

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

In the Matter of)
)
Advanced Television Systems)
and Their Impact upon the)
Existing Television Broadcast) MM Docket No. 87-268
Service)

FIFTH REPORT AND ORDER

Adopted: April 3, 1997

Released: April 21, 1997

By the Commission: Chairman Hundt and Commissioners Quello and Ness issuing separate statements; Commissioner Chong concurring in part and issuing a statement.

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I. INTRODUCTION

1. Television has played a critical role in the United States in the second half of the twentieth century. A technological breakthrough -- digital television -- now offers the opportunity for broadcast television service to meet the competitive and other challenges of the twenty-first century.¹

2. The Telecommunications Act of 1996 ("1996 Act") provided that initial eligibility for any advanced television licenses issued by the Commission should be limited to existing broadcasters, conditioned on the eventual return of either the current 6 MHz channel or the new digital channel. Today we adopt rules to implement the statute. Our rules are designed to give digital television the greatest chance to meet its potential. We recognize the challenges that will be faced by broadcasters in adopting this new technology. Accordingly, we have generally refrained from regulation and have sought to maximize broadcasters' flexibility to provide a digital service to meet the audience's needs and desires. Where appropriate, however, we have adopted rules we believe will ensure a smooth transition to digital television for broadcasters and viewers. These rules include an aggressive but reasonable construction schedule, a requirement that broadcasters continue to provide a free, over-the-air television service, and a simulcasting requirement phased in at the end of the transition period. Further, we recognize that digital

¹ This *Fifth Report and Order* follows the adoption of a standard for the transmission of digital television. *Fourth Report and Order* in MM Docket No. 87-268, 11 FCC Rcd 17771 (1996) ("*Fourth Report and Order*"). We have previously issued the following documents in this proceeding. *Notice of Inquiry* in MM Docket No. 87-268, 2 FCC Rcd 5125, 5127 (1987) ("*First Inquiry*"); *Tentative Decision and Further Notice of Inquiry* in MM Docket No. 87-268, 3 FCC Rcd 6520 (1988) ("*Second Inquiry*"); *First Report and Order* in MM Docket No. 87-268, 5 FCC Rcd 5627 (1990) ("*First Order*"); *Notice of Proposed Rule Making* in MM Docket No. 87-268, 6 FCC Rcd 7024 (1991) ("*Notice*"); *Second Report and Order/Further Notice of Proposed Rule Making* in MM Docket No. 87-268, 7 FCC Rcd 3340 (1992) ("*Second Report/Further Notice*"); *Second Further Notice of Proposed Rule Making* in MM Docket No. 87-268, 7 FCC Rcd 5376 (1992) ("*Second Further Notice*"); *Memorandum Opinion and Order/Third Report and Order/Third Further Notice of Proposed Rule Making* in MM Docket No. 87-268, 7 FCC Rcd 6924 (1992) ("*Third Report/Further Notice*"); *Fourth Further Notice of Proposed Rule Making/Third Notice of Inquiry* in MM Docket No. 87-268, 10 FCC Rcd 10541 (1995) ("*Fourth Further Notice/Third Inquiry*"); *Fifth Further Notice of Proposed Rule Making* in MM Docket No. 87-268, 11 FCC Rcd 6235 (1996) ("*Fifth Further Notice*"); *Sixth Further Notice of Proposed Rule Making* in MM Docket No. 87-268, 11 FCC Rcd 10968 (1996) ("*Sixth Further Notice*"). We note that we also adopt today the *Sixth Report and Order*, MM Docket No. 87-268, FCC 97-115, released April 21, 1997 ("*Sixth Report and Order*").

For the background of this proceeding, see *Fourth Further Notice*, *supra* at 10542-43. We note that a number of parties filed Comments or Reply Comments late, accompanied by a request or motion asking us to accept these late-filed comments. In the interests of compiling as full a record as possible, we accept all such late-filed Comments and Reply Comments in response to the *Fourth Further Notice*. A complete list of the comments filed in response to the *Fourth Further Notice/Third Inquiry* is found in Appendix C.

broadcasters remain public trustees with a responsibility to serve the public interest.

II. ISSUE ANALYSIS

A. Goals

3. Digital technology holds great promise. It allows delivery of brilliant, high-definition, multiple digital-quality programs, and ancillary and supplementary services such as data transfer. But, while the opportunities afforded by digital technology are great, so are the risks. In recent years, competition in the video programming market has dramatically intensified. Cable, Direct Broadcast Satellite (DBS), Local Multipoint Distribution System (LMDS), wireless cable, Open Video Systems (OVS) providers, and others vie, or will soon vie, with broadcast television for audience. Many operators in those services are poised to use digital. Some, like DBS, actually transmit digitally today but must convert the signals to analog NTSC service for display on home receivers, while others have plans to implement digital technology in the future. Broadcasters have long recognized that they must make the switch to digital technology. The viability of digital broadcast television will require millions of Americans to purchase digital television equipment. Because of the advantages to the American public of digital technology -- both in terms of services and in terms of efficient spectrum management -- our rules must strengthen, not hamper, the possibilities for broadcast DTV's success.

4. In the *Fourth Further Notice/Third Inquiry*, we outlined the goals of: "1) preserving a free, universal broadcasting service; 2) fostering an expeditious and orderly transition to digital technology that will allow the public to receive the benefits of digital television while taking account of consumer investment in NTSC television sets; 3) managing the spectrum to permit the recovery of contiguous blocks of spectrum, so as to promote spectrum efficiency and to allow the public the full benefit of its spectrum; and 4) ensuring that the spectrum -- both ATV channels and recovered channels -- will be used in a manner that best serves the public interest."² In the context of the implementation of a DTV standard, we also enumerated the goals: "1) to ensure that all affected parties have sufficient confidence and certainty in order to promote the smooth introduction of a free and universally available digital broadcast television service; 2) to increase the availability of new products and service to consumers through the introduction of digital broadcasting; 3) to ensure that our rules encourage technological innovation and competition; and 4) to minimize regulation and assure that any regulations that we do adopt remain in effect no longer than necessary."³ These goals can be distilled into the two essential objectives that underlie the decisions we make today.

5. First, we wish to promote and preserve free, universally available, local broadcast television in a digital world. Only if DTV achieves broad acceptance can we be assured of the

² *Fourth Further Notice/Third Inquiry, supra*, at 10541.

³ *Fifth Further Notice, supra*, at 6236.

preservation of broadcast television's unique benefit: free, widely accessible programming that serves the public interest. DTV will also help ensure robust competition in the video market that will bring more choices at less cost to American consumers. Particularly given the intense competition in video programming, and the move by other video programming providers to adopt digital technology, it is desirable to encourage broadcasters to offer digital television as soon as possible. We make decisions today designed to promote the viability of digital television services. Digital broadcasters must be permitted the freedom to succeed in a competitive market, and by doing so, attract consumers to digital. In addition, broadcasters' ability to adapt their services to meet consumer demand will be critical to a successful initiation of DTV.

6. Second, we wish to promote spectrum efficiency and rapid recovery of spectrum. Decisions that promote the success of digital television -- our first goal -- promote this goal as well. The more quickly that broadcasters and consumers move to digital, the more rapidly spectrum can be recovered and then be reallocated or reassigned, or both. The faster broadcasters roll out digital television, the earlier we can recover spectrum.

7. Our decisions today further these goals. They ensure that broadcasters have more flexibility in their business. Broadcasters will be able to experiment with innovative offerings and different service packages as they continue to provide at least one free program service and meet their public-interest obligations. We choose to impose few restrictions on broadcasters and to allow them to make decisions that will further their ability to respond to the marketplace. We leave to broadcasters' business judgment such decisions as whether to provide high definition television or whether, initially, to simulcast the NTSC stream on DTV, and what and how many ancillary and supplementary services to provide.⁴ To aid the launch of digital services, we provide for a rapid construction of digital facilities by network-affiliated stations in the top markets, in order to expose a significant number of households, as early as possible, to the benefits of DTV. We require those most able to bear the risks of introducing digital television to proceed most quickly. Our decisions here will foster the swift development of DTV, which should enable us to meet our target of ending NTSC service by 2006. To permit careful monitoring of the development of digital television and an opportunity to reassess the decisions we make today, we intend to conduct a review of DTV every two years until the cessation of NTSC service.

B. Channel Bandwidth

8. Background. In the *Fourth Further Notice/Third Inquiry*, we noted that we had previously decided that DTV would be introduced by assigning existing broadcasters a temporary channel on which to operate a DTV station during the transition period.⁵ We also noted that the

⁴ The 1996 Act requires that the Commission assess and collect a fee from licensees who offer ancillary or supplementary services on a subscription basis. 47 U.S.C. § 336(e).

⁵ *Fourth Further Notice/Third Inquiry*, supra at 10543. We decided to continue use of the 6 MHz channel early in this proceeding. *Third Report/Further Notice*, supra at 6926; see also *First Order*, supra at 5627-29.

DTV transmission system was designed for a 6 MHz channel and added that "we continue to believe that providing 6 MHz channels for ATV purposes represents the optimum balance of broadcast needs and spectrum efficiency."⁶ Nonetheless, we invited comment on any means of achieving greater spectrum efficiency,⁷ and, in this section, we will discuss whether 6 MHz channels should be allotted.

9. Comments. All broadcasters filing comments support affording a second 6 MHz channel per broadcaster for DTV.⁸ Joint Broadcasters, for example, state that the entire 6 MHz is required; assigning less would deprive the public of HDTV and set back the transition, because the Grand Alliance⁹ system presupposes 6 MHz channels, and anything different would require an entirely new design and testing program.¹⁰ Additionally, equipment manufacturers generally support the provision of 6 MHz channels for DTV purposes, noting that 6 MHz of spectrum is required for HDTV broadcasts.¹¹

10. However, Media Access Project, et al. ("MAP") argues that the Commission should provide broadcasters only enough spectrum to provide one "free" digital program service, either by allocating less than 6 MHz channels to broadcasters, by allocating the spectrum to others and only affording broadcasters "must carry" rights; or by allocating the spectrum to broadcasters but

⁶ *Fourth Further Notice/Third Inquiry, supra* at 10543. Indeed, the DTV Standard subsequently adopted in the *Fourth Report and Order* ("DTV Standard") is predicated upon the use of a 6 MHz channel.

⁷ *Id.*

⁸ See e.g., Comments of Broadcasters (a joint filing of 96 broadcast related entities including Capital Cities/ABC, Inc., CBS, Inc., NBC, Inc. Fox Television Stations, Inc., National Association of Broadcasters, and Association of Independent Television Stations, now the Association of Local Television Stations) ("Joint Broadcasters"), Pacific FM, Inc. ("Pacific FM"), Busse Broadcasting Corporation ("Busse"), and Association of America's Public Television Stations and the Public Broadcasting Service ("AAPT/PBS"); Reply Comments of Joint Broadcasters, Malrite Communications Group, Inc. ("Malrite"), and Viacom Inc. ("Viacom"). AAPT/PBS agreed with the allocation of 6 MHz channels for DTV, noting that allocating less than 6 MHz would retard the development of High Definition Television ("HDTV") and cripple the global leadership position in digital technology currently enjoyed by the U.S. Comments of AAPT/PBS at 13.

⁹ For a discussion of the Grand Alliance, see *Fourth Report and Order, supra* at 17773-74. We will refer to the Grand Alliance generally as "the Grand Alliance," except that when we refer to the Comments filed by the Grand Alliance in this proceeding, we will refer to that party as "the Digital Grand Alliance."

¹⁰ Comments of Joint Broadcasters at 10-11; see also Comments of New World at 5.

¹¹ See comments of the Digital Grand Alliance at 2, Electronics Industries Association and the Advanced Television Committee ("EIA") at 6, and Zenith Electronics Corporation ("Zenith") at 3. General Instrument Corporation ("General Instrument"), however, argued that a 6 MHz channel is justified provided that the predominant use is for HDTV, but a smaller channel would be more appropriate if the predominant use were a service of lower picture quality or non-video service.

requiring them to lease out excess capacity to unaffiliated programmers.¹² Further, Home Box Office ("HBO") asserts that if the Commission determines that the public interest demands Standard Definition Television ("SDTV") or other auxiliary applications, it must take another look at whether an entire 6 MHz slice of new spectrum should go to incumbent broadcasters.¹³

11. Decision. We invited comment in the *Fourth Further Notice/Third Inquiry* on any means of achieving greater spectrum efficiency. Based on the comments, we continue to believe that providing 6 MHz channels for DTV purposes "represents the optimum balance of broadcast needs and spectrum efficiency."¹⁴ We do not believe that greater spectrum efficiency can be achieved by adopting a different channel size. Indeed, use of 6 MHz channels would facilitate spectrum efficiency because making the DTV channel the same width as the analog channel will afford greater flexibility at the end of the transition in terms of the choice of channel the broadcaster retains for DTV purposes.

12. Moreover, contrary to those comments that disagreed with allotting 6 MHz channels for DTV, we believe that the use of 6 MHz channels is necessary to provide viewers and consumers the full benefits of digital television made possible by the DTV Standard, including high definition television ("HDTV"), standard definition television, and other digital services. The DTV Standard was premised on the use of 6 MHz channels. To specify a different channel size at this late date would not promote our goals in adopting the DTV Standard and would prolong the conversion to DTV. Specifically, we believe that failing to specify a 6 MHz channel would undermine our goals, expressed in the *Fourth Report and Order*, of fostering an expeditious and orderly transition to digital technology and managing the spectrum to permit the recovery of contiguous blocks of spectrum and promote spectrum efficiency. The conversion to DTV would undoubtedly be significantly delayed if we set aside the longstanding expectations of the parties, on which they have based the technology and established their plans, and specified a different channel bandwidth. Accordingly, we reaffirm our earlier judgment and will allot 6 MHz channels for DTV.

C. Eligibility

13. Background. We proposed to limit initial eligibility for DTV channels to existing broadcasters.¹⁵ Our proposed criteria for existing broadcasters included full-service television broadcast station licensees, permittees authorized as of October 24, 1991, and parties with applications for a construction permit on file as of October 24, 1991, who are ultimately awarded a full-service broadcast license. After release of the *Fourth Further Notice/Third Inquiry*,

¹² Comments of MAP at 7-8.

¹³ Reply Comments of HBO at 5.

¹⁴ See *Fourth Further Notice/Third Inquiry, supra*, at 10543.

¹⁵ See *Fourth Further Notice/Third Inquiry, supra*, at 10544-45.

Congress statutorily addressed eligibility in the 1996 Act. Congress instructed the Commission to limit the initial eligibility for advanced television licenses to persons that, as of the date of the issuance of the licenses, are licensed to operate a television broadcast station or hold a permit to construct such a station.¹⁶ The 1996 Act did not change the fact that the Commission lacks statutory authority to auction broadcast spectrum.

14. Comments. We sought comment on the potential impact of the eligibility restriction on the Commission's policy of fostering programming and ownership diversity.¹⁷ Few commenters address this topic. However, some commenters address the basic issue of the eligibility restriction. For example, some argue that allowing broadcasters to offer subscription services without opening up that opportunity to competitors would violate the legal principles enunciated in *Ashbacker Radio Corporation v. FCC*, 326 U.S. 327 (1945), discussed below.¹⁸ Others maintain that the Commission faces an *Ashbacker* problem unless it mandates that broadcasters provide HDTV. General Instrument argues that "allowing existing broadcasters too much 'flexible use' of the 6 MHz ATV allocation raises the *Ashbacker* problem by changing the primary service provided rather than merely modifying existing licenses," but that the Commission could avoid *Ashbacker* problems by requiring that the predominant use of the DTV spectrum be for HDTV transmission.¹⁹ HBO argues that if we were to allow the DTV channel to be put to uses other than HDTV, for which broadcasters have no more established interest or expertise than potential competing applicants, the public interest rationale for granting the spectrum to incumbents without a competitive process would evaporate.²⁰

15. Another eligibility issue raised by commenters concerns the restriction of initial eligibility to full-service licensees. LPTV commenters such as Abacus Television point out the contribution that LPTV stations make in providing television service to underserved areas as well as the local and specialized nature of the services they provide. These comments also contend that the Commission has long found that diversification of mass media ownership serves the public interest by promoting diversity of program and service viewpoints and by preventing undue concentration of economic power. According to Abacus Television, excluding LPTV from the analog to digital transition would undermine these principles. Further, Abacus argues, it would exclude the vast majority of minority television licensees and permittees and is antithetical to increasing ownership diversity. Abacus argues that the Commission should perform a market-by-market analysis to determine which LPTV stations could be accommodated; absent that, it could minimize the effect on LPTV stations by adding a second phase to the process of creating a Table

¹⁶ 47 U.S.C. § 336(a)(1).

¹⁷ *Fourth Further Notice/Third Inquiry*, *supra*, at 10545.

¹⁸ Comments of Seniors' Advocate at 2-3; Comments of MAP at 10-13; Comments of PCIA at 9-10.

¹⁹ Comments of General Instrument at 7 (emphasis in original).

²⁰ Reply Comments of Home Box Office at 6.

of Allotments to address the accommodation of LPTV service next, after it has begun the conversion process for full power television licensees. It offers suggestions on how to carry out this phase.²¹ WatchTV, Inc. also argues that the Commission should make unused digital channels available to existing low power operators on the same terms and conditions as it may adopt for small market broadcasters and educational licensees before it allows new entrants to apply.²² Additionally, White Eagle Partners believes that LPTV stations should be eligible to receive 6 MHz DTV channels.²³

16. Still other LPTV commenters argue that neither LPTV stations nor full service stations should be afforded a second 6 MHz channel. Community Broadcasters Association ("CBA") believes that a dual channel DTV scenario would be an inefficient use of spectrum, requiring not only immense private investment, but also leading to a host of logistical and other problems that will negate many of the benefits of DTV. CBA argues that full power and LPTV stations should be permitted to convert to DTV on their present channel at any time.²⁴

17. Decision. In the 1996 Act, Congress specifically addressed the eligibility issue. Congress provided that the Commission "should limit the initial eligibility for [DTV] licenses to persons that, as of the date of such issuance, are licensed to operate a television broadcast station or hold a permit to construct a station (or both) . . ."²⁵ In comments filed before passage of the 1996 Act, some parties argue that granting incumbent broadcasters the exclusive right to apply for the DTV spectrum raises potential problems under *Ashbacker Radio Corporation v. FCC*, 326 U.S. 327 (1945), and its progeny. Other commenters argue similarly that *Ashbacker* concerns are raised unless the Commission imposes an HDTV mandate. However, given Congress' explicit direction, there is now no statutory basis to question the Commission's authority to limit initial eligibility to existing broadcasters. Following Congress' direction, we determine that initial eligibility should be limited to those broadcasters who, as of the date of issuance of the initial licenses, hold a license to operate a television broadcast station or a permit to construct such a

²¹ Comments at 2-25. Abacus argues that in spectrally crowded areas, it may be better to give each licensee less than 6 MHz rather than excluding some existing broadcasters. *Id.* at 21.

²² Comments at 2-3.

²³ Reply Comments at 3.

²⁴ Reply Comments of CBA at 4-7. Alternatively, CBA argues, the Commission should attempt to avoid displacing LPTV stations in drafting the DTV Table, LPTV stations should be allowed to apply for a second channel before the general public is invited to apply, and those LPTV stations unable to find a second channel should be permitted to convert to DTV on their existing channel when and as they elect to do so. *Id.* at 8. Additionally, according to CBA, if an LPTV station that provides local programming in a community cannot otherwise be accommodated and would otherwise be forced to go dark, the full power broadcasters in the market should be required to make one of their channels available to distribute the LPTV programming. *Id.* at 8 n. 11.

²⁵ 47 U.S.C. § 336(a)(1).

station, or both.²⁶

18. We will continue our previously adopted policy to limit initial eligibility for DTV licenses to existing full-power broadcasters. We previously determined that there is insufficient spectrum to include LPTV stations and translators, which are secondary under our rules and policies, to be initially eligible for a DTV channel.²⁷ As we noted in the *Sixth Further Notice*, in order to provide DTV allotments for existing full service stations, it will be necessary to displace LPTV stations and TV translator stations to some degree, especially in major markets. We have not been able to find a means of resolving this problem. However, we note that limiting initial eligibility to full-power broadcasters does not necessarily exclude LPTV stations from the conversion to digital television. Moreover, in the *Sixth Further Notice*, we made a number of proposals to mitigate the impact on LPTV stations, and, in the *Sixth Report and Order*,²⁸ we adopt a number of measures intended to minimize the impact of DTV implementation on LPTV service.

D. Definition of Service

1. Spectrum Use

19. Background. The *Fourth Further Notice/Third Inquiry* reaffirmed our intention to preserve and promote universal, free, over-the-air television. We recognized that broadcast television has become an important part of American life and thus stated "we envision that the 6 MHz channel earmarked for [DTV] will be used for free, over-the-air broadcasting."²⁹ We also recognized the increased flexibility that DTV offered broadcasters and noted that "allowing at least some level of flexibility would increase the ability of broadcasters to compete in an increasingly competitive marketplace, and would allow them to serve the public with new and innovative services."³⁰

²⁶ Our eligibility criteria are consistent with the provisions of Section 336 of the 1996 Act. 47 U.S.C. § 336. We have made the initial assignment of channels in the accompanying *Sixth Report and Order* and adopted criteria for the allotment of additional DTV channels. We will give particular consideration for assigning temporary DTV channels to new licensees who applied on or before October 24, 1991, given the reliance that these parties may have placed on rules we adopted before passage of the 1996 Act. *Second Report/Further Notice, supra*, at 3343, *clarified, Third Report/Further Notice, supra*, at 6932-33.

²⁷ *Second Report/Further Notice*, ¶ 42.

²⁸ *Sixth Report and Order, supra*, at ¶¶ 144-47.

²⁹ *Fourth Further Notice/Third Inquiry, supra*, at 10543.

³⁰ *Id.* at 10544.

20. The DTV Standard, adopted by the Commission in the *Fourth Report and Order*,³¹ permits broadcasters to offer a variety of services. It allows broadcasters to offer free television of higher resolution than analog technology. It allows the broadcast of at least one, and under some circumstances two, high definition television programs; and it allows "multicasting," the simultaneous transmission of three, four, five, or more digital programs. The Standard also allows for the broadcast of CD-quality audio signals. And it permits the rapid delivery of large amounts of data: an entire edition of the local newspaper in less than two seconds, sports information, computer software, telephone directories, stock market updates, interactive educational materials and, indeed, any information that can be translated into digital bits. In addition to allowing broadcasters to transmit video, voice, and data simultaneously, the DTV Standard allows broadcasters to do so dynamically, meaning that they can switch back and forth quickly and easily. For example, a broadcaster could transmit a news program consisting of four separate SDTV programs for local news, national news, weather and sports; while interrupting that programming with a single high definition television commercial with embedded data about the product; or transmit a motion picture in a high definition format, while simultaneously using the excess capacity for transmission of data unrelated to the movie.³²

21. In light of the flexibility and new capabilities of digital television, we asked to what extent we should permit broadcasters to use their DTV spectrum for uses other than free, over-the-air television. Recognizing that broadcasters are currently allowed to use a portion of their broadcast spectrum for ancillary or supplementary uses that do not interfere with the primary broadcast signal, we asked whether we should permit such uses of the DTV spectrum, and, if so, how such uses should be defined and what portion of the DTV system's capacity should be allowed for such ancillary and supplementary services. Assuming we permitted ancillary and supplementary services, we also asked to what extent we should allow broadcasters to use DTV spectrum for services that go beyond traditional broadcast television or ancillary and supplementary uses analogous to those allowed under the current regulatory structure. We also asked whether broadcasters should be permitted to provide nonbroadcast and/or subscription services, and, if permitted, how such services should be defined, how much of the DTV capacity should be allowed for such uses, and what, if any, regulation would be appropriate for such services.³³

22. Comments. Most commenters support affording flexibility to broadcasters to provide ancillary and supplementary services. Joint Broadcasters favor the provision of any ancillary and

³¹ See 47 C.F.R. 73.682(d).

³² *Fourth Report and Order*, *supra* at 17774-75 & n. 12.

³³ *Fourth Further Notice/Third Inquiry*, *supra* at 10543-44. In the *Third Report/Further Notice*, *supra* at 6981, we noted that we did not want ancillary uses to predominate over the primary use of the channel for "ATV" programming. In the *Fourth Further Notice/Third Inquiry*, however, we noted that this presumption had been overtaken by technological developments, specifically the development of the Grand Alliance digital transmission system. *Fourth Further Notice/Third Inquiry*, *supra* at 10542-44.

supplementary services other than those limited by the Telecommunications legislation then pending.³⁴ Viacom urges that DTV licensees should be authorized to explore the full potential of the ATSC DTV system as long as those uses do not adversely affect the broadcaster's free video service.³⁵ AAPTS/PBS favors ancillary broadcast and nonbroadcast use of the DTV channel, noting that flexible use will serve the public interest by helping to spur development of new technologies and to provide greater opportunities for noncommercial stations to enhance their public service to their respective communities. A noncommercial station could, for example, utilize digital transmission to distribute program-related course materials, textbooks, student and teacher guides, computer software and content areas of the World Wide Web as part of the station's instructional programming. Further, noncommercial stations could use ancillary and supplementary services, without regard to the educational content, as a revenue source to support nonprofit services and operations and the transition to DTV.³⁶

23. Microsoft argues that licensees should be given maximum flexibility to provide a wide variety of services and any definition of free over-the-air broadcasting should be narrowly defined in the DTV environment.³⁷ Texas Instruments, Inc. ("Texas Instruments") argues that it is premature for the Commission to regulate the mix of DTV services by requiring a certain amount of capacity to be used for video programming; freedom from regulatory restraints will enhance television's functionality and appeal beyond entertainment to encompass new and unforeseen services.³⁸

24. Equipment manufacturers such as General Instrument, Motorola, Thomson, and Zenith, and EIA urge that the Commission should permit flexible use of the DTV channel consistent with the preservation of free over-the-air television and as long as there is a substantial commitment to HDTV.³⁹ Motorola, however, supports a more restrictive definition of ancillary

³⁴ Comments of Joint Broadcasters at 22-23.

³⁵ Reply Comments of Viacom at 28. Viacom concurs with a minimum HDTV requirement and a minimum requirement for free over-the-air service.

³⁶ Comments of AAPTS/PBS at 7-8, 20-22; Reply Comments of AAPTS/PBS at 6-8. AAPTS/PBS urges that the Commission should presume that ancillary uses do not interfere with the broadcast use of the spectrum so long as the licensee provides at least one SDTV or HDTV broadcast service on the DTV channel during normal operating hours (for example, 6 a.m. to midnight, 6 days a week). Comments at 21 n. 34.

³⁷ Comments of Microsoft at 7. Indeed, Microsoft argues that the Commission's goal of preserving free over-the-air broadcasting would seem to be an outmoded policy goal. *Id.* at 6-7.

³⁸ Comments of Texas Instruments at 4-5.

³⁹ Comments of General Instrument at 5-6 (HDTV should be the predominant use of the channel); Comments of Motorola at 11; Comments of Thomson at 3-5; Comments of Zenith at 3; Comments of EIA at 7-8.

services.⁴⁰ The Digital Grand Alliance states that, while the predominant use should be for free over-the-air television and a minimum number of HDTV hours should be broadcast, the Commission should permit flexible uses of the DTV channel.⁴¹ Cohen, Dippell and Everist argues that a broadcaster should be permitted to provide new and innovative services that do not cause objectionable interference to existing users, provided that the primary use is broadcasting to the general public.⁴²

25. NYNEX and Personal Communications Industry Association ("PCIA") urge that the primary use of the DTV channel should be free over-the-air broadcasting.⁴³ NYNEX urges that allowing broadcasters to provide nonbroadcast and subscription services would threaten free, universal broadcasting and should be permitted only as a residual use of spectrum capacity.⁴⁴ PCIA urges that a DTV licensee should be permitted to offer broadcast-related services, such as closed captioning, pay programming, broadcast or narrowcast audio service, and home shopping, but should not be allowed to offer mobile radio services like paging without open competition for DTV licenses by all qualified applicants.⁴⁵ Golden Orange suggests that the Commission should permit all types of broadcast ancillary services that do not cause interference to the primary HDTV requirement it urges the Commission to adopt, but that the Commission should not permit nonbroadcast services or non-TV subscription services.⁴⁶ HBO argues that the second channel should be used for HDTV and opposes affording broadcasters flexible use of the channel, but adds that if the Commission permits flexibility in the use of the channel, it should nonetheless require that a substantial portion of the day be devoted to HDTV programming.⁴⁷ The Benton Foundation opposes spectrum flexibility as affording broadcasters an unfair competitive advantage over competitors and argues that the principal use of the second channel, defined as a minimum

⁴⁰ Comments of General Instrument at 5-6; Comments of Motorola at 11. Motorola believes that ancillary services should be confined to traditional broadcast ancillary services, and ancillary information or interactive services should be substantially related to the video carried by the license holder. According to Motorola, it would be unfair to permit broadcasters to obtain spectrum free of charge and offer non-broadcast subscription services. *Id.*

⁴¹ Comments of the Digital Grand Alliance at 6.

⁴² Comments of Cohen, Dippell and Everist at 3.

⁴³ Comments of NYNEX at 7; Comments of PCIA at 5-6.

⁴⁴ Comments of NYNEX at 7-8.

⁴⁵ Comments of PCIA at 5-8.

⁴⁶ Comments of Golden Orange at 2. Included in the ancillary services Golden Orange would permit are multiple SDTV services, subscription TV services, information data transmission, and digital radio (multilingual) services. *Id.*

⁴⁷ Comments of HBO at 8, 14; Reply Comments of HBO at 2-4.

of 75% of capacity, should be for broadcast.⁴⁸

26. Broadcasters, as a group, express their staunch support for the continuation of our tradition of universal and free broadcast television.⁴⁹ For example, the comments of the Joint Broadcasters, a group constituting a wide cross-section of broadcast television stations and networks, emphasize broadcasters' commitment to provision of free television service.⁵⁰ ALTV, Pacific FM, and Busse argue that broadcasters should be required to offer at least one free over-the-air channel enhanced by digital technology but should otherwise be unfettered as to the services they provide.⁵¹ MAP and the Benton Foundation argue that because broadcasters will receive free and exclusive use of the broadcast spectrum, free, over-the-air broadcasting should comprise no less than 75% of a broadcaster's capacity.⁵²

27. Decision. As we have noted before, an overarching goal of this proceeding is to promote the success of a *free*, local television service using digital technology. Broadcast television's universal availability, appeal, and the programs it provides -- for example, entertainment, sports, local and national news, election results, weather advisories, access for candidates and public interest programming such as education television for children -- have made broadcast television a vital service. It is a service available free of charge to anyone who owns a television set, currently 98% of the population.

28. We expect that the fundamental use of the 6 MHz DTV license will be for the provision of free over-the-air television service. In order to ease the transition from our current analog broadcasting system to a digital system, we will require broadcasters to provide on their digital channel the free over-the-air television service on which the public has come to rely. Specifically, broadcasters must provide a free digital video programming service the resolution of which is comparable to or better than that of today's service and aired during the same time periods that their analog channel is broadcasting.⁵³

29. We wish to preserve for viewers the public good of free television that is widely available today. At the same time, we recognize the benefit of permitting broadcasters the opportunity to develop additional revenue streams from innovative digital services. This will help

⁴⁸ Reply Comments of the Benton Foundation at 4-5.

⁴⁹ See, e.g., Comments of Joint Broadcasters at 3-5; Comments of ALTV at 13; Comments of National Broadcasting Company, Inc. ("NBC") at 2-3; Comments of CBS, Inc. ("CBS") at 5-6.

⁵⁰ Comments of Joint Broadcasters at 3.

⁵¹ Comments of ALTV at 13; Comments of Pacific FM at 2; Comments of Busse at 2.

⁵² Comments of MAP at 19-20; Reply Comments of the Benton Foundation at 4-5.

⁵³ For example, a broadcaster who provides programming on its analog channel from 6:00 am until midnight must provide a free over-the-air digital signal during those hours.

broadcast television to remain a strong presence in the video programming market that will, in turn, help support a free programming service. Thus, we will allow broadcasters flexibility to respond to the demands of their audience by providing ancillary and supplementary services that do not derogate the mandated free, over-the-air program service. Ancillary and supplementary services could include, but are not limited to, subscription television programming, computer software distribution, data transmissions, teletext, interactive services, audio signals, and any other services that do not interfere with the required free service.

30. This decision is supported by the overwhelming weight of the record. Consistent with precedent that has treated telecommunications services provided by an NTSC station other than the regular television program service as ancillary,⁵⁴ we will consider as ancillary and supplementary any service provided on the digital channel other than free, over-the-air services. In addition, we will not impose a requirement that the ancillary and supplementary services provided by the broadcaster must be broadcast-related.

31. The approach we take here, of allowing broadcasters flexibility to provide ancillary and supplementary services is supported both generally and specifically by the 1996 Act, enacted after issuance of the *Fourth Further Notice/Third Inquiry*. In general, the 1996 Act seeks "[t]o promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."⁵⁵ More importantly, the 1996 Act specifically gives the Commission discretion to determine, in the public interest, whether to permit broadcasters to offer such services. Section 336(a)(2) of the Communications Act, contained in Section 201 of the 1996 Act, provides that if the Commission issues additional licenses for advanced television services, it "shall adopt regulations that allow the holders of such licenses to offer such ancillary or supplementary services on designated frequencies as may be consistent with the public interest, convenience, and necessity."⁵⁶

32. Section 336(b)(2) sets out the specific parameters of our authority to permit ancillary and supplementary services,⁵⁷ and the approach we take here fully complies with those

⁵⁴ See *Report and Order* in MM Docket No. 84-168, 101 FCC 2d 973, ¶ 10 (1985); *Report and Order* in MM Docket No. 95-42, 11 FCC Rcd 7799 (1996); 47 C.F.R. § 73.646.

⁵⁵ Preamble to Pub. L. No. 104-104, 110 Stat. 56 (1996).

⁵⁶ 47 U.S.C. § 336(a)(2).

⁵⁷ Section 336(b) of the Communications Act, also added by Section 201 of the 1996 Act, provides that in prescribing the regulations required by Section 336(a), the Commission shall:

(1) only permit such licensee or permittee to offer ancillary or supplementary services if the use of a designated frequency for such services is consistent with the technology or method designated by the Commission for the provision of advanced television services;

parameters. Thus, under Section 336(b)(2), the Commission is required to limit ancillary and supplementary services to avoid derogation of any advanced television services that the Commission may require. The Commission has exercised its discretion and is requiring broadcasters to continue to provide the free over-the-air service on which the public has come to rely. We herein require that any ancillary and supplementary services broadcasters provide will not derogate that required service. Further, Section 336(b)(1) requires that the Commission may only permit broadcasters to offer ancillary or supplementary services "if the use of a designated frequency for such services is consistent with the technology or method designated by the Commission for the provision of advanced television services. . . ."⁵⁸

33. Moreover, we believe that the approach we take here will serve the public interest by fostering the growth of innovative services to the public and by permitting the full possibilities of the DTV system to be realized. One of our goals is to promote spectrum efficiency. Encouraging an expeditious transition from analog to digital television and a quick recovery of spectrum will promote that goal. By permitting broadcasters to assemble packages of services that consumers desire, we will promote the swift acceptance of DTV and the penetration of DTV receivers and converters. That, in turn, will help promote the success of the free television service. As discussed above, digital television promises a wealth of possibilities in terms of the kinds and numbers of enhanced services that could be provided to the public. Indeed, we believe that giving broadcasters flexibility to offer whatever ancillary and supplementary services they choose may help them attract consumers to the service, which will, in turn, hasten the transition. In addition, the flexibility we authorize should encourage entrepreneurship and innovation. For example, it may encourage the development of compression technologies that could allow even more digital capacity on a 6 MHz channel, paving the way for multiple high definition programs and more free programming than would otherwise be offered.

(2) limit the broadcasting of ancillary or supplementary services on designated frequencies so as to avoid derogation of any advanced television services, including high definition television broadcasts, that the Commission may require using such frequencies;

(3) apply to any other ancillary or supplementary service such of the Commission's regulations as are applicable to the offering of analogous services by any other person, except that no ancillary or supplementary service shall have any rights to carriage under section 614 or 615 or be deemed to be a multichannel video programming distributor for purposes of section 628;

(4) adopt such technical or other requirements as may be necessary or appropriate to assure the quality of the signal used to provide advanced television services, and may adopt regulations that stipulate the minimum number of hours per day that such signal must be transmitted; and

(5) prescribe such other regulations as may be necessary for the protection of the public interest, convenience, and necessity.

47 U.S.C. § 336(b).

⁵⁸ 47 U.S.C. § 336(b)(1).

34. There is no public interest harm in permitting ancillary and supplementary services; indeed, to the contrary, allowing such services contributes to efficient spectrum use and can expand and enhance use of existing spectrum.⁵⁹ In this case, technological advancements, *i.e.*, digital technology, have made it possible for broadcasters to provide continuing free, over-the-air service and still have the capacity to provide other innovative services. It would be contrary to the public interest to handicap broadcasters in providing these services and to deprive consumers of the opportunity to purchase the services they desire. We note, however, that we will review our flexible approach to permitted ancillary and supplementary services during the periodic reviews established herein and make adjustments to our rules as needed.

35. We note that the 1996 Act requires the Commission to establish a fee program for ancillary or supplementary services provided by digital licensees if subscription fees are required in order to receive such services or if the licensee directly or indirectly receives compensation from a third party in return for transmitting material furnished by such third party (other than commercial advertisements used to support broadcasting for which a subscription fee is not required).⁶⁰ We will issue a Notice to consider proposals as to how that statutory provision should be implemented.

36. In addition, consistent with the 1996 Act, non-broadcast services provided by digital licensees will be regulated in a manner consistent with analogous services provided by other persons or entities.⁶¹ We already follow such an approach with respect to ancillary and supplementary services provided by NTSC licensees, for example, on the VBI and the video portion of the analog signal.⁶²

2. High Definition

37. Background. In the *Fourth Further Notice/Third Inquiry*, the Commission noted that the Grand Alliance system would provide broadcasters new flexibility and new capabilities to provide not only high definition television but also multiple program streams, as well as a variety of nonvideo and/or subscription-based services. After noting that allowing at least some level of flexibility would increase the ability of broadcasters to compete in an increasingly competitive marketplace, would permit new and innovative services to be provided to the public, and would allow for a more rapid transition to digital broadcasting, the Commission requested comment as to whether it should require broadcasters to provide a minimum amount of high definition

⁵⁹ See *Report and Order* in MM Docket No. 95-42, 11 FCC Rcd 7799, ¶ 8 (1996).

⁶⁰ 47 U.S.C. § 336(e)(1).

⁶¹ 47 U.S.C. § 336(b)(3).

⁶² *Report and Order* in MM Docket No. 95-42, 11 FCC Rcd 7799, ¶ 17 (1996); 47 C.F.R. § 646(c). We also follow such an approach with respect to subsidiary communications services on the television aural baseband subcarriers. 47 C.F.R. § 73.667(b).

television and, if so, what minimum amount should be required.⁶³

38. Comments. Many commenters are opposed to a minimum HDTV requirement. Commenters urging the Commission not to apply a minimum HDTV requirement but rather to leave that determination to the marketplace and thus to broadcasters and viewers include the National Association of Broadcasters ("NAB"), ALTV, the Benton Foundation, Microsoft Corporation, Telemundo Group, Inc. ("Telemundo"), and AAPTS/PBS.⁶⁴ NAB notes that mandating a certain amount of HDTV could impair broadcasters' ability rapidly to fuel development of the DTV market with complementary program offerings and could prolong the transition to digital television. NAB states: "By providing maximum latitude, the Commission will encourage development of diverse new programming services that will facilitate the most rapid acceptance of ATV and lead to the most rapid return of NTSC spectrum."⁶⁵ ALTV states that a minimum HDTV requirement would be burdensome and, moreover, superfluous because the broadcast industry has maintained its commitment to implement HDTV. According to ALTV, independent stations rely on syndicated and local programming, which is less likely to be produced in an HDTV format, so a minimum HDTV requirement would have a disproportionately burdensome impact on independents.⁶⁶ ALTV states that any minimum HDTV requirement, if and when justified by future circumstances, should be adopted later in the transition, as more HDTV programming comes on the market.⁶⁷ Telemundo notes that a minimum HDTV requirement would negatively impact foreign language stations and networks, many of which feature programming produced outside the United States, where HDTV production is likely to lag domestic HDTV production.⁶⁸ AAPTS and PBS, in joint comments, oppose a minimum HDTV requirement, noting that the Commission can rely on broadcasters and public television's commitment to HDTV, and argue that if the Commission adopts an HDTV requirement, it should be "liberally waived" for noncommercial stations (particularly those analog stations that may share a DTV channel in the transition).⁶⁹ The Benton Foundation argues that mandating an HDTV minimum serves no public interest because it does not increase the number of voices in the

⁶³ *Fourth Further Notice/Third Inquiry, supra* at 10543-44.

⁶⁴ According to Microsoft, the best use of the spectrum can be determined by the licensee, and requiring a minimum amount of HDTV is likely to leave licensees with regulatory constraints that do not permit them to respond to competitive alternatives. Comments of Microsoft at 7. Additionally, Alliance for Community Media believes that the Commission should neither require nor encourage HDTV; HDTV should be permitted to develop in the marketplace. Comments of Alliance for Community Media at 10-11.

⁶⁵ Comments of NAB at 2.

⁶⁶ Comments of ALTV at 10-11.

⁶⁷ Comments of ALTV at 11.

⁶⁸ Reply Comments of Telemundo at 2.

⁶⁹ Comments of AAPTS/PBS at 18-20.

marketplace or contribute to the civic discourse of democracy.⁷⁰

39. Support for a minimum HDTV requirement is expressed by three networks,⁷¹ HBO, NYNEX Corporation,⁷² receiver manufacturers,⁷³ Viacom,⁷⁴ Golden Orange Broadcasting Co., Inc. ("Golden Orange"),⁷⁵ and the National Consumers League.⁷⁶ Supporters of a minimum requirement generally argue that a requirement will help promote the early availability of HDTV programming, create demand for HDTV receivers, stimulate the market, and speed the transition. Golden Orange, for example, notes that without HDTV, the public will not be motivated to buy receivers.⁷⁷ HBO argues that the legal and policy principles that justify awarding incumbent broadcasters a second channel for DTV do not permit broadcasters to use this second channel for any thing other than HDTV programming, and, if the FCC allows other than HDTV programming, it should require that a substantial portion of the broadcast day, especially during dayparts and prime time, be devoted exclusively to HDTV.⁷⁸ These commenters vary on the amount of HDTV programming that should be required and on how the minimum should be implemented.⁷⁹

⁷⁰ Reply Comments of Benton Foundation at 6.

⁷¹ Comments of CBS at 6-8; Comments of ABC at 7; Comments of NBC at 8.

⁷² Comments of NYNEX at 4-5.

⁷³ Comments of General Instrument Corporation ("General Instrument") at 5; Comments of Motorola, Inc. ("Motorola") at 11; Comments of Thomson at 4; Comments of EIA at 5-8; Comments of The Digital Grand Alliance at 4-5; Comments of Zenith Electronics Corporation ("Zenith") at 3.

⁷⁴ Comments of Viacom at 23-25.

⁷⁵ Comments of Golden Orange at 2.

⁷⁶ Comments of National Consumers League at 6.

⁷⁷ Comments of Golden Orange at 2.

⁷⁸ Comments of HBO at 7-14.

⁷⁹ Capital Cities/ABC, Inc. ("ABC"), for example, supported a minimum of five hours per week at the beginning of the transition, to be reevaluated later, with a substantial degree presented in prime time. Comments of ABC at 7. NBC suggested an annual minimum requirement averaging five hours per week. Comments of NBC at 8. Viacom agreed that five hours per week would not be unduly onerous, particularly if it were calculated on an annual basis. Reply Comments of Viacom at 24. NYNEX and Information Technology Industry Council ("ITI") supported an HDTV minimum of at least the daily prime-time hours. Comments of NYNEX at 5 & n.10; Comments of ITI at 5 (no specific number of hours specified; requirement should include broadcast during prime time hours). The Digital Grand Alliance and General Instrument recommended a required minimum of 25 hours of HDTV programming per week, of which 15 hours should be prime time programming. Comments of The Digital Grand Alliance at 5 (prime time or weekend afternoons); Comments of General Instrument at 5-6. Motorola proposed a minimum of 8 hours per day and all prime time hours. Comments of Motorola at 11.

40. While believing that the marketplace is the best determinant of the optimum balance between HDTV and other DTV services, Joint Broadcasters support a minimum HDTV requirement if necessary to assure HDTV a fair chance in the marketplace.⁸⁰ Joint Broadcasters also declare their support for HDTV as the "centerpiece" of the digital television system and note the commitment of many broadcast organizations to provide HDTV.⁸¹ MAP, which supports allotting only enough capacity to broadcasters to provide one free, over-the-air, digital program service, argues accordingly that there is little reason for the Commission to mandate HDTV.⁸² However, MAP notes that the only justification for affording broadcasters exclusive use of the entire 6 MHz of spectrum is that they will deliver significant amounts of HDTV programming.⁸³

41. Decision. Our decisions today, and our previous adoption of the DTV Standard, give broadcasters the opportunity to provide high definition television programming, but we decline to impose a requirement that broadcasters provide a minimum amount of such programming and, instead, leave this decision to the discretion of licensees. The DTV Standard will allow broadcasters to offer the public high definition television, as well as a broad variety of other innovative services. We believe that we should allow broadcasters the freedom to innovate and respond to the marketplace in developing the mix of services they will offer the public. In this regard, we endeavor to carry out the premises of the 1996 Act which, as noted above, seeks "[t]o promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies."⁸⁴ There is no reason to involve the government in a decision that should properly be based on marketplace demand. The 1996 Act specifically affords the Commission discretion whether or not to require minimum high resolution television programming.⁸⁵

42. Our decisions to adopt the DTV Standard and to use 6 MHz channels permit broadcasters to provide high definition television in response to viewer demand. If we do not mandate a minimum amount of high resolution television, we anticipate that stations may take a variety of paths: some may transmit all or mostly high resolution television programming, others a smaller amount of high resolution television, and yet others may present no HDTV, only SDTV, or SDTV and other services. We do not know what consumers may demand and support. Since broadcasters have incentives to discover the preferences of consumers and adapt their

⁸⁰ Comments of Joint Broadcasters at 5.

⁸¹ Reply Comments of Joint Broadcasters at 17.

⁸² Comments of Media Access Project, *et al.* at 7, 18.

⁸³ Reply Comments of MAP at 5.

⁸⁴ Preamble to Pub. L. No. 104-104, 110 Stat. 56 (1996).

⁸⁵ 47 U.S.C. § 336(b)(2), adopted by Section 201 of the 1996 Act.

service offerings accordingly, we believe it is prudent to leave the choice up to broadcasters so that they may respond to the demands of the marketplace. A requirement now could stifle innovation as it would rest on *a priori* assumptions as to what services viewers would prefer. Broadcasters can best stimulate consumers' interest in digital services if able to offer the most attractive programs, whatever form those may take, and it is by attracting consumers to digital, away from analog, that the spectrum can be freed for additional uses. Further, allowing broadcasters flexibility as to the services they provide will allow them to offer a mix of services that can promote increased consumer acceptance of digital television, which, in turn, will increase broadcasters' profits, which, in turn, will increase incentives to proceed faster with the transition.

43. We have also been persuaded by the arguments that a minimum high definition television requirement would be burdensome on some broadcasters. We note the arguments of ALTV and Telemundo as to the difficulties a minimum high resolution television requirement might impose on independent stations and foreign language stations, respectively. We acknowledge the contributions of such stations and the programming they provide to the diversity of our broadcast television service and hesitate to impose a requirement that might make it more difficult for such stations to convert to digital television, perhaps even undermining their ability to do so. We are not convinced that high definition television programming should be mandated where to mandate it might impose significant burdens on stations, particularly where, as will be discussed below, it appears that the marketplace will provide high definition television programming even absent a governmental requirement to that effect.

44. We note that some commenters argued that a high definition television mandate is necessary to give program producers and equipment manufacturers the necessary incentives to support high resolution television, and to provide viewers and consumers enough high resolution television programming to foster demand for such programming and to drive DTV receiver purchases. To the contrary, however, we believe that a minimum high definition television requirement is unnecessary to achieve these goals. We note in this regard that broadcasters and networks have emphasized their commitment to high definition television.⁸⁶ We find nothing in the record that identifies a market failure or other reason to impose a governmental requirement for high definition television. High definition television will afford broadcasters an important tool in the increasingly competitive video programming market. There is no reason to believe that a government mandate is necessary to ensure that high definition television gets a fair chance in the marketplace.

E. Public Interest Obligations

45. Background. As we stated in the *Fourth Further Notice*, the rules imposing public interest obligations on broadcast licensees originate in the statutory mandate that broadcasters serve the "public interest, convenience, and necessity," as well as other provisions of the

⁸⁶ See, e.g., Comments of Joint Broadcasters at 17-18 & n. 18; Comments of NBC at 1-2; Comments of ABC at 6.

Communications Act.⁸⁷ These obligations include the requirements that broadcasters must provide "reasonable access" to candidates for federal elective office and must afford "equal opportunities" to candidates for any public office⁸⁸ and that weekly they must provide three hours of children's educational programming.⁸⁹ Licensees must also adhere to restrictions on the airing of indecent programming⁹⁰ and must comply with the 1996 Act provisions relating to the rating of video programming.⁹¹ In the *Fourth Further Notice/Third Inquiry*, the Commission noted that these current public interest rules were developed under the analog model and therefore were shaped by the limitations inherent in analog technology. The Commission sought comment on whether the greater capabilities afforded by digital technology should affect licensees' obligations to serve the public interest, and if so, how those obligations might be adapted to the digital context.

46. Comments. Commenters generally agree that existing public interest obligations should continue to apply, at the very least, to free, over-the-air programming on DTV. They differ greatly, however, on whether, and if so, how, the public interest obligation should be applied and possibly expanded in a DTV world. Joint Broadcasters argue that public interest obligations should continue to apply to NTSC through the transition, and to all the DTV services, but that there is no need to impose additional obligations on the transition channel.⁹² ALTV comments that on DTV, free broadcast television service should continue to be subject to the public interest obligations now applied to NTSC, but that no public interest obligations should apply to nonbroadcast services.⁹³ General Instrument argues that public interest obligations should attach to free, over-the-air broadcasting on DTV, but that for provision of subscription services, broadcasters should be required to pay a fee to compensate the public.⁹⁴

47. Some commenters offered specific proposals on how the broadcasters' public-interest obligations could be reconceptualized and adapted in light of the new possibilities offered by digital technology. MAP argues that public interest obligations should apply to each program service, including subscription services, provided over DTV spectrum. MAP proposes that

⁸⁷ 47 U.S.C. § 307(c).

⁸⁸ 47 U.S.C. §§ 312(a)(7), 47 C.F.R. §§ 73.1944 (reasonable access); 47 U.S.C. 315, 47 C.F.R. § 73.1941 (equal opportunities). *See also* 47 C.F.R. § 73.1920 (personal attacks rule); 47 C.F.R. § 73.1930 (right to reply).

⁸⁹ 47 U.S.C. § 303b, 47 C.F.R. 73.671, 73.673, 73.3526.

⁹⁰ 18 U.S.C. § 1464; 47 U.S.C. 303; 47 C.F.R. § 73.3999.

⁹¹ 47 U.S.C. § 303(w).

⁹² Comments of Joint Broadcasters at 25-26; Comments of Christian Communications of Chicagoland, Inc. at 4-6.

⁹³ Comments of ALTV at 15-18.

⁹⁴ Comments of General Instrument at 10.

broadcasters be required to provide "new and different public service in exchange for the opportunity to convert to digital television," including free time for political candidates, noncommercial public access, and dedication of 20% of total program time to children's educational and informational programming."⁹⁵ Alliance for Community Media suggests that, at a minimum, public interest guidelines should contain a quantitative measure of programming including: local news and information; educational programs for children and adults; material helpful to nonprofit, charitable, health, or social-service organizations; and programs to allow elected officials and nonprofit organizations to communicate to the community.⁹⁶ The Benton Foundation urges that broadcasters be required to provide, for example, at least six hours of children's educational television, free time for candidates, and access to programming time by members of the community.⁹⁷

48. Decision. In this proceeding we seek to promote the successful transition of analog broadcast television into a digital broadcast television service that serves the public interest. Broadcasters have long been subject to the obligation to serve the "public interest, convenience and necessity."⁹⁸ In the 1996 Act, Congress provided that broadcasters' public interest obligations extend into the digital environment:

"(d) Public Interest Requirement. --Nothing in this section shall be construed as relieving a television broadcasting station from its obligation to serve the public interest, convenience, and necessity. In the Commission's review of any application for renewal of a broadcast license for a television station that provides ancillary or supplementary services, the television licensee shall establish that all of its program services on the existing or advanced television spectrum are in the public interest."⁹⁹

In enacting this provision, Congress clearly provided that broadcasters have public interest obligations on the program services they offer, regardless of whether they are offered using analog or digital technology.

49. In the digital television era, although many aspects of the business and technology of broadcasting may be different, broadcasters will remain trustees of the public's airwaves. Our current rules were developed when technology permitted broadcasters to provide just one stream of programming over a 6 MHz channel. We recognize, however, that digital technology expands the effective capacity of 6 MHz of spectrum. For example, it permits, but does not require,

⁹⁵ Comments of MAP at 20-32.

⁹⁶ Comments of Alliance for Community Media at 35-36.

⁹⁷ Reply Comments of the Benton Foundation at 6-10.

⁹⁸ 47 U.S.C. §§ 307(a), 309(a); *En Banc Programming Inquiry*, 44 FCC 2303, 2312 (1960).

⁹⁹ 47 U.S.C. § 336(d).

licensees to provide several program streams, as well as other digital services, on the 6 MHz channel of spectrum that we are assigning them. The dynamic and flexible nature of digital technology creates the possibility of new and creative ways for broadcasters to serve the country and the public interest.

50. Some argue that broadcasters' public interest obligations in the digital world should be clearly defined and commensurate with the new opportunities provided by the digital channel broadcasters are receiving. Others contend that our current public interest rules need not change simply because broadcasters will be using digital technology to provide the same broadcast service to the public. We are not resolving this debate today. Instead, at an appropriate time, we will issue a Notice to collect and consider all views. As we authorize digital service, however, broadcast licensees and the public are on notice that existing public interest requirements continue to apply to all broadcast licensees. Broadcasters and the public are also on notice that the Commission may adopt new public interest rules for digital television. Thus as to the public interest, our action today forecloses nothing from our consideration.

F. Transition

1. Simulcast

51. Background. In our 1992 *Second Report/Further Notice*, we determined that DTV licensees should simulcast on their NTSC channel the programming offered on their DTV channel.¹⁰⁰ Specifically, we adopted, as a preliminary matter, a 50 percent simulcasting requirement, beginning one year after the six-year application and construction period, increasing to 100 percent two years later.¹⁰¹ Our early simulcast decisions were based on the expectation that DTV would primarily consist of the broadcast of a single HDTV program service. However, as DTV technology developed, we learned that DTV would be able to do much more than we initially expected and that it would be possible to transmit multiple simultaneous SDTV program services on a single 6 MHz channel. Recognizing that a licensee would be unable to simulcast multiple program services on its NTSC channel, we stated in the *Fourth Further Notice* that our simulcast requirement must be revisited and we must consider alternatives.¹⁰² In addition, we stated that we still perceived a need for a simulcast requirement, albeit different from that first envisioned, and proposed to require the simulcast of all material being broadcast on the licensee's NTSC channel on a program service of the DTV channel.¹⁰³ We requested comment on this

¹⁰⁰ *Second Report/Further Notice, supra* at 3355-56.

¹⁰¹ Additionally, we indicated that we would review this schedule at the time of our initial review of the pace of conversion at the end of the application/construction period and immediately prior to the imposition of 100 percent simulcasting. *Third Report/Further Notice, supra* at 6927-29.

¹⁰² *Fourth Further Notice/Third Inquiry, supra* at 10547.

¹⁰³ *Id.*

proposal.¹⁰⁴

52. Comments. Broadcasters are divided on the necessity of a simulcast requirement. Numerous comments note that simulcasting is certain to occur even in the absence of a mandate.¹⁰⁵ The Joint Broadcasters emphasize that they believe that much simulcasting of NTSC programming on the DTV channel would happen in the normal course. However, because broadcasters have differing views on the need for a requirement, the group declined to take a position on that issue.¹⁰⁶ NAB and ALTV maintain that a simulcast requirement would be counterproductive and may delay development and penetration of DTV, especially during the early stages of the transition.¹⁰⁷ However, NAB acknowledges that a phase-in of simulcasting near the end of the transition could be an effective means of preventing disenfranchisement of the remaining NTSC viewers.¹⁰⁸ ABC and CBS argue that a simulcast requirement should apply from the outset of the transition.¹⁰⁹ CBS argues that a simulcast requirement could spur the sale of DTV equipment and ensure that DTV and NTSC broadcast services do not evolve into separately programmed services.¹¹⁰ NBC supports a 50% simulcasting requirement to allow for some innovation.¹¹¹ Broadcasters and other commenters arguing against the advisability of a simulcast requirement maintain that rigid requirements would hamper broadcasters' ability to promote and provide the programming that was most likely to draw viewers to the DTV channel.¹¹² They argue that transition to DTV would occur most rapidly if broadcasters had the maximum flexibility to experiment with new services and to put together offerings that would best satisfy viewers. Commenters point out that simulcasting would slow the transition by preventing broadcasters from enticing viewers to DTV by making desirable programming available on DTV that is not available on NTSC. ALTV also argues that any requirement would be based on speculation about the development of digital service, and therefore imposition of any

¹⁰⁴ *Id.*

¹⁰⁵ Comments of Joint Broadcasters at 21; Comments of ALTV at 12; Comments of AAPTS/PBS at 17; Comments of Hitachi America at 6.

¹⁰⁶ Comments of Joint Broadcasters at 20-22.

¹⁰⁷ Comments of NAB at 4-6; Comments of ALTV at 12.

¹⁰⁸ Comments of NAB at 6. NAB states that simulcasting should be defined as DTV licensees simulcasting on their NTSC stations the programming offered on the DTV stations.

¹⁰⁹ Comments of ABC at 10; Comments of CBS at 8-9.

¹¹⁰ Comments of CBS at 8-10.

¹¹¹ Comments of NBC at 6.

¹¹² *See, e.g.,* Comments of ALTV at 12; Comments of Hitachi America at 6; Comments of Christian Communications of Chicagoland, Inc. at 6-7; Comments of Cohen, Dippell and Everist at 4-5.

rule, if necessary at all, should be postponed.¹¹³

53. Equipment manufacturers recommend that a simulcast requirement be tailored to promote a rapid transition to HDTV and DTV and recovery of NTSC spectrum.¹¹⁴ The cable industry supports a simulcast HDTV service, that is the broadcast of one program over two channels to the same area at the same time.¹¹⁵ Public-interest groups generally support requiring DTV broadcasters to simulcast their NTSC service on the DTV channel.¹¹⁶ Commenters supporting a simulcast requirement argue that such a requirement would expedite the transition from analog to digital by guaranteeing that popular programming services continue to be available, in enhanced technical quality, on the DTV channel. They also point out that simulcasting would prevent the development of two separately programmed services, which might delay the transition. As to the question of phase-in, the Digital Grand Alliance suggests that simulcast requirements be minimal in the early years of the transition to facilitate innovative HDTV programming, and more comprehensive in the later years to avoid perpetuating unique NTSC programming that would make it difficult to cease NTSC broadcasts. Throughout the transition, one DTV program stream should be identical to the program stream carried on the NTSC channel.¹¹⁷

54. Decision. We decline to adopt a simulcast requirement for the early years of the transition. In order to help reclaim spectrum at the end of the transition period, however, we adopt by the sixth year from the date of adoption of this *Report and Order* a requirement of 50% simulcasting of the video programming of the analog channel on the DTV channel; by the seventh year, a 75% simulcasting requirement; by the eighth year, a 100% simulcasting requirement, until the analog channel is terminated and that spectrum returned.

55. We have previously recognized the need to afford broadcasters flexibility to program their DTV channels to attract consumers, especially during the critical launch phase of DTV.¹¹⁸ We do not adopt a simulcast requirement during the early years of the transition in order to give broadcasters the ability to experiment with program and service offerings. We are convinced by commenters who argue that many consumers' decisions to invest in DTV receivers will depend on the programs, enhanced features, and services that are not available on the NTSC service,¹¹⁹

¹¹³ Comments of ALTV at 12.

¹¹⁴ See, e.g., Comments of the Digital Grand Alliance at 8-9; Comments of General Instrument at 11-12.

¹¹⁵ Comments of NCTA, Inc. at 5.

¹¹⁶ See, e.g., Comments of MAP at 32-33; Comments of Alliance for Community Media at 14-18.

¹¹⁷ Comments of the Digital Grand Alliance at 8-9.

¹¹⁸ *Second Report/Further Notice, supra* at 3356.

¹¹⁹ Comments of NAB at 4.