel licensees" refers to those licensees that do not have a second or "paired" channel to convert to DTV. In 1998, in the "Service Reconsideration Order," the Commission decided to afford new NTSC permittees, whose applications were not granted on or before April 3, 1997, and who were therefore not eligible for an initial DTV paired license, the choice to immediately construct either an analog or a digital station on the channel they were granted. Pursuant to this policy, the Commission specified that these new NTSC permittees, which we now sometimes refer to as "singletons" or "single-channel licensees," would not be awarded a second channel to convert to DTV, but could, instead, convert on their single 6 MHz channel. It was further decided that if they choose initially to build an analog station, they may request Commission authorization to convert to DTV at any point during the transition, up to the end of that period. *See Service Reconsideration Order*, 13 FCC Rcd at 6865, ¶ 11 (1998).

[102] In being treated like a two out-of-core licensee, the licensee will be required to file a new election form in the second round of elections (*See* Step 4). *See* IV.A.1.d., *infra*.

[103] *See* note 101, *supra.*

[104] MSTV has proposed that, a month later in the first round (proposed as July 2005), licensees with two out-of-core channels would file a notice with the Commission specifying a preference for three possible channels, subject (continued….)

plan two out-of-core licensees would not know at this time whether a two in-core licensee selecting its NTSC channel in the first round would ultimately obtain that election.[105] MSTV would have two out-of-core licensees protect both channels of two-in-core licensees electing their NTSC channel, effectively denying two out-of-core licensees' the ability to select certain otherwise available channels. Accordingly, as will be discussed below, two out-of-core licensees will make their elections in the second round, at which point two in-core and one in-core licensees may already have a channel "locked in" (as defined above) and have released an in-core channel, making that in-core channel available for future selection.

c. Step 3: First round interference conflict analysis and tentative designations; Conflict Forms filed

53. The interference conflict analysis contemplated in our Step 3, which we expect to complete by February 2005, will determine whether and to what extent an elected in-core NTSC channel would cause interference to an existing or proposed in-core DTV channel. Using objective computer analysis, we will identify and communicate interference conflicts arising from the first round. We agree with MSTV that knowing what channels are available for selection in the second round is important in order to provide second round electors with an informed choice among all channels remaining after completion of the first round. Accordingly, through the interference conflict analysis process, we will set tentative channel designations for in-core licensees with channels that have been elected in the first round and "locked in."

54. Specifically, through our first round interference conflict analysis, Commission staff will determine whether and to what extent an elected in-core NTSC channel causes an interference conflict to: (1) an in-core DTV channel that was elected in the first round; (2) an in-core DTV channel of any licensee that elected its NTSC channel in the first round that still may need to revert to its DTV channel; or (3) another elected in-core NTSC channel in the first round.[106]

55. Upon completion of our first round interference conflict analysis, the Media Bureau will issue a letter to each licensee determined to cause an interference conflict(s). Licensees with interference conflicts will have 60 days from the date of this conflict notification letter in which to file their First Round Conflict Decision Forms, indicating how they intend to resolve their interference conflict. These First Round Conflict Decision Forms, which we expect to be filed in April 2005, will provide licensees with the opportunity to decide whether to maintain their in-core NTSC election, change their election to their in-core DTV channel, or, if a one-in-core licensee, elect to participate in the second round.[107]

(Continued from previous page)
to the requirement that they protect first round elections, as well as all existing in-core DTV stations and the in-core channels of one in-core licensees (which includes licensees with two in-core channels that elected their in-core NTSC channel).

[105] This situation would not be resolved until Step 3, through interference conflict analysis. *See* section IV.A.1.c., *infra*.

[106] We note that the nature of the interference conflict differs with respect to an elected NTSC channel of a one-in-core station, which enjoys a special status, as opposed to an elected NTSC channel of a two-in-core station, which has the option to change its election to its currently assigned DTV channel.

[107] Two in-core licensees may not release both in-core channels to participate in the second round of elections, except for the case of two in-core low VHF channels. *See* note 87, *supra*. We note that two in-core licensees already have the advantage of having an in-core DTV channel.

Licensees can maintain their in-core NTSC election if they resolve their interference conflict by (1) agreeing to accept interference and reduce facilities;[108] and/or (2) negotiating an agreement (*i.e.*, conflict resolution agreement) with the licensee(s) with which they are in conflict.[109] Licensees currently allotted an out-of-core DTV channel will be afforded the opportunity for full replication facilities on an in-core DTV channel, unless they choose to accept less. The licensee may agree to accept interference as long as it is still able to serve all of its community of license.[110] If the conflict is thus resolved, the licensee's currently assigned in-core DTV channel is released. After receipt of the First Round Conflict Decision Forms, we will announce any additional channel elections that have been "locked in" as tentative channel designations. Based on this information, second round electors will be able to determine which channels will be available for selection in the second round of elections.

56. An interference conflict exists when it is determined that more than tolerable new interference exists (*i.e.*, in this context, 0.1 percent in addition to existing interference). If it is determined that no interference conflict exists (meaning in this context that the elected in-core NTSC station adequately protects stations in each of the three categories noted above, to the extent required), then the licensee's elected NTSC channel will be "locked in" and its DTV channel will be released, if applicable. If it is determined that an interference conflict does exist, and would therefore prevent granting the in-core NTSC channel election with the certified coverage, then the licensee must decide whether to reduce its facilities to eliminate the interference,[111] or change its election to its DTV channel, or be treated as a two out-of-core licensee if its paired DTV channel is out of core.[112] The licensee may agree to reduce its facilities to eliminate interference as long as it is still able to serve all of its community of license. With regard to stations with an allotted out-of-core DTV channel electing to operate a DTV station on their in-core NTSC channel, we will permit the 0.1 percent additional interference limit to be exceeded on a limited basis in order to afford these stations an improved opportunity to select their NTSC channel.[113] Such allowance is justified because these single channel licensees have only one in-core channel to select and may need this additional accommodation. We are concerned, however, that such operations not cause substantial interference to existing DTV service (*e.g*. interfering within the area in which service replication is already being achieved by an operating station). Although we do not expect such instances will be widespread, where we find it appropriate to do so, we may ask a station seeking DTV operation on its in-core NTSC channel to operate at a power level that would avoid large amounts of interference to existing DTV operations, even if this would preclude that station from operating with full replication

[108] In choosing this option, licensees would have to agree to accept interference or reduce facilities, as necessary. Licensees must certify that they will resolve their interference conflict(s), and will be required to demonstrate such by submitting technical engineering data.

[109] In choosing this option, licensees would have to negotiate a settlement with the licensee(s) with which they are in conflict. Licensees must certify that they will resolve their interference conflict(s), and will be required to demonstrate such by submitting evidence of a negotiated conflict resolution agreement and supplying engineering information, as may be necessary. Licensees' submissions must evidence compliance with 47 C.F.R. § 73.623(g).

[110] *See, generally,* 47 C.F.R. § 73.625. *See also* 47 C.F.R. §§ 73.622, 73.623.

[111] Licensees electing to reduce their facilities will be required to submit data demonstrating specifying how they will eliminate the interference conflict.

[112] As noted above, the licensee will indicate its decision by filing a conflict decision form.

[113] *See* note 101, *supra*.

facilities. Licensees should be aware that the burden is on them to ensure that the channel they elect can serve their community of license.[114] Consequently, should it be determined when proposing a final DTV Table of Allotments that a licensee's election does not cover its community of license, we will void that election and place the licensee on a more appropriate channel.

57. The interference conflict analysis performed in the first round is illustrated through the following examples. In the case of a two-in-core licensee whose election of its in-core NTSC channel causes an interference conflict which prevents granting the in-core NTSC channel with the certified coverage, the licensee will file a conflict decision form indicating whether it will accept its in-core NTSC channel with interference and reduced facilities or if it will revert to its DTV channel. The channel selected at this time would be "locked in" and the other channel would be released. In the case of a licensee with only one in-core NTSC channel (including singletons) that elected its in-core NTSC channel and an interference conflict was found that would prevent granting coverage to extent certified, the licensee will file a conflict decision form indicating whether it wishes to accept its in-core NTSC channel with interference or if it wishes to be treated as a two out-of-core licensee and file an election in the second round (see Step 4). Licensees are cautioned that it is possible that they may obtain a less preferable tentative channel designation than had they decided to keep their in-core NTSC channel election with interference and reduced facilities.[115]

d. Step 4: Second Round Election Forms filed

58. In our second round of elections, which we expect to occur July 2005, licensees with two out-of-core channels and those now treated like them,[116] will be required to file a Second Round Election Form.

59. *Two out-of-core licensees*. In their Second Round Election Form, two out-of-core licensees may submit one channel election preference[117] or may request that the Commission determine a "best available" channel (*i.e.*, one that minimizes new interference to all protected channels) for them at full replication facilities.[118] Second round electors may also submit one contingent channel preference which would be available for selection only if the licensee rescinds its original second round election as part of a

[114] *See, generally,* 47 C.F.R. §§ 73.622, 73.623.

[115] We note that these licensees may include their reduced-facilities NTSC channel on their list of second round election preferences. There would be, however, no guarantee that their discarded in-core channel would be awarded back to them should their higher second round election preferences not be available to them.

[116] This category includes those first round electors that indicated in their conflict decision forms that they wanted to be treated as two out-of-core licensees, rather than accept their in-core NTSC channel with interference and reduced facilities. Also included in this category are licensees that do not have an in-core channel (*e.g.*, an out-of-core singleton).

[117] Two out-of-core licensees may negotiate channel election arrangements with other licensees. *See, supra,* discussion of negotiated channel election arrangements in the First Round.

[118] Two out-of-core licensees wishing to ensure receipt of a tentative channel designation in the second round should consider making a Commission-determined "best available" channel their election preference. Thus, licensees that request that the Commission determine a "best available" channel for them at full replication facilities will be placed by Commission staff in this round.

negotiated conflict resolution or settlement agreement with another licensee.[119]

e. Step 5: Second round interference conflict analysis and tentative designations

60. We recognize that there may be a sizable number of election preferences filed in the second round and that licensees may list conflicting channel preferences. Second round electors may also be asked to accept a channel with interference and reduced facilities because of an interference conflict with a protected channel. In anticipation of these issues, our second round interference conflict analysis, which we expect to complete by September 2005, offers a process of identifying and resolving such interference conflicts. We will evaluate election preferences for interference conflicts (as defined above), and "lock in" second round election preferences as tentative channel designations, to the extent possible. We will accommodate the election preference of each licensee to the extent possible, but cannot guarantee that licensees will receive their selected channel. The Second Round Conflict Form will provide second round electors with the opportunity to decide whether the interference and reduced facilities to which they would have to agree to obtain their channel preference would be acceptable to maintain their election preference. Second round electors unwilling to accept its election preference with interference and reduced facilities or that otherwise cannot resolve their interference conflict may participate in the third round of elections.[120]

61. Upon completion of our second round interference conflict analysis, the Media Bureau will notify each licensee that is determined to cause an interference conflict(s). Licensees will have 60 days from the date of this conflict notification letter in which to file their Second Round Conflict Decision Forms, indicating how they intend to resolve their interference conflict. These Second Round Conflict Decision Forms, which we expect to be filed in November 2005, will provide licensees with the opportunity to decide whether to maintain their second round channel elections or instead participate in the third round. Licensees have several options available to them. Licensees can maintain their second round channel election if they resolve their interference conflict by (1) agreeing to accept interference and reduce facilities;[121] and/or (2) negotiating an agreement (*i.e.*, conflict resolution agreement) with the licensee(s) with which they are in conflict.[122] Licensees can decide to change their election to their contingent second round channel by entering into a negotiated channel election arrangement with another

[119] We do this in an effort to encourage licensees to resolve conflicting channel preferences through settlement negotiations. Licensees may also request that the Commission determine a "best available" channel for their contingent preference.

[120] We believe that in many cases of conflicting second round channel preferences, licensees will be able to reach settlement agreements, thereby avoiding the necessity of having the Commission resolve their conflict after the third round of elections. *See, supra*, discussion of negotiated conflict resolution agreements in the First Round conflict analysis.

[121] Licensees must certify that they will resolve their interference conflict(s), and will be required to demonstrate such by submitting technical data.

[122] Licensees must certify that they will resolve their interference conflict(s), and will be required to demonstrate such by submitting evidence of a negotiated conflict resolution agreement and supplying engineering information, as may be necessary.

licensee whereby they surrender rights to their original channel preference to that licensee.[123] Finally, licensees can decide that they are not willing to accept their election preference with interference and reduced facilities or that they cannot otherwise negotiate a resolution to their interference conflict and elect to participate in the third round of elections.[124] We note that where more than one station elects the same channel and those stations cannot negotiate a settlement agreement, the subject channel will become unavailable for selection in the second round and licensees will have the opportunity to select that channel in the third round.[125] After receipt of the Second Round Conflict Decision Forms, we will announce any additional channel elections that have been "locked in" as tentative channel designations.[126] Based on this information, third round electors will be able to determine which channels are available to them for selection.

f. Step 6: Third and final round of elections

62. We will hold a third round of elections, expected to occur in January 2006, to find channels for licensees that were not "locked in" at tentative channel designations in the previous two rounds. This third round provides a subsequent round for two out-of-core licensees whose election preferences could not be accommodated in their initial round of elections. We agree with MSTV that these licensees, as well as any other licensees that remain unplaced at this time, should be afforded the opportunity to make one additional channel election preference.[127] Election preferences made in this round must protect all "locked in" channels.[128] If a licensee is not able to specify a preferred channel on which it can operate satisfactorily without conflicting with a protected channel, it may ask the Commission to specify a channel for its use at full replication facilities. In such cases, the Commission will select a channel that minimizes new interference among all affected stations.

63. In this third round, we will also permit licensees with a low VHF channel or a channel subject to international coordination issues to seek an alternate tentative channel designation.[129]

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[123] Licensees may use their contingent channel election only in the context of a negotiated settlement with another licensee, and may not use their contingent channel election at all if such use would result in an interference conflict.

[124] We believe that in many cases of conflicting second round channel preferences, licensees will be able to reach settlement agreements, thereby avoiding the necessity of having the Commission resolve their conflict after the third round of elections.

[125] As noted below, the Commission will resolve third round conflicts pursuant to certain criteria. *See infra* section IV.A.1.f.

[126] Upon completion of the second interference conflict analysis and tentative channel designations, we expect that only a small number of licensees will remain with no channel "locked in." These licensees will be afforded an opportunity to file one additional election preference in the third and final round of elections.

[127] These licensees will file a Third Round Election Form.

[128] Participants in the Third Round may elect from available channels and may file negotiated channel election arrangements. *See, supra,* discussion of negotiated channel election arrangements in First Round and Second Round channel elections.

[129] Some commenters contend that in some cases low VHF channels may not offer licensees the ability to provide the best DTV service to the public. *See, e.g., MSTV Ex Parte* at 16-17; and *Capitol Broadcasting Ex Parte* dated (continued….)

Specifically, to the extent a preferred channel is available in this final election round, we will allow such licensees to elect a different channel for their final DTV operations, notwithstanding that they have an elected and "locked in" channel. These licensees may also request that the Commission determine a "best available" channel for them at full replication facilities.[130] No other licensees with an elected (and "locked in") channel will be permitted to participate in this third and final round of elections.

64. *Conflicts among third round preferences*. In deciding among third round election preferences, we will determine on a case-by-case basis what channel best replicates a station's service area while minimizing new interference to other stations.[131] This analysis includes considerations of service to the public – including service to local communities[132] – and overall spectrum efficiency. We will also consider in our analysis those factors enumerated by MSTV: (1) whether the station was an early adopter of DTV technology (*i.e.*, the length of time the station has been operating on DTV); (2) the impact on the public's access to DTV services (*i.e.*, the population served by the station's digital signal and the percentage of replication population covered); (3) whether one or both of the station's channels is/are in the low VHF band (which might weigh in favor of that station receiving priority); (4) whether coordination with or interference to or from Canada or Mexico is a problem; (5) the existence of any zoning, environmental or other such issues; and (6) any other factors that may be relevant at the time.[133]

g. STEP 7: New DTV table of allotments and authorizations proposed and adopted through rulemaking process

65. After completion of our channel election and repacking process, expected by August 2006, we will issue a Notice of Proposed Rule Making to propose a New DTV Table of Allotments. In creating the new DTV allotments proposals, we will provide all eligible stations with channels for DTV operations after the transition. In developing the new allotments, we will attempt to accommodate the preferences of

(Continued from previous page)
July 27, 2004 at 1. Although the data are incomplete at this time, we are persuaded that low VHF licensees should be afforded an additional opportunity to find a channel that may better serve the public. For this reason, we will also permit two in-core low VHF licensees to release both of their channels after the first round so that they may be treated as two out-of-core licensee and participate in the second round of elections. MSTV proposed an additional election round for licensees who found their prior election unacceptable and contemplated that licensees which had to choose between two low VHF channels would be among those possibly dissatisfied licensees. *MSTV Ex Parte* at 8. Stations with international coordination issues may also need this additional flexibility in the event that the channel initially elected does not receive international clearance at the expected facilities.

[130] We note that it may not be possible to accommodate these preferences. Moreover, it is possible that the low VHF channel may be the best available channel for the licensee.

[131] If, for example, the channel elected conflicts with a DTV channel tentatively designated for post-transition use by another station, the Commission will resolve the conflict by determining the best available channel for the licensee, as described herein.

[132] Considering licensees' ability to reach and provide coverage to local communities is consistent with the Commission's statutory obligation to ensure that broadcasters are responsive to the needs and interests of local communities. *See* 47 U.S.C. § 307(b) (in which Congress directed the Commission to "make such distribution of licenses, frequencies, hours of operation, and power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same").

[133] *Id.* at 9-11.

broadcasters to the extent possible.[134] Our proposed Table will be based on the tentative channel designations established through our channel election process, as well as on our evaluation of overall spectrum efficiency and providing the best service to the public, including service to local communities.[135] In the NPRM, we will seek comment on our proposed new DTV Table of Allotments.

66. Only Commission licensees and permittees will participate in the channel election process. Applicants for new stations and petitioners for new allotments will not make elections. We note that there are remaining applications that have been pending since before 1997 to obtain approximately 50 new NTSC stations. These applications will be dismissed if found to be inconsistent with the current protection requirements. In developing the post-transition DTV table, we will generally protect those NTSC allotments with pending new station applications that have "cut-off" status (do not face an additional opportunity for filing of mutually exclusive applications). This is consistent with the protection that must be afforded by DTV applications pursuant to Section 73.623(h)(2) of the rules. An exception to this protection is that we will not protect the existing channel allotment where the applications are associated with a rule making petition that requests another channel (but may protect the new channel proposed in the rule making petition in accordance with the discussion that follows). For mutually-exclusive groups of applications where there is a settlement, or the tentative selectee is known, we will consider the facilities proposed by the prevailing applicant in the settlement group or the tentative selectee. We will continue to process these protected applications to grant of an NTSC construction permit and note that these will be new single-channel stations, allowed to choose between NTSC and DTV operation during the transition, but required to become DTV at the end of the transition. At the conclusion of the channel election and repacking process, remaining unprotected new station applications will be evaluated and may be accommodated with a post-transition DTV allotment or dismissed when we issue the NPRM proposing the new DTV Table of Allotments.

67. Pursuant to opportunities the Commission provided, some of the pre-1997 NTSC applicants have continued to pursue a new station authorization by filing rule making petitions requesting a different NTSC channel or a DTV channel.[136] In addition, some petitions have been filed seeking DTV channel allotments for new stations. These pending NTSC and DTV rule making proposals will be dismissed if found to be inconsistent with the current protection requirements. Each rule making request, including those associated with applications and those seeking new DTV allotments, falls into one of three groups: (1) pending petitions for rulemaking; (2) outstanding rule makings (Notice of Proposed Rule Making issued); or (3) completed rule makings that now have pending applications for a construction permit. We will attempt to protect allotments and proposed allotments in the second and third groups where we have already adopted a Notice of Proposed Rule Making or a Report and Order to establish a channel allotment. Protection of these rule making proceedings is consistent with the requirements placed on

[134] To clarify as requested by Cox Broadcasting, the process will account for interference agreements among stations under Section 73.623(g) and will generally preserve the protection afforded by those agreements. *See* Cox Comments at 2.

[135] *See* note 132, *supra*.

[136] *See* Public Notice, "Mass Media Bureau Announces Window Filing Opportunity For Certain Pending Applications and Allotment Petitions For New Analog TV Stations," 14 FCC Rcd 19559 (MB rel. Nov. 22, 1999) ("November 1999 Window Filing PN"); and Public Notice, "Mass Media Bureau Announces Window Filing Opportunity For Certain Pending Requests For New NTSC Television Stations On Channels 52-59," 17 FCC Rcd 2155 (MB rel. Feb. 6, 2002) ("March 2002 Window Filing PN").

DTV applications by Section 73 .623(h)(2) of the rules. However, we advise these petitioners that there may be a few cases where we must modify, restrict or eliminate their requested allotment in order to accommodate all eligible broadcasters with a post-transition DTV allotment. Remaining rule making petitions will be evaluated at the conclusion of the channel election and repacking process and may be accommodated with a post-transition DTV allotment or dismissed when we issue the NPRM proposing the new DTV Table of Allotments.

2. Freeze of Procedures to Change Allotments

68. A stable database is not only crucial to the channel election process, but is vital to the completion of the technically difficult task of developing a new DTV Table of Allotments. To make the channel election process and the creation of the new DTV Table of Allotments as manageable as possible, the Media Bureau has temporarily suspended certain procedures for altering DTV and analog TV service areas and channels until after the new DTV Table of Allotments is complete.[137] We will continue to process rulemakings in which a Notice of Proposed Rule Making has been issued prior to the adoption of this Order. Additionally, the Media Bureau staff is directed to dismiss all pending petitions to change the NTSC Table of Allotments in which a Notice of Proposed Rule Making has not been issued prior to the adoption of this Order.[138] Pursuant to the freeze, the Media Bureau we will not accept for filing, until further notice, the following:

- Petitions for rulemaking to change DTV channels within the DTV Table of Allotments.[139]
- Petitions for rulemaking for new DTV allotment proceedings.[140]
- Petitions for rulemaking to swap in-core DTV and NTSC channels.[141]

[137] *See August 2004 Filing Freeze PN*, DA 04-2446 (MB rel. Aug. 3, 2004).

[138] We note that the Media Bureau staff previously dismissed or denied a number of petitions for new or changed NTSC allotments on various grounds, thereby declining to issue a Notice of Proposed Rule Making for these petitions. Several petitioners have sought reconsideration or review of these actions. In view of our decision to dismiss all pending petitions for new NTSC allotments which have not been subject to the Notice process, all pending petitions for reconsideration or review of NTSC allotment requests that have not advanced to the Notice stage are hereby dismissed.

[139] 47 C.F.R. §§ 73.622, 73.623.

[140] 47 C.F.R. § 73.622.

[141] In the NPRM, we sought comment on whether we should allow stations to use an application process to make these swaps. We proposed to require that parties meet the spacing requirements for amending the analog Table of Allotments pursuant to 47 C.F.R. § 73.610 and to allow parties to use Longley-Rice analysis to demonstrate that an analog TV station protects DTV stations and for amending the DTV Table of Allotments pursuant to 47 C.F.R. § 73.623. We invited comment on these proposals and on how the Commission should address any loss of analog service or cable carriage or other public interest issues that may arise in connection with analog/DTV channel swap proposals. *Second DTV Periodic NPRM*, 18 FCC Rcd at 1288, ¶28. Currently, two or more DTV licensees/permittees are allowed to request a swap of their DTV channel allotments by filing modification applications for each station. Few commenters address this issue on the record. Fewer state that they support channel swaps by application. *See* CEA Comments at 16; Thomas Smith Comments at 4. *See also* NYS-OFT Comments at 12-13; NPSTC Reply at 3-4 (supporting easing Taboo restrictions on early DTV/In-core analog swaps); MSTV/NAB Comments at 7; Paxson Reply at 10; Sinclair Comments at 8. For the reasons stated above, (continued….)

- Applications to change DTV channel allotments among two or more licensees.[142]
- Petitions for rulemaking by licensees/permittees to change NTSC channels or communities of license.
- Television modification applications that would increase a station's DTV service area in channels 2-51 in one or more directions beyond the combined area resulting from the station's parameters as defined in the following: (1) the DTV Table of Allotments; (2) Commission authorizations (license and/or construction permit); and (3) applications on file with the Commission prior to release of this Order; and television modification applications that would increase a station's analog service area in channels 2-51 in one or more directions beyond the combined area resulting from the station's parameters as defined in the following: (1) Commission authorizations (license and/or construction permit) and (2) applications on file with the Commission prior to release of this Order.[143] We will continue to process applications on file as of the date this Order is adopted. The Media Bureau may consider, on a case by case basis and consistent with the public interest, amendments to those applications to, for example, resolve interference with other stations or pending applications or resolve mutual exclusivity with other pending applications.
- Class A station displacement applications and applications for coverage changes that would serve any area that is not already served by that Class A station's authorized facilities.[144]

69. Notwithstanding the freeze, licensees will not be prevented from filing modification applications when the application would help resolve international coordination issues or when a broadcast station seeks a new tower site due to the events of September 11, 2001. In addition, the Media Bureau will consider, on a case-by-case basis, requests for waiver of the freeze when the modification application is necessary or otherwise in the public interest for technical or other reasons, such as when zoning restrictions preclude tower construction at a particular site or when unforeseen events, such as extreme weather events or other extraordinary circumstances, require relocation to a new tower site.

3. Border Interference Issues

70. A few commenters state that they have concerns with the Letter of Understanding governing

(Continued from previous page)

we have determined that we will freeze all NTSC/DTV channel swaps upon adoption of this Order. We therefore do not reach the issue of streamlining the NTSC/DTV channel swap process.

[142] 47 C.F.R. §§ 73.622(c)(1), 73.623. Stations hoping to participate in negotiated channel election arrangements, discussed *supra,* must notify the Commission in the channel election form. If these arrangements are approved, the participants will be notified..

[143] We froze maximization applications for channels 52-59 on June 18, 2002. Public Notice, 17 FCC Rcd 11290 (2002). We froze maximization applications for channels 60-69 on January 24, 2003. Public Notice, 18 FCC Rcd 627 (2003).

[144] As an exception to this freeze, on-air Class A stations demonstrating that they face imminent disruption of service may request an STA to continue operations. Displacement applications filed by out-of-core LPTV stations that have been deemed Class A-eligible requesting a move to an in-core channel where Class A authority could be granted will not be acted on during this freeze, but for such stations, immediate non-Class A LPTV displacement relief may be requested through an STA.

modifications of the DTV Table of Allotments within 400 km of the U.S./Canadian border.[145] They submit that clarifications to the LOU process are essential to broadcasters' ability to plan their channel election and post transition business plans. For example, Red River and Paxson request that the Commission clarify that the LOU will not interfere with post-transition DTV replication of stations' current analog service area regardless of whether a station elects to provide permanent DTV service on its analog or digital channel. Red River also states that the LOU may function to prohibit some broadcasters from electing their NTSC – and specifically high VHF NTSC – channels for DTV use after the transition and requests that the Commission negotiate "channel election protections" for all U.S. station operations in the border zone.[146] CD&E, Red River, and Paxson also report that the LOU does not account for maximization applications on file with the Commission, and request that the Commission account for maximization applications in the LOU process.[147]

71. There are approximately 43 stations with DTV applications awaiting international coordination.[148] We recognize that certain issues may remain to be completed in connection with the Canadian approval process for these stations. We will still require, however, broadcasters to make timely channel elections. As noted above, broadcasters with an out-of-core DTV channel and an in-core analog channel that is not available for digital use under the LOU should indicate this fact on their channel election form.[149] Like any one in-core licensee, these licensees may release their in-core channel and participate in the second round of elections; however, we will also afford licensees a later opportunity in the third round to elect another channel in the event their elected channel remains subject to, or was in the interim adversely affected by, international coordination.[150] Those broadcasters remaining on their DTV allotments that do not have applications to maximize should not have unusual difficulties in the approval process. With respect to post-transition DTV replication of stations' current analog service, we must coordinate DTV use of NTSC channels in border areas.[151] We will resolve any remaining international coordination issues as part of the process of developing new DTV allotments.

B. Replication and Maximization

72. In the creation of the DTV Table of Allotments, each DTV channel allotment was chosen to allow DTV service thereon to best match the Grade B service contour of the NTSC station with which it was paired.[152] We took this approach to ensure that broadcasters have the ability to reach the audiences

[145] Red River Reply at 1, Paxson Comments at 24; Cohen Dippell and Everist ("CD&E") Comments at 6.

[146] Red River Reply at 2.

[147] Red River Reply at 1, Paxson Comments at 24; CD&E Comments at 6.

[148] As of August 4, 2004, there are 32 pending DTV applications/rule making proposals requiring Canadian approval and 11 pending DTV applications/rule making proposals requiring Mexican approval. (These numbers do not reflect those applications which have failed the coordination process or which require further action by the applicant.)

[149] *See* section IV.A.1., *supra*.

[150] *See* section IV.A.1.f., *supra*.

[151] We will conduct this coordination in the course of the new allotment rulemaking.

[152] *Sixth Report and Order*, 12 FCC at 14605, ¶¶ 29-30.

that they have been serving with the NTSC analog transmission system and that viewers continue to have access to the stations that they are accustomed to receiving over the air.[153] Although we have declined to make full signal replication mandatory,[154] we continue to believe that most DTV broadcasters eventually will replicate their NTSC coverage with DTV service. As an incentive to replicate, we stated that DTV licensees must either be on the air replicating their April 1997 NTSC Grade B service area as of the replication deadline or lose interference protection to the unreplicated portion of this service area outside the noise-limited signal contour.[155] We stated that other full or low-power stations would then have the opportunity to expand their service areas to serve the viewers made available as a result of a DTV station's failure to fully replicate.[156] We also stated in the *First DTV Periodic MO&O* that we would treat stations seeking to maximize their service areas in a similar manner.[157] We have emphasized DTV service maximization in the digital transition as a means by which stations may increase their DTV signal coverage and provide DTV service competitively within their respective markets.[158]

73. In the *First DTV Periodic MO&O*, our goal in temporarily deferring the replication protection deadline established in the *First DTV Periodic Report and Order* was to permit stations to elect a more gradual build-out of their DTV facilities, and thereby increase the number of stations capable of commencing digital service to at least their core communities by the May 2002 and May 2003 construction deadlines. We also gave DTV licensees seeking to maximize facilities, including analog UHF licensees, the same flexibility to implement graduated construction plans as analog VHF licensees.

74. We stated in the *First DTV Periodic MO&O* that we would establish in this second DTV

[153] *Id*.

[154] *See First DTV Periodic Report and Order*, 16 FCC Rcd at 5955, ¶ 21.

[155] *Id.* at 5956, ¶ 22.

[156] *Id.*

[157] *First DTV Periodic MO&O,* 16 FCC Rcd at 20606, ¶¶ 29-30. By maximizing, stations make power and antenna height increases above the values allotted in the DTV Table, and site changes that extend the service area of DTV facilities beyond the NTSC replication facilities. *Class A Order*, 15 FCC Rcd at 6377, ¶ 52. Congress has recognized the importance of preserving the right of DTV stations to maximize and has established specific measures to protect coverage areas defined in maximization applications. In the Community Broadcasters Protection Act of 1999, Congress protected applications for maximization against new Class A stations. To be entitled to protection by low power television stations applying for primary Class A status, DTV stations were required to have filed an application for maximization or a notice of intent to seek maximization by December 31, 1999, and to have filed a bona fide application for maximization by May 1, 2000. 47 U.S.C. § 336(f)(1)(D), (7)(A)(ii)(IV).

[158] *Sixth Report and Order*, 12 FCC Rcd at 14605, ¶ 30. The Media Bureau froze maximization applications in the 698-746 MHz band (channels 52-59 or the "Lower 700 MHz band") to assist participants in Auction No. 44 to determine the areas potentially available in the band for the provision of service by auction winners before the channels are cleared. *Public Notice*, 17 FCC Rcd 11,290 (2002). The Media Bureau later froze maximization applications in the 746-806 MHz spectrum band (channels 60-69 or the "Upper 700MHz band") to protect Guard Band and Public Safety entities from shifts or expansion in existing broadcast service, and to facilitate the eventual clearing of this spectrum and the auction of the commercial portions of the spectrum. *Public Notice*, 18 FCC Rcd 627 (2003).

periodic review a date by which broadcasters must either replicate their NTSC coverage or lose DTV service protection to the unreplicated areas, and by which broadcasters with authorizations for maximized digital facilities must either provide service to the associated coverage area or lose DTV service protection to the uncovered portions of those areas.[159] For DTV channels within the core spectrum, we proposed in the *NPRM* to set new replication and maximization protection dates: July 1, 2005, for affiliates of the top-four networks (*i.e.,* ABC, CBS, Fox and NBC) in markets 1-100; and July 1, 2006, for all other commercial DTV licensees as well as noncommercial DTV licensees.[160] We sought comment on these dates, stating our goal to allow stations sufficient time to provide full replication and maximization service while also ensuring that stations continue to progress toward an all-digital broadcast service.[161] We requested comment on whether we should adopt the same or different replication and maximization interference protection deadlines for stations operating in the 700 MHz band.[162] We also sought comment on the disposition of construction permits or applications for replication or maximization pending after the deadline.[163]

75. Some commenters argue that deadlines are unnecessary to further the transition and will be more harmful to broadcasters than beneficial to the transition.[164] MSTV/NAB and others request that we set the interference protection deadlines at the end of the transition for both in-core and out-of-core stations.[165] They reason that setting deadlines at the end of the transition will have no effect on the transition as the vast majority of transition-driving major-network-affiliated broadcasters in the largest markets and stations owned by large group owners are operating at full DTV facilities. They assert that requiring smaller market stations to fully replicate or maximize will only generate a small increase in overall population served compared to the population currently receiving DTV service from the larger market stations.[166] In October 2003, MSTV submitted an analysis of digital broadcast power and coverage ("MSTV Power and Coverage Study"), reporting that approximately 60.4 percent of the stations operating pursuant to an STA are providing sufficient signal to reach 70 percent or more of their replication population., and that the overall reach of DTV signals should be sufficient to stimulate the

[159] *First DTV Periodic MO&O*, 16 FCC Rcd at 20606, ¶ 29.

[160] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1290, ¶ 33.

[161] *Id.* at 1290, ¶ 32.

[162] *Id.* at 1298, ¶ 53.

[163] *Id.*

[164] Some broadcasters assert that because they are reaching a significant proportion of their potential audience while under STAs, requiring full replication would be more expensive than useful. Belo states that to go to authorized power will cost it $800,000 and increase its monthly electric expenses from $350 to $5,000. Belo Comments at 9-10. Cordillera provides its typical costs of construction of full power facilities at $700,000 ($400K for antenna/tower and $300K for transmitter upgrades). Cordillera Comments at 6. Block Communications estimates its total cost of upgrading its current low-power facilities to increase the coverage of WFTE-DT and WDRB-DT to be between $3 and $3.5 million. Block Reply at 2.

[165] MSTV/NAB Comments at 8. *See also* Public Television Comments at 26 (supports a requirement for in-core only); Belo Comments at 10; CBC Comments at 12; Hubbard Comments at 4; Paxson Reply at 12; Sinclair Comments at 9-12. *See generally* NBC/Telemundo.

[166] MSTV/NAB Comments at 8; Tribune Reply at 3.

marketplace for DTV broadcast receivers.[167]

76. Others assert that firm replication and maximization dates are necessary to increase DTV service to the public and also to advance the clearing of spectrum in the Lower 700 MHz (channels 52-59) and Upper 700 MHz (channels 60-69) bands. For example, contrary to broadcasters' assertions that STA signals cover a sufficient percentage of their local population, Cavalier asserts that not all broadcasters operating at low power cover such high percentages of their populations.[168] CEA asserts that basic engineering demonstrates that under-powered signals cannot reach all the viewers in an analog service area.[169] Thomson declares that more than half of all broadcasters (*i.e.*, those that are operating under an STA) may be operating at such a low power that they are denying any digital signal to a substantial portion of their viewers.[170] Thomson offers anecdotal evidence of complaints of people in suburban areas without access to DTV signals, but seeks better reporting data from the Commission.[171] Zenith states that reduced power transmission adversely affects consumer reception within the station's low power service area because strong NTSC signals cannot be rejected by DTV receivers if the ratio of desired digital to strong adjacent analog is too small.[172] The American Cable Association ("ACA") reports that the signals of DTV broadcasters at low power are not reaching cable systems' headends.[173] Because of this potential for poor user experience, Zenith asserts that it is critical that the Commission take whatever steps are necessary to ensure broadcasters build out their full facilities and increase their

[167] *See* Letter from David Donovan, President, MSTV, to Marlene Dortch, Secretary, FCC, dated February 9, 2004, attaching Letter from David Donovan, President, MSTV, to Marlene Dortch, Secretary, FCC, dated October 30, 2003, and "Reaching the Audience: An analysis of Digital Broadcast Power and Coverage," Mark R. Fratrik, Ph.D., Vice President, BIA Financial Network, prepared for the Association of Maximum Service Television, Inc., dated October 17, 2003 (also finding, among other things, that the most popular stations have operational DTV facilities that serve most, if not all, of their replication areas). *See also* MSTV/NAB Comments at 11; CD&E reports that based on an initial inspection of the coverage achieved by STA operations specifying facilities that fulfill the community coverage requirement, STA facilities in many instances will serve a substantial portion of their respective NTSC service areas. CD&E Comments at 4. *See also* Block June 17, 2003 Letter at 2 (stating that WFTE-DT Salem and WDRB-DT Louisville reach 86 percent and 71 percent of their ATSC Grade B populations with STAs and that this is typical coverage of a DTV station operating under STA); Belo Comments at 9-10 (KENS-DT, San Antonio under STA, but serving 81 percent of population.); Cordillera Comments at 6 (showing KPAX-DT, Missoula at 91 percent coverage of analog Grade B).

[168] Cavalier Reply at 19.

[169] CEA Reply at 13-14. CEA offers an example of a station in Springfield, Illinois that, according to CEA, fails to serve a significant number of viewers within its existing analog service area. CEA Comments at Appendix A. *See also* CEA Reply at 5.

[170]Thomson, Inc. ("Thomson") Reply at 3.

[171] *Id.*

[172] Zenith Comments at 5. S*ee also* WPSX Reply at 5.

[173] ACA Comments at 8. ACA reports that this problem is particularly acute in smaller and economically disadvantaged areas.

power expeditiously.[174]

77. Some commenters seek deadlines much earlier than those we proposed in the *NPRM*. For example, CEA suggests July 1, 2004, for network affiliates in the top 100 markets and July 1, 2005, for all other broadcasters, including noncommercial.[175] CEA reasons that delaying full coverage beyond 2004/2005 will deprive consumers of access to multiple sources of over the air programming.[176] Motorola asserts that establishing deadlines for channel election and interference protection as early as possible will provide a stable core environment and thus aid non-core licensees to move into the core.[177]

78. We take seriously our mandate to speed the transition and to ensure that the spectrum is used efficiently. At the same time, we have attempted to accomplish these objectives without imposing undue cost and delay on broadcasters. After careful consideration of the comments, we will adopt the following use-it-or-lose-it replication and maximization deadlines:

- **July 1, 2005** – Use-it-or-lose-it deadline for DTV licensees affiliated with the top-four networks (*i.e.*, ABC, CBS, Fox and NBC) in markets 1-100. Those licensees that receive a tentative DTV channel designation in the channel election process on their current digital channel must construct full, authorized facilities. Those licensees that receive a tentative DTV channel designation on a channel that is not their current DTV channel must serve at least 100 percent of the number of viewers served by the 1997 facility on which their replication coverage was based.[178]
- **July 1, 2006** – Use-it-or-lose-it deadline for all other commercial DTV licensees as well as noncommercial DTV licensees. Those licensees that receive a tentative DTV channel designation in the channel election process on their current digital channel must construct full, authorized DTV facilities. Those licensees that receive a tentative DTV channel designation on a channel that is not their current DTV channel must serve at least 80 percent of the number of viewers served by the 1997 facility on which their replication coverage was based.

79. We adopt these deadlines for the following reasons. First, we believe that the time has come to ensure that consumers have access to a full range of digital programming services from their local broadcast stations. We note that, even according to MSTV's own study, approximately 40 percent of

[174] Zenith Comments at 5. Concerns have also been raised by some rural groups, who cite insufficiently powered DTV transmissions as contributing to the potential disenfranchisement of rural communities from the early stages of the DTV transition. *See* Comments of Larry Mitchell, American Corn Growers Association; Paul Clark, National Association of Farmer Elected Committees.

[175] *See* CEA Comments at 17.

[176] CEA Reply at 10.

[177] Motorola Comments at 6.

[178] The number of viewers served by a station's 1997 facility on which its replication is based will be determined using population data from the year 2000 census. Thus, the population that will be reported as served by a station's 1997 facility on the table of station information that we plan to issue soon will generally be different (in most cases larger) than the population reported as served by that facility on Appendix B to the *Second MO&O on Recon. of the Fifth and Sixth R&Os.*

stations operating pursuant to STAs are reaching less than 70 percent of their analog population with a digital signal.[179] The unserved households are more likely to be in outlying or rural areas, since the minimum STA coverage requirement is that a station's DTV signal covers its actual community of license.[180] Those consumers, like all consumers, reasonably expect that when they buy a digital television set they will be able to receive the same broadcast stations in digital that they receive in analog.

80. Second, our temporary deferral of the replication and maximization deadlines in 2001 recognized that, given the existing marketplace conditions, some broadcasters, particularly those in smaller markets, needed to take a more graduated build-out approach.[181] In particular, we recognized the existing reality of modest DTV receiver penetration, which affected the financial decisions of broadcasters and those who fund them.[182] The outlook for DTV receivers has changed dramatically since 2001. In August 2002, the Commission adopted a DTV tuner mandate.[183] Beginning on July 1, 2004, television receivers shipped in the U.S. must include digital broadcast tuners on a phased-in basis; by July 2007, all television receivers 13 inches and above must include a digital broadcast tuner.[184] In addition, in September 2003, the Commission adopted rules to permit the manufacture of cable-ready "plug-and-play" sets for one-way digital programming. By Commission mandate, each of these sets will also include an over-the-air digital tuner.[185] Between these mandates and the overall increasing pace of the DTV transition, we expect that the penetration of digital televisions with off-air reception capability will dramatically increase in the coming years.[186] Indeed, in testimony before Congress in June 2004, the Consumer Electronics Association ("CEA") forecast that more than 85 million American homes will have DTV tuners by 2010.[187] This emerging reality should alleviate the concerns of commenters stating that they do not wish to provide service in advance of widespread DTV set penetration.[188] Therefore, we do

[179] MSTV Power and Coverage Study at 16.

[180] As ACA notes, this often can affect cable subscribers in these outlying or rural areas as well, since the cable systems in those areas may not be able to receive an adequate broadcast signal for carriage.

[181] *See First DTV Periodic MO&O* at ¶ 25.

[182] *Id.*

[183] *See DTV Tuner Order*, 17 FCC Rcd 15978 (mandating that television sets contain digital tuners on a phased-in basis, beginning in July 2004).

[184] *See fn. 26, supra,* describing DTV tuner phase-in schedule.

[185] *See Plug & Play Order*, 18 FCC Rcd at 20900-01, ¶ 34.

[186] *See Broadcast Flag Order*, 18 FCC Rcd at 23554, ¶ 8 ("We are reaching a critical juncture in the transition – the forthcoming availability of digital cable ready televisions with off-air reception capability will dramatically increase the number of consumers with access to DTV content and services"); *Plug and Play Order*, 18 FCC Rcd at 20900-01, ¶ 34.

[187] *See* Testimony of Gary J. Shapiro, President and CEO, Consumer Electronics Association, before the Committee on Energy and Commerce, Subcommittee on Telecommunications and the Internet, June 2, 2004, at 8.

[188] *See* Joint Commenters at 4; NBC/Telemundo Comments at 10; Hubbard Comments at 4; CD&E Comments at 2-3; MSTV/NAB Comments at 8; Tribune Reply at 3.

not believe it is appropriate to further postpone replication and maximization deadlines.[189]

81. Third, we do not believe a replication/maximization deadline will impose an undue burden on broadcasters. Approximately 45 percent of broadcasters currently on the air have built licensed facilities and are operating at full power.[190] Many of these full-power stations are located in smaller markets and/or are non-commercial. Not only did they incur higher build-out costs than a station building today, but they have been incurring higher power costs to operate at full power. It would be inequitable to permit broadcasters operating at lower power – who have already accrued significant benefits from the Commission's STA policy – to continue to require the full-power broadcasters continue to shoulder a heavier load throughout the transition.

82. Fourth, we do not believe that the build-out deadlines will result in undue "stranded investment." As an initial matter, we are not requiring stations to replicate or maximize. The "use-it-or-lose-it" deadline simply means that after a reasonable build-out period has passed, if a station fails to provide a signal to serve certain viewers, another entity should have the opportunity to do so. After a reasonable build-out period, we believe that the objectives of providing service to the public and spectrum efficiency militate against further protection of the unserved areas. In addition, we have made a significant accommodation for those broadcasters moving to a new DTV channel at the end of the transition: the top-four network affiliates in the top 100 markets need only provide service to the same number of viewers as their replicated service area in order to preserve their right to maximize/replicate on their ultimate DTV channel; the remaining stations need only serve 80 percent of the number of viewers in their replicated service area to preserve their right to maximize/replicate on their ultimate DTV channel. If, as MSTV asserts, a significant amount of power (and hence, expense) is needed to "push" a UHF television signal out the last few miles beyond the station's "line of sight" or "radio horizon,"[191] this should help address the concern. Moreover, we have made a special accommodation, described below, for many of the broadcasters for whom there would certainly be stranded investment – those with a DTV allotment outside of the core. We also note, according to Harris Corporation, that much of the investment in building out will not be stranded even if a station ultimately moves to another channel because some of the equipment can be re-used.[192] Finally, for those broadcasters with an in-core DTV allotment that may

[189] We also disagree with Sinclair's assertion that the Commission should be focusing on the performance of over-the-air DTV receivers and not mandating that broadcasters increase transmitter power and coverage area. Sinclair Comments at 10; Sinclair Letter of June 13, 2002 at 1-2. In the *DTV Tuner Order* we adopted specific requirements to ensure that television sets be able to adequately receive DTV signals on all of the channels allocated to television service and continue to believe that competitive forces are generally the best approach for ensuring that DTV receivers perform adequately. *See DTV Tuner Order* 17 FCC Rcd at 15999, 16006, ¶¶ 46, 64. We encourage broadcasters to continue to work with consumer electronics manufacturers to improve the performance levels of DTV receivers and note progress in this regard. *See ATSC Approval of Recommended Practice A/74, establishing voluntary guidelines for DTV broadcast receiver performance, announced June 22, 2004* (available at www.atsc.org).

[190] *See* **Appendix D**.

[191] MSTV Power and Coverage Study at 4.

[192] *See* Letter from David R. Siddall to Marlene Dortch, Secretary, FCC, dated December 9, 2003, attaching charts estimating costs of a station operating with an STA on an out-of-core DTV allotment to relocate to an in-core channel. Depending on the station's power level and whether it ultimately moves to an in-core VHF or UHF channel, the "stranded" investment caused by an intermediate power increase on the existing DTV channel could (continued….)

want to consider moving elsewhere at the end of the transition, whatever additional costs there are can be factored into that decision just like the sunk costs of the initial STA facility. In any event, these broadcasters would be in no worse position than the hundreds of broadcasters that have already built out to full power and may face a similar choice.

83. Fifth, as with other aspects of the transition such as the initial construction deadlines, we recognize the particular needs of smaller market and non-commercial broadcasters by setting earlier deadlines for the larger market, commercial broadcasters expected to lead the transition.[193] In addition, we are adopting a waiver process for stations that truly cannot afford to build out to these minimum requirements, or that cannot build out for other reasons beyond their control.

84. Stations on any channel that have received construction permits with construction deadlines that extend beyond these replication/maximization interference protection dates must meet their replication/maximization requirements at the expiration date specified by their construction permit.[194] They must build facilities that meet the minimum requirements by that date or lose interference protection.

85. A station that fails to meet the above replication/maximization requirements will lose interference protection to the unused portion of the associated area as of the applicable interference protection deadline, as described more fully in section IV.D., *infra*.[195] In addition, a station failing to meet the above deadlines will lose the ability to "carry over" its interference protection to its unserved DTV service area on its post-transition channel (*e.g.*, on its in-core NTSC channel), as determined in the

(Continued from previous page)
range from $345, 000 for a higher power station (out of a total investment of $1,355,000 to $1,975,000) to $505,000 for a lower power station (out of a total investment of $1,145,000 to $1,720,000). Harris has particular expertise in this regard as "the world's leading broadcast transmission equipment supplier," and the supplier of the majority of DTV transmitters and encoders in the United States. *See* Harris Comments at 1.

[193] *See* 47 C.F.R. § 73.624(d).

[194] In the *First DTV Periodic MO&O*, the Commission established a process whereby certain commercial stations and all noncommercial educational stations operating pursuant to a DTV STA would receive automatic DTV CP extensions until a future "use or lose" date. 16 FCC Rcd at 20608, ¶ 36. In the *Second DTV Periodic NPRM*, we sought comment on new replication and maximization protection dates and on the disposition of construction permits or applications for replication or maximization pending at the time of the deadline. In conjunction with the replication and maximization protection dates adopted herein, we clarify that we will also apply the DTV CP extension policy to all stations operating with a licensed DTV facility. Therefore, all properly authorized operating DTV stations with authorized CPs to make changes to their licensed facilities, including the network affiliate stations in the top 30 markets, will have their CPs extended until the replication/maximization interference protection deadlines established in this order. We believe this change is appropriate in order to provide consistency in the treatment of stations with outstanding CPs that have already received a DTV license and those with an outstanding CP operating pursuant to a DTV STA.

[195] As a practical matter, nearly every station that has fully replicated its analog coverage will have maximized its DTV coverage by reaching at least some small areas beyond the analog Grade B contour. Where a station has maximized its DTV coverage by a coverage shift that leaves some of its replication coverage area unserved, then the station's protection will shift to its maximized coverage area and it will lose interference protection to the unserved replication area.

channel election process described above.[196] Thus, for example, if a station subject to the July 1, 2006 deadline builds out only to 60 percent of its replicated service population by that date, it will lose interference protection on its digital allotment beyond that 60 percent service area, and, if it seeks to move to its NTSC allotment at the end of the transition, it will not retain the ability to carry over interference protection beyond the 60 percent service area.

86. By contrast, a station that meets its applicable build-out requirements will retain interference protection to its authorized service area on its DTV channel if it remains on that channel, as well as the ability to "carry over" its interference protection for its authorized DTV service area if it moves to a different DTV channel post-transition.[197] However, a station moving to a different DTV channel at the end of the transition will lose interference protection during the transition to any unserved areas on its current DTV channel as of the applicable deadlines, notwithstanding the fact that it meets the minimum build-out requirements. For example, assume a broadcaster subject to the July 1, 2006 deadline will be changing DTV channels at the end of the transition and meets the 80 percent build-out requirement by serving 90 percent of its replicated service population by July 1, 2006. Assume further that it was authorized to build maximized facilities, serving 120 percent of its replicated service population. At the end of the transition, it will be entitled to "carry over" its full maximization service area, to the extent possible under our rules. However, during the transition, the station will lose interference protection on its existing DTV channel for those areas within its maximized service area that are unserved as of the deadline (*i.e.*, those areas containing 90 percent-120 percent of its service population).

87. For those stations that are unable to provide the required service by our replication/maximization protection deadlines because of severe financial constraints or circumstances beyond a station's control, we will establish a limited waiver process and grant extensions of the applicable replication or maximization interference protection deadline on a six-month basis if good cause is shown. Broadcasters seeking a waiver on the basis of financial hardship must make a showing similar

[196] Analog service will remain protected throughout the transition, but DTV service to the former analog area will not be protected after the transition unless replication deadlines are met. Some stations may currently have licenses or construction permits to serve areas smaller than the service area allotted to them in the DTV table of allotments. Unless broadcasters in this situation construct facilities to serve these unserved areas within the DTV allotment prior to the replication/maximization interference protection deadline, they risk not being able to expand later to regain that service area.

[197] This decision modifies our decisions in the *Class A Order* and *Class A Recon*. *Class A Order,* 15 FCC Rcd at 6379-80, ¶ 58; *Class A Recon*., 16 FCC Rcd 8269-70, ¶ 67. In the *Class A Order*, in the context of relative interference protection priorities of Class A and DTV stations, we stated that "[t]o preserve their ability to maximize … within the core, we will require stations … to … maximize their DTV service area on their … DTV channel. These stations must have filed a notice of intent to maximize and must file an application to maximize within the deadlines mandated by the CBPA. [W]e will allow these stations to carry over to their in-core [NTSC] channel the maximized digital service area achieved on the [DTV] channel, to the extent that the [NTSC] channel facilities for maintaining the maximized service area provide required interference protection to other DTV stations." *Class A Order,* 15 FCC Rcd at 6379-80, ¶ 58. Under today's decision, stations need only meet our replication/maximization build-out deadlines to preserve their ability to maximize on their ultimate DTV channel. Similarly, stations electing to forfeit their current DTV channel and "flash-cut" to digital on their analog channel under the options described below for stations with out-of-core DTV allotments and satellite stations, will be entitled to interference protection as if they met the applicable replication/maximization build-out deadlines.

to that required to obtain a waiver of the DTV construction deadlines on financial hardship grounds.[198]

1. Single Channel Broadcasters

88. KM Companies requests that we specifically address the treatment of single channel broadcasters with respect to the interference protection deadline.[199] As discussed elsewhere, single channel broadcasters will participate in the channel election process. Analysis of their channel elections will be based on their authorized facilities (construction permit for stations that have both a license and a construction permit). Whether their single-channel authority is analog or digital, a broadcaster that has not constructed or is not operating the appropriate facilities on which its election analysis is based will lose protection of the unserved area as of the applicable interference protection deadline (except in cases where the DTV allotment coverage is based on a construction permit that expires after the deadline, in which case they will keep their protection as long as the construction permit remains valid).

2. Early Surrender of DTV Out-of-core Channels ("Flash Cut")

89. The *Second DTV Periodic NPRM* asked if we should establish earlier replication and/or maximization interference protection deadline(s) for out-of-core broadcasters (*i.e.,* in the 700 MHz band) than broadcasters operating on channels within the core in order to allow new services to be provided in portions of replication areas that a DTV licensee may never plan to serve in this spectrum.[200] In response, a significant number of commenters urge us to prioritize band clearing in the 700 MHz band,[201] with many commenters — broadcasters and wireless operators alike — suggesting that DTV stations not be required to replicate or maximize in the 700 MHz band.

90. NYS-OFT argues that the Commission must take every reasonable step to ensure that public safety entities can use the Upper 700 MHz (channels 60-69) band during the remainder of the transition period and requests that the Commission expedite clearing broadcast stations out of the entire band.[202] In

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[198] *Fifth Report and Order*, 12 FCC Rcd at 12841, ¶ 77; *First DTV Periodic MO&O* 16 FCC Rcd at 20611-12, ¶¶ 46-47. As with any request for waiver of our rules, a request for an extension of the applicable deadline will be granted only upon a showing of good cause and where grant of the extension will serve the public interest. *See WAIT Radio v. FCC*, 418 F.2d 1153, 1159 (D.C. Cir. 1969), *cert. denied*, 409 U.S. 1027 (1972) ("An applicant for waiver faces a high hurdle even at the starting gate.").

[199] KM Companies Comments at 3-4.

[200] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1298, ¶ 53.

[201] *See, e.g.,* Association of Public-Safety Communications Officials International, Inc. ("APSCO") Comments at 2-5; Public Safety Wireless Network Comments at 6-7; New York State Office for Technology ("NYS-OFT") Comments at 3, 7; Motorola Comments at 6; Crown Castle USA, Inc. Comments at 3-4; Joint Comments of KanOkla Telephone Association, Inc., Peoples Telephone Cooperative, Inc. and Artic Slope Telephone Association Cooperative ("KanOkla") at 3-4; Access Spectrum, LLC Comments at 7-11; DataCom Comments at 5-8; Flarion Technologies, Inc. ("Flarion") Comments at 3-4; Harbor Wireless, LLC, ("Harbor") Comments at 5; CEA Reply at 10.

[202] Spectrum that New York State needs to operate its statewide wireless network in the Upper 700 MHz band is blocked by television stations in many of the most heavily populated areas of New York. NYS-OFT Comments at 2-3, 7, 26.

order to allow for early access to the public safety spectrum, NYS-OFT proposes that the Commission pursue an aggressive deadline for service area replication with regard to out-of-core digital allotments, and those that choose not to meet the deadline should lose interference protection in areas not served.[203]

91. Many commenters emphasize the importance of the recovery of spectrum as an element of the digital transition.[204] Harbor argues that efforts to develop wireless technologies in the Lower 700 MHz band (channels 52-59) will succeed only if there is a prompt, well-managed transition to DTV.[205] Flarion and Harbor report that investment in 700 MHz equipment is sluggish due to the belief in the marketplace that broadcast use of the lower 700 MHz band will not be largely discontinued by 2006 - even in markets where interference from broadcasters is not a problem.[206]

92. Aloha states that the public interest would be served by the Commission clarifying that digital stations in the Lower 700 MHz band that are not now operational must be fully constructed (*i.e.*, full replication and maximization) on or before June 30, 2004, or abandoned. Aloha asserts that broadcasters not replicating their authorized service areas are in effect squatting on valuable spectrum, and are not serving their purpose of attracting viewers to DTV.[207] Aloha suggests that if licensees choose to abandon their digital station they can be afforded an opportunity later to commence digital service by "flash-cutting" from their existing analog operation to digital.[208] Aloha concludes that if broadcasters elect not to build, and instead abandon their out-of-core channel, it should clear some or all of the more than 100 existing and non-operational allocations from the Lower 700 MHz band. Aloha adds that if out-of-core broadcasters elect to build to fully serve their authorized service areas instead, the overall digital transition will be advanced.[209]

93. Broadcast stations assert that building replicated and maximized facilities out of the core is too costly. For example, Public Television argues that stations with out-of-core channels should not be required to replicate or maximize on the out-of-core channels, but should retain interference protection.[210] Public Television asserts that requiring out-of-core stations to replicate or maximize would waste public and private capital, given that these channels will be returned to the Commission at the end of the

[203] NYS-OFT Comments at 14. (noting that these stations should still be afforded full protection from interference on their final in-core allotment).

[204] DataCom Comments at 2; KanOkla Comments at 4; Motorola Comments at 6; NYS-OFT Comments at 14; National Public Safety Telecommunications Council ("NPSTC") Reply at 4. Access Spectrum, LLC asks us to strictly enforce the deadlines that are established, given the lack of incentive for broadcasters to build out their DTV facilities in the 700 MHz band. Access Spectrum Comments at 8-10.

[205] Harbor Comments at 2.

[206] Flarion Comments at 2. Flarion cites 196 NTSC and 186 DTV stations in channels 52-69. *See also* Harbor Comments at 3.

[207] Aloha Comments at 3-4.

[208] Aloha Comments at 3.

[209] Aloha Comments at 3-4.

[210] Public Television at 27.

transition.[211] WLNY states that if it is required to undertake a "double move" (*i.e.*, construct a maximized DTV facility on its out-of-core channel and, after abandoning that facility, construct a new, second DTV facility on its eventual in-core channel), it will have incurred an unnecessary substantial expenditure, ranging from over $730,000 to almost $1,200,000 (depending on the exact in-core channel ultimately assigned to WLNY).[212] WLNY states that this waste of money and resources can be avoided only by eliminating any requirement for the construction of an out-of-core maximized DTV facility, thereby leaving WLNY free to go directly from its out-of-core low power DTV operation to its permanent in-core DTV operation at the end of the transition period.

94. As noted above, Harris reports that a station with a DTV out-of-core channel will have higher costs if it is required to replicate or maximize on the out-of-core channel before moving to its eventual in-core channel. Harris estimates that a station assigned to out-of-core channel 57 would spend $515,000 to build and broadcast in digital at reduced power pursuant to an STA.[213] If the station operates at full power on channel 57, Harris estimates costs of an additional $505,000. If the station later moves to an in-core VHF channel (2-13), it would cost another $630,000, for a total of $1.65 million. In contrast, if the station remained at STA power on channel 57, and went to full power only upon moving to its in core VHF channel, its total cost would be $1.145 million, which is a saving of $505,000.[214] Dielectric Communications reports similar expense to build in full power out-of-core, much of which would be lost when the station moves to its eventual in-core allotment.[215]

95. The Commission permits broadcasters with NTSC stations in the Upper 700 MHz (60-69)[216] or the Lower 700 MHz (52-59)[217] to enter into voluntary band clearing arrangements consistent with the

[211] Public Television at 27. MSTV/NAB asserts that pushing deadlines off to the end of the transition for all stations will mitigate stranded investment in maximized facilities, especially for stations with out-of-core assignments. MSTV/NAB Comments at 9. *See also* Hubbard Comments at 4

[212] *See, e.g.* WLNY Comments at 16

[213] Harris Dec. 9, 2003 Letter and Attachment. Harris specifies a 1.8 kW STA.

[214] Harris also reports a $505,000 cost savings in avoiding an out-of-core power increase before moving to an in-core channel between 14 and 51.

[215] Dielectric Nov. 20, 2003 Letter and Attachment ($1.1 to $1.25 million to build a maximized digital transmitter for a UHF station and roughly $390,000 to move to another channel, attributable to costs of new antenna and transmitter and for re-installation.)

[216] *See* Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, ("*Upper 700 MHz First Report and Order*"), 15 FCC Rcd 476 (2000); Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, 15 FCC Rcd 20845 at 20870-71 ¶ 61 (2000); Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, *Third Report and Order*, 16 FCC Rcd 2703, 2718, ¶ 36 (2001); *on recon.* Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, 16 FCC Rcd 21633 (2001).

[217] *See* Reallocation and Service Rules for the 698-746 MHz Spectrum Band (Television Channels 52-59), 17 FCC Rcd 1022, 1094 n.537 and 1095, ¶ 184 (2002).

Commission's existing band-clearing rules and Section 6 of the Auction Reform Act of 2002.[218] In furtherance of the significant public interest in rapid band clearing, and in recognition of the fact that all out-of-core DTV facilities will have to move at the end of the transition, we will permit stations with an in-core NTSC channel paired with an out-of-core DTV channel, as well as stations with two out-of-core channels, to surrender their out-of-core DTV channels and operate in analog on their analog channels. We will also permit single-channel DTV stations out of the core, upon Commission approval, to elect not to construct DTV facilities and instead to give up their assigned DTV channel in the 700 MHz band in return for a DTV channel inside the core.[219] Stations have up to their initial channel election deadline to inform the Commission that they will use this option. We delegate the authority to grant these requests to the Media Bureau. Upon approval from the Commission, these stations will then surrender their out-of-core digital channel and be treated as single channel stations, allowed to "flash cut" to digital on their in-core channel no later than the end of the transition in the stations' markets.[220] Because of the greater potential for wasted expenditures in DTV facilities built in the 700 MHz band (since there will not be an opportunity to remain in that band after the transition), and given the potential for earlier use of this spectrum by public safety and other 700 MHz licensees, we will presume that granting such a request will be in the public interest if the station demonstrates that it is assigned a DTV channel out of the core and that grant of the request would not result in the loss of a DTV channel affiliated with one of the four largest national television networks (ABC, CBS, NBC, or Fox). We have consistently relied on affiliates of the four largest national television networks to achieve the necessary milestones throughout the DTV transition.[221] We conclude that the presumption we establish is consistent with Congress' objectives for this spectrum, should generally increase the attractiveness of the spectrum to potential 700 MHz licensees, and will not unduly delay the expeditious transition to DTV.

96. This presumption, however, is neither conclusive nor dispositive. We will also consider whether special circumstances raised by the resulting loss of digital broadcast service would be sufficient

[218] Auction Reform Act of 2002, Pub. L. No. 107-195, 116 Stat. 715 ("Auction Reform Act") § 6(a), 47 U.S.C. § 337 note. Section 6 of the Auction Reform Act restricts the Commission from waiving certain broadcast interference standards and the minimum spacing requirements for certain proposals to relocate Channel 52-69 analog operations to a Channel 2-51 DTV allotment, if such waiver "will result in any degradation in or loss of service, or an increased level of interference to any television household except as the Commission's rules would otherwise expressly permit, exclusive of any waivers previously granted." *Id.* These restrictions do not, however, apply to proposals to move Channel 63, 64, 68, or 69 analog operations to in-core DTV allotments "in order to make such frequencies available for public safety purposes." *Id.*, Section 6(b).

[219] We will assign these broadcasters an in-core DTV channel when we generate a revised DTV Table of Allotments. *See also* discussion *supra* section IV. A. 1.

[220] As noted above, these stations will retain their ability to replicate and/or maximize on their NTSC allotment as if they met the applicable replication/maximization build-out requirement. The station will then be responsible for meeting any DTV service obligations, (*e.g.* hours of operation, and replication/maximization requirements) applicable to other like broadcasters on the date it commences DTV operations.

[221] *See Fifth Report and Order*, 12 FCC Rcd at 12842, ¶ 78. These stations also must remain on the air in order to fulfill Congress' directive that stations "licensed to or affiliated with one of the four largest national television networks" must be "broadcasting a digital television service signal" in order for the transition to occur. *See* 47 U.S.C. § 309 (j)(14)(B)(i).

to rebut the presumption.[222] Also, for requests that do not meet the presumption, we would consider all the relevant public interest factors regarding opportunities for provision of wireless and public safety services, acceleration of the DTV transition, and the loss of broadcast service in deciding whether or not to approve the request.

97. Stations that have been denied an extension of the construction requirements and admonished because they failed to demonstrate that they are meeting the necessary criteria for an extension and have not come into compliance are not eligible to surrender their out-of-core DTV channel.[223]

C. Satellite Stations

98. In the *Second DTV Periodic NPRM* we sought comment on whether the public interest would be served by allowing television satellite stations to turn in their digital authorization and "flash-cut" to DTV transmission at the end of the transition period.[224] TV satellite stations are full power terrestrial broadcast stations authorized under Part 73 of the Commission's rules to retransmit all or part of the programming of a parent station that is typically commonly owned. Eligible satellite stations were assigned a paired DTV channel in the current DTV Table of Allotments. The Commission first authorized TV satellite operations in small or sparsely populated areas, which were deemed to have economic bases insufficient to support stand-alone, full-service operations.[225] The Commission later authorized satellite stations in larger markets when the applicant demonstrated that the proposed satellite could not operate as a stand-alone, full-service station.[226] The Commission has also allowed a full-service station to convert to satellite operation upon a showing that the community no longer has a sufficient economic base to

[222] We find that the surrender of DTV channels of these out-of-core stations will generally not create a loss of particular programming to viewers during the transition because, as presented in Paxson's comments, the stations will continue analog operations until switching to DTV by the end of the transition. *See* Paxson Comments at 30-31.

[223] On April 16, 2003, the Commission released an Order establishing remedial measures to be followed when a television station fails to meet its DTV construction deadline and fails to adequately justify an extension of its DTV construction deadline. Under the three-step graduated sanction process we will first deny the request for an unqualified extension and admonish the station for its failure to comply with its DTV construction obligation. The station will then have six months to complete its construction, subject to reporting requirements and possible additional sanctions in the interim. Under the second step, if the station has not come into compliance with the DTV construction requirement within the six-month period, then, absent extraordinary and compelling circumstances, we will issue a Notice of Apparent Liability for forfeiture to the licensee and require that the station report every 30 days on its proposed construction milestones and its efforts to meet those milestones. Under the third and final step, if the station has continued to fail in its efforts to come into compliance with the DTV construction requirement within the second six-month period of time (*i.e.,* one year from the date of the formal admonition), then, absent extraordinary and compelling circumstances, we will consider its construction permit for its DTV facilities to have expired and we will take whatever steps necessary to rescind the station's DTV authorization. *Remedial Measures For Failure to Comply With Digital Television Construction Schedule*, 18 FCC Rcd 7174 (2003) ("*Remedial R&O*").

[224] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1326, ¶ 127.

[225] *See*, *e.g.*, Authorization of UHF Stations, 43 FCC 2734 (1954).

[226] Suburban Broadcasting Corp., 83 F.C.C.2d 359, 365-66 (1980).

support a full-service operation.[227]

99. On October 16, 2003, the Commission deferred the digital construction deadlines for 30 satellite stations that had requested a third extension of time to construct.[228] The Commission noted that the issue of whether to permit satellites to turn in their digital authorization and "flash cut" to DTV transmission at the end of the transition period is under consideration in this proceeding.

100. All of the commenters that addressed this issue agreed that satellite stations should be given special treatment in the transition to digital operations.[229] These commenters generally argue that most satellite stations operate in small or sparsely populated areas that have an insufficient economic base to support full-service operations. This economic reality makes it prohibitively expensive for most satellite stations to construct separate digital facilities and to operate analog and digital stations concurrently. Indeed, two satellite station owners commented that, if satellite stations were required to build and operate separate digital facilities during the transition, they might be forced to turn in their satellite station licenses and let the stations go dark.[230]

101. MSTV/NAB supports the Commission's proposal to permit satellite stations to turn in their digital authorizations and "flash cut" to DTV transmissions on their analog channel at the end of the transition period.[231] MSTV/NAB argues that, to ensure clarity and certainty in the channel election process, the Commission should require satellite stations to make a decision whether to flash-cut prior to the channel election deadline. MSTV/NAB also argues that those satellite stations that already have built out their digital facilities should be granted flexibility in other ways, such as being permitted to operate their DTV facilities at a reduced schedule until the end of the transition.[232] Media General proposes that satellite stations be permitted to surrender one of their paired channels now provided that they construct fully operational DTV facilities on their retained channel that replicate the station's current analog service area by or before the end of the DTV transition period in the satellite station's market.[233] LeSEA argues that satellite stations should have the option to turn in either their analog or digital authorization, at the licensee's discretion, at the end of the transition.[234] LeSEA argues that because most satellite stations operate in geographically isolated regions, the retention of digital authorizations during the transition would not pose significant spectrum inefficiency issues. Alternatively, LeSEA proposes that satellite

[227] *See*, *e.g.*, Central Minnesota Television, Inc., 2 FCC Rcd 6730 (1987); Television Satellite Stations, 6 FCC Rcd 4212, 4213-14 (1991) (subsequent citations omitted).

[228] *See*, *Order*, DTV Build-Out, Requests for Extension of the Digital Television Construction Deadline, Commercial Television Stations With May 1, 2002 Deadline, 18 FCC Rcd. 22705 (2003).

[229] *See* Comments of MSTV/NAB at 18-19; Thomas C. Smith at 5-6; LeSEA Broadcasting Corporation ("LeSEA") at 4; Media General Communications, Inc. ("Media General") at 1.

[230] *See* Comments of LeSEA at 4; Media General at 6.

[231] *See* MSTV/NAB Comments at 18; MSTV/NAB Reply at 16.

[232] *See* MSTV/NAB Comments at 18-19; MSTV/NAB Reply at 17.

[233] *See* Media General Comments at 10-11.

[234] *See* LeSEA Comments at 4-5.

stations should be permitted to flash-cut to digital operations now on either their analog or digital channel, and turn in the unused channel authorization. According to LeSEA, the flash-cut now option would be workable only if satellite stations were guaranteed cable carriage for the digital signal.[235]

102. To ensure that the channel election process described herein proceeds smoothly and that the channels being surrendered by satellite licensees are included, we will require all satellite stations to participate in the channel election process. We will permit satellite stations to surrender one of their paired channels (the one not elected on their channel-election form for use after the transition) and flash cut from analog to digital transmission by the end of the transition period. Satellite stations that choose to flash cut must make the flash cut decision and notify the Commission by their initial channel election deadline. Satellite stations choosing the flash cut option will be required to surrender one of their two broadcast channels. Except as provided below (for stations with out-of-core analog and in-core DTV channels), satellite stations that choose not to flash cut and instead choose to retain both an analog and a digital channel during the transition period must comply with the applicable digital construction deadlines, including any extension granted by the Commission. As noted above, a satellite station that surrenders one of its channels under the "flash-cut" option will be treated as if it met the applicable replication/maximization build-out requirements.

103. Satellite stations with an analog channel outside the core and that are electing their current in-core DTV channels for post-transition DTV service will not be required to surrender a channel at this time. To do so would require these stations to give up their DTV channels unnecessarily or to build DTV facilities now, unlike other satellite stations which, under the flash cut policy announced herein, may elect to wait to build their digital facilities until closer to the end of the transition period. In this instance, we believe the benefits of this approach outweigh our interest in rapid clearing of the out-of-core television spectrum. Satellite stations with an out-of-core analog channel and an in-core digital channel may retain their out-of-core channel for continued analog service until the end of the transition or until they decide to build and transmit only in digital, whichever is earlier.

104. Stations electing to return their DTV channel to the Commission will retain interference protection to the areas defined in existing DTV replication or maximization applications on file with the Commission until the end of the transition when the station must commence digital transmissions. This interference protection will apply to the digital service area of the channel on which the station flash cuts to digital to the extent that the station replicates and maximizes at the time of the flash cut and to the extent consistent with our DTV interference protection rules. To ensure that satellite stations that have already constructed digital facilities or that do so before the end of the transition are not disadvantaged, we will also permit these stations to retain replication and maximization interference protection for their digital stations until the end of the transition in their market. Similarly, to provide satellite stations that have constructed digital facilities additional flexibility during the transition while maintaining an basic level of service to the public, we will also permit satellite stations that choose to construct separate digital facilities to operate only during prime time hours (at a minimum) until the end of the transition.[236]

105. We believe that this approach will best ensure that satellite stations complete the conversion to digital format and continue to provide broadcast programming to viewers in their communities. We agree with LeSEA, Media General, and MSTV/NAB that many satellite stations may

[235] *Id.* at 8.

[236] "Prime time" is defined in 47 C.F.R. § 79.3(a)(6).

not be financially capable of operating both an analog and a digital facility concurrently. As these commenters point out, satellite stations provide programming to communities that cannot support operation of these stations on a full-service basis. Indeed, Media General and LeSEA state that their satellite stations continually operate at a loss and that, absent some relief from the requirement of constructing and operating dual facilities during the transition, they may be forced to turn in their satellite licenses and cease all operations. Unlike full-service stations, satellite stations have chosen to forego or relinquish full-service status and instead retransmit the programming of a parent station because full-service operation of the satellite facility is not economically viable. We believe that the unique status of and circumstances faced by satellite stations warrant special treatment of these stations during the transition.

106. We do not believe that granting this special relief to satellite stations will unduly hinder the overall transition to digital television. Some of the affected viewers may have access to other digital signals. According to a study of its satellite stations, Media General states that many households receiving an off-air signal from a satellite station have access to at least one off-air DTV signal of a distant full-power TV station broadcast from a larger city.[237] Moreover, the alternative to the flash-cut option we are adopting today, that of requiring satellites to operate dual facilities during the transition, could result in the cessation of all service, either analog or digital, by some satellite stations. The approach we adopt today will ensure that satellite stations provide digital service by the end of the transition and will help preserve television service in the historically underserved communities in which most satellite stations operate.

D. Disposal of Construction Permits and Applications for Replication/Maximization

107. In the *NPRM*, we asked for comment on how the Commission should dispose of a station's construction permit or application for replication or maximization facilities if the station fails to construct and operate facilities that fully replicate its NTSC service or provide signal coverage over an authorized maximized service area by the interference protection deadlines established in this proceeding.[238] We stated that our inclination was to restrict any station that has failed to fully replicate or construct its authorized maximization facilities by the applicable deadline from filing an application to expand coverage for a certain period of time in order to allow other existing or new stations, including Class A eligible LPTV stations on out-of-core channels, to apply to use this spectrum.[239]

108. WDLP suggests that when a broadcaster is not providing full signal coverage after the deadlines, LPTV and other licensees should be permitted to file displacement applications (as minor changes).[240] The Community Broadcasters Association ("CBA"), representing the nation's low power and Class A television stations, supports rules whereby once a station fails to replicate or maximize its services, that station is prevented from filing a new application to expand its facilities to recapture that

[237] *See* Media General Comments at 8. Media General states that it commissioned a technical study in the markets served by its five satellite stations in 2001. According to Media General, this study demonstrates that the majority of the service areas for these satellite stations received at least one other DTV service. *Id.*, n.18.

[238] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1290-91, ¶ 35.

[239] *Id.* at 1290-91, ¶ 35.

[240] WDLP Comments at 4.

"lost" spectrum.[241] CBA supports modifying the construction permits and facilities of digital licensees failing to meet the Commission's proposed deadlines.[242] It asserts that making such modifications will enable other broadcasters to take advantage of the unused facilities and spectrum.

109. We will dismiss any applications and cancel any construction permits for facilities in excess of those in actual operation by a station as of the applicable interference protection date. We will require broadcasters to file applications for licenses to cover their actual facilities served as of the interference protection deadline. We have given broadcasters ample opportunities over the past years to expand their service areas, and advance warning that if they elect not to provide their viewers with DTV the Commission may ensure the area is served in other ways.[243] Therefore, we will permit existing DTV stations seeking to expand their coverage area and Class A eligible stations on out-of-core channels to apply for unused spectrum within the core.[244] We will describe the procedures for filling in those unserved areas in a future Public Notice or as part of the periodic review process. Broadcasters failing to meet our replication or maximization deadlines will be permitted to reapply for authorization to provide service to those areas, but their applications will be subject to conflicting applications. This will allow other existing stations, including Class A eligible LPTV stations on out-of-core channels, the opportunity to apply to use this spectrum. The process for resolving conflicting applications will be announced in another Public Notice or proceeding.

E. Pending DTV Construction Permit Applications

110. Approximately 65 commercial and noncommercial television licensees have not yet been granted an initial DTV CP. Almost all of these licensees have filed an application for a digital CP, but grant of these applications has been delayed for a variety of reasons, including delays in international coordination with Canada and Mexico and unresolved interference issues. To date, these applicants have not been required to construct DTV facilities pending action on their outstanding DTV applications. To ensure that all licensees that have been allotted digital spectrum begin to provide digital service, we proposed in the *Second DTV Periodic NPRM* to require that all television licensees that have filed an application for a digital CP with the Commission that has not yet been granted commence digital service pursuant to special temporary authority ("STA") within one year from adoption of the Report and Order in this proceeding.

111. It is crucial at this stage of the transition that all licensees with DTV CP applications that have not yet been granted begin to construct digital facilities. We will therefore adopt a proposal similar to that advanced in the *NPRM.* Rather than requiring licensees with pending DTV CP applications to construct at least the minimum initial facilities required to serve their communities of license within a year from the adoption of this Report and Order, as we proposed, we will instead require such licensees, within the same time frame, to construct and operate "checklist" facilities that conform with the

[241] CBA Comments at 2.

[242] *Id.*

[243] *See First DTV Periodic Report and Order*, 16 FCC Rcd at 5956, ¶ 22.

[244] LPTV stations may also apply for secondary operation on unused spectrum.

parameters of the DTV Table of Allotments and other key processing requirements.[245] This approach best advances our goal of ensuring continued progress in the transition by requiring that all licensees begin to provide DTV service. "Checklist" applications are routinely processed by the Commission staff within three days of filing, and most do not require international coordination. Thus, this procedure is the most expeditious means of awarding DTV construction permits to those licensees who do not yet have them.

112. As MSTV/NAB points out,[246] many licensees with pending DTV CP applications are facing delays beyond their control. Some are awaiting international coordination of pending applications or resolution of interference issues. Other licensees have applied for new DTV allotments either to replace an initial out-of-core allotment with one in the core or to otherwise improve their potential DTV service. Although the Commission will continue to work with applicants to resolve outstanding issues and to process pending applications for digital facilities as expeditiously as possible, we nonetheless agree with those commenters who argue that it is critical at this stage in the transition that all licensees begin working toward construction of DTV facilities.[247]

113. We will allow licensees with pending DTV CP applications that file checklist applications to continue to pursue their non-checklist applications now on file. Thus, while these applicants will receive a construction permit for a checklist facility and will be required to construct such facilities within one year from adoption of the Report and Order in this proceeding, we will permit these applicants to continue to attempt to resolve the issues delaying approval of their non-checklist application currently on file with the Commission. If the non-checklist application is approved before construction of the checklist facility is complete, the permittee may request that the Commission substitute the non-checklist CP for the checklist CP. The Commission will consider requests for waiver of the one year construction deadline, on a case-by-case basis, using the criteria for extension of DTV construction deadlines.[248] Grounds for an extension must relate to the checklist facility, not the pending non-checklist application.

F. Intermediate Signal Level

114. In the *First DTV Periodic MO&O*, we allowed stations to commence digital operations by constructing and operating facilities that at least provide the required level of digital signal strength to

[245] *See* 47 C.F.R. § 73.622(f)(2); Public Notice, "Commission Details Application Filing Procedures for Digital Television," (rel. Oct. 16, 1997). "Checklist" facilities have power and antenna height equal to or less than those specified in the DTV Table of Allotments and are located within a specified minimum distance from the reference coordinates specified in the DTV Table of Allotments. Because these facilities comply with the interference requirements specified in the rules, no further consideration of interference is required. In addition, because the DTV Table has been coordinated with Canada and Mexico, "checklist" facilities generally do not require further international coordination.

[246] *See* MSTV/NAB Comments at 13; MSTV/NAB Reply at 14.

[247] *See* CEA Comments at 18 (contending that unresolved CP issues, such as requests for higher power and larger service areas that cannot be reconciled with applications for other stations or coordinated with neighboring countries, should not be used as an excuse to do nothing).

[248] *Fifth Report and Order*, 12 FCC Rcd at 12841-42, ¶ 77; *Second DTV Periodic NPRM*, 18 FCC Rcd at 1301-1302, ¶¶ 63-64; 47 C.F.R. § 0.459.

their communities of license.[249] We predicted that the "requirement that broadcasters serve their community of license will ensure that, for most stations, the majority of their analog service populations will receive initial digital service."[250] We also decided to retain our enhanced principal community signal strength standard, which requires a 7dB increase in community of license coverage that must be met by December 31, 2004, for commercial stations and December 31, 2005, for noncommercial stations.[251] The purpose of our revised requirement was to improve the availability and reliability of DTV service in the community of license and provide an extra measure of protection from interference to DTV service in the community. The *NPRM* asked if significant numbers of consumers are not being served by stations operating under low-power STAs, and, if so, what actions the Commission should take.[252] We asked whether we should establish a deadline by which stations must provide DTV service within the entire area of their analog "city-grade" coverage contour or their Grade A coverage. We also asked whether the 7dB increase in community of license coverage will likely ensure that the majority of viewers are served without an additional coverage requirement.

115. We conclude that we will not impose an intermediate signal level requirement. Several commenters opposed an intermediate requirement[253] and broadcasters supported it only if coupled with delaying the replication and maximization deadlines until the end of the transition.[254] We did not receive hard evidence of broadcasters operating at such low levels that they are not covering their communities of license.[255] With the community of license signal strength increases set for 2004 and 2005, we expect that more of broadcasters' service areas will be covered as these dates approach.[256] Nonetheless, given the anecdotal evidence of dissatisfied viewers unable to receive signals,[257] we will closely monitor reports from consumers and other parties regarding broadcasters operating at insufficiently low power levels and

[249] *First DTV Periodic MO&O*, 16 FCC Rcd at 20607, ¶ 25.

[250] *Id.*

[251] *First DTV Periodic MO&O*, 16 FCC Rcd at 20607, ¶ 25. In the *First DTV Periodic Report and Order*, we imposed a principal community coverage requirement that is stronger than the DTV service contour requirement that we adopted as an initial obligation in the *Fifth Report and Order*, 16 FCC Rcd at ¶ 27.

[252] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1291, ¶ 36.

[253] *See* CEA Comments at 17; Public Television Comments at 27-28; CBC Comments at 12.

[254] *See*, *e.g.*, Belo Comments at 10; MSTV/NAB Comments at 8.

[255] Harris hypothesized that broadcasters are not providing adequate signal coverage and proposed July 1, 2004 for broadcasters to assure Grade A coverage, but it did not provide data. Harris Reply at 2.

[256] Increasing power is one way of increasing the signal strength within an area, such as the community of license. A 7 dB increase in a station's power will result in a 7 dB increase in signal strength. A power increase will also increase the station's service area. Increasing antenna height is another way to increase a station's signal strength and service area.

[257] *See*, *e.g.*, Reply of the Consumer Federation of America at 3-4 ("CFA Reply"); American Corn Growers Association Comments; National Association of Farmer Elected Committees Comments; CEA Comments at 7-10, 16-17; Thomson Comments at 5-8; Comments of the National Cable & Telecommunications Association ("NCTA") at 7-8; ACA Comments at 7-9.

will act on these reports should a pattern of abuse of our signal level requirements become evident.[258] We may also, on our own initiative, conduct signal strength tests to ensure that broadcasters are operating at power levels that are consistent with the Commission's requirements.

G. Interference Protection of Analog and Digital Television Service in TV Channels 51-69

1. Definition of "Actual" Parameters

116. The *Second DTV Periodic NPRM* sought comment on an issue raised in the *Public Safety Spectrum Report and Order.*[259] The *NPRM* explained that sections 90.545(c) and 27.60(b) of the Commission's rules describe alternative methods for a wireless applicant or licensee in the 700 MHz band to move closer to an analog TV or DTV antenna while still complying with the interference protection requirements in the rules.[260] Pursuant to one of these alternatives, the applicant or licensee may submit an engineering study that considers the "actual," rather than "hypothetical," parameters of the analog TV or DTV station and that demonstrates that the station's actual coverage area is smaller than its hypothetical operating parameters - because the station is operating, for example, with lower power than that presumed in the hypothetical parameters or because intervening terrain or other factors reduce the station's coverage area - thereby permitting land mobile stations and these broadcast facilities to be more closely spaced.[261] The *Public Safety Order* allowed applicants to submit engineering studies showing how they propose to meet the appropriate desired to undesired ("D/U") signal strength ratio at the existing TV station's "authorized or applied for" Grade B service contour or equivalent contour for DTV stations instead of providing the protection built into the distance spacing table, which is based on a standard TV station's hypothetical Grade B contour.[262] In the *Second DTV Periodic NPRM*, we tentatively concluded that Sections 90.545(c)(1)(ii) and 27.60(b)(1)(iii) of our rules should be amended to make clear that the interference protection specified in those provisions should be afforded to authorized and/or applied for NTSC and DTV facilities, including the facilities specified on the broadcast station's license or construction permit or both when a station has both a license and a construction permit. We sought comment on this tentative conclusion, as well as alternatives.

117. As proposed, we will amend sections 90.545(c)(1)(ii) and 27.60(b)(1)(iii) to make clear that the interference protection specified in those provisions will be afforded to authorized and/or applied for NTSC and DTV facilities, including the facilities specified on the broadcast station's license or

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[258] Thomson agrees and urges near-term Grade A coverage requirement if data confirms persistence of coverage problems. Thomson Comments at 8.

[259] *See Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communications Requirements Through the Year 2010*, 14 FCC Rcd 152, 224 ¶ 158 (1998) ("*Public Safety Spectrum Report and Order*").

[260] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1297, ¶ 50.

[261] Reference to the Grade B contour of a "hypothetical" station permits an applicant or licensee to determine if there is any need to submit additional engineering studies or if there is not even a hypothetical station within the relevant area. If there is a hypothetical station, then the applicant or licensee must demonstrate how it would protect the actual (including authorized or applied for) parameters.

[262] *Public Safety Spectrum Report and Order*, 14 FCC Rcd at 224, ¶ 158.

construction permit or both when a station has both a license and a construction permit.[263] While some public safety and other entities in the 700 MHz band assert that protecting authorized and/or applied for NTSC and DTV facilities is unnecessary, this protection is necessary to permit broadcasters to increase their service to reach their replication and maximization levels without risk of interference from new services. Permitting stations to achieve replication and maximization coverage serves the transition to DTV by increasing the population with access to digital signals. In addition, as discussed in section IV.B., *supra*, replication on out-of-core DTV channels is necessary to preserve broadcasters' opportunity to carry over their DTV service areas to their eventual in-core channels.[264] As asserted by Sinclair, protecting less than the full replicated or maximized facilities could create loss of service to wireless or public safety providers when DTV stations increase to replicated or maximized facilities.[265] Our existing band-clearing policies and newly introduced "flash cut" policy discussed in section IV.B.2, *supra*, should alleviate some of the 700 MHz entities' concerns by more rapidly freeing up additional spectrum in channels 52-69. New operations in the 700 MHz band will essentially need to provide the interference protection specified in sections 90.545(c)(1)(ii) and 27.60(b)(1)(iii) for authorized or applied for but un-built facilities only until the July 1, 2005, and July 1, 2006, replication/maximization interference protection dates.[266] As discussed above, if a broadcaster is not serving its fully authorized replication or maximization facilities on the applicable interference protection deadline, we will require the broadcaster to obtain a license to cover its existing facility and will only protect that existing facility going forward.[267]

2. Applications for New Analog TV or DTV Facilities

118. As we stated in the *Second DTV Periodic NPRM*, the Commission has determined it will not authorize new DTV facilities in channels 60-69.[268] The Commission has also determined that it will not authorize additional new analog full-service television stations on channels 60-69, and that it would dismiss any application or allotment petition for a new analog facility that was not satisfactorily amended to specify a channel below channel 60 by the established deadline (referred to herein as the "July 15, 2000 filing window").[269] Thus, there will be no new analog TV or DTV entrants in the 746-806 MHz

[263] In the TV and DTV broadcasting services, applicants file separately for a construction permit and a license to operate a facility when construction is completed. Licensees may also file applications for construction permits to modify their stations' facilities. When applications are granted, the facilities are authorized by a construction permit or license. *See*, *e.g.*, 47 C.F.R. §§ 73.3533, 73.3536, and 73.3538.

[264] Some commenters request that we more narrowly limit interference protection to broadcasters in the 700 MHz band. *See* APSCO Comments at 2. *See also* Access Spectrum Comments at 10-11; NYS-OFT Comments at 14-15.

[265] Sinclair Comments at 13.

[266] In limited circumstances we will grant interference protection beyond the replication/maximization dates for stations granted construction extension waivers. *See* section IV.B., *supra*. In addition, some stations may elect to take advantage of the opportunity to "carry over" maximized facilities into the core by meeting our replication requirements as discussed in that section.

[267] *See* section IV.D., *supra*.

[268] *DTV Sixth Report and Order*, 12 FCC Rcd at 14671, ¶ 182.

[269] *Reallocation Report and Order*, 12 FCC Rcd at 22971, ¶ 40. *See November 1999 Window Filing PN*, 14 FCC Rcd 19559 (1999); *Window Filing PN*, 15 FCC Rcd 4974 (2000).

band, other than those acquired through auction, which wireless and other new service providers must protect.

119. In the *Lower 700 MHz Band Report and Order*, we dismissed pending petitions for new NTSC channel allotments in the band comprising channels 52-59, stating that adding new analog TV allotments or stations at this stage of the transition would be inconsistent with the DTV transition process.[270] With respect to pending applications for construction permits for new analog TV stations in this band, we provided a 45-day opportunity (referred to herein as the "March 8, 2002 filing window") for applicants to request a change in their applications to either (1) provide analog or digital service in the core television spectrum, *i.e.*, channels 2-51, or (2) provide digital service in the 698-740 MHz band, *i.e.*, channels 52-58.[271] Any applications or rulemaking proposals and later associated applications filed by pending applicants during this 45-day window must be protected by wireless and other entities. Because of the adjacent channel interference that new stations on channel 59 could cause to new licensees in the adjacent Upper 700 MHz band, we concluded that we will no longer accept or grant any application for a new analog TV or DTV station on channel 59 nor permit an existing DTV station to modify its channel to channel 59. We required parties with outstanding applications specifying channel 59 to request another channel within 45 days after release of the *Lower 700 MHz Band Report and Order*.[272]

120. In the *Second DTV Periodic NPRM* we indicated that digital service in the Lower 700 MHz band could be proposed after the auction of channels in that band by a station with an existing DTV allotment on a channel outside the 52-58 band seeking to move to a channel inside this band or by a DTV station inside this band seeking to move to another channel inside the band.[273] As we indicated in section IV. A. 2, *supra*, we have determined herein that, in order to facilitate the channel election process, we will no longer accept, as of the date of adoption of this Report and Order, applications for DTV channel changes and swaps. Thus, there will be no new analog or DTV entrants in the 698-740 MHz band other than those acquired through auction.

121. A few requests for DTV channels in the 52-58 band were filed during the July 15, 2000, and March 8, 2002, filing windows. The Commission has completed processing all but one of these petitions for rulemaking. While these parties may continue to pursue construction of their proposed facilities within the 52-58 band, we will permit these parties, upon Commission approval, to elect not to construct these facilities and instead to give up their assigned DTV channel in the 52-58 band in return for a DTV channel inside the core. We will assign these broadcasters an in-core DTV channel when we generate a revised DTV Table of Allotments.

3. Channel 51

122. In the *Second DTV Periodic NPRM*, we sought comment on the interference protection that should be afforded by wireless entities and other new service providers to future analog TV and DTV facilities on channel 51 that are authorized or requested after the auction of the spectrum comprising

[270] *Lower 700 MHz Band Report and Order*, 17 FCC Rcd at 1042, ¶ 44.

[271] *Id.*; *March 2002 Window Filing PN*, 17 FCC Rcd 2155 (2002).

[272] *Lower 700 MHz Band Report and Order*, 17 FCC Rcd at 1042-43, ¶ 45.

[273] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1300, ¶ 59.

channel 52.[274] Channel 51 will remain allocated to broadcast use as part of the core television spectrum (channels 2-51), and is available for use by existing and new analog TV and DTV stations. However, as we stated in the *Second DTV Periodic NPRM*, because channel 51 is adjacent to channel 52 we are concerned about possible interference between new wireless and other licensees on channel 52 and operations on channel 51. In the *Lower 700 MHz Report and Order*, we declined to adopt a guard band or other specialized mechanism to protect DTV operations on channel 51, and stated that we would instead rely on interference protection criteria to ensure that new licensees adequately protect core channel TV and DTV operations.[275] We noted that the adjacent channel protection for TV and DTV stations on channels 52-69 is no different from the protection for those stations in the core spectrum; only the duration of that protection differs.[276] In light of our concern about possible adjacent channel interference, we sought comment on whether we should provide the same level of adjacent channel protection to future analog and digital broadcast facilities on channel 51 as is currently provided by wireless or other operators to incumbent analog and digital stations on this channel and, if so, how we can accomplish such protection without unduly restricting use of the channel 52 spectrum.

123. MSTV/NAB urge the Commission to ensure that stations on channel 51 continue to receive at least the same level of protection as other stations on in-core channels, including protection from wireless and other new service providers.[277] Flarion Technologies, Inc. ("Flarion") argues that any interference protection the Commission adopts for channel 51 should be reciprocal. Thus, according to Flarion, channel 51 television licensees should be required to protect channel 52 wireless operators from harmful interference and *vice versa*.[278] Flarion also argues that applicants for new broadcast facilities on channel 51 should be required to undertake frequency coordination with wireless operators using channel 52 frequencies located within 100 miles of the proposed channel 51 facilities. Such a requirement would provide notice to wireless operators, underscore the obligation of channel 51 broadcasters to protect wireless operators on channel 52 frequencies, and allow both users of the frequencies to take steps to minimize potential interference.[279] Flarion also argued that the Commission should reduce or eliminate the required desired/undesired signal strength ratio for "distantly adjacent" wireless channels; *e.g.*, those that are at least 4.75 MHz removed from the top of channel 51.[280]

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[274] *Id.* at 1300-01, ¶ 60.

[275] *Lower 700 MHz Band Report and Order*, 17 FCC Rcd at ¶ 23.

[276] Because DTV stations on channels 52-69 will eventually relocate to the core TV spectrum, the broadcast interference protection standards on channels 52-69 will no longer apply after the transition. By contrast, the need for protection of broadcast operations on core TV channel 51 will continue indefinitely.

[277] *See* MSTV/NAB Comments at 6, n.5.

[278] *See* Flarion Comments at 4.

[279] *Id.*

[280] According to Flarion, the current rules treat the entire 6 MHz comprising channel 52 as "adjacent" to channel 51. However, a 1.25 MHz wireless channel used at the top of channel 52 could be as far as 4.75 MHz removed from the top of channel 51 and as much as 9.5 MHz removed from the channel 51 visual carrier. Thus, Flarion argues that such "distantly adjacent" wireless channels should not be subject to the same adjacent channel protection requirements imposed on wireless channels immediately adjacent to channel 51. Instead, the FCC should reduce or eliminate the required desired/undesired signal strength ratio for "distantly adjacent" wireless (continued….)

124. We will accord the same level of adjacent channel protection to both incumbent and future analog and digital broadcast facilities on channel 51. Thus, wireless and other operators on channel 52 must provide the interference protection prescribed in the *Lower 700 MHz Report and Order* to all broadcasters on channel 51, including any that may commence operation after the auction of the adjacent channels in the 52-58 band. We agree with MSTV/NAB that stations on channel 51 should receive the same level of protection as other stations on in-core channels, including protection from wireless and other new service providers.[281] We disagree with Flarion that any interference protection the Commission adopts for channel 51 should be reciprocal. Channel 51 is part of the core channels reserved for broadcast use, and we do not believe use of channel 51 for broadcast purposes should be restricted in order to protect operations on channel 52, even if those operations predate the commencement of operations on channel 51. We also decline to adopt Flarion's proposal that the Commission reduce or eliminate the required desired/undesired signal strength ratio for "distantly adjacent" wireless channels. This proposal to revisit the wireless to TV and DTV protection criteria established in the 700 MHz proceedings is beyond the scope of this proceeding. The Commission's rules do permit wireless and other operators in the 52-58 band to negotiate agreements with broadcasters and other operators to accept any interference that may be caused by operations on distantly adjacent frequencies.[282] Licensees proposing new operations in the 700 MHz bands on a frequency "distantly adjacent" to an existing operation could also file a request for waiver of the interference requirements.

H. Simulcasting

125. In the DTV *Fifth Report and Order*, we adopted rules requiring DTV licensees to simulcast 50 percent of the video programming of their analog channel on their DTV channel by April 1, 2003. This requirement increased to a 75 percent simulcasting requirement on April 1, 2004, and increases to a 100 percent requirement on April 1, 2005.[283] The simulcasting requirement was intended to ensure that consumers enjoy continuity of free over-the-air video programming service when analog spectrum is reclaimed at the end of the transition. The Commission has stated that it may be difficult to terminate analog broadcast service if broadcasters show programs on their analog channels that are not available on their digital channels.[284]

126. In the *Second DTV Periodic NPRM*, the Commission sought comment on whether we should retain, revise, or remove the simulcasting requirement in 47 C.F.R. § 73.624(f), how to define simulcasting, and whether the existing dates for implementation of the simulcasting requirements are appropriate.[285] We asked in the *Second DTV Periodic NPRM* whether the ultimate requirement of 100

(Continued from previous page)

channels. According to Flarion, this argument applies to all TV channels that are adjacent to wireless services, not just channel 51. At a minimum, Flarion contends that the FCC should recognize that "distantly adjacent" wireless channels are less likely to interfere with channel 51 facilities than wireless channels that are immediately adjacent to channel 51 and should consider this factor in evaluating alternative engineering analyses allowed under Section 27.60 of its rules. *See* Flarion Comments at 5.

[281] *See* MSTV/NAB Comments at 6, n.5.

[282] *See* 47 C.F.R. § 27.60(b)(1)(iv).

[283] *Fifth Report and Order*, 12 FCC Rcd at 12832, ¶ 54; 47 C.F.R. § 73.624(f)(i)-(iii).

[284] *Fifth Report and Order*, 12 FCC Rcd at 12833, ¶ 56.

[285] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1302-1303, ¶¶ 65-67.

percent simulcasting other than at the very end of the transition creates a disincentive for broadcasters to innovate. We also asked whether a requirement to simulcast is necessary or whether broadcasters have a market-based incentive to simulcast and are currently simulcasting 100 percent of their analog programming on their digital channel. In addition, we sought comment on whether something less than a 100 percent simulcasting requirement would be sufficient to protect analog viewers while allowing for innovation on the DTV channels.

127. In an *Order* adopted April 28, 2003, the Media Bureau granted noncommercial educational television stations a six-month waiver of the DTV simulcasting requirements, until November 1, 2003.[286] The Bureau noted that, in light of the burden faced by NCE stations in complying with both the construction and simulcasting requirements at once, and in light of our pending re-evaluation of our simulcasting requirements, good cause existed to grant NCE stations a six-month waiver of the simulcasting requirements in Section 73.624(f).[287] We also stated that we would consider requests for waiver extensions from NCE stations on their individual merits if the Commission had not yet acted on the simulcasting issues raised in the *Second DTV Periodic NPRM* by November 1, 2003. The Media Bureau has granted several additional requests for waiver of the DTV simulcasting requirements to give stations additional time to acquire and install the facilities necessary to meet the simulcasting requirement[288] or to permit stations to experiment with innovative uses of the digital channel.[289]

128. The broadcast industry commenters that addressed the simulcasting issue unanimously support elimination or reduction of the current simulcasting obligations.[290] These commenters generally argue that the simulcasting requirement is not necessary to ensure viewer access to desirable programming because broadcasters have sufficient incentives to broadcast almost all of their programs on both their analog and digital signals. These commenters also contend that the simulcasting rule was intended to become effective at or near the end of the transition to ensure that viewers are not

[286] *See Order*, 18 FCC Rcd 8166 (2003).

[287] *Id.* at ¶ 6.

[288] *See Orders*, 18 FCC Rcd. 22538 (2003) (granting a waiver of § 73.624(f) to South Texas Public Broadcasting System, Inc. ("STPBS")); DA 03-3663 (rel. Nov. 17, 2003) (granting waivers of the simulcasting requirement to three noncommercial stations in New Mexico); 19 FCC Rcd. 7214 (2004) (granting an additional 6 month waiver to STPBS).

[289] *See Simulcast Order*, 18 FCC Rcd at 8169 ¶¶ 8-10 (granting a waiver of the simulcasting requirements to Milwaukee Area Technical College to allow MATC to simulcast the analog programming of its two NCE stations on one of its associated digital stations, and to use the other digital station to air high definition programming full time). *See also* Orders, 18 FCC Rcd. 22531 (2003) (granting a waiver to permit Twin Cities Public Television, Inc. to simulcast the analog programming of both of its two NCE stations on one of its associated digital stations and to use the other digital station to air high definition programming full time); 18 FCC Rcd. 22538 (2003) (granting a waiver of the simulcasting requirements to KTWU-DT where the station was providing a wide sampling of innovative high-definition programming as well as a standard definition channel devoted to children's programming); DA 04-1976 (rel. June 30, 2004)(granting a waiver of the simulcasting requirement to Educational Broadcasting Corporation to permit it to experiment with innovative uses of its digital channel WNET-DT and to offer additional digital programming to the community).

[290] *See*, *e.g.*, Comments of MSTV/NAB at 14-16; Public Television at 31; Belo at 11; Capitol Broadcasting Company, Inc. ("Capitol") at 12; Hubbard at 7; Sinclair at 14; Disney/ABC at 3-4.

disenfranchised when analog service ceases. According to these commenters, the Commission should eliminate simulcasting requirements now and revisit whether such requirements are necessary closer to the end of the transition.[291] Broadcast industry commenters also argue that the development of new and compelling digital programming will play a key role in stimulating consumer interest in DTV and in advancing the transition, and that by mandating that broadcasters ultimately air all of the programming broadcast on their analog channel on their digital channel, the simulcasting rule discourages the development of innovative programming.[292]

129. NCTA favors retention of the simulcasting requirements. NCTA argues that removing the simulcasting obligation would permit broadcasters to treat their digital signal as a separate, additional program stream and give them the incentive to maintain that separate service indefinitely, making it more difficult to reclaim the second channel at the end of the transition. NCTA also argues that it will be more difficult for cable systems to carry digital signals in lieu of analog signals as the end of the transition nears if the digital signal differs substantially from the analog.[293] CEA states that it would prefer that stations simulcast 100 percent of their analog programming on their digital channel but argues that, at a minimum, the Commission should retain the minimum digital operating hours currently tied to the simulcasting rule.[294]

130. We believe that, at this point in the transition, mandating a requirement that the programming aired on the analog channel be simulcast on the digital channel is not necessary to advance transition progress. As MSTV/NAB notes, simulcasting has been the general practice of broadcasters as the transition has progressed. Thus, contrary to the concerns of NCTA, broadcasters are not now treating their digital channel as a separate, unique program stream. We also agree with HDNet, Belo, and Disney/ABC that the availability of high-quality innovative digital content is critical to the advancement of the transition. There is evidence in the record that the simulcasting rule may impede the distribution of high definition programming to broadcasters.[295] We are concerned that broadcasters not be impeded in developing, obtaining, or airing high definition and other innovative programming that could spur consumer demand for DTV.

131. Accordingly, we will eliminate, for the time being, the requirement that broadcasters air on their digital channel the programming aired on their analog channel.[296] We expect broadcasters to use this increased flexibility to provide innovative, value-added programming to consumers; if this expectation proves misplaced, we will take appropriate action. However, as we continue to monitor the progress of the transition in future DTV periodic reviews, we will continue to consider whether re-imposition of a simulcasting requirement is advisable. Our concern is to ensure that, as the end of the

[291] *See*, *e.g.*, MSTV/NAB Comments at 14-15.

[292] *See*, *e.g.*, Comments of HDNet at 4 (stating that, as the nation's leading producer of high definition programming, the simulcasting rule will impede its ability to continue to distribute such programming to broadcasters); Disney/ABC at 3-4; Belo at 11; Public Television at 31.

[293] *See* NCTA Comments at 24.

[294] *See* CEA Comments at 19.

[295] *See* HDNet Comments at 10-12.

[296] *See* Appendix B with revised 47 C.F.R. § 73.624.

transition nears, significant numbers of viewers will not be denied access to desirable programming aired only on analog channels. We believe that eliminating rather than reducing the simulcasting requirement is appropriate at this point in the transition. There is no evidence of the need for any simulcasting requirement at this time. While we recognize that, as NCTA argues, viewers could lose access to programs at the end of the transition if programs available on analog channels are not available on digital channels, we believe we can address this concern if the need arises closer to the end of the transition. Because we are eliminating the simulcasting requirement, we do not address herein the issue of how to define simulcasting in the context of the digital transition.

132. *Minimum hours of operation of digital stations*. In the DTV *Fifth Report and Order*, we required DTV licensees and permittees to transmit at least one DTV signal at any time the licensee or permittee transmits an analog signal.[297] In the *First DTV Periodic MO&O*, the Commission revised this requirement to allow stations subject to the May 1, 2002, or May 1, 2003, digital construction deadlines to operate initially at a reduced schedule by providing, at a minimum, a digital signal during prime time hours, consistent with their simulcasting obligations.[298] The minimum operating hours for these digital stations effectively increases as the simulcasting obligations are phased in. For example, beginning April 1, 2003, DTV stations that were required to be on the air by May 1, 2002, are required to provide a simulcast digital signal at least 50 percent of the time they transmit an analog signal and, under the requirements of Section 73.624(b)(1), are also required to air a digital video program signal during prime time. Along with the simulcasting requirements, the minimum hours requirements step up to a 75 percent requirement in April 2004, and a 100 percent requirement in April 2005. Stations that were subject to the earlier DTV construction deadlines (May 1, 1999 for top-four network affiliates in the top 10 television markets and November 1, 1999 for all remaining top-four network affiliates in the top 30 television markets) are subject to our original rule requiring that they operate their DTV station at any time that the analog station is operating.[299]

133. We proposed in the *Second DTV Periodic NPRM* that, if we eliminate or reduce the simulcasting requirements in Section 73.624(f), we amend Section 73.624(b)(1) of our rules in order to retain the same phased-in minimum DTV operating hours for smaller and smaller-market stations that were tied to the simulcasting requirements.[300] A number of commenters argue that the Commission

[297] *See Fifth Report and Order*, 12 FCC Rcd at 12820, ¶ 28 and 47 C.F.R. § 73.624(b) as adopted in that Order.

[298] *First DTV Periodic MO&O*, 16 FCC Rcd at 20598, ¶ 11 (2001), *recon. denied*, 17 FCC Rcd 15978 (2002), *Third Memorandum Opinion and Order on Reconsideration*, 17 FCC Rcd 18571 (2002). The top-four network affiliates in the top 30 television markets are required to operate their DTV stations whenever their analog stations are operating. The reduced digital operating schedule tied to the simulcasting requirements applies only to commercial stations in the top 30 markets not affiliated with a top-four network, commercial stations in markets below the top 30, and noncommercial stations.

[299] *First DTV Periodic MO&O*, 16 FCC Rcd at 20599, ¶ 11. *See also* 47 C.F.R. § 73.624(b).

[300] In its Order adopted April 28, 2003, the Media Bureau denied a simulcasting waiver request filed by Paxson Communications Corporation, which sought a one-year waiver of § 73.624(f), and in particular the minimum operating hours requirements currently pegged to the § 73.624(f) simulcasting requirements. *See Order*, 18 FCC Rcd 8166 (2003).

should postpone the date by which smaller-market stations have to expand operating hours.[301] For example, MSTV/NAB argues that the Commission should maintain the DTV operating hours minimum at 75 percent for smaller and smaller-market broadcasters until the end of the transition, at which time a full-time operating requirement would begin. MSTV/NAB points out that, at 75 percent, a station on the air in analog full time would provide digital service 18 hours a day, leaving only the station's least demanded hours of operation, such as the overnight hours, without DTV service.

134. As we proposed in the *NPRM*, we will retain the same minimum DTV operating hours for smaller and smaller-market stations as were in effect under the simulcasting requirements. Thus, DTV stations subject to the May 1, 2002, or May 1, 2003, construction deadlines will continue to be subject to the requirement, effective April 1, 2004, that they air a digital signal for an amount of time equivalent to 75 percent of the amount of time they provide an analog signal.[302] The digital signal must be aired during prime time hours. The minimum digital operation requirement will increase to 100 percent on April 1, 2005 (requiring the airing of a digital signal for an amount of time equivalent to at least 100 percent of the amount of time the station airs an analog signal). We herein amend Section 73.624 of our rules to retain the minimum operating hours requirements while deleting the simulcasting requirements.[303]

135. We disagree with Paxson that the minimum operating hours requirement should be delayed pending the Commission's decision in the must-carry proceeding. As we indicated in denying Paxson's earlier request for a one-year waiver of the April 1, 2003 operating hours requirement,[304] we do not believe that the increase in the hours of digital programming offered to viewers needs to await finalization of the Commission's separate proceeding regarding mandatory carriage of analog and digital signals during the transition.

136. We also disagree with the other commenters who support a delay in the increase in the minimum operating hours of DTV stations. Increasing the operating hours of digital stations subject to the May 1, 2002, and May 1, 2003, digital construction deadlines will help further the transition by helping to drive DTV set penetration and encouraging content producers and advertisers to invest in DTV. These stations have been on notice since the November 2001 adoption of the phased-in simulcasting requirement in the *First DTV Periodic MO&O* that their DTV operating hours must be stepped-up on April 1, 2004, and April 1, 2005. Postponing the required, gradual increase in the digital operating hours of these stations would be inconsistent with the ultimate goal of this proceeding of moving to an all digital television service.

137. Finally, MSTV/NAB suggests that the Commission permit DTV stations coming on the air later than the April 1, 2003, and April 1, 2004, minimum operating hour deadlines (*i.e.*, stations that have been granted an extension of time to complete construction of their DTV facilities and stations that

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[301] *See* MSTV/NAB Comments at 17-18; Paxson Comments at 43-45 (arguing that the Commission should delay its minimum operating hours requirement until one year following a decision by the Commission in its pending DTV must carry proceeding); Block Comments at 9.

[302] Effective April 1, 2003 and until the requirement increased on April 1, 2004, these stations were required to air a digital signal for 50 percent of the time they provided an analog signal.

[303] *See* Appendix B.

[304] *See Order*, 18 FCC Rcd 8166 (2003).

have not yet been granted a DTV construction permit) to ramp up their hours of operation gradually.[305] In the *Second DTV Periodic NPRM*, we stated that stations that have been granted an extension of time to construct beyond the simulcast deadlines must comply with the minimum digital operating requirements in effect at the time the station commences digital operations.[306] We continue to believe that this approach is appropriate. We disagree with MSTV/NAB that these stations should be entitled to postpone increasing their digital hours of operation while other similar sized stations are required to provide more digital service.

I. Noncommercial Educational Television Stations

138. Noncommercial television broadcasters were scheduled to complete construction of their digital stations and commence digital service by May 1, 2003. Of the 373 noncommercial television stations, 84 were on the air either on time or ahead of this construction deadline and approximately 214 requested extensions of the deadline. The Commission has granted all of these extension requests. Other NCE stations have construction permits that have not yet expired or have filed construction permit applications with the Commission that have been processed and are awaiting additional information or international coordination, or are mutually exclusive. We invited comment in the *Second DTV Periodic NPRM* on what steps, if any, the Commission should take to assist noncommercial stations in the transition to DTV. In particular, we sought comment on whether the financial hardship standard for grant of an extension of time to construct a digital television station should be applied differently to noncommercial licensees.[307]

139. Public Television argues that the financial hardship standard for grant of an extension of time to construct a digital television station should be applied more liberally to public television stations to reflect their unique means of funding.[308] According to Public Television, 45 percent of public broadcasting revenues come from taxed-based sources including federal and state governments as well as public universities and local authorities. Public Television contends that federal funds have been insufficient and not timely enough to allow some stations to meet the May 1, 2003, construction deadline. Public Television states that, to date, the Federal government has appropriated only 13 percent of the total cost to convert, 40 percent of which was contained in the 2003 fiscal year appropriation that was not enacted until February 2003. In addition, state budget crises have curtailed state funding for a number of stations.[309] WHYY, Inc. also supports the application of a less stringent financial hardship standard for public television licensees.[310]

140. As we have acknowledged before, noncommercial stations face unique financial difficulties in constructing digital facilities.[311] According to Public Television, 24 percent of the public

[305] *See* MSTV/NAB Comments at 18 n. 21.

[306] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1303 n. 94, ¶ 64.

[307] *Id.* at 1301-02 ¶¶ 63-64.

[308] *See* Public Television Comments at 14.

[309] *Id.* at 9-10.

[310] *See* WHYY, Inc. Comments at 2.

[311] See, *e.g.*, *Fifth Report and Order*, 12 FCC Rcd at 12852 ¶ 104.

television stations seeking an extension of the May 1, 2003, construction deadline cited funding difficulties as a motivating reason for the extension request.[312] For those stations facing funding shortfalls we have and will continue to consider the unique funding needs of noncommercial educational broadcasters in assessing a station's request for an extension of time to construct a DTV facility. As the unique circumstances of noncommercial stations are being considered under our current extension criteria, we do not believe it is necessary at this time to revise those criteria for noncommercial stations or to change the way we are applying the current criteria to this group.

141. According to Public Television, NCE stations cite non-financial impediments to construction more frequently than financial impediments as the cause for delay in completing their DTV facilities.[313] However, there is no evidence that noncommercial licensees face unique non-financial obstacles to completing construction. Thus, we also do not believe it is necessary at this time to revise our criteria for evaluating non-financial grounds for an extension for noncommercial licensees to assist this group to complete the digital transition. We will continue to monitor the progress of noncommercial educational television stations in their conversion to digital transmissions, however, and will continue to assess whether further steps are needed to assist these stations in accomplishing the conversion.

J. DTV Transmission Standard and PSIP

1. Update of the DTV Transmission Standard

142. In the *DTV Tuner Order*, we revised our rules to specify that the August 7, 2001, version of the ATSC DTV standard A/53B should be used in place of the September 16, 1995, version originally adopted.[314] We also acknowledged the likelihood that there will be further improvements made to the DTV standard over time, and stated our intention to consider incorporation into our rules of proposed changes that reflect the kind of broad industry consensus developed through ATSC's standards-making procedures. In the *NPRM*, we sought comment on whether our rules should be further changed to reflect any revisions to the ATSC DTV standard A/53B since the August 7, 2001, version.[315]

143. In response, the Advanced Television Systems Committee ("ATSC") indicates that it has

[312] *See* Public Television Comments at 9.

[313] According to Public Television, 80 percent of the noncommercial stations filing extension requests cited technical reasons (including lack of tower crews, delays in obtaining the necessary equipment, and interference disputes) for filing their extension requests, and 43 percent cited legal reasons for the request (such as zoning disputes or delays in obtaining necessary permissions from authorities), while only approximately 25 percent citing funding difficulties as a reason for the request. Some of the delays reported by NCEs in obtaining necessary equipment from manufacturers was due to delays in obtaining federal funding for ordering equipment. *See* Public Television Comments at 9, 11.

[314] *DTV Tuner Order*, 17 FCC Rcd at 16001, ¶ 50. We revised Section 73.682(d) of the rules to specify ATSC Doc. A/53B (ATSC Digital Television Standard, 7 Aug. 01), except for Section 5.1.2 ("Compression format constraints") of Annex A ("Video Systems Characteristics") and the phrase "see Table 3" in Section 5.1.1 Table 2 and Section 5.1.2 Table 4. *Id.* ¶ 51.

[315] *See Second DTV Periodic NPRM*, 18 FCC Rcd at 1320 ¶ 113.

made changes to its "ATSC Digital Television Standard (A/53B)" since its August, 2001 standard.[316] According to ATSC, the ATSC DTV Standard (A/53B) has been amended to include Amendment 1, which sets forth the Active Format Descriptor ("AFD").[317] ATSC states that AFD is intended to help avoid the "postage stamp" effect that can result from mismatched aspect ratios.[318] The AFD function provides the ability to communicate to the display device the "active area" of the video signal. For example, it can communicate to a display that a 4x3 video signal contains within it a letterboxed 16x9 video image. ATSC states that while use of AFD is optional under the standard, it believes that to the extent broadcasters want to implement this functionality, it is important that it be done in a way that is consistent with the Standard.[319]

144. CEA and Sharp request that we adopt Amendment 1 but also require broadcasters to transmit AFD information and "bar data" whenever the active area of video does not fill the coded frame.[320] Sony Electronics also supports making use of AFD mandatory and suggests that the Commission determine an appropriate phase-in period for implementing AFD in order to minimize any burden on broadcasters for updating their digital broadcast equipment (potentially through software upgrade) to incorporate the AFD functionality.[321] MSTV/NAB states that while the development of the AFD is a valuable enhancement to the DTV standard, they do not think that transmission of AFD data needs to be mandatory.[322] MSTV/NAB suggests that market forces will be sufficient to ensure use of the descriptor in appropriate circumstances.[323]

145. We find that it is desirable and appropriate to update our DTV rules to recognize Amendment 1 (May 23, 2002) to ATSC DTV Standard A/53B (August 7, 2001). We decline to mandate that broadcasters use the AFD when the active video portion picture does not completely fill the coded picture. The revisions in the new version of the ATSC DTV Standard were developed through careful consideration and deliberation within the technical committees of ATSC and thus reflect a consensus agreement based on the input of parties from various segments of the industry.[324] While broadcasters will

[316] *See id*. The version currently specified in Section 73.682(d) of the rules, 47 C.F.R. 73.682(d), is dated August 7, 2001. Section 73.682(d) also specifies that DTV transmissions are not required to comply with portions of the ATSC DTV Standard that make reference to 18 specific video formats, defined in terms of, *e.g.*, screen aspect ratios, frame rates and type of scanning.

[317] *See* <http://www.atsc.org/standards/a_53b_with_amendment_1-2.pdf>.

[318] "Postage stamp video" occurs when a wide image is letterboxed into a 4:3 broadcast (black top & bottom), and the 4:3 broadcast is column boxed onto the display. Sharp Comments at 5. The Consumer Federation of America asserts that consumers purchasing new DTV sets are liable to encounter this problem. CFA Reply at 1.

[319] ATSC Comments at 3.

[320] CEA Comments at 24; Sharp Comments at 5-6.

[321] *See* Letter from John Godfrey, Sony Electronics, Inc. (Dec. 1, 2003).

[322] MSTV/NAB Reply at 26.

[323] *Id.*

[324] ATSC Comments at 2.

have the option to use AFD, if a station includes AFD data it must follow the ATSC DTV standard. As more consumers acquire widescreen aspect ratio sets, the problem of "postage stamp video" will become more prevalent if not addressed by broadcasters. Broadcasters should have every incentive to make their programming attractive to viewers and to avoid disenfranchising those viewers as they begin to adopt DTV.

146. The ATSC also adopted Amendment 2 to A/53B, which revises the transport section of the ATSC Digital Television Standard, Annex C, to update normative references to avoid conflicts, and to establish a common methodology for carriage of private data in the ATSC Transport Stream.[325] The amendment defines the ATSC Private Information Descriptor for the carriage of private descriptor-based data, and it also clarifies rules for use of the MPEG-2 Registration Descriptor mechanism for management of private data in the digital multiplex. To be consistent with the current version of the ATSC A/52 Digital Audio Compression Standard, Amendment 2 revises the way audio language is signaled in the ATSC system and specifies the use of ISO-639 language encoding to identify written and spoken languages. Amendment 2 also specifies some requirements that had been implemented in transmission and receiving equipment but not properly specified in A/53B. These included the requirement that each service with an audio component must include at least one "complete main" audio service and the requirement that the video Elementary Stream component be identified with MPEG-2 stream-type value 2. Upon final approval of the ATSC membership, ATSC suggests that the Commission incorporate Amendment 2 to A/53B into its rules.[326]

147. MSTV/NAB, commenting before the completion of Amendment 2, suggests that the Commission adopt Amendment 2 into our rules upon final approval of the ATSC membership.[327] Public Television states that it strongly supports the comments of ATSC filed in this proceeding that request incorporation of A/53B Amendment 2 (transport stream amendments) into Commission rules.[328] Disney/ABC states that incorporating such changes will help keep the digital standard current, flexible, and relevant.[329]

148. We will update our DTV rules to recognize Amendment 2, as released by the ATSC on May 19, 2003.[330] Updating the rules to reflect improvements in the standard will benefit both the public and broadcasters by allowing broadcasters to make technical improvements in their service that will enhance the quality of DTV services they provide. Accordingly, we are revising Section 73.682(d) of the rules to specify ATSC Doc A/53B (ATSC Digital Television Standard, 7 Aug 01), Revision B with Amendment 1 and Amendment 2.[331] We also continue to encourage further improvements to the DTV

[325] ATSC Comments at 3.

[326] ATSC Comments at 4.

[327] MSTV/NAB Comments at 32.

[328] Public Television Reply at 43

[329] Disney/ABC Comments at 5.

[330] *See* <http://www.atsc.org/standards/a_53b_with_amendment_1-2.pdf>.

[331] As provided in the current Section 73.682(d) and as set forth in the Commission's decision adopting the ATSC standards for DTV service in Fourth Report and Order in the DTV proceeding we have not incorporated Section 5.1.2 ("Compression format constraints") of Annex A ("Video Systems Characteristics") and the phrase "see (continued….)

standards. Although it will be necessary to conduct additional rule making activity to incorporate such changes in the rules, we nonetheless will endeavor to pursue such rule making as quickly as possible, either through our periodic review of the DTV transition or through separate proceedings as may be appropriate.

2. PSIP

149. In the *DTV Tuner Order*, we stated that we would seek comment on whether the Commission should adopt the ATSC Program System and Information Protocol ("PSIP") standard[332] into our rules as part of the DTV periodic review process.[333] PSIP is data that is transmitted along with a station's DTV signal that tells DTV receivers information about the station and what is being broadcast. PSIP provides a method for DTV receivers to identify a DTV station and to determine how a receiver can tune to it.[334] PSIP identifies both the DTV channel and the associated NTSC channel and enables DTV receivers to associate the two channels, thereby making it easy for viewers to tune to the DTV station even if they do not know the channel number.[335] In addition to identifying the channel number, PSIP tells the receiver whether multiple program channels are being broadcast and, if so, how to find them. It also identifies whether the programs are closed captioned, and conveys available v-chip information, among other things.[336] The Commission has recognized the utility that the ATSC PSIP Standard offers for both broadcasters and consumers.[337] In the *NPRM*, we sought comment on whether to require the use of PSIP and which aspects of PSIP should be adopted into our rules.[338] We also sought comment on, among other

(Continued from previous page)
Table 3" in Section 5.1.1 Table 2 and Section 5.1.2 Table 4. *See* Fourth Report and Order in MM Docket No. 87-268, 11 FCC Rcd 17771 (1996).

[332] *See* "Program and System Information for Broadcast and Cable," Advanced Television Systems Committee, Doc. A/65B, Rev. B to PSIP for Terrestrial Broadcast and Cable ("ATSC A/65B") (Mar. 18, 2003).

[333] *DTV Tuner Order*, 17 FCC Rcd at page number, ¶ 55. We stated that in the interim we will continue to support and encourage the voluntary use of the PSIP specification by broadcasters and cable operators and its inclusion in consumer electronics equipment. Section 73.682(d) of our rules includes a reference to the ATSC PSIP Standard as a document that licensees may consult for guidance.

[334] *See* ATSC's PSIP website at <http://www.psip.org/>.

[335] Linkages between analog and DTV channels are managed through the DTV "Transport Stream Identifier" and analog "Transmission Signal ID" (Both, "TSID"). *See* ATSC A/65B, 6.3.1 Terrestrial Virtual Channel Table p. 32; EIA/CEA-608-B. The Association for Maximum Service Television ("MSTV") has undertaken the task of maintaining a list of TSIDs. *See* <http://www.mstv.org/downloads/TSIDASGN.doc>. ATSC also coordinates the TSID registration process. 6.3.1 Terrestrial Virtual Channel Table, ATSC A/65B at 32, note 6.

[336] As will be discussed in sections J. 3 and K., *infra*, PSIP enables the proper functioning of v-chip and closed captioning. *See* CPB/WGBH National Center for Accessible Media Comments ("NCAM") at 5; Tim Collings Comments at 1; Joel Federman Comments at 3.

[337] The channel mapping protocols contained in the PSIP identification stream could help resolve issues associated with digital channel positioning. *Carriage of Digital Television Broadcast Signals*, 16 FCC Rcd 2598, 2635 (2001) (petitions for reconsideration pending). *See also First DTV Periodic Review Second Report and Order*, 17 FCC Rcd at 16003 ¶ 55.

[338] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1320-21, ¶¶ 114-18.

things, whether and how broadcasters include PSIP information with their digital broadcast signals and also how consumer electronics equipment manufacturers build equipment to search for information in DTV signals.

150. Commenters almost uniformly agree that PSIP is an important element of the DTV System and is essential to reliable, real-world operation and the success of the DTV transition.[339] MSTV/NAB states that most broadcasters now recognize and support the use of PSIP.[340] ATSC asserts that consistent broadcaster implementation of PSIP will allow consumer electronics manufacturers to design receivers that can easily tune to DTV channels to provide viewers with a good user experience.[341] Cox Broadcasting says that by requiring broadcasters to use PSIP, the Commission would create marketplace certainty for equipment manufacturers so that they have incentive to invest in innovative devices that would rely on the PSIP standard.[342] CEA states that PSIP functionalities enable a viewing experience that competes with delivery by DVD, satellite, and cable.[343] In addition, CEA extols PSIP for allowing broadcasters to build on their existing brand-identity, allowing transparent changes in DTV assignments, and allowing transparent tuning of associated translator stations.[344]

151. Zenith states that although some broadcasters are voluntarily transmitting PSIP information, it is often improperly implemented, thereby diminishing the value of PSIP and causing consumer confusion.[345] ATSC reports that acquisition of a DTV channel not transmitting PSIP is often significantly slower than acquisition of a channel with PSIP.[346] Sharp states that because the PSIP standard is not mandatory, digital equipment must be designed to recognize both correct PSIP information and incorrect PSIP information, and discard the latter or attempt to understand what was meant to be communicated.[347] Sharp further states that incorrect PSIP information may actually have significant adverse affects on other broadcasters when, for example, a broadcaster's programming is blocked or the program of one broadcaster may appear on another broadcaster's channel.[348] Harris reports that because

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[339] *See* ATSC Comments at 5; MSTV/NAB Comments at 27. *See also* Public Television Comments at 43; CEA Comments at 24-31; NCAM Comments at 4; Cox Broadcasting Comments at 7; Harris Comments at 8-10; Sharp Comments at 6; Thomson Comments at 11; Disney Comments at 2, 5-6; CERC Comments at 10; Zenith Reply at 3. But *See* Fireweed Communications LLC Feb. 5, 2004 ex parte (stating that in its market in South Central Alaska there are virtually no viewers, so PSIP is not important.)

[340] MSTV/NAB Comments at 27 and footnote 36 (projecting that 84.46 percent of respondents to a late-2002 PSIP survey expect to utilize PSIP by May 1, 2003.)

[341] *See* ATSC Comments at 5.

[342] Cox Broadcasting Comments at 6-7.

[343] CEA Comments at 25.

[344] CEA Comments at 26.

[345] Zenith Reply at 4.

[346] *See* ATSC Comments at 5.

[347] Sharp Comments at 10.

[348] Sharp Comments at 10.

different receivers have been designed to operate under different assumptions of what broadcasters intend to carry in the PSIP and program streams, receivers may reboot, lock up, or display blank screens when encountering different stream conditions.[349] Tribune asserts that action by the Commission now will avoid needless consumer frustration and confusion and will almost certainly help speed up the digital transition.[350]

152. We conclude that adoption of ATSC A/65B (PSIP) into our broadcast transmission standards will serve the public interest. As pointed out by commenters, during the development of PSIP, the ATSC carefully considered which elements of PSIP should be mandatory and which should be optional.[351] Further, based its experience with the deployment of over 180 PSIP systems, Harris states that it is not aware of any difficulties that are experienced by either the broadcaster or the viewing consumer if the ATSC A/65B PSIP standard is properly implemented.[352] We find the cost to broadcasters of implementing PSIP will be minor in comparison to the overall costs of converting to DTV and will provide many options to expand on the investments they have made to convert to DTV.[353] We therefore require that broadcasters fully implement PSIP to the extent that ATSC A/65B requires.[354] In order to give broadcasters adequate time to come into compliance, this requirement shall take effect 120 days after publication in the Federal Register.[355] We expect broadcasters to populate the required tables and descriptors with the proper information to help receivers assemble functioning guides. All tables and descriptors that require one time setup should be set correctly, including TSID, Short Channel Name, Service Type, Modulation Mode, Source ID, and Service Location Descriptor. ATSC A/65B also requires that broadcasters send populated EITs covering at least a 12 hour period. These EITs should be populated with the correct information, so that the user knows what programs are on for this 12 hour period. Also, we expect that manufacturers will have every incentive to build equipment that looks to PSIP for its basic functionality, but we will revisit the issue if necessary. Standardized use of the data transmitted through PSIP will ensure that the full benefits and innovations of the new digital system will be available to the

[349] Harris Comments at 8.

[350] Tribune Reply at 4.

[351] ATSC Comments at 7; CEA Comments at 25.

[352] Harris Comments at 9.

[353] Harris reports that based on its experience as a manufacturer of broadcast station PSIP equipment, it currently would cost a DTV broadcast station $29,900 for full implementation of PSIP, including all Program and System tables. Harris Comments at 9

[354] According to A/65, the PSIP mandatory tables are: Master Guide Table (MGT); Terrestrial Virtual Channel Table (TVCT); Event Information Tables (EIT-0 to EIT-3); System Time Table (STT); Rating Region Table (RRT). According to A/65, the RRT is not mandatory for the U.S. region (0x01). Transmission of the RRT is not necessary where the content advisory ratings table is fixed, as is the case now in the U.S. If the ratings system were to change, however, or an addition to the ratings system were to be adopted, broadcasters would have to transmit a new RRT in order to transmit the new or additional ratings information. *See* section IV.J.3., *infra,* for discussion of the RRT.

[355] *See* amended 47 C.F.R. § 73.682(d) in Appendix B.

public.[356]

153. *Major/Minor Channel Numbers*. In the *NPRM,* we noted that the ATSC PSIP standard attaches the assignment of "major channel number" values to a broadcaster's current NTSC RF channel number regardless of the actual RF channel used for DTV transmission, and sought comment on whether there was any need to modify this standard.[357] For example, a broadcaster who operates an NTSC service on channel 4 and a DTV service on channel 27 would use the major channel 4. The PSIP "minor channel number" is used to identify programs and other services, which are a part of the DTV service. For example, channel 4.1 may be an HDTV program service and it may be multiplexed with an SDTV service, which is channel 4.2. According to ATSC, this allows a viewer to easily "surf" from, for example, 4.0 (NTSC) to 4.1 (HDTV) to 4.2 (SDTV). ATSC, MSTV/NAB, and others state that the major/minor channel number scheme established in ATSC A/65B will be useful.[358] ATSC states that the PSIP Standard defines specific requirements for use of "major channel numbers" to provide viewers with a uniform methodology to access DTV services and to avoid conflict with duplicative numbers in a market. The major channel number also allows broadcasters to maintain their local brand identification. We see no reason to modify this standard. During the development of PSIP, ATSC recognized that in some situations broadcasters would need to deviate from the rule that the major channel number is the same as the broadcaster's NTSC channel number and created certain exceptions.[359] We agree with ATSC and MSTV/NAB that these exceptions should provide broadcasters with the necessary flexibility to address most circumstances. To the extent broadcasters have a unique situation that is not provided for in PSIP, the Commission may grant exceptions on a case-by-case basis. The correct TSIDs must be used to ensure that receivers link the analog and digital channels properly. Accordingly, broadcasters are required to transmit the TSIDs assigned for their stations in their digital transmission. During the transition period while both analog and digital signals are broadcast, stations are required to transmit the NTSC TSID in line 21, field 2 in order for the receiver to locate the programs referenced in PSIP.

[356] PSIP enables improvements to program guides, closed captioning, and use of v-chip, and enables channel number navigation using the familiar analog channel numbers to tune to new digital channel assignments.

[357] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1321-22 ¶117. *See* "Program and System Information for Broadcast and Cable," Advanced Television Systems Committee, Doc. A/65B, Rev. B to PSIP for Terrestrial Broadcast and Cable ("ATSC A/65B"), Annex B, Assignment of Major Channel Numbers for Terrestrial Broadcast in the U.S. (Mar. 18, 2003).

[358] ATSC Comments at 6; MSTV/NAB Comments at 28; Sharp Comments at 12-13; Harris Comments at 9.

[359] *See* ATSC Program and System Information Protocol, Annex B, Additional Constraints on Virtual Channel Table For the U.S. Exceptions are, for example: (1) if a broadcaster without an NTSC broadcast license applies and receives a license for a digital broadcast channel, the major channel number should be the same as the DTV RF channel; (2) if a broadcaster owns or controls broadcast licenses for two or more different RF channels having overlapping service areas, a common major channel number for all services on all channels may be used; (3) if a broadcaster includes in its DTV service programming originating from a different licensed broadcaster, the major channel number of the original broadcast may be used as long as it is coordinated to avoid conflicts; and, (4) for a translated signal, the major/minor channel numbers shall remain the same as the original broadcast station unless the major channel conflicts with a broadcaster operating in the service area of the translator. In that case, the translator changes the major number to a non-conflicting number. *Id.*

3. PSIP and DTV V-Chip

154. In the *NPRM* we asked if the Commission needs to do more to ensure that v-chip functionality is available in the digital world. While the Commission's rules require that digital television receivers have the capability to enable viewers to block the display of programs with a common rating, the technical standards to achieve this goal are not specified. We expressed concern that the lack of a specific requirement may lead to confusion among broadcasters and manufacturers with regard to where to place program rating information, resulting in the failure of the blocking functionality that the v-chip provides. Accordingly, we sought comment on whether the Commission should adopt the provisions of the ATSC A/65A standard that requires all digital television broadcasters to place v-chip rating information in the PSIP. We also asked whether it was necessary to require equipment manufacturers to develop equipment that accesses program rating information in the PSIP. Finally, we requested comment on a Petition for Rulemaking filed by CEA which sought to incorporate industry standard EIA/CEA – 766 into the Commission's rules to facilitate v-chip functionality in digital receivers.

155. As an initial matter, we reiterate that this Order adopts the ATSC A/65 PSIP standard in its entirety.[360] This Order also requires that broadcasters transmit all mandatory tables and descriptors of PSIP with their digital programming. Accordingly, the Event Information Tables ("EITs") defined within PSIP will contain any available Content Advisory Descriptors ("CADs") for broadcast programming.[361] This uniform transmission practice will ensure that various receiver manufacturers can more readily design products which will search for and react to program rating information on a consistent basis. Sharp Electronic Corporation states that numerous consumer electronics companies are currently designing and/or selling digital televisions that utilize the content advisory data as defined in the PSIP.[362] While we believe that this is indeed the case, we are nonetheless adopting rules to require digital television receivers to look for the content advisory descriptors in the EITs.[363]

156. The PSIP carries the Rating Region Table ("RRT"), which describes the content advisory rating system being used.[364] ATSC in their comment states that: "the PSIP Standard does provide the ability to extend or replace the content advisory system in the U.S. by assignment of a new, different rating region code. Receivers that are built compliant with CEA standards and recommended practices

[360] *See* section IV.J.2., *supra*.

[361] The PSIP requirements do not mandate broadcaster use of v-chip but rather require that broadcasters that choose to provide v-chip blocking information do so by following the PSIP protocols. For terrestrial broadcast, if parental advisory information is to be provided, the Content Advisory Descriptor is required in the EIT, which is an element of the PSIP Standard. *See* ATSC A/65B at § 6.9.4; ATSC Comments at 8. *See also Implementation of Sections 551(c), (d), and (e) of the Telecommunications Act of 1996: Technical Requirements to Enable Blocking of Video Programming Based on Program Ratings*, 13 FCC Rcd 11248, 11259 (1998) ("V-chip Order"); 47 U.S.C. §§ 303(x), 330(c)(4).

[362] *See* Sharp Comments at 15.

[363] 47 U.S.C. § 330(c) instructs the Commission to oversee "the adoption of standards by industry for blocking technology," and to ensure that blocking capability continues to be available to consumers as technology advances.

[364] Without the information in the RRT, the program rating icons (*e.g.*, TV-Y7 or PG-13) will be displayed, but the explanations of the icons will not.

will support an additional new system with one or more independent categories, each with a series of levels definable by a new RRT." Some have expressed concern that the current ratings system is "hard-wired" into digital televisions, making modifications impossible on existing sets.[365] We generally believe that the ability to modify the current content advisory system is beneficial. The suggestion by ATSC to use a different US rating region code for any additional new rating system ensures that the older RRT remains intact for legacy digital receivers that have not been designed to process newer versions of the RRT. These legacy digital receivers could continue to be used and would not be rendered obsolete. At the same time, newer digital receivers would be able to recognize and respond to an additional rating system. Accordingly, to ensure the ability to modify the content advisory system, receivers must be able to process newer RRT version numbers or use new rating region codes as suggested by ATSC.[366]

157. As requested by CEA, we are adopting by reference EIA-766[367] U.S. and Canadian Rating Region Tables (RRT). We note that the adoption of the standard will not preclude manufacturers from incorporating additional blocking standards or techniques into receivers.[368] Therefore, additional blocking techniques that are dependent only on inputs such as the date, time of day, or television channel, may be incorporated into television receivers as manufacturers see fit.

158. Additionally, we are adopting our proposal to apply v-chip rules to digital television receivers with displays in the 16:9 aspect ratio that are 7.8 inches or greater in height. Furthermore, we are requiring that v-chip technology be included in all digital television receivers with integrated 4:3 displays measuring at least 13 inches diagonally.[369] Similar to our requirements for closed caption capabilities in digital television receivers, the rules will also be applicable to DTV tuners which are sold without an associated display device.[370]

159. Finally, we are inclined to provide a transition period for manufacturers to begin producing compliant digital television receivers. We understand that the design cycle of a television receiver model is generally about 18 months. The Commission has previously taken into consideration receiver design cycles in proceedings that required the introduction of new television technology.[371] We also understand that many manufacturers are currently relying on EIA 766 to comply with the

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[365] *See* Tim Collings Comments at 2-4, Letter from Tim Collings to Marlene Dortch, FCC, dated October 24, 2003 at 2. *See also* Letter from Rep. Edward J. Markey to Chairman Michael K. Powell, FCC, dated January 29, 2003.

[366] 47 U.S.C. § 330(c)(4). *See also* amendment to 47 C.F.R. § 15.120(d) in Appendix B.

[367] EIA-766 specifies the exact syntax to be used to define the US and Canadian RRTs in accordance with A/65, as well as exact syntax to be used for the CADs that convey the rating information.

[368] *See* Tim Collings Comments at 2.

[369] 47 U.S.C. § 303(x).

[370] *Closed Captioning Requirements for Digital Television Receivers*, 15 FCC Rcd 16788, 16805 ¶ 47 (2000) ("*DTV Closed Captioning Order*").

[371] *See*, *e.g.*, *V-Chip Order*, 13 FCC Rcd at 11256-57 ¶¶ 21-24; *DTV Closed Captioning Order*, 15 FCC Rcd at 16807-08 ¶¶ 54-58.

Commission's v-chip requirements as applied to digital receivers.[372] Our existing requirement that digital television receivers react in a similar manner as analog televisions when programmed to block specific rating categories ensures that digital receivers will continue to respond to v-chip information during the phase-in period. Therefore, we believe it is reasonable to provide an 18 month transition period. After the transition period, all digital television receivers will be required to provide v-chip functions following the regulations that we adopt in this proceeding.

4. PSIP and LPTV/TV Translators

160. We also requested comment on issues concerning the implications of PSIP on the operation of TV translator facilities. We requested comment on how the proper PSIP information is to be provided on TV translator rebroadcasts and who will be responsible for ensuring that that information is provided. We also requested comment regarding the costs of providing PSIP information on TV translators as well as any other concerns that translator operators might have in implementing PSIP on their DTV operations.[373] We received comments from CEA, ATSC, Public Television, and Harris in response to our questions. In August 2003, the Commission initiated a proceeding to examine issues related to the authorization of digital translators and boosters.[374] Because the record will be more specifically tailored to LPTV, translators, and boosters, we will address the implications of PSIP on those facilities in connection with the *Digital LPTV* proceeding.

K. DTV Closed Captioning

161. The Television Decoder Circuitry Act of 1990 requires generally that television receivers contain circuitry that is able to decode and display closed captioning.[375] The Act also directs the Commission to take such action that it determines appropriate to ensure that closed captioning service continues to be available to consumers as new technology is developed.[376] In accordance with the Act, in July, 2000, the Commission adopted regulations with regard to the functioning of digital television receivers and closed captioning services.[377] The *DTV Closed Captioning Order* incorporated Section 9 of the EIA/CEA standard EIA-708-B with minor modifications into the Commission's rules. This industry

[372] *See Expedited Petition for Rulemaking*, filed in ET Docket No. 97-206, RM 9832 (Jan. 12, 2000) at 3. A copy of this Petition for Rulemaking has been included in the docket of this proceeding.

[373] We further note that a similar issue arises with cable service when a broadcast DTV signal or its associated analog signal is carried on a cable system on a channel that is different from its broadcast signal. PSIP in the context of cable carriage is a topic in a pending proceeding. *Carriage of Digital Television Broadcast Signals*, 16 FCC Rcd 2598, 2635 (2001) (petitions for reconsideration pending).

[374] *Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations*, 18 FCC Rcd 18365 (2003) ("*Digital LPTV Notice*").

[375] Pub. L. No. 101-431, 104 Stat. 960 (1990) (codified at 47 U.S.C. §§ 303(u), 330(b)).

[376] 47 U.S.C. § 330(b).

[377] *See DTV Closed Captioning Order*, 15 FCC Rcd 16788 (2000); 47 C.F.R. § 15.122(b) (incorporating by reference EIA-708-B, "Digital Television (DTV) Closed Captioning," Electronics Industries Alliance (Dec. 1999) ("EIA-708-B")).

standard provides guidelines for caption providers as well as encoder and decoder manufacturers to implement closed captioning services with digital television technology. The *DTV Closed Captioning Order* also amended Section 79.1 of the Commission's regulations to require an increasing amount of digital programming to be captioned in a format that can be recovered and displayed by decoders meeting the EIA-708-B standard.[378]

162. As part of *Second DTV Periodic NPRM*, the Commission sought comment on whether there was additional action that it should take to ensure the accessibility and functioning of closed captioning service for digital television.[379] Several commenters asserted that some issues need to be clarified in order for closed captioning services to be consistently and effectively delivered.[380] For example, NCAM contends that in some cases broadcasters may not be delivering true DTV caption data intended for digital television receivers. Instead, those broadcasters are delivering NTSC type data, intended for use when digital programming is down-converted for display on analog receivers. NCAM states that, without DTV captioning data, digital receivers may not be able to function in the manner in which the Commission intended. In fact, some of these receivers may not display any captions at all.[381]

163. We note that the EIA-708 standard provides comprehensive instructions for the encoding, delivery, and display of closed caption information for digital television systems. The standard provides for a larger set of captioning characters than the analog captioning standard, EIA-608. However, EIA-708 also supports transport of the analog EIA-608 captioning information for use when a digital broadcast is being viewed on an analog receiver through a DTV converter. The rules adopted in the *DTV Closed Captioning Order* were intended to require that the decoder circuitry in digital tuners respond primarily to any digitally formatted caption information. Accordingly, consumers who purchase DTV receivers will be confident that they will be able to take advantage of the new capabilities of captioning in the digital environment. Therefore, we hereby clarify that digital television receivers must first search for and respond to native EIA-708 closed caption information. Only if that information is not available in the DTV datastream should the receiver search for any available transcoded analog captioning data conforming to the EIA-608 standard. Furthermore, broadcasters should be aware that receivers will be searching for EIA-708 data in all digital broadcasts. If digital programming is to be captioned, it must contain EIA-708 data.[382] This applies to all digital broadcast programming, regardless of whether the programming is delivered in standard definition or high definition.

164. In the *DTV Closed Captioning Order*, the Commission observed that viewers will be able to watch digital programming on existing analog displays by using a DTV converter. With regard to the broadcasters' responsibility to deliver closed caption data, the *DTV Closed Captioning Order* states that, "[I]n order for programming distributors to count captioned digital television programming toward their closed captioning requirements in 47 C.F.R. Section 79.1, they must also transmit captions than can be

[378] 47 C.F.R. § 79.1.

[379] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1322, ¶119.

[380] *See generally* comments of MSTV/NAB; The CPB/WGBH National Center for Accessible Media (NCAM); CEA; and Sharp Electronics.

[381] *See* NCAM Comments at 3.

[382] *See* 47 C.F.R. § 15.122(b).

decoded by the decoder in that analog set."[383] Therefore, while all captions supplied with new digital programming should conform to the standards for "native" EIA-708 style captions as detailed in the standard, analog captions must also be provided if a broadcaster wishes to count the programming towards its quarterly captioning requirements.[384]

165. In the *Second DTV Periodic NPRM* we noted that at the time the *DTV Closed Captioning Order* was adopted the Commission had not made broadcasters' adherence to the ATSC A/65 (PSIP) standard a requirement. We stated that the standard requires the caption service descriptor to be in the EITs and makes optional the presence of the caption service descriptor in the Program Mapping Table (PMT). EIA-708 standard requires the caption service descriptor to be in the PMT and, when present, in the EITs. We questioned whether a requirement for all digital television broadcasters to place the caption service descriptor in the EITs alone would eliminate situations in which digital television receivers that search for closed captioning information in the EITs are not able to find any captioning information although it is present in the PMT according to EIA-708. We believe that our decision to adopt the PSIP standard in its entirety along with the previous adoption of the EIA-708 results in the caption service descriptor being present in both EITs and in the PMTs. This proposal to require the caption service descriptor to be present in both places will insure that legacy digital receivers that have been designed according to EIA-708 alone could continue to find the caption service descriptor in the PMT and would not be rendered obsolete.

L. DTV Labeling Requirements and Consumer Awareness

166. The *Second DTV Periodic NPRM* requested comment on the need for labeling requirements to provide consumers with information on the capabilities of digital television equipment at the point of sale.[385] We noted that a General Accounting Office ("GAO") Report to Congress in 2002 found that at least 40 percent of the public was unfamiliar with the digital transition,[386] and 68 percent of those surveyed did not know that when the transition ends, consumers with analog-only sets will be unable to continue receiving over-the-air broadcast television without use of an external digital tuner or converter.[387] In addition, we sought comment on whether to require a disclosure label on analog-only sets or a digital conversion fact sheet to inform consumers that a converter or external DTV tuner will be needed to ensure reception of television broadcast signals after stations in the consumer's market complete conversion to digital-only broadcasting.

167. In the first DTV periodic review proceeding, we sought comment on whether we should require digital television equipment that cannot receive over-the-air digital broadcast signals to carry a

[383] *DTV Closed Captioning Order*, 15 FCC Rcd at 16809, ¶ 63.

[384] *See* 47 C.F.R. § 79.1.

[385] *Second DTV Periodic NPRM*, 18 FCC Rcd at 1314-15, ¶¶ 95-98.

[386] *See* "TELECOMMUNICATIONS: Additional Federal Efforts Could Help Advance Digital Television Transition," General Accounting Office Report, GAO-03-7, Nov. 2002 ("GAO Report") at 15.

[387] Only 14 percent of those surveyed by the GAO were "very familiar" with the difference between analog and digital televisions. GAO speculates that even this number may be high because consumers may be confusing current digital television services provided by cable or satellite with DTV. GAO Report at 16 and n.12.

label informing consumers of this limitation on the receivers' functionality.[388] In the *DTV Tuner Order*, we observed that the reluctance of the public to buy digital receivers is the problem with reaching the 2007 target date for completing the transition.[389] We required that all TV receivers with screen sizes greater than 13 inches manufactured in the U.S. after July 1, 2007 be capable of receiving DTV signals over-the-air.[390] As DTV tuners reach the market, consumers will only buy them if they understand what they are and that the future utility of analog-only televisions is limited. We decided not to require in that proceeding that television receivers that cannot receive over-the-air digital broadcast signals carry a label informing consumers of this limitation but we resolved to monitor the marketplace and take steps as necessary to protect consumers' interests.[391]

168. Accurate communication of the impending change from analog to digital transmission is a highly material disclosure for consumers contemplating the purchase of a television.[392] We believe, as retailers and manufacturers agree, that communicating product attributes and features spur sales. We agree with Thompson that it is important to use the same nomenclature and definitions industry-wide.[393] CEA has developed uniform nomenclature that appears in its Consumer Guide to HDTV,[394] but the labeling recommended has not been adopted by manufacturers and retailers on a widespread basis.[395] Recent ex parte filings indicate that the relevant industries, manufacturers and some retailers, are working on improved sales materials and clear, standard terminology and an increasing amount of information available for consumers who research on the Internet or in industry publications.[396] However, much of

[388] *See First DTV Periodic Report and Order*, 16 FCC Rcd at 5986, ¶ 111.

[389] *DTV Tuner Order*, 17 FCC Rcd at 15990, ¶ 27; *See also* Consumer Electronics Association v. Federal Communications Commission, 347 F.3d 291 (D.C. Cir. 2003).

[390] *DTV Tuner Order*, 17 FCC Rcd at 15996, ¶ 40.

[391] *Id.* at ¶ 59.

[392] Retailers sell analog-only televisions for over $500 without prominent disclosure that they will not receive television signals without additional equipment after the analog spectrum is returned. *See*, *e.g.*, 30" Phillips, widescreen aspect ratio, "ideal for DVD" for $599 at Best Buy, <http://www.bestbuy.com/site/olspage.jsp?id=1051826211193&skuId=5421368&type=product&productCategoryId=cat03002>.

[393] Thompson Reply at 8 (*e.g.*, "HDTV Sets" means "devices with HDTV displays and integrated DTV receivers" and "HDTV Monitors" means devices that require a separate receiver).

[394] *See* "A Consumer's Guide to the Wonderful World of HDTV" in CEA *ex parte* filed Dec. 23, 2003.

[395] For example, Best Buy offers "HD-Ready" televisions, which is not a term defined in CEA's consumer guide. Best Buy's website defines it as "Fully capable of high-definition display when connected to an optional HDTV source. Conventional analog TV reception is provided via a built-in NTSC tuner." The prices for such "HD-Ready" televisions range from $999.99 (Samsung) to $1999.99 (Toshiba). *See* <http://www.bestbuy.com/site/olspage.jsp?id=1051826206574&skuId=5341784&type=product&cmp= percent20 percent20> (viewed January 29, 2004). *See also* Best Buy's Samsung "HD Built-in Digital TV" for $1099.99 at <http://www.bestbuy.com/site/olspage.jsp?id=1069302293832&type=product> ("Built-in HDTV tuner allows you to receive over-the-air high-definition broadcasts where available (HD-capable antenna required). Optional set-top box required for reception of high-definition cable or satellite programming.")

[396] *See*, *e.g.*, CERC *ex parte* (Apr. 29, 2004).

the mass advertising and point of sale information remains confusing, inconsistent, and lacks explanation of the eventual limitations on analog-only equipment.[397] We have been reluctant to require specific labeling and expected that manufacturers and retailers would develop consistent, clear and uniform terminology to convey to consumers prior to purchase the features and limitations of television products, such as a chart of available features with "Yes" or "No" or checkmark indicated for each feature, including whether the equipment is analog-only and will require additional equipment to receive television signals after the transition.[398] We are working with the parties and consumer organizations to develop materials and techniques for consumer education.[399] Therefore, at this time, we will not determine whether it is necessary for the Commission to require labeling. We will reserve that determination for further consideration in the Second Report and Order in the Second DTV Periodic Review, which will address the interpretation of Section 309(j)(14).

M. DTV Station Identification

169. Under our current rules, television stations are required to make station identification announcements at the beginning and end of each time of operation as well as hourly.[400] Official station identification may be made visually or aurally, and must consist of the station's call letters immediately followed by the community or communities specified in the station's license as the station's location.[401] Either or both the name of the licensee and the station's channel number may be inserted between the call letters and the station location, but no other insertion is permissible.[402]

170. In the *Second DTV Periodic NPRM* we proposed to require digital television stations to follow the same rules for station identification as analog television stations. The few commenters that addressed this issue generally support this proposal.[403] Thomas C. Smith ("Smith") notes that many

[397] For example, a sign or cling label displayed at point of sale could say: "Analog only - Not digital; will need separate converter box for over-air reception."

[398] *See*, *e.g.*, Ronald Brey Comments at 4-5 (checklist grid attached to the screen distinguishing HDTV from analog and over-the-air reception from cable or satellite).

[399] A chart format could be developed based on CEA's consumer guide, that describes the resolution and aspect ratios for HDTV, EDTV and SDTV and lists them as "Best, Better, Good." *See* CEA *ex parte* filed Dec. 23, 2003 at 10.

[400] 47 C.F.R. § 73.1201(a). Section 73.1705 ("Time of Operation") of the FCC's rules specifies whether commercial and noncommercial TV and radio stations may be licensed for unlimited time operation, share time operation, and/or specified hours operation (such as daytime-only). 47 C.F.R. § 73.1705.

[401] 47 C.F.R. § 73.1201(b). Digital television stations have been assigned the same call letters as their associated analog TV stations, except that the digital station is identified with the suffix "DT."

[402] *Id.* Television satellite stations must include in their station identification announcements the number of the channel on which each station is operating. 47 C.F.R. § 73.1201(c)(3)(i).

[403] *See* Thomas C. Smith Comments at 5 (stating that station identifications are helpful to both the viewer and the station and should not be a burden to the station); WDLP Broadcasting Co., LLC at 7 (noting that the purpose of the station identification rule is to let the public know the essential identity of the station so the viewer can contact that station or the FCC about its programming).

stations now are simply passing through digital programs provided by the network and may not have the ability at this point to add a local identification to their program stream.[404] Smith states that in the future, however, stations should be required to do a local identification at regular intervals. WDLP Broadcasting Co., LLC ("WDLP") argues that the Commission should permit maximum flexibility with respect to DTV station identification. This commenter argues that the Commission should permit DTV stations to identify themselves using, for example, the station's network affiliation and channel number followed by the community of license, but without the station's call letters.[405] Smith also notes that some stations promote the channel number or the channel number and network affiliation together, while others promote the station's call letters. [406]

171. We will adopt our proposal and require digital television stations to follow the same rules for station identification as analog television stations. Thus, digital stations will be required to make station identification announcements, either visually or aurally, at the beginning and end of each time of operation as well as hourly. As with analog stations, we will require that the identification consist of the station's call letters followed by the community or communities specified in the station's license as the station's location. Stations may insert between the call letters and the station's community of license the station's frequency, channel number, name of the licensee, and/or the name of the network, at their discretion. We will not adopt the proposal of WDLP to permit stations to omit the station's call letters in their identification. Each station's call letters are unique; thus, call letters serve as the clearest means of distinguishing among stations. As stations transition to digital format and provide multicast programming, thereby increasing the number of program streams potentially available to the public, clear identification of the station providing the programming viewers are watching becomes increasingly important, both for viewers and for stations themselves.

172. If a station chooses to include its channel number in its station identification, we will require that the station use the major (analog) channel number. As discussed above, we have decided to adopt the ATSC A/65B standard into our rules.[407] One of the most important benefits of PSIP is that it defines specific requirements for use of "major" channel numbers to provide viewers with a uniform methodology to access DTV services and avoid conflict with duplicative numbers in a market. PSIP will allow viewers to see a broadcaster's major channel number regardless of the broadcaster's allocated digital broadcast channel. Thus, PSIP allows broadcasters to keep their existing channel number in the digital world, thereby assisting viewers who have come to identify these numbers with particular broadcasters and preserving the investment broadcasters have made in marketing these numbers. We believe that it is consistent with our adoption of the PSIP standard into our rules to require stations electing to identify themselves by channel number to use their major channel number, which is defined in the PSIP standard as the broadcaster's current NTSC RF (analog) channel number. Thus, a broadcaster who operates an NTSC service on channel "26" and a DTV service on channel "27" would use the major channel "26" in station identification announcements. We will permit stations that choose to multicast to include additional information in their station announcements identifying each program stream. Thus, a station with major channel number 26 might have channel 26.0 (NTSC program stream), channel 26.1

[404] *See* Thomas C. Smith Comments at 5.

[405] *See* WDLP Comments at 8.

[406] *See* Thomas C. Smith Comments at 5.

[407] *See* section IV.J.2., *supra.*

(HDTV) and 26.2 (SDTV). Stations may also provide information in the station announcement identifying the network affiliation of the program service (e.g., "WXXX-DT, channel 26.1, YYY (community of license), your WB network channel").

173. For stations simulcasting their analog programming on the digital channel, we will permit station identification announcements to be made simultaneously for both stations as long as the identification includes both call signs (*e.g.*, "WXXX-TV and WXXX-DT") if it is intended to serve as the identification for both stations.[408] If they chose to make simultaneous identifications for more than one channel, stations should ensure that these announcements are adequate to identify both program streams.

N. Distributed Transmission Technologies

174. In the *Second DTV Periodic NPRM* we sought comment on whether we should provide for DTV stations using distributed transmission technologies.[409] A DTV distributed transmission system would employ multiple synchronized transmitters spread around a station's service area. Each transmitter would broadcast the station's DTV signal on the same channel, relying on the performance of "adaptive equalizer" circuitry in DTV receivers to cancel or combine the multiple signals plus any reflected signals to produce a single signal. Such distributed transmitters could be considered to be similar to analog TV booster stations, a secondary, low power service used to "fill in" holes in the parent station's coverage area, but DTV technology has the potential to enable this type of operation in a much more efficient manner. [410] For analog TV boosters, in contrast, significant self-interference will occur unless there is substantial terrain blocking the arrival of multiple signals into the same area (for example, one signal from the primary analog station directly and one signal from a booster station).

175. In addition to the fundamental question of whether to allow distributed transmission technology, we sought comment on many related issues, such as whether such facilities should have primary or secondary regulatory status, whether we should limit the location of or area served by distributed transmitters, how interference to and from such transmitters should be calculated, and what power, antenna height, or other technical standards or limits should be imposed.

176. Commenting parties generally support use of this technology. In particular, Merrill Weiss Group ("Weiss") is a strong proponent of distributed transmission technology, citing its potential for improving spectrum efficiency by enabling increased levels of service while maintaining or reducing the levels of interference.[411] Weiss also indicates that urban area service can be improved where higher signal levels are made available from multiple directions, which can enable reception with set-top antennas instead of roof-mounted antennas. Weiss claims that distributed transmission systems will often use shorter towers that may avoid zoning problems and that they can be located to overcome obstacles of

[408] Our rules currently allow co-owned AM/FM radio stations licensed to the same community simultaneously broadcasting the same programming on both stations to make joint station identification announcements for both stations. 47 C.F.R. § 73.1201(c)(2).

[409] *See Second DTV Periodic NPRM*, 18 FCC Rcd at 1415-1317, ¶¶ 99-105.

[410] The Commission's Spectrum Policy Task Force has recommended that digital television broadcasters be permitted to operate single frequency low power distributed transmission systems within their present service areas. *See Spectrum Policy Task Force Report*, ET Docket No. 02-135, at p. 64 (rel. Nov. 2002).

[411] *See* Weiss Comments at 10.

rough terrain in some markets and urban canyons in others. Finally, Weiss suggests that distributed transmitters can help make a staged rollout of maximized service possible. MSTV/NAB support quick Commission action to allow distributed transmission systems, either in this proceeding or in a separate "fast track" proceeding.[412] Others specifically support Weiss, including Axcera, a manufacturer of transmitters and related equipment, WPSX/Penn State Public Broadcasting, which has an experimental authorization to test distributed transmission technology, and Tribune Broadcasting Company and Golden Orange Broadcasting, TV licensees that face specific situations where they may want to use distributed transmission technology.[413] Others, such as transmission equipment manufacturer Harris Corporation and Siete Grande Television, Inc., which operates four analog channel 7 transmitters covering different parts of Puerto Rico, also support allowing DTV distributed transmission systems.[414] Ronald Brey and Thomas C. Smith express concern that not enough is known about the performance of distributed transmission technology and that increased interference could be caused.[415]

177. We agree with the generally supportive comments that the technology has potential benefits to the public and the reported testing to date is encouraging. Thus, in principle, we approve of the use of DTS technology. As suggested by MSTV/NAB, we will soon open a separate "fast track" proceeding to propose rules for DTS operation and to develop an adequate record on several technical and policy issues related to its use. In that proceeding, we will address the regulatory status of DTS facilities, limitations on where DTS facilities can provide service, and how DTS facilities are treated from the standpoint of interference they would be predicted to cause to other broadcast stations and interference they would receive from other stations. In addition, we will consider policy issues such as how to avoid situations where stations could fail to serve significant populations within their nominal coverage area and how stations employing DTS facilities should be evaluated with respect to meeting replication and maximization deadlines.

178. While that DTS proceeding is conducted, we will allow stations to request DTS operation on a case-by-case basis based on conservative parameters. Specifically, interim DTS operations will not be allowed if they would provide predicted service beyond a station's currently authorized area (including its replication area as well as any maximization area resulting from facilities granted by a construction permit or license). An interim DTS proposal will only be approved if it is designed to serve essentially all of its replication coverage area.[416] A station's desire to explore DTS operation will not be acceptable grounds for it requesting an extension of the replication and maximization interference protection deadline. Beyond these decisions, our staff will determine on a case-by-case basis the adequacy of other aspects of proposed operation (including permissible power, antenna height, and the acceptability of interference showings). We note that the record in this proceeding does not reflect current successful and

[412] *See* MSTV/NAB Comments at 32.

[413] *See* Axcera Reply at 5; Tribune Reply at 4; Golden Orange Broadcasting Reply at 1; WPSX/Penn State Public Broadcasting Reply at 1.

[414] *See* Harris Comments at 6; Siete Grande Comments at 8.

[415] *See* Brey Comments at 5; Thomas C. Smith Comments at 5.

[416] An acceptable application during this interim period must show that all viewers within the station's replicated service area who are predicted to be served by their current analog transmitter would likewise be predicted to receive the minimum signal strength from at least one DTT transmitter.

practical operation of DTS technology. We will authorize additional experimentation and development work through our Special Temporary Authority (STA) process. Operation under such authority will be allowed to continue while we conduct the rule making proceeding. Depending upon the outcome of that proceeding, we may then convert the STAs to regular authorizations.

V. PROCEDURAL MATTERS

179. *Accessibility Information*. Accessible formats of this *Report and Order* (computer diskettes, large print, audio recording and Braille) are available to persons with disabilities by contacting Brian Millin, of the Consumer & Governmental Affairs Bureau, at (202) 418-7426, TTY (202) 418-7365, or at bmillin@fcc.gov.

180. *Paperwork Reduction Act of 1995 Analysis*. This *Report and Order* contains new or modified information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. The Commission is requesting OMB approval under the emergency processing provisions of the 1995 Act (5 C.F.R. §1320.13) of the information collection requirements and forms contained in this *Report and Order*. OMB, the general public, and other Federal agencies are invited to comment on the new or modified information collection(s) contained in this proceeding.

181. Written comments by the public on the proposed information collection(s) are due 60 days from date of publication of this *Report and Order* in the Federal Register. Written comments must be submitted by the public, Office of Management and Budget and other interested parties on the proposed information collection(s) on or before 60 days from date of publication of this *Report and Order* in the Federal Register. In addition to filing comments with the Secretary, a copy of any comments on the information collection(s) contained herein should be submitted to Judith F. Herman, Federal Communications Commission, Room 1-A804, 445 12th Street, SW, Washington, DC 20554, or via the Internet to Judith-B.Herman@fcc.gov, and to Kristy L. LaLonde, OMB Desk Officer, Room 10234 NEOB, 725 17th Street, NW, Washington, DC 20503, or via the Internet to Kristy L. LaLonde@omb.eop.gov, or via fax at 202-395-5167.

182. *Regulatory Flexibility Act*. As required by the Regulatory Flexibility Act,[417] the Commission has prepared a Final Regulatory Flexibility Analysis ("FRFA") relating to this *Report and Order*. The FRFA is set forth in **Appendix C**.

VI. ORDERING CLAUSES

183. **IT IS ORDERED** that pursuant to the authority contained in Sections 1, 4(i) and (j), 5(c)(1), 7, 301, 302, 303(f), 303(r), 303(u), 303(w), 303(x), 307, 308, 309, 316, 319, 324, 336(c), 336(f), 337, 330(b), 330(c), 332(c) of the Communications Act of 1934, 47 U.S.C §§ 151, 154(i) and (j), 155(c)(1), 157, 301, 302, 303(f), 303(r), 303(u), 303(w), 303(x), 307, 308, 309, 316, 319, 324, 336(c), 336(f), 337, 330(b), 330(c), 332(c) that this Report and Order IS ADOPTED and the Commission's rules **ARE HEREBY AMENDED** as set forth in Appendix *B,* and shall become effective 30 days after publication in the Federal Register except that rule section 47 C.F.R. § 73.1201 that contains information collection requirements under the PRA is not effective until approved by OMB. The FCC will publish a document in the Federal Register announcing the effective date for this section.

[417] *See* 5 U.S.C. § 604.

184. **IT IS FURTHER ORDERED** that, pursuant to 47 U.S.C. § 155(c), the Chief, Media Bureau, is GRANTED DELEGATED AUTHORITY to implement the electronic Channel Election Forms and the specific dates adopted in this Order.

185. **IT IS FURTHER ORDERED** that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this *Report and Order*, including the Final Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

186. **IT IS FURTHER ORDERED** that the Commission **SHALL SEND** a copy of this *Report and Order* in a report to be sent to Congress and the General Accounting Office pursuant to the Congressional Review Act, *see* 5 U.S.C. § 801(a)(1)(A).

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A
LIST OF COMMENTERS

A. Leading Comments

1. A&E Television Networks
2. Access Spectrum, LLC
3. Advanced Television Systems Committee
4. Alaska Broadcasters Association, et al.
5. Aloha Partners, L.P.
6. American Cable Association
7. American Corn Growers Association, (Larry Mitchell)
8. Association for Maximum Service Television/NAB
9. Association of Public-Safety Communications Officials-International, Inc. (APSCO)
10. Association of Public Television Stations, The Corporation for Public Broadcasting and The Public Broadcasting Service (Public Television)
11. BELO Corp.
12. Block Communications, Inc.
13. Brey, Ronald J.
14. Capitol Broadcasting Company, Inc.
15. Cavlier Group, LLC (Withdrawn)
16. Channel 3 of Corpus Christi, Inc.
17. Civil Rights Organizations (Minority Media and Telecommunications Council)
18. Cohen, Dippell and Everist, P.C.
19. Collings, Tim
20. Comcast Corporation
21. Community Broadcasters Association (CBA)
22. Communications Corporation of America (CCA)
23. Consumer Electronics Association (CEA)
24. Consumer Electronics Retailers Coalition (CERC)
25. Consumer Federation of America
26. Cordillera Communications, Inc.
27. Courtroom Television Network LLC
28. Cox Broadcasting, Inc.
29. CPB/WGBH National Center for Accessible Media (NCAM)
30. Crown Castle USA, Inc.
31. DataCom Wireless, LLC
32. Davis Television Wausau, LLC
33. Eastern Television Corporation (ETC)
34. Flarion Technologies
35. Federman, Joel Ph.D.
36. Harbor Wireless, LLC
37. Harris Corporation
38. HDNet, LLC
39. Hubbard Broadcasting, Inc.
40. Kaiser, Henry J. Family Foundation
41. Kanokla Telephone Association, Inc., et al (KanOkla)
42. KM Communications, Inc. et al.
43. LeSEA Broadcasting Corporation
44. Media General Communications, Inc.

45. Merrill Weiss Group, LLC (S. Merrill Weiss)
46. Motorola, Inc.
47. National Broadcasting Company, Inc. (NBC) and Telemundo Group, Inc.
48. National Association of Farmers Elected Committees (NAFEC), (Paul Clark)
49. National Cable & Telecommunications Association
50. National Minority T.V., Inc.
51. Paxson Communications Corporation
52. Preston, Eugene G. PhD EE
53. Public Safety Wireless Network
54. Sharp Electronics Corporation
55. Siete Grande Television, Inc.
56. Sinclair Broadcast Group, Inc.
57. Smith, Thomas C.
58. Statewide Wireless Network, New York State, Office for Technology, State Capitol, ESP
59. Thomson, Inc.
60. Walt Disney Company and The ABC Television Network
61. WatchTV, Inc.
62. WDLP Broadcasting Co. ,LLC
63. WHYY, INC.
64. WLNY-TV, Inc.

B. Leading Reply Comments

1. A&E Television Networks
2. Aloha Partners, L.P.
3. Association for Maximum Service Television/NAB
4. Axcera, LLC
5. Cavalier Group, LLC
6. Children's Media Policy Coalition
7. Collings, Tim
8. Consumer Electronics Association
9. Courtroom Television Network LLC
10. Cox Broadcasting, Inc.
11. DIRECTV, Inc.
12. Everist, Donald G.
13. Golden Orange Broadcasting Co., Inc.
14. Harris Corporation
15. LIN Television Corporation
16. McBride Spectrum Partners, LLC
17. McBride, Vincent D.
18. MTC North, Inc.
19. National Cable & Telecommunications Association
20. National Public Safety Telecommunications Council
21. Paxson Communications Corporation
22. Red River Broadcast Co., LLC
23. Rural 700 MHz Band Licensees
24. Thomson Inc.
25. Tribune Broadcasting Company
26. WPSX/Penn State Public Broadcasting
27. Zenith Electronics Corporation

C. Leading Ex Parte or Late-Filed Comments

1. Association for Maximum Service Television, Inc.
2. Association of Public Television Stations
3. Block Communications, Inc
4. Campaign Legal Center
5. Capitol Broadcasting Co., Inc
6. Center for the Creative Community
7. Children's Media Policy Coalition
8. Collings, Tim
9. Consumer Electronics Association
10. CPB/WGBH National Center for Accessible Media
11. Dielectric Communications
12. Harris Corporation
13. Fireweed Communications LLC
14. Media Access Project
15. MTC North, Inc
16. Philips Electronics North America Corporation
17. Sinclair Broadcast Group Inc.
18. Sony Electronics Inc.
19. Starz Encore Group LLC
20. Thomson Inc.
21. Waddell, J. Patrick
22. WLNY-TV, Inc.

APPENDIX B
RULE CHANGES

PART 15--RADIO FREQUENCY DEVICES

Part 15 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority for Part 15 continues to read as follows:

Authority: 47 U.S.C. 154, 302, 303, 304, 307, 336, and 544A.

2. Section 15.38, paragraph (b) is amended by adding subsections (13) and (14) as follows:
§ 15.38 Incorporations by reference.

(b)

(13) EIA–766–A: "U.S. and Canadian Region Rating Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information using ATSC A/65-A Program and System Information Protocol (PSIP)," 2001, IBR approved for §15.120.

* * * * *

3. Section 15.120, paragraph (c) subsection (2) is amended by revising it to read as follows:

§15.120 Program blocking technology requirements for television receivers.

(c) Transmission Format.

(2) Digital television program rating information shall be transmitted in digital television signals in accordance with § 73.682(d) of this chapter.

* * * * *

4. Section 15.120, paragraph (d) subsection (2) is amended by revising it to read as follows:

§15.120 Program blocking technology requirements for television receivers.

(d) Operation.

(2) Digital television receivers shall react in a similar manner as analog televisions when programmed to block specific rating categories. Effective March 15, 2006, digital television receivers will receive program rating descriptors transmitted pursuant to industry standard EIA/CEA -766-A "U.S. and Canadian Region Rating Tables (RRT) and Content Advisory Descriptors for Transport of Content Advisory Information using ATSC A/65-A Program and System Information Protocol (PSIP)," 2001 (incorporated by reference, see §15.38). Blocking of programs shall occur when a program rating is received that meets the pre-determined user requirements. Digital television receivers shall be able to respond to changes in the content advisory rating system.

* * * * *

PART 27 -- MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

Part 27 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 27 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

2. Section 27.60, paragraph (b) subsection (1)(iii) is amended by revising it to read as follows:

§ 27.60(b)(1)(iii) TV/DTV interference protection criteria.

* * * * *

(iii) submit an engineering study justifying the proposed separations based on the parameters of the land mobile station and the parameters, including authorized and/or applied for facilities, of the TV/DTV station(s) it is trying to protect; or,

* * * * *

PART 73 – RADIO BROADCAST SERVICES

1. The authority for Part 73 continues to read as follows:

AUTHORITY: 47 U.S.C. 154, 303, 334 and 336.

2. Section 73.624 is amended to read as follows:

§ 73.624 Digital television broadcast stations.

* * * * *

(b) DTV broadcast station permittees or licensees must transmit at least one over-the-air video program signal at no direct charge to viewers on the DTV channel. Until such time as a DTV station permittee or licensee ceases analog transmissions and returns that spectrum to the Commission, and except as provided in paragraph 1 of this section, at any time that a DTV broadcast station permittee or licensee transmits a video program signal on its analog television channel, it must also transmit at least one over-the-air video program signal on the DTV channel. The DTV service that is provided pursuant to this paragraph must be at least comparable in resolution to the analog television station programming transmitted to viewers on the analog channel.

(1) DTV broadcast station permittees and licensees required to construct and operate a DTV station by May 1, 2002, or May 1, 2003, pursuant to paragraph (d) of this section must, at a minimum, beginning on the date on which the DTV station is required to be constructed, provide a digital video program signal, of the quality described in paragraph (b) above, during prime time hours as defined in § 79.3(a)(6) of this chapter. These licensees and permittees must also comply with the minimum operating hours requirements in paragraph (f) of this section.

* * * * *

(f)(i) Commencing on April 1, 2003, DTV television licensees and permittees required to construct and operate a DTV station by May 1, 2002, or May 1, 2003, must transmit at least one over-the-air video program signal at no direct charge to viewers on their DTV channel at least 50 percent of the time they are transmitting a video program signal on their analog channel.
(ii) Commencing on April 1, 2004, DTV licensees and permittees described in paragraph (f)(i) must transmit a video program signal as described in paragraph (f)(i) on the DTV channel at least 75 percent of the time they are transmitting a video program signal on the analog channel.
(iii) Commencing on April 1, 2005, DTV licensees and permittees described in paragraph (f)(i) must transmit a video program signal as described in paragraph (f)(i) on the DTV channel at least 100 percent of the time they are transmitting a video program signal on the analog channel.
(iv) The minimum operating hours requirements imposed in paragraphs (f) (i)-(iii) of this section will terminate when the analog channel terminates operation and a 6 MHz channel is returned by the DTV licensee or permittee to the Commission.

* * * * *

3. Section 73.682 is amended by revising paragraph (d) to read as follows:

§ 73.682 TV transmission standards.

* * * * *

(d) Digital broadcast television transmission standard. Effective [120 days after publication in the Federal Register] transmission of digital broadcast television (DTV) signals shall comply with the standards for such transmissions set forth in ATSC A/52: "ATSC Standard Digital Audio Compression (AC-3)" (incorporated by reference, see § 73.8000), ATSC Doc. A/53B, Revision B with Amendment 1 and Amendment 2: "ATSC Digital Television Standard," except for Section 5.1.2 ("Compression format constraints") of Annex A ("Video Systems Characteristics") and the phrase "see Table 3" in Section 5.1.1. Table 2 and Section 5.1.2 Table 4 (incorporated by reference, see § 73.8000), and ATSC A/65B: "ATSC Program and System Information Protocol for Terrestrial Broadcast and Cable," 2003. (incorporated by reference, see § 73.8000) Although not incorporated by reference, licensees may also consult ATSC Doc. A/54, Guide to Use of the ATSC Digital Television Standard, (Oct. 4, 1995), and ATSC Doc. A/69, Recommended Practice PSIP Implementation Guidelines for Broadcasters (June 25, 2002). (Secs. 4, 5, 303, 48 Stat., as amended, 1066, 1068, 1082 (47 U.S.C. 154, 155, 303)).

* * * * *

4. Section 73.1201 is amended to read as follows:

§ 73.1201 Station identification

* * * * *

(b) *Content*. (1) Official station identification shall consist of the station's call letters immediately followed by the community or communities specified in its license as the station's location; *Provided*, That the name of the licensee, the station's frequency, the station's channel number, as stated on the station's license, and/or the station's network affiliation may be inserted between the call letters and

station location. DTV stations choosing to include the station's channel number in the station identification must use the station's major channel number and may distinguish multicast program streams. For example, a station with major channel number 26 may use 26.1 to identify an HDTV program service and 26.2 to identify an SDTV program service. No other insertion between the station's call letters and the community or communities specified in its license is permissible.

*****

(c) *Channel*. (1) *General*. Except as otherwise provided in this paragraph, in making the identification announcement the call letters shall be given only on the channel, or channels in the case of a broadcaster that is multicasting more than a single channel, identified thereby.

* * * * *

5. Section 73.8000,is amended by revising paragraph (b) subsections (2) and (3) as follows:
§ 73.8000 Incorporation by reference.

(b) ***

(2) ATSC A/53B: "ATSC Digital Television Standard," 1995, Amendment 1 and Amendment 2, IBR approved for § 73.682, except for section 5.1.2 of Annex A, and the phrase "see Table 3" in section 5.1.1. Table 2 and section 5.1.2 Table 4.

(3) ATSC A/65B: "ATSC Program and System Information Protocol for Terrestrial Broadcast and Cable," 2003, IBR approved for § 73.682, IBR approved for §§ 73.9000-73.9001**.**

* * * * *

PART 90--PRIVATE LAND MOBILE RADIO SERVICES

Part 90 of Title 47 of the Code of Federal Regulations is amended as follows:

1. The authority citation for Part 90 continues to read as follows:

Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7).

2. Section 90.545, paragraph (c) subsection (1)(ii) is amended by revising it to read as follows:

§ 90.545 (c)(1)(ii) TV/DTV interference protection criteria.

* * * * *

(ii) submit an engineering study justifying the proposed separations based on the parameters of the land mobile station and the parameters, including authorized and/or applied for facilities, of the TV/DTV station(s) it is trying to protect; or,

* * * *

APPENDIX C
FINAL REGULATORY FLEXIBILITY ANALYSIS

1. As required by the Regulatory Flexibility Act of 1980, as amended ("RFA"),[418] an Initial Regulatory Flexibility Analysis ("IRFA") was incorporated in the *Notice of Proposed Rule Making* ("*NPRM*").[419] The Commission sought written public comment on the proposals in the *NPRM*, including comment on the IRFA. One comment was received on the IRFA and is discussed below. This Final Regulatory Flexibility Analysis ("FRFA") conforms to the RFA.[420]

2. **Need for and Objectives of the Report and Order.** The policies and rules set forth herein are required to ensure a smooth transition of the nation's television system from analog to digital format. In the Commission's DTV proceeding (MM Docket No. 87-268), the Commission stated its intention to hold periodic reviews of the progress of the digital conversion and to make any adjustments necessary to our rules and policies to "ensure that the introduction of digital television and the recovery of spectrum at the end of the transition fully serves the public interest."[421] In this second periodic review, we revisit, as we indicated we would, several issues addressed in the first periodic review, and address a number of additional issues that we consider essential to resolve in order to ensure continued progress on the digital transition. The objective of this second periodic review is to make adjustments to our rules and policies to facilitate the introduction of digital television and the recovery of spectrum at the end of the transition.

3. Foremost among the steps taken in this item, the Report and Order establishes the timing and procedures necessary to establish a new Table of DTV Allotments that will determine the post-transition channels for all digital stations. Specifically, the item commences a three-round channel election process in the fall of 2004. Licensees are encouraged to ensure accuracy of database technical information on-file with the Commission before October 1, 2004. The Commission will issue a Table of Station Information (based on licensees' on-file database information) so that station licensees will know the DTV service populations to be used in the channel election process. In November 2004, the channel election process begins with all stations certifying their database technical information; and certifying intent to replicate or maximize on their post-transition channel. In December 2004, round one begins and station licensees with two in-core (channels 2-51) channels elect the channel they prefer to retain for digital broadcasting, and licensees with one in-core and one out-of-core (channels 52-69) channel elect whether to use their in-core channel for post-transition digital operation. In round two, expected in July 2005, station licensees without a current in-core channel assignment elect a channel from those available after round one. In round three, expected in January 2006, station licensees not yet assigned a channel, or assigned channel 2 through 6, may elect a channel from those available after round two. Between each round, the Commission will announce which channels are protected, which are in conflict, and which are available. Station licensees with conflicts will decide whether to accept interference and remain on elected channels

[418] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

[419] *Second DTV Periodic NPRM*, 18 FCC Rcd 1279 (2003).

[420] *See* 5 U.S.C. § 604.

[421] *See Fifth Report and Order*, 12 FCC Rcd at 12856 ¶ 116 (1997)"", *on recon.*, *Service Reconsideration Order*, 13 FCC Rcd 6860, *on further recon.*, *Second MO&O on Recon. of the Fifth and Sixth R&Os*, 14 FCC Rcd 1348 (1998), *recon. dismissed*, *Order*, 14 FCC Rcd 11572 (1999), *recon. dismissed*, *Order*, 15 FCC Rcd 4760 (2000).

or move to the next election round. After round three, the Commission will resolve remaining conflicts based on relevant factors. Finally, the Commission will issue a Notice of Proposed Rulemaking, expected by August 2006, proposing and seeking comment on new DTV Table of Allotments.

4. To facilitate the election process, the Media Bureau has implemented a freeze on certain requests for allotment and service area changes by TV and DTV stations. Notwithstanding the freeze, stations with international coordination issues or other problems beyond their control may amend applications as necessary.

5. In addition, the Order finds that firm but fair replication and maximization dates are necessary to increase DTV service to the public and also to advance the clearing of spectrum in the Lower and Upper 700 MHz bands (comprising television channels 52-69). The Order establishes two replication and maximization deadlines. The first deadline is July 1, 2005 and it applies to the top four affiliates in the top 100 markets. If they will remain on their digital channel assignments after the transition, they must fully replicate and maximize by this date. If they will move to another channel post-transition, they must be serving by July 1, 2005 100% of the number of viewers served by the 1997 facility on which their replication was based. The second deadline, July 1, 2006, applies to all other stations. If they will remain on their current digital channel after the transition, they must fully replicate and maximize by this date. If they will move to another channel post-transition, they must be serving by July 2006 at least 80% of the number of viewers served by the 1997 facility on which their replication was based. Failure to replicate or maximize by these deadlines will result in loss of interference protection to the unserved areas. If they have met these deadlines, the item would allow stations that are going to move to a different channel after the transition to carry-over their authorized maximized area to their new channels.

6. The Order does not adopt an intermediate signal requirement, but retains the 7 dB increase required by December 31, 2004, for commercial stations and December 31, 2005, for noncommercial stations.

7. To provide additional flexibility and fairness for many of the stations that are currently out-of-core, the Order allows such stations to return out-of-core digital channels before the transition and "flash cut" to digital on their in-core channels without losing replication or maximization protection on their eventual in-core channel assignments.

8. In addition to resolving the channel election, replication and maximization issues, the item encourages creative and value-added programming on digital channels by removing the requirement that licensees simulcast their analog video programming on their digital channel, while retaining the requirements for minimum hours of operation. This "simulcast requirement" could be reinstituted near the end of the transition if warranted.

9. In addition, the Report and Order permits satellite stations to "flash-cut" from analog to digital at the end of the transition; clarifies the interference protection parameters of broadcast stations on channels 51-69; and requires stations to use Program and System Information Protocol ("PSIP"), [422] which will facilitate digital operations and features, including channel numbering, v-chip, and closed captioning, and will establish technical requirements that will permit the TV ratings system to be modified in the future.

[422] *See* "Program and System Information Protocol for Broadcast and Cable," Advanced Television Systems Committee, Doc. A/65B, Rev. B to PSIP for Terrestrial Broadcast and Cable ("ATSC A/65B" or "PSIP") (Mar. 18, 2003).

10. Finally, the Report and Order approves in principle the use of distributed transmission technologies for digital television service. Digital Transmission Systems ("DTS") would employ multiple synchronized transmitters spread around a station's service area, enabling broadcasters to fill gaps in service coverage. The item states the Commission will open a separate "fast track" proceeding to propose rules for DTS operation and to address related technical and policy issues. In the interim, the Order allows stations to request authorization for DTS operation on a case-by-case basis based on conservative parameters.

11. The Report and Order defers action on whether to require point-of-sale labels describing TV equipment capabilities (such as, high definition, digital monitor only, or analog) and on the issue of how the Commission should interpret the Section of the Communications Act that sets December 31, 2006, as the deadline for return of analog spectrum and establishes criteria for extensions of that deadline. The Order states that the Commission plans to address these issues in the near future.

12. **Summary of Significant Issues Raised by Public Comments in Response to the IRFA.** The American Cable Association ("ACA") filed a comment in response to the IRFA in this proceeding. ACA states that the Commission's DTV transition regulations must accommodate the unique circumstances and higher cost structures of smaller cable systems. In particular, ACA asks that the Commission address the following issues: 1) the disproportionate cost of the DTV transition for smaller cable systems due to headend and set-top box costs; 2) the disproportionate burden of dual must-carry for smaller cable systems due to more limited channel capacity; 3) the unwillingness of some broadcasters to deliver an adequate quality DTV signal to outlying areas of their markets; and 4) the "continuing abuse" of retransmission consent of a handful of media conglomerates, which is constraining channel capacity, raising costs, and hampering small systems' ability to develop solutions to DTV carriage. ACA urges the Commission to consider alternatives to its rules that would minimize any significant economic impact on small entities, including exemption from coverage of the rule or parts thereof for small entities.[423]

13. The issues raised by ACA regarding the impact of the transition on smaller cable systems are more pertinent to the Commission's pending must-carry proceeding than to this DTV periodic review. The rules and policies addressed herein apply primarily to broadcasters and equipment manufacturers, and relate only indirectly to cable operators. A copy of ACA's comments have been associated with the file in the must-carry proceeding.

14. Although we decline to address the issues raised by ACA in this proceeding, we do adopt herein a number of policies that take into consideration the legitimate needs and interests of small businesses. For example, the item provides for a later replication and maximization interference protection deadline of July 1, 2006 for smaller stations (not affiliated with a top-four network) and those in smaller markets. Affiliates of the top-four networks (i.e., ABC, CBS, Fox, and NBC) in markets 1-100 are given an earlier replication and maximization interference protection deadline of July 1, 2005. In addition, smaller stations and those in smaller markets that will move to another channel post-transition are permitted to serve only 80% (rather than 100%) of the number of viewers served by the 1997 replication coverage area by the July 2006 deadline to carry-over their authorized maximized service area to their new channel. To assist stations facing severe financial constraints or obstacles beyond a station's control that are specific to the DTV transition process, the item permits these stations to apply for a six-month waiver of the interference protection deadline.

15. The Report and Order also permits certain stations with an in-core NTSC channel paired with

[423] ACA IRFA Comments at 1-3.

an out-of-core DTV channel, as well as stations with two out-of-core channels, to surrender their out-of-core DTV channel before the end of the transition and operate in analog on their in-core channel. The item also permits single-channel DTV stations out of the core, upon Commission approval, to elect not to construct DTV facilities and instead give up their out-of-core DTV channel in return for a DTV channel inside the core. Upon approval from the Commission, these stations will "flash-cut" to digital operations on their in-core channel no later than the end of the transition in the station's market. This "flash-cut" policy will assist stations with an out-of-core DTV channel that are concerned about the cost of constructing DTV facilities outside the core that cannot be operated after the transition. In addition, the Report and Order permits satellite stations to surrender one of their paired channels and flash cut from analog to digital transmissions by the end of the transition period. This flash-cut option should provide significant financial relief for satellite stations, many of which are small and all of which serve communities unable to support a full-service station.

16. **Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply.** The RFA directs the Commission to provide a description of and, where feasible, an estimate of the number of small entities that will be affected by the proposed rules.[424] The RFA generally defines the term "small entity" as having the same meaning as the terms "small business," small organization," and "small government entity."[425] In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.[426] A small business concern is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration ("SBA").[427]

17. **Television Broadcasting.** The Small Business Administration defines a television broadcasting station that has no more than $12 million in annual receipts as a small business.[428] Business concerns included in this industry are those "primarily engaged in broadcasting images together with sound."[429] According to Commission staff review of the BIA Publications, Inc. Master Access Television

[424] 5 U.S.C. § 603(b)(3).

[425] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in 15 U.S.C. § 632). Pursuant to the RFA, the statutory definition of a small business applies, "unless an agency, after consultation with the Office of Advocacy of the SBA and after opportunity for public comment, establishes one or more definitions of such the term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.

[426] 5 U.S.C. § 601(3) (incorporating by reference the definition of "small business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

[427] 15 U.S.C. § 632. Application of the statutory criteria of dominance in its field of operation, and independence are sometime difficult to apply in the context of broadcast television. Accordingly, the Commission's statistical account of television stations may be over-inclusive.

[428] *See* 13 C.F.R. § 121.201, NAICS Code 515120 (adopted Oct. 2002).

[429] NAICS Code 515120. This category description continues, "These establishments operate television broadcasting studios and facilities for the programming and transmission of programs to the public. These establishments also produce or transmit visual programming to affiliated broadcast television stations, which in (continued….)

Analyzer Database as of May 16, 2003, about 814 of the 1,220 commercial television stations in the United States have revenues of $12 million or less. We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations[430] must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. There are also 2,127 low power television stations (LPTV).[431] Given the nature of this service, we will presume that all LPTV licensees qualify as small entities under the SBA definition.

18. In addition, an element of the definition of "small business" is that the entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific television station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any television station from the definition of a small business on this basis and are therefore over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent.

19. **Cable and Other Program Distribution.** The SBA has developed a small business size standard for cable and other program distribution services, which includes all such companies generating $12.5 million or less in revenue annually.[432] This category includes, among others, cable operators, direct broadcast satellite ("DBS") services, home satellite dish ("HSD") services, multipoint distribution services ("MDS"), multichannel multipoint distribution service ("MMDS"), Instructional Television Fixed Service ("ITFS"), local multipoint distribution service ("LMDS"), satellite master antenna television ("SMATV") systems, and open video systems ("OVS"). According to the Census Bureau data, there are 1,311 total cable and other pay television service firms that operate throughout the year of which 1,180 have less than $10 million in revenue.[433] We address below each service individually to provide a more precise estimate of small entities.

20. **Cable Operators.** The Commission has developed our own definition of a small cable system operator for the purposes of rate regulation. Under the Commission's rules, a "small cable

(Continued from previous page)
turn broadcast the programs to the public on a predetermined schedule. Programming may originate in their own studios, from an affiliated network, or from external sources." Separate census categories pertain to businesses primarily engaged in producing programming. *See* Motion Picture and Video Production, NAICS code 512110; Motion Picture and Video Distribution, NAICS Code 512120; Teleproduction and Other Post-Production Services, NAICS Code 512191; and Other Motion Picture and Video Industries, NAICS Code 512199.

[430] "Concerns are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 C.F.R. § 121.103(a)(1).

[431] FCC News Release, "Broadcast Station Totals as of September 30, 2002."

[432] 13 C.F.R. § 121.201, NAICS code 517510. This NAICS code applies to all services listed in this paragraph.

[433] Economics and Statistics Administration, Bureau of Census, U.S. Department of Commerce, 1997 Economic Census, Subject Series – Establishment and Firm Size, Information Sector 51, Table 4 at 50 (2000). The amount of $10 million was used to estimate the number of small business firms because the relevant Census categories stopped at $9,999,999 and began at $10,000,000. No category for $12.5 million existed. Thus, the number is as accurate as it is possible to calculate with the available information.

company" is one serving fewer than 400,000 subscribers nationwide.[434] We last estimated that there were 1,439 cable operators that qualified as small cable companies.[435] Since then, some of those companies may have grown to serve over 400,000 subscribers, and others may have been involved in transactions that caused them to be combined with other cable operators. Consequently, we estimate that there are fewer than 1,439 small entity cable system operators that may be affected by the decisions and rules in this Report and Order.

21. The Communications Act, as amended, also contains a size standard for a small cable system operator, which is "a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed $250,000,000."[436] The Commission has determined that there are 68,500,000 subscribers in the United States. Therefore, an operator serving fewer than 685,000 subscribers shall be deemed a small operator if its annual revenues, when combined with the total annual revenues of all of its affiliates, do not exceed $250 million in the aggregate.[437] Based on available data, we find that the number of cable operators serving 685,000 subscribers or less totals approximately 1,450.[438] Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed $250,000,000, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

22. **Direct Broadcast Satellite ("DBS") Service.** Because DBS provides subscription services, DBS falls within the SBA-recognized definition of Cable and Other Program Distribution Services.[439] This definition provides that a small entity is one with $12.5 million or less in annual receipts.[440] There are four licensees of DBS services under Part 100 of the Commission's Rules. Three of those licensees are currently operational. Two of the licensees that are operational have annual revenues that may be in excess of the threshold for a small business.[441] The Commission, however, does not collect annual revenue data for DBS and, therefore, is unable to ascertain the number of small DBS licensees that could be impacted by these proposed rules. DBS service requires a great investment of capital for operation, and we acknowledge, despite the absence of specific data on this point, that there are entrants in this field that may not yet have generated $12.5 million in annual receipts, and therefore may be categorized as a small business, if independently owned and operated.

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[434] 47 C.F.R. § 76.901(e). The Commission developed this definition based on its determinations that a small cable system operator is one with annual revenues of $100 million or less. *Sixth Report and Order and Eleventh Order on Reconsideration*, 10 FCC Rcd. 7393 (1995).

[435] Paul Kagan Associates, Inc., Cable TV Investor, Feb. 29, 1996 (based on figures for Dec. 30, 1995).

[436] 47 U.S.C. § 543(m)(2).

[437] 47 C.F.R. § 76.1403(b).

[438] Paul Kagan Associates, Inc., Cable TV Investor, Feb. 29, 1996 (based on figures for Dec. 30, 1995).

[439] 13 C.F.R. § 121.201, NAICS code 517510.

[440] *Id.*

[441] *Id*.

23. **Home Satellite Dish ("HSD") Service.** Because HSD provides subscription services, HSD falls within the SBA-recognized definition of Cable and Other Program Distribution Services.[442] This definition provides that a small entity is one with $12.5 million or less in annual receipts.[443] The market for HSD service is difficult to quantify. Indeed, the service itself bears little resemblance to other MVPDs. HSD owners have access to more than 500 channels of programming placed on C-band satellites by programmers for receipt and distribution by MVPDs, of which 150 channels are scrambled and approximately 350 are unscrambled.[444] HSD owners can watch unscrambled channels without paying a subscription fee. To receive scrambled channels, however, an HSD owner must purchase an integrated receiver-decoder from an equipment dealer and pay a subscription fee to an HSD programming package. Thus, HSD users include: (1) viewers who subscribe to a packaged programming service, which affords them access to most of the same programming provided to subscribers of other MVPDs; (2) viewers who receive only non-subscription programming; and (3) viewers who receive satellite programming services illegally without subscribing. Because scrambled packages of programming are most specifically intended for retail consumers, these are the services most relevant to this discussion.[445]

24. **Multipoint Distribution Service ("MDS"), Multichannel Multipoint Distribution Service ("MMDS") Instructional Television Fixed Service ("ITFS") and Local Multipoint Distribution Service ("LMDS").** MMDS systems, often referred to as "wireless cable," transmit video programming to subscribers using the microwave frequencies of the MDS and ITFS.[446] LMDS is a fixed broadband point-to-multipoint microwave service that provides for two-way video telecommunications.[447]

25. In connection with the 1996 MDS auction, the Commission defined small businesses as entities that had annual average gross revenues of less than $40 million in the previous three calendar years.[448] This definition of a small entity in the context of MDS auctions has been approved by the SBA.[449] The MDS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas ("BTAs"). Of the 67 auction winners, 61 met the definition of a small business. MDS also includes licensees of stations authorized prior to the auction. As noted, the SBA has developed a definition of small entities for pay television services, which includes all such companies generating $12.5 million or less in annual receipts.[450] This definition includes multipoint distribution services, and

[442] 13 C.F.F. § 121.201, NAICS code 517510.

[443] *Id.*

[444] Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming, 19 FCC Rcd 1606, 1655 (2004) ("Tenth Annual Report").

[445] *Id.* at 4385.

[446] Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding, 10 FCC Rcd at 9589, 9593 (1995) ("ITFS Order").

[447] *See* Local Multipoint Distribution Service, 12 FCC Rcd 12545 (1997) ("LMDS Order").

[448] 47 C.F.R. § 21.961(b)(1).

[449] *See ITFS Order*, 10 FCC Rcd at 9589.

[450] 13 C.F.R. § 121.201, NAICS code 517510.

thus applies to MDS licensees and wireless cable operators that did not participate in the MDS auction. Information available to us indicates that there are approximately 850 of these licensees and operators that do not generate revenue in excess of $12.5 million annually. Therefore, for purposes of the FRFA, we find there are approximately 850 small MDS providers as defined by the SBA and the Commission's auction rules.

26. The SBA definition of small entities for Cable and Other Program Distribution Services, which includes such companies generating $12.5 million in annual receipts, seems reasonably applicable to ITFS.[451] There are presently 2,032 ITFS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in the definition of a small business.[452] However, we do not collect annual revenue data for ITFS licensees, and are not able to ascertain how many of the 100 non-educational licensees would be categorized as small under the SBA definition. Thus, we tentatively conclude that at least 1,932 licensees are small businesses.

27. Additionally, the auction of the 1,030 LMDS licenses began on February 18, 1998, and closed on March 25, 1998. The Commission defined "small entity" for LMDS licenses as an entity that has average gross revenues of less than $40 million in the three previous calendar years.[453] An additional classification for "very small business" was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than $15 million for the preceding calendar years.[454] These regulations defining "small entity" in the context of LMDS auctions have been approved by the SBA.[455] There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 40 winning bidders. Based on this information, we conclude that the number of small LMDS licenses will include the 93 winning bidders in the first auction and the 40 winning bidders in the re-auction, for a total of 133 small entity LMDS providers as defined by the SBA and the Commission's auction rules.

28. In sum, there are approximately a total of 2,000 MDS/MMDS/LMDS stations currently licensed. Of the approximate total of 2,000 stations, we estimate that there are 1,595 MDS/MMDS/LMDS providers that are small businesses as deemed by the SBA and the Commission's auction rules.

29. **Satellite Master Antenna Television ("SMATV") Systems.** The SBA definition of small entities for Cable and Other Program Distribution Services includes SMATV services and, thus, small entities are defined as all such companies generating $12.5 million or less in annual receipts.[456]

[451] *Id*.

[452] SBREFA also applies to nonprofit organizations and governmental organizations such as cities, counties, towns, townships, villages, school districts, or special districts, with populations of less than 50,000. 5 U.S.C. § 601(5).

[453] *See LMDS Order,* 12 FCC Rcd at 12545.

[454] *Id.*

[455] *See* Letter to Daniel Phythyon, Chief, Wireless Telecommunications Bureau (FCC) from A. Alvarez, Administrator, SBA (January 6, 1998).

[456] 13 C.F.R. § 121.201, NAICS code 517510.

Currently, there are approximately 250 SMATV operators providing service to approximately 1.2 million residential subscribers.[457] The best available estimates indicate that the largest SMATV operators serve between 15,000 and 55,000 subscribers each. Most SMATV operators serve approximately 3,000-4,000 customers. Because these operators are not rate regulated, they are not required to file financial data with the Commission. Furthermore, we are not aware of any privately published financial information regarding these operators. Based on the estimated number of operators and the estimated number of units served by the largest ten SMATVs, we believe that a substantial number of SMATV operators qualify as small entities.

30. **Open Video Systems ("OVS").** Because OVS operators provide subscription services,[458] OVS falls within the SBA-recognized definition of Cable and Other Program Distribution Services.[459] This definition provides that a small entity is one with $ 12.5 million or less in annual receipts.[460] The Commission has certified 25 OVS operators with some now providing service. Affiliates of Residential Communications Network, Inc. ("RCN") received approval to operate OVS systems in New York City, Boston, Washington, D.C. and other areas. RCN has sufficient revenues to assure us that they do not qualify as small business entities. Little financial information is available for the other entities authorized to provide OVS that are not yet operational. Given that other entities have been authorized to provide OVS service but have not yet begun to generate revenues, we conclude that at least some of the OVS operators qualify as small entities.

31. **Electronics Equipment Manufacturers.** Rules adopted in this proceeding could affect manufacturers of DTV receiving equipment and other types of consumer electronics equipment. The SBA has developed definitions of small entity for manufacturers of audio and video equipment[461] as well as radio and television broadcasting and wireless communications equipment.[462] These categories both include all such companies employing 750 or fewer employees. The Commission has not developed a definition of small entities applicable to manufacturers of electronic equipment used by consumers, as compared to industrial use by television licensees and related businesses. Therefore, we will utilize the SBA definitions applicable to manufacturers of audio and visual equipment and radio and television broadcasting and wireless communications equipment, since these are the two closest NAICS Codes applicable to the consumer electronics equipment manufacturing industry. However, these NAICS categories are broad and specific figures are not available as to how many of these establishments manufacture consumer equipment. According to the SBA's regulations, an audio and visual equipment manufacturer must have 750 or fewer employees in order to qualify as a small business concern.[463] Census Bureau data indicates that there are 554 U.S. establishments that manufacture audio and visual

[457] *See Annual Assessment of the Status of Competition in Markets for the Delivery of Video Programming*, 19 FCC Rcd 1606, 1666 (2004) ("*Tenth Annual Report*").

[458] *See* 47 U.S.C. § 573.

[459] 13 C.F.R. § 121.201, NAICS code 517510.

[460] *Id.*

[461] 13 CFR § 121.201, NAICS code 334310.

[462] 13 CFR § 121.201, NAICS code 334220.

[463] 13 CFR § 121.201, NAICS code 334310.

equipment, and that 542 of these establishments have fewer than 500 employees and would be classified as small entities.[464] The remaining 12 establishments have 500 or more employees; however, we are unable to determine how many of those have fewer than 750 employees and therefore, also qualify as small entities under the SBA definition. Under the SBA's regulations, a radio and television broadcasting and wireless communications equipment manufacturer must also have 750 or fewer employees in order to qualify as a small business concern.[465] Census Bureau data indicates that there 1,215 U.S. establishments that manufacture radio and television broadcasting and wireless communications equipment, and that 1,150 of these establishments have fewer than 500 employees and would be classified as small entities.[466] The remaining 65 establishments have 500 or more employees; however, we are unable to determine how many of those have fewer than 750 employees and therefore, also qualify as small entities under the SBA definition. We therefore conclude that there are no more than 542 small manufacturers of audio and visual electronics equipment and no more than 1,150 small manufacturers of radio and television broadcasting and wireless communications equipment for consumer/household use.

32. **Electronic Computer Manufacturers.** The Commission has not developed a definition of small entities applicable to computer manufacturers. Therefore, we will utilize the SBA definition of electronic computers manufacturing. According to SBA regulations, a computer manufacturer must have 1,000 or fewer employees in order to qualify as a small entity.[467] Census Bureau data indicates that there are 563 firms that manufacture electronic computers and of those, 544 have fewer than 1,000 employees and qualify as small entities.[468] The remaining 19 firms have 1,000 or more employees. We conclude that there are approximately 544 small computer manufacturers.

33. **Description of Projected Reporting, Recordkeeping and other Compliance Requirements.** The Report and Order requires all full power commercial and noncommercial television broadcast licensees and permittees to file a pre-election certification form by November 2004. In addition, full power licensees and permittees choosing to participate in the channel election process will file channel election forms in one or more of the three election rounds, and may file conflict decision forms based on the outcome of their election. The purpose of these filings is to permit stations to inform the Commission of their preference for a final DTV channel. Without these election forms, stations could

[464] Economics and Statistics Administration, Bureau of Census, U.S. Department of Commerce, 1997 Economic Census, Industry Series – Manufacturing, Audio and Video Equipment Manufacturing, Table 4 at 9 (1999). The amount of 500 employees was used to estimate the number of small business firms because the relevant Census categories stopped at 499 employees and began at 500 employees. No category for 750 employees existed. Thus, the number is as accurate as it is possible to calculate with the available information.

[465] 13 C.F.R. § 121.201, NAICS code 334220.

[466] Economics and Statistics Administration, Bureau of Census, U.S. Department of Commerce, 1997 Economic Census, Industry Series – Manufacturing, Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, Table 4 at 9 (1999). The amount of 500 employees was used to estimate the number of small business firms because the relevant Census categories stopped at 499 employees and began at 500 employees. No category for 750 employees existed. Thus, the number is as accurate as it is possible to calculate with the available information.

[467] 13 C.F.R. § 121.201, NAICS code 334111.

[468] Economics and Statistics Administration, Bureau of Census, U.S. Department of Commerce, 1997 Economic Census, Industry Series – Manufacturing, Electronic Computer Manufacturing, Table 4 at 9 (1999).

not inform the Commission of their preferred channel for post-transition DTV operation. The decision as to which channel to elect for post-transition operation may be a difficult and time-consuming one for some broadcasters. However, channel election and the development of a new DTV Table of Allotments are steps integral to the digital transition. Factors that could make the channel election decision time consuming are not likely to be related to whether the entity is small or large. Licensees may elect not to participate in the channel election process and not file these forms and instead have the FCC assign them a post-transition channel at the end of the election process.

34. **Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered.** The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.[469]

35. In a number of instances, while adopting a given rule for larger entities, the Report and Order considers and adopts alternative requirements for small or smaller market entities to assist these entities in completing the digital conversion. For example, the Report and Order adopts the following interference protection deadlines for DTV channels within the core spectrum: July 1, 2005, for affiliates of the top-four networks (*i.e.*, ABC, CBS, Fox, and NBC) in markets 1-100; and July 1, 2006, for all other commercial DTV licensees as well as noncommercial DTV licensees. Thus, smaller stations and stations in smaller markets are given more time to meet the interference protection deadline. In addition, smaller stations planning to move to another channel post-transition are given lesser requirements than larger stations. For top four affiliates in the top 100 markets, if they will remain on their digital channel assignments after the transition, they must fully replicate and maximize by July 1, 2005. If they will move to another channel post-transition, they must be serving by July 1, 2005 100% of the number of viewers served by the 1997 facility on which their replication was based. The second deadline, July 1, 2006, applies to all other stations. If they will remain on their current digital channel after the transition, they must fully replicate and maximize by this date. If they will move to another channel post-transition, they must be serving by July 2006 at least 80% of the number of viewers served by the 1997 facility on which their replication was based. Failure to replicate or maximize by these deadlines will result in loss of interference protection to the unserved areas. If they have met these deadlines, the item would allow stations that are going to move to a different channel after the transition to carry-over their authorized maximized area to their new channels.

36. While the Commission considered applying the same deadline and replication and maximization requirements to all stations, it concluded that a later deadline and reduced requirement for smaller and smaller market stations is warranted. In addition, to assist stations facing severe financial constraints or obstacles beyond a station's control that are specific to the DTV transition process, the item permits these stations to apply for a six-month waiver of the interference protection deadline.

37. In some instances, a rule was adopted applicable to large and small entities in the same way conferring the same benefits upon both. In furtherance of the significant public interest in rapid band-

[469] 5 U.S.C. § 603(c)(1) – (c)(4)..

clearing and to address the potential for stranded investment in facilities outside of core channels, the Report and Order permits certain stations with an in-core NTSC channel paired with an out-of-core DTV channel, stations with two out-of-core channels, and single-channel DTV stations out-of-the-core, to surrender their out-of-core DTV channel before the end of the transition and operate in analog on their in-core channel. Upon approval from the Commission, these stations will "flash-cut" to digital operations on their in-core channel no later than the end of the transition in the station's market. This "flash-cut" policy will assist both smaller and larger stations with an out-of-core DTV channel that are concerned about the cost of constructing DTV facilities outside the core that cannot be operated after the transition. These entities will be permitted to surrender early their out-of-core channel and operate only in analog on their in-core channel until they flash-cut to digital-only operation on that channel no later than the end of the transition. The Commission considered not permitting these stations to flash-cut, but finally concluded that permitting this flash-cut option would best advance the transition and the clearing of the out-of-core spectrum.

38. In addition, the Report and Order permits satellite stations to surrender one of their paired channels and flash cut from analog to digital transmissions by the end of the transition period. This flash-cut option should provide significant financial relief for satellite stations, many of which are small and all of which serve communities unable to support a full-service station.

39. The Report and Order also adopts another waiver that will most likely benefit smaller stations as opposed to larger stations. The Report and Order requires television licensees that have not yet been granted an initial DTV CP to construct, within a year from the adoption date of this Report and Order, a "checklist" facility that conforms with the parameters of the DTV Table of Allotments and other key processing requirements. The Commission will consider requests for waiver of the one year construction deadline, on a case-by-case basis, using the criteria for extension of DTV construction deadlines. Grounds for an extension must relate to the checklist facility, not the pending non-checklist application. This waiver procedure permits stations facing financial hardship as well as other obstacles to construction of digital facilities to make a showing why waiver of the construction deadline would serve the public interest. The waiver is available to all stations regardless of size or income, but it likely to benefit smaller stations more as these stations are more likely to encounter financial hardships in constructing DTV checklist facilities.

40. The Report and Order declines to postpone the existing phased-in minimum operating hours for smaller and smaller-market digital television stations. However, these phased-in dates permit these stations to step up gradually the number of hours of digital programming they offer. In contrast, top-four network affiliates in the top 30 television markets are required to operate their DTV station at any time that the analog station is operating.

41. **Federal Rules Which Duplicate, Overlap, or Conflict with the Commission's Proposals.** None.

42. **Report to Congress.** The Commission will send a copy of the Report and Order, including this FRFA, in a report to be sent to Congress pursuant to the Congressional Review Act.[470] In addition, the Commission will send a copy of the Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the SBA. A copy of the Report and Order and FRFA (or summaries thereof) will also be

[470] *See* 5 U.S.C. § 801(a)(1)(A).

published in the Federal Register.[471]

[471] *See* 5 U.S.C. § 604(b).

APPENDIX D
DTV STATIONS AUTHORIZED TO BE ON THE AIR
As of July 28, 2004

Category	# DTV Paired Licenses	# DTV Stations on Air	% On the Air	With Licensed Facility or Program Tests	With STAs
Top 30 Market Network Affiliates	119	119	100 percent	110	9
Other Commercial*	1230	1018	82.8 percent	342	676
Non-Commercial Educational**	373	286	76.7 percent	182	104
Total	1722	1423	82.6 percent	634	789

* May 1, 2002 Build Out Deadline
** May 1, 2003 Build Out Deadline

A total of 843 commercial television stations subject to the May 1, 2002, deadline requested an initial extension of time to complete construction. The Media Bureau granted 772 of these initial extension requests upon showings that the delay in completing construction was due to financial hardship or to circumstances that were either unforeseeable or beyond the permittee's control. In October 2003, the Commission ruled on 141 applications submitted by commercial television stations seeking additional extensions of the May 1, 2002, deadline for construction of their digital television facilities pursuant to Section 73.624(d)(3)(iii) of the Rules.[472] The Commission granted the applications and extended the DTV construction deadline for 104 stations to six months from the release date of the *Order*. The Commission admonished 7 stations for their continuing failure to timely construct, denied their applications, and afforded them six months from the release date of the Order to comply with the DTV construction rule.[473] The DTV construction deadline for the remaining 30 satellite stations was deferred pending the outcome of this DTV periodic review proceeding.[474] In May 2004, the Commission granted a third extension of time to complete construction to five "network-affiliated" television stations located in the top thirty television markets.[475] In addition, in June 2004, the Commission granted 29 applications submitted by commercial television stations seeking a third extension of the May 1, 2002, DTV construction deadline.[476] In these cases, the Commission found that the television licensees had made reasonable and diligent efforts to construct their authorized facilities and that the failure to construct was

[472] 47 C.F.R. § 73.624(d)(iii).

[473] Requests for Extension of the Digital Television Construction Deadline, 18 FCC Rcd 22705 (2003).

[474] Because the *Second DTV Periodic NPRM* requested comment on whether the public interest would be served by allowing satellite stations to turn in their digital authorization and "flash cut" to DTV transmission at the end of the transition period, the Commission deferred the construction deadlines of the 30 satellites stations requesting construction extensions pending the outcome of the DTV periodic review proceeding.

[475] Requests for Extension of the Digital Television Construction Deadline, FCC 04-117 (rel. May 26, 2004).

[476] Requests for Extension of the Digital Television Construction Deadline, FCC 04-124 (rel. June 10, 2004).

due to causes that were either unforeseeable or beyond the licensee's control. These stations were given an additional six months from the release date of the applicable *Order* to complete construction. In the June 2004 *Order*, the Commission admonished two stations for their continuing failure to timely construct DTV facilities, denied their extension applications, and afforded them six months from the release date of the *Order* to comply with the DTV construction rule. In addition, in the June 2004 *Order* the Commission deferred the DTV construction date for four satellite stations pending the outcome of this DTV periodic review proceeding.

Two-hundred fourteen non-commercial television stations subject to the May 1, 2003, deadline requested an initial extension of time to complete construction. All of these stations were granted six-month extensions, mainly because of difficulties encountered by the stations in implementing award grants from the Corporation for Public Broadcasting and the U.S. Department of Commerce. One hundred thirty-two NCE stations filed requests for second extensions. One hundred and twenty-nine of these requests were granted and these stations awarded an additional six-month extension of time to construct, largely due to technical difficulties that were either unforeseeable or beyond the permittees' control. Five of the second extension requests were dismissed since the stations subsequently commenced DTV operations.

APPENDIX E

PRE-ELECTION CERTIFICATION FORM

[See separate pdf file]

APPENDIX F

DIGITAL CHANNEL ELECTION FORMS

[See separate pdf file]

STATEMENT OF
CHAIRMAN MICHAEL K. POWELL

Re: Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television

Increasingly, the American public is experiencing the benefits of the digital television transition—from high-definition video and audio, to more over-the-air services, such as multicasting and new low-cost entrants in the pay-television marketplace. Over the past three and a half years, this Commission, in partnership with each segment of the television industry, has demonstrated an unwavering commitment to leading the consumer adoption of DTV.

The results of our collective efforts are finally coming to bear. Broadcasters continue to build-out their over-the-air digital facilities; cable and satellite operators are carrying more digital and high-definition programming than ever before; broadcasters and cable programmers are producing more high-definition programming and introducing new channels every day; set manufacturers are churning out more digital and high-definition television sets, many with over-the-air tuners, and set prices are dropping dramatically; and finally, as a result, consumers are experiencing the wonders that digital and high-definition television have to offer.

In making this substantial progress, the national dialogue has shifted from wondering if the DTV transition would ever end to exploring when it should end. The importance of the end of the DTV transition for our country cannot be overstated. Completion of the transition will recoup a significant amount of spectrum for first-responder, public safety use and for innovative wireless broadband services—enhancing our homeland and economic security in the process.

We take today's actions, most notably to set channel election and replication and maximization deadlines not only to bring consumers more over-the-air digital services, but to help usher in the beginning of the end of the DTV transition. The government-industry partnership has excelled in the last several years to break the log-jam that was the DTV transition. That said, there is more work to be done to achieve our dual goals of bringing the benefits of digital and high-definition television to the American public and reclaiming valuable spectrum for public safety and wireless broadband services. This Commission stands ready continue to do its part.

STATEMENT OF
COMMISSIONER MICHAEL J. COPPS

Re: Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television

Today the Commission takes another step to advance the digital transition. As I have before, so will I commend again today my colleagues' commitment to move the transition forward. I will vote to approve the item.

But I want to focus for a moment on what is missing here. I want to focus, again, on what is missing in our work to advance the digital transition. When we launched this second periodic review a year and a half ago, we asked questions about the public interest obligations of DTV broadcasters and committed to address these issues promptly. And, remember please, it's not that we were just beginning last year to consider how the digital migration will serve the public interest. Rather, we were refreshing a record in Commission proceedings that dates back to 1999—five years ago. Yet, today, we move forward to consider issues from the second periodic—and still no action on the public interest.

The vast majority of television stations are already beginning to broadcast in digital and hundreds of stations across the country are multicasting. And yet, those broadcasters do not know what they must do to discharge their public interest obligations on their new channels. Worse, viewers are equally in the dark. We really can't delay any longer in bringing some certainty for both broadcasters and the public.

The digital transition holds the promise of reinventing free, over-the-air television by providing consumers new and valuable services and offering broadcasters new and valuable business opportunities. High definition programming, multicasting and datacasting will transform the television experience. There is a potential for this new digital reality to be a real boost for localism, competition and diversity. But if the American people are to realize the full benefits of DTV, we have to call the public interest issues forward and accord them the high priority they deserve. I urge the Commission to work together to complete action on these important public interest issues just as we have worked together on the mechanics of the digital transition.

STATEMENT OF
COMMISSIONER KEVIN J. MARTIN

Re: Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, Report and Order, MB Docket No. 03-15

Today we take another step in our effort to further advance the digital transition. I think the item strikes a fair balance between several competing interests: the desire to get more digital programming out to consumers, the need to reclaim the 700 MHz spectrum, the need for certainty regarding applicable rules, and the concern of broadcasters that they not be required to make excessive investments in temporary facilities. On this last point, I am concerned about the effect our replication and maximization deadlines will have on the smallest broadcasters, and I emphasize that I hope our waiver process will allow for flexibility where warranted.

I look forward to taking what appears now to be last critical step: resolving the pending petitions for reconsideration regarding the extent of broadcasters' "must carry" rights in the digital world. I hope we address this issue soon.

STATEMENT OF
COMMISSIONER JONATHAN S. ADELSTEIN

Re: Second Periodic Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, Report and Order

This item appropriately moves the digital television transition forward. It establishes a staggered channel election process to arrive at a final channel assignment for broadcasters. Along the way, we worked hard to ensure that broadcasters have as much ability as possible to make informed judgments consistent with our overarching goal of speeding the transition and bringing enhanced digital viewing to consumers. We recognize that further work is needed to address low power stations and international border coordination. We advance innovation through distributed transmission technologies. We open up technical avenues for enhancements to v-chip and closed captioning technologies. And we continue to monitor efforts to improve consumer information. Each of these steps advances the transition and adds further clarity, certainty, and transparency to the process.

While I'm pleased that we march on with the mechanics of the digital transition, I am puzzled why we have not yet provided broadcasters and the public with a concrete understanding of broadcasters' public interest obligations in the digital age.

This necessary piece of the transition continues to lag further and further behind. Congress made clear that broadcasters continue to have public interest obligations in the digital world, but left it up to the Commission to specify how those should be applied. As we continue to speed the arrival of the best possible digital television service to the public, several proceedings that could bring certainty continue to linger at the Commission. More than four years ago the Commission inquired generally how it should update broadcasters' public interest obligations for the digital age. In September 2000, the Commission followed with specific proceedings to update children's television obligations and to standardize and enhance broadcasters' disclosure of public files. In this periodic review, we sought additional comment on these proceedings and stated our goal of bringing them to a prompt conclusion. Yet no further action has been taken on any of those proceedings.

We've had more than ample time to bring the public interest into the transition. Parents are eager to know what opportunities the transition will bring to their children. Candidates should be able to use the Internet to quickly determine the political advertising landscape of a given station. Broadcasters should welcome the opportunity to showcase their local civic and public affairs coverage on their websites. The digital age offers tremendous opportunities for both broadcasters and the public. Multicasting and other new horizons in digital broadcasting should correspond to new horizons in serving the public interest.

A new era in broadcasting is taking shape now. The vast bulk of broadcasters are now broadcasting digitally, with hundreds broadcasting multiple programming streams. We owe it to the public and to broadcasters to devote sufficient time and resources of this Commission to establishing concrete, measurable public interest obligations to fulfill Congress's vision of this enhanced digital viewing experience. Let's not leave the public behind as we continue finalizing the blueprints for digital television.