

and a simulcast requirement might limit broadcasters' ability to experiment with the full range of digital capabilities. Because the DTV channels represent valuable resources with large opportunity costs, we believe licensees will have economic incentives to provide programming and services that will attract consumers to DTV. In any event, a simulcast requirement during this initial transition phase appears to be unnecessary because the record suggests that marketplace forces will ensure that the best NTSC programming will be simulcast on the digital channel and broadcasters have indicated that they will simulcast NTSC programs on the DTV channel even in the absence of a requirement.¹²⁰

56. While we believe that a simulcast requirement is not warranted during the early years of the transition, there are benefits to a simulcast requirement near the end of the transition period. Such a requirement will help ensure that consumers will enjoy continuity of free over-the-air program service when we reclaim the analog spectrum at the conclusion of the transition period. It may be difficult to terminate analog broadcast service if broadcasters show programs on their analog channels but not on their digital channels. We believe that it will be easier to terminate analog services and reclaim the spectrum at the end of the transition if most broadcast households are capable of receiving DTV signals and these households do not suffer the loss of a current program service only offered on analog channels. Thus, we will require a phased-in simulcasting requirement as follows: By the sixth year from the date of adoption of this *Report and Order*, we adopt a 50% simulcasting requirement; by the seventh year, we adopt a 75% simulcasting requirement; by the eighth year, we adopt a 100% simulcasting requirement which will continue until the analog channel is terminated and the analog spectrum returned. We recognize that we will need to define clearly "simulcasting" in the context of DTV and will do so as part of our two-year reviews or other appropriate proceeding.

2. Licensing of DTV and NTSC Stations

57. **Background.** The *Second Report/Further Notice* determined to treat the licensee as having two separate licenses.¹²¹ In the *Fourth Further Notice/Third Inquiry*, however, the Commission tentatively concluded that substantial benefits could be obtained if the NTSC and ATV facilities were instead authorized under a single, unified license. The Commission tentatively decided that such a policy would ease administrative burdens on the Commission and broadcasters alike by reducing the number of applications that would have to be filled out, filed, and processed, and would be consistent with our authority under Section 316 of the Act to modify an existing license.¹²² Licensing the two facilities under a single license would also retain the policy announced in the *Second Report/Further Notice* of treating both facilities the same for

¹²⁰ Comments of Joint Broadcasters at 21.

¹²¹ *Second Report/Further Notice*, *supra*, at 3344.

¹²² *Fourth Further Notice/Third Inquiry*, *supra*, at 10548.

revocation/nonrenewal purposes.¹²³

58. Comments. Those commenters, which include broadcasters, networks, and equipment manufacturers, who address this issue largely support our revised proposal for a single, paired license.¹²⁴ One commenter, broadcaster Golden Orange, argues that the DTV and NTSC stations should have separate licenses.¹²⁵

59. Decision. We adopt our tentative conclusion, echoed by nearly all those who commented, that the NTSC and DTV facilities should be licensed under a single, paired license. As determined earlier, this system will help the Commission and broadcasters alike by keeping administrative burdens down. It is also consistent with our intention to treat the DTV license and the NTSC license together for the purposes of revoking or not renewing a license.¹²⁶ Once broadcasters have satisfied construction and transmission requirements, they will receive a single, paired license for the DTV and NTSC facilities.

60. One of our objectives is to promote broadcasters' ability to build digital businesses so that their valuable free programming service will continue. We anticipate that some licensees may find it beneficial to develop partnerships with others to help make the most productive and efficient use of their channels. We intend to give broadcasters flexibility in structuring business arrangements and attracting capital to build a successful DTV business. One of our overarching objectives is to promote the success of digital television. We anticipate that some licensees may find it beneficial to develop partnerships with others to help make the most productive and efficient use of their channel, and we will look with favor on such arrangements. Broadcasters may find it useful to work with other broadcasters or others who have special expertise in exploiting digital technology. Parties could come together for the sharing of facilities, costs, and equipment, the development and provision of programming and service offerings, access to capital and financing, the establishment of business plans, and the like. Such arrangements will aid both broadcaster and public, by helping the broadcaster achieve the most competitive and beneficial business strategy and by ensuring for the public the best use of the digital spectrum, including not only the most efficient use of the spectrum but also the greatest array of valuable services. Variations on partnerships have arisen in other contexts, which indicates that they are efficient and useful. For example, in the common network/affiliate relationship, a network provides programming and advertising that its affiliates may use. Another example is the Commission's authorization of Instructional Television Fixed Services (ITFS) licensees to lease, for profit, their

¹²³ *Second Report/Further Notice, supra*, at 3344.

¹²⁴ *See, e.g.*, Comments of the Digital Grand Alliance at 9; Comments of Joint Broadcasters at 16; Comments of General Instrument at 12-13; Comments of New World Television Inc. at 6; Comments of AAPTS/PBS at 15.

¹²⁵ Comments of Golden Orange at 2.

¹²⁶ *See Second Report/Further Notice, supra*, at 3344.

excess capacity to other service providers.¹²⁷ We are receptive to the establishment of like arrangements in the DTV context. Whatever the arrangement, it is the licensee who remains responsible for ensuring the fulfillment of all obligations incumbent upon a broadcast licensee.

G. Application/Construction Period

61. **Background.** The *Second Report/Further Notice* adopted a two year application period and an additional three years for construction of a DTV facility.¹²⁸ We were concerned that without a specific timetable, some parties might delay construction while waiting for others to take the lead, to the detriment of our goal of expeditious DTV implementation.¹²⁹ We clarified that broadcasters who did not apply and construct within the established time period (and who failed to obtain an extension of time) would lose their initial eligibility for a DTV frequency.¹³⁰ We noted that existing policies regarding extensions of time would afford broadcasters adequate flexibility to cope with unforeseen implementation problems.¹³¹ We defined "construction" as the capability of emitting DTV signals, regardless of the source of these signals (*e.g.*, local origination, pass-through of a network signal, or other signal).¹³² This definition of construction would allow broadcasters to "phase-in" full DTV implementation as their individual circumstances and markets permit.¹³³

62. In the *Third Report/Further Notice*, we adjusted the application deadline from a two-year to a three-year period, and provided for a total six-year application and construction period with those applying early having a longer portion of the six-year period to devote to construction of DTV facilities.¹³⁴ We explained that the deadlines for application and construction would assist in our reclamation of the reversion channel and our sliding scale approach would provide sufficient relief to small-market stations which produce less revenue.¹³⁵ While we recognized that some stations would be market leaders in the implementation of DTV, we remained concerned that such leadership may not emerge, at least in certain markets, unless we established a clear

¹²⁷ *Report and Order*, 94 FCC 2d 1203, 1248 (1983).

¹²⁸ *Second Report/Further Notice*, *supra* at 3346.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ For additional clarification of our extension policies, *see*, *Second Report/Further Notice*, *supra* at 3347-48.

¹³² *Second Report/Further Notice*, *supra* at 3347.

¹³³ *Id.*

¹³⁴ *Third Report/Further Notice*, *supra* at 6937.

¹³⁵ *Id.* at 6941, 6946-47.

framework for the DTV transition.¹³⁶

63. The *Fourth Further Notice/Third Inquiry* proposed a procedure by which broadcasters would have six months in which to make an election and confirm to the Commission that they want a DTV license.¹³⁷ After that, they would have the remainder of the three-year period in which to supply any required supporting data, and a total of six years to complete construction. If they would elect not to construct a DTV facility, or would elect but then fail to construct, their NTSC licenses would expire at the end of the DTV conversion period, and they would be required to cease broadcasting.¹³⁸ We sought comment on all aspects of the construction period. We asked whether certain classes of stations should be afforded special relief, and if so, which classes.¹³⁹

64. Comments. While most commenters do not specifically address the election period, some voice approval of a six-month election period.¹⁴⁰ The Digital Grand Alliance, however, suggests that the six-month election period be accompanied by a mechanism to ensure that this election represents real commitment to convert, such as the imposition of a non-refundable application fee, a substantial deposit refunded at commencement of DTV broadcast, or a fine if the broadcaster fails to commence DTV broadcast.¹⁴¹ On the other hand, Busse and Pacific FM argue that the 6-month election period is not a viable choice, because those who do not want a DTV license have, in effect, elected to go out of business since, under the Commission's proposal, all licensees will be required to cease broadcasting in NTSC at the end of the transition period.¹⁴²

65. Commenters voice many views. Many generally support the Commission's suggested timeframe, but suggest that the Commission take account of the fact that practical impediments may arise to implementation.¹⁴³ While in support of the proposal for many stations, Joint Broadcasters, joined by ALTV, propose that a less demanding schedule and liberal waivers apply to help stations facing difficulty, such as noncommercial stations, small stations, those in small

¹³⁶ *Id.* at 6941-42.

¹³⁷ *Fourth Further Notice/Third Inquiry, supra* at 10550.

¹³⁸ *Id.*

¹³⁹ *Id.* at 10550-51.

¹⁴⁰ *See, e.g.,* Comments of Joint Broadcasters at 12; Comments of Thomson at 7; Comments of General Instruments at 16; Comments of Golden Orange at 6; Comments of New World Television at 8.

¹⁴¹ Comments of the Digital Grand Alliance at 13.

¹⁴² Comments of Busse at 6; Comments of Pacific FM at 5.

¹⁴³ *See, e.g.,* Comments of EIA at 21.

or rural markets, or in financial distress, as well as for those stations that face FAA, zoning, or other similar problems.¹⁴⁴ Busse points out that even stations in large markets -- such as those with religious or specialty formats -- may have difficulty making a timely transition.¹⁴⁵ NAB suggests that the construction deadline be staggered on a market-by-market basis, in which large-market stations have six years, and small-market stations have three or six additional years, to complete construction, and in addition that waivers for problems such as zoning approvals also be available.¹⁴⁶ The Association of Federal Communications Consulting Engineers argues that the six-year implementation period is inadequate, given the number of stations that will need to acquire transmission equipment, input/monitoring equipment, and tower structures during that limited time frame.¹⁴⁷ Christian Communications of Chicagoland proposes that the Commission recognize that the application/construction period operate as a "guideline subject to revision" rather than a set deadline.¹⁴⁸

66. Others maintain that, at least in some cases, the six-year period is too long. Thomson and the Digital Grand Alliance propose that the Commission shorten the application and construction periods at least in the 25 largest markets, but do not specify what period would be appropriate.¹⁴⁹ General Instrument proposes that a three-year construction period be considered for major markets, and a six-year period for smaller markets.¹⁵⁰ Motorola argues that, given the notice that broadcasters have been afforded, the appropriate time table is a six-month application period, a six-month processing and grant period, and a two-year construction period.¹⁵¹

67. Decision. We will apply a streamlined three-stage application process to the group of initially eligible analog permittees and licensees allotted a paired channel in the DTV Table of Allotments.¹⁵² We will soon issue a Public Notice detailing the procedures to be followed, but will describe them briefly here.

¹⁴⁴ Comments of Joint Broadcasters at 12-16; Comments of ALTV at 7-8.

¹⁴⁵ Comments of Busse at 8.

¹⁴⁶ Comments of NAB at 6-8.

¹⁴⁷ Comments of Association of Federal Communications Consulting Engineers at 8-9.

¹⁴⁸ Comments of Christian Communications of Chicagoland, Inc., at 11.

¹⁴⁹ Comments of Thomson at 8; Comments of the Digital Grand Alliance at 13.

¹⁵⁰ Comments of General Instrument at 16.

¹⁵¹ Comments of Motorola at 8-9.

¹⁵² We note that under Section 553(b)(A), notice and comment are not necessary for rules of agency procedure or practice. 5 U.S.C. § 553(b)(A).

68. Stage One -- Initial Modification License for DTV. Pursuant to the 1996 Act and the eligibility criteria discussed above, we issue, by this paragraph and the attached Appendix E, additional DTV licenses to those initially eligible to receive them.

69. The statute directs us to limit initial eligibility for DTV 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, or both.¹⁵³ As the statute contemplates, we hereby issue a license to all eligible licensees and permittees, a list of which is attached to this *Report and Order* as Appendix E. We conclude that it more effectively effectuates the congressional scheme to implement the statute through a three-phased process, with the first phase consisting of the initial DTV license, rather than through our conventional procedure. Use of the conventional licensing process would prevent us from establishing a date certain at which to determine initial eligibility, a process that is necessary to allow us to establish the Table of Allotments. Thus, we hereby issue a license, conditioned upon satisfaction of the additional requirements set out in ¶¶ 70-75 below. This license will modify the analog television permit or license; however, licensees may not begin construction or transmission until the additional conditions are met.¹⁵⁴ The license is also conditioned upon the requirement that "either the additional license or the original license held by the licensee be surrendered to the Commission for reallocation or reassignment (or both) pursuant to Commission regulation."¹⁵⁵

70. Request for Cancellation. We presume that the recipients will welcome receipt of their initial DTV License and will be fully committed to the conversion to DTV. Nonetheless, there may be some broadcasters who do not wish to receive a second channel to convert to DTV. We wish to reclaim these second channels as quickly as possible so that the spectrum may be awarded to those who would use it quickly and effectively,¹⁵⁶ and we earlier proposed a six-month election period to accomplish this result. We now believe that a six-month election period is too long. Given the length of this proceeding and the public benefits of acting quickly, we believe that broadcasters have already had ample time to consider many options, and will shorten the "election" period. In order to achieve the benefits of a rapid election and in the interests of spectrum efficiency, we ask that licensees who wish to cancel the initial DTV license do so by writing the Commission within 90 days from the release date of the DTV Table of Allotments adopted in the *Sixth Report and Order*.

71. Stage Two -- Certification or Application for Construction Permit. To receive authorization for commencement of construction, an Initial DTV Licensee must file Form 301

¹⁵³ 47 U.S.C. § 336(a)(1).

¹⁵⁴ As discussed below, we expect that the application or certification process will be speedy and will not delay applicants as they prepare to implement the build-out.

¹⁵⁵ 47 U.S.C. 336(c).

¹⁵⁶ In a subsequent Public Notice, we will discuss the procedures for awarding such unpaired channels.

and the appropriate fee to obtain a construction permit.¹⁵⁷ Noncommercial stations must file Form 340. The application must be filed before the mid-point in a particular applicant's required construction period has expired.¹⁵⁸ The Bureau will begin acting upon applications as soon as this *Report and Order* becomes effective.

72. We will apply a certification procedure for applicants that answer "yes" to a checklist of requirements contained in the construction permit application; these certifications will be automatically granted. Given the very rapid review permitted by this streamlined procedure, we will be able to grant a construction permit to broadcasters within a matter of days of submission of this form. Other applicants will be required to furnish additional technical information.

73. In the *Fifth Further Notice, supra* at ¶ 59, we sought comment on whether specific TV technical and procedural rules should be applied to DTV and whether modification of the rules was needed. Among those NTSC TV rules were Section 73.685 and 73.1030. No comments addressed these issues. We herein establish a minimum set of technical requirements that will allow us to process these DTV construction permit applications. Fundamentally, a DTV application must conform to the DTV Table we are creating in the *Sixth Report and Order*, specifying the indicated channel at a transmitter site, effective radiated power ("ERP") and antenna height meeting the restrictions imposed in that document. As described in the *Sixth Report and Order*, applications specifying a transmitter site within five kilometers of the site assumed in the DTV Table and also specifying an ERP and antenna height that do not exceed the values in the DTV Table will be accepted and not subject to interference-protection processing. Further, in order to avoid exposing the public to dangerous situations, we will continue the NTSC TV practice of verifying that the FAA has made any necessary determination that the proposed tower does not represent a hazard to air navigation, and we will require DTV applicants to certify as to no significant environmental impact or to include an environmental statement as described in Section 1.1307 of our rules, including consideration of RF radiation levels. In addition, to avoid altering an AM radio station's radiation pattern in a way that could cause interference in the AM radio band, we will require DTV applications to comply with Section 73.658(h). To avoid interference to our spectrum monitoring functions and to radio astronomy observations, we will also require DTV applications to comply with Section 73.1030. Additionally, as discussed below, the DTV service contour will be required to encompass the community of license.

74. To speed the process, we will consider the DTV applications or certifications as

¹⁵⁷ 47 C.F.R. § 1.1104. As discussed below, this application and its associated fee will be for a minor change. A new Section V-D, DTV Broadcast Engineering Data, attached as Appendix D, is added to Forms 301 and 340, and should be filed along with Sections I and VII of Form 301 and the relevant sections of Form 340.

¹⁵⁸ Thus, if an applicant has until May 1, 1999, to construct, the construction permit application or certification must be filed on or before May 1, 1998; if until November 1, 1999, on or before August 1, 1998, and so on.

involving a minor change in facilities¹⁵⁹ and will process them accordingly. Since this application will be for a minor change, applicants will not have to supply full legal or financial qualifications information.¹⁶⁰ We will not initially require full-replication of the analog station's coverage area by DTV facilities. Accordingly, we will accept initial construction permit applications from applicants who demonstrate that their DTV coverage encompasses the community of license.¹⁶¹ In situations where applicants seek a waiver of any of our requirements, we will entertain requests to allow them to begin construction, at their own risk, prior to the grant of a construction permit.

75. Stage Three -- Application for License to Cover Construction Permit for a DTV Facility. When construction of the DTV facility has been completed, the permittee may commence program tests upon notification to the FCC, provided that an application for a license to cover the construction permit for the DTV facility, on Form 302, is filed within ten days, along with the appropriate fee.¹⁶²

76. Construction Schedule. We have decided to adopt the following construction requirements. Stations affiliated with ABC, CBS, Fox and NBC must build digital facilities in

¹⁵⁹ Pursuant to Section 73.3572(a)(1) of the Commission's rules, a major change in a television station's facilities is any change in frequency or community of license. 47 C.F.R. § 73.3572(a)(1). The change involved in constructing and operating a DTV facility does not constitute a change in frequency, merely the implementation of the initial DTV License on a channel assigned in the *Sixth Report and Order*. The analog site will remain on the same frequency. Moreover, the DTV facility will, of course, be licensed to the same community, since it will be part of one license. We note that in our *Notice, supra* at 7026, we sought comment as to whether, as an alternative to a dual licensing scheme, we should treat the addition of a DTV channel as a major modification. We now conclude that it should be treated as a minor modification for the reasons discussed herein.

¹⁶⁰ In the *Third Report/Third Further Notice, supra* at 6945-46, we noted that we would not relax the financial qualifications showing required for a broadcast applicant. We were concerned that applicants that were not financially qualified could tie up the spectrum without ever obtaining the funds necessary to build the facility, thus negating a reason for restricting eligibility to existing broadcasters -- *i.e.*, their ability to implement DTV swiftly. Our decision to treat the construction permit as a minor modification, however, eliminates the need for a financial qualifications showing. Moreover, Congress has determined that we should limit eligibility to existing broadcasters, and we have decided to streamline the application process so that DTV can be implemented quickly.

¹⁶¹ While the *Sixth Report and Order* establishes the upper limit for DTV facilities, we believe that we should allow construction initially of DTV facilities that provide service to a smaller area. At the same time, stations should not be able to claim that they have completed required construction when they have built facilities that are so low in power that they reach no meaningful service area. Accordingly, as noted above, we establish the initial required coverage area as the community of license. During the first two-year review, we will consider whether to modify the build-out requirement to require a full-replication facility as well as adjustments to the protection of the full-replication facility.

¹⁶² Pursuant to Section 1.68(a) of the Commission's rules, 47 C.F.R. § 1.68(a), the Commission will grant the application where it finds that "all the terms, conditions, and obligations set forth in the application and permit have been fully met, and that no cause or circumstance arising or first coming to the knowledge of the Commission since the granting of the permit would, in the judgment of the Commission, make the operation of such station against the public interest."

the ten largest television markets by May 1, 1999. Stations affiliated with ABC, CBS, Fox and NBC in the top 30 television markets, not included above, must construct DTV facilities by November 1, 1999.¹⁶³ All other commercial stations must construct DTV facilities by May 1, 2002. All noncommercial stations must construct their DTV facilities by May 1, 2003. We note that 24 stations in the top ten markets have voluntarily committed in writing to the Commission to building DTV facilities within 18 months.¹⁶⁴ We applaud these broadcasters' voluntary commitments to give a great number of viewers access to a DTV signal in a very short period. This important step means that a significant portion of the public will be able to receive multiple signals by the holiday shopping season, when nearly 40 percent of all receivers are sold.¹⁶⁵ We ask that those stations that have represented to the Commission that they will have completed construction of the DTV facility by November 1, 1998, file reports at six-month intervals, beginning on November 1, 1997, stating that their plans to meet these deadlines are on schedule or specifying any difficulties encountered in attempting to meet these deadlines.

77. We will grant an extension to the applicable deadline where a broadcaster has been unable to complete construction due to circumstances that are either unforeseeable or beyond the licensee's control if the licensee has taken all reasonable steps to resolve the problem expeditiously. Such circumstances include, but are not limited to, the inability to construct and place in operation a facility necessary for transmitting DTV, such as a tower, because of delays in obtaining zoning or FAA approvals, or similar constraints, or the lack of equipment necessary to transmit a DTV signal. We do not anticipate that the circumstance of "lack of equipment" would include the cost of such equipment. With respect to extensions of the applicable construction deadline, the Commission will take into account problems encountered that are unique to DTV conversion, and will modify its existing policies regarding extensions accordingly. Authority is delegated to the Chief of the Mass Media Bureau to grant an extension of time of up to six months beyond the applicable construction deadline, upon demonstration by the DTV licensee or permittee that the standard discussed above is met, but the Bureau may grant no more

¹⁶³ Within the top 30 markets there are individual television markets where ABC, CBS, Fox, or NBC has more than one affiliate. In such instances, the May 1, 1999, and November 1, 1999 construction requirement applies to the station with the largest audience share.

¹⁶⁴ By letter to the Commission, the following stations have committed to an 18-month construction schedule: New York: WCBS; Los Angeles: KNBC, KTLA, KABC; Chicago: WMAQ; Philadelphia: KYW, WPVI, WCAU, WTXF; San Francisco-Oakland: KRON, KPIX, KGO; Boston: WCVB, WMUR; Washington, D.C.: WRC, WJLA, WUSA; Dallas-Fort Worth: KDFW, KXAS, WFAA; Detroit: WJBK, WWJ; Atlanta: WSB, WXIA. We note that a letter from Edward O. Fritts, President of the National Association of Broadcasters, and Margita E. White, President of the Association for Maximum Service Television to FCC Secretary William Caton, April 2, 1997, also listed these stations as committing to build DTV facilities within an 18-month time frame.

¹⁶⁵ See Letter from Edward O. Fritts, President of the National Association of Broadcasters and Margita E. White, President of the Association for Maximum Service Television, to FCC Secretary William Caton, April 2, 1997; Letter from Gary Shapiro, President of the Consumer Electronics Manufacturers Association, to Chairman Reed E. Hundt, March 27, 1997 (acknowledging importance of 18-month construction schedule to meet holiday shopping season).

than two extension requests upon delegated authority. Subsequent extension requests will be referred to the Commission.

78. Our decision to adopt different requirements for different categories of broadcasters is similar to the market-staggered approach favored by most broadcasters and equipment manufacturers.¹⁶⁶ We agree that the most viewed stations in the largest television markets can be expected to lead the transition to DTV and that these stations are better situated to invest the capital necessary to establish the first DTV stations.¹⁶⁷ We also agree that smaller market stations will find it easier to begin DTV service after learning from the experience gained by the larger market stations.¹⁶⁸ In addition, we agree that our staggered construction schedule will help keep costs lower for smaller market stations, as equipment costs decrease as the market matures.¹⁶⁹ In addition, a tiered approach allows us to ensure that DTV quickly reaches a large percentage of U.S. television households while placing requirements on a relatively small number of stations.

79. Our earlier preliminary decision to provide for an across-the-board six-year application/construction schedule is no longer appropriate. We now believe that a general six-year construction schedule would unnecessarily delay the realization of our goals of free, universal DTV service and spectrum recovery. A six-year construction schedule for all commercial stations anticipated neither the rapid development of digital technologies nor the ability of manufacturers and suppliers to provide DTV equipment. In light of these changes, we now believe that the six-year construction period is too long. Instead, we believe that an aggressive construction schedule should be implemented for several reasons.

80. First, digital broadcast television stands a risk of failing unless it is rolled out quickly. Many operators in other media such, as DBS, cable, and wireless cable use or plan to use digital technology. Unless digital television broadcasting is available quickly, other digital services may achieve levels of penetration that could preclude the success of over-the-air, digital television. Viewers who have leased or purchased digital set-top boxes from competing digital media may be less likely to purchase DTV receivers or converters. If digital, over-the-air television does not succeed, however, viewers will be without a free, universally available digital programming service.

81. Second, a rapid construction period will promote DTV's competitive strength internationally, as well as domestically. Other countries are moving swiftly to establish their own

¹⁶⁶ See, e.g., Comments of Joint Broadcasters at 14; Comments of NAB at 7; Comments of Thomson at 7-8; Comments of the Digital Grand Alliance at 13-16.

¹⁶⁷ See, e.g., Comments of NAB at 7; Comments of Thomson at 8; Comments of the Digital Grand Alliance at 13.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

terrestrial digital television services. For example, the United Kingdom is scheduled to begin broadcasting terrestrial digital television by 1998 or earlier.¹⁷⁰ Japan has recently announced that it will move from analog high definition television to digital television.¹⁷¹ Neither European nor Japanese digital standards are compatible with the U.S. standard. In the DTV Standard proceeding, equipment manufacturers and labor unions argued that quick and decisive action was necessary to permit American companies to compete internationally.¹⁷² The National Telecommunications and Information Administration and the Office of Science and Technology Policy argued that absent quick action, America might relinquish its technological lead to international competitors,¹⁷³ while rapid adoption would spur the American economy in terms of manufacturing, trade, technological development, international investment, and job growth.¹⁷⁴ Rapid introduction of digital television in the U.S. will help facilitate its adoption abroad.

82. Third, an aggressive construction schedule helps to offset possible disincentives that any individual broadcaster may have to begin digital transmissions quickly, as well as the possible absence of market forces that might themselves ensure rapid construction. We recognize that an individual broadcaster may consider implementation of DTV to require it to invest funds in order to capture viewers for which it is already receiving advertising revenue. Such a broadcaster might prefer to wait until others have converted to digital for a number of reasons, including lower equipment costs. On the other hand, a broadcaster may recognize first-mover advantages, such as being first to market with programs in higher definition or with ancillary data services. Our schedule ensures rapid construction in major markets.

83. Fourth, a rapid build-out works to ensure that recovery of broadcast spectrum occurs as quickly as possible. As we discuss in the *Sixth Report and Order*, at the end of the transition we plan to recover 78 MHz of clear spectrum in addition to the 60 MHz of partially encumbered spectrum we plan to recover in the near future from channels 60-69. We will also recover at the end of the transition that spectrum within channels 60-69 that is still needed for analog and digital television broadcasting during the transition.

84. By adopting construction requirements, we hope to give the various industries involved the certainty to move forward. Penetration of color television sets, for example, was

¹⁷⁰ *Race to Set British DTV Standard*, Television Digest, Nov. 11, 1996.

¹⁷¹ *See Ministry Announces Plan to go Digital in Land of TV Broadcast*, Daily Yomiuri/Yomiuri Shimbun, March 11, 1997.

¹⁷² *See, e.g., Fifth Further Notice*; Comments of Thomson at 16; Zenith at 15-16; Philips at 15-16; the Digital Grand Alliance at 29-3; *see also* Citizens for HDTV at 16-18.

¹⁷³ *Fifth Further Notice*, Comments of National Telecommunications and Information Administration at 1-3.

¹⁷⁴ *Id.*

limited until the three major networks began transmitting prime time programming in color.¹⁷⁵ This provides evidence that consumers may not purchase great numbers of DTV sets or converters until multiple stations in their market are transmitting DTV, and that we therefore should adopt construction requirements that ensure that there are multiple digital television broadcasters operating. Television manufacturers plan to have the first digital television sets ready for purchase by the public by mid-1998.¹⁷⁶ The construction schedule set forth here provides that multiple stations in most of the top ten markets are operating at roughly that time.

85. Our construction schedule will facilitate our goal of having at least 40 facilities affiliated with the four top networks in the top 10 markets transmitting DTV by May 1, 1999. Within roughly 24 months in each of the top 10 markets, which cover approximately 30 percent of U.S. television households, viewers will have DTV transmissions available from multiple stations. These signals will come from network affiliates, which are generally the stations with the highest ratings in the market. In the top 30 markets, network-affiliated stations must construct digital facilities by November 1, 1999. These markets include 53 percent of U.S. television households. Stations in the second category will benefit from the success of the stations in the first category, as word spreads from the largest markets to those medium-sized markets. The May 1, 1999, requirement applies to only 40 of the country's approximately 1200 commercial television stations, and only 80 additional stations will be affected by the November 1, 1999, deadline. Over one thousand commercial stations will have until May 1, 2002, to plan for and implement their DTV facilities. Noncommercial stations will have until May 1, 2003, to construct.

86. We believe that our construction schedule is reasonable. We note that the most aggressive requirements apply to stations that we believe are most able to absorb the costs of conversion and are otherwise situated to make the transition quickly: stations affiliated with the four major networks in the largest markets. We base our decision in this regard on several grounds. First, network affiliates consistently garner the highest percentage of audience share,¹⁷⁷ and thus are likely to have substantial revenues that may be used to fund the conversion. Second,

¹⁷⁵ The FCC ratified the current color transmission standards in late 1953, but at the beginning of 1965, household penetration of color TV sets stood only at 4.9 percent. Nineteen-sixty-five was the first year with substantial color programming from all three major commercial networks. And in 1966, those networks went to virtually all color programming in prime time. See Ducey, R.V. and Fratrack, M.R. (1989) *Broadcasting Industry Response to New Technologies*, *Journal of Media Economics* 2 (Fall): 67-86; and *All-color TV only one year away?* *Broadcasting*, June 21, 1965, at 27-9. In the twelve-year period before the three networks had substantial color programming, color set penetration climbed no higher than 4.9%. In the five-year period from 1965 to 1970, however, color set penetration jumped from 4.9 percent to 35.7 percent, and six years later it reached 73.6 percent. See Television Bureau of Advertising (1990) *Trends in Television*, at 4.

¹⁷⁶ Brinkley, *Advanced TV Posing Issue of Timing*, *New York Times*, March 10, 1997, reported that Thomson Consumer Electronics, which makes televisions under the RCA and Proscan labels, indicated that Thomson and others in the industry plan to have DTV sets on the market in mid-1998.

¹⁷⁷ See, e.g., *Television Audience 1995*, at 21; *Cable Television Developments*, Spring 1997, at 5.

network affiliates are in a stronger position than independent stations because they obtain programming from their network and may also receive economic, technical, and other support that would help with respect to the conversion. Affiliates are consistently the most highly watched and generally the most financially successful, with better ratings and consequent higher advertising revenues.¹⁷⁸ Their greater strength should give them a strong position from which to launch their digital service. Accordingly, we believe that network affiliates in the largest markets will be in the best position to make a rapid transition to DTV. We recognize that in some markets, a network has two affiliates, one of which is much stronger, with a much larger audience share, than the other. We have provided relief to the smaller affiliate in such cases, by granting a longer construction deadline.¹⁷⁹ Finally, our construction schedule also focuses on network affiliates because we believe that the sale of receivers and thus the conversion to DTV will be accelerated by the early availability of network programming in DTV.¹⁸⁰

87. Thus, the roughly two-year construction requirement that applies to these affiliates will both serve the public and be nonburdensome to these broadcasters. By May 1, 1999, markets including fully 30 percent of television households will have access to multiple streams of digital television. The vast majority of commercial broadcasters will have five years in which to construct, and noncommercial stations will have six years in which to construct their digital facilities. We agree with commenters arguing for a shorter construction schedule, especially for broadcasters in the largest television markets.¹⁸¹ As these commenters point out, broadcasters have been on notice throughout this proceeding of the impending need to convert to DTV. With their greater population coverage and scope of operations, we agree that broadcasters in the largest markets generally will be better able to afford and support a more rapid construction schedule.¹⁸²

88. Moreover, the construction timetable appears to be consistent with the announced plans of the large networks. CBS has received an experimental authorization from the Commission and plans to transmit a DTV signal from the Empire State Building in the spring of 1997.¹⁸³ ABC

¹⁷⁸ See, e.g., Palmer, *The Eye Has It*, *Barron's*, March 3, 1997.

¹⁷⁹ See n. 164, *supra*.

¹⁸⁰ We have recognized the value and appeal of network programming in a number of previous decisions. See *Channel 41, Inc.*, 6 FCC Rcd 4109, 4111 (1991) (rule waiver granted in order to preserve ABC programming); *Herald Publishing Co.*, 6 FCC 2d 631 (1967) (waiver granted in part because station proposed to bring NBC network programming to a large number of viewers for the first time).

¹⁸¹ See, e.g., Comments of Thomson at 8; Comments of the Digital Grand Alliance at 13; Comments of Motorola at 8.

¹⁸² *Id.*

¹⁸³ *Annual Sales of Million DTV Sets Possible by 2002*, *Video Week*, February 19, 1997.

plans to have stations experimenting with digital transmission in early 1998.¹⁸⁴ Fox ordered digital transmitters for its O & O's fully five years ago from Harris Corporation,¹⁸⁵ and plans to have digital transmission between the network and affiliates in place by third quarter 1998.¹⁸⁶ NBC said it would begin broadcasting digital signals 18 months after licenses are awarded.¹⁸⁷ NBC already has designed and is building a \$55 million dollar state-of-the-art digital infrastructure at its headquarters at 30 Rockefeller Plaza that will be commissioned this year.¹⁸⁸ On February 2, 1997, WHD-TV, NBC's owned-and-operated model DTV station in Washington, D.C., broadcast "Meet the Press" in high resolution, using the new DTV standard.¹⁸⁹ NBC has also announced that it intends "to move as aggressively and expeditiously as is technically feasible" to enable all of its owned and operated stations around the country to transmit DTV and is "encouraging and helping" its NBC affiliates across the nation in making the transition to DTV.¹⁹⁰

89. Our confidence in the willingness of licensees to move rapidly is also supported by a recent survey of broadcasters which shows that 28 percent of respondents plan to convert to DTV within two years and 79 percent of respondents plan to convert to DTV within five years.¹⁹¹ In fact, some broadcasters have already completed arrangements for their digital transmission facilities. For example, the network affiliates in San Francisco have arranged to place their antennae for digital transmission on Sutro Tower. Similarly, in New York City, the CBS-owned station has already arranged to place an antenna for digital transmission atop the Empire State Building.

90. In addition, two experimental digital television stations are already up and running, and were able to begin transmissions just four months after announcing their plans to do so: WHD-TV in Washington, D.C., the model station sponsored by the broadcast and equipment

¹⁸⁴ *TV Networks Set to Shop*, Broadcasting and Cable, February 24, 1997, at 60.

¹⁸⁵ Lambert, *HDTV push feels like shove to broadcasters*, Broadcasting, June 29, 1992, at 31; Lambert, *HDTV: Hardware begins to replace theory*, Broadcasting, April 20, 1992, at 24.

¹⁸⁶ Broadcasting and Cable, February 24, 1997, at 66.

¹⁸⁷ Leopold, *NBC orders digital-TV transmitters*, Electronic Engineering Times, January 13, 1997, at 8.

¹⁸⁸ Testimony of Robert C. Wright, National Broadcasting Company, Inc., Before the U.S. House of Representatives; Committee on Commerce; Subcommittee on Telecommunications, Trade and Consumer Protection, February 12, 1997.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.*

¹⁹¹ Digital TV Survey Findings, conducted for Harris Corporation by Systems Research Corporation. Phone survey of 400 broadcasting executives representing 479 stations nationwide. Survey was conducted from October 8, 1996 through October 18, 1996.

industries,¹⁹² and WRAL, in Raleigh, North Carolina. We have also already granted eight requests for experimental facilities, at least five of which are now operating, and we expect to grant another five experimental licenses soon. These efforts reflect the ability of broadcasters to set up facilities, and they have given broadcasters experience with digital television equipment that should help speed its introduction elsewhere. Finally, equipment manufacturers' recent announcement that they will have all digital television sets by Christmas 1998 is a further expression of confidence and expectation that DTV will be widely available by that time so as to ensure consumer demand.¹⁹³

91. While we recognize that conversion to digital will impose some burden on broadcasters, we have taken steps to ease broadcasters' introduction of digital service by requiring them at the outset only to emit a DTV signal strong enough to encompass the community of license, and not requiring them to begin transmission to achieve full replication. Many broadcasters will be able to use existing towers for digital transmission and reduce the costs of constructing a DTV facility. Many commenters who argued in favor of a longer construction schedule did so based on their contention that construction of full-replication facilities would require more than six years due to hardware supply constraints, insufficient personnel resources, or lack of adequate new tower sites.¹⁹⁴ However, our construction requirement is satisfied by the emission of a DTV signal strong enough to encompass the community of license, rather than the more difficult requirement that broadcasters replicate their existing service areas. Therefore, licensees need not initially construct full-replication facilities. We believe that the establishment of a construction requirement that is more easily satisfied, as well as our staggered approach, will alleviate the difficulties raised by some commenters.

92. One of the most significant issues in converting to digital broadcasting is the construction of new towers or the upgrade of existing towers. As explained above, this burden will be eased by our limited build-out requirement. In addition, while we recognize that there may not be sufficient equipment available in the earliest days to allow for a full-fledged DTV operation to be implemented by all 1,600 television licensees, we are confident that minimal facilities for the handful of licensees in the top ten markets can be assembled in a timely fashion. These facilities need only meet our requirements of serving the community of license, which can be accomplished by the use of existing equipment or prototypes certain to be introduced soon.

93. As for noncommercial stations, we allow them until May 1, 2003, to construct DTV facilities. There is strong support in the record for giving noncommercial stations greater leeway in the construction of DTV facilities. As discussed more fully below, noncommercial stations need and warrant special relief to assist them in the transition. And, as noted above, there are some noncommercial stations at the forefront of DTV. However, we are convinced by the record

¹⁹² See *Model HDTV Station Gives First Public On-Air Demo*, Newsbytes, August 8, 1996.

¹⁹³ Chen and Bournellis, *High-definition television standards*, Electronic News, Jan. 6, 1997.

¹⁹⁴ Comments of AFCCE at 8; Comments of Joint Broadcasters at 12-14; Comments of NAB at 7.

that noncommercial stations, as a group, may have more difficulty with the transition to DTV than commercial stations. Therefore, we permit noncommercial stations a longer period of time to construct DTV facilities than commercial DTV stations.

H. Recovery Date

94. Background. Earlier in this proceeding, the Commission made the preliminary decision to establish a recovery date 15 years from the date of the adoption of an ATV system or the date a final Table of ATV Allotments is effective, whichever is later.¹⁹⁵ At the end of this period, all analog broadcast would cease, and the spectrum used for NTSC would be returned to the Commission. The Commission emphasized that, given the uncertainties surrounding the conversion process and the possible changes in the data on which we relied, setting the recovery date at 15 years was necessarily preliminary. In order to avoid making a decision that would be overtaken by events, the Commission adopted a schedule of periodic reviews to make whatever adjustments might be necessary.¹⁹⁶ The Commission made clear that broadcasters who do not convert to ATV will have to cease broadcasting in NTSC at the end of the 15-year transition period. The Commission explained that establishment of a firm date for full transition would be in the public interest because it would keep administration simple, assure progress toward spectrum recovery on a timely basis, and give parties a clearly defined planning horizon.¹⁹⁷ The *Fourth Further Notice/Third Inquiry* explained that a more rapid conversion to ATV might be possible than previously expected. The broadcast industry, including equipment manufacturers, have been aggressive in developing digital television technology, as have alternative programming providers such as Direct Broadcast Satellite (DBS), cable systems, wireless technology, and others. Because of the developing competition, and the drop in prices resulting from the proliferation of digitally based media, the *Fourth Further Notice/Third Inquiry* anticipated that conversion might occur more rapidly than originally anticipated.¹⁹⁸ Commenters were asked to address whether some objective benchmark(s) could be used to determine when broadcasters should cease NTSC transmission.

95. Comments. Numerous commenters note that the high degree of uncertainty surrounding the successful establishment of DTV makes it difficult to set an end-point for NTSC service. Many urge us therefore to postpone setting a transition date.¹⁹⁹ Joint Broadcasters argue, for instance, that: "Even the enterprise of setting self-enforcing benchmarks at this point is highly

¹⁹⁵ *Third Report/Further Notice, supra*, at 6964-65; *Second Report/Further Notice, supra*, at 3353-54.

¹⁹⁶ *Third Report/Further Inquiry, supra*, at 6964.

¹⁹⁷ *Second Report/Further Notice, supra*, at 3353.

¹⁹⁸ *Fourth Further Notice/Third Inquiry, supra*, at 10548-49.

¹⁹⁹ Comments of EIA at 22-24; Comments of Cohen, Dippell and Everist at 5; Comments of Pulitzer Broadcasting Co. Comments at 4; Viacom Reply Comments at 29-31; Comments of Busse at 4-6.

speculative in the absence of market experience. There are simply too many unknowns that will need to be factored into any such decision -- the cost and availability of digital sets, the cost and availability of converters, and ATV penetration levels both in terms of households and sets.²⁰⁰ Some commenters propose that the Commission set a nominal target date for the cessation of NTSC broadcasts, with periodic reviews to monitor the progress of implementation.²⁰¹ Others support a settled "date certain" approach.²⁰²

96. If the Commission were to set objective benchmarks, comments suggest several possible benchmarks: a measurement of the total number of sets and total number of households capable of displaying DTV;²⁰³ a measurement of the number of stations transmitting digital signals and the number of households with digital receivers, including set-top boxes;²⁰⁴ a "sets-sold" methodology so that once DTV sets reach some percentage, e.g., 70%, of current TV households, NTSC transmissions would cease three years later,²⁰⁵ or when a certain percentage, e.g., 80%, of television households no longer rely solely on analog broadcasting.²⁰⁶

97. Decision. One of our overarching goals in this proceeding is the rapid establishment of successful digital broadcast services that will attract viewers from analog to DTV technology, so that the analog spectrum can be recovered. Accomplishment of this goal requires that the NTSC service be shut down at the end of the transition period and that spectrum be surrendered to the Commission. Indeed, Congress required the Commission to condition the grant of a digital license on the Commission's recovery of 6 MHz from each licensee. The Act provides:

"(c) RECOVERY OF LICENSE. --If the Commission grants a license for advanced television services to a person that, as of the date of such issuance, is licensed to operate a television broadcast station or holds a permit to construct such a station (or both), the Commission shall, as a condition of such license, require that either the additional license or the original license held by the licensee be surrendered to the Commission for reallocation or reassignment (or both)

²⁰⁰ Comments of Joint Broadcasters at 27.

²⁰¹ Comments of the Digital Grand Alliance at 10-11; Comments of Motorola at 6; Comments of Thomson at 6; Comments of Golden Orange at 1-2.

²⁰² Comments of APCO at 2; Comments of National Consumers League at 6; Comments of New World Television at 8.

²⁰³ See, e.g., Comments of Joint Broadcasters at 28; Comments of AAPTS/PBS at 23; Comments of Pulitzer Broadcasting Co. at 4-5.

²⁰⁴ Comments of Hitachi America, Ltd. at 4; Comments of EIA at 23-24.

²⁰⁵ Comments of Microsoft at 7-8.

²⁰⁶ Comments of General Instrument at 13-14; Comments of the Digital Grand Alliance at 10-11.

pursuant to Commission regulation.²⁰⁷

The question we face is at what point in time the surrender should occur.

98. We continue to believe that it is desirable to identify a target end-date of NTSC service. Doing so will lend certainty to the introduction of digital by making clear to the public that analog television service will indeed cease on a date certain.²⁰⁸ A target will provide broadcasters and manufacturers with a defined planning horizon that will help them gauge their business plans to the introduction of DTV.

99. While the Commission has previously considered a 15-year end-point for NTSC service, we now believe that broadcasters should be able to convert to digital broadcast much more rapidly. Specifically, we believe that a target of 2006 for the cessation of analog service is reasonable. As the *Fourth Further Notice/Third Inquiry* explained, as digital technology has developed, we have had reason to expect that DTV may be adopted more quickly than originally anticipated.²⁰⁹ Competitors in the video programming market, such as DBS, cable, and wireless cable, have aggressively pursued the potential of digital technology. This competitive pressure has lent urgency to the need for broadcasters to convert rapidly. Furthermore, technological advances have worked to lower the introductory costs to broadcasters; for example, new technology may allow many broadcasters to use existing towers for digital transmission, thus easing the expense of converting to digital equipment. And, due to the introduction of other services, broadcasters who need new towers, will be able to lease space on their new towers to mobile service providers, further lowering the costs of converting.²¹⁰ On the viewers' side, technological advances in converter-box technology will lower the consumer costs of the introduction of digital technology. The dramatic drop anticipated in converter-box prices will permit consumers inexpensively to continue to use existing equipment, thus easing the introduction of digital services.²¹¹ Based on our current information, we believe 2006 is a reasonable target.

100. As we discuss below, we will conduct reviews of the progress of DTV every two years. This will allow us to monitor the progress of DTV and to make adjustments to the 2006

²⁰⁷ 47 U.S.C. 336(c).

²⁰⁸ See *Third Report/Further Notice*, *supra*, at 6955-56.

²⁰⁹ *Fourth Further Notice/Third Inquiry*, *supra*, at 10548-49.

²¹⁰ See Testimony of Larry Irving, Assistant Secretary for Communications and Information, U.S. Department of Commerce, National Telecommunications and Information Administration, on *Management of the Radio Spectrum*, before the House Committee on Commerce, Subcommittee on Telecommunications, Trade, and Consumer Protection, February 12, 1997, at pp. 27-29.

²¹¹ Equipment manufacturers have estimated that the cost of a DTV converter will be approximately \$300 in 1998, falling to \$85 in 2007. See, e.g., Reply Comments of Hitachi at 25 in the *Fifth Further Notice*.

target, if necessary. In evaluating the appropriateness of the 2006 target date, key factors for consideration will include viewer acceptance of digital television, penetration of digital receivers and digital-to-analog converter set-top boxes, the availability of digital-to-analog conversion by retransmission media such as cable, DBS, and wireless cable, and generally the number of television households that continue to rely solely on over-the-air analog broadcasting. We emphasize, as we have throughout this proceeding, that at the designated date, broadcasters who do not receive extensions must return one of their two channels.²¹²

I. Noncommercial Stations

101. Background. In the *Fourth Further Notice/Third Inquiry*, we noted that noncommercial licensees would face unique problems in their transition to DTV, particularly in the area of funding. Accordingly, we asked for comment on what relief would be appropriate for noncommercial broadcasters. We also noted comments by noncommercial broadcasters that the six-year application/construction period was insufficient, but expressed our preference to establish a firm transition schedule, dealing with unique problems on a case-by-case basis, rather than establishing two sets of broadcasters, each with its own schedule. Finally, we asked what other relief could be afforded to noncommercial broadcasters to assist them in the conversion to DTV, such as by mandating that only the minimum required broadcast programming must be "noncommercial," and to minimize restrictions on their operations and allow them greater flexibility.²¹³

102. Comments. AAPTS/PBS state that their biggest concern is the ability of noncommercial stations to raise sufficient funds to support current operations and the transition to DTV. Toward that end, they assert that they have worked with Congress to propose legislation that would replace the current system of federal funding for public television stations with new sources of funding. In their Comments, AAPTS/PBS seek flexibility in the application and construction period in light of the financial constraints faced by noncommercial broadcasters, including relaxation or elimination of the financial qualifications requirement and establishment of a less demanding construction schedule for noncommercial stations -- requiring only that they construct and begin operating DTV facilities some time prior to the ultimate conversion deadline.²¹⁴ Finally, they urge that noncommercial stations that share a channel under their legislative proposal be afforded flexibility to convert to full-time DTV operation on their NTSC channels at any time during the transition period and that the Commission should adopt a waiver policy under which noncommercial stations that operate their own DTV channels would be permitted, on a case-by-case basis to convert to DTV operation on one of the station's 6 MHz

²¹² See *Second Report/Further Notice*, *supra*, at 3353; *Third Report/Further Notice*, *supra*, at 6967-68

²¹³ *Fourth Further Notice/Third Inquiry*, *supra* at 10551-52.

²¹⁴ Comments of AAPTS/PBS at 27-30; Reply Comments of AAPTS/PBS at 8-10.

channels and cease NTSC operations earlier than the conversion date.²¹⁵

103. MAP also supports relaxing the construction and transition timetables and financial qualifications for public broadcasters.²¹⁶ General Instrument notes its general support for government action that would "mitigate financial problems faced by noncommercial stations in converting to ATV technology, and would lead to conversion as early as possible."²¹⁷ Further, The Digital Grand Alliance agrees with AAPTS/PBS that the Commission should modify its approach as necessary to promote the conversion of noncommercial stations to DTV. It does not object to affording less demanding construction schedules for noncommercial broadcasters as long as they are operating their DTV channel by the end of the transition period, and it endorses giving them the option to convert to full-time DTV on their NTSC channels at any time during the transition period.²¹⁸

104. Decision. At the outset, we note our commitment to noncommercial educational television service and our recognition of the high quality programming service noncommercial stations have provided to American viewers over the years. We also acknowledge the financial difficulties faced by noncommercial stations and reiterate our view that noncommercial stations will need and warrant special relief measures to assist them in the transition to DTV. Accordingly, we intend to grant such special treatment to noncommercial broadcasters to afford them every opportunity to participate in the transition to digital television, and we will deal with them in a lenient manner. As discussed above, we will not require a financial showing of any broadcaster seeking a construction permit to build a DTV station, and, accordingly, no special treatment will be required of noncommercial broadcasters in this regard. With respect to the construction deadline, discussed above, we will apply a six-year construction period timetable to noncommercial stations, the longest permitted to any category of DTV applicant. We believe, however, that it would be premature to attempt to resolve the issue of what additional special treatment, if any, should be afforded to noncommercial broadcasters at this early date, and we will consider this issue in our periodic reviews. At the same time, however, we wish to note that public broadcasting service was the first to establish a digital satellite transmission system and that public broadcasting licensees are in the forefront of experimenting with digital television.²¹⁹ Public broadcasters have taken an innovative approach in experimenting with the capabilities of digital technology.

J. Must-Carry and Retransmission Consent

²¹⁵ Comments of AAPTS/PBS at 23-24.

²¹⁶ Reply Comments of MAP at 23.

²¹⁷ Comments of General Instrument at 7.

²¹⁸ Reply Comments of the Digital Grand Alliance at 47.

²¹⁹ See, e.g., *PBS Plans DTV Office*, Television Digest, Oct. 7, 1996.

105. In the *Fourth Further Notice/Third Inquiry*, we requested comment on questions relating to the issues of what must-carry obligations and retransmission consent provisions should apply to DTV stations, both during the transition and as a consequence of DTV having replaced NTSC broadcasting.²²⁰ We received comments on these issues from several entities. Subsequent to the issuance of the *Fourth Further Notice/Third Inquiry*, Congress, in the 1996 Act, gave the Commission some direction as to the scope of must-carry, indicating that no ancillary or supplementary DTV services should have must-carry rights.²²¹

106. On March 31, 1997, the Supreme Court upheld the constitutionality of the must-carry provisions contained in the Cable Television Consumer Protection and Competition Act of 1992,²²² in *Turner Broadcasting System, Inc. v. FCC ("Turner II")*.²²³ In upholding the constitutionality of must-carry, the Court emphasized that preserving the benefits of free, over-the-air broadcast television and promoting the widespread dissemination of information from a multiplicity of sources were important governmental interests. The *Turner II* case did not expressly address the issue of must-carry of digital television signals. In order to obtain a full and updated record on the applicability of the must-carry and retransmission consent provisions in the digital context, particularly in light of the *Turner II* decision, we intend to issue a Notice to seek additional comments on these issues.

K. All-Channel Receiver Issues

107. **Background.** Traditionally, we have not regulated broadcast receivers except insofar as they incidentally radiate energy.²²⁴ However, the All Channel Receiver Act authorizes us to require that television receivers "be capable of adequately receiving all frequencies allocated by the Commission to television broadcasting."²²⁵ While we require that all TV broadcast receivers be capable of adequately receiving all channels allocated by the Commission to the television broadcast service,²²⁶ we previously determined in this proceeding that the All Channel Receiver Act does not mandate the manufacture of dual-mode (DTV and NTSC) receivers.²²⁷ We were concerned that such a requirement might burden consumers, and sought comment on whether

²²⁰ *Fourth Further Notice/Third Inquiry*, *supra* at 10552-54.

²²¹ 47 U.S.C. § 336(b)(3).

²²² P.L. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 521 *et seq.*

²²³ No. 95-992, 1997 WL 141375 (U.S. Mar. 31, 1997).

²²⁴ See 47 C.F.R. §§ 15.101 *et seq.*

²²⁵ 47 U.S.C. §303(s).

²²⁶ See 47 C.F.R. §15.117.

²²⁷ *Third Report/Further Notice*, *supra* at 6984.

there is any need to require that manufacturers produce receivers capable of both NTSC and DTV reception during the transition to DTV.²²⁸

108. In the *Fourth Further Notice of Proposed Rule Making*, we noted that DTV would have the capability to deliver both HDTV and SDTV and sought comment on whether permitting the manufacture and sale of receivers that receive and display only NTSC, SDTV, or HDTV signals, or some combination, would be consistent with the All Channel Receiver Act and in the public interest. We also requested comment on whether we should regulate how a signal should be displayed, the need for a labeling requirement for television receivers, and limiting the sale of NTSC receivers.

109. Comments. Most broadcasters support a requirement that all DTV receivers and set-top converters be able to receive and display NTSC signals, and receive all DTV signals included in the DTV transmission standard and display them in the highest quality format which the particular set is designed to accommodate.²²⁹ Golden Orange argues that the Commission should allow market forces to determine receiver design.²³⁰ The Digital Grand Alliance and most equipment manufacturers argue that manufacturers will build digital receivers that receive all DTV formats, including HDTV, along with NTSC broadcasts, without any FCC requirement.²³¹ The Digital Grand Alliance states that it would support a requirement that all DTV receivers receive all DTV formats including HDTV, if it were coupled with a requirement that broadcasters transmit minimum amounts of HDTV programming.²³²

110. While most broadcasters and Motorola favor regulations governing how DTV signals are displayed on DTV receivers, most equipment manufacturers and other commenters favor a market-driven approach.²³³ Comments are also mixed on the need for labeling requirements. Joint Broadcasters state that the Commission should consider a notice requirement on NTSC-only sets warning consumers that NTSC transmissions will end.²³⁴ New World states that the FCC should require every NTSC-only set to come with a prominent warning that the set will not

²²⁸ *Id.*, at 6984-85.

²²⁹ Comments of Joint Broadcasters at 37; Comments of AAPTS/PBS at 35; Comments of Christian Communications at 13.

²³⁰ Comments of Golden Orange at 3.

²³¹ *See, e.g.*, Comments of Digital HDTV Grand Alliance at 17; Comments of EIA at 15.

²³² Comments of the Digital Grand Alliance at 17.

²³³ *See, e.g.*, Comments of Motorola at 9; Comments of the Digital Grand Alliance at ii; Comments of EIA at 16; Comments of Hitachi America, Ltd. at 3; Comments of Information Technology Industry Council at 4.

²³⁴ Comments of Joint Broadcasters at 36.

receive broadcasts after a date certain without modifications.²³⁵ MAP argues that the burdens of labeling are far outweighed by the need to protect consumers.²³⁶ Equipment manufacturers maintain that labeling requirements are unnecessary.²³⁷ EIA states that informational programs and consumer education are critical components of the manufacturer-consumer relationship, so manufacturers will be certain to educate consumers regarding their equipment options during the transition to DTV.²³⁸ On the issue of limiting the sale of NTSC receivers, New World and the AAPTS/PBS favor a requirement that all televisions sold after some date be capable of receiving and displaying digital broadcast transmissions.²³⁹ The Digital Grand Alliance and EIA argue that the Commission should not ban or limit the sale of NTSC-only receivers.²⁴⁰ During the transition to digital, and perhaps even after, the Digital Grand Alliance contends, there is likely to be a demand for NTSC-only sets driven by cable services, wireless cable services, direct broadcast satellite services, digital video disc players, and VCRs.²⁴¹

111. Decision. The digital broadcast transmission standard which we adopted in the *Fourth Report and Order* differed from the standard we proposed in the *Fifth Further Notice*. Many of the comments we received in response to the *Fifth Further Notice* assumed that the Commission would adopt a DTV transmission standard that included specific video formats. However, the standard we adopted in the *Fourth Report and Order* did not specify video formats. We chose instead to allow video formats to be determined by the market and consumer demand.²⁴² Because of this important modification, we believe that some of the arguments made by the commenters on specific all-channel receiver issues are no longer applicable.

112. We have decided that, at this time, equipment manufacturers should have maximum latitude to determine which video formats DTV equipment will receive. We believe that it is likely that market forces will provide incentives for broadcasters and equipment manufacturers to work closely together to produce the receiver and converter designs most valued by consumers.

113. We do not believe that our goals would be advanced by mandating that all digital

²³⁵ Comments of New World Television Inc. at 16.

²³⁶ Comments of MAP at 22; Minority Media and Telecommunications Council, and Citizens Communication Center Project at 22.

²³⁷ See, e.g., Comments of the Digital Grand Alliance at 17-18; Comments of Thomson at 9.

²³⁸ Comments of EIA at 15-16.

²³⁹ Comments of New World Television Inc. at 15-16; Comments of AAPTS/PBS at 35.

²⁴⁰ Comments of the Digital Grand Alliance at 17; Comments of EIA at 16.

²⁴¹ Comments of the Digital Grand Alliance at 17.

²⁴² *Fourth Report and Order, supra* at ¶ 39.

receivers receive and display NTSC signals and DTV signals, regardless of format, aspect ratio, or progressive or interlaced scanning, as broadcasters argue. We expect that equipment manufacturers will make available to consumers digital receivers that receive both NTSC and DTV signals. However, we will not preclude equipment manufacturers from designing digital receivers that do not receive NTSC signals. In addition, we believe that equipment manufacturers should be allowed to offer lower-cost, digital receivers that receive only progressive scan or SDTV formats. Our two-year reviews will give us an opportunity to monitor DTV receiver designs and address any problems that may arise.

114. We have decided to postpone any decision concerning a labeling requirement. We are providing broadcasters flexibility in their choice of video formats and equipment manufacturers flexibility in their choice of receiver designs and we are hopeful that this will result in products and services that draw consumers to DTV. At this early stage of the transition process, we will rely on consumer electronics manufacturers and retailers to provide the information necessary for consumers to make informed choices. Should problems arise, and consumers become confused, as the transition moves forward, we will have opportunity to revisit labeling requirement issues through our review process. Finally, we recognize that there is an enormous embedded base of video cassette recorders, cable decoder boxes, laser disc players, and other video equipment that use NTSC receivers for non-broadcast purposes. This suggests that there may be a continuing market for the sale of NTSC display devices, even after the conversion to DTV. Therefore, we decline to limit the sale of NTSC-only display devices.

L. Review Issues

115. In the *Third Report/Further Notice*, the Commission set deadlines for the application and construction period, the simulcast requirements, and the transition end-date.²⁴³ The Commission also adopted a timetable, with specific years, for the review of information relating to these time periods, under the assumption that the ATV standard and a table of ATV allotments would be adopted by late 1993.²⁴⁴ The Commission emphasized that the adoption of certain dates would give parties a measure of certainty, while a schedule for review would permit government and industry to adapt, if necessary, to unforeseen circumstances.

116. While the specific dates established in the *Third Report/Further Notice* have been overtaken by events and are no longer applicable, we continue to believe that regular reviews of the progress of DTV are highly desirable. Given the importance of digital television's introduction, we conclude that a periodic review every two years until the cessation of analog service is necessary to allow the Commission the opportunity to ensure that the introduction of digital television and the recovery of spectrum at the end of the transition fully serves the public interest. During these reviews, we will address any new issues raised by technological

²⁴³ *Third Report/Further Notice, supra*, at 6927-28.

²⁴⁴ *Third Report/Further Notice, supra*, at 6927.

developments, necessary alterations in our rules, or other changes necessitated by unforeseen circumstances.²⁴⁵ The Commission will address such issues as the appropriateness of 2006 as a target recovery date, the proper application of the simulcast requirement, the special needs of noncommercial stations, issues related to DTV receiver designs and set labelling, and any other issue that requires examination. Our decisions today, at the very outset of the introduction of digital television, are in some respects necessarily preliminary. A periodic review will permit us to make whatever adjustments will be required.

III. CONCLUSION

117. Digital television will enter a highly competitive, challenging telecommunications marketplace. Our decisions in this Report and Order, designed to foster technological innovation and competition, while minimizing government regulation, will, we hope, increase the likelihood that we will see a digital television service that provides a host of new and beneficial services to the American public, while preserving free universal television service that serves the "public interest, convenience, and necessity."

IV. ADMINISTRATIVE MATTERS

118. Paperwork Reduction Act of 1995 Analysis. This R&O contains either new or modified information collections. The Commission has submitted to OMB an emergency request for approval of: 1) an information collection regarding the cancellation of the Initial DTV License and 2) the form attached to this R&O to be used to apply for a DTV construction permit. The first request will be used only once and the Commission will not seek extension of the approval for this collection. The second will continue to be used by the public. OMB approved this emergency request and assigned 3060-0766 as the control number. Additionally, this R&O contains a requirement that those stations that voluntarily committed to building DTV facilities within 18 months are required to submit progress reports on construction of facilities. Therefore, the Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public to comment on the revisions to the applicable form and the progress reports contained in this R&O as required by the Paperwork Reduction Act of 1995, Pub. L. No. 104-13. Public and agency comments are due 60 days from date of publication of this R&O in the Federal Register. Comments should address: (a) whether the new or modified collection of information is necessary for the proper performance of the functions of the Commission, including whether the information shall have practical utility; (b) the accuracy of the Commission's burden estimates; (c) ways to enhance the quality, utility, and clarity of the information collected; and (d) ways to minimize the burden of the collection of information on the respondents, including the use of automated collection techniques or other forms of information technology. In addition to filing comments with the Secretary, a copy of any comments on the information collections contained herein should be submitted to Dorothy Conway, Federal Communications Commission, Room 234, 1919 M Street, N.W., Washington, DC 20554, or via the Internet to dconway@fcc.gov.

²⁴⁵ See also *Fourth Report and Order*, *supra*, at ¶ 49.